



Town of  
**McCandless**  
PENNSYLVANIA



COURTESY, TOWN OF MCCANDLESS

# Evaluation of Fire Services Delivery

**FAST ATTACK**

Fire Services Training & Consulting  
November 20, 2023

## **Executive Summary**

This *Evaluation of Fire Services Delivery* for the Town of McCandless, Allegheny County, Pennsylvania, was conducted by Nicholas Sohyda, Executive Fire Officer, and Fire Services Consultant, at the request of the of the McCandless Town Council.

An analysis of the information collected has resulted in the conclusion that the consolidation of the Town's three fire companies would address several issues identified in the SWOC (Strengths, Weaknesses, Challenges, Opportunities) analysis and improve communications and efficiency. Two of the three volunteer fire companies are having difficulty recruiting newer, younger members; weekday response is inconsistent and unreliable; and there is a lack of trust and standardization amongst the three companies. To facilitate the consolidation process, provide for a common vision and consistency in service delivery, and to allow the Fire Marshal to focus on the core responsibilities identified in the Town Code, it is recommended the Town hire a full-time, paid fire chief. The fire chief would oversee the operations of the volunteer fire companies, provide the fire companies with a seat at the table with the local government, advise Town Council in reference to future needs for additional staffing, assist with recruitment and retention, recommend equipment purchases, and serve as the Town's Emergency Management Coordinator.

In addition, the consultant recommends the creation of a weekday staffing program that includes paying existing volunteers a stipend to provide weekday staffing, a pay-per-call program to reimburse volunteers for responding to calls, and the implementation of an aggressive recruitment and retention program. The overall goal of these recommendations it to sustain the volunteer fire services delivery model by providing administrative and operational support, providing incentives for individuals to volunteer, and allowing volunteers to focus more time on training and responding to calls as opposed to worrying about station and equipment maintenance and administrative duties. In turn, the residents should see an enhanced level of service through the cooperation, standardization, cost-efficiency, and collective vision of a single McCandless Fire Department.

A total of eleven (11) recommendations are provided throughout this report, along with recommended outcomes and implantation benchmarks for each recommendation. In the consultant's opinion, the Town's fire service delivery system is currently performing at an average to slightly above average level, but is at or near a tipping point. As is common across the Commonwealth, a decline in people willing to volunteer, less availability amongst those who do volunteer and increases in incidents, training requirements, and regulatory compliance will require greater municipal support and leadership to maintain a mostly volunteer system.

## **Table of Contents**

Introduction	p. 4
Municipal Responsibility for Fire Protection	p. 6
Bureau of Fire Prevention	p. 8
Incident Statistics	p. 10
Distribution	p. 12
Resources & Staffing	p. 19
ISO Public Protection Classification Rating	p. 29
Comparison of Company By-Laws	p. 32
Municipal Fire Services Funding	p. 33
Organizational Culture	p. 35
Recruitment & Retention	p. 39
Consolidation	p. 44
Fire Department Leadership	p. 48
Integration of Technology	p. 51
Bibliography	p. 53

### **Appendices**

Appendix A - Summary of Fire Marshal Activities - 2022

Appendix B – SWOC Analysis Survey

Appendix C - SWOC Analysis Additional Comments

**This Page Left Blank**

## **Introduction**

This *Evaluation of Fire Services Delivery* for the Town of McCandless, Allegheny County, Pennsylvania, was conducted by FAST ATTACK Fire Services Training & Consulting, Nicholas Sohyda, Executive Fire Officer and Fire Services Consultant, by request of the McCandless Town Council.

The scope of services for this project included assisting the Town of McCandless and the Town's three independent volunteer fire companies (Highland, Ingomar & Peebles) with recommendations that will allow the volunteer fire companies to continue to provide high quality services, as well as guide management decisions, organizational structure, and efficient use of resources, over the next 5 to 10 years. To carry out the scope of services, the consultant interviewed the town manager, finance director, Fire Marshal, the fire chiefs, and several members of the departments. The consultant also collected data to evaluate current fire protection delivery, conducted a SWOC (Strengths, Weaknesses, Opportunities, Challenges) analysis in reference to each individual fire company and the overall fire services delivery system, evaluated the use of current technology, and provide recommendations for improved service delivery and collaboration.

The procedures used to conduct this study included a review of fire service literature of Executive Fire Officer Papers, journal articles, national standards, ISO ratings, best management practices, a SWOC analysis, and other various manuals and information available via the Internet

Throughout the evaluation, the fire companies provided specific information related to workload, by-laws, budgets, staffing, apparatus, and facilities. For comparison purposes, the consultant relied on benchmarks and "best practices" developed by the:

**National Fire Protection Association (NFPA)** - The National Fire Protection Association is an organization that develops, publishes, and disseminates timely consensus standards covering all areas of fire safety. These NFPA standards have been adopted by numerous state and federal authorities, giving them the force of law. In Pennsylvania, NFPA standards are recognized as voluntary consensus standards.

**Southwestern Pennsylvania Commission's (SPC) Standards for Effective Local Government** – These standards are designed to assist local elected and appointed officials in determining the capacity and effectiveness of municipal operations in all areas of government, including fire operations, emergency medical services, and emergency management.

**Insurance Services Office (ISO)** - The Fire Suppression Rating Schedule (FSRS) is a manual containing the criteria ISO uses in reviewing the firefighting capabilities of individual communities. The schedule measures the major elements of a community's fire-suppression system and develops a numerical grading called a Public Protection Classification (PPCTM).

**Center for Public Safety Excellence (CPSE)** - The Center for Public Safety Excellence, Inc. (CPSE), a non-profit organization developed through a cooperative effort of the International City/County Manager's Association (ICMA) and the International Association of Fire Chief's (IAFC), establishes and promotes recognized professional standards to help fire agencies move beyond tactical deployment to continuous strategic improvement.

**American Public Works Association (APWA)** – The American Public Works Association (APWA) serves professionals in all aspects of public works—a fact that sets it apart from other organizations and makes it an effective voice of public works throughout North America. With a worldwide membership over 28,500 strong, APWA includes not only personnel from local, county, state/province, and federal agencies, but also private sector personnel who supply products and services to those professionals.

For the purposes of this study, it is assumed that the information provided by the fire companies and its members is accurate and complete.

## **Municipal Responsibility for Fire Protection**

It is widely accepted that the assurance of the provision of fire services is a local government responsibility. Local government is broadly interpreted to include municipalities, boroughs, cities, towns, villages, and townships.

In February of 2008, the General Assembly of Pennsylvania passed House Bills 1131, 1133, and 1134, entitled “An Act concerning boroughs and townships of the first and second class; and amending, revising, consolidation and changing the law related thereto, providing for the establishment of fire and emergency medical services” providing for specific powers of local government relating to emergency services. In amending the Act, a clause was added that local governments “shall be responsible for ensuring that fire and emergency medical services are provided within the municipality by the means and to the extent determined by the municipality, including the appropriate financial and administrative assistance for these services. The municipality shall consult the fire and emergency medical service providers to discuss the emergency service needs of the municipality. The municipality shall require any emergency services organization receiving funds to provide to the municipality an annual itemized listing of all expenditures of these funds before the municipality may consider budgeting additional funding to the organization.”

To attain the delivery of optimum fire services, it is essential that local government recognize and accept that responsibility to fulfill that obligation to provide appropriate guidance and direction to:

- Oversee the formation process of the organization of fire services.
- Ensure that the fire service organization reflects the public interest.
- Protect the service from undesirable external interference.
- Determine basic policies for providing services; and,
- Legally define the duties and responsibilities of service providers.

Identification of this authority and responsibility is also defined in Section 3-1 of NFPA 1201, *Standard for Delivering Fire and Emergency Services to the Public*, as:

*“The government agency responsible for establishment and operation of the fire department shall adopt a formal statement (by laws, resolution, or statute) of purpose and policies for the fire department that includes the type and levels of services that are to be provided, the area to be served, and the delegation of authority to the fire chief and other officers to manage and operate the fire department.”*

The Commission on Fire Accreditation International (CFAI), *Fire and Emergency Services Self-Assessment Manual*, 10<sup>th</sup> edition, Category I, Governance and Administration, defines

Governance as the recognition of the authority that allows an organization or agency to legally form and operate. In fulfilling this responsibility, the legal entity that oversees this formation process reflects the public interest, protects the agency from undesirable external interference, determines basic policies for providing services, and interprets the agency's activities to its constituency. Administration is defined as the activities that carry out the implementation of the policies established by the authority having jurisdiction.

The legal entity and governing authority define the duties and responsibilities of the agency in an official policy statement. The agency administration exercises responsibility for the quality of the agency through an organized system of planning, staffing, directing, coordinating, and evaluating. The agency administration is entrusted with the assets and is charged with upholding its mission and programs, to ensure compliance with laws and regulations, and to provide stability and continuity.

The Towns of McCandless Municipal Code, Article X, Public Safety, Section 1002, Fire Prevention, provides for a Bureau of Fire Prevention and the discharge of fire prevention and fire protection through independent fire companies.

- (a) **Bureau of Fire Prevention.** Council shall establish and provide for the duties of the Bureau of Fire Prevention, which shall consist of a Fire Marshal and the Fire Chiefs of the various districts of the Town or their delegated assistants. The Fire Marshal shall be appointed for an indefinite term by Council after consultation with the Fire Chiefs of the various districts. The Fire Marshal shall receive such compensation, if any, as may be determined by Council. He shall be entitled to receive reimbursement for reasonable expenses properly incurred by him in the performance of his duties. The Fire Chiefs or their delegated assistants shall act as inspectors in their respective districts. The Fire Marshal, assisted by the Fire Chiefs or their delegated assistants, shall be generally responsible for the administration and enforcement of the Fire Code. The Fire Marshal and the Fire Chiefs shall have all powers granted to them by Council pursuant to the terms and provisions of the Administrative Code and other applicable ordinances.
- (b) **Independent Fire Companies.** Council may provide for the discharge of the fire prevention and fire protection responsibilities of the Town through independent fire companies, so long as it determines that such independent fire companies are willing and able adequately to carry out those responsibilities. Council may contribute to the purchase, maintenance, and operation of fire engines and other fire equipment by such independent fire companies; provided, however, that all such contributions shall be made subject to the condition that the fire equipment purchased with Town funds shall revert to the Town in the event of a dissolution of an independent fire company.



**Recommendation #1:** It is recommended that the Town and the Fire Companies develop a written agreement or memorandum of understanding (MOU) that defines the responsibilities of the governing authority and the independent fire companies, including funding, reporting requirements, vehicle usage, minimum training requirements, municipal personnel policies, etc. This agreement or MOU should be for a 2 to 5-year period, at which time the agreement/MOU should be revisited and updated as applicable.

**Recommended Outcomes:**

- To provide clarity on what the Town expects from the fire companies regarding reporting, budgeting, response, etc.
- To provide clarity on what the fire companies expect from the Town regarding funding, services, etc.
- Improved communication and cooperation.

**Implementation Benchmarks**

- Quarterly meetings between the Town and the fire companies.
- Development of a written agreement/MOU.
- Re-visit and re-evaluate terms and responsibilities as identified in the agreement/MOU.

### **Bureau of Fire Prevention**

The Bureau of Fire Prevention is established in the Town of McCandless Municipal Code, Article X, Public Safety, Section 1002, Fire Prevention. The Bureau is directed by a Fire Marshal, Ord. 678, passed July 19, 1982. The Fire Marshal is appointed by Council and is responsible for the enforcement of the International Fire Code, Ord. 1395, passed April 25, 2011.

Under the Ordinance (Ord. 678), the Fire Marshal is responsible for the inspections of all buildings except one and two-family residential and the non-common areas of multi-family and dormitories and the investigation of every fire or explosion occurring within the jurisdiction that is of a suspicious nature, or which involves the loss of life or serious injury or causes destruction or damage to property.

The Town of McCandless Fire Marshal Position Description, Examples of Duties, in addition to fire inspections and fire investigations, includes creating instructional videos and other educational materials; conducting trainings and drills for nursing homes, schools, and businesses; conducting training for the fire and police departments; coordinating events and creating promotional materials to promote volunteer service; responding to fire calls; and assisting the building inspector with all new construction.

The Fire Marshal was requested to provide a list of current responsibilities. The Fire Marshal's response is as follows:

**Fire Marshal Duties:**

1. Fire inspections, conducts fire inspections for all commercial occupancies.
2. Fire investigations, conduct fire investigations to determine the origin and cause of fires.
3. Fire Prevention, coordinate and conduct fire prevention programs for all schools ranging from pre-K through 5<sup>th</sup> grade (over 2,200 kids).
4. Teach fire safety training for employees of assisted living facilities, day care centers, etc.
5. Respond to fire calls to assist fire companies.
6. Liaison between the Town and the volunteer fire companies
7. Handle VFC complaints from calls, ie. fire alarm in trouble, hydrant issues, possible code violations, etc.
8. Coordinate the Town's Volunteer Firefighter Recruitment, Retention and Recognition "Step Up" Program
9. Develop training opportunities for the volunteer fire companies.
10. Coordinate and schedule the Steering Committee meetings, held quarterly.
11. Coordinate the Strategic Planning for Fire Service
12. Coordinate the Firefighter physicals program, held annually.
13. Evaluate false alarm calls to determine if the alarm is false and bill according to Town's false alarm ordinance.
14. Manage open burning regulations.
15. Manage Knox box program including annual audit of Knox keys.
16. Plan and coordinate Annual Firefighter Appreciation Dinner banquet, typically held in November.

**Emergency Management Coordinator Duties:**

1. Update Emergency Operation Plan (EOP)
2. Create hazard specific plans to be included in our EOP.
3. Create Emergency Operations Center (EOC)
4. Attend regular training classes at ACES, minimum quarterly.
5. Update NARM periodically
6. Ensure staff and Town employees are trained and get their required NIMS certificates.
7. Work with vulnerable facilities' Emergency Management Coordinators regularly
8. Coordinate the Town's damage reporting program.
9. Find shelter team members and get them trained.
10. Try to find volunteers to serve on EMA, shelter teams, route alert teams, etc.
11. Attend con ed classes to keep certifications current (75 hours)

According to the Building Department, there are approximately 1,385 businesses in the Town of McCandless. Assuming the average inspection takes 1 to 1-1/2 hours to complete, including preparation, driving to and from, and reporting, and most inspections require one to two re-inspections to gain compliance, approximately 3,460 to 4,160 hours would be required to complete annual inspections on all business, not including an unknown number of multi-family dwellings and dormitories. Assuming 260 workdays in a year, not including time off, a single fire inspector could realistically complete annual inspections of 50% to 60% of all businesses if they committed 8 hours a day to proactively performing only fire inspections.

While the fire Marshal Ordinance (Ord. 678) provides for the Fire Marshal to perform fire code inspections and fire investigations, additional responsibilities including emergency management, responding to calls, fire and life safety education, permits, training, and administration account for over 50% of the Fire Marshal's time.

A summary of the Fire Marshal's activities for 2022 is included in Appendix A. Based on the number of fire inspections completed in 2022 (approximately 1 per day), it is projected that commercial occupancies are currently being inspected approximately once every 10 years. The average number of annual fire investigations is approximately seven.

The numerous ancillary duties performed by the Fire Marshal, outside those designated by Ordinance, do not allow the Fire Marshal's Office to take a proactive approach to the enforcement of the Fire Code. Inspections seem to occur reactively as the result of a complaint or problem as opposed to proactively on a set schedule. It is recommended that the Town set expectations as to the frequency of fire inspections for commercial properties to ensure fairness and consistency for business owners, as well as to provide for Fire Code compliance and staff the Fire Marshal's Office appropriately to meet those expectations.

**Recommendation #2: To improve the frequency of inspections, the Town should either 1) hire a full-time paid fire chief (discussed later in this report) who would assume all of the ancillary duties currently performed by the Fire Marshal, allowing the Fire Marshal to focus on inspections, investigations, and public education, and/or 2) add part-time and/or full-time staffing to the Fire Marshal's Office to improve inspection frequency.**

**Recommended Outcomes:**

- Increase the frequency of fire inspections.
- Provide for a greater level of safety for occupants and visitors.
- Protect community assets, businesses, and tax base.

**Implementation Benchmarks**

- Hire additional staff.
- Evaluate frequency and effectiveness of inspections and core functions of the Fire Marshal's Office.

## **Incident Statistics**

Based on the data received from the Fire Marshal's Office, the departments respond to approximately 1,500 calls in the Town of McCandless annually, in addition to providing mutual aid to neighboring communities an average of 300 times per year. Of the total call volume, approximately 50% of the responses are emergency medical calls.

A summary of response data for 2020, 2021, and 2022 was provided by the individual departments:

Table 1: Total Incidents, 2020-2022

	2020	2021	2022	TOTAL	AVERAGE
<b>Ingomar</b>				993	331
<b>Highland</b>	548	613	741	1,902	634
<b>Peebles</b>	967	1,162	1,511	3,640	1,213

Table 2: Aid Given vs. Aid Received, 2020 - 2022

	2020	2021	2022	TOTAL	AVERAGE
<b>Ingomar</b>				594 / 219	198 / 73
<b>Highland</b>	381 / 136	423 / 136	515 / 184	1,319 / 456	440 / 152
<b>Peebles</b>	376 / 187	358 / 197	302 / 129	1,035 / 513	345 / 171

Table 3: Average Member Turnout Per Incident, 2020 - 2022

	2020	2021	2022	AVERAGE
<b>Ingomar</b>				2.9
<b>Highland</b>	4.6	5.3	4.6	4.7
<b>Peebles</b>	4.4	4.2	4.1	5.2*

\* Average Member Turnout for Peebles for non-EMS incidents is likely higher; however, EMS calls, which only requires 1 to 2 members, lowers their overall average per incident.

Table 4: Average Response Time and Turnout Time, 1<sup>st</sup> Suppression or QRS Unit, 2020 - 2022

	2020	2021	2022	AVERAGE
<b>Ingomar</b>				8:35 / 3:21
<b>Highland</b>	5:57 / 4:22	9:20 / 5:30	8:22 / 4:32	7:53 / 4:48
<b>Peebles</b>	7:22 / 3:37	7:11 / 2:44	7:16 / 3:08	7:16 / 3:10

**Recommendation #3:** As the State Fire Commissioner’s Office implements a new records management system for the Pennsylvania Fire Service, it is recommended that the departments have one central license, so all reporting goes to a central location for improved reporting and data analysis.

**Recommended Outcomes:**

- Improve efficiency for monthly reporting.
- Improved quality control and data analysis.

**Implementation Benchmarks**

- Receipt of new records management system based on State Fire Commissioner’s recommendation.
- Set up with vendor to allow for central reporting from the 3 fire companies.

**Distribution**

The Commission on Fire Accreditation International (CFAI) defines *distribution* as the station and resource locations needed to minimize and terminate emergencies. Effective distribution assures a sufficiently rapid first due response deployment. Distribution is measured by the percent of the jurisdiction covered by first due units within adopted public policy time frames.

The Insurance Services Office (ISO) has always evaluated the distribution of fire resources through the community based on a fixed travel distance of 1.5 miles for an engine company and 2.5 miles for a ladder/service company. Over 40 years ago, the RAND institute conducted research on the travel times of various types of fire apparatus. One of the results of the research was the determination that the average speed of a fire engine on an emergency response was 35 miles-per-hour (MPH) over average terrain, with average traffic and weather conditions, and slowing restrictions. Another result was the equation commonly referred to as the Rand travel time equation. The equation that is used by ISO and many others is:

$$T = 0.65 + 1.7D$$

Using the equation  $T = 0.65 + 1.7D$ , where T=Time and D=Distance and D is equivalent to 1.5 miles, ISO determined that the travel time for the first arriving engine is 192 seconds. Using the RAND equation, 240 seconds is equal to about 1.97 miles. The National Fire Protection Association’s (NFPA) Deployment Standards for an “urban” community (population density greater than 2,000 / sq mile) provide for the arrival of the first unit based on a four-minute travel time, equal to the travel distance of approximately 1.5 miles. Thus, the distribution of fire stations could be one station every 3.0 to 4.0 road miles and still comply with recognized standards.

The ISO's Public Protection Classification Rating categorizes "distribution" as "deployment". Credit is provided for all areas within 1.5 road miles of the nearest fire station for engines and 2.5 road miles for aerial apparatus. For areas beyond the 1.5 road miles for engines and 2.5 road miles for aerial apparatus, the department can receive 90% credit for an automatic aid engine or aerial that is within 5 miles.

The distribution of engine companies for the Town of McCandless is as follows:

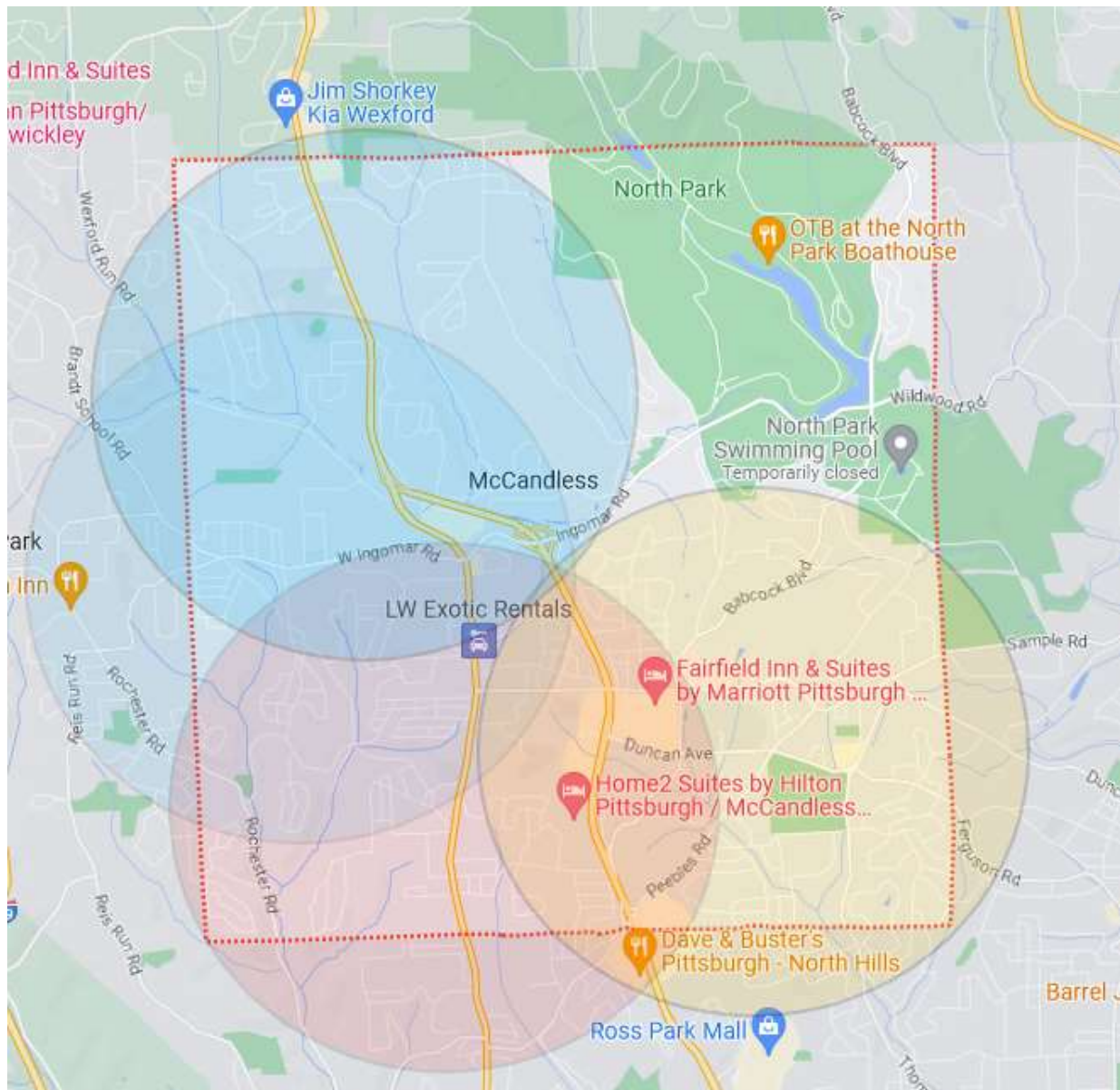


Figure 1: McCandless Engine Co. Distribution @ 1.5 miles



The distribution of ladder companies for the Town of McCandless is as follows:

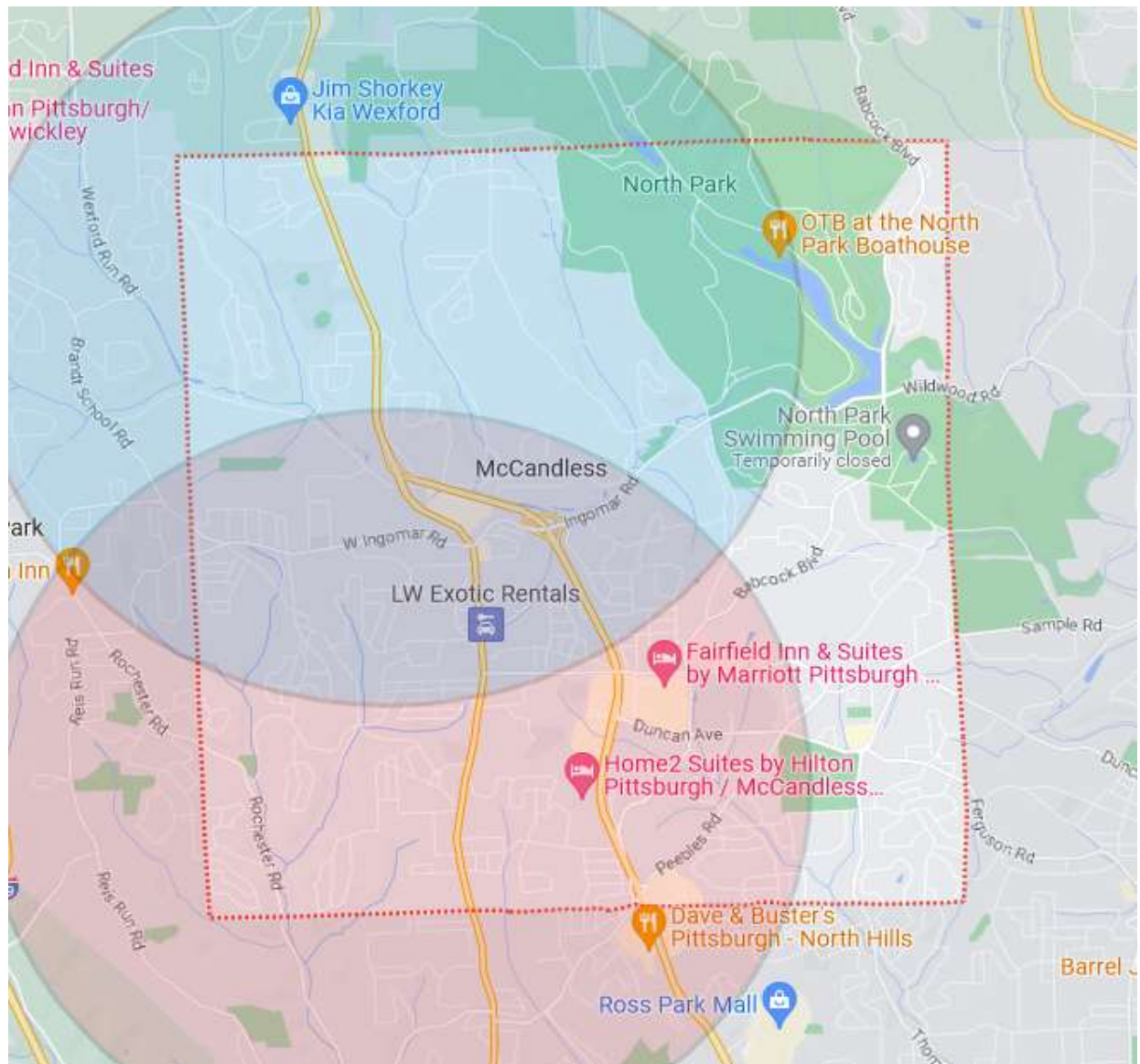


Figure 2: McCandless Ladder Co. Distribution @ 2.5 miles

The Commission on Fire Accreditation International (CFAI) defines *concentration* as the spacing of multiple resources arranged so that an initial Effective Response Force (ERF) can arrive on scene within the time frames outlined in the on-scene performance expectations. The ERF and time frames are defined by NFPA Standard 1720, *Standard for the Organization*

*and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments.*

The basic premise behind NFPA 1720 is that to control a building fire with minimal life and property loss, a fire department must be able to place an adequate number of firefighters and equipment on the fire scene, ready to engage an emergency, within a given timeframe.

The resource needs and timeframe are driven by the growth process of a typical fire. Once ignition occurs, a fire does not grow in a linear fashion, it grows exponentially. Unchecked, it ultimately reaches a point known as “flashover.” At flashover, a fire changes from involvement of a limited area of the room to a full fire involvement of the space. This event occurs almost explosively. Flashover is a critical stage of fire growth for two reasons. First, a person in a flashover room cannot survive. Others within the building will likely be injured and possibly trapped. Second, the rate of combustion and fire spread increases dramatically, making victim location and rescue far more difficult. Fire control will require more hose lines and water flow.

Control of a pre-flashover fire can be safely accomplished with a minimum number of resources. When a small crew of firefighters can begin fire control activities on a small appliance fire, a cooking accident, an overheated motor, a smoldering mattress or similar incident prior to flashover, the chance of injury or loss of life is low, and damage is usually minor.

On the other hand, once a flashover occurs, a large complement of firefighters will be needed for fire control and the likelihood of life loss or injury to both occupants and firefighters is high. Damage will be substantial often resulting in destruction of the building and contents. Clearly, a fire department’s best opportunity to alter the course of the emergency, stop loss and minimize the negative consequences is to intervene as early as possible in the fire timeline.

The ability of adequate fire suppression forces to greatly influence the outcome of a structural fire is undeniable and predictable. Data generated by NFPA provide empirical data that rapid and aggressive interior attack can substantially reduce the human and property losses associated with structural fires.



**Table 5: Fire Extension in Residential Structures**

Rate per 1000 Fires			
Extension	Civilian Deaths	Civilian Injuries	Dollar Loss per Fire
Confined to the room of origin	2.32	35.19	3,185
Beyond the room but confined to the floor of origin	19.68	96.86	22,720
Beyond the floor of origin	26.54	63.48	31,912
Note: Residential structures include dwellings, duplexes, manufactured homes (also called mobile homes), apartments, row houses, townhouses, hotels and motels, dormitories, and barracks.			

National Fire Protection Standard 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments* was developed in 2001 as the benchmark standard for defining levels of service, deployment capabilities, and staffing levels for substantially volunteer fire departments. The purpose of this standard is to specify the minimum criteria addressing the effectiveness and efficiency of the volunteer public fire suppression operations, emergency medical service, and special operations delivery in protecting the citizens of the jurisdiction. The requirements of the standard address functions and outcomes of fire department emergency service delivery, response capabilities, and resources. The standard also contains minimum requirements for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning.

The NFPA staffing and response benchmarks for volunteer departments are based on community demographics:

**Table 6: NFPA 1720 Response Benchmarks for Volunteer Fire Departments**

Demand Zone	Demographics	Staffing and Response Time	Percentage
Urban	>1,000 people/mi. <sup>2</sup>	15 / 9	90
Suburban	500 – 1,000 people/mi. <sup>2</sup>	10/10	80
Rural	<500 people/mi. <sup>2</sup>	6 / 14	80

Combining the time benchmarks and resource needs, a fire department should be able to place at least one firefighting unit and a minimum of ten firefighters at a fire scene within ten minutes of dispatch in suburban areas and at least one firefighting unit and six firefighters at a fire within fourteen minutes of dispatch in rural areas. These response goals should be met at least 80% of the time. It must also be noted that these are the minimum acceptable standards for substantially volunteer departments and they are based on a fire in a relatively small, detached dwelling.

The concentration of resources is as follows, utilizing Franklin Park, Wexford, Hampton, and Ross Township Companies:

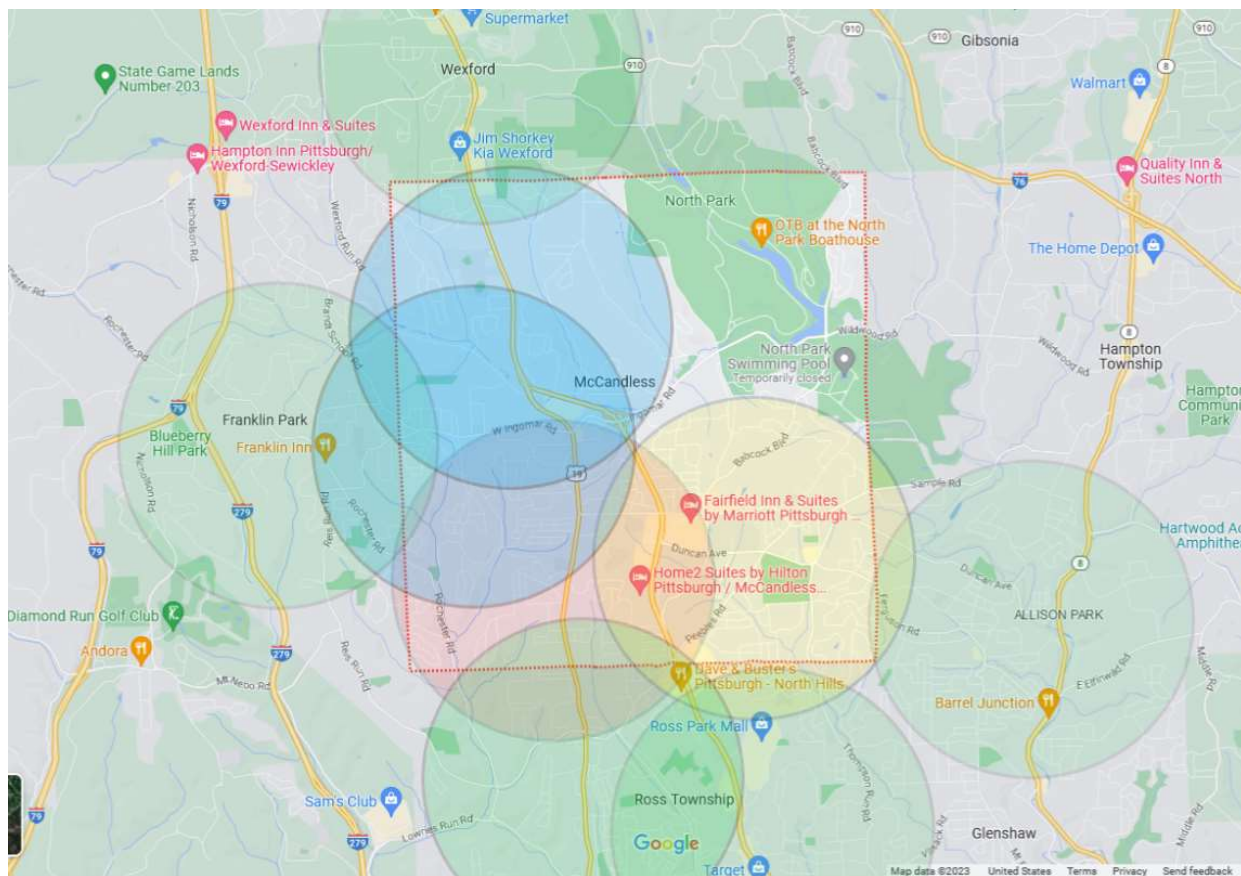


Figure 3: McCandless Concentration

The Town's population density of 1,805 people per square miles qualifies it as an urban community per NFPA 1720. Based on the urban community response benchmarks in Table 6 and member turnout and response times in Tables 3 & 4, the departments are likely to meet the response time objective of 9 minutes or less but are not likely to meet the staffing objective of 15 members. An average turnout for fires is expected to be 10 – 12 firefighters at any given time.

It is worth noting that while the number of calls continue to increase nationally, the number of actual fires has decreased from approximately 12 per 1,0000 population in 1980 to approximately

4 per 1,000 population in 2020. Therefore, while it is critical to have a timely response more frequently to minor incidents and medical calls, the number of actual calls requiring the assembly of an effective response force of fifteen firefighters is infrequent.

**Recommendation #4: The Town should develop a Standard of Cover identifying its response goals, collect data and monitor performance, and provide staffing and funding to meet the identified service goals.**

**Recommended Outcomes:**

- Provide resources and funding based on community risks and desired performance.

**Implementation Benchmarks**

- Identify community risks.
- Adopt performance measures.
- Collect data to a central location via new records management system.
- Measure fire department performance.
- Evaluate and update the Standards of Cover based on performance.
- Develop plan to maintain/improve performance.

## **Resources and Staffing**

Fire protection is provided by three, independent, all-volunteer fire companies responding out of four stations:

### **Ingomar Volunteer Fire Company**

The Ingomar Volunteer Company, Allegheny County Station 187, is an all-volunteer fire department that deploys resources from a main station located at 9695 Harmony Road and a sub station located at 10176 Old Perry Highway, in the northwestern portion of the municipality.

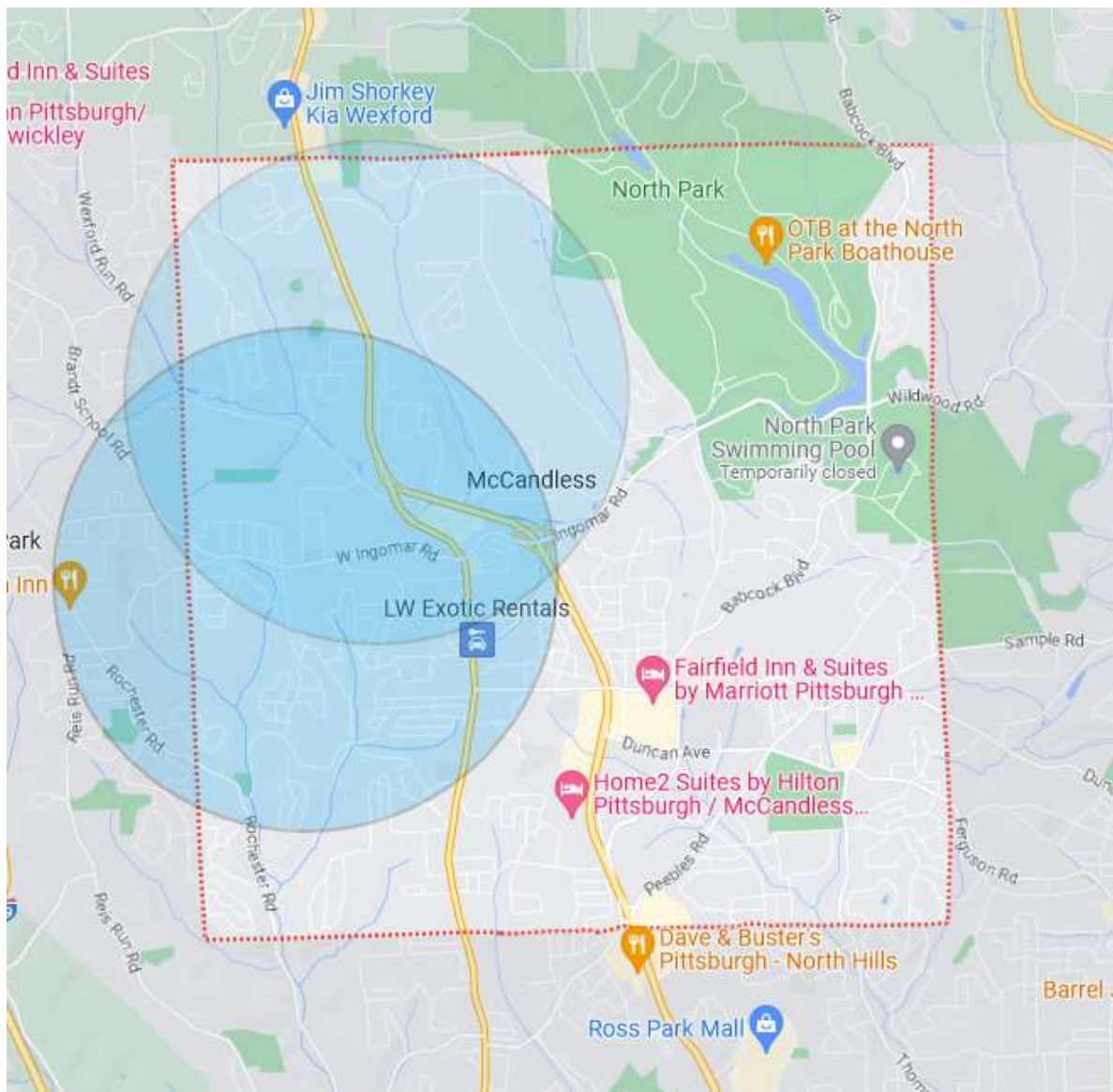


Figure 4: Ingomar Volunteer Fire Company Station Location & Distribution

The department carries out its mission utilizing the following apparatus and equipment:

187 Engine 1 – 2011 Sutphen Engine  
187 Engine 2 – 1989 Hahn Pumper  
187 Quint – 2004 Sutphen 70' Aerial  
187 Rescue 1 – 2023 Sutphen Rescue/Air Truck  
187 Rescue 2 – 2000 Ford F-350 Super Duty

The department has a roster of twenty-nine (29) “active” members meeting the following criteria:

Members By Category		Average Member Fire Call Participation		Avg. Call / Year
Interior Firefighter	16	Greater than 20%	7	➤ 62
Exterior Firefighter	5	10 – 19%	2	31 - 61
Support	4	5 – 9%	4	17 - 30
Administrative	4	Less than 5%	12	< 17

The average age of members responding to calls is 50 years old with an average of 20 years of experience. Over the previous 12-month period, active members averaged 46 hours of training.



Figure 5: Ingomar Volunteer Fire Company Stations



## Highland Volunteer Fire Department

The Highland Volunteer Fire Department, Allegheny County Station 186, is an all-volunteer department that deploys resources from a single station located at 8705 Harold Place in the southwestern portion of the municipality.

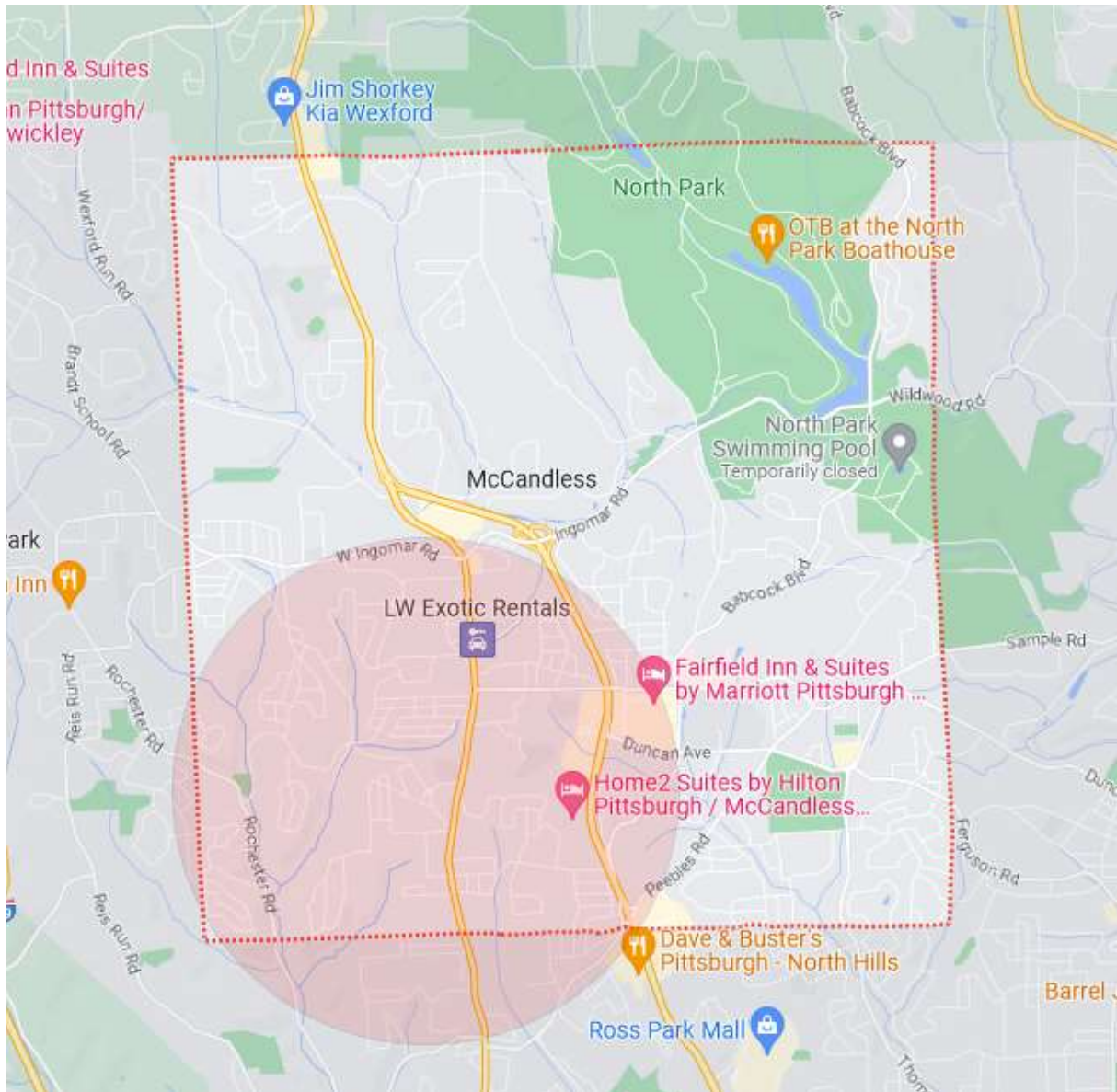


Figure 6 : Highland Volunteer Fire Department Station Location & Distribution

The department carries out its mission utilizing the following apparatus and equipment:

186 Engine 1 – 2003 Sutphen Engine  
186 Squad – 2005 Ford  
186 Truck – 2010 Pierce 100' Aerial  
186 Duty Officer – 2014 Ford Staff Vehicle  
186 Command – 2022 Ford Staff Vehicle  
186 Engine 2 – 2023 Pierce Engine

The department has a roster of thirty-seven (36) “active” members meeting the following criteria:

Members By Category		Average Member Fire Call Participation		Avg. Call / Year
Interior Firefighter	24	Greater than 20%	9	➤ 127
Exterior Firefighter	4	10 – 19%	8	63 - 126
Junior	0	5 – 9%	5	32 - 62
Associate	8	Less than 5%	13	< 32

The average age of the members responding to calls is 39 years old with an average of 14 year of experience. Training data was not available/reviewed.



Figure 7: Highland Fire Department Station

### Peebles District Volunteer Fire Company

The Peebles Volunteer Fire Department, Allegheny County Station 188, is an all-volunteer fire department that deploys resources from a single station located at 1391 Duncan Avenue in the southeastern portion of the municipality.

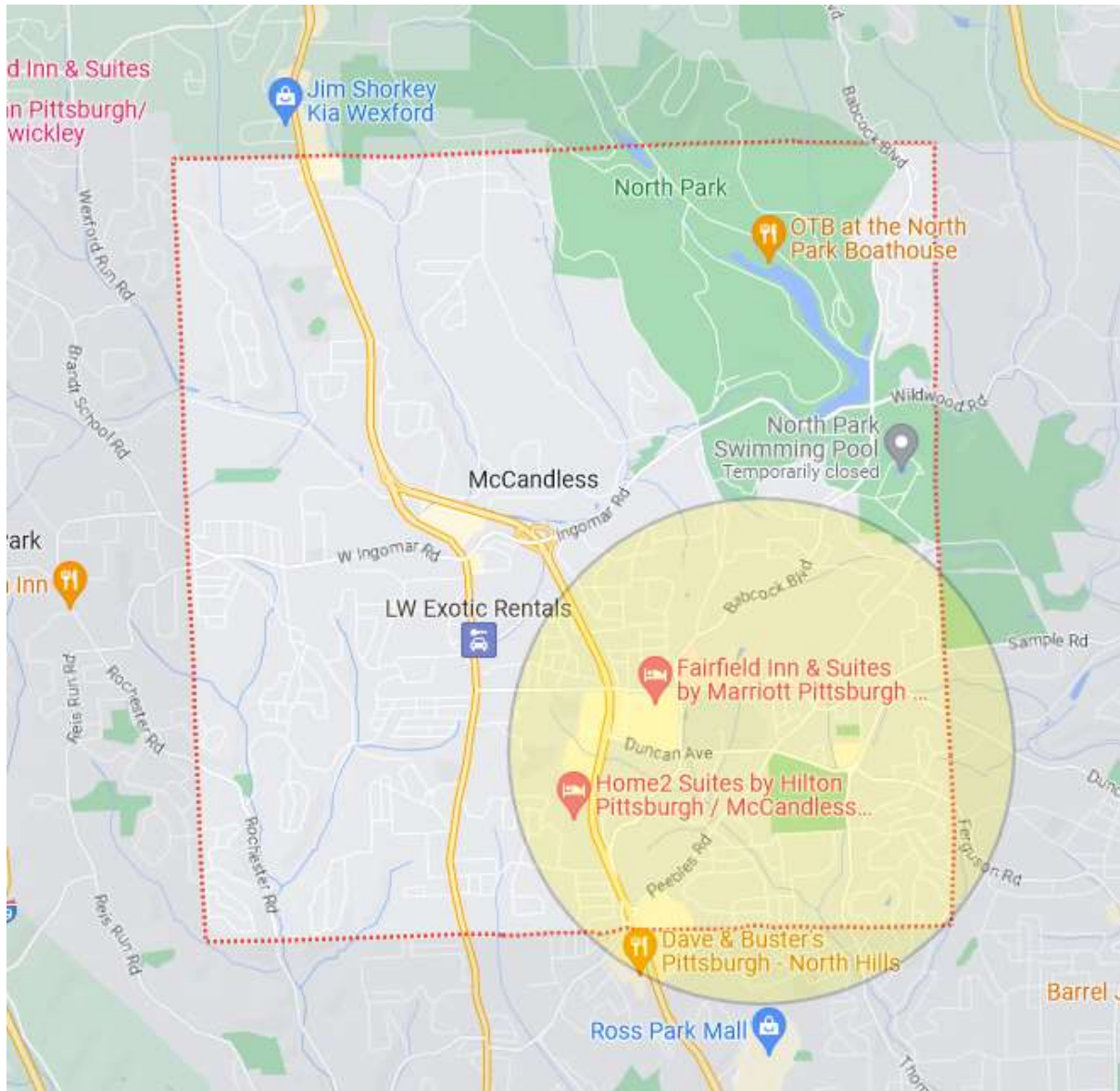


Figure 8: Peebles District Volunteer Fire Company Station Location & Distribution



The department carries out its mission utilizing the following apparatus and equipment:

188 Engine 1 – 2023 Pierce

188 Engine 2 – 1999 Pierce

188 Rescue Engine – 2013 Pierce Rescue/Engine

188 Squad – 2014 Ford F-150

188 Command – 2018 Ford Explorer

The department has a roster of fifty-eight (58) “active” members meeting the following criteria:

Members By Category		Average Member Fire Call Participation		Avg. Call / Year
Interior Firefighter	33	Greater than 20%	7	➤ 243
Exterior Firefighter	14	10 – 19%	10	121 - 242
Junior	2	5 – 9%	8	61 - 120
Administrative	10	Less than 5%	5	< 61

The average age of members responding to calls is 31 years old with an average of 6 years of experience. Forty-two percent of the active members have less than 2 years of experience. Members average approximately 58 hours of training annually.



Figure 9: Peebles District Volunteer Fire Company Station

One way to supplement the volunteer staff and ensure an emergency response during weekday hours, when the majority of volunteers are at work, is to implement a volunteer staffing program. Existing qualified members of the three fire companies would be eligible to sign up to fill four to five positions daily, from 8 am to 4 pm, and would receive a stipend. The stipend would be limited to 20% of what the community would pay a career firefighter to do the same work per the Fair Labor Standards Act (FLSA). While an advantage of the staffing program is members that are immediately available to respond to emergency incidents, additional advantages include expanding and enhancing service delivery to the community and making more efficient use of the time volunteers have available to volunteer. Some of these advantages may include:

- Daily station cleaning and maintenance
- Daily apparatus and equipment cleaning and maintenance
- Pre-planning
- Assistance with departmental administration
- Assistance with department fundraising
- Fire hydrant flow testing
- Other administrative duties

Minimum qualifications for a member to participate in the staffing program should include Pro-Board or IFSAC Firefighter I Certification, 1<sup>st</sup> Aid/CPR, and a minimum of two years' experience as a firefighter, not including junior firefighter status. Members qualified to drive and operate apparatus should meet a minimum standard agreed upon by the fire chiefs.

Funding for the staffing program ranges between \$52,000 and \$62,400 annually.

- 4 positions per day (2 engine, 2 truck) @ \$40/shift = \$52,000.00
- 5 positions per day (3 engine, 2 truck) @ \$40.00/shift = \$62,400.00

The engine crew could staff the Peebles Station. The truck crew could alternate days between the Ingomar and Highland Stations.

**Recommendation #5: Implement a weekday staffing program consisting of four to five members per day staffing two apparatus from two stations.**

**Recommended outcomes:**

- Provide for a guaranteed minimum daylight response Monday – Friday when volunteers are most likely to be working.
- Provide for faster daylight response times Monday – Friday when there is greater congestion.
- Assist Fire Marshal with pre-planning.
- Lessen impact on existing volunteers.
  - o Daily cleaning and maintenance of apparatus and equipment.
  - o Daily cleaning of station and facilities.
  - o Assist Fire Marshal with pre-planning.
  - o Assist with administrative and other duties as defined by the Fire Chief.

**Implementation Benchmarks**

- Consolidate the 3 companies so existing members are members of the McCandless Volunteer Fire Department as opposed to the individual companies.
- Identify minimum qualifications for participation in the staffing program.
- Develop or purchase a scheduling software for members to sign up for shifts.
- Provide funding to the volunteer department to pay members.
- Develop a program and identify minimum qualifications for current members from other departments to participate in program if minimal participation from existing members?

**Recommendation #6: Based on current staffing levels, the Ingomar Volunteer Fire Company should close the Substation on Old Perry Highway, relocate the Quint to the Main Station, and sell Rescue 2.**

**Recommended Outcomes:**

- Consolidation of equipment into one location.
- Eliminate duplication of two rescue vehicles.
- Cost savings.

**Implementation Benchmarks:**

- Move apparatus and equipment to main station.
- Close Substation.
- Monitor Ingomar staffing, call locations, and response times.

The current vehicle and apparatus inventory for the 3 companies is as follows:

Table 7: McCandless Fire Departments' Vehicles & Apparatus

Year	Unit Designation	Make	Resource Type
1989	187 Engine 2	Hahn	Engine
1999	188 Engine 2	Pierce	Engine
2000	187 Rescue 2	Ford F-350	Rescue
2003	186 Engine 1	Sutphen	Engine
2004	187 Quint	Sutphen	70' Aerial
2005	186 Squad	Ford	Squad
2010	186 Truck	Pierce	100' Aerial
2011	187 Engine 1	Sutphen	Engine
2013	188 Rescue Engine	Pierce	Rescue Engine
2014	188 Duty Officer	Ford	Staff Vehicle
2014	188 Squad	Ford F-150	Squad
2018	188 Command	Ford Explorer	Staff Vehicle
2022	187 Command	Ford Explorer	Staff Vehicle
2022	186 Command	Ford Explorer	Staff Vehicle
2023	186 Engine 2	Pierce	Engine
2023	187 Rescue 1	Sutphen	Rescue/Air
2023	188 Engine 1	Pierce	Engine

### **National Fire Protection Association Standards for Apparatus Replacement**

The National Fire Protection Association (NFPA) Standard on Automotive Fire Apparatus, Guidelines for Front-Line and Reserve Fire Apparatus, recommends that apparatus greater than 15 years be placed in reserve status and upgraded to incorporate as many features as possible of the current fire apparatus standard. The recommended age for reserve apparatus is between twenty and twenty-three years, with applicable upgrades.

**Definition of first-line fire apparatus:** First-line fire apparatus must be manufactured to NFPA 1901 and must be maintained in accordance with NFPA 1912 and 1915.

**Definition of reserve fire apparatus:** Reserve fire apparatus is defined as apparatus manufactured to applicable NFPA 1901 editions, after 1991 and prior to the 2009 edition. Such apparatus must have been **upgraded to include as many of the features as possible** found in 2009 or newer units.

While NFPA Standards are not mandatory, they establish a datum point for age of apparatus and updating guidelines. Fire Departments that do not follow NFPA Guidelines assume full liability of retaining known deficient apparatus in service. To knowingly operate or approve of the operation

of a vehicle that could kill or injure the public or a fire fighter severely exposes fire department officials to liability.

Critical enhancements in design, safety, and technology should also play a key role in the evaluation of an apparatus' life cycle. Previous editions of the fire department apparatus standards featured many requirements advancing the level of automotive fire apparatus safety and user friendliness. Contained within the 2009 edition were requirements for rollover stability; tire pressure indicators; seat belt warning systems requiring all occupants be properly seated and belted; extended seat belt length requirements resulting from an in-depth anthropometric study evaluating the average size of today's fully dressed firefighter; roadability, including minimum accelerations and top speed limitations; enhanced step and work surface lighting; cab integrity testing; increased use of retroreflective striping in the rear of apparatus, providing a consistent identifiable set of markings for all automotive fire apparatus; and enhanced aerial control technologies, enabling short jacking and envelope controls.

Considering ISO Requirements, NFPA recommendations, American Public Works Association Guidelines, organizational and community needs, call volumes, and current replacement schedule, the following apparatus replacement schedule with projected costs has been developed:

Table 8: Recommended Replacement Schedule

Year	Unit Designation	Make	Resource Type	Replacement Year	Cost
1989	187 Engine 2	Hahn	Engine	N/A	\$0
1999	188 Engine 2	Pierce	Engine	N/A	\$0
2000	187 Rescue 2	Ford F-350	Rescue	2030	\$550,000
2004	187 Quint	Sutphen	70' Aerial	2025	\$1,200,000
2005	186 Squad	Ford	Squad	2025	\$80,000
2010	186 Truck	Pierce	100' Aerial	2030	\$1,600,000
2011	187 Engine 1	Sutphen	Engine	2031	\$950,000
2013	188 Rescue Engine	Pierce	Rescue Engine	2033	\$1,000,000
2014	188 Squad	Ford F-150	Squad	2029	\$80,000
2018	188 Command	Ford Explorer	Staff Vehicle	2028	\$50,000
2022	187 Command	Ford Explorer	Staff Vehicle	2032	\$50,000
2022	186 Command	Ford Explorer	Staff Vehicle	2032	\$50,000
2023	186 Engine 1	Pierce	Engine	2043	\$850,000
2023	187 Rescue 1	Sutphen	Rescue/Air	N/A	\$0
<b>TOTAL COST</b>					<b>\$6,460,000</b>

The recommended replacement schedule would replace 187 Engine 1 with a Rescue - Engine, eliminating the need for future replacement of 187 Rescue 1. The re-sale value of the existing apparatus is estimated at approximately \$400,000.00. Approximately \$320,000 per year is necessary to fund fire apparatus over the next 20 years, at today's cost.

### **ISO Public Protection Classification Rating**

An additional independent measure of fire department service effectiveness is the Insurance Services Office (ISO) Public Protection Classification Rating System. Using a scale of 1 to 10 (1 being best, 10 being no protection), the ISO rates fire protection in thousands of communities throughout the country. The rating is used by insurance companies to set premiums on properties its insurers. Commercial, industrial, mercantile, institutional, and multi-family dwellings are the most highly impacted properties when a city's rating changes.

The Insurance Services office conducted a community classification survey of McCandless in January of 2017. The Town was awarded a Class 3 rating, placing it in the top 9% of communities in Pennsylvania (Figure 10). A Class 3 rating is appropriate for the community. The Town and fire departments should strive to maintain a Class 3 rating as the classification has been developed for use in property insurance premium classifications and any reduction may have an impact on some residents and property owners.

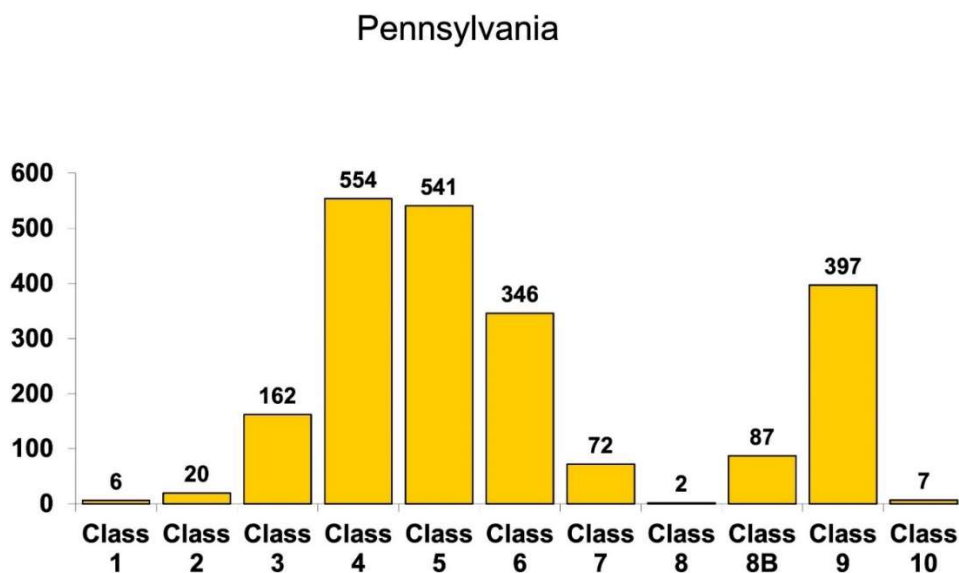


Figure 10: Comparison of Pennsylvania Community ISO Ratings

The Town received the following ISO Public Protection Classification during its most recent survey in 2017 (Table 9):

Table 9: ISO Grading for the Town of McCandless

	<b>Credit Available</b>	<b>Credit Earned</b>
<b>Emergency Reporting</b>	3.00	2.10
<b>Telecommunicators</b>	4.00	3.98
<b>Dispatch Circuits</b>	3.00	2.55
<b>Total Communications</b>	<b>10.00</b>	<b>9.54</b>
<b>Engine Companies</b>	6.00	5.81
<b>Reserve Pumpers</b>	0.50	0.47
<b>Pump Capacity</b>	3.00	3.00
<b>Ladder/Service Co.</b>	4.00	2.46
<b>Reserve Ladder/Service</b>	0.50	0.21
<b>Distribution / Deployment</b>	10.00	6.29
<b>Personnel</b>	15.00	3.17
<b>Training</b>	9.00	5.79
<b>Operational Considerations</b>	2.00	2.00
<b>Total Fire Department</b>	<b>50.00</b>	<b>29.20</b>
<b>Supply System</b>	30.00	29.02
<b>Hydrants</b>	3.00	2.94
<b>Hydrants Testing</b>	7.00	6.20
<b>Total Water Supply</b>	<b>40.00</b>	<b>38.16</b>
<b>Community Risk Reduction</b>	5.50	4.93
<b>Divergence</b>		- 7.40
<b>Total</b>	<b>105.5</b>	<b>73.52</b>
<b>Classification</b>	1 – 10	3

\* Divergence is a reduction in credit to reflect a difference in the relative credits or Fire Department & Water Supply.

Each component is evaluated using a fractional point scale and added together to establish the community point total. Additionally, points are subtracted, known as Divergence, when the water supply is relatively better than the fire department or vice versa. The thinking is that a good water supply would be underutilized with an ineffective fire department and conversely, the best fire departments would be less effective with a sub-standard water supply.

The Total score of 73.52 can be improved to a 75.25 by ensuring that:

- Equipment carried on engines and ladders complies with NFPA 1901, Standard for Automotive Fire Apparatus
- Annual pump testing is conducted per NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles
- Annual hose testing per is conducted NFPA 1962, Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances
- Annual aerial testing is conducted per NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles

When an ISO representative conducts a fire department assessment, areas examined include recordkeeping practices; pumper, aerial, and hose tests; apparatus equipment; personnel training, and deployment protocols. Receiving and handling fire alarms reviews the facilities provided for the public to report fires, and for the operator on duty at the communications center to dispatch fire department companies to the fires.

The fire department section reviews the engine and ladder-service companies, equipment carried, response to fires, training, and available fire fighters. Based on required fire flow, the township's apparatus needs are as follows (Table 10):

Table 10: ISO Apparatus Requirements for McCandless

	# of Engines	# of Ladders	# of Service
Apparatus Required	4	1	0

In lieu of purchasing and maintaining the full complement of ISO required apparatus, a community can receive 90% of the credit from a neighboring community for automatic aid engines and ladders.



### **Comparison of Company By-Laws**

The Internal Revenue Service (IRS) allows for the exemption of a volunteer fire company as a social welfare organization if its members are actively engaged in firefighting and similar disaster assistance. Typically, volunteer fire companies have by-laws that indicate how the organization will operate, how positions will be filled, how meetings will be run, and how finances will be handled as required to maintain their 501 (c)(3) status.

**Table 11: Fire Company By-Law Comparison**

	<b>Ingomar</b>	<b>Highland</b>	<b>Peebles</b>
Limitation of Powers	Yes	No	Yes
Dissolution Requirements	Yes	Yes	Yes
Requirements for Administrative Officers	Years of Service	Years of Service	Years of Service
Requirements for Line Officers	Years of Service	Years of Service	Years of Service
Meetings	Monthly	Monthly	Monthly
Quorum	1/3 Active Membership	20% Eligible Members	1/3 Active Membership
Member Age Requirement	16 years of age	16 years of age	15 years of age
Probationary Requirement	6 months	6 months	6 months
Membership Categories	Brigade Associate Apprentice Life Honorary	Life Active Associate Probationary Honorary Junior	Probationary Firefighting Non-Firefighting Junior Lifetime
Non-Discrimination	Yes	No	No
Conflict of Interest	Yes	No	No

**Recommendation #7:** The Town and fire companies should jointly develop fire officer eligibility requirements, including certifications and training, to be eligible to be elected to line officer positions in the respective volunteer fire companies. Once the eligibility criteria are identified, all members should be given 24 months to obtain any missing/new certifications and training before the eligibility requirements go into effect.

**Recommended Outcomes:**

- Provide benchmark requirements and consistency in fire officer selection process.
- Elevate fire company leadership.

**The companies should develop a single set of by-laws, applicable to all three volunteer fire companies, per Recommendation #10.**

## **Municipal Fire Services Funding**

The McCandless Volunteer Fire Department are funded via an allocation from the town, Act 84 Relief Funding, State & Federal Grants, and fundraising efforts. The town also maintains a capital reserve fund for interest free loans for the purchase of fire apparatus. The average 2021 per capita cost for fire protection in like-size local communities was \$68.02. A comparison of local municipal fire protection funding is as follows:

**Table 12: 2021 Statewide Municipal Annual Financial Report Cost Comparison**

<b>Municipality</b>	<b>Population</b>	<b>Fire Protection</b>	<b>Expenditures</b>	<b>Per Capita</b>	<b>% Overall Budget</b>
<b>Allegheny County</b>	906,666	\$37,313,484	\$1,271,723,176	\$41.15	2.9
<b>McCandless</b>	29,698	\$1,119,525	\$18,105,947	\$37.70	6.0
<b>Cranberry Twp</b>	33,096	\$1,622,920	\$59,652,376	\$49.04	2.7
<b>Bethel Park</b>	33,577	\$1,570,084	\$41,966,207	\$46.76	3.7
<b>Upper St. Clair</b>	21,160	\$900,209	\$44,229,473	\$42.54	2.0
<b>N. Strabane Twp</b>	15,700	\$2,935,680	\$35,598,483	\$186.99	8.2
<b>Mt. Lebanon</b>	34,075	\$3,894,183	\$64,846,779	\$114.28	6.0
<b>Peters Twp</b>	22,946	\$2,055,897	\$39,480,483	\$89.60	5.2
<b>Monroeville</b>	28,640	\$1,423,605	\$40,582,397	\$49.71	3.5
<b>Moon Twp</b>	27,240	\$1,977,093	\$25,970,685	\$72.58	7.6
<b>Ross Twp</b>	33,567	\$1,382,198	\$36,311,079	\$41.18	3.8
<b>Shaler Twp</b>	28,132	\$472,083	\$23,508,606	\$16.78	2.0
<b>Pine Twp</b>	14,691	\$1,014,958	\$13,854,561	\$69.09	7.3

Recommendations in this report, hiring a fire chief (\$81,460 plus benefits of approximately \$14,000), implementing a weekday staffing program (\$62,400) and providing a per call stipend to volunteers (\$45,000) would have a total budget impact of approximately \$203,000 per year, or \$6.84 per capita.

Each fire company is provided with an annual allotment. In 2023, the allotment was \$162,500.00 per company, for a total of \$487,500.00.

- Based on the number of members responding to at minimum of 5% of the calls in each company, the annual allocation equates to \$12,500.00 per member for Ingomar, \$7,3900.00 per member for Highlands, and \$6,500.00 per member for Peebles.
- Based on average annual call volume over the previous 3-year period, the annual allocation equates to \$490.00 per call for Ingomar, \$258.00 per call for Highland, and \$134.00 per call for Peebles.

While the Town has tried to fund each Company equally, the reality is that the more members a company has to support, and the more calls a company responds to, amounts to a greater operational cost.

A more equitable funding solution may include providing each company with a base amount and additional funding based on call volume and active membership. In a consolidated department with a paid fire chief, there would be a single fire department allocation that would be supervised by the fire chief and provided to the companies based on need.

**Recommendation #8:** The Town should develop a funding formula for the volunteer companies that considers the number of active members supported by each company, call volume, departmental needs, etc. A paid, full-time fire chief could be instrumental in this process.

**Recommended outcomes:**

- Provides each company with a base level of funding.
- Ensures companies can outfit, support, and protect their active membership.
- Provides funding based on service delivery to the community.

**Implementation Benchmarks**

- Development of a funding formula that is reasonable to all 3 companies.
- Budget, call data, and active membership information provided to Town annually.

An example funding formula might resemble the following:

Table 13: Funding Formula Example

	Highland	Ingomar	Peebles
Base	\$110,000	\$110,000	\$110,000
Active Members (\$1,000 per annually)	\$22,000	\$13,000	\$25,000
Incidents (\$50/Fire and \$10/EMS)	\$31,700	\$16,550	\$42,000 \$5,500
TOTAL PER	\$163,700	\$139,550	\$182,500
TOTAL COST			\$487,750

## **Organizational Culture**

Members were asked to complete an anonymous survey of both their individual fire departments and fire protection delivery in McCandless as a whole. This survey (Appendix B) consisted of a SWOC Analysis and ideas to maintain and/or improve fire service delivery, as well as a section for general comments. Common themes throughout the survey included:

- Strengths – Knowledge, leadership, training, dedication, cooperation, response times.
- Weaknesses – Lack of members, recruitment & retention, lack of standardization, leadership, attitudes, resistance to change, lack of joint purchasing, lack of communication, no shared vision, rivalries.
- Opportunities – Recruitment and retention, funding, community involvement, relationship with Town Council, joint training, standardization.
- Threats – Funding, lack of members, rising costs, time demands.
- Challenges – Lack of members, declining volunteerism, costs, communication, funding.

The summary of the survey results is included on the following pages:

Table 14: Ingomar VFC SWOC Analysis

Ingomar Volunteer Fire Department			
Number of Respondents		13	
Age Range / Average Age		20-68 / 47	
Average Years of Service		22	
Departmental Responses			
Strengths	Weaknesses	Opportunities	Challenges
Knowledgeable Officers (9) Fiscally Responsible (6) Training Member Dedication None Experience (3) Camaraderie	Recruitment & Retention (6) Judgmental Member Response Lack of Younger Members (3) Daytime Response Lack of members (4) Lack of Reliable Equipment Archaic Thinking	Recruitment & Retention (12) Advocate on Council Additional Funding Incentives for Volunteers (2) Consolidation (2) Live-In Program	Lack of Members (7) Continuity on Council Getting Younger Members (5) Cost of Living Aging Equipment Council Support Bad Attitudes Recruitment Lack of Onboarding Balancing Vol/Family Age of Members
Ideas to improve service delivery?			
<ul style="list-style-type: none"><li>• Town assistance with recruitment &amp; retention</li><li>• Aggressive recruitment efforts</li><li>• Include fire departments in McCandless E-mail Newsletter</li><li>• Crackdown on false alarms with fines</li><li>• Some older members have such bad attitudes, I don't know how a new person would want to stay</li><li>• Re-engage members that have drifted away</li><li>• Understanding that the "Good Ole Boy" Mentality doesn't work to retain new members</li><li>• Professional appearance in public</li><li>• Understand community demographics and develop recruitment strategies to target areas of need</li><li>• Too much duplication</li></ul>			
Town-Wide Responses			
Strengths	Weaknesses	Opportunities	Challenges
Leadership (2) Scene Cooperation (4) Response Time (2) Capabilities (2) Collaboration Incident Response Dedicated Members None Apparatus & Equipment (2)	No Common SOG's (2) No Standardization (5) No Joint Purchasing Different Agendas Lack of Cooperation (2) Fiscal Responsibility Funding Rivalry Lack of Communication Administrative Cooperation	Continuity on Council Joint Purchasing (3) Joint Training (3) Recruitment (6) Town Support Common SOG's Building Trust	Egos Recruitment & Retention (5) Regulatory Compliance Lack of Cohesion Lack of Trust Lack of Standardization (2) Financial Sustainability (2) Rising Costs Increasing Calls

Table 15: Highland VFD SWOC Analysis

Highland Volunteer Fire Department			
Number of Respondents		16	
Age Range / Average Age		19 - 65 / 40	
Average Years of Service		18	
Departmental Responses			
Strengths	Weaknesses	Opportunities	Challenges
Knowledge (6) Professionalism (5) Communications Commitment Training (2) Pride Leadership (3) Finances (2)	Communications (2) Number Active FFs (5) Resistance to Change (2) Poor Recruitment Member Participation (5) Lack of Experience No Standardization No Minimum Standards Leadership Skills (3)	Recruitment & Retention (8) Grant Funding Funding (4) Staffing (3) Succession Planning Public Engagement (2) Duty Crews	Lack of Members (11) Funding (3) Transient Members (3) Cancelling Response Time Demands (2)
Ideas to improve service delivery?			
<ul style="list-style-type: none"><li>Improved communications amongst departments</li><li>Make efficient use of volunteer time</li><li>One department with one chief</li><li>Adopt Common Guidelines</li><li>Paid Staffing (4)</li><li>Paid chief (2)</li><li>Consolidation</li><li>Volunteer Incentives</li><li>Train Together</li></ul>			
Town-Wide Responses			
Strengths	Weaknesses	Opportunities	Challenges
Equipment (6) Working Together (4) Cooperation Professionalism (2) Quality of Members	No Standardization (7) Dept. 1 <sup>st</sup> Mindset (3) Bickering Amongst Dept's Independent Purchasing Rivalries (4) Freelancing Communication (2) Command (2)	Recruitment Grants Community Involvement Working Together Training Together (2) Staffing Paid Chief (2) Joint Purchasing Standardization	Cost of Living (2) Lack of Members (5) Equipment Costs Town Council Donations Lack of Communications Lack of Planning Lack of Funding (3) Town Council Turnover

Table 16: Peebles District VFC SWOC Analysis

Peebles District Volunteer Fire Company			
Number of Respondents		22	
Age Range / Average Age		14 – 63 / 32	
Average Years of Service		11	
Departmental Responses			
Strengths	Weaknesses	Opportunities	Challenges
Staffing/Membership (14) Response Times (6) Leadership (5) Training (5) Teamwork (2) Operations (2) Member Participation Progressive	Inadequate Facilities (6) Funding (3) Attitudes (3) Accountability (2) Planning (2) Communications (2) Burnout Home Affordability	Building Renovations (6) Funding from Town (5) Outside Training (5) Relationship with Town (3) Recruitment (3) Retention Incentives (2) Community Involvement	Funding (10) Recruitment/Retention (5) Rising Costs Burnout Communications
Ideas to improve service delivery?			
<ul style="list-style-type: none"><li>Increased funding/support (6)</li><li>Improved recruitment and retention (2)</li><li>Consolidation (2)</li><li>Better use of employees who are also volunteers</li><li>Update outdated gear</li><li>Increased training with other departments</li><li>Improved marketing</li><li>Improved communications with residents</li></ul>			
Town-Wide Responses			
Strengths	Weaknesses	Opportunities	Challenges
Work Well Together (8) Response Times (4) Knowledge (2) None (2) Apparatus (2)	No Standardization (6) Cancelling Units (4) No shared vision (3) Leadership Structure (3) Communication (2) Lack of respect (2) Lack of Support Apathy for minor calls No joint purchasing	Joint training (9) Community involvement (2) Consolidation (2) More funding (2) Shared mission Transparency Improved marketing Unified command structure Combination department	Declining volunteerism (11) Funding (8) Apparatus Poor response Understaffed Relationships Communication Dropped calls Independence

## **Recruitment & Retention**

Volunteer firefighters are a highly valued community resource. It is estimated that volunteers save communities over 139.8 billion dollars annually. The 2020 estimated value of a volunteer's time was \$28.54 per hour. With the average volunteer firefighter spending 8 hours per week, it is estimated that the average volunteer firefighter contributes over \$10,000.00 worth of time to the community annually. It is projected that a fully career fire department with 3 full-time firefighters per shift and a full-time fire chief would cost the Town over \$560,000.00 annually in personnel costs.

One of the issues identified, not only locally, but also nationally, is declining volunteerism. Recruiting enough qualified members has become one of the greatest challenges facing volunteer fire departments today. At one time, most communities had little difficulty attracting members. Often, multiple generations of the same family would belong to departments for long terms. Frequently, many of the firefighters worked locally and on rotating shifts. In many cases local businesses would allow firefighters to leave work to attend fires. This was sustainable because only a small number of fires would occur during work hours.

At the same time, demands on firefighter's time were minimal. Required training was nonexistent in many departments and minimally required in others. Fundraising was important, but the relative cost to run a fire department was low.

Today, this has all changed. Fire departments face tremendous competition for firefighter's time. Most families have two wage earners or have the main breadwinner working two or more jobs. More opportunities exist for children today than ever before. Just transporting children to and from their activities consumes a large amount of a parent's time. Today's workforce is far more transient than previous. As the region's industrial base has eroded, less people work in the communities where they live and smaller numbers of members work shifts. Additionally, fewer employers allow employees to leave work to fight fires.

These changes have taken place at a time when firefighter time demand has increased dramatically. Firefighter training has rightfully become mandatory in most departments. Minimum required training to become a basic firefighter now runs well over 200 hours. Standards now stipulate minimum levels of hazardous materials, right-to-know, and incident management training. Safety was once given nothing more than lip service. Today it has become a cornerstone of fire department training programs. Concurrently, calls for service have increased substantially. Connected alarm systems, carbon monoxide detectors, vehicle accidents, medical assists and service calls are all responsible for creating a demand overload at a time when fire department membership is dwindling.

All this said, there are still a substantial number of people who are willing to become volunteer firefighters if the right incentives are in place. To recruit members, a community needs to identify



what they are offering potential members. Recruiting for the fire department should not be all that difficult because the service has a lot to offer; excitement, friendship, respect, the chance to save a life, and a host of other positives. But these things alone are often insufficient to attract new members. There also must be flexibility that allows people to volunteer in a manner that fits their needs or meets their schedule. A marketing effort to reach out to potential candidates and illustrate the benefits of membership is essential.

**Recommendation #9: Establish a Recruitment & Retention Committee, develop a Recruitment & Retention Plan, and designate a Recruitment & Retention Coordinator for each fire company, whose focus is the recruitment, onboarding, and maintenance of volunteer membership.**

**Recommended outcomes:**

- Increase volunteer membership to provide for the delivery of consistent fire and emergency services throughout the Town.
- Increase community engagement.
- Cost savings for taxpayers. The annual cost of fire protection for a full-time fire department is estimated at \$4,570,000.00.

**Implementation Benchmarks**

- Ensure membership and application information is easy to locate on the fire company website, the first place most residents go to learn about volunteering.
- Maintain a strong social media presence focusing on recruitment.
- Provide immediate follow-up of any interest or applications received within 24 hours and conduct an initial meeting within 7 days to ensure an applicant does not lose interest and can meet established requirements.
- Identify a recruitment and retention coordinator(s) responsible for contacting prospective candidates, marketing the department, and surveying the existing membership regarding incentives.
- Conduct exit interviews with members who quit or resign to determine why members may be leaving the department.
- Consolidate the 3 companies so existing members are members of the McCandless Volunteer Fire Department as opposed to the individual companies.
- Identify minimum qualifications for participation in the staffing program.
- Develop or purchase a scheduling software for members to sign up for shifts.
- Provide funding to the volunteer company to incentivize members.
- Apply for Staffing for Adequate Emergency Response (SAFER) Grant Funding.

- Develop a program and identify minimum qualifications for current members from other departments that may be interested in participating in a staffing program if minimal participation from existing members?

Initiatives that have worked for other fire departments include:

- Implement a “Duty-shift Program”. This initiative can often pay dividends by attracting individuals to volunteer who prefer to schedule blocks of time to serve rather than be subjected to being always on call. This is not unlike performing volunteer work for hospitals, nursing homes and schools. With this program, the fire department establishes minimum participation guidelines and minimum training requirements. Persons wishing to become a “Duty-shift Member” would agree to be at the fire station for a specified number of time blocks per month. In return, the volunteer would receive a small stipend, and be entitled to all the benefits of volunteer membership.

This program is not for everyone and is a departure from the traditional volunteer fire department model. As such, it may not be rapidly accepted in each company. That said, many departments in the suburban Washington, DC area have found great success by implementing a “Duty-shift Program”. They have found that there is a segment of their population that is willing to volunteer, but is too busy with family, jobs and other obligations to participate on an on-call basis. Another benefit to the “Duty-shift” program is additional credits for personnel as part of the Insurance Services Office (ISO) Grading Schedule.

- A successful firefighter recruiting campaign must create a community awareness of the fire department and its needs. To accomplish this, the department should be marketed via as many media sources as possible. Publish a fire department web site with easy-to-find information on becoming a volunteer; send direct mailings; distribute flyers in the schools; create a speaker’s bureau for community groups; consider lawn signs and billboards; produce an informational video to air on the local cable access channel; have a strong social media presence. Most, if not all these initiatives can be accomplished with community and/or departmental talent at little or no cost.
- Engage the community by conducting a “Citizen’s Fire Academy”. There are several benefits to such a program. Conducted like a major league baseball “fantasy camp”, a Citizen’s Fire Academy provides the opportunity for interested citizens to participate in a multi-faceted program of instruction of the activities of a fire department. Typically, there are eight to twelve sessions on topics ranging from fire operations to rescue operations, emergency management, CPR and AED usage, department history and operations, fire

prevention, etc. Participants can take part in many activities within their physical abilities and safety.

These programs tend to be self-sustaining from favorable word of mouth and minimal advertising. Most people who participate are amazed at the depth and breadth of fire department activities and the dedication and commitment of the firefighters. They invariably become strong supporters of the fire department. They also share their experiences with friends and relatives which results in a great deal of good will in the community.

- Develop incentives. Volunteer firefighters are not free, just less expensive than career firefighters. To compensate members for a portion of their time, many departments have created a package of incentives and rewards. Some of the components of a total benefits package may include:
  - Tax incentives. Reduced property or earned income taxes or waived occupational privilege taxes are possibilities. Recently, Pennsylvania passed Act 172-2016, the Volunteer Firefighter Tax Credit legislation allowing communities to provide tax credits to volunteer firefighters (Appendix A).
  - Free use of local recreation facilities.
  - Education/tuition assistance plans.
  - Individual and team recognition awards.
  - Length of service (LOSAP) remuneration plans.
  - Retirement plans.
  - Life and health insurance policies.
  - Credit union memberships.
  - Wellness programs.
  - Training and fire conference attendance.
  - Clothing and uniform provisions.
  - Accident insurance
  - College tuition credits.

The fire companies should collectively apply for a Staffing for Adequate Emergency Response (SAFER) Grant to develop a comprehensive recruitment and retention plan, including incentives for completing initial training.

The Town/fire companies should also consider some type of initial training reimbursement program for new members. A challenge to recruiting new members is the amount of time to meet the requirements of the State's Essential of Firefighting Program which requires close to 200 hours of attendance to complete. An initial training reimbursement program would provide

a stipend to new members that successfully complete the required training and obtain their Pro-Board Firefighter I Certification. The stipend amount might range between \$1,000.00 and \$2,000.00 per new recruit.

When departments recruit and retain firefighters, the members' families are often required to make numerous sacrifices for the member to meet departmental obligations. Successful recruitment and retention programs include the families through banquets, breakfasts/lunches, kid's parties, picnics, ballgames, etc.

Recruitment and retention programs can be funded via a federal grant program, the Staffing for Adequate Emergency Response (SAFER) Program. SAFER grants were created to provide funding directly to fire departments and volunteer firefighter interest organizations to help them increase or maintain the number of trained, "front line" firefighters available in their communities.

The goal of SAFER is to enhance local fire departments' abilities to comply with staffing, response and operational standards established by the NFPA (NFPA 1710 for career departments and/or NFPA 1720 for volunteer departments). These grants are generally for 4-year performance periods and can include the costs associated with a recruitment and retention coordinator, media marketing (TV/Radio/Internet, etc.), print marketing (signs/banners/flyers/brochures), new members costs (NFPA 1582 medical evaluation/station uniforms), cost of initial training, leadership training for existing staff, tuition assistance for higher education, personal protective equipment for new recruits, stipends for points based systems, pay-per-call, Length of Service Awards Programs (LOSAP), insurance programs, awards and incentives for operational activities (gift cards for top responders, non-uniform clothing, length of service plaques).

## **Consolidation**

The primary goal of any plan of consolidation or merger should revolve around and focus upon public safety considerations with a secondary consideration being economics.

Unfortunately, over the last 30 years, the emergency services in Pennsylvania have been tasked with greater demands to address additional knowledge and skill sets required (i.e. hazardous materials, terrorism, technical rescue) as well as responding to an increasing number of calls. Additionally, the number of volunteers in the Commonwealth has decreased from over 300,000 in the 1970's to less than 35,000 currently. Even with a decline in the number of volunteers, Pennsylvania has had the unfortunate experience of annually being at the top of the list in the number of emergency responders killed in the line of duty.

The bottom line is that the emergency services in many communities are being tasked to provide greater levels of service with very limited resources and decreasing financial assistance. The need exists to develop a cost-effective method for emergency services delivery throughout the Commonwealth.

The reality is that each community is left to determine:

“What do I need to protect the community?”

“How much will it cost?”

“What are my funding sources?”

“How do I deliver these services?”

The joining of fire and rescue organizations is a means by which an increasing number of municipalities are responding to a variety of issues. These issues include fiscal constraints, increasing workload, new and increasing demands for service, declining volunteerism, and the need to become more cost efficient and productive. Cooperative service comes in a variety of forms from a simple intergovernmental agreement like mutual aid to a complex merger. Other forms of cooperation may include automatic aid agreements or functional, partial, and operational consolidations. Each form of cooperation has its advantages depending on the conditions and the departments it may serve. For this study, the peer consultant considered the following:

**Administrative Consolidation** – Two or more fire departments maintain separate operations while some administrative/staff functions, such as clerical and personnel, are combined. An example would be a single Fire Chief, Administrator, or Business Manager overseeing both fire departments.

**Partial Consolidation** – Each department remains legally separate but a group is formed to perform special functions. This group would provide service to both communities but are members of their respective organization. An example would be the sharing and staffing of a single fire station.

**Functional Consolidation** – Each fire department remains legally separate but performs special functions as if they were one department. An example would be combined training or maintenance programs.

**Operational Consolidation** – Each fire department remains legally separate but join together both administrative and operations functions, delivering services as if they were one department.

**Full Consolidation** – Two agencies completely merge into a single legal agency. All service demands in each community are looked at as a single function of the department and political boundaries become invisible.

Ranked as the most important service level issues when considering consolidation include:

1. The amount of time it takes fire units to respond to fires and medical emergencies
2. Provision of advanced and basic life support services
3. Number of firefighters and paramedics who respond to a call
4. How costs will be shared
5. Response by “back-up” units
6. Equipment at fire stations
7. Minimum training levels

Typically, the consolidation or merger of two or more fire departments results in the following:

- One fire department.
- One employer.
- One set of rules, regulations, and operating guidelines.
- One personnel management system.
- One chain of command.

The national experience regarding fire department consolidation indicates major improvement in service and internal efficiencies that have a positive impact on the public. Several key improvements typically include:

- Improved fire ground communications.
- Improved fire ground operations by following the same standard operating guidelines and working together as a team.
- Reduced apparatus maintenance and upkeep.
- Reduced response time of apparatus by dispatching the closest unit.
- Improved firefighter safety.

**Recommendation #10: The Town and fire companies should pursue a full consolidation with a goal of operating as one fire department from 3 stations.**

**Recommended outcomes:**

- Addresses several of the issues identified in the SWOT analysis, including:
  - o Allowing for greater standardization of operations, equipment, membership requirements, and joint training.
  - o Supporting the implementation of a staffing program as members will no longer be members of individual companies, but of the McCandless Fire Department
  - o Addressing the issue of joint purchasing and greater coordination in purchasing
  - o Allowing management and elected officials to focus on one department as opposed to 3 different departments with 3 different agendas.
- Allows for a more equitable distribution of funds based on community and departmental needs as opposed to the individual companies each receiving 1/3 of the funding.

**Implementation Benchmarks**

- The Town and fire companies should establish 4 committees, with 2 to 3 representatives from each company:
  - o By-Laws Committee to develop a standard set of By-Laws for the consolidated organization
  - o Operations Committee to develop Standard Operating Guidelines, develop a line organizational structure, and to develop a plan for standardizing apparatus and equipment
  - o Recruitment & Retention Committee to develop a recruitment and retention plan, apply for SAFER Grant funding, and recommend incentives to Town leadership, including a funding request to fund the incentives
  - o Budget Committee to develop an annual budget for the consolidated organization



- o Vote of the membership from each fire company to accept the consolidation plan and By-Laws
- o Engagement of an attorney to file for a new charter for the new organization

## **Fire Department Leadership**

The amount of time and effort needed to manage an all-hazards fire-rescue agency in today's society is exorbitant. Budgeting, purchasing, regulatory compliance, community risk reduction, increasing calls for service, policy development, recruitment and retention, and extensive training are just some of the core functions today's fire chiefs, paid or volunteer, are expected to perform. Today's fire chief must also serve as a leader, manager, coordinator, enabler, change agent, capacity-builder, role model, human resource manager, grant writer, facilitator, volunteer advocate, visionary, and planner.

The role and responsibilities of today's fire chiefs have more to do with people skills and administration than with emergency response roles. The challenge for many volunteer fire chiefs, is that in addition to trying to meet all the roles and responsibilities identified above, volunteer fire chiefs generally have full-time jobs and other commitments that limit their availability to perform everything that is required. In general, volunteer fire chiefs tend to focus their attention on training and emergency activities, while limited time is available/allocated to address other areas and their overall authority may be limited to an operational capacity depending on the department's bylaws.

As more and more communities are evaluating areas in which to improve their existing emergency service agencies, one area that many are considering, and implementing, is full-time, paid leadership. The goal of this approach is to reduce the administrative workload of volunteer fire officers and to allow existing members to do what they signed up to do: become well trained firefighters that respond to emergency calls to help their communities. Locally, Cranberry Township, Mt. Lebanon, Peters Township, Cecil Township, North Strabane Township, South Strabane Township, and Upper St. Clair have full time, paid leadership that successfully directs, manages, and leads both full-time and volunteer firefighters.

A full-time fire chief would be a department head level position, providing the volunteer fire service agencies with a seat at the table, and responsible to the town manager and elected officials for the implementation of policies, guidelines, goals and objectives, budgeting, and reporting of the activities and needs of the fire department.

The hiring of a full-time fire chief would require an Ordinance outlining the role and responsibilities of the fire chief's position in relation to the volunteer fire companies, and changes to the volunteer fire companies' by-laws recognizing the authority of the town fire chief. An example Ordinance is included in Appendix D for review.

As an ordinance and job description are developed, the focus of the fire chief's position should be to support the long-term sustainability of the volunteer fire companies, exercising caution as to not attempting to seize control of the departments away from the volunteers, seize assets, implement policies that interfere with department bylaws, eliminate volunteer voting privileges,

or taking any action that may appear as developing an employer / employee relationship with the volunteer members of the department.

As discussed in the Fire Marshal's section of this report, the fire chief would assume many of the ancillary duties being performed by the Fire Marshal, including the Emergency Management Coordinator duties, responding to fire calls to assist fire companies, acting as a liaison between the Town and the volunteer fire companies, handling complaints, coordinating recruitment and retention, developing training opportunities, coordinating steering committee meetings, strategic planning, coordinating physicals, and coordinating the Annual Firefighter Appreciation Dinner. Additional responsibilities would include facilitating the standardization of guidelines and equipment, capital purchasing recommendations, budgeting, reporting, grants, and the implementation of new programs.

The 2021, statewide average salary for a fire chief was \$81,460.00. Additional benefits generally include a township vehicle, educational stipends, longevity, uniforms, retirement, and health care insurance.

**Recommendation #11: The Town should consider hiring a full-time fire chief to improve communications, oversight, and coordination amongst the volunteer fire companies as well as to improve the efficiency of the Fire Marshal's Office.**

**Recommended outcomes:**

- Functioning as the top fire-rescue official for the Town.
- Managing a reorganization of fire services delivery.
  - Working to build strong levels of trust and communication with elected officials, volunteer members, surrounding fire departments, and the public.
  - Directing, managing, and leading volunteer firefighters.
- Facilitation of the standardization of volunteer department by-laws, operating guidelines, equipment, and training.
- Providing for the long-term sustainability of volunteer fire services delivery.

**Implementation Benchmarks**

- Adopt an Ordinance defining the role and responsibilities of the Town Fire Chief.
- Amend department By-Laws recognizing the role and responsibilities of the Town Fire Chief.
- Develop a job description for the position of Fire Chief.
- Advertise, interview, and hire a Town Fire Chief.

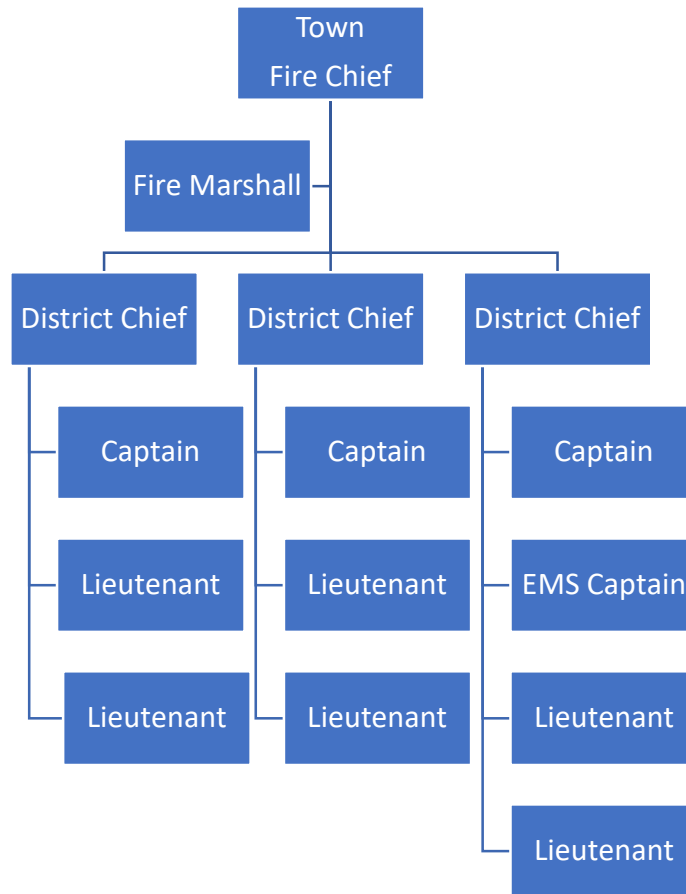


Figure 11: Proposed Organizational Chart

## **Integration of Technology**

The world is not just changing for the fire service. Society has embraced an infiltration of technology into almost everything its citizens do. In this new age of technology, progressive fire departments can make better decisions and provide for a greater level of firefighter safety and on-scene emergency response operations via improved technology. Some of these technologies and challenges for the fire service include:

**Records Management Systems with Enhanced Analytics** – More and more local governments are utilizing performance metrics to justify expenses. Gone are the days when fire chiefs could justify purchases, policy changes and directives simply based on experience and gut instinct. Data is now being leveraged into real world insight to monitor performance, uncover gaps, and make operational decisions based on the collection of data. While it is anticipated that the State Fire Commissioner's Office will provide the basic incident reporting module to all Pennsylvania fire companies free of charge, the Town should consider funding additional modules that allow for the reporting of all 3 companies to a central location for data analysis. Approximate cost is estimated at \$6,000.00 annually.

**Thermal Imaging** - A Thermal Imaging Camera (TIC) is a type of the thermographic camera used in firefighting. These cameras render infrared radiation as visible light, allowing firefighters to see areas of heat through smoke, darkness, or heat-permeable barriers. Thermal imaging cameras pick up body heat, and they are normally used in cases where people are trapped where rescuers cannot find them. They can also be used to search for victims outdoors on a cool night, spot smoldering fires inside a wall, or detect overheating electrical wiring. Highlands and Ingomar each have nine (9) thermal imaging cameras and Peebles has three (3) thermal imaging cameras. These cameras cost between \$6,0000 and \$10,0000 each.

**HAAS** – Safety Cloud Technology connects first responders, towing and recovery fleets, and roadway workers with vehicles and motorists for real-time digital alerts that prevent collisions and improve road safety for everyone. Fire and EMS departments use Safety Cloud to reduce the risk of collisions en route and on scene, track fleet and crew status, and improve response times and interagency coordination. When responders activate apparatus emergency lights, approaching drivers receive real-time digital alerts to slow down and move over. These are delivered via apps, navigation systems, or mobile devices to drivers up to 30 seconds in advance and reduce the risk of collision by up to 90%. The Infrastructure Investment and Jobs Act signed in November of 2021 includes millions of dollars in federal funds for digital alerting technology to protect public safety fleets, establishing digital alerting as a critical safety technology for the country's first responders and other roadway workers. This technology costs approximately \$400/per unit annually.

**Dispatch & Pre-planning Software** – The Towns Fire Companies and Fire Marshal’s Office utilize First Due pre-planning software which provides critical response information to first responders via mobile data terminals in each of the companies’ units. Pre-planning software is an invaluable resource which allows first responders to access building layout, access routes, fire protection features, building contacts, utility locations, etc. While pre-planning software is a powerful intelligence tool, it requires some one to gather and upload the required information for each individual occupancy.

In addition, the Town Fire Companies utilize the Rover Alerting App, which allows first responders to access call information, mapping, and see who is responding via an app on an individual’s cell phone. With one touch on the Rover app, responders send their availability while Rover automatically fetches their credentials, location, and travel time. The app also provides all the details of the incident, so responders and commanders have the knowledge they need to be ready to roll.

**Lithium Ion Battery and Electric Vehicle Fires** - These incidents are becoming more common for a number of reasons. For starters, lithium-ion batteries are now in numerous consumer tech products, powering laptops, cameras, smartphones and more. They allow companies to squeeze hours of battery life into increasingly slim devices. But a combination of manufacturer issues, misuse and aging batteries can heighten the risk from the batteries, which use flammable materials.

While electric vehicle sales account for less than 2% of vehicle sales in the United States in 2020, and electric vehicle fires accounted for just 25.1 fires per 100k sales, as compared to gas vehicles which accounted for 1,529.9 fires per 100k sales, electric vehicle fires can require a tremendous amount of effort from emergency personnel to extinguish the blaze. A chain reaction inside the batteries—sometimes called thermal runaway—can occur when the battery generates more heat than it can dissipate. Lithium-ion batteries also burn hotter and can last much longer than gas, which tends to burn out quickly. Lithium-ion battery fires can take tens of thousands of gallons of water to extinguish. Tools such as pancake nozzles, fire blankets, and piercing nozzles should be considered by at least one of the fire companies for addressing fires in electric vehicles.



## **Bibliography**

Buckman, J. (2006). Recruiting, training, and maintaining volunteer firefighters. (3<sup>rd</sup> ed.). Fairfax, VA: International Association of Fire Chiefs.

Center for Public Safety Excellence (2020). Fire and emergency service self-assessment manual. (10<sup>th</sup> ed.). Chantilly, VA: Center for Public Safety Excellence.

General Assembly of Pennsylvania (2008). House Bill No. 1131, 1133, 1134. Harrisburg, PA: General Assembly of Pennsylvania.

Insurance Services Office (2014). Fire suppression rating schedule. New York: Insurance Services Office.

Insurance Services Office (2017). Fire suppression rating schedule for Town of McCandless. Milton, N.J.: Insurance Services Office.

International City/County Managers Association (2002). Managing fire and rescue services. Washington, D.C.: International City/County Managers Association.

McDonald, Candice (2019). Preventing Firefighter Burnout. The VFA Quarterly Review. Volunteer Firefighter Alliance Inc. Knoxville, Tennessee.

National Fire Protection Association (2008). Fire protection handbook (20<sup>th</sup> ed.). Quincy, MA: National Fire Protection Association.

National Fire Protection Association (2020). NFPA 1031, Standard for fire inspector and plan examiner. Quincy, MA: National Fire Protection Association.

National Fire Protection Association (2020). NFPA 1201, Standard for providing fire protection to the public. Quincy, MA: National Fire Protection Association.

National Fire Protection Association (2020). NFPA 1720: Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by volunteer fire departments. Quincy, MA: National Fire Protection Association.

National Fire Protection Association (2021). NFPA 1901, Standard for automotive fire apparatus. Quincy, MA: National Fire Protection Association.

National Fire Protection Association (2012). NFPA 1911, Standard for the inspection, maintenance, testing, and retirement of in-service automotive fire apparatus. Quincy, MA: National Fire Protection Association.

Southwestern Pennsylvania Commission (n.d.). Standards for effective Local government: A workbook for performance, Chapter VII, Municipal fire management. Pittsburgh, PA: Southwestern Pennsylvania Commission.

# APPENDIX A

Summary of Fire Marshal Activities - 2022

## FIRE MARSHAL – ANNUAL 2022

FIRE CODE INSPECTIONS	319
FIRE CODE CITATIONS	6
BURNING ORDINANCE VIOLATIONS	6
BURNING ORDINANCE CITATIONS	1
OCCUPANCY INSPECTIONS	33
FIRE MARSHAL CALLS	226
FIRE INVESTIGATIONS	7
TRAINING SESSIONS ATTENDED	10
TRAINING HOURS	16
FIRE PREVENTION PROGRAMS	48
NO, OF PEOPLE PRESENTED TO	2,596
FALSE ALARMS	106
FALSE ALARMS BILLED	41
FLASE ALARMS BILLED (Amount)	\$12,600

# Appendix B

SWOC Analysis Survey

**McCandless Township  
Fire Department SWOT Analysis**

**Department Name:** \_\_\_\_\_

**Member Age:** \_\_\_\_\_ **Member Years of Service:** \_\_\_\_\_

1. What would you consider to be your department's strengths?

---

---

2. What would you consider to be your department's weaknesses?

---

---

3. What opportunities do you think your department needs to pursue to ensure its long-term survival and maintain service delivery?

---

---

4. What challenges does your department face that may threaten its long-term survival or ability to deliver service?

---

---

5. Additional comments or ideas to maintain and/or improve service delivery to the residents of McCandless?

---

---

---



6. What would you consider to be the strengths of the 3 departments collectively?

---

---

7. What would you consider to be the weaknesses of the 3 departments collectively?

---

---

8. What opportunities do you think the 3 departments should pursue collectively to ensure the long-term survival of each department and maintain service delivery?

---

---

9. What challenges do you think the 3 departments face collectively that may threaten the departments' long-term survival or ability to deliver service?

---

---

10. Additional comments:

---

---

---

---

---

Note: The results of this survey are intended to remain anonymous and improve the delivery of service to the residents of McCandless. This survey should not be used to criticize individuals, but to improve service delivery of the long-term sustainability of the fire department(s).

# Appendix C

SWOC Survey Additional Comments

<p>“We represent, protect, and serve the same community. We need to act like it. There’s no need for competition for the same goal. We need better communication and uniformity.”</p>
<p>“The goal for each department should be to work together and provide the best service for the residents, not screw the other departments just to look better.”</p>
<p>“The three departments work well individually. Some things need straightened out. Overall, McCandless has a good fire service.”</p>
<p>“The Town of McCandless is past a point where the VFD’s can provide quality services by themselves. Town intervention is needed to correct issues and prevent further reduction in service quality. This requires paid staff supplemented by a volunteer core.”</p>
<p>“No direction on equipment purchases, no common fireground structure, no training standards, lack of training together, 3 chiefs not on the same page.”</p>
<p>“More focus on knowledge of firefighters, improved safety culture, forward thinking, and not be focused simply on being 1<sup>st</sup> on scene.”</p>
<p>“Afraid now more than ever to respond. Combination of inexperienced leaders, departments jumping calls being acceptable, freelancing firefighters, no Command. I do not want to be an injury or line of duty death stat.”</p>
<p>“The Town of McCandless has grown to the point of leaving the protection and safety of its residents to volunteers who may or may not be available or may not be experienced enough to handle the situation.”</p>
<p>“The Town of McCandless has placed such an administrative burden on its volunteer fire departments that our members are no longer willing to serve in the role of president or treasurer.”</p>
<p>“Businesses should have some kind of mandatory user fee to help support the 3 department’s expenses. Fines for false alarms should go to the departments.”</p>
<p>“An overall strategy and leader is needed to address these issues to maintain volunteers for all the departments without lowering standards.”</p>
<p>“We are underfunded. Out of date gear, broken trucks, old tools, outdated tools and trucks. It costs money to operate, and the Town Officials do not understand this.”</p>
<p>“Fire departments need better funding, recruitment and retention, as well as department leaders putting their egos aside for the better of the residents.”</p>

<p>"Give active firefighters some compensation – per call basis or something. They spend many hours of their lives helping the community and they get nothing for their time, training, work, and efforts – a little amount goes a long way. Burnout is real, especially during the pandemic. Program to help with burnout, PTSD, depression should be available to members."</p>
<p>"I believe if the 3 companies became one, we would have great leadership amongst all 3."</p>
<p>"Police are not at home cutting the grass, get a 911 call, then go to the police station, and respond to the call. Volunteering is almost a thing of the past."</p>
<p>"There is growing frustration between departmental leadership and members of the 3 departments. One department feels as if they are doing 95% of the work, and the other departments are not showing initiative to improve operationally."</p>
<p>"For being a volunteer organization with members who leave their families and put their safety on the line to serve and protect the residents from devastating events there should be more Town support than there is right now."</p>
<p>"Requirements and expectations of fire departments require considerable time and effort. The time requirement has resulted in reduced volunteerism. Increase services and equipment require appropriate funding to keep service quality up to par. Failure to realize these facts could lead to a reduction in services for the community. It is absolutely vital to remember these departments are 100% volunteer and they want to serve their community properly."</p>
<p>"This town has great potential for all 3 companies to be great but 2 out of the 3 seem to only do what they have to instead of trying to better their department. I'm not sure how one is still open because they hardly have any people and do not answer calls or only show up with 1 or 2 people."</p>
<p>"Overall, McCandless has very strong fire departments and volunteers. Coming from a career service and another local volunteer fire department, I have never seen such a high level of will to improve and progress."</p>
<p>"The overall Brotherhood and ability to stay humble, trust one another, and do the job is 100% gone."</p>
<p>"There are a number of issues facing us (1 raising taxes to pay for fire department operations, (2 transitioning to some part-time or full-time staff, 3) Consolidating the departments to reduce costs (4 behind in technology, 5) new recruit training management is poor, (6 lack of standardization and SOG's, (6 We still think and act as individual companies, not a unified force, (7 Mindset amongst older members that unless you have 25 years your opinion</p>

doesn't count (8 We need to be more inclusive of the younger and newer members...they don't get paid and don't have to be here!"

"The up and down cycles of volunteer fire service membership, even in well-staffed departments, is unsustainable as these embers mature and obtain employment, they are likely to move out of McCandless. The future of the volunteer fire service is a statewide problem which must be dealt with, including financial incentives for volunteers."

"If the Town wants to avoid a massive tax increase that it would take to fully fund a career department and equipment, they should work with us to potentially create larger incentives to attract volunteers. If the Town hires paid drivers or Chiefs, there is a risk of losing many of your volunteer staff as has been the case in other communities."

"If the 3 departments could work together and optimize their strengths while covering each other's weaknesses, we could significantly increase our quality of service."