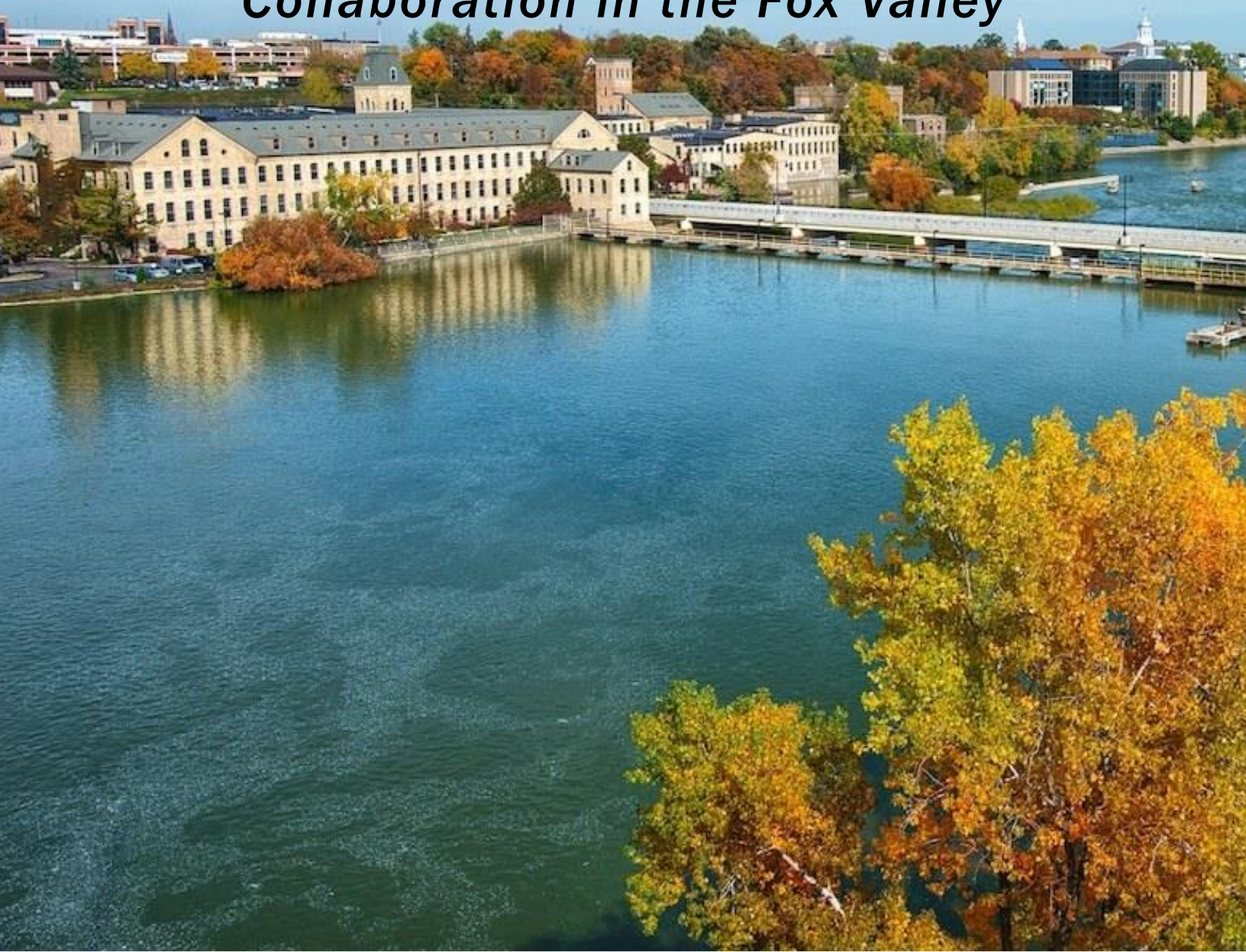


BETTER TOGETHER

*Options for Enhanced Fire Department
Collaboration in the Fox Valley*



WISCONSIN
POLICY FORUM

ABOUT THE WISCONSIN POLICY FORUM

The Wisconsin Policy Forum was created on January 1, 2018, by the merger of the Milwaukee-based Public Policy Forum and the Madison-based Wisconsin Taxpayers Alliance. Throughout their lengthy histories, both organizations engaged in nonpartisan, independent research and civic education on fiscal and policy issues affecting state and local governments and school districts in Wisconsin. WPF is committed to those same activities and that spirit of nonpartisanship.

PREFACE AND ACKNOWLEDGMENTS

This report was undertaken to provide citizens and policymakers in Wisconsin's Fox Valley with analysis that will be helpful to them as they consider the future of fire and EMS service provision in their region and options for collaboratively addressing emerging and future challenges. The intent was to lay out programmatic data and discuss options for enhanced collaboration, but not to make specific recommendations on fire and EMS service provision for individual communities.

Report authors would like to thank the fire chiefs from the five Fox Valley departments that participated in this study and other fire department officials and personnel for their assistance in providing information and for patiently answering our questions.

In addition, we wish to acknowledge and thank the municipalities served by the five fire departments for jointly commissioning and underwriting much of the cost of this research.



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*Options for Enhanced Fire Department
Collaboration in the Fox Valley*

June 2022

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INTRODUCTION

Fire and emergency medical service (EMS) agencies across Wisconsin are facing intensifying fiscal and service-level challenges that are threatening existing service models and prompting consideration of new approaches. These challenges stem, in part, from the strict property tax levy limits facing Wisconsin municipalities as well as growing costs associated with increased calls for service. Escalating staff recruitment and retention barriers stemming from the state's tight labor market and extra demands created by the pandemic also have exacerbated the challenges for many departments.

Fire departments in Wisconsin's Fox Valley generally enjoy a higher level of staffing and resources when compared to their peers and have a long history of cooperation, including strong mutual aid agreements and a newly formed regional fire academy. Yet, at the same time, these departments are challenged by growing service demands and the same fiscal limitations experienced by other municipal governments across the state. For some, particular challenges have emerged with regard to rising EMS calls.

In recognition of the strong spirit of cooperation that already exists, several fire chiefs from the Fox Valley approached the Wisconsin Policy Forum (WPF) to help them consider options for enhanced collaboration or new service sharing arrangements as a means of mutually addressing some of their common challenges. This report responds to that request and covers a range of service sharing options for the fire departments serving Appleton, Grand Chute, Kaukauna, Neenah-Menasha, and Oshkosh.

Specifically, the analysis covers five distinct areas of fire department operations that were identified in consultation with the chiefs: training; special operations; community risk reduction; fleet maintenance; and EMS quality control and oversight. Possibilities for joint purchasing and shared information technology systems and platforms also were considered in the context of several of those areas.

For each service area, we considered a continuum of less to more comprehensive options. Those on the more comprehensive side would establish new organizations, such as a Regional Training Bureau or joint fire investigations resource. Other options are much more limited, such as codifying existing practices regarding vehicle loans by adopting formal intergovernmental agreements.

The analysis was conducted with the participation of the fire chiefs and staff. In fact, while not endorsing any specific approach, the chiefs and other subject matter experts from the five participating fire departments spoke and met regularly with Forum researchers throughout the study process to share information and discuss operational details of various service sharing options.

In the pages that follow, we lay out the results of our analysis. It is important to note that its purpose was not to recommend specific service sharing approaches or implementation plans, but instead to present a range of potential options and to provide sufficient analysis that will allow decision-makers to determine which (if any) should be considered for more detailed study and implementation.

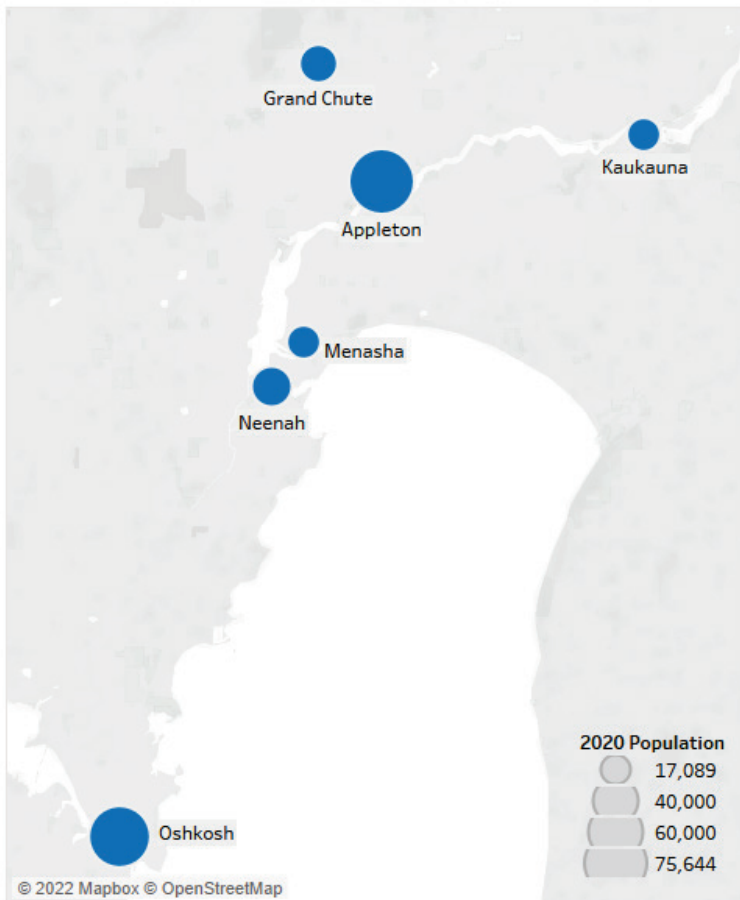


REGIONAL SETTING

The Fox Cities/Oshkosh region is the third-largest metropolitan region in Wisconsin. The region includes two major cities – Appleton and Oshkosh – as well as Grand Chute, the largest town in Wisconsin and home to the largest retail mall in the area, the Fox River Mall. The mid-sized cities of Kaukauna, Menasha, and Neenah round out the six communities considered in this report.

Four of the six municipalities covered by the study are contiguous, as shown in **Map 1**; only Oshkosh and Kaukauna are separated from the others. The highest population density is in Appleton, with similar densities in Neenah and Menasha. Kaukauna and Grand Chute have more suburban densities typical of post-World War II development.

Map 1: Municipalities covered by study



Below we summarize a handful of demographic and housing indicators that offer additional context about the makeup of the region, with a particular focus on factors that relate to fire services and EMS.

Demand for both EMS and fire services is generally related to the number of residents and employees in an area but other demographic and housing factors also can play a role. For example,



older populations have a higher need for all types of health care, including EMS, while commercial and industrial development can present a greater need for fire service capacity. The type and age of housing also can affect fire services. We also review development projections and analyze potential impact that growth may have on demand for emergency services over the next 20 years.

Population characteristics

Table 1 shows population trends in the six municipalities since 2000 and reveals that Grand Chute and Kaukauna have experienced higher growth rates than the other municipalities (although Appleton had the highest total population growth). The population for the six cities collectively grew by more than 5% between 2010 and 2020, which was substantially higher than the percentage growth in the state’s population of 3.6%.

Table 1: Population trends, 2000 to 2020

	2000	2010	2020	Change 2010 to 2020	% Change 2010 to 2020
Appleton	70,087	72,623	75,644	3,021	4.2%
Oshkosh	62,916	66,083	66,816	733	1.1%
Neenah	24,507	25,501	27,319	1,818	7.1%
Menasha	16,331	17,353	18,268	915	5.3%
Grand Chute	18,392	20,919	23,831	2,912	13.9%
Kaukauna	12,983	15,462	17,089	1,627	10.5%
Total Region	205,216	217,941	228,967	11,026	5.1%
State Total	5,363,715	5,686,986	5,893,718	206,732	3.6%

Source: U.S. Census Bureau, Decennial Censuses

Based on estimates from the East Central Regional Planning Commission and other sources,¹ there is modest development potential in the region through 2040. The area is expected to continue to grow, with a capacity to add 19,100 housing units, which translates to an annual population growth rate of around 1%. The Wisconsin Department of Administration projects a more modest population increase of 0.6% annually for the region.

¹ Data for Appleton, Menasha, and Oshkosh come from a Regional Housing Affordability Report published by the East Central Wisconsin Regional Planning Commission in 2018. Projected housing units estimates for Kaukauna and Grand Chute come from their Comprehensive Plans. The estimate for Neenah is based on the WI DOA household projection for 2040 (2013).



Table 2 provides additional detail on the age of the population in the six municipalities, including the number of citizens who reside in nursing facilities. Grand Chute has the oldest population, with 19.3% of its residents over age 65 and a median age above 40. Appleton has the lowest median age, possibly due to the number of college-aged individuals who reside in that city, as well as the lowest percentage of seniors.

Table 2: Age Characteristics, 2019

	% over 65	Med Age	Skilled Nursing Facilities Pop
Appleton	13.4%	33.9	619
Oshkosh	17.3%	35.5	458
Neenah	15.0%	38.5	85
Menasha	14.7%	37.4	18
Grand Chute	19.3%	40.4	306
Kaukauna	14.4%	38.0	269

Source: US Census Bureau, 2019 American Community Survey (ACS)

Housing Characteristics

While the number of elderly residents within a municipality can have an impact on EMS calls, a community’s housing characteristics relate more closely to fire capacity and risk. For example, high-rise buildings require the use of ladder trucks for fire response, while areas with high housing densities can produce greater call volumes and higher potential loss of life and property in a significant fire.

Table 3 summarizes some important housing characteristics and shows that Grand Chute has the highest percentage of multiple-family housing (3 or more units), which conveys higher density. Grand Chute also has the newest housing stock, with 8.5% of its units built since 2010. This is important because newer housing units may be less prone to electrical hazards or other fire risks, although one study participant noted that newer homes are built with materials that succumb to fire more quickly and burn faster than older homes. Oshkosh also has a comparably high percentage of multiple family units (29.6%). Appleton, Neenah, Menasha and Kaukauna are similar in terms of the mix of housing types.

Table 3: Housing characteristics, 2019

	Total Housing Units	% multi family	% built since 2010
Appleton	30,447	20.5%	4.4%
Oshkosh	28,676	29.6%	3.6%
Neenah	11,444	21.3%	3.6%
Menasha	8,287	20.8%	5.0%
Grand Chute	10,853	40.1%	8.5%
Kaukauna	6,982	17.8%	5.6%

Source: 2019 ACS

Employment and Property Values

Fire and EMS call volumes are impacted not only by residential population, but also by levels of economic activity, which can be reflected by the number of employees in each community. For example, Grand Chute officials noted that employees and visitors significantly boost the weekday population in that community and this difference is reflected in higher call volumes relative to other times of day.

While we were unable to secure recent employment data for the four smaller municipalities, **Table 4** shows that Oshkosh and Appleton employed a combined 71,207 individuals in 2021, while the three counties in which the six municipalities are located employ more than 205,000 people. Employment



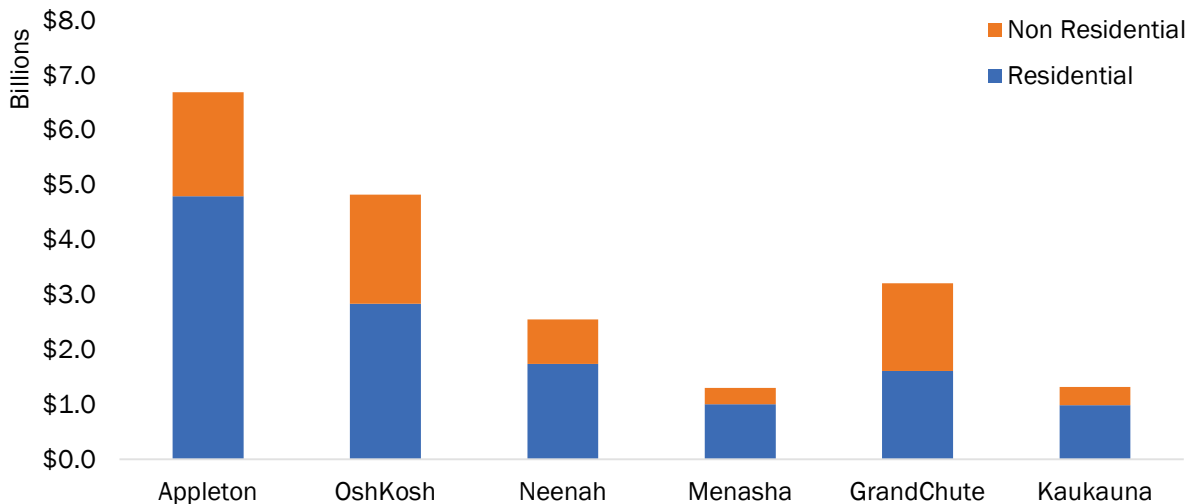
in the three-county region has grown by 3.7% over the past decade, which is below the 4.3% growth in employment statewide since 2011.

Table 4: Employment in two largest cities and three-county region, 2011-2021

	2011	2016	2021	Change	% Change 2011-2021
Oshkosh	32,501	33,725	33,290	789	2.4%
Appleton	36,503	38,624	37,917	1,414	3.9%
Total	69,004	72,349	71,207	2,203	3.2%
Calumet County	11,267	13,640	14,806	3,539	31.4%
Outagamie County	98,672	104,406	101,830	3,158	3.2%
Winnebago County	88,365	90,893	89,054	689	0.8%
Total	198,304	208,939	205,690	7,386	3.7%

Additional context on the potential need for fire protection and EMS comes from the types of properties that are present in a region, as a higher percentage of commercial and manufacturing property entails a larger number of employees as well as greater numbers of shoppers and other visitors. Using Wisconsin Department of Revenue reports on equalized property values,² **Chart 1** differentiates between residential and non-residential development in the six municipalities (the non-residential total is mostly commercial and manufacturing but also includes undeveloped, agriculture, forest, and other).

Chart 1: Residential and non-residential equalized property values, 2019



In Grand Chute, non-residential development accounts for about 50% of the town’s equalized value, which conveys higher numbers of daily visitors and workers. Oshkosh also has a comparatively high percentage (41%) of non-residential value.

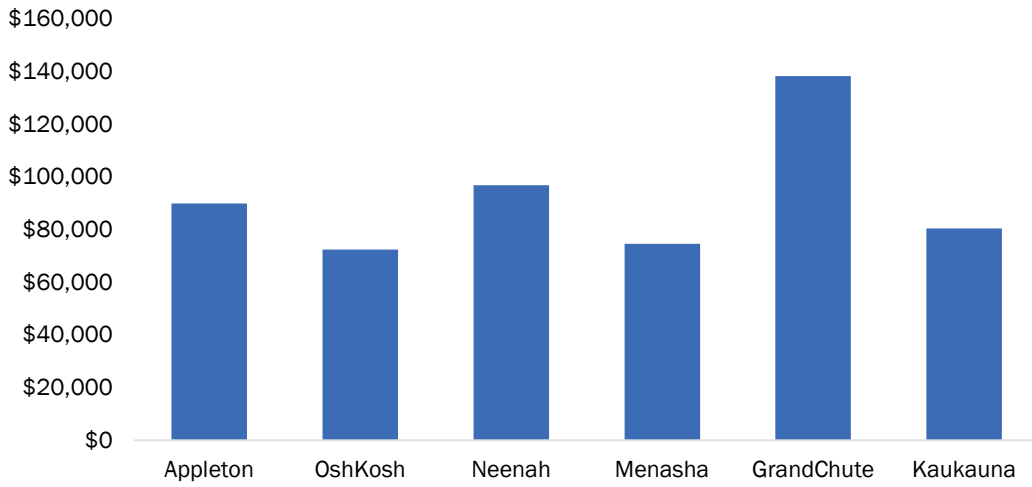
Finally, **Chart 2** shows per capita equalized property values, which provides some perspective on ability to pay for fire/EMS and other municipal services. Grand Chute again stands out with the highest per capita values. The relative “property wealth” of Grand Chute relates to several factors

² Equalized value is an approximation of assessed value which is derived for all municipalities in the state annually by the Department of Revenue.



described above, including higher housing values overall, higher housing density, newer housing, and a higher proportion of commercial development in relation to total value.

Chart 2: Per capita equalized property values, 2019



DEPARTMENT SNAPSHOTS

In this section, we offer brief overviews of each department, as well as a financial overview and a summary of current collaboration efforts. Just as the demographics, housing, and employment trends of each municipality vary, each of the five fire departments has unique characteristics and strengths.

Appleton Fire Department

The Appleton Fire Department (AFD), established in 1894, maintains six stations and is staffed with full-time, career firefighters and EMS responders. It responds to all hazards and ranks as one of the top departments in Wisconsin in terms of technical rescue capability.

AFD utilizes a private ambulance company – Gold Cross Ambulance Service – for its paramedic response and all EMS transport. The department upgraded its license to EMT Basic in 2020 and plans to advance to paramedic status within two years (see text box for description of EMS license levels).

Table 5: Appleton Fire Department Snapshot

Area Served (sq miles)	25.80
Service Population	75,644
Dispatched from	Outagamie County
Staffing Model	Career
EMS License	EMT Basic
Ambulance Transport	No
No. of Stations	6
FTEs	96
Avg On Duty	24
2021 Budgeted Expenditures	\$13,261,240
2021 Fire Calls	1,661
2021 EMS Calls	5,180
2021 Total Calls	6,841

On average, AFD responded to 18.7 calls per day in 2021. The city’s call volumes are impacted by a large Octoberfest celebration that brings 100,000 people to the city each year as well as a summer festival, the Mile of Music, that attracts 70,000 revelers each summer.

EMS LICENSE LEVELS

Emergency Medical Responder - EMRs are trained to provide non-invasive first aid. This includes clearing airways manually, CPR, controlling bleeding, using cervical collars, and taking vital signs. EMRs are trained in the use of portable defibrillator devices.

Emergency Medical Technician-Basic - in addition to all of the skills of an EMR, EMT-Bs are trained to perform more invasive medical skills, such as the use of tourniquets. They are also able to administer oxygen and can provide more types of medications, including Narcan for opioid overdoses.

Advanced EMT - all of the skills of EMT-B and also can start an IV and administer a wider range of medications.

Paramedic - all of the skills of Advanced EMT with the addition of invasive procedures such as using a needle for chest decompression and intubation. Paramedics are also able to administer the widest variety of medications.

Source: WI EMS Scope of Practice, Wisconsin Department of Health Services



Oshkosh Fire Department

The Oshkosh Fire Department (OFD) is the largest department considered in this study with 114 full-time equivalent employees (FTEs). Originally established in 1856, OFD staffs six stations. The department is one of only a few fire departments in Wisconsin that has earned the highest rating of 1 from the Insurance Services Office (ISO) in its ratings of fire protection capability and capacity.

OFD provides fire protection to the city of Oshkosh, an area of close to 27 square miles. It is also the Advanced Life Support (ALS) EMS provider to an area almost 10 times that size, providing paramedic and ambulance transport services to 11 surrounding towns.

On average, OFD responded to 26.1 calls per day in 2021. Its call volumes are impacted by the city's hosting of the Experimental Aircraft Association (EAA) AirVenture each year, which brings more than 600,000 visitors to the region over six days in July.

Table 6: Oshkosh Fire Department Snapshot

	Fire	EMS
Area Served (sq miles)	26.91	263.00
Service Population	66,083	92,522
Dispatched from	Winnebago County	
Staffing Model	Career	
EMS License	Paramedic	
Ambulance Transport	Yes	
No. of Stations	6	
FTEs	114	
Avg On Duty	28	
2021 Budgeted Expenditures	\$13,741,100	
2021 Fire Calls	1,430	
2021 EMS Calls	8,121	
2021 Total Calls	9,551	

Neenah-Menasha Fire and Rescue

The two fire departments serving Neenah and Menasha merged in 2003 to form Neenah-Menasha Fire and Rescue (NMFR). The department uses exclusively full-time, career staff and is licensed at the EMR level. Gold Cross Ambulance is responsible for paramedic response and ambulance transport.

NMFR has four stations. The department fielded an average of 8.0 calls per day in 2021, and its EMS call rate of 64.4 per 1,000 residents was the lowest of the five participants. This is probably because NMFR does not respond to low-acuity EMS calls, which are routed directly to Gold Cross Ambulance. In addition, senior housing and nursing homes are not as common in Neenah and Menasha as in the other communities (as shown in the previous section).



Table 7: Neenah-Menasha Fire and Rescue Snapshot

Area Served (sq miles)	13.79
Service Population	44,702
Dispatched from	Winnebago County
Staffing Model	Career
EMS License	EMR
Ambulance Transport	No
No. of Stations	4
FTEs	68
Avg On Duty	17
2021 Budgeted Expenditures	\$8,784,400
2021 Fire Calls	898
2021 EMS Calls	2,073
2021 Total Calls	2,971

Grand Chute Fire Department

The Grand Chute Fire Department (GCFD) uses both full-time, career staff and “paid-on-premise” (POP) employees who supplement career staffing levels. The POP employees are paid hourly for working shorter shifts and responding to call-in requests for larger incidents. As a result of its staffing model, GCFD’s total expenditures per employee are the lowest of the five departments, at about \$112,000 per year. The department staffs two stations.

As noted in the previous section, the Town of Grand Chute stands out from its neighbors in many ways. It has the highest percentage of multiple family housing, the largest concentration of non-residential development, and its population has the highest median age. It is not surprising, in light of these factors, that Grand Chute had the highest rate of EMS calls per 1,000 residents among the five departments, at 95.3 in 2021. On an average day in 2021, GCFD responded to 6.9 calls overall.

Table 8: Grand Chute Fire Department Snapshot

Area Served (sq miles)	23
Service Population	23,495
Dispatched from	Outagamie County
Staffing Model	Combination
EMS License	Paramedic
Ambulance Transport	No
No. of Stations	2
Career FTEs/POP FTEs	34.00/5.36
Avg On Duty	10
2021 Budgeted Expenditures	\$4,396,858
2021 Fire Calls	690
2021 EMS Calls	1,820
2021 Total Calls	2,510



Kaukauna Fire Department

The Kaukauna Fire Department (KKFD) dates from the 1880s and was one of the first small departments to implement paramedic service, in 1979.³ Like OFD, KKFD only provides fire services to city residents, but it provides EMS and ambulance transport at the ALS level to seven surrounding towns.

The KKFD has 20 full-time, career employees. An additional 11 employees serve as “paid-on-call” (POC) employees who are called in when needed for fire response and paid on an hourly basis for their service. All regular shifts at the department’s single station are staffed by career employees. Its 20 FTEs make it the smallest of the five departments. KKFD responded to 4.3 calls per day in 2021.

Table 9: Kaukauna Fire Department Snapshot

	Fire	EMS
Area Served (sq miles)	8.23	58.68
Service Population	17,089	27,910
Dispatched from	Outagamie County	
Staffing Model	Career (some POC)	
EMS License	Paramedic	
Ambulance Transport	Yes	
No. of Stations	1	
Career FTEs/POC FTEs	20.00/0.78	
Avg On Duty	5	
2021 Budgeted Expenditures	\$2,669,305	
2021 Fire Calls	197	
2021 EMS Calls	1,361	
2021 Total Calls	1,558	

Financial Overview

Table 10 shows 2021 budgeted revenues and expenditures for each department. Revenue amounts for KKFD and OFD include reimbursements generated from ambulance transports (those total \$550,000 for KKFD and almost \$1.7 million for OFD). As noted above, the other three departments respond to EMS calls and provide care at the scene but Gold Cross Ambulance provides paramedic-level care and ambulance transport and it retains all ambulance transport revenues.

Other types of revenue include 2% insurance dues, other state aid, special event revenue, and revenue from a variety of other permits such as burning permits.

Table 10: 2021 budgeted revenues and expenditures

	Appleton	Oshkosh	NMFR	Kaukauna	Grand Chute
Revenue	\$435,775	\$1,949,800	\$181,286	\$599,050	\$217,140
Expense	\$13,261,240	\$13,741,100	\$8,784,400	\$2,669,305	\$4,396,858
Net Expense	\$12,825,465	\$11,791,300	\$8,755,500	\$2,070,255	\$4,307,718

³ Kaukauna native chronicles history of fire dept., *Appleton Post Crescent*, December 29, 2015.



Current Collaboration

Fire department services are unique among municipal services in that automatic aid and mutual aid are fundamental to response and operations. Consequently, intergovernmental cooperation and collaboration is a must and is broadly accepted and encouraged by most chiefs.

At the scene of a structure fire or other large incident, National Fire Protection Association (NFPA) standards require a minimum of 14 to 16 responders. Most departments are not staffed to respond to such large and complex incidents, which are infrequent. Instead, they are staffed to handle an average daily workload while relying on mutual aid to assist with low-frequency, high-risk events.

It is important to note that even for large departments that have sufficient personnel on duty to manage a structure fire on their own, doing so will leave most of their stations empty and compromise their ability to respond to second and third calls. Consequently, even such large departments lean on their neighbors in the event of a major fire or emergency.

Fire departments in Wisconsin utilize the Mutual Aid Box Alarm System (MABAS), which dictates how resources are deployed within regions for major fire or EMS incidents. Many departments also have additional mutual aid arrangements with neighboring departments. For example, the Appleton and Grand Chute departments have an automatic aid agreement for fire response only, which means that certain equipment is dispatched simultaneously from both departments when a call comes in from either jurisdiction. AFD and NMFR recently resumed a similar automatic aid agreement.

Along these lines, seven municipalities in the Fox Valley region (the six included in this study and the Village of Fox Crossing) negotiated a COVID-19 Mutual Aid Pact in March 2020 that advances mutual aid in the region. That agreement is designed to provide coverage from neighboring fire departments for any department that experiences staffing shortages due to COVID-19.

Under the agreement, the chiefs appointed a regional coordinator who is responsible for maintaining a list of available personnel and equipment among all six departments. If necessary, any of the participating departments can make a request for coverage through the regional coordinator, who will make a “fair and equitable” distribution of resources. The agreement also includes a right of refusal if a chief believes that participation would affect his ability to protect his own municipality. Fortunately, the agreement has not needed to be activated to date, but it is an important advance in interagency collaboration and reflects a regional orientation and a culture of collaboration among the departments and the elected leadership of Fox Valley communities

One consequence of the culture of cooperation and strong relationships between departments in the region is that several of the most obvious opportunities for regional collaboration are already happening. For example:

- **Training:** Extensive cooperation is already in place for ongoing fire training for existing staff. Some larger training activities conducted by individual departments are open to all of the other departments in the region and training officers from the respective departments meet regularly and plan joint trainings. NMFR and AFD have even covered each other’s stations during training to allow more on-duty firefighters to attend. Also, for the past two years, OFD, GCFD, and NMFR have also collaborated on training for new recruits. They collectively conduct a five-week academy in the spring, which has proved to be an efficient way for all three departments to bring new recruits up to speed on necessary firefighting and EMS skills.



- **Special Operations:** For both technical rescue and hazardous materials (hazmat) incidents, there are already regional collaborations in place through teams designated by the state that handle response to larger and more complex events. Those teams are made up of firefighters trained as technicians, primarily in AFD and OFD, although there are responders trained to an operational level in technical rescue, structural collapse, and hazmat in all departments. Once these regional teams are activated, the state funds the operation cost, including the cost of backfilling for firefighters that are deployed to a site for a technical rescue or hazmat response. In addition to regional teams, automatic aid agreements exist among multiple departments for confined space and active shooter incidents.
- **Administrative Functions:** There is some cooperation in candidate testing since all departments use Fox Valley Technical College for a regional hiring process.

The following sections provide further detail on five specific areas of fire department operations that may hold potential to pursue even greater levels of collaboration in the future.



COLLABORATION AREA #1: TRAINING

Training in most fire and EMS agencies occurs on a weekly, if not daily, basis. The NFPA details required training for all aspects of firefighting and special operation. Training is also one of the categories that the Insurance Services Office (ISO) evaluates when rating fire departments, and ongoing training is also required by the Wisconsin Department of Health Services (DHS) for responders to maintain their EMS licenses. Training is critical to fire and EMS operations both in terms of ensuring the most effective response in the field and in limiting potential for injury to personnel.

In the Fox Valley, each of the five departments has a designated training officer who manages and documents training activities within their department. The five training officers also meet regularly to organize joint trainings and collaborate in other ways. As an example, NMFR recently acquired a structure and offered it as a training resource to the other four departments. In addition, OFD, NMFR, and GCFD operate a joint recruit training program.

Scope of Training Activities

WPF met with training officers for all five departments to further explore training requirements, types of training, and opportunities for greater collaboration. A couple of challenges to pursuing greater collaboration in this area also emerged. One is that while off-site joint training has benefits, it reduces available staffing to serve on shifts and may also incur overtime costs. Another complication is that each fire department has its own Standard Operating Procedures and Guidelines (SOPs and SOGs).

At the same time, the chiefs emphasized that because many basic skills are common across all departments, such as CPR certification and ACLS certification for paramedics, there is considerable potential to enhance collaboration on training. Also, to the extent that departments can agree on standard SOPs, the possibilities for collaboration will grow.

It is important to note that this standardization is ongoing. For example, the three departments who participate in the joint recruit training needed to agree to some standard protocols, and training officers currently are discussing how to standardize SOPs regarding radio communications. Also, GCFD discovered during a joint training on high rise response that other departments were using a shorter hose arrangement that was easier and more efficient to manage. As a result, GCFD changed its SOP on hose arrangement to match the other departments.

There are several types of training and each has unique characteristics. Those types and their potential for collaboration are summarized below.

Company training – this is a basic form of training that covers all aspects of fire and EMS and much of it is common to all departments. Because this form of training occurs at the station, personnel remain on duty and can respond to calls. Training officers estimate that 25% to 30% of company training is standard across the five Fox Valley departments and could be conducted jointly. They also note that if SOPs and SOGs are standardized, then this could expand to as much as two-thirds of all company training.



Academy/Recruit training – this is an annual, five-week initial training for recruits. As noted above, three departments now collaborate on the recruit academy. There is potential for AFD and KKFD to also join in this effort.

Probationary training – this training of new employees is mostly done at the station with equipment specific to each department.

Officer training – one obvious benefit of multi-department training of officers relates to incident command at large incidents that involve a response from multiple departments, as it is crucial that respondents “speak the same language” when working at the scene of complicated and dangerous fires and/or rescues. Training chiefs also point out that many other areas of officer training are common to each department, such as leadership, conflict resolution, coaching, and employee evaluation. At the same time, other aspects of officer training are particular to each department.

Driver/Operator training – while this training may be somewhat particular to each department’s vehicles and geography, it consists primarily of driving skills and the science of hydraulics and might easily be standardized across departments.

Special operations training – fire personnel are expected to respond to a wide variety of incidents, including special operations such as water rescues, confined space rescues, hazardous materials releases, etc. It is challenging for each training officer to be an expert in every area of special operation, so collaboration on different types of advanced training may be beneficial.

EMS training – training requirements for EMS are set by the state DHS and vary depending on the level of EMS license. Each department provides sufficient training for all personnel to maintain their EMS licenses. For example, KKFD holds a paramedic refresher class every month with outside trainers, while OFD and AFD primarily rely on in-house resources. Currently, there are differences in EMS services between departments, which presents challenges to organizing joint trainings. AFD is planning to implement paramedic service within the next few years, however. When that occurs, four of the five departments will be at a paramedic level and will be better positioned to consider joint training, although there still will be differences in transport capabilities and protocols.

Current Resources

We asked the departments to estimate the total number of hours devoted to training annually. While those estimates differed, the training officers agreed that their adherence to NFPA and ISO requirements means that the five departments have similar training programs in terms of time and content.

With regard to training equipment and facilities, each of the departments has a training tower (Fox Valley Technical College also provides one). NMFR and Fox Valley Technical College also have “burn rooms” that are used for live fire suppression training. NMFR, AFD, and KKFD have classrooms near their training towers, while OFD is planning to build a larger training facility.

Table 11 shows the staff designated by each department for planning, management, and oversight of each department’s training programs. OFD currently dedicates the most staff resources to training, with 2.5 FTEs. At smaller departments, training officers by necessity have other management responsibilities.



Table 11: Current training management staff and cost

Department	Staff	Est Training FTE	Est Salary and Benefits*
AFD	Battalion Chief, not on shift duty**	1.00	138,814
	Division Chief	1.00	151,200
OFD	Captain	1.00	124,600
	Division Chief - EMS Trainer	0.50	75,600
NMFR	Assistant Chief	1.00	111,342
GCFD	0.50 Battalion Chief, on shift duty**	0.50	54,551
KKFD	0.12 Assistant Chief, on shift duty**	0.12	15,274
Total		5.25	671,381

* Salaries are based on current pay scales for each department. Fringe benefits are estimated at 40% of salary costs.

** "On shift duty" refers to command staff who work 24-hour shifts and are responsible for managing fire response and/or operations in addition to training programs.

Potential Areas for Collaboration

Based on the types of training and different models currently used by the five departments, we believe there may be merit in pursuing collaboration in the following training-related areas:

- Creating training performance benchmarks
- Coordinating online training
- Shared/traveling training for special teams/hazmat, drivers and operators, company trainings
- Support for company trainings through shared plans and materials
- Organizing multi-department training sessions
- Standardizing SOPs and SOGs to allow for greater training collaboration
- Expanding joint recruit training to more departments
- Supporting agreements for shifts in service areas or change of quarters between departments to accommodate off-site training

Potential Collaboration Models

Training Cooperative and IGAs

The training officers suggested that one potential step toward even greater collaboration would be the establishment of a formal Training Cooperative. Such an approach would require each member to take responsibility for one particular area (e.g. company training, technical rescue, health and safety, etc.) and agree to provide on-site training in that area to each participating department.

One advantage of a co-op approach is that it would reduce the scope of responsibility for individual training officers given that they would have only one or two areas of specific responsibility, which could free up time for other managerial tasks. Such an approach also would standardize training across departments. The main disadvantage is that it would limit specialized knowledge in each department. Negotiating and managing a cooperative endeavor also may be time consuming.

Under this approach or even as an immediate step, the departments may wish to formalize their training collaboration by establishing intergovernmental agreements (IGAs) that would allow for the



interoperability of training staff and facilitate participation in training by any participating department at any station in the region. Such an IGA also likely would include specifications for sharing training expenses, such as the cost of outside trainers, and submission of joint applications for grants to support training opportunities. IGAs also would address potential liability issues emanating from the conduct of joint training activities, such as damage to property, repair and replacement cost of equipment, and worker's compensation liability.

Regional Training Bureau or Regional Training Office

We also modeled two options for a more comprehensive merger of training functions. The first is a Regional Training Bureau (RTB), which would be an independent entity that would serve all five departments. Under this approach, we would envision a limited scope of services that would not fully replace the training function in each department (particularly with regard to company training). The Regional Training Office approach is a more comprehensive model with a larger staff that would assume much responsibility for training functions for participating departments.

Regional Training Bureau

To provide perspective on the fiscal impact of a hypothetical RTB approach, we modeled an RTB with 3.0 FTEs – one division chief, one battalion chief, and one lieutenant. There also would be non-personnel costs related to supplies, rent, etc. We assume the RTB would supplement and support training programs at each department. Based on the list of potential collaborative tasks above, the RTB would take on tasks like:

- Creating training performance benchmarks
- Organizing multi-department training sessions
- Standardizing SOPs and SOGs to allow for greater training collaboration
- Supporting agreements for shifts in service areas or change of quarters between departments to allow for off-site training.
- Support for company trainings through shared plans and materials

Training officers suggested that under this conceptual framework, RTB officers also could act as senior officers at the scene of large fires or other incidents for all five departments, as optimally several officers should be available to report to the scene of such incidents. There, they could fill roles related to safety, operations, and accountability. From a training perspective, participating at complex scenes also would give RTB officers an opportunity to evaluate the effectiveness of training of front-line staff and to identify any gaps in training.

Table 12 shows an estimated annual cost of \$436,000 to support our hypothetical RTB, while **Table 13** shows how that cost might be allocated to the five participating departments. Our allocation methodology uses each department's proportional share of total FTEs. (See Appendix A for a description of the allocation methodology.)



Table 12: Estimated annual cost of RTB

Position	Est FTE	Cost*
Division Chief	1.0	108,000
Battalion Chief	1.0	97,000
Training Lieutenant	1.0	85,000
Total Salaries		290,000
Fringe Benefits		116,000
Non Personnel Costs		30,000
Grand Total	3.0	436,000

*Salaries are based on AFD's pay scales. Fringe benefits are estimated at 40% of salary expenses.

Table 13: Hypothetical cost allocation, RTB

Department	Cost Allocation
AFD	\$123,600
OFD	\$146,775
NMFR	\$88,194
GCFD	\$50,676
KKFD	\$26,754
Total	\$436,000

The total cost of this model is less than the current cost of training, as shown earlier in Table 11. However, the RTB would not fully replace existing training activities and programs within departments as it would focus on higher-level planning and coordination. In addition, as described above, certain aspects of training are unique to each department. Consequently, a significant portion of the \$436,000 cost of an RTB may represent an additional cost to the five departments.

However, an RTB also could generate benefits to each. For example, the RTB would be able to offer more training resources while departments also could re-allocate portions of their existing training staff's time to other priorities. Greater standardization in training also could pay dividends during mutual aid responses or if one department is called to cover another department's station.

In evaluating an RTB from a financial perspective, chiefs and other stakeholders would need to consider how much of their current training workload could be transferred to the new entity. That question would be influenced by the tasks that would be consolidated under a centralized approach. Service-level consideration should focus on whether joint training might have a positive impact on firefighting and EMS effectiveness and on-scene coordination.

Regional Training Office

Our hypothetical model for a Regional Training Office (RTO) would house a full-fledged training staff and provide a far more comprehensive training program to departments than an RTB. We assume that the 4.5 FTEs that currently manage training for AFD, OFD, and NMFR would be merged into a single office, which would be housed in one of the larger departments. To add capacity to handle training for the two remaining departments, this model assumes an additional lieutenant and a driver/operating engineer to handle driver training. A half-time administrative support position also is included.



In contrast to the RTB model, this model assumes that a training office would handle most training needs for each department, including providing instruction and specialized training. **Table 14** shows the breakdown of positions and costs.

Table 14: Staffing and cost of regional training office

Staff	Est FTE	Cost
Assistant Chief	1.0	108,000
Battalion Chief	2.5	242,500
Captain	1.0	89,000
Lieutenant	1.0	85,000
Driver/OE	1.0	80,000
Admin Support	0.50	27,500
Total Salaries		632,000
Fringe Benefits		252,800
Non-personnel costs		20,000
Grand Total	7.0	904,800

Non-personnel costs for the RTO are estimated to be lower than in the RTB option because the training office would be housed in an existing department with existing administrative structures. Because the hypothetical office would meet almost all training needs for each department, a comparison with current costs is more appropriate than for the RTB model. Such a comparison shows there would be an estimated increase in collective costs for training of about \$233,000 annually, though service-level benefits also would be gained through greater training standardization, enhanced coordination, and possibly greater effectiveness.

Table 15 shows one hypothetical approach for allocating the cost of a regional training office using each department’s proportional share of total FTEs. It is important to note that under this approach, those departments that transfer positions to a training office would realize a savings in personnel costs, which would offset a share of their total allocated cost.

Table 15: Hypothetical cost allocation, RTO

Department	Allocated Cost	Current Cost
AFD	\$256,499	\$168,814
OFD	\$304,592	\$351,400
NMFR	\$183,023	\$111,342
GCFD	\$105,165	\$54,551
KKFD	\$55,521	\$15,274
Total	\$904,800	\$671,381

Summary

Each of the five Fox Valley departments invests considerable time and resources in training across a wide variety of topics. The departments already collaborate to some extent but they do cite some challenges to greater collaboration.

A reasonable next step may be to enhance existing collaborations through a cooperative agreement that divides responsibility for major training areas between existing training officers. This option has



the advantage of maintaining existing staffing within each department, although it may require added time spent on discussion and planning.

The RTB approach is modeled here as a supplement to existing training programs; it would address regional issues such as standardizing SOPs that might ensure better coordination and cohesion at the scene of major incidents where multiple departments are involved in the response. This approach also could reduce the time spent by existing staff on planning for joint and specialized trainings. The additional command staff also could serve as a resource at the scene of large fires or other incidents. The downside of this approach is that while it has potential to produce service-level improvements and free up some existing command staff time for other priorities, it also could result in an added cost for each department.

We also modeled a regional training office that would combine existing training staff with some additional staff and that would manage a larger portion of training for all five departments. This approach could be costlier but would likely create a more coordinated and effective training program for all. Under this approach, the three larger departments would transfer existing positions to the RTO and all departments would give up sole control of most of their own training activities.



COLLABORATION AREA #2: SPECIAL OPERATIONS

All five departments in this study are prepared to carry out special operations, including hazardous materials (hazmat) response and technical rescues. Technical rescues include several types of water rescues, confined space and trench rescues, structural collapses, and others (see box for more detail). The NFPA sets expectations for technical rescue operations and training, while hazmat response standards are set by the Wisconsin Department of Natural Resources and the U.S. Environmental Protection Agency.

All five departments train firefighters to an “awareness” level of response, meaning that personnel recognize when a special rescue is required and have enough knowledge to provide support at the scene. Individual firefighters also may obtain advanced training to gain certification as technicians, who have the skills and knowledge to coordinate and manage hazmat and technical rescues. Larger departments may designate teams of technicians who can respond to scenes of special operations.

Technical Rescue Definitions

Swiftwater – water moving faster than 1 knot

Rope – can be applied to many different environments

High angle/low angle – ropes rescue involving heights or slopes, such as bluff rescue

Confined space – silos, industrial vats, vaults. Confined spaces are permitted by OSHA and must designate a rescue agency, typically the local fire department.

Trench Rescue – rescue from a collapsed trench, typically in relation to construction sites

Structural collapse – catastrophic failure of a structure

Each county has its own coordinated approach to special operations and regional collaborations for such incidents are already organized through the Wisconsin Department of Emergency Management. For example:

- The Wisconsin Hazardous Material Response System coordinates regional responses to hazmat incidents in a way that is similar to MABAS. Local fire departments provide first response but each county also has a hazmat response team. AFD provides the county response team for Outagamie County and OFD serves in that role for Winnebago County. For more serious incidents, regional hazmat teams are activated. The Fox Valley is covered by the Northeast Regional Team, which is staffed by AFD, OFD, and Green Bay Fire. The state also contracts with AFD for radiological response.⁴ The state manages the mutual aid process, provides special and personal protective equipment to local departments, and funds the cost of hazmat response, including the cost to backfill employees who are deployed on a regional response.
- AFD, OFD, and NMFR are also participating members of the Wisconsin Urban Search and Rescue Task Force. This is a team that specializes in collapsed structures and confined spaces but also responds to natural disasters and other incidents, such as terrorist attacks.

⁴ The Point Beach nuclear power plant is located in Two Rivers, Wisconsin.



Similar to the Hazardous Materials Response system, responses of the Urban Search and Rescue Task Force are funded or reimbursed by the state.

Current Resources

While technical rescues require specialized equipment (detailed below), the heart of technical rescue response is staff training. This begins with company training in a variety of basic skills, such as rope skills.

Table 16 shows that all five departments train firefighters in seven types of technical rescue, but not all departments train in all additional types. In most cases, this is due to differing risks in each service area. For example, swiftwater rescue is only necessary around rivers while airport fire is a significant risk for OFD, but not for other departments. As noted above, company training ensures that firefighters are able to recognize a special operation scene and request appropriate support.

Table 16: Special operation training types

	AFD	OFD	GCFD	NMFR	KKFD
Rope			All		
Search and rescue			All		
Confined space			All		
Water/Ice			All		
Hazmat			All		
Active Shooter			All		
High angle/low angle	✓	✓		✓	✓
Swiftwater	✓			✓	✓
Trench	✓	✓		✓	✓
Structure collapse	✓			✓	✓
Radiological	✓	✓	✓		
Airport Fire	✓	✓	✓		
Dive team		✓		✓	

Firefighters who are certified as special operation technicians are valuable resources for each department. Technicians have additional training and knowledge that allows them to identify hazardous materials or to mitigate complex emergencies, and their advanced skills allow them to manage an incident and request appropriate support and other resources. **Table 17** shows the number of trained technicians by type of special operation for each department.



Table 17: Employees at the technician skill level

	AFD	OFD	GCFD	NMFR	KKFD
High angle/low angle	25			10+	3
Rope	25			10+	3
Search and rescue	85		40	10+	
Confined space	25		3	10+	3
Water/Ice	85	110	40	9	
Swiftwater	30			40	
Trench	15			10+	
Active Shooter	85	110	40		
Hazmat	25	19	8		7
Structure collapse	20			10+	
Radiological	10	19			
Airport Fire		110			
Dive team		14	1	8	

Finally, the larger departments have sufficient staff to organize designated teams for specific types of special operations. AFD is known for its proficiency in technical rescue and has organized teams around many disciplines. Some of those are also common to NMFR and OFD, including swiftwater, hazmat, and radiological. NMFR is the only department with a designated team for water/ice rescue. NMFR and OFD also both have organized dive teams, an area that is not covered by AFD.

Special operations also require specialized vehicles and equipment. A list for each department is shown in **Table 18**.

Table 18: Special operation vehicles

	Boats	Tech Rescue	Hazmat	ARFF	Other
AFD	1 14' Aluma craft 14' Zodiac	Semi heavy rescue 2 heavy rescue engines	2 hazmat trucks/trailers		4 ice water rescue suits
OFD	23' boat (County) Husky ice boat (County) Zodiac boat	Special Ops trailer Mass casualty response trailer	Regional hazmat response trailer Support trailer	2 large ARFF trucks Rapid response vehicle	UTV for ice Dive response, setup for 4 divers
NMFR	23' boat (County) Husky ice boat (County) Zodiac boat	Special response vehicle/trailer			UTV for ice 8 sets of swiftwater rescue PPE Dive response, setup for 4 divers
GCFD	Rapid Deployment Craft for ice and flat water rescue	Rescue engine Front line engines have water/ice suits and equipment and ballistic PPE			UTV for wildland and off-road EMS Confined space rescue equipment on one front line engine
KKFD	14' Zodiac 14' Aluma craft	2007 Pierce Heavy Rescue			UTV for wildland burns 4 swiftwater suits 6 sets of ballistic gear



Potential Areas for Collaboration

Based on discussions with the chiefs and other staff, we explored a cooperative model of special operations rather than more formal consolidation options. One reason for this decision is that regional collaborations are already in place and are funded by the state. Also, each department's special operations resources are valuable assets (both locally and to the region) and we found little appetite to reduce individual capabilities within each department.

In a cooperative model, each department would maintain its existing teams, programs, and training. Departments could explore mutual or automatic aid agreements for particular special operations responses and, more generally, could explore sharing of equipment, personnel, training, and resources. Those departments that do not function at the technical level would either provide operational support or coverage to other jurisdictions.

A cooperative model optimally would have each member provide a similar contribution in terms of resources and also receive a similar benefit. In other words, each department might be the designated response team for one or two types of special operations while receiving service from other departments for the remainder. If either obligations or benefits are lopsided, then some type of reimbursement mechanism may need to be developed for departments that have greater technical rescue capabilities. Reimbursement could be structured on a per-incident basis, or as an annual "membership" fee to participate in a technical rescue collaboration.

We asked each department to rank each type of technical rescue according to 1) frequency of occurrence within their service; and 2) overall risk given the characteristics of the department's service area. We asked about both measures because there may be infrequent events that would nonetheless have a devastating impact on life or property for which departments need to be prepared. Perhaps the best example of this would be a large radiological or hazmat incident.

Table 19 shows how each department ranked each type of special operation. We combined responses for the two categories to produce one overall ranking and in some cases adjusted for consistency (some respondents were more conservative than others in terms of ratings).

Table 19: Rankings of special operation types by frequency and overall risk

	AFD	OFD	GCFD	NMFR	KKFD
Swiftwater	High	Low	Med	High	High
Hazmat	High	High	Med	Med	High
Active Shooter	High	Med	High	Med	Med
Water/Ice	Med	High	Med	High	Med
Airport Fire	Low	High	Low	Low	Low
Dive Team	Low	High	Low	High	Low
Search and rescue	Med	Med	Med	Med	Med
Confined space	High	Low	Med	Low	Med
Structure collapse	High	Low	Med	Low	Low
High angle/low angle	Med	Low	Med	Low	Low
Rope	Med	Med	Med	Med	Low
Trench	Low	Low	Med	Low	High
Radiological	Med	Low	Low	Low	Low



Based on each department's responses, we can begin to identify some areas where technical rescue specialization by department may make sense. For example, because AFD ranked confined space and structural collapse as high-need relative to the other departments, and because it also has designated teams for these types of technical rescue, that department would be the logical entity to house those capabilities for the entire region. Water/ice rescue was ranked highly by NMFR compared with AFD and GCFD, so it might be the designated specialist in that area; both OFD and NMFR have dive teams, so one of those departments could assume that specialty; and trench rescue was ranked higher by GCFD than other departments so it potentially could provide that response capability for the region.

While this cursory analysis is a good starting point for discussion, it is important to note a couple of caveats:

- Response time is an important factor. Certain special operations require immediate response, such as swiftwater or active shooter/TEMS medic, and may not lend themselves as well to regional specialization due to geographic distances.
- The size of the response also varies by type of rescue. Structure collapse and swiftwater rescues, for example, require a large number of responders, while confined space generally requires fewer response personnel.

Summary

Chiefs and other staff we interviewed generally agree that some level of specialization and regional sharing for certain types of special operations makes sense and would be mutually beneficial. If this approach is implemented, departments hosting specialized teams might still allow participation by personnel from other departments to maintain some level of expertise across all departments. For example, while AFD may host the regional team for structural collapse, firefighters from other departments could still train with the team and respond region-wide.

In addition, because hazmat is a very broad area of response, departments may wish to consider regionalizing only specific types of hazmat responses. That would ensure that each department maintains a sufficient general hazmat response capability.



COLLABORATION AREA #3: COMMUNITY RISK REDUCTION

Each of the five Fox Valley departments conducts a variety of community risk reduction (CRR) activities. These include enforcement of fire code regulations through regular inspections of commercial properties as well as investigations of fires after they occur. Departments also provide public education on fire safety and more general health and safety issues, such as proper installation of car seats, fall prevention for seniors, water safety, etc.

Inspections are a part of daily operations at each fire station. In addition to ensuring public safety, they give firefighters a chance to become accustomed with the layout of buildings in their jurisdictions, the presence of any hazardous chemicals located at various sites, and the location of Knox boxes which allow for easy access to a building in the case of emergency. All firefighters in each of the five departments have some involvement with inspections, although AFD has two civilian inspector positions and NMFR has six firefighters who specialize in inspections. Also, more complex inspections (such as for industrial facilities) or follow-up inspections generally are delegated to specialized personnel or officers.

Fire investigations occur infrequently but are an important CRR function for any department, as they help to identify improvements needed for fire safety. As such, investigations can inform public education and community risk reduction, as well as other areas of concern.

Public education is similar to inspections in that departments have personnel who specialize in education activities, but those activities also are supported by front-line staff. A common component of public education is programming for elementary schools, but broader community risk reduction activities include programs that focus on specialized populations, such as college students living in dorms, seniors at risk for falls, recreational swimmers, etc. These activities also bolster community relations for fire departments.

Current Resources

Table 20 shows the number of inspections, investigations, and public education events reported by each department in 2019. It is not surprising that the larger departments serving larger service areas conduct the most inspections. Variations in the number of investigations and public education events is likely due to different interpretations of data rather than significant differences in the incidence of major fires or education programming.

Table 20: 2019 inspections, investigations, and public education events

	2019 Inspections	2019 Investigations	Public Ed Events 2019
AFD	4,030	40	188
OFD	3,431	39	413
NMFR	3,006	62	789
GCFD	2,588	42	108
KKFD	1,121	12	50

Source: WPF Survey, 2022



Table 21 shows how each department staffs the inspections/investigations and public education functions in terms of oversight and staff who are assigned exclusively to these functions (based on number of FTEs dedicated to the function). The table does not include regular hours spent by firefighter personnel on these activities.

Table 21: Staff dedicated to CRR functions*

Department	Position	Insp/Inv FTE	Public Ed FTE
AFD	Battalion Chief	0.66	0.34
	Fire Protection Engineer	1.00	
	Fire Inspector	1.00	
OFD	Captain	1.00	
	Community Program Coordinator		1.00
	Asst Chief	0.20	
NMFR	Asst Chief	0.66	0.34
GCFD	Asst Chief	0.30	0.20
	Battalion Chief	0.40	0.10
KKFD	Asst Chief	0.10	0.05
Total		5.32	2.03

* NMFR and AFD employ firefighters who do inspections during the day but are scheduled on 24-hour shifts. Also, AFD has four firefighters with certification to conduct fire investigations, while OFD has one firefighter who also has this certification. KKFD uses state investigation resources. GCFD has two firefighters in addition to the battalion chief who are certified fire investigators.

Based on these staffing totals, **Table 22** shows estimated annual salary and benefit costs dedicated to these three functions by the Fox Valley departments. Since the investment in fire investigations is a relatively small amount, it is combined with the cost of inspections in the table. Again, this table does not include the time spent on inspections or public education by line staff as part of regular shift duties. Also, it should be noted that in four of the departments, an assistant chief is responsible for management oversight of these programs. This is one of several roles for assistant chiefs.

Table 22: Estimated personnel costs for community risk reduction activities

	Inspections	Public Education	Total
AFD	298,942	46,127	345,070
OFD	153,440	105,000	258,440
NMFR	74,455	38,356	112,812
GCFD	80,042	35,177	115,220
KKFD	12,728	6,364	19,092
Total	619,609	231,026	850,635

*NMFR does most public education with off-duty firefighters at an overtime cost of \$15,000 per year.

Most of the departments maintain inspection vehicles. Also, NMFR owns a trailer which is used for elementary school programs while OFD has a public education van with training props and materials. OFD also has a fire safety trailer, otherwise known as a “smoke house.”



Potential Areas for Collaboration

As described above, a large part of the workload associated with inspections and education is conducted by firefighters during their regular shifts. Consequently, even under new service sharing arrangements, major portions of those duties logically would remain with individual departments. However, it would be logical to consider regional collaboration for fire investigations given that they are relatively infrequent and require specialized staff. In addition, a regional approach for repeat or complex inspections, such as for industrial facilities or new businesses, might be considered.

With regard to public education, collaboration on specialized elements might be considered, such as:

- Planning and curriculum
- Public Information Officer role – including social media, press, etc.
- Special educational programs
 - College dorm safety
 - Seniors – fall prevention, etc.
 - Juvenile fire starters
 - Water safety
- Other community risk reduction activities
 - Vaccine clinics
 - Car seat/bike helmet checks
 - CPR and First Aid classes
 - Fire extinguisher training
 - Stop the Bleed training

Potential Collaboration Models

The five Fox Valley departments have a clear opportunity to enhance collaboration around CRR by sharing educational resources. For example, the departments could work together to develop public education curricula and materials for school programs. Departments also could share instructors and equipment for community programs, such as CPR and fire extinguisher training.

If the departments wish to consider more comprehensive options, then we would suggest that they consider the possible creation of a regional bureau focused on fire investigations and complex inspections, or a larger bureau that would add public education and public information functions.

Inspection and Investigations Bureau

Under this model, a regional bureau would handle all fire investigations and more complex inspections for the five departments. Responsibility for routine inspections would be retained in individual departments. Each of the departments also could assign officers to the bureau for a limited time to give department staff the opportunity to gain experience in both investigations and inspections. Similarly, officers within individual departments who have investigations training could be included in certain fire investigations so that expertise is shared across departments.

We developed a hypothetical staffing model for such a bureau and show the positions and costs in **Table 23**. We envision three full-time investigator/inspection positions plus an administrative support position. The estimated cost of \$496,000 also includes \$20,000 for non-personnel items.



Table 23: Staffing and estimated costs for hypothetical Inspection and Investigations Bureau

	Annual Cost
Asst Chief/Fire Investigator	108,000
Batt Chief/ Inspector	97,000
Inspector	80,000
Rotating Departmental Personnel	-
Admin Support	55,000
Total Salaries	340,000
Fringe Benefits	136,000
Non-Personnel Costs	20,000
Grand Total	496,000

The annual cost could be allocated to the five departments in various ways. **Table 24** shows one possible approach, which would use two evenly weighted factors: each department’s volume of inspections and its service population for fire response only (see Appendix A for additional detail). The table also shows how the total and individual costs of the bureau would compare to each department’s current costs for inspections and investigations.

Table 24: Hypothetical cost allocation for Inspection and Investigations Bureau

Department	Allocated Cost (4.0 FTE)	Current Cost (5.45 FTE)
AFD	\$155,122	\$298,943
OFD	\$134,767	\$153,440
NMFR	\$100,527	\$74,455
GCFD	\$68,677	\$80,042
KKFD	\$39,908	\$12,728
Total	\$496,000	\$619,609

While this table would appear to show a cost savings, it is important to note that the 5.45 FTEs currently dedicated to inspections and Investigations across the five departments likely would not be eliminated, as most are command staff with other assignments. Consequently, the only real “savings” may be the ability to free up time of senior command staff for other department priorities, unless sufficient workload is eliminated from one or more command positions to allow them to be eliminated or consolidated.

For larger departments, the question is how much of the workload relating to inspections and investigations can reasonably be entrusted to a regional bureau and whether that shift may positively impact other departmental operations and potentially reduce personnel costs. For smaller departments, the cost of a regional bureau also is unlikely to reduce existing salary costs, but it does offer access to higher levels of expertise in both inspections and investigations.

Regional CRR Bureau

A second model would create a full regional CRR Bureau by adding public education and public information functions to the model described above. This model includes the positions from the



smaller bureau and adds an education coordinator and a public information officer, as shown in **Table 25**. We show how costs might be allocated using the same factors outlined above in **Table 26**.

Table 25: Staffing and estimated costs for hypothetical CRR Bureau

	Annual Cost
Asst Chief/Investigator	\$108,000
Batt Chief/Inspector	\$97,000
Inspector	\$80,000
Rotating Departmental Personnel	
Education Coordinator	\$65,000
PIO	\$80,000
Admin Support	\$55,000
Total Salaries	\$485,000
Fringe Benefits	\$194,500
Non-Personnel	\$30,000
Grand Total	\$709,000

Table 26: Hypothetical cost allocation for CRR Bureau

	Allocation	Current
AFD	221,736	345,071
OFD	192,641	258,440
NMFR	143,697	112,812
GCFD	98,169	115,220
KKFD	52,757	19,092
Total	709,000	850,634

While Table 26 suggests that departments may realize some savings from a CRR Bureau, each would need to consider the responsibilities that could be transferred to a regional bureau and what workload, staffing, and costs would remain. To the extent that existing departmental personnel could be transferred to the bureau, such as fire inspector or community program educator positions, departments would realize offsetting savings. There was consensus among the five chiefs, in particular, that having a shared public information officer would benefit all departments.

One advantage of the larger bureau that includes public education is the potential to expand community risk reduction programs. As described above, community risk reduction involves much more than school presentations. Joining forces to fund dedicated public education positions could offer more robust programming that could yield public safety benefits – and perhaps even reduced call volumes – in the future.

Summary

While routine CRR activities (with the possible exception of investigations) logically would be retained by each individual Fox Valley department, collaboration opportunities exist with regard to specialized functions and broader public education. The creation of a regional bureau to handle some or all of these activities collectively for the five departments may yield benefits in terms of creating higher levels of expertise and knowledge across the board (particularly for the smaller departments) and freeing up time for some senior staff to address other priorities. However, because creation of such a bureau would be unlikely to yield an opportunity for staff reductions within individual departments, there likely would be an added cost that would need to be weighed against these potential benefits.



COLLABORATION AREA #4: FLEET MAINTENANCE

A fire department’s ability to appropriately maintain its fleet of vehicles is central to its operations. To arrive at a fire and be unable to generate sufficient water pressure or to have apparatus malfunction would be disastrous. Fleet maintenance activities include regular or scheduled maintenance, emergency repairs, and extensive testing of pumps, hoses, and other equipment located on apparatus. The NFPA specifies appropriate standards for the conduct of fleet maintenance activities.

Reserve engines are another important component of fleet operations, since they allow for front line vehicles to receive regular (and emergency) maintenance without reducing the department’s response capabilities.

Current Fleet Resources

Table 27 shows the vehicle fleets of each department by general vehicle categories. Conventional pickup trucks or cars, such as those used as inspection vehicles, are not included for the sake of simplicity. As the only departments that provide ambulance transport, OFD and KKFD are the only ones that own and maintain ambulances.

Table 27: Fire department fleets

	AFD	OFD	NMFR	GCFD	KKFD
Engine	5	5	4	2	2
Ladder Truck	1	1			1
Quint	1	1	1	1	
Heavy Rescue	1				1
Light Rescue	1				
Ambulance		7			2
HazMat	2				
Boat	1	1	2		2
Other Specialty	2	3	2		
Command	2	2	1	4	1
Tender				1	
Reserve Engines	2	2	1	2	
Reserve Ambulances		2			1
Reserve Truck		1			

Table 28 shows how each department manages fleet maintenance and cites capacity challenges noted by chiefs. It is noteworthy that AFD, OFD, and GCFD all reported that their municipal garages have reached capacity in terms of their ability to handle fire vehicle maintenance needs.



Table 28: Fleet maintenance service models and challenges

Department	Service Model	Capacity Challenges/Notes
NMFR*	4 fire department mechanics on shift	Have some space in Station 35
GCFD	Town DPW	At capacity, having to outsource work although another half-time mechanic position was approved in the 2022 budget
OFD	City DPW	Have 4 trained mechanics but having staffing issues
AFD	City DPW	Dedicated mechanic who works out of fire station; at capacity
KKFD	Outsourced	

* NMFR has four mechanics who work 8-hour shifts as part of their 24-hour firefighting shift.

Table 29 shows the past three years of expenditures for fleet maintenance according to departmental budgets. Combined, we estimate that the five departments spend about \$656,000 annually to maintain and service their fleets.

Table 29: Fleet maintenance expenditures, 2019 - 2021

	2019 Actual	2020 Estimate	2021 Budget
AFD*	\$177,032	\$194,076	\$194,126
OFD	\$190,308	\$182,600	\$170,600
NMFR**	\$203,656	\$205,510	\$205,510
GCFD	\$51,727	\$41,132	\$53,740
KKFD	\$32,028	\$27,800	\$32,500
Total	\$654,751	\$651,118	\$656,476

* AFD's charges from the Central Equipment Agency are adjusted to remove fuel expenses.

** The amount shown for NMFR is a calculated amount based on 1.4 FTEs plus additional costs shown in the budget. NMFR has four mechanics who work 8-hour shifts as part of their 24-hour firefighting shifts. We estimate that is the equivalent of 1.32 FTEs when accounting for leave and training. NMFR also has two assistant mechanics who work as needed, which increases the estimated FTEs to 1.4.

Finally, to be able to consider alternative service models, we need to convert the time spent by departmental and non-fire department personnel to FTEs.⁵ Table 30 shows that currently, the five departments collectively devote an estimated 4.2 FTEs to maintain fire department apparatus.

Table 30: Fleet maintenance staffing

	Labor Hours	Estimated Mechanic FTE
AFD	2,356	1.13
OFD	2,509	1.21
NMFR	2,912	1.40
GCFD	541	0.26
KKFD	420	0.20
Total	8,738	4.20

⁵ We described in the footnote to Table 29 how FTEs were calculated for NMFR. For the other departments, we divided labor hours of non-departmental personnel into fleet charges (net of fuel and capital expenses) to derive number of labor hours charged to the fire department. Those hours are divided by 2,080 to determine FTEs. Also, Oshkosh and Appleton have central garages that have an hourly rate for labor. In Oshkosh, that rate is \$68/hour.



Potential Areas for Collaboration

Our discussions with the chiefs and fleet maintenance personnel yielded several potential options for greater collaboration and/or consolidation of fleet maintenance in the Fox Valley. Below, we first discuss creation of a shared fire maintenance garage and then briefly explore the possibility of expanding the capacity of NMFR to handle fleet maintenance for other departments. We selected NMFR because it is the only department that currently appears to have such capability. We also consider a scenario in which the departments would collectively outsource fleet maintenance to a third-party contractor. Finally, we discuss some options for creating a combined reserve fleet and how such a change could be structured.

Shared Fire Maintenance Garage

While the five departments currently devote a combined total of 4.2 FTEs to fleet maintenance, we assume that number could be reduced slightly to 4.0 FTEs under a shared garage framework given efficiencies tied to consolidation. Our modeling therefore assumes 4.0 mechanics, though we also assume a support position to help coordinate work and do billing, etc. The projected personnel costs are shown in **Table 31**.

Table 31: Estimated personnel costs for shared garage

	Salary	Salary/Benefits
Lead Mechanic	\$90,000	\$126,000
Mechanic	\$80,000	\$112,000
Mechanic	\$80,000	\$112,000
Mechanic	\$80,000	\$112,000
Admin Support	\$50,000	\$70,000
Total		\$532,000

In addition, costs for parts, utilities, rent, supplies, and other miscellaneous items need to be considered in estimating the cost of a regional garage. We estimate that “overhead” cost by examining the cost structures of the OFD and AFD central garage operations. Excluding the cost of fuel and capital depreciation, the overhead expense is between 84% of total personnel costs (OFD) and 94% (AFD). Using those multipliers, the additional cost of operating a central fire vehicle garage would reach approximately \$1 million.

When we compare this rough estimate to current combined costs of about \$650,000, it appears that there would be no financial benefit to consolidating garage functions. However, it is important to note that even though the overall staffing of both models is similar, it is the overhead that appears to make a central garage more expensive. To a large extent, these overhead costs are now either being spread out over municipal-wide operations (for all but KKFD, which outsources) or otherwise subsidized in each municipality’s budget. It is possible that creation of a shared garage would allow individual municipalities to experience offsetting overhead savings, but we are not able to determine whether that would be the case within the scope of this analysis.

One potential benefit of a consolidated garage would be greater staffing expertise given that fire vehicle maintenance would be the sole responsibility of garage personnel. It is also possible that the dedicated fire vehicle staff could be more efficient and produce quicker turnaround times for maintenance and repairs given their singular focus. Consequently, the fact that overhead costs



appear to make this option more expensive should not necessarily preclude its consideration, and the Fox Valley departments may wish to analyze the overhead issue in greater detail if they find this option attractive from a service-level standpoint.

Regional role for NMFR

A second option is for one of the larger departments to provide garage services on a contract basis to one or more other departments. NMFR would be the most likely department to take on this role since it directly manages its fleet maintenance services and is the only department that reported available facilities or capacity to take on additional workload at this time. KKFD and GCFD, in particular, may want to discuss with NMFR the possibility of a service contract for some or all types of fleet maintenance given their smaller volumes of work.

Should there be interest in pursuing this option, then the fiscal impact would be determined by NMFR's billable rate and how that compares to current costs for the departments interested in contracting. Optimally, NMFR's charge would be lower than each department's current cost because of its ability to absorb a sizable portion of the work into its existing staff capacity. Other considerations would be how to develop an equitable approach for prioritizing work between departments and what the potential turnaround time for fleet maintenance and repairs would be.

Collective fleet maintenance outsourcing

Finally, some chiefs suggested exploring a scenario in which all five departments would collectively bid out their fleet maintenance to a private vendor. This may produce a financial savings given that a private sector vendor may have the ability to absorb the work into its existing capacity and/or may have cost advantages linked to size and flexibility. Also, if the five departments collectively bid out the service, then the larger volume may produce savings when compared to outsourcing alone.

It also must be recognized, however, that when services are contracted, there is a need for contract management and oversight that would add to the cost. There also may be greater risk, as if the contractor does not perform acceptably or goes out of business, then departments may find that the capacity within municipal garages is gone and would have to be rebuilt within tight budgets.

Options for sharing reserve engines

The five departments currently maintain eight reserve engines. A consolidated approach to reserve vehicles offers the possibility of reduced maintenance and replacement costs if the total number of reserves can be reduced. That would appear to be a realistic possibility given that reserve vehicles often are not in use, which makes them available for sharing.

We would suggest, that the five departments reasonably could operate with six reserve engines on a collective basis – one specifically designated for each department and one additional engine. This may be a conservative conclusion and a review of usage data on reserves may suggest that further reductions in reserve engines would be justified.

Cost allocation for a shared engine reserve fleet could be based on usage or some initial “membership” amount that would be equal for all departments (with the remainder allocated based on usage). If the five departments decide to share a reserve fleet, then it also would make sense for maintenance to be provided jointly, either through one of the fire departments or a vendor. Those costs could be allocated on a similar basis.



A primary benefit of a shared reserve fleet, in addition to the potential for financial savings, is its greater guarantee for all departments that a reserve engine would be available when needed in light of the larger fleet. Currently, limited reserve fleets at individual departments occasionally require departments to borrow reserve vehicles from others. Lending and borrowing of reserve engines now happens informally and chiefs suggested that more formal agreements that address liability issues would be beneficial if a shared fleet is not pursued.

There also would be logistical considerations that would need to be worked out. For example, the ownership of reserve vehicles in a shared reserve fleet would need to be considered, as well as how to share financial impacts. It would be logical to assume that initially, the reserve fleet would be built via donations of existing reserve engines to the shared fleet. Given that two or more engines would not be needed and potentially could be sold, how to allocate the financial benefit of doing so also would need to be considered.

Likewise, the reserve fleet could be kept up to date as older active engines are replaced by individual departments, which would then donate the engines to the reserve fleet to replace even older reserve vehicles. Financial considerations regarding those transactions also would need to be agreed upon by the five departments.

Summary

While a complete consolidation of fleet maintenance may be financially impractical, there are a few less comprehensive options that could benefit some or all of the Fox Valley fire departments. One is for NMFR to provide fleet maintenance services for the smaller departments and in particular KKFD, which now uses a private vendor but might possible get a better rate from NMFR.

A shared reserve fleet would be a first step towards greater collaboration in this area. Given that departments already borrow reserve vehicles from each other, a more coordinated program would provide a dependable supply of reserve vehicles. If the departments do move forward with sharing of reserve vehicles, then it may make sense to house that program at NMFR, which has garage capacity and its own mechanics.



COLLABORATION AREA #5: EMS QUALITY CONTROL & OVERSIGHT

As discussed in an earlier section, all five of the Fox Valley departments provide both fire protection and emergency medical services (EMS), although there are differences in the types and levels of EMS provided. For example, while all provide basic emergency medical response, two of the five departments are not licensed to provide a paramedic level of service and three of the five rely on a private ambulance company to provide medical transport from the site of an incident to the hospital.

The level and type of EMS that a department is licensed to provide has a bearing on staffing levels and apparatus. Calls for EMS occur several times a day and while they typically require fewer responders than fire calls, they often occur simultaneously.

Current Resources

Table 32 shows EMS license levels (see box on page 8 for definitions) and transport capabilities for the five departments. KKFD and OFD provide both a paramedic level of service and transport. Both OFD and KKFD also provide contracted paramedic transport for several surrounding towns. In the remaining municipalities, first response comes from fire departments (though GCFD is able to provide a paramedic level of care at the scene) and transport is provided by Gold Cross Ambulance.

Both of the county dispatch centers that serve the five departments also provide Emergency Medical Dispatch (EMD). Under EMD, dispatchers are able to evaluate the call and assign an acuity level. Departments can generally match their response to EMD levels, perhaps sending only an engine for low-acuity incidents. If there is a delay in assigning a level to an incident, however, departments will send both an ambulance and an engine.

Table 32: Current EMS licensing and transports

Department	EMS Level	Transport
AFD	EMT Basic (plans for paramedics by 2024)	No
OFD	Paramedic	Yes
NMFR	EMR	No
GCFD	Paramedic	No
KKFD	Paramedic	Yes

From a financial perspective, an advantage of providing ambulance transport is the opportunity to recover reimbursement from public or private health insurance entities to offset some or all of the cost. Conversely, EMS responses that do not involve a transport typically are not subject to any type of medical reimbursement.

However, those departments that transport patients also incur additional expenses, including the need to pay somewhat higher wages to paramedics on their staff and purchase and maintain ambulances. OFD replaces its ambulances every three years and this level of vehicle replacement is a significant expense. In addition, because departments that provide transport have longer average times per call, their staffing needs may be higher.



Another important consideration is that paramedics need regular practice to maintain their skills. Having too many paramedics in an area can limit the ability of each paramedic to obtain adequate experience. In other areas of the state, we have found that this can lead to turnover as paramedics seek opportunities to use their advanced life support skills. At the same time, paramedics who handle high volumes of calls on a daily basis can experience burnout.

All five departments designate either an assistant chief or battalion chief to provide oversight, quality control, and training for their EMS function. Because EMS oversight is only one of several areas of responsibility for those positions, most departments could only estimate the amount of time dedicated to EMS compared with other functions. OFD and KKFD each have a division chief dedicated to EMS. OFD also has three half-time EMS coordinators.

EMS operations also are guided by medical directors at each of the five departments. These medical directors advise the department on a contractual basis and are employed elsewhere in a medical practice. Medical directors credential EMS personnel, provide continuing education, and set standards and protocols. They also are responsible for quality control and system improvement. In the Fox Valley, GCFD and KKFD share a medical director, and two of the remaining medical directors work for the same practice.

Potential Areas for Collaboration

While the differences in EMS service levels and models make collaboration less practical than for other fire department functions, there are still some potential steps that could be taken by the Fox Valley departments to foster greater coordination. Those include the sharing of data collection and analysis; consolidating medical direction; and agreeing to a common set of EMS protocols that could help to lay the foundation for a regional EMS system. It is also worth noting that AFD plans to move to a paramedic license level within the next few years, at which time four of the five departments will be licensed at that level and prospects for greater collaboration will improve.

Data collection is a prerequisite for evaluation and improvement of the EMS system. Currently, four of the five departments use the same data collection and reporting system. Some of the ways that data can be harnessed to address system performance include:

- **Information sharing and enhanced data analysis.** In our interviews, several chiefs noted that sharing insights based on trends or best practices would benefit all. Some of the areas discussed were best practices for drug overdoses, COVID protocols, use of personal protective equipment (PPE), improving heart attack and stroke survival rates, etc.
- **Quality assurance.** The medical directors rely on data to ensure best practices and to continually improve pre-hospital care. Taking these steps on a regional basis may be beneficial given that health care services and needs transcend municipal boundaries.
- **System improvement.** By looking at data on a regional basis, EMS leaders may be able to identify potential larger system improvements. For example, evaluation of response time data may lead to different dispatching approaches, such as a “closest unit response” framework in which a response or back-up comes from the closest unit regardless of jurisdiction.



Another way to begin to move towards a regional, collaborative EMS system would be to consolidate medical direction under one or two physicians. Doing so could ensure that areas like training, performance management, and performance expectations are conducted consistently across the departments.

Consolidation of the medical direction function also could pave the way for adoption of shared protocols, which would be an additional step toward a more coordinated regional EMS approach. A common set of protocols not only could ensure more seamless coordination at the scene of mutual aid incidents, but it also could create opportunity to cross-credential personnel between departments. This would allow paramedics from one community to respond to more calls in other jurisdictions, thus enabling them to keep up their skill levels. In fact, one of the chiefs suggested that paramedics in departments that do not do their own transport could take shifts with OFD or KKFD to get more hands-on experience.

A longer-term goal of collaboration could be to accommodate expanded use of community paramedicine, an emerging practice in which fire department paramedics expand their reach into the community to provide case management and follow-up treatment to individuals who are frequent users of 911. This practice can reduce call volumes and hospitalizations and also can improve outcomes for chronically ill residents.

For the past two years, GCFD has been participating in a pilot community paramedicine program that has allowed department personnel to connect residents with programs that provide food, medication, and transportation to doctor's appointments. GCFD has also expanded the role of paramedicine into fall prevention programs for the elderly and efforts to address hoarding. Implementation of community paramedicine initiatives would be best supported by a stronger regional system, regular planning, system evaluation, etc.

Potential Next Steps

There are many ways that the departments could initiate discussion about some of the possibilities mentioned above, which hold potential to improve EMS service delivery and quality across the region. One possible next step would be to develop a formal intergovernmental agreement that would guide the creation and activities of a regional EMS committee to oversee EMS quality and coordination. The committee might consist of senior EMS officials from each department, medical directors, county emergency management and public health officials, representatives from private sector health care entities, and other stakeholders. This formalized committee would evaluate EMS systems, operational policies, guidelines, and protocols and make suggestions to the medical directors. The committee also could review equipment and practices and help to identify system problems that may adversely impact patient care or system operations.



CONCLUSION

Our analysis of enhanced service sharing opportunities for the Appleton, Grand Chute, Kaukauna, Neenah-Menasha, and Oshkosh fire departments has found several potential opportunities to build on the strong framework of collaboration and cooperation that currently exists between the five departments. However, as was the case with many of the other fire and EMS service sharing studies we have conducted over the past several years, a key takeaway is that these opportunities are geared more toward enhancing the quality of service than reducing fire department expenditures.

For example, we find that regionalizing services in areas like training, community risk reduction, and fleet maintenance by creating regional bureaus with dedicated staff could produce greater coordination, capacity, and effectiveness, while also freeing up some existing staff resources for other activities. However, there would be an added cost because the creation of shared regional staff positions would not allow departments to eliminate existing staff positions in most instances.

In the two other areas where we saw the greatest potential for enhanced collaboration – special operations and EMS quality control and oversight – we suggest that rather than looking at a regional bureau model, the five departments instead should consider less comprehensive means of sharing resources. Examples would be to designate specific departments to take responsibility for certain special operations activities on behalf of all five, and forming a regional committee with participation from each department and their medical directors to oversee EMS data collection and standardize EMS protocols.

Within each functional area we considered, we present options that would allow the departments to “start small” and build over time toward more comprehensive collaborations that would be more expensive and require extensive negotiations on cost sharing and implementation. It is also important to note that options we discuss for each functional area could be implemented simultaneously and in a coordinated and prompt manner. In fact, the five departments could get started right away by:

- **Negotiating intergovernmental agreements (IGAs) to solidify existing “handshake” arrangements that exist in several functional areas.** Formal agreements could clarify both operational and liability concerns where collaboration already has been initiated. One example would be to formalize procedures under which departments loan vehicles to one another to address terms of loans and potential liability issues such as damage to property, repair and replacement costs, and employee injuries or property damage. Another would be to formalize mutual and automatic aid agreements for certain special operations responses where cooperation already occurs, including specifics on how equipment, personnel, training, and other resources will be shared among the five departments when such responses are required.
- **Negotiating intergovernmental agreements that will allow for the interoperability of existing resources.** An example here could be in the area of fire investigations, as the departments could seek to immediately share fire investigators by negotiating an IGA to cover standardized qualifications/training for fire investigators, cross-jurisdictional authority, shared equipment, call-out rotation and compensation, and employee injuries. A similar agreement could be reached to allow for the interoperability of training staff and the ability to share expenses for outside speakers and instructors as well as jointly apply for grant opportunities. Such an IGA also could



address any liability issues such as damage to property, repair and replacement cost, and employee injuries that occur during training.

On the other end of the spectrum, should the five departments and the municipalities that house them ultimately wish to “go big,” then they might consider a single Fox Valley Fire Resources Bureau to regionalize the large array of support or specialized services that are addressed in this report. An independent bureau of this nature could be governed by a board that has representation from each municipality and funded by a single cost allocation approach. It could manage or provide all or some of the services associated with each of the functional areas we discuss, as well as look for opportunities for new forms of regional collaboration.

Finally, we would note that training has been a primary focus of this study, as it is central to the effective operation of any professional fire/EMS agency and transcends the various functional areas. If the Fox Valley Departments wish to start with one area, then we would suggest training and, more specifically, building on their existing work with regard to joint recruit academies and the revision and standardization of SOPs. Fortifying joint training and SOPs could be stepping stones themselves to pursuing greater cooperation in areas like special operations and EMS.

Overall, it is clear that the five departments already work well together, while their experience with COVID-19 has made it even more evident that there is value in considering their operations in a more regionalized fashion. We would suggest they start with the relatively simple steps we have outlined to formalize service sharing where it is already budding or occurring, and then consider more concrete options as the benefits of enhanced cooperation can be measured and delineated, and as areas that require more extensive planning and negotiation become more pronounced.

Intergovernmental cooperation can be time consuming and requires an investment of resources even in the initiation phase. Yet, our previous work on service sharing has demonstrated to us that it is worth the investment, particularly in regions like the Fox Valley where trust and positive working relationships already provide a foundation for doing more.



APPENDIX A: ALLOCATION METHODOLOGIES

Expenses related to training initiatives were allocated using proportional shares of total FTEs, as shown in the table below.

	FTE	Percent
AFD	96.00	28.3%
OFD	114.00	33.7%
NMFR	68	20.2%
GCFD	39.36	11.6%
KKFD	20.78	6.1%
Total	338.64	100.0%

In the case of Community Risk Reduction expenses, two allocation measures were used: the number of inspections performed by each department and total population served (fire only). These measures were averaged and the resulting allocation is shown in the last column of the table below.

	Inspections	Percent of Total	Population	Percent of Total	Average
AFD	4,030	28.4%	75,644	34.1%	31.3%
OFD	3,431	24.2%	66,816	30.1%	27.2%
NMFR	3,006	21.2%	42,854	19.3%	20.3%
GCFD	2,588	18.3%	20,919	9.4%	13.8%
KKFD	1,121	7.9%	15,462	7.0%	7.4%
Total	14,176	100.0%	221,695	100.0%	100.0%

