Plateau Valley Fire Protection District

Strategic and Master Plan

Final Report - March 2025

PLATEAU VALLEY FIREFIGHTER EMT FIRE DIST.

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Critical Immersive Training

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INTRODUCTION

MissionCIT is pleased to present the following Master Plan and Strategic Plan for the Plateau Valley Fire Protection District. The fire chief and the District Board of Directors should be applauded for their foresight in developing such plans to help guide the future of the district.

We would like to thank the following for their input and thoughts regarding the fire district and its future.

The Plateau Valley Fire Protection District Board of Directors
The men and women (career and volunteer) of the fire district
The citizens who attended our focus group meeting

We would like to particularly thank Fire Chief Kevin Henderson and Mr. Eric Bruton for their assistance in providing us with excellent historical information and current data about the department with which to make informed recommendations.

The fire service is regulated and guided by numerous regulations, codes, standards and best practices. These are promulgated by federal, state, and local governments as well as standards making bodies. The largest and most influential of these bodies is the National Fire Protection Association (NFPA) which publishes more than 200 codes, standards, recommended practices and guides. NFPA codes and standards are written and maintained by a cadre of hundreds of subject matter experts who donate their time and efforts to ensure that public safety considerations are at the forefront of the management of fire service organizations and response to emergency incidents. When applicable, the recommendations put forth in this study were guided by referencing the appropriate regulation, code and/or standard and are cited as appropriate.

PROJECT GOALS AND OBJECTIVES

In discussions with the Plateau Valley Fire Chief and their Board of Directors, their request for MissionCIT regarding this report and the goals and objectives were clear and basic. They desired the following:

Goal

Develop a comprehensive Master Plan and Strategic Plan to guide the future of the Plateau Valley Fire Protection District

Objectives

1. Develop a 5–10-year blueprint for how the district should be funded and staffed
2. Recommend organizational improvements that need to be made
3. Provide suggestions on how the fire district can continue to recruit and retain career and volunteer personnel
4. Provide recommendations for other system changes or modifications to improve service delivery

EXECUTIVE SUMMARY

The Plateau Valley Fire Protection District (PVFPD) currently provides fire and EMS services through a combination of career and volunteer personnel. The fire district has a proud history of volunteer service provided by the residents in this rural/remote, but tight knit, area of Mesa County. The career staffing in the district has most recently been improved to include two full time personnel, 24/7, to respond with an ambulance or a fire unit. In addition, the fire district just experienced the hiring of a new fire chief who has been well accepted and is making positive improvements in the organization.

However, the demographics and workload within the fire district are changing. Additional full and part time residents are moving to the area to be in such a pristine area of the country. The district is also seeing growth in tourism during all seasons of the year. This growth and the existing aging population are causing an increase in workload, specifically EMS calls. Over the last six years, the department has seen an approximate increase in calls of 38%, an increase of over 6% each year. In addition, the Powderhorn Ski Resort, while in operation, has a workload impact on the fire district and they are planning for increased growth. All of this increased workload is impacting a small, dedicated volunteer and career staff who are trying to maintain safe and adequate service delivery.

The fire district has, and will continue to rely on volunteer personnel for fire and EMS services. One observation from this assessment is the decline in the availability of volunteer personnel, which combined with the increased incident workloads is putting stress on the fire district.

The decline in volunteers for the fire district, as is occurring all across the United States, is based primarily on the following:

- Less interest by the population to volunteer in their communities
- Less available personal time by the population to serve as volunteers
- Increased training and time requirements for volunteer personnel, particularly in the EMS field
- New residents expecting a certain level of services that may or may not exist similar to where they came from

In addition to the workload and personnel impacts on the fire district, the cost of delivering services has risen dramatically, just in the last five years.

Through a systematic process, the MissionCIT team conducted online surveys and met with multiple fire district personnel and outside community groups to hear of the issues, concerns and needs within the district. The comments, in detail, are included in the appendices of the report. The messages from these meetings were consistent and similar. The themes from these sessions were used to draft the organizational goals for the strategic plan. The goals, in no particular order, include the following:

- Goal #1 – Ensure firefighter and citizen safety as a priority in the Plateau Valley Fire Protection District
- Goal #2 – Improve staffing and response capabilities within the fire district
- Goal #3 – Improve the organizational management processes to ensure fire district operations effectiveness, efficiency and consistency of service delivery
- Goal #4 – Develop and implement long-term career and volunteer member recruitment and retention efforts
- Goal #5 – Develop a long-term training and career development plan for members of the fire district
- Goal #6 – Diversify and increase the funding sources for the fire district

To address the impacts of growth, service demands and the decline of volunteers, the Plateau Valley Fire Protection District is recommended to take the following strategic key steps:

- Increase and diversify its funding stream by increasing its millage rate by 6 mils over the next three years.
- Initiate a focused volunteer recruitment marketing campaign to attract new members.
- Hire additional career staff to provide 24/7 coverage at the Collbran station.
- Develop a capital equipment fund to plan for and replace its capital equipment items.
- Review and improve the processes and procedures within the fire district to increase proficiency, safety and levels of training.

All the goals, objectives and recommendations laid out in this report are attainable through a concerted effort of planning, funding and focus by the fire district. Some will have more impact than others, but over time, all will help the organization improve.

THE COMMUNITY

Mesa County is a large county on the western edge of Colorado. It encompasses approximately 3,341 square miles with an estimated 2023 population of 159,681. It is the fourth largest county and is the 11th most populated county in Colorado. The population is expected to increase by 25% over the next 15 years. Approximately 71% of the land in the county is public land managed by either the State of Colorado or the Federal Government. Mesa County is at an intersection of several major transportation routes.

The Plateau Valley Fire Protection District (PVFPD) provides fire and emergency medical services (EMS) to the eastern most portion of Mesa County. Within the PVFPD response area is one incorporated town, Collbran, and several other unincorporated areas, including Mesa, Molina and Powderhorn Ski Resort. The population of Collbran is 369 people over one-half square mile. According to the US Census, the town population decreased by 48% over the 2010-2020 time period. This is attributed to a decrease in gas drilling in the area during that time. The population of Molina is 189. Mesa has a population of approximately 600. Included within the response of the fire district is the Powderhorn Mountain Resort. This resort has skiing attractions as well as residential housing. There are approximately 140 single family or multi-family units within the resort.

The fire district is largely rural and consists of large lot development, estate homes with rural crossroads commercial zones (Mesa County Master Plan, pg. 55).

Main Street in Collbran

Office Building in Collbran

Main Street in Mesa

Mesa area

Hotel in Mesa area

Remote single-family dwelling in fire district

Remote areas of fire district

There are some multi-family developments within the Powderhorn community. However, most of the homes in Powderhorn are vacant much of the time, as they are used as second or vacation homes (Mesa/Powderhorn Plan, 2012, pg.32). Covering a population of approximately 5,000 over 797 square miles, the average population density within the fire district is 6.3 people per square mile.

Powderhorn Ski area

Condo complex in Powderhorn

Single family dwelling in Powderhorn

Community Growth

The overall population growth within the fire district is flat, except for the Mesa and Powderhorn areas. These areas still have undeveloped lots available for growth. In Mesa there are 105 undeveloped lots and in Powderhorn, there are 326 undeveloped lots. (Mesa/Powderhorn Plan, 2012, pg. 3) Due to the ability of Powderhorn to construct multi-family dwellings, a development is approved for 2,400 units (Mesa/Powderhorn Plan, 2012, pg. 8). More information regarding the potential growth in Powderhorn is provided later in the report.

The Town of Collbran is also seeing some growth through recent approvals with the potential development of 20-40 new homes on half-acre lots and five additional homes on five acre lots. There is also a new pre-K-12 school and improved sports fields being constructed in the town. With recent political developments, expected increases in gas drilling in the area may cause additional population growth to occur.

Community Risks

As with much of Mesa County, the significant community risks for the PVFPD are from wildfires and floods. In addition, there are several identified areas of potential landslides within the fire district, presenting a moderate risk.

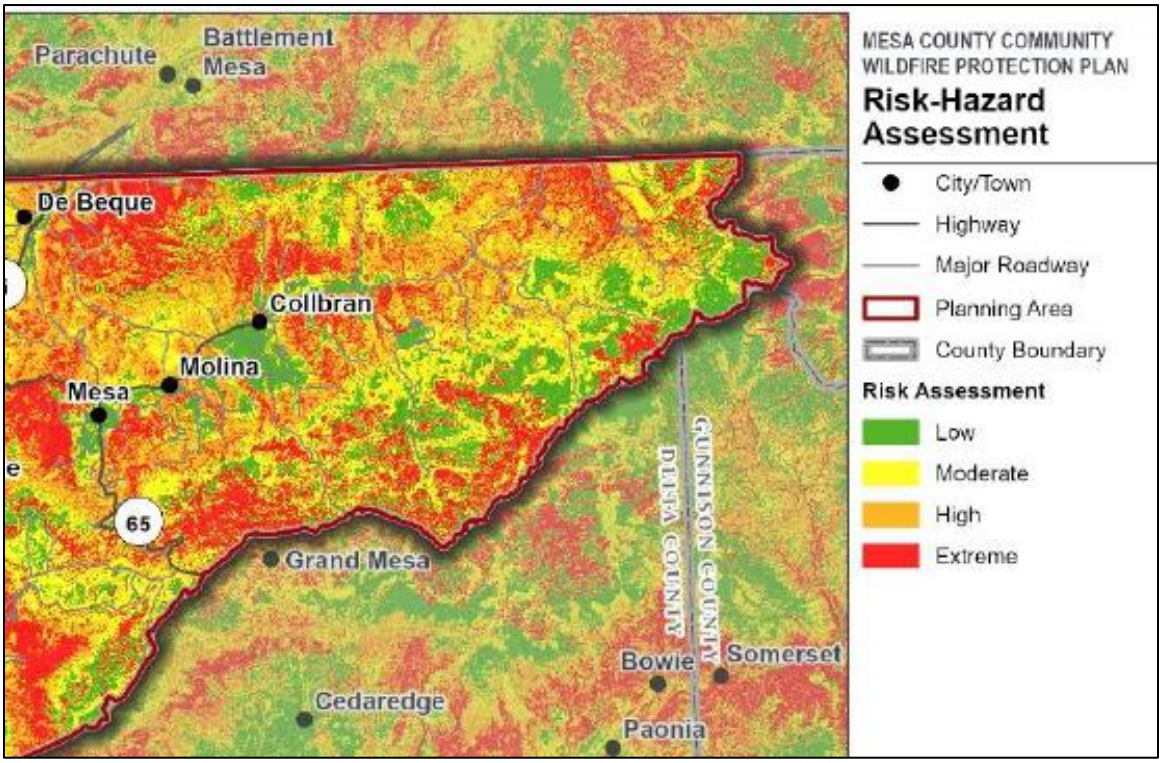
Figure 1: Community Risks for PVFPD

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Total Score	Hazard Level
Avalanche	2	4	6	32	M
Drought	8	4	4	48	M
Earthquake	6	4	4	40	M
Expansive Soils	2	4	2	16	L
Extreme Heat	8	4	2	40	M
WildFire	6	8	4	80	H
Flood	6	8	6	96	H
Hail Storm	4	4	2	24	L
Land Subsidence	2	4	4	24	L
Landslide/Rockfall	4	8	6	80	H
Lightning	2	8	4	48	M
Tornado	2	4	2	16	L
Wind Storm	4	6	4	48	M
Winter Storm	6	6	2	48	M
Dam Failure	4	4	6	40	M
Hazardous Materials	2	8	4	48	M

Source: Mesa County Hazard Mitigation Plan

The fire hazard assessment of wildfires within the Plateau Valley FPD shows the following risk areas:

Figure 2: Mesa County Risk-Hazard Assessment for Wildfires



Source: 2023 Mesa County Community Wildfire Protection Plan – Page 38

With the recent events in California, community wildfire planning and mitigation initiatives will be critical in the future. The fire district should ensure that it is as prepared as possible to mitigate the wildfire hazards and respond to such incidents should they occur. Within the 2023 Mesa County Community Wildfire Protection Plan, there are twelve community areas within the PVFPD rated as moderate to extreme in wildfire risk. This is more than any other fire district within the county. These communities include:

Table 1: Wildfire Risk Categorization by Community

Extreme Risk Area	High Risk Area	Moderate Risk Area
Vega Vista Road	Powderhorn Ski Area	Collbran/Plateau City
Horizon Estates	Old Grand Mesa	
Aspen Park	Mesa	
Buzzard Creek Drainage	Coon Creek	
Vega Drainage	Kimball Creek	
	Molina	

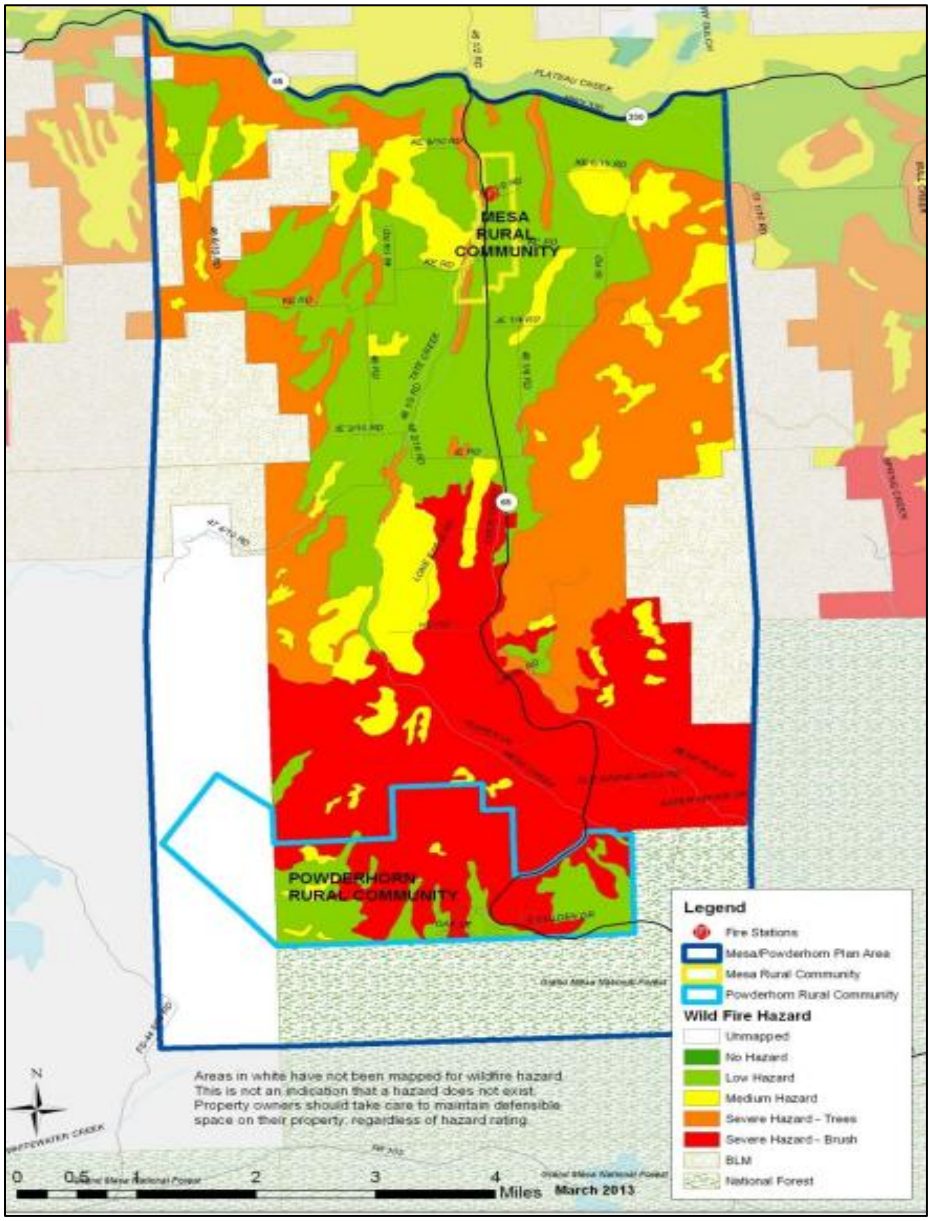
As cited in the 2023 Mesa County Wildfire Protection Plan, the major risks within these communities include lack of access, limited or no water supply and thick fuel loading.

Within the Mesa/Powderhorn Plan of 2012, several fire protection issues were identified. These included:

- Undersized water lines
- Areas not served by water systems
- The need for a Powderhorn located Fire Station and equipment
- The length of response times to Powderhorn

Source: Mesa/Powderhorn Plan, 2012, pg. 12

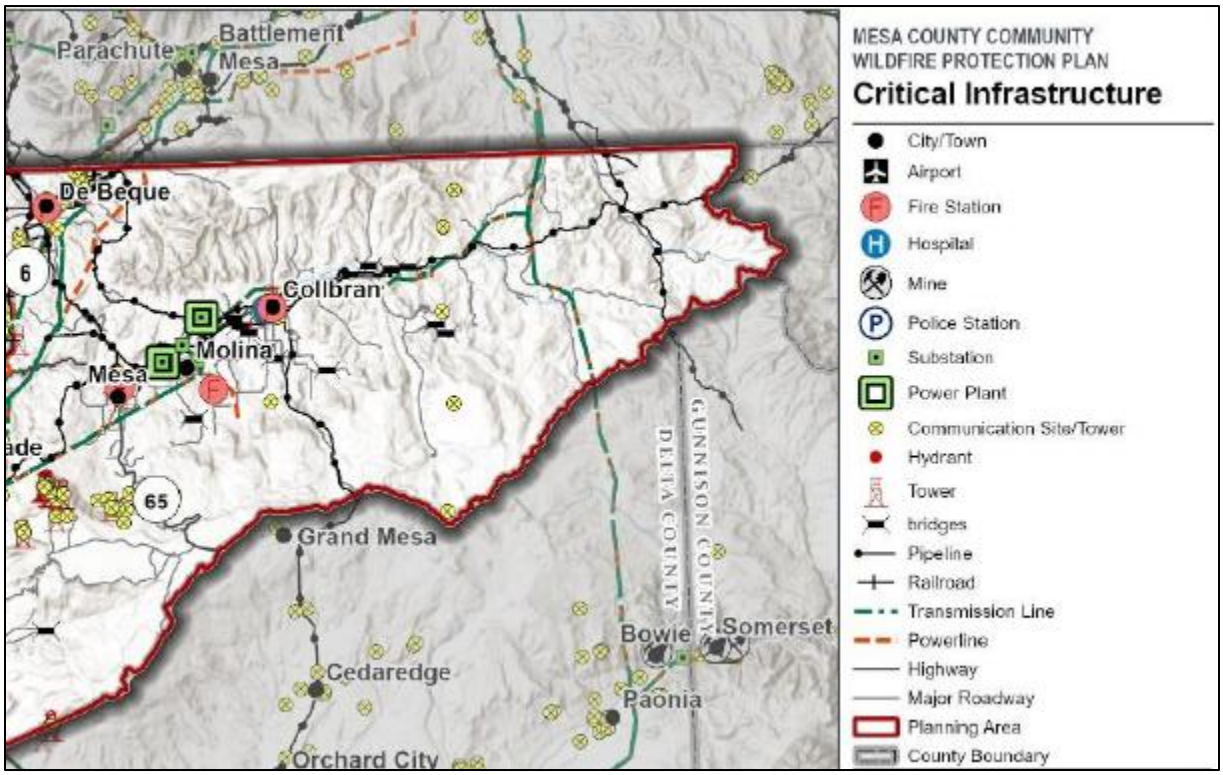
Figure 3: Mesa/Powderhorn Wildfire Risk Areas



Source: Collbran 2035 Comprehensive Plan

There are several critical infrastructure risks in the fire district from wildfire incidents. Damage to such facilities would significantly impact key power and communications facilities.

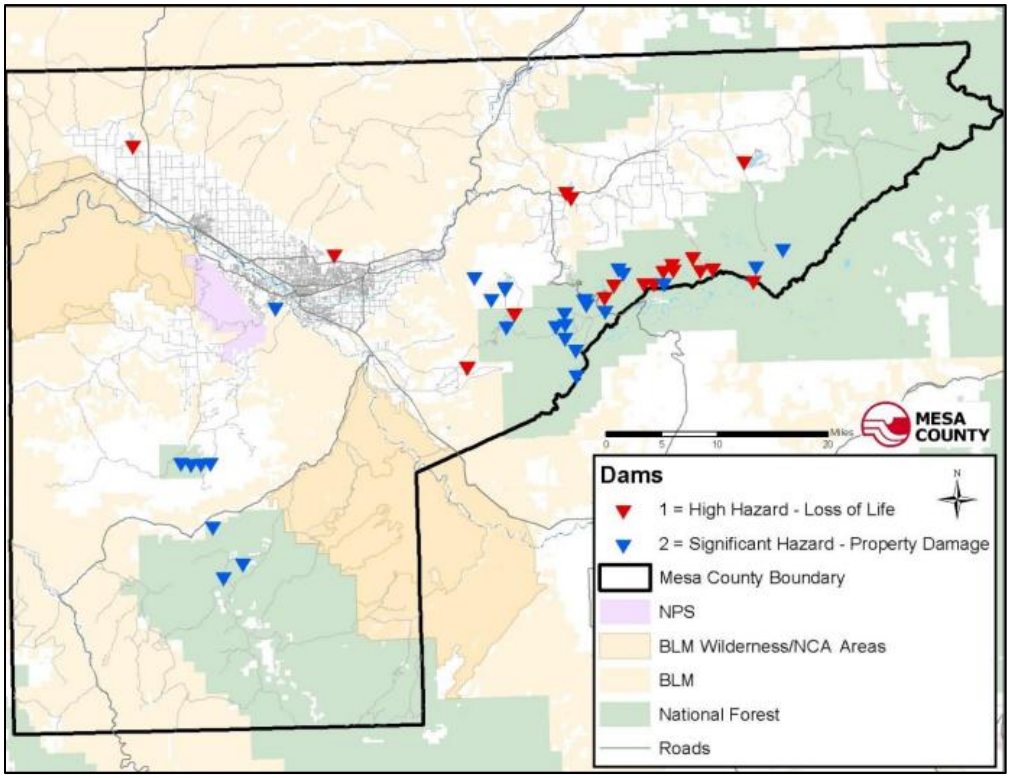
Figure 4: Mesa County Critical Infrastructure



Source: 2023 Mesa County Community Wildfire Protection Plan – Page 42

Within the fire district, there are multiple high and significant hazard dams that if breached can pose life safety risks to residents.

Figure 5: Mesa County Dam Locations



Source: Mesa County Hazard Mitigation Plan

The PVFPD has multiple oil and gas drilling well sites, with an estimated 800-900 active wells within its response area. Drilling activity has recently started to increase with the changes in national politics and the economy. There are also natural gas compression/distribution sites within the district to distribute gas from existing wells. Most all these sites have work crews on them with varying degrees of industrial hazards, including the generation of high heat processes. There are also two power generation sites within the fire protection district.

With the identified community disaster risks within the PVFPD, there is also the impact of these risks on the community members and how resilient they are to recover or deal with such an event. The Centers for Disease Control has created the Social Vulnerability Index (SVI) to identify communities most at risk from being able to recover from a disaster. It refers to a "community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human caused threats, such as toxic chemical spills"[1]. Mesa County has an SVI of 0.6462. On a scale of 0 to 1, this indicates that residents in the county have a medium to high level of vulnerability regarding disasters and the ability to recover from them.

[1] "Social Vulnerability Index." *Place and Health - Geospatial Research, Analysis, and Services Program (GRASP)*, 22 July 2024, www.atsdr.cdc.gov/place-health/php/svi/index.html.

GOVERNANCE/OVERSIGHT

The PVFPD is a Title 32 Special District as defined by the State of Colorado. The district is governed by an elected, five-member, Board of Directors that oversees district business operations and the fire chief, to whom they provide policy direction.

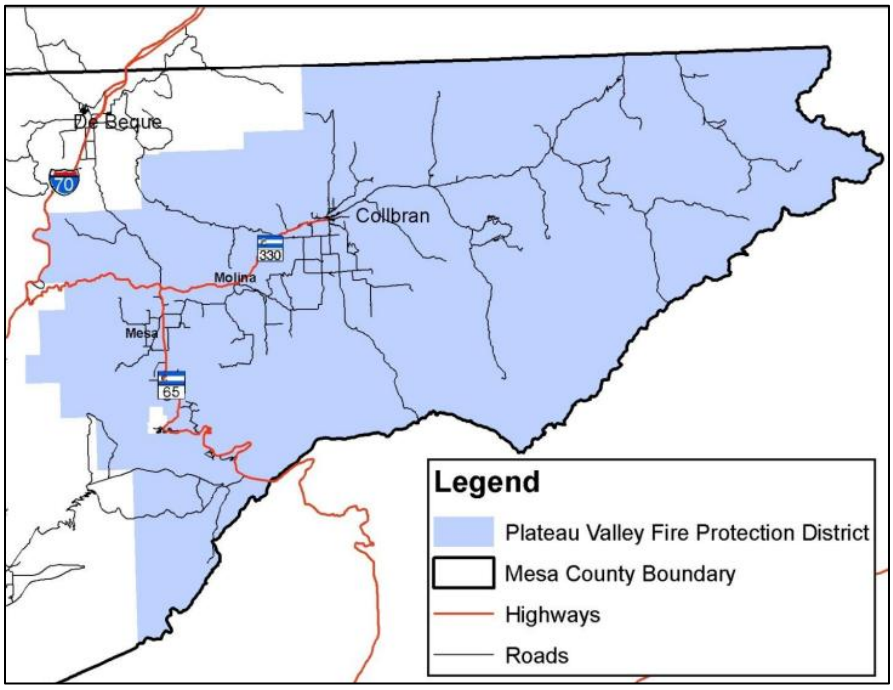
The provision of Emergency Medical Services is overseen by Mesa County. The county maintains a countywide Medical Director who sets the training, equipment and operating protocols for all medical personnel. Recently, the State of Colorado assumed oversight of the licensure of EMS vehicles and development of state EMS standards. It is not yet clear the impact that this will have on the operations of PVFPD.

THE FIRE DISTRICT

The PVFPD is a combination department, staffed with career and volunteer members. The fire district covers 797 square miles of far eastern Mesa County with an estimated population of 5,000. The district consists of 462 square miles (58%) of national forest and 88 square miles (11%) of Bureau of Land Management property. The district operates with 6 full time, 5 part time, 17 volunteer personnel, one career fire chief and one administrative assistant. When fully staffed, there are two full time personnel on duty 24/7 consisting of a firefighter/paramedic and firefighter/EMT. Staffing with the second full time position began in September, 2024. Part time personnel backfill for the career firefighters when there are shift vacancies or leave use. Of the volunteer personnel, one is certified as a paramedic and two can operate as EMT's.

One of the career members is assigned the duties of training officer for the district and another career member is assigned the duties of EMS Coordinator and Quality Assurance Reviewer for EMS responses.

Figure 6: Plateau Valley Fire Protection District



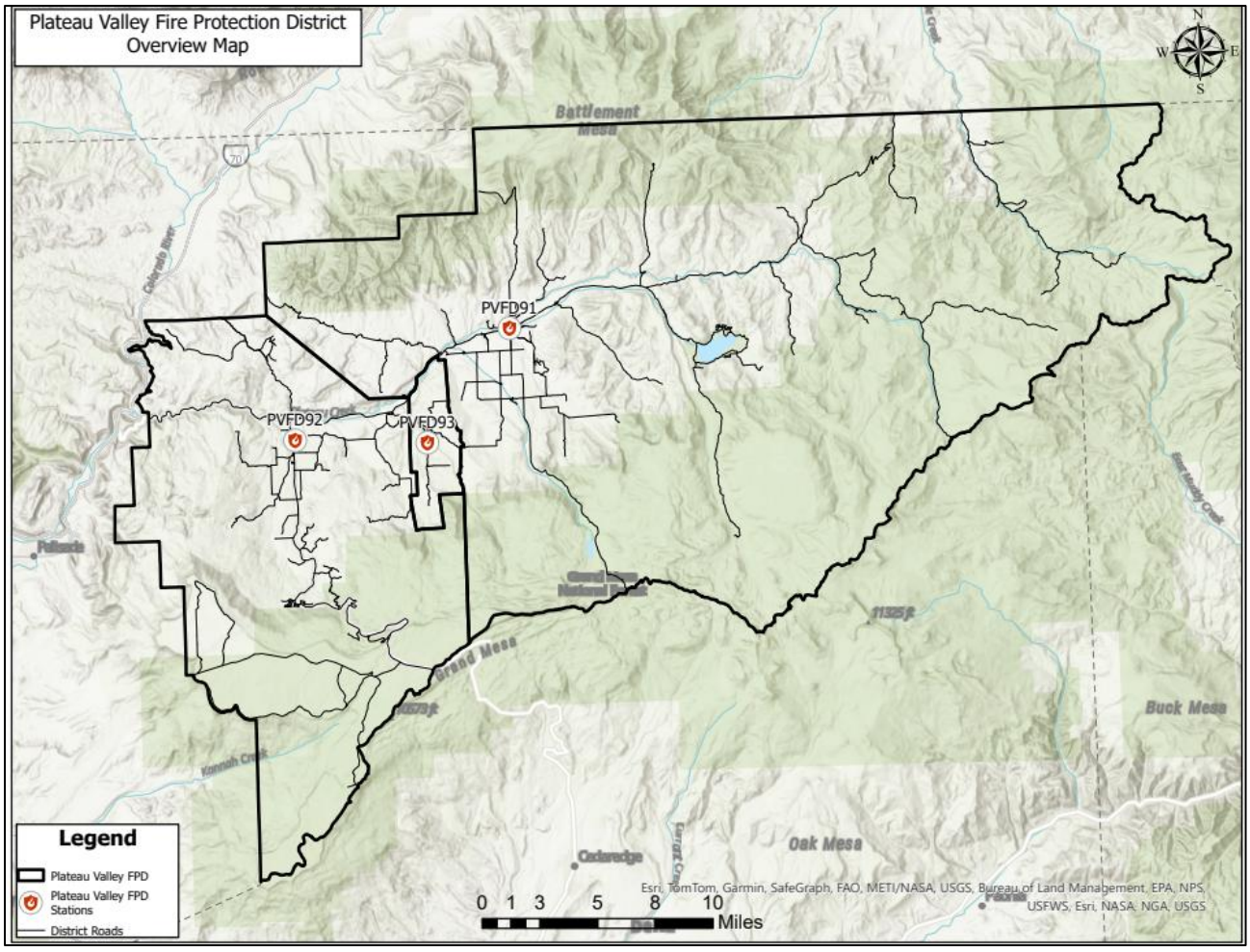
Source: Mesa County Hazard Mitigation Plan

The fire district operates from three stations and with the following apparatus:

- Three engines
- Three tenders
- Three ambulances
- Five brush trucks
- Three squad units
- Multiple offroad and snow vehicles

The fire station locations within the district are shown below:

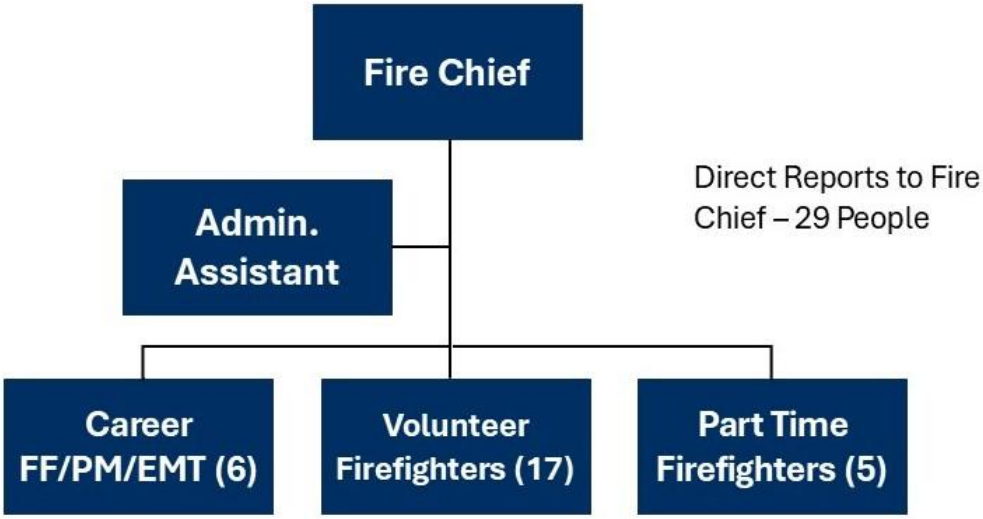
Figure 7: PVFPD Fire Stations



Based on population and demographics, the district would be considered rural and/or remote in some locations.

The current organizational structure within the fire district is the following:

Figure 8: PVFPD Current Organizational Structure



GRAND MESA METRO DISTRICT (GMMD)

Though located within Mesa County, the GMMD is a special development district and contracts with the PVFPD to provide EMS and fire protection services to the district, including the Powderhorn community and resort. The GMMD is approximately 650-800 acres and governed by their own board of directors. Powderhorn is a residential resort area that is located within the Grand Mesa Metro District (GMMD), which is in the southwest portion of the fire district. Powderhorn Resort, which was developed in the 1960s, operates as a ski area with several lifts including a high-speed quad lift. Outside of ski season, the resort is used for mountain biking, other outdoor adventure sports and community events.

During the ski season, Powderhorn sees approximately 500-700 visitors daily during weekdays and 2,100-2,400 on the weekends. The onsite population, during ski season, is approximately 90%-day travelers and 10% resident/condo rentals. There are approximately 350-400 employees operating onsite during the ski season. Due to elevation and local weather conditions, ski season typically runs from late autumn to early spring.

The ski resort area consists of single-family dwelling units, multi-family, 2-3 story condo units, timeshare units, tiny houses and some limited retail and restaurant facilities onsite. Two of the three condo buildings have automatic sprinkler systems installed.

The current general breakout of housing within the GMMD district includes the following:

Table 2: GMMD Housing Breakdown

Development	Number of Dwelling Units	Number of Vacant Lots (Future Development)
Time Share Units	48 Units - One to Three Bedroom	
Valley View	32 Units – Owner occupied (Mostly year-round) (Fully sprinklered)	
Slope Side	20 Hotel sized rooms - Rental	Additional 2–3-bedroom condos to be built with underground parking
Wildwood	25 single family dwellings	20 lots for development
Powder Ridge	15 single family dwellings	25 lots for development

Projected future development within Powderhorn is expected to include the construction of 75-150 additional tiny homes and a development named Ski Oui Oui, which will have townhouses and single-family dwellings up to a maximum density of 914 units. When fully built out, Powderhorn is expected to have a population of 8,000 to 10,000 seasonal or full-time residents. (All information for this section provided by Ms. Sheila Dole, President of GMMD)

Currently, the PVFPD responds to approximately 50 incidents per year at Powderhorn, mostly EMS related incidents during the ski season. However, the anticipated growth could have a significant impact on the future call volume for the district. At build-out, it would be estimated that an additional 500-800 calls for service could occur at Powderhorn annually.

MASTER PLAN

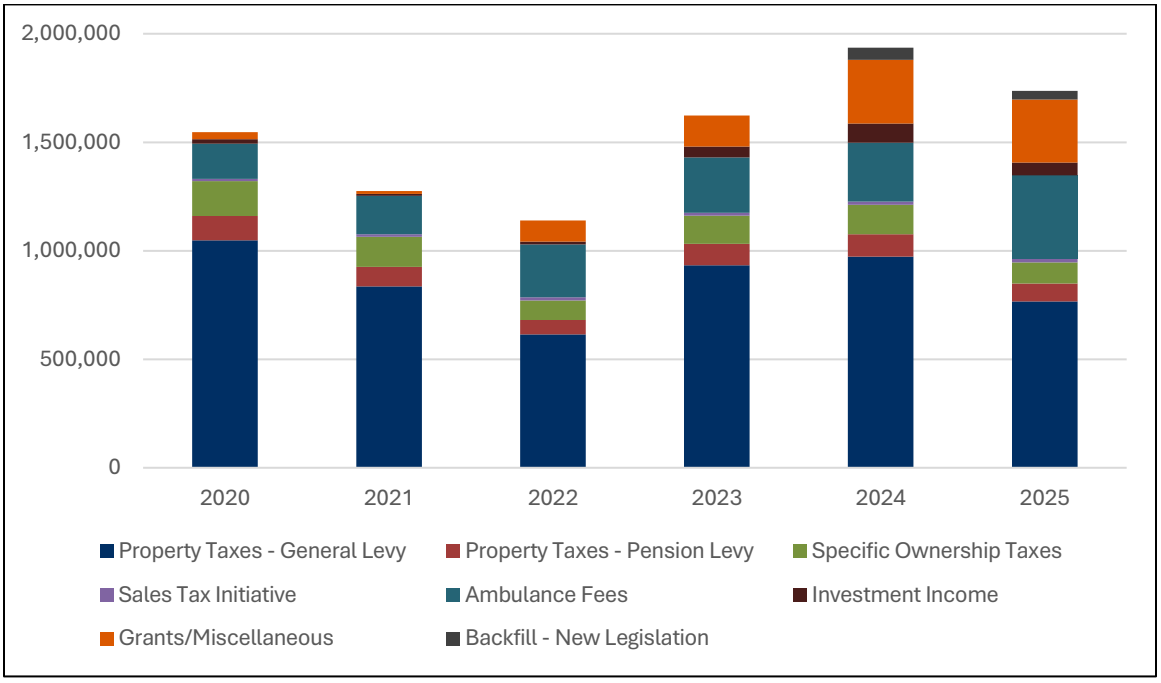
A developed master plan for an organization observes how they are operating, the services provided and what infrastructure and staffing are in place, all relative to the risks and demographics of the community. A long-range forecast is then developed to make improvements in organizational service levels, infrastructure and staffing. MissionCIT, LLC has developed the following master plan for the Plateau Valley Fire Protection District based on all the known data, level of operations, and future projected needs. The master plan is broken down into several key areas that include Staffing, Stations, Apparatus, Community Risk Reduction, and Health, Safety and Wellness.

SECTION 1: FUNDING

The PVFPD is funded by several different revenue sources. The primary revenue source is from a millage (mil) levy on property valuation in the district. Currently, the general mil levy for the district is 4.669. The district also has a separate volunteer firefighter pension levy of .5 mil, approved in 2000. The total mil levy for the district is 5.169. The district charges for EMS services and has worked to develop additional revenue sources to diversify its budget revenues. The various revenue sources over the last 6 years are shown below.

As part of an agreement with the Grand Mesa Metro District, the GMMD compensates the fire district approximately $24,700 per year for coverage for a portion of the GMMD area. This revenue is based on property valuation in the GMMD at the fire district millage rate and is accounted for as part of the fire district's EMS revenues.

Figure 9: Fire District Revenue 2020 - 2025



The FY2025 budget for the district includes the following revenue and sources.

Table 3: FY25 Revenue for PVFPD

Source	Revenue	Percentage of Budget
Property Taxes – General Levy	$766,979	44%
Property Taxes – Pension Levy	$82,135	5%
Backfill – New Legislation	$40,000	2%
Specific Ownership Taxes	$97,900	6%
Sales Tax Initiative	$15,000	1%
Investment Income	$60,000	3%
Ambulance Fees	$385,000	22%
Grants/Miscellaneous	$290,000	17%
FY2025 Total	**$1,737,014**	**--**

The fluctuating expenditures within the fire district over the last several years points to a concerning trend of increasing expenditures with declining revenues. The decreasing revenues from property taxes are due to legislative impacts on special districts within the state. This leads to the fire district having to expend funds from its reserves in order to balance its budget needs.

Figure 10: PVFPD Revenues and Expenditures 2020 – 2025

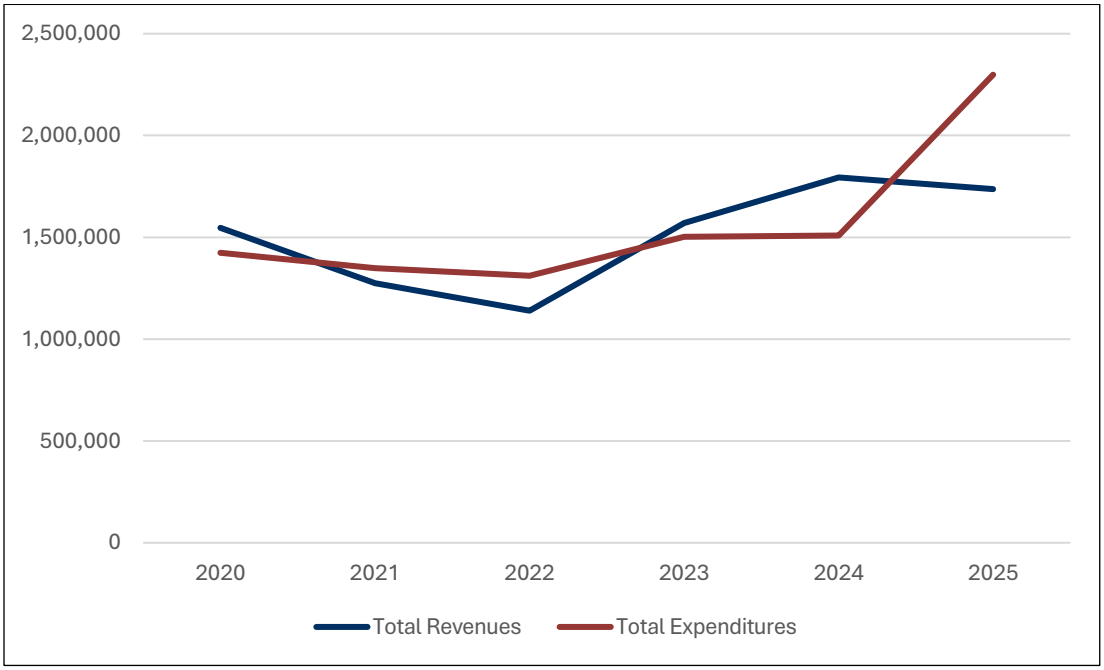


Table 4: PVFPD Revenues and Expenditures 2020 – 2025

Budget Year	Revenues	Expenditures	Variance
2020	$1,546,461	$1,423,451	$123,010
2021	$1,275,141	$1,348,835	($73,694)
2022	$1,139,635	$1,311,302	($171,667)
2023	$1,570,121	$1,501,851	$68,270
2024	$1,794,130	$1,509,513	$284,617
2025	$1,737,014	$2,298,672	($561,658)

This practice is not sustainable for the long-term success of the fire district.

The expenditure trend for the fire district has included the following over the last 6 years.

Table 5: PVFPD Expenditure Trend by Budget Category 2020-2025

Budget Year	General and Administrative *(Minus Wages and Payroll)*	Volunteer Pension	Wages and Payroll	Operating	Capital Expenditures
2020	$405,123	$98,761	$554,922	$171,204	$193,441
2021	$320,193	$87,690	$596,016	$165,219	$179,717
2022	$338,427	$64,480	$583,867	$260,059	$64,469
2023	$350,368	$98,078	$578,500	$232,869	$191,810
2024	$445,297	$104,070	$809,750	$316,765	$371,000
2025	$550,972	$80,439	$930,000	$306,700	$511,000
Change 2020-2025	**+36%**	**-18%**	**+67%**	**+79%**	**+164%**

Similar to the revenue side, the district expenditures over the last 5 years have also had fluctuations. Like everything today, overall costs are continuing to increase, whether for goods and materials or personnel costs. The new fire chief is attempting to improve equipment, facilities and safety practices for the department personnel.

Recommendation 1.1	The fire district should continue to explore additional revenue sources to increase their budget diversity.

Recommendation 1.2	The fire district should consider discussions with the Grand Mesa Metro District to have them initiate a lodging tax on accommodations to help fund the responses and operational needs of the Powderhorn community.

Recommendation 1.3	The fire district should consider a long-term mil levy increase plan tied to projected organizational improvements and funding needs. More detail is provided in the Implementation Plan Section.

SECTION 2: VOLUNTEER RECRUITMENT AND RETENTION

The PVFPD currently does not have a formal volunteer recruitment program. Most of their volunteer recruitment comes from word-of-mouth efforts in the community.

The fire district has several current policies and practices in place to retain volunteer personnel. The district covers the costs of attendance for fire and EMS classes, pays volunteers $20.00 per call response and holds an annual appreciation dinner for volunteers. In addition, the fire district has a volunteer firefighter pension plan. After serving 20 years, upon retirement, a volunteer member is eligible to receive an $800 monthly pension. Members, at age 50, who serve less than 20 years, but more than 10, can receive a pension amount equal to $35 per month, per year of service.

Volunteer personnel are required to respond to a minimum of 16 calls per year and attend 36 hours of training per year to maintain their active status with the PVFPD. The district provides workers' compensation coverage for the volunteers. The district also provides short term and long-term disability plans for members, who can receive monthly payments if utilizing the program. Training and/or business meetings are held twice a month by the fire district.

Other than obtaining a CPR card, there are no minimum training requirements for volunteers in order to respond and operate at fire or EMS incidents. There are no required training certification requirements for volunteer personnel to maintain their membership with the district other than the call and training attendance criteria indicated above. More information and recommendations about training can be found in Section 11.

Recommendation 2.1	The fire district should have a documented entry process and volunteer position description for new volunteer personnel so that new, potential members have a clear sense of the expectations for them joining the organization.

Recommendation 2.2	The fire district should consider developing an administrative only volunteer position description and recruit for non-response volunteer personnel who can assist with website development, logistics functions, vehicle maintenance, etc. to take the burden off existing career and volunteer personnel.

Recommendation 2.3	The fire district should develop a comprehensive volunteer marketing/recruitment program to include social media, events, and community interaction to gain additional interest and members.

Recommendation 2.4	The fire district should develop a tracking system for new members so that their progress through the application phase, orientation, and any training activities can be documented.

SECTION 3: SYSTEM WORKLOAD AND PERFORMANCE

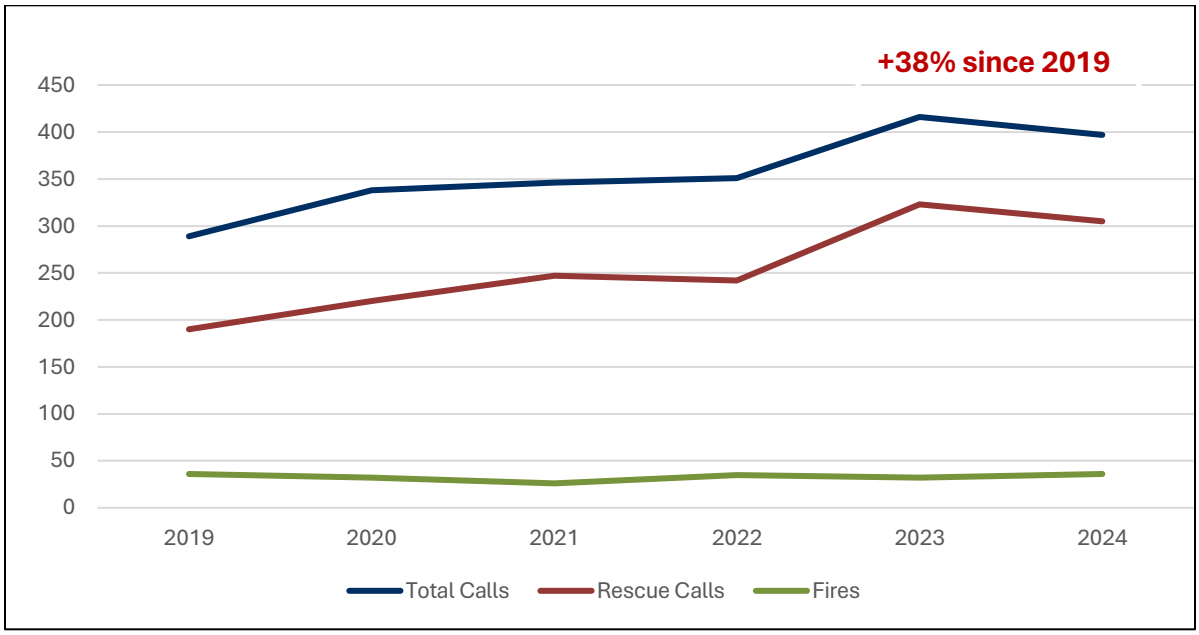
A summary of the workload responses, fire loss and injuries and deaths within the district over the last six years includes the following:

Table 6: Department Workload

Year	Total Calls for Service	Mutal Aid Given	Mutual Aid Received	Fire Loss	Civilian Injuries and Deaths	Fire Service Injuries and Deaths
2019	287	2	12	$150,000	0	0
2020	327	11	14	$220,000	0	0
2021	329	17	20	$682,070	0	0
2022	334	17	13	$16,500	0	0
2023	406	10	17	0	0	1 non-fire injury
2024	397	6	14	$150,000	0	3

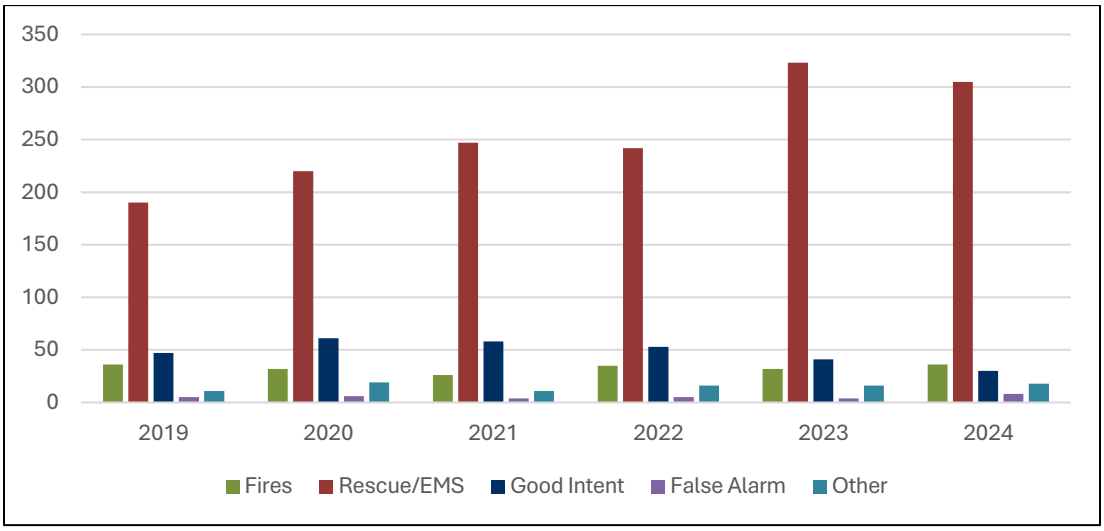
The incident breakouts by general call type for the district shows the following:

Figure 11: PVFPD Call Type 2019-2024



A more specific breakout of incidents notes that the predominant increase in calls over the last six years has been from EMS responses while most of the other main categories, such as fires, good intent and other calls have remained relatively constant during that same time.

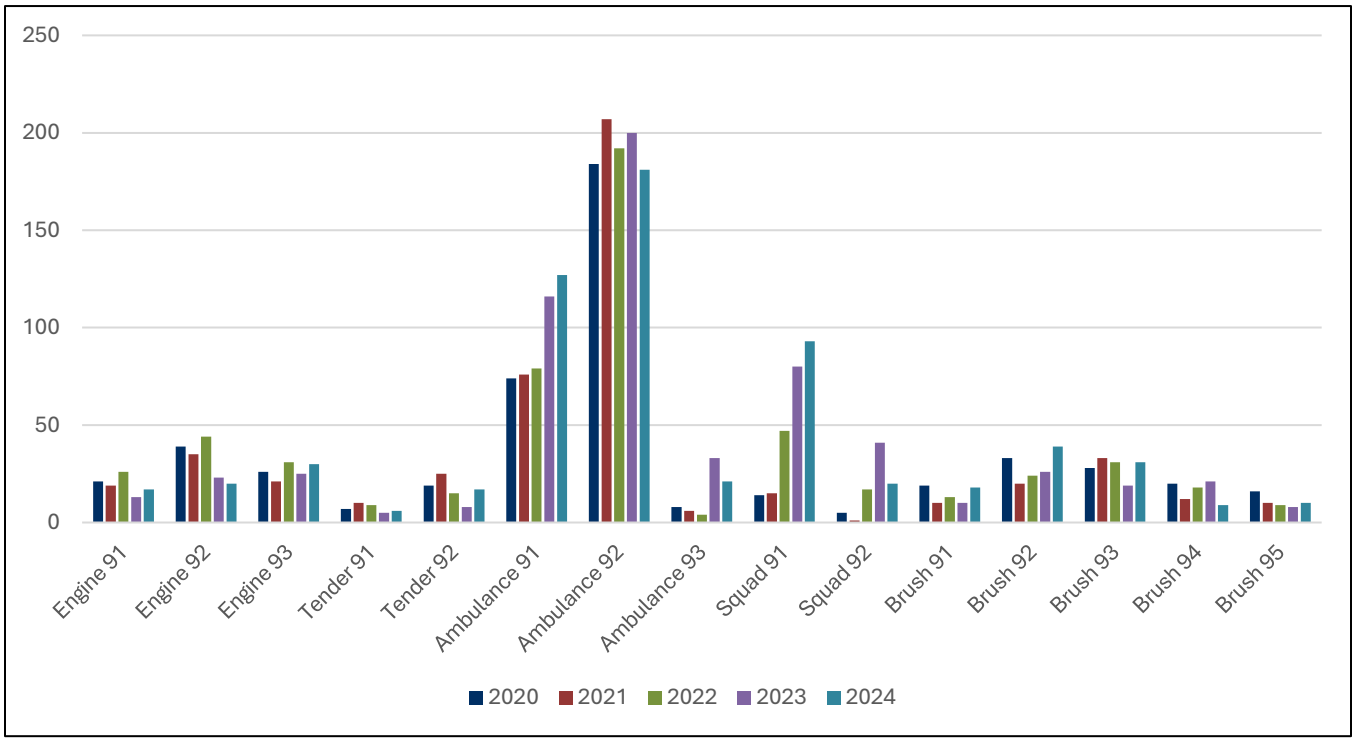
Figure 12: PVFPD Calls by Call Type 2019-2024



Like many fire departments in the United States, the number of responses to EMS incidents in the fire district far exceeds other call types.

The number of responses by each district unit shows the impact of EMS calls in the district. The increase in responses by Ambulances 91 and 93 could point to an increase in concurrent calls for service indicating a need for increased resource availability within the district. See next page.

Figure 13: Number of Responses by District Unit 2020-2024



Within the fire service, there are two main response parameters with which fire departments are measured against. Those parameters are the Insurance Services Organization (ISO) and the National Fire Protection Association (NFPA).

ISO rates fire departments on their coverage to areas within 5 miles of travel distance from a fire station. This distance is used by the Insurance Services Office (ISO) to determine a property's fire protection class, where properties located within 5 road miles of a responding fire station are considered to have better protection and typically receive a better insurance rating compared to those further away; essentially, if a property is within 5 miles of a fire station, it is considered to be within a favorable response distance for ISO calculations.

NFPA looks at travel time from a fire station. Within the NFPA 1720 standard, "*Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments",* fire protection coverage for rural areas recommends that fire response apparatus to be able to arrive on scene within 14 minutes after dispatch of those response units. For the purposes of this study, MissionCIT uses travel time of 12 minutes to allow for a two-minute turnout time of personnel to don appropriate personal protective equipment (PPE) and begin the movement of response apparatus.

The following two maps show the fire station coverage within the PVFPD following the ISO requirement at 5-mile travel distance and the NFPA 1720 standard at a 12-minute travel time threshold. Both maps show very similar coverage areas within the district.

Figure 14: PVFPD ISO coverage (5-mile travel distance)

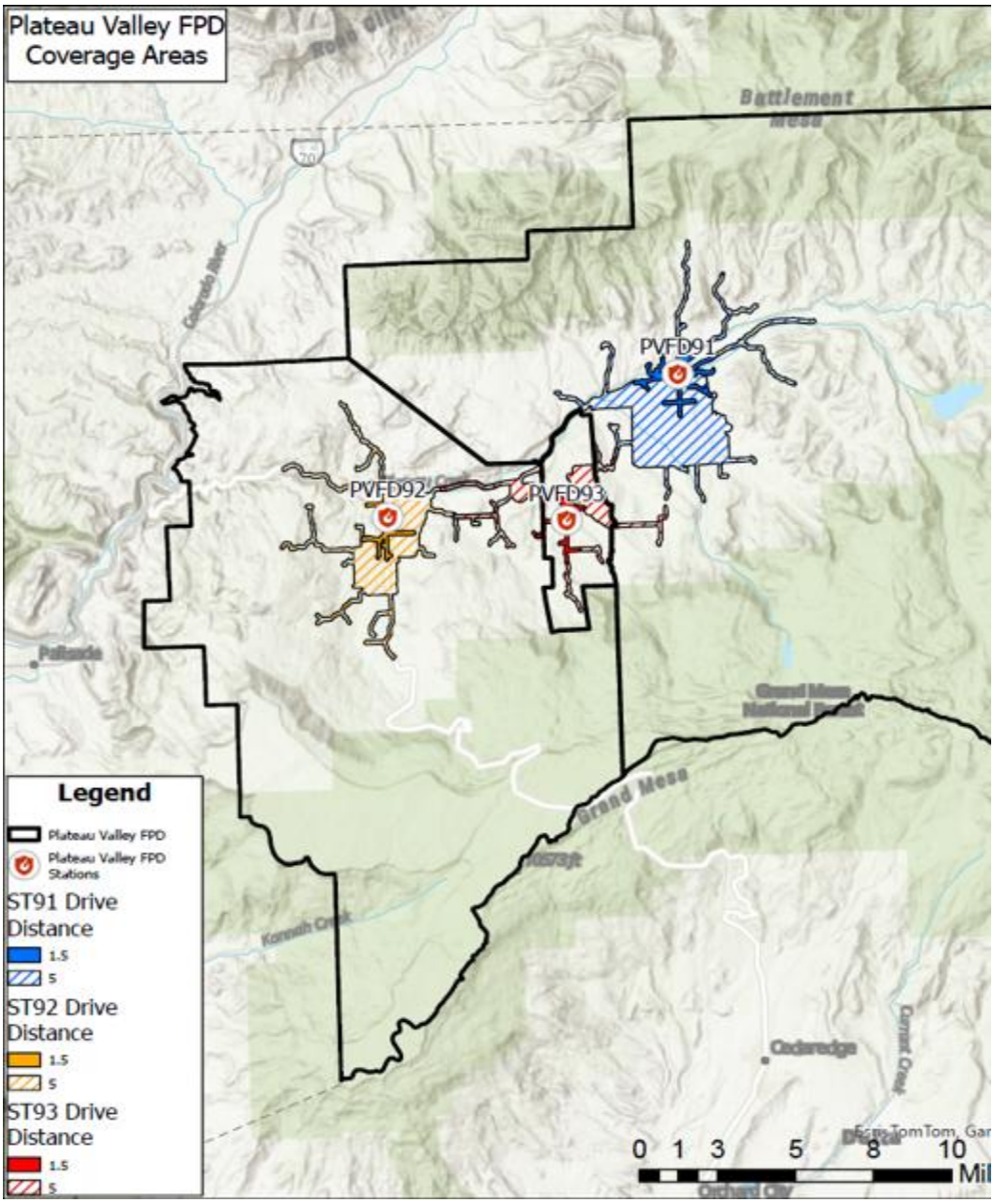
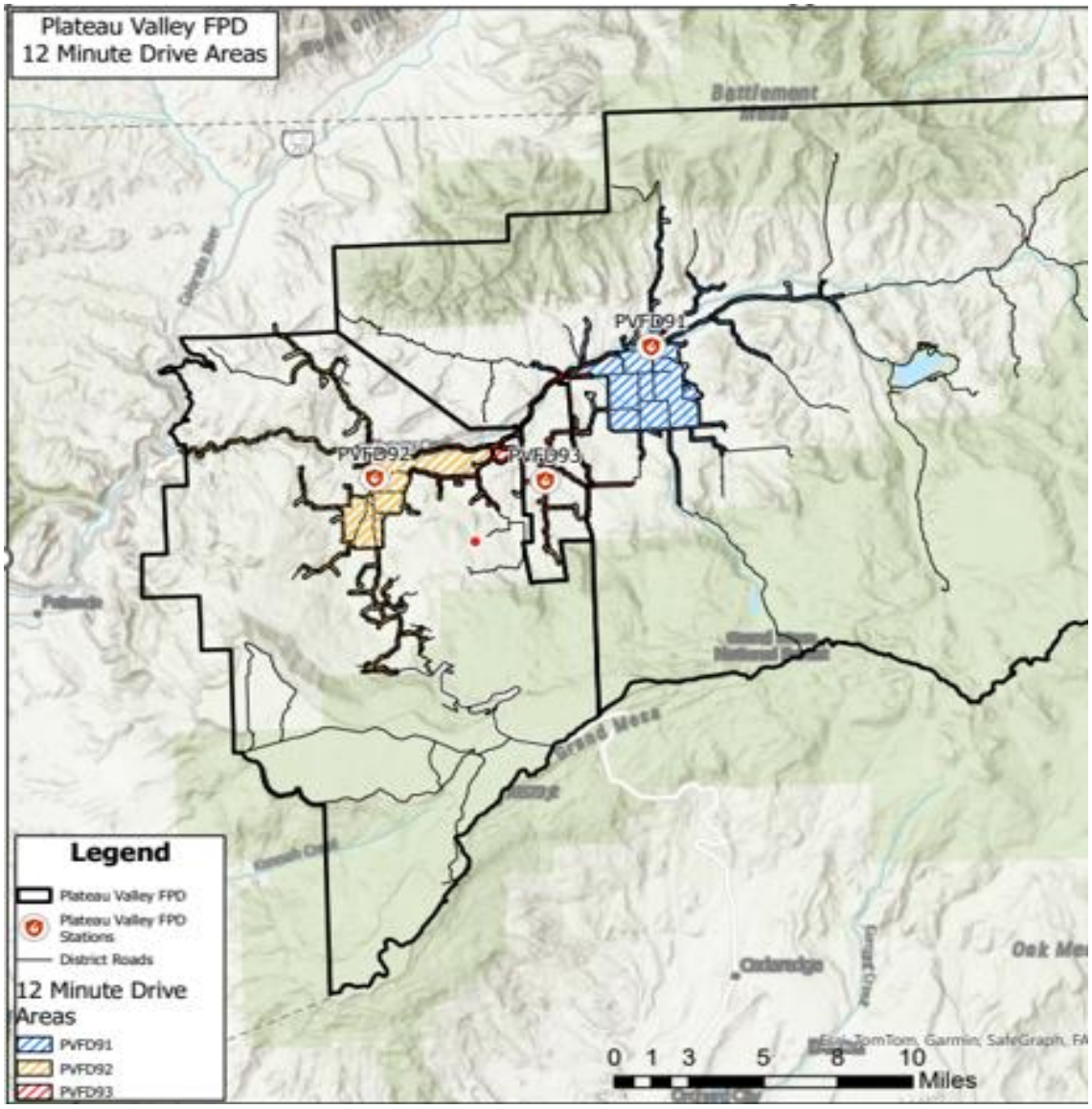


Figure 15: NFPA 1720 coverage (12 minutes travel time)



From a GIS analysis, the location of the fire stations within the fire district provides the following coverage levels:

- ISO Guidelines
  - Percentage of structures within 1.5 miles of a fire station – 20%
  - Percentage of structures within 5 miles of a fire station – 50%
- NFPA 1720 Standard
  - Percentage of structures within a 12-minute travel time from a fire station – 54%

The distribution of incidents within the district is shown on the following heat maps, which display the volume of calls, with brighter colors representing where more incidents occur.

Figure 16: PVFPD Call Volume Heat Map, 2021-2023

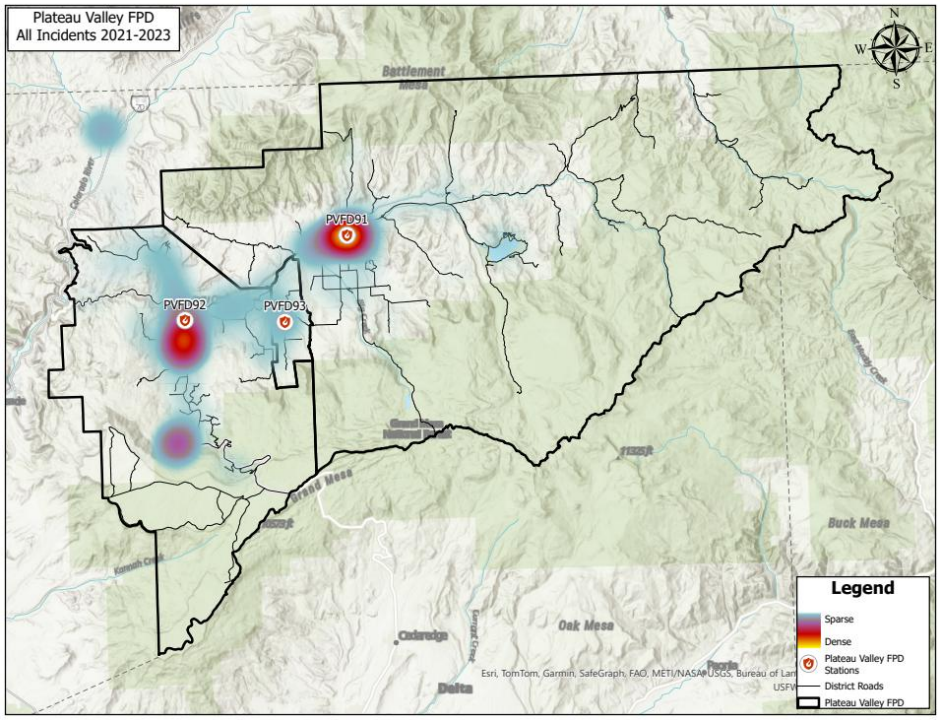


Figure 17: PVFPD Incident Locations, 2021-2023

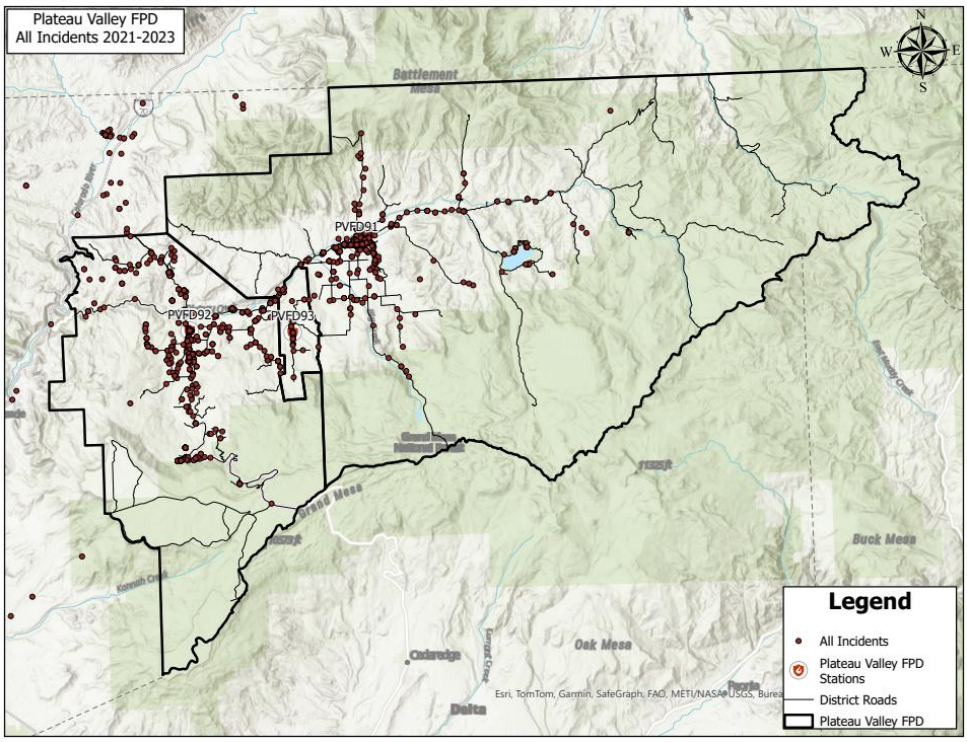


Figure 18: PVFPD EMS Incidents Heat Map, 2021-2023

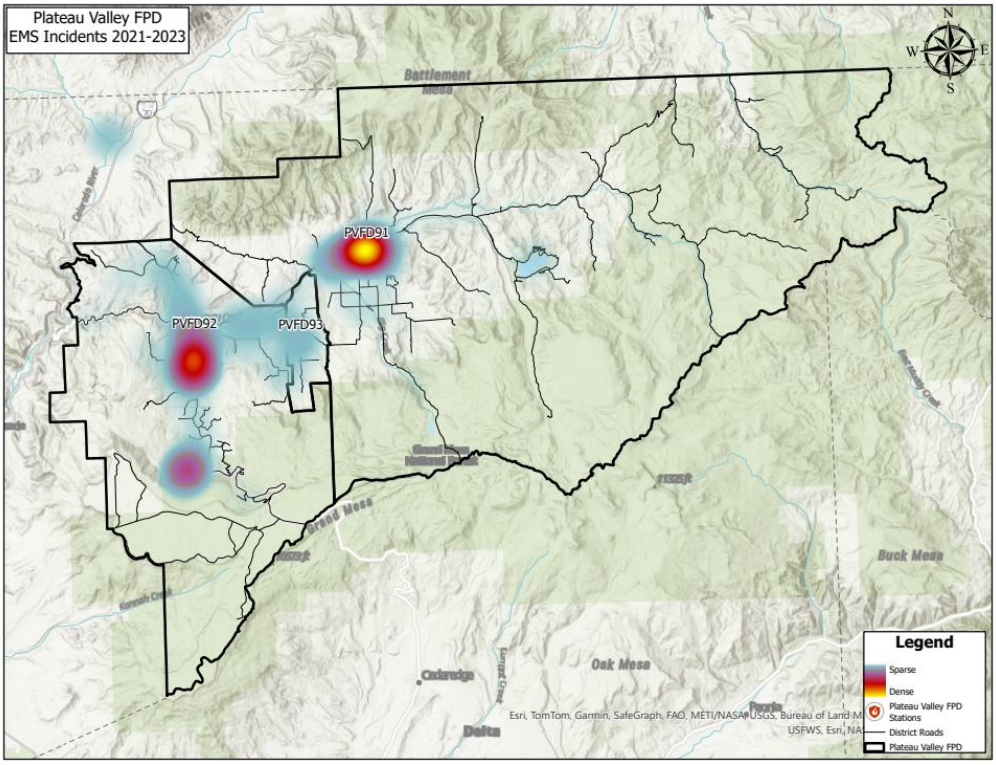
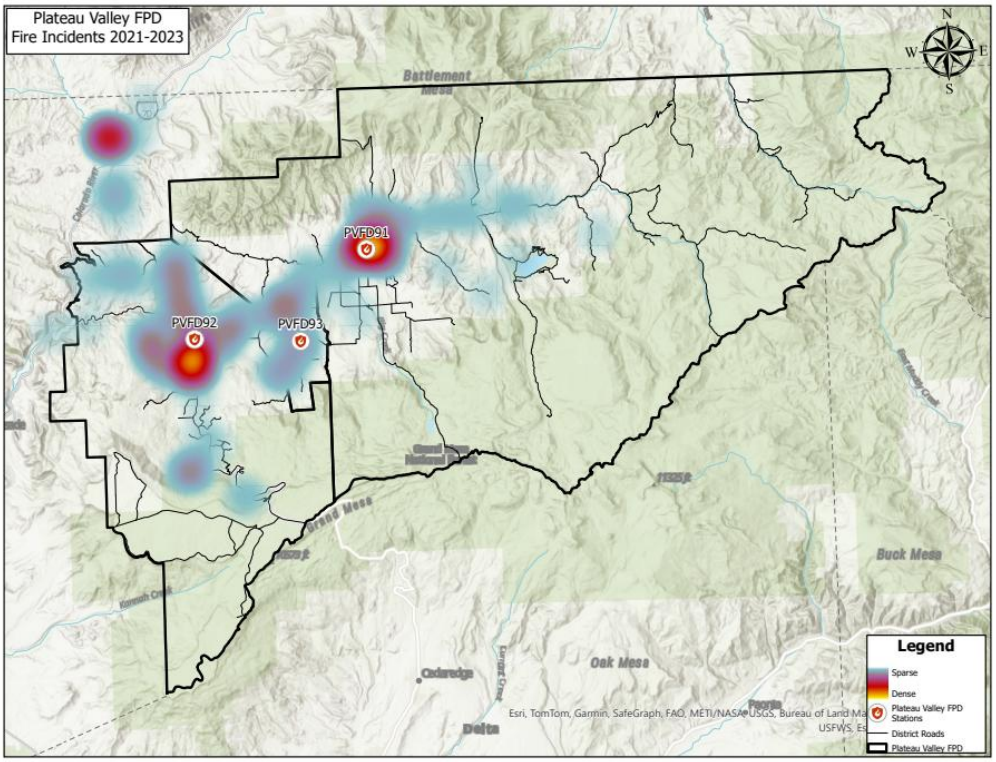


Figure 19: PVFPD Fire Incidents Heat Map, 2021-2023



From additional GIS analysis, the location of total incidents relative to the location of the fire stations shows the following coverage levels:

- ISO Guidelines
  - Percentage of incidents within 5 miles of a fire station – 69%
- NFPA 1720 Standard
  - Percentage of incidents within a 12-minute travel time from a fire station – 72%

The vast majority of incidents the fire district responds to are located within the population areas of Mesa, Collbran and Powderhorn. This is normal since that is where the population centers are. For fire related incidents, there is a hot zone in the DeBeque Fire District for mutual aid responses and some increase in activity along the route from Mesa to Collbran. Based on this call distribution, the stations in Mesa and Collbran are appropriately located to cover the majority of incidents. The number of incidents within the Powderhorn area may dictate that a facility and resources be located onsite soon to ensure a more appropriate level of response during ski season.

An analysis of the fire/other incidents and EMS incident broken down by day of the week and by time of day, over the last four years shows the following:

Table 7: Fire/Other Incidents by Day of Week, 2021-2024

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
0000 to 0059	1		1			1		3
0100 to 0159	1	1	2	1	1			6
0200 to 0259	1				1			2
0300 to 0359					1			1
0400 to 0459		1			1			2
0500 to 0559	2	1	1			1		5
0600 to 0659				2	2	1	1	6
0700 to 0759		1	2	5	4	2		14
0800 to 0859	4		1	3		4	2	14
0900 to 0959	2	4	1	1	2	3		13
1000 to 1059	3	4	1	4	3	2	7	24
1100 to 1159	2	2	3	3	2	4	1	17
1200 to 1259	2	5	3	3	2	5	3	23
1300 to 1359	1	4	2	4	6	3	4	24
1400 to 1459	4	8	5	5	5	6	4	37
1500 to 1559	3		3	3	2	7	3	21
1600 to 1659	7	1	4	6	6	5	5	34
1700 to 1759	6	2	4	6	5	3	7	33
1800 to 1859	4	7	3	5	6	6	3	34
1900 to 1959	2	2	2	6	6	3	3	23
2000 to 2059		2	6	3	4	2	3	20
2100 to 2159	2	2	1		6	4	3	18
2200 to 2259	1	2		1	2	1	7	14
2300 to 2359			1	2		2	1	6
Total	**48**	**49**	**46**	**63**	**66**	**65**	**57**	**394**

Table 8: EMS Incidents by Day of Week, 2021-2024

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
0000 to 0059	5		4	2		5	3	19
0100 to 0159	1		4	1	1	2	2	11
0200 to 0259	1	3	2	4		2	4	16
0300 to 0359		3		2	1	2	4	12
0400 to 0459	2	3	2	2	4	2	2	17
0500 to 0559	5	2		4	2	1		14
0600 to 0659	5	5	5	2	6	3	4	30
0700 to 0759	3	3	2	5	5	6	5	29
0800 to 0859	12	3	4	5	8	6	1	39
0900 to 0959	8	9	10	10	6	9	8	60
1000 to 1059	10	8	11	12	15	16	13	85
1100 to 1159	11	14	10	17	14	13	8	87
1200 to 1259	8	12	5	11	9	22	13	80
1300 to 1359	16	10	8	5	16	27	19	101
1400 to 1459	8	5	12	5	14	22	19	83
1500 to 1559	8	8	8	15	18	18	19	94
1600 to 1659	5	4	6	11	14	5	6	51
1700 to 1759	5	8	11	5		16	6	51
1800 to 1859	7	9	8	5	7	13	7	56
1900 to 1959	7	5	3	10	12	7	4	48
2000 to 2059	3	7	4	9	8	6	6	43
2100 to 2159	3	3	4	4	7	9	8	38
2200 to 2259	4	3	2	6	1	3	3	22
2300 to 2359	3	2	2	3	3	5	3	21
Total	**140**	**129**	**127**	**155**	**171**	**218**	**167**	**1107**

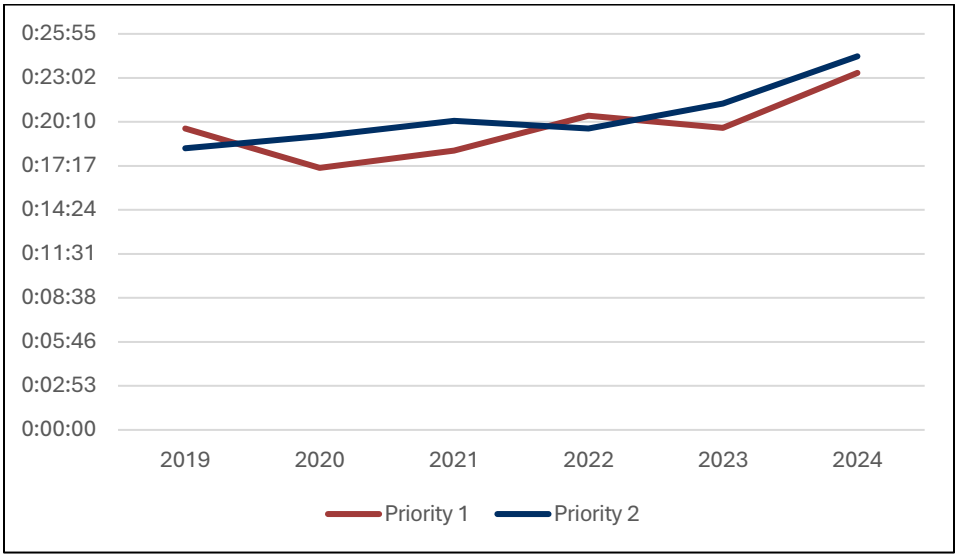
The busiest times of the day and days of the week for the district, particularly for EMS calls, are generally 10 am to 8 pm on Friday, Saturday and Sunday. This can be attributed to two main items. First, more people are moving around during the weekends and second, there are people, with associated vehicle traffic, moving to and from the Powderhorn resort area.

Analyzing the average call processing, response time and total call time for the Priority 1 and Priority 2 incidents responded to by the district over the last 6 years, we see the following:

Table 9: Average Call Times for Priority 1 and 2 Incidents, 2019-2024

Year	Number P1 Calls	Avg. Call Processing	Avg. Dispatch to On Scene	Avg. Total Incident Time Create to Close	Number P2 Calls	Avg. Call Processing	Avg. Dispatch to On Scene	Avg. Total Incident Time Create to Close
2019	120	1:29	19:44	2:00:20	73	2:52	18:26	2:17:12
2020	139	1:05	17:09	2:07:17	107	0:53	19:13	2:14:01
2021	155	0:48	18:17	2:19:51	97	0:55	20:14	2:46:18
2022	160	1:03	20:34	2:24:59	72	1:27	19:43	2:36:29
2023	205	0:49	19:46	2:20:49	116	1:16	21:21	2:36:56
2024	225	0:51	23:22	2:30:52	84	0:47	24:27	2:39:27

Figure 20: Priority 1 and 2 Calls Dispatch to On Scene



The number of calls has been increasing for both priority incident types. The Priority 1 incidents have increased by over 87% during this period. The call processing time by the emergency communications center has fluctuated greatly during the six years that were analyzed. It is unknown whether this is due to staffing issues within the center or call processing process changes that may have been implemented, or both. The average response time to the scene (dispatch to unit on scene), has also fluctuated over these six years with an overall increase of almost 4 minutes for Priority 1 calls and an increase of 6 minutes for Priority 2 calls. Overall, the average total time that a unit is committed to an incident has continued to increase within the fire district for both priority types, with Priority 1 calls taking over 30 minutes longer and Priority 2 calls taking over 22 minutes longer since 2019.

Response statistics were also analyzed as median and fractile times. Median time is the true middle value in a range from low to high. Fractile times noted below are at the 90th percentile, which means that PVFPD is meeting these times 90% of the time. The total response time for a unit is the time the unit is notified, the amount of time it takes for the unit to go enroute and the travel time to get to the scene.

Table 10: PVFPD Response Statistics

Year	Turnout		Response Time		Total Response Time		Call Cleared and Unit in Service	
	Median	90th	Median	90th	Median	90th	Median	90th
2019	0.38	17.16	6.47	17.37	12.42	25.63	63.32	91.13
2020	2.23	15.58	7.99	17.87	12.72	26.51	59.37	91.33
2021	2.75	13.37	9.73	19.67	15.66	27.23	60.17	91.96
2022	2.72	16.81	9.15	20.68	15.39	28.48	59.91	86.23
2023	3.05	19.55	9.58	17.72	15.60	31.18	56.94	83.88
2024	2.73	19.02	11.77	20.35	16.52	30.32	56.53	91.27

Within this analysis, the total response, median and fractile times, have continued to increase over the last six years. The overall unit clearance time has gone down slightly during that time. In addition, it is taking greater time for units to get enroute and respond to the incident. This data may be skewed for second and third calls in the district where a response force must be assembled, either through a response to the station, personal vehicle response to the scene or picking up members along the response route, as the fire district changed its response notification process to dispatch in the summer of 2022. This is shown below.

Figure 21: PVFPD Median and 90th Percentile Turnout Times, 2019-2024

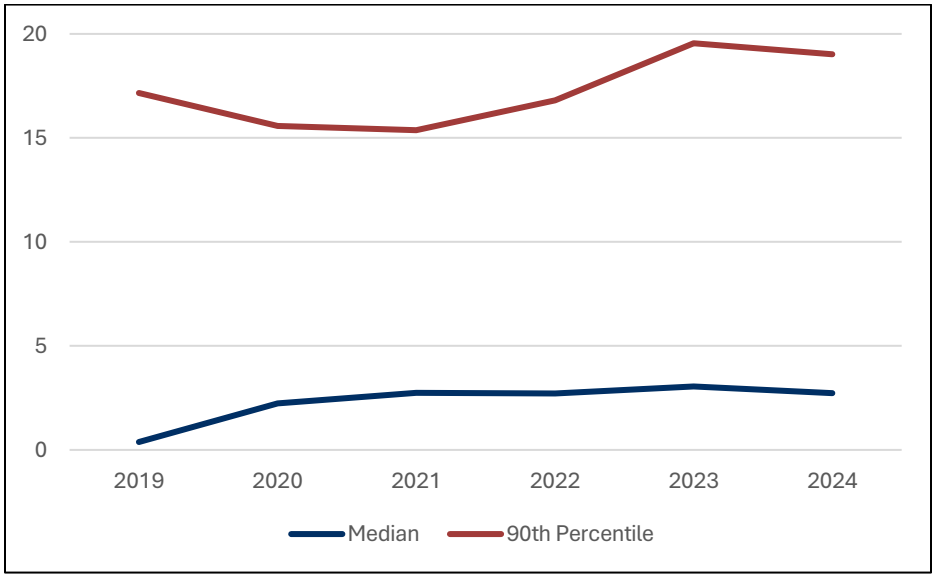
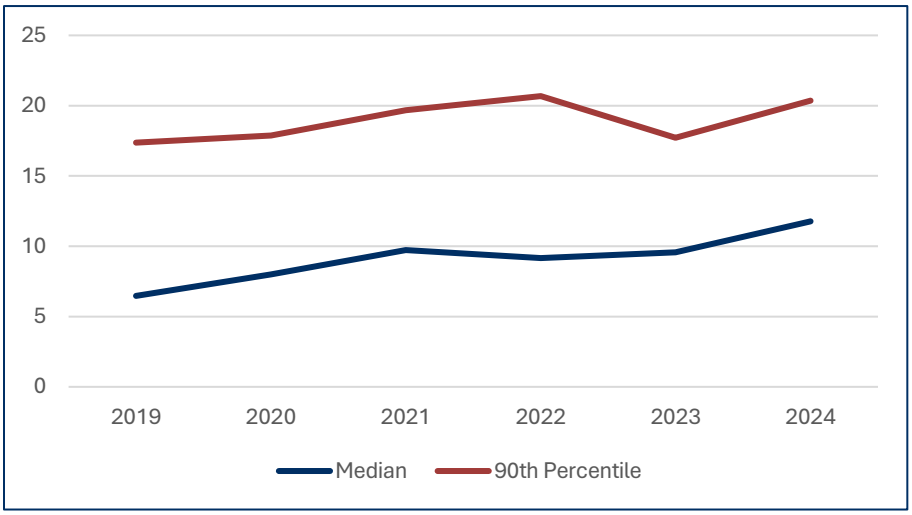


Figure 22: PVFPD Median and 90th Percentile Response Times, 2019-2024



The overall assessment of the fire district projects that calls for service will continue to increase. Specifically for EMS calls, it is projected that as the population in the area continues to grow older and there is an increase in overall population within the district, the number of incidents will increase. With this, the amount of time that district resources, particularly EMS units, are committed to an incident and unavailable for service will also remain high. The projected increase in EMS calls will continue to strain the single, career staffed EMS ambulance, creating more instances of the fire chief and volunteer personnel having to cobble together a second or third crew to respond to subsequent EMS or fire incidents. The increase in the EMS responses will also have an effect on the ambulance fleet requiring more frequent maintenance or ambulance replacement.

Recommendation 3.1	The fire district should more closely examine turnout times to see if there are internal improvements that can be made in that process.

Recommendation 3.2	Based on the distribution of incidents, particularly EMS calls, the district should not consider construction of a central, staffed, station between Stations 91 and 92, as was mentioned to MissionCIT personnel while onsite. Such a decision risks removing or relocating vital resources to less active areas of the district.

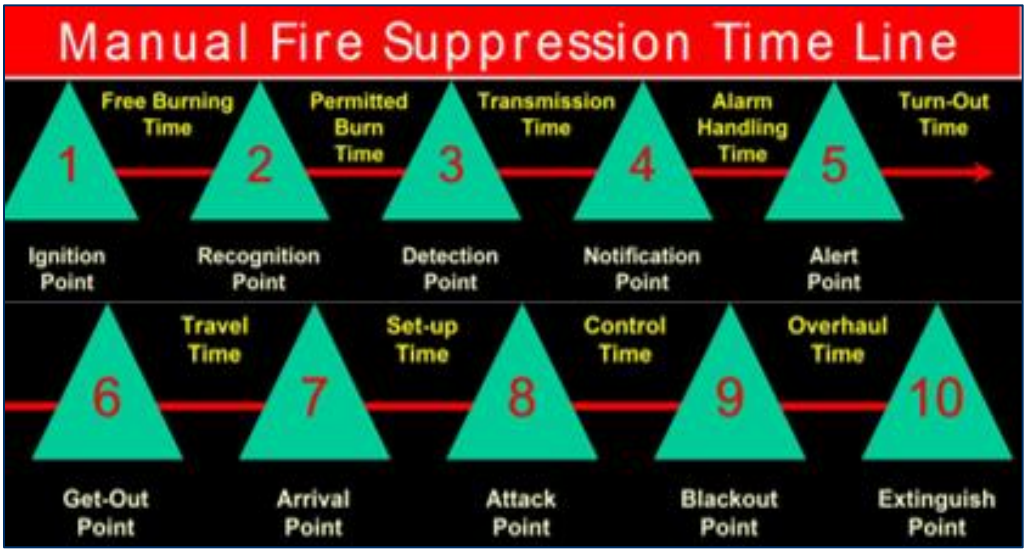
Recommendation 3.3	The fire district should develop response and staffing performance measures and track their performance against them to ensure the delivery of high-quality services. See Appendix G for a suggested draft.

SECTION 4: STAFFING

This section will describe measurable performance factors which promote safe and effective fireground operations. Fire departments that concentrate on these components are much more likely to possess a culture of risk identification, fireground safety and effective tactical operations, which leads to preserving their greatest asset- their members, and developing a favorable level of community support.

It is necessary to preface any discussion of fire department performance by first describing the manual (as opposed to automatic) fire suppression timeline. All fires undergo these ten points in the chart below, also known as "proxy measures." These measures affect fire department performance and fire outcome. For example, when a fire starts, it typically burns until it is detected (1 and 2). Thus, recognition and detection time, up until the alert point are out of the fire department's control. When the fire is reported, the amount of time required to process and dispatch the incident (4) is under the control of emergency communications. Items 5-10 are then the responsibility of the fire department. In theory, the quicker the fire department can turnout, respond, arrive, set up, and attack the fire, the better the outcome. Thus, the following analysis will focus on these latter measures to describe the effective firefighting force and apply them to the fire response system in Plateau Valley.

Figure 23: Manual Fire Suppression Timeline



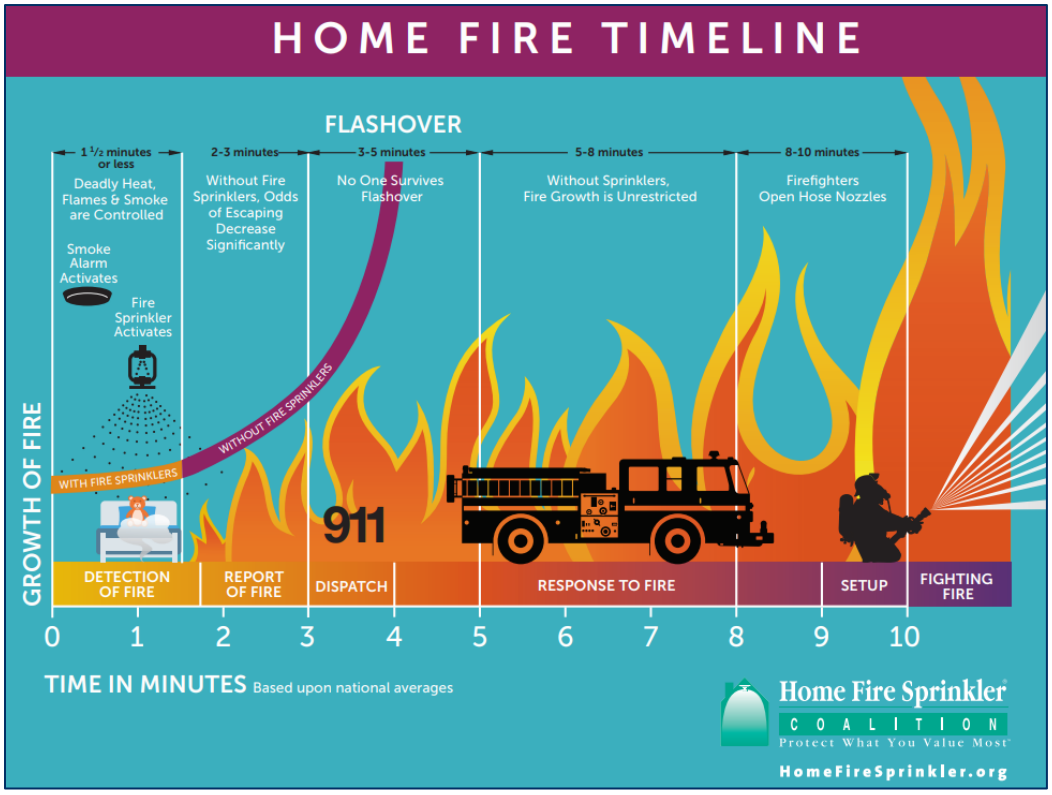
Source: Rexford Wilson Manual Fire Suppression Timeline. Used with permission by John Oates, CEO, International Public Safety Data Institute (PSDI) 2024.

Fire behavior is another concept to understand when looking at effective fire department operations. Like humans, fire has a life cycle, and understanding this can mean the difference between life or death during an incident. Research has determined that there are four stages of a fire, and it is important to understand these in order to safely and effectively combat a structure fire. The four stages are as follows:

- **Ignition -** The initial stage when fuel, oxygen, and heat combine in a chemical reaction. An incipient fire results from that reaction. A fire extinguisher can usually control the fire at this stage.
- **Growth -** The fire's size increases as more fuel ignites. The fire's growth is affected by many factors, including the amount of fuel, atmospheric conditions, and building conditions such as ceiling height. Indicators of the growth stage include increased room temperature, brown stains, cracks in windows, and a layer of smoke above the flame.
- **Fully developed -** The fire has spread to most or all the available fuel and temperatures peak. This is the most difficult stage to suppress because the fire is causing the most heat damage.
- **Decay -** The fire consumes its available fuel, temperatures decrease, and the fire's intensity decreases. The fire eventually becomes a smolder or goes out.

A rapid transition between the growth stage and the fully developed stages is called “flashover”. A flashover occurs when most of the combustible material in an enclosed area, also known as a fuel rich area, such as a home or commercial building with typical furnishing and finishes, ignites simultaneously. Flashover produces temperatures which can easily reach 1,800 degrees Fahrenheit or greater in a matter of seconds, producing an un-survivable environment for both firefighters and occupants. The chart below depicts the research-based timeline average in a structure fire.

Figure 24: Home Fire Timeline



Source: Home Fire Sprinkler Coalition

These two charts demonstrate that a flashover can occur in less than eight minutes, and often within three to five minutes from ignition. This means that in an un-sprinklered property, occupants have little time to escape. Further, firefighters entering or operating in the building at this critical moment could face explosive fire development.

Firefighting is a task-oriented, labor-intensive team operation requiring continual training, physical stamina, and an understanding of building construction and fire behavior. Most every analysis of labor ranks firefighting as one of the most dangerous of all occupations. Successful firefighting operations are dependent upon several factors, to include:

- Enough firefighters who are trained and equipped to perform tasks safely and efficiently
- The safe arrival of firefighters such that task execution may be done in a timely fashion
- Coordinated task execution and incident management, with a constant focus on the safety of occupants and firefighters

Broken down, the major tasks needed to manage an incident successfully and safely include:

- Prompt emergency dispatch and the relay of pertinent information to firefighters
- Safe arrival to the scene
- Proper tactical placement of apparatus
- Establishment of incident command with situation-based priorities (360-degree size-up, situation report, and development of initial priorities; specifically, victim rescue, protection of exposed properties, confinement, and extinguishment of fire)
- Establishment of an uninterrupted sustained water supply
- Utility control
- Tactical ventilation of the building
- Tactical deployment of firefighting hose lines
- Tactical deployment of ladders
- Victim rescue and EMS
- Medical evaluation for firefighters
- Preservation of unburned private property
- Safe overhaul of the building to ensure fire is out
- Incident demobilization and return to quarters
- After action review

The inability to perform these tasks in a rapid, coordinated sequence can lead to unnecessary damage and, worse, civilian or firefighter death and injury. For example, if the arrival of firefighters is delayed by long call processing and dispatch time, prolonged turn out time, or a long response time, a structure fire will advance from the ignition phase to the growth phase in under 10 minutes. This means a one-room fire could quickly involve several rooms, necessitating additional personnel, resources and water supply from stations at farther distances. Likewise, if firefighters do not arrive in a timely manner and in proper sequence, rescue and suppression actions may be attempted without appropriate safeguards in place, such as proper use of PPE to include self-contained breathing apparatus (SCBA), “back up”, (i.e. secondary) hose lines and a sustained water supply, endangering both civilians and firefighters.

The concept of “safe staffing” for structural firefighting has evolved over the last 30 years. Much of this development has been the result of analysis of significant incidents from across the country where firefighters and civilians have been killed. Through the formal reviews of these incidents, common themes have emerged, and recommendations have been attained on best practices for fire departments when dealing with these incidents. In addition, the science of firefighting has been advanced through laboratory testing and analysis of fire behavior. Many theories which formed the tactics of firefighting over the last 30-40 years have been disproved, resulting in vast changes to tactical and task level operations.

The National Fire Protection Association (NFPA) has developed consensus-based standards which provide guidance for the proper complement and arrival of response units and their staffing levels, as follows:

- NPFA 1500, "*Standard on Fire Department Occupational Safety, Health and Wellness Program*", Section A.8.5.1.1 recommends that "a minimum acceptable fire company staffing level should be four members responding on or arriving with each engine and each ladder responding to any type of fire."
- NFPA 1710, "*Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*", describes the tasks the initial response assignment should be able to complete, using a 2,000 square foot, wood frame dwelling, without a basement or exposures. While it does not define the composition of the initial alarm assignment, it does require:
    a. Four-person staffing on all engines, ladders/quints, rescue squads, or other specialty vehicles (excluding command-type vehicles and EMS units)
    b. Arrival of the first engine company, staffed with four personnel, within 240 seconds (4 minutes) or less of turnout and driving time, 90 percent of the time
    c. Arrival of the second engine, ladder, rescue squad, quint, or other specialty vehicle (excludes command-type vehicles and EMS units), staffed with four personnel, within 360 seconds (6 minutes), 90 percent of the time
    d. Arrival of the first alarm assignment in 480 seconds (8 minutes), 90 percent of the time
    e. A minimum of seventeen members (16, if no ladder is dispatched) on scene, to include four members to perform as a rescue intervention team (RIT)

    For garden apartment-type units and strip-mall type buildings, the total staffing required is twenty-eight members. For high-rise buildings, the total staffing required is forty-three members.

Table 11: NFPA 1710 – Recommended Staffing for First Alarm Structural Assignment Capability

Task	Single Family Dwelling *(2000 sq. ft.)*	Apartment *(1200 sq. ft. apartment in a 3-story building)*	Open- Air Strip Shopping Center *(13,000 - 196,000 sq. ft.)*
Incident Command	1	2	2
Establishing a water supply	1	2	2
Fire flow application with hose lines	4	6	6
Support for hose lines	2	3	3
Search and rescue team	2	4	4
Ventilation and raising ladders	2	4	4
Aerial ladder operator (If needed)	1	1	1
Rapid Intervention Crew	4	4	4
Initial Medical Care	N/A	2	2
Total Effective Response Force Needed	16-17 personnel	27-28 Personnel	27-28 personnel

Source- NFPA 1710 "Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments"

Even for non-structural incidents, a need for adequate numbers of personnel to respond to mitigate the incident is necessary. Below is a representative chart showing the typical number of needed personnel on non-structural emergency incidents.

Table 12: General Considerations for Minimum Staffing for Typical Non-Structural Response Incidents

Task	Vehicle Accident with Person Entrapment	Brush Fire *(Less than 1 acre and accessible)*
Incident Command	1	1
Fire Unit Driver/Operator	1	2
Hose line operator	2	4
Rescue Tool Operator	2	n/a
Hand Tool Operator	n/a	2
Patient Care	2	n/a
Total	8	9

- 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"*, uses the same baseline 2,000 square foot, wood frame dwelling, without a basement or exposures. However, it does not recommend minimum unit staffing levels. Instead, the standard allows the local Authority Having Jurisdiction

(AHJ) to establish specific staffing levels and response times to meet the need of the department (see below). This assessment should be done based on the hazards and risks inherent in the community being protected. NFPA 1720 does allow an authority to identify different "demand" zones and to establish requirements to meet those needs. NFPA 1720 requires firefighting operations to begin within two minutes of arrival, with all of the equipment needed to fight the fire, 90 percent of the time.

Table 13: NFPA 1720 Staffing and Response Time Requirements

Demand Zone [a]	Demographics	Minimum Staff to Respond [b]	Response Time [c] *(minutes)*	Meets Objective
Urban area	> 1000 people /sq. mi.	15	9:00	90%
Suburban area	500-1000 people / sq. mi.	10	10:00	80%
Rural area	< 500 people / sq. mi.	6	14:00	80%
Remote area	Travel distance greater than or equal to 8 miles	4	Directly dependent on travel distance	90%
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90%

a – A jurisdiction can have more than one demand zone
b – Minimum staffing includes members responding from the AHJ's department and automatic aid
c – Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table
Source: 2020 Edition of 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"

In addition to NFPA, regulations are also in place to govern "safe" operations at a structure fire.

- The Occupational Safety and Health Administration (OHSA) has regulations for operating in a hazardous atmosphere (Immediately Dangerous to Life and Health, or IDLH). OSHA 1910.134 (g)(4) requires at least two trained members to enter IDLH atmosphere (such as a structure fire) and remain in contact with each other through visual, audible, or physical means, and that at least two members must remain outside (Initial Rapid Intervention Crew, (IRIC) to monitor the inside crew as well as conditions and be available for immediate rescue should the situation warrant. This is commonly known as the "two in two out" regulation.
- Similarly, NFPA 1500, Sections 8.6.4, 8.6.5, 8.6.6, and 8.6.7, dictate crew management requirements during an emergency incident. These provisions require teams of at least two personnel, who must be in visual, audible, or physical means when operating in hazardous areas. Further, there must be two members on the outside to act as an initial rescue team, subject to immediate deployment.

- NFPA 1710 and 1720 require upgrade of the IRIC to a Rapid Intervention Crew (RIC), consisting of four members, in full PPE when the incident escalates to present significant risk to firefighters.

Plateau Valley Fire Protection District

To qualify the following recommendation for improvements to the PVFPD, MissionCIT will address operations using the NFPA 1720 standard. **Given that the district utilizes a combination of career and volunteer firefighting personnel, recommendations to adhere to NFPA 1710 would be unattainable and unnecessary for the current community hazards and risk at hand.**

Two on-duty career personnel currently staff the appropriate resource needed for a response, whether an EMS transport unit or a fire suppression unit. Volunteers operate without "in-station" staffing on a regular basis, instead responding from home or from work. When alerted, volunteers drive their vehicle to their respective station, meet apparatus at a coordinated collection point along the response route or drive directly to the scene, and then commence operations with other career or volunteer personnel who have assembled.

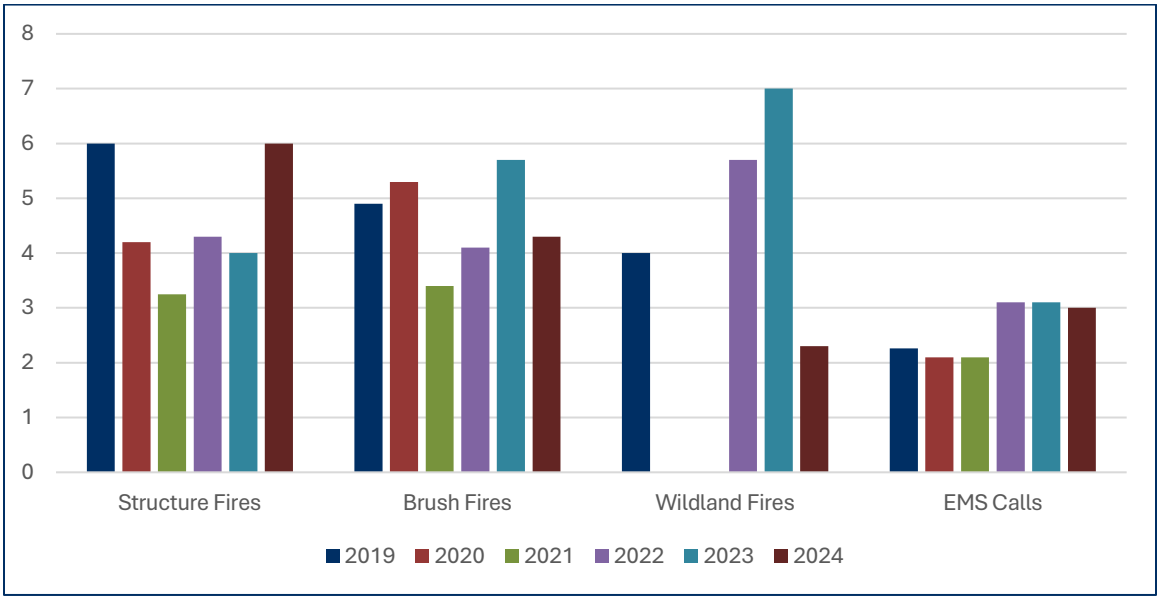
NFPA 1720 prescribes firefighting personnel levels and response times which are based upon multiple "demand zones," which include urban, suburban, rural, and remote zones, as well as classification of properties as special risk. Response time is defined in this standard as the incident alerting time from the dispatch until the arrival point of the first unit on the scene. This time interval does not include the ignition, detection, and reporting points nor the alarm handling time, which can add several minutes to the overall arrival time, adding to the growth and complexity of the fire. According to the Standard, the first arriving unit may be a tactical firefighting unit or a single first responder.

An evaluation of the PVFPD shows the majority of the structures are located in rural or remote areas, including those within the Town of Collbran and the Powderhorn area. These are mostly one and two-family residential homes, with some multi-family condos in Powderhorn. However, there are several commercial and industrial buildings located in each area with reduced property separations which should be considered higher risk. The projected growth for the PVFPD favors more residential growth over commercial or industrial. **MissionCIT proposes that a staffing model based upon the rural and remote demand zone is best for the overall community at this time. This means that response for structure fires should result in:**

- **Six personnel on the scene within 14 minutes for rural locations, 80% of the time, and**
- **Four personnel on the scene for remote areas, 90% of the time.**

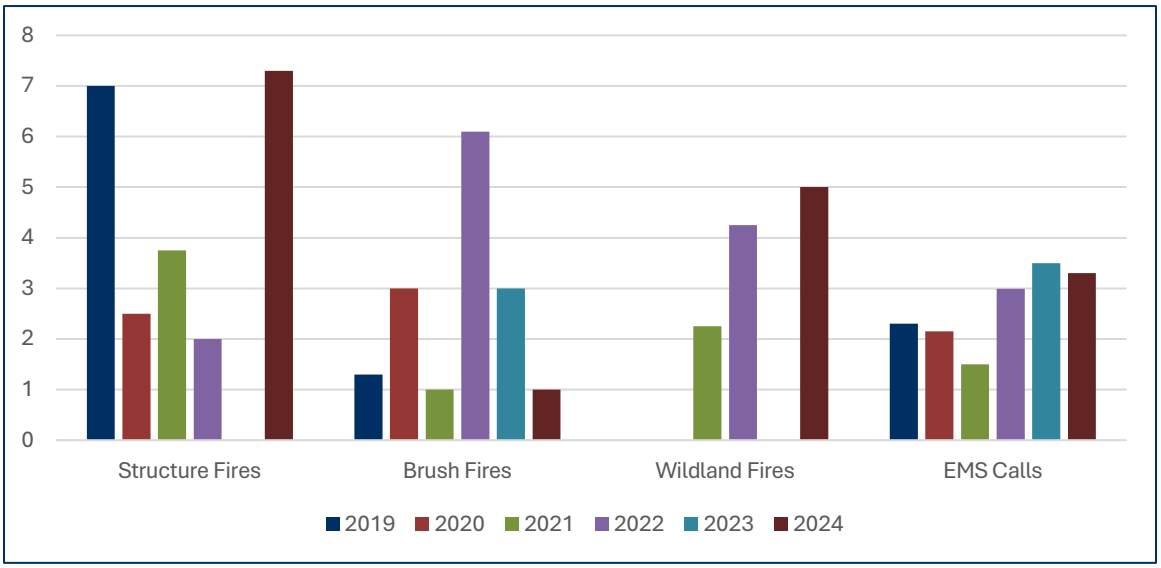
It should be noted that the response time for structures in the rural and remote areas assumes that fires in un-sprinklered buildings will have fully developed and may be at the decay phase when units arrive. It is more likely that fire attack will be from the exterior, lessening the need for more personnel to set up initial operations or for there to be any initial interior fire attack operation. As confirmed by conversations with the fire chief, almost 99% of the time, upon arrival, structure fires are well involved or in the decay phase and thus no initial interior operations are undertaken. The exception to this is the need for salvage and overhaul operations after the fire has been largely extinguished. However, this may not be the case in more denser properties/areas such as Collbran or Powderhorn. The tactical fire attack methods and potentially required staffing for incidents in these areas may require greater numbers of personnel to match those under NFPA 1710. The current response staffing trends within the fire district have included the following;

Figure 25: PVFPD Average Personnel Response, 6am to 6pm



Note – Wildland Fire Data was not available for 2020 and 2021.

Figure 26: PVFPD Average Personnel Response, 6pm to 6am



Note – Wildland Data was not available for 2019, 2020 and 2023. Structure Fire Data was not available for 2023.

The average overall personnel response to structure fires has declined over the last six years, particularly during the nighttime hours, but showed an increase in 2024. Response during the daytime hours has been fairly steady since 2020, with the exception of response to wildland incidents. Some of the variation may be due to National Fire Incident Reporting System (NFIRS) call coding regarding brush vs. wildland types of incidents. The response to EMS calls, the largest generator of responses for the district has also remained consistent as well. This is most likely due to the addition of the career staffing.

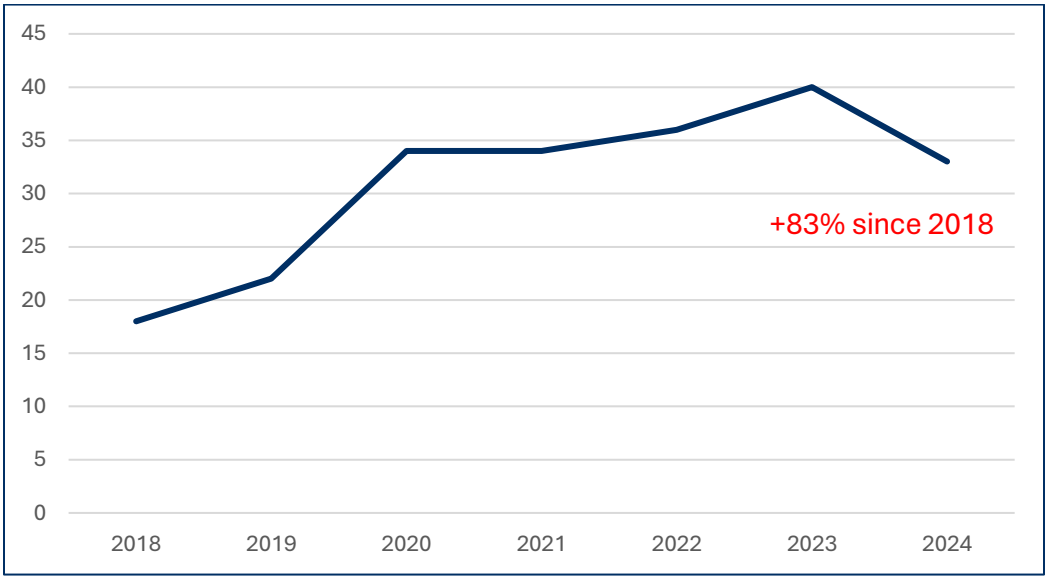
With the variation in personnel response to structure fires, the district may not be meeting the recommended staffing for meeting NFPA 1720 for rural and remote areas on a consistent basis. A decline in staffing can increase the chances of personnel injury due to overtasking of resources. If there is the need for an interior attack/rescue at an incident, the fire district may not have the capabilities to safely initiate such an operation. In addition, the most populated and densely inhabited location in the district, the town of Collbran, does not have 24/7 fire station staffing and is approximately 15-20 minutes response time from the staffed Mesa fire station. An increase in the available pool of volunteers or an increase in 24/7 career staffing is necessary in the Collbran area for the station to improve coverage.

A significant staffing issue observed by the MissionCIT team was the capacity of the fire district to handle concurrent incidents. This is heightened with the opening and operation of the Powderhorn Ski Resort. With the career crew of two at the Mesa station, EMS transport turnaround times (from dispatch to unit availability for the next incident) are often more than two hours. During that time, the availability of additional qualified volunteer personnel to respond to additional emergency incidents can vary greatly. This is particularly critical for EMS incidents.

When concurrent incidents are dispatched during the week, the fire chief will pair up with a volunteer member, or off duty career member, to respond to a subsequent call. However, on weekends, that level of response is not guaranteed. As an example of this situation, while onsite, the MissionCIT staff observed the ambulance dispatched to Powderhorn for an EMS incident. While transporting to the hospital, a second EMS call was dispatched to Powderhorn. The fire chief had to respond with the second ambulance and an EMS certified volunteer member to the second call. While the members of the PVFPD are to be commended for their availability, this impromptu method of staffing apparatus can leave the members and community at risk.

The history of concurrent incidents, over the last seven years, where a second, or even third or fourth call is dispatched in the district, before the first response unit is clear and available shows a consistently increasing trend, except for 2024.

Figure 27: PVFPD Concurrent Incidents, 2018-2024



Recommendation 4.1	The fire district should work to recruit additional fire and EMS qualified volunteer personnel who can assist with the capacity of response within the district.

Recommendation 4.2	The fire district should work to add 24/7 career staffing at the Collbran station to reduce response times into that area and to provide additional capacity for response to other areas of the fire district.

Recommendation 4.3	The fire district should work to increase the number of qualified EMS personnel who can assist in staffing a second or third ambulance when needed.

Recommendation 4.4	Long term, the fire district should consider the creation of volunteer and career Lieutenant positions to ensure appropriate crew supervision, provide for effective command when the fire chief is not available and to allow for greater delegation of responsibility to those positions.

SECTION 5: DEPARTMENT DEPLOYMENT/OPERATIONS

The district is part of a regional Intergovernmental Agreement (IGA) with 13 other fire and emergency services departments to provide mutual aid fire and EMS assistance if requested and have reciprocating response into the PVFPD. They also have an IGA with the Grand Mesa Metropolitan District (GMMD) for fire and EMS response.

Within PVFPD, the current staffing is two career fire/EMS personnel 24/7 with volunteer personnel responding on a per-call basis. The fire district does not maintain officer positions except for the full-time fire chief position. For emergency responses, the on-duty career staff will respond with the appropriate EMS or fire apparatus. Volunteer personnel also respond to incidents directly or can be picked up by the responding apparatus along the route. There are also instances when volunteer personnel are aware that the career employees are responding to an incident and go to the fire station(s) to staff apparatus for secondary calls. One last method of staffing management is for an EMS certified volunteer member to meet an ambulance transporting a patient and swap out with one of the career staff to allow them to return to the fire station. This permits the career member to be available to respond to additional calls rather than be tied up during long hospital transport turnaround times in Grand Junction.

Additional concurrent calls are managed by the volunteer personnel. If there are no volunteer personnel available for a concurrent incident, the district typically requests the DeBeque Fire Protection District for mutual aid. The Palisade and Clifton Fire Protection Districts have also been utilized to respond into Plateau Valley for fire and EMS calls. Using mutual aid resources from the valley results in long response times.

The volunteer personnel utilize Active911 for their call notifications and response information. They are also all assigned 800 MHZ radios to be able to communicate on the regional communications system or the dedicated PVFPD radio frequencies. Given the need to coordinate responses in the manners noted, the communication of member status (i.e. who is available), who is responding and from where, is a critical aspect of the district's emergency response management process.

If a wildland incident is dispatched within the district, PVFPD will initially respond, but will work to determine on whose land (National Forest, BLM, County Land) the fire is located so that the appropriate agency can be notified and respond. If on County Land, the Sheriff's Office oversees wildland mitigation and suppression and will respond with resources (two staffed mitigation crews). Fire district personnel will remain in command of these incidents until the appropriate agency having jurisdiction (AHJ) arrives and assumes command and responsibility for the

incident. District personnel and resources may remain on scene to assist as requested by the AHJ.

Emergency Medical Services are provided at the Advanced Life Support level by the fire district. There is discussion occurring to potentially increase this level of service to the Advanced Practice Paramedic (APP) level due to the distance and time that the PVFPD ambulances take to transport to Grand Junction. This increased service level would be beneficial to the residents and patients transported by the fire district.

SECTION 6: APPARATUS

The fire district operates a small, but very diverse, fleet of heavy and light apparatus. In addition, they operate several other special/support units.

The fire district performs all minor repair work and routine maintenance, such as oil changes, for its apparatus in-house. More complex repair items are done either at the International/Kenworth facility in Grand Junction or they utilize a mobile emergency vehicle technician (EVT) mechanic out of Rifle, Colorado.

Below is a current distribution and average age of the fleet for the fire district. A detailed inventory of the fleet is located in Appendix A.

Table 14: PVFPD Fleet Number and Age

Unit Type	Number of Units	Average Age
Pumpers	3	12 years old
Tenders	3	21 years old
Brush Trucks	5	11 years old *(2 Units are brand new)*
Ambulances	3	10 years old
Specialty Rescue/ Support Units	9	--

Examples of the heavy apparatus and tanker fleet are below.

Engine 91 – Type 1 Engine

Ambulance 91

Engine 93 – Type 3 Engine

Brush 95

Tender 91

Tender 93

There are national consensus standards regarding the use, maintenance and replacement of fire apparatus.

The primary standard regarding apparatus acquisition and replacement is NFPA 1900 (2024 edition) - *"Standard for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances"*. This standard took the place of the former 2016 NFPA 1901 *"Standard for Automotive Fire Apparatus"*.

In Appendix F of the NFPA 1900 Standard, NFPA recommends the following.
"It is recommended that apparatus more than 15 years old that have been properly maintained and are still in serviceable condition be placed in reserve status, be upgraded in accordance with this standard, and incorporate as many features as possible of the current fire apparatus standard".

Appendix F lists approximately fourteen safety and system upgrades that should be considered for ensuring the longevity of apparatus and improving safety for firefighters for older units.

It also recommends that, ***"Apparatus that were not manufactured to the applicable NFPA fire apparatus standards or that are over 25 years old should be replaced".***

Based on NFPA 1900 standard recommendations for age only, the heavy fire apparatus fleet for Plateau Valley Fire Protection District falls into the following areas.

Table 15: NFPA 1900 Standard Recommendations for Apparatus Age

Type of Apparatus	Meets NFPA Standard for:		
	Remaining in Front Line Service	Placement into Reserve Status	Total Replacement
Pumpers	33%	67%	0%
Tenders	33%	33%	33%

NFPA 1910 (2024 edition) - *"Standard for the Inspection, Maintenance, Refurbishment, Testing, and Retirement of In-Service Emergency Vehicles and Marine Firefighting Vessels"* is a consolidation of the former NFPA 1911, 1912, 1925 and 1071 standards and addresses the required preventative and routine maintenance for emergency vehicles. This standard recommends that certified Emergency Vehicle Technicians perform maintenance and repair work on heavy fire apparatus.

The American Public Works Association (APWA) also has published guidelines for the replacement of heavy work vehicles, including fire apparatus. Apparatus is scored based on age, mileage, the type of service, reliability, maintenance and repair costs and the overall condition.

Table 16: APWA Replacement Guidelines

Factor	Points		
Age	One point for every year of chronological age, based on in-service date		
Miles/Hours	One point for each 10,000 miles or 1,000 engine hours of use		
Type of Service	1, 3 or 5 points are assigned based on the type of service unit receives. For instance, fire pumpers would be given a 5 because it is classified as severe duty service. In contrast, an administrative sedan would be given a 1.		
Reliability	Points are assigned as 1, 3 or 5 depending on the frequency that a vehicle is in the shop for repair. A 5 would be assigned to a vehicle in the shop two or more times per month on average, while a one would be assigned to a vehicle in the shop an average of once every 3 months or less.		
M & R Costs	1 to 5 points are assigned based on total life M&R costs (not including repair of accident damage). A 5 is assigned to a vehicle with life M&R costs equal to or greater than the vehicle's original purchase price, while a 1 is given to a vehicle with life M&R costs equal to 20% or less of its original purchase cost.		
Condition	This category takes into consideration body condition, rust, interior condition, accident history, anticipated repairs, etc. A scale of 1 to 5 points is used with 5 being poor condition.		
Point Ranges	Under 18 Points	Condition I	Excellent
	18 to 22 Points	Condition II	Good
	23 to 27 Points	Condition III	Qualified for Replacement
	28 Points and Above	Condition IV	Needs Immediate Consideration

Source – "APWA Vehicle Replacement Guide"

Reviewing the fire district pumper fleet against these criteria, the results include:

- **33% are in Excellent or Good condition**
- 0% are Qualified for Replacement
- **67% Need Immediate Consideration for replacement**

The tender fleet, compared to these criteria, results in:

- 0% are Good
- **33% are Qualified for Replacement**
- **67% Need Immediate Consideration for replacement**

Even with the APWA and NFPA national recognized standards, apparatus replacement can be based on several other factors regarding the wear and tear of the apparatus and the availability of updated safety features. Some of these include:

- Local road conditions
- Travel distances, speeds of apparatus response and engine wear
- Department preventative maintenance programs
- Department workload
- Weather impacts, such as the use of road salt, etc.
- Crew compartment air bags, updated braking and safety systems and updated emissions systems

Based on these factors, there may be apparatus that exceed the NFPA 1900 15-year age threshold for replacement but are still in relatively good shape. Conversely, there may also be apparatus that are only 10 years old but are completely worn out and need immediate replacement.

In addition to the need to replace apparatus, the current state of the fire apparatus manufacturing processes has been significantly impacted by COVID and the state of industry in general is adversely affecting supply chains, timelines and scheduling. The current time period from placing an apparatus order until delivery is averaging 36 to 42 months. This does not take into account the development of specifications necessary for purchase and the contract bidding process. In addition, the cost of apparatus has increased dramatically. Today, a new custom fire pumper is approximately $1 million dollars while a new ladder truck is approximately $2 million. A commercial chassis fire unit is slightly cheaper but will still cost in the $700k to $900k range.

Based on the current costs for fire apparatus and conservatively utilizing the NFPA and/or APWA guidelines, the Plateau Valley FPD needs to replace the following fire apparatus:

Table 17: PVFPD Fire Apparatus Estimated Replacements and Costs

Unit	Total Estimated Cost
2 Engines	$2 – 2.4 million
2 Tenders	$1.5 - 2 million

Recommendation 6.1	The fire district should develop an apparatus replacement and funding plan for both its pumpers and tenders. It should immediately begin the process to develop apparatus specifications for replacement of these units.

Recommendation 6.2	The fire district should ensure that all major repair/maintenance work done on fire/EMS apparatus is done by a certified Emergency Vehicle Technician (EVT) to maintain the highest levels of safety.

SECTION 7: EQUIPMENT

The fire district utilizes Mine Safety Appliances (MSA) brand self-contained breathing apparatus (SCBA) that was purchased in 2019. The district conducts annual facepiece fit testing of their personnel; however, they do not conduct fit testing during the intake process of new career or volunteer members. The fire district purchases either Lion or Globe fire personal protective equipment (PPE). Most members who keep their PPE with them, rather than leaving them at a fire station, have gear bags for storage.

The SCBA units have never been flow-tested since their purchase, nor have any of the SCBA bottles been hydro-statically tested. The fire district has one SCBA refilling air compressor located at Station 91. It is, however, located in the apparatus bay of the station, which is not optimal. The compressor air quality is checked annually. The fire districts ground ladders are not tested.

NFPA maintains several consensus standards related to fire service equipment. The Occupational Safety and Health Administration (OSHA) has regulations for fire/EMS agencies to follow regarding equipment used for firefighting and for personnel safety. Even though local government workers and volunteers are not covered by OSHA within Colorado, it is recommended best practice that fire departments work towards protecting their members by following federal regulations and consensus standards.

Recommendation 7.1	The fire district should immediately institute flow testing for all SCBA units on an annual basis as recommended by NFPA 1852, "*Standard on the Selection, Care and Maintenance of Open Circuit Breathing Apparatus*" and OSHA 1910.134 and 1910.156.
Recommendation 7.2	The fire district should immediately begin conducting hydro-static testing of all SCBA bottles every 3 years, if of composite material, or every 5 years if they are aluminum per NFPA and OSHA.
Recommendation 7.3	The fire district should institute a practice of providing entry level SCBA facepiece fit testing for all new members, who may use SCBA during firefighting training and incidents.

Recommendation 7.4	The fire district should conduct annual testing of its ground ladders as recommended by NFPA 1932, "*Standard on Use, Maintenance and Service Testing of In-Service Fire Department Ground Ladders*". This is typically done by contracting with certified vendors.

Recommendation 7.5	The fire district should look to relocate its SCBA air compressor to a separate room away from the apparatus bay and diesel exhaust fumes.

SECTION 8: STATIONS

The Plateau Valley Fire Protection District operates from three facilities. An inventory of the emergency services facilities is included below.

Table 18: PVFPD Emergency Services Facilities Inventory

Station Number	General Description	Year Constructed	Type of Construction	Square Footage	Facilities	Number of Apparatus Bays	General Condition	Safety Features*
91	Station w/meeting room and kitchen	2002	Steel	1,000	Sleeping Qtrs. – No Bath/Showers – Yes Kitchen Area – Yes	6 Back-In	Good	None
92	Office areas, living quarters, and meeting room	2014	Steel	6,800	Sleeping Qtrs. – Yes Bath/Showers – Yes Kitchen Area – Yes	4 Back-In	Fair issues w/heating, flooring and ventilation	Smoke and CO Detectors only
93	Two bay steel building	1996 Not owned by fire district – leased	Steel	1,040	Sleeping Qtrs. – No Bath/Showers – Yes, bathroom only Kitchen Area – No	2 Back-In	Fair	None

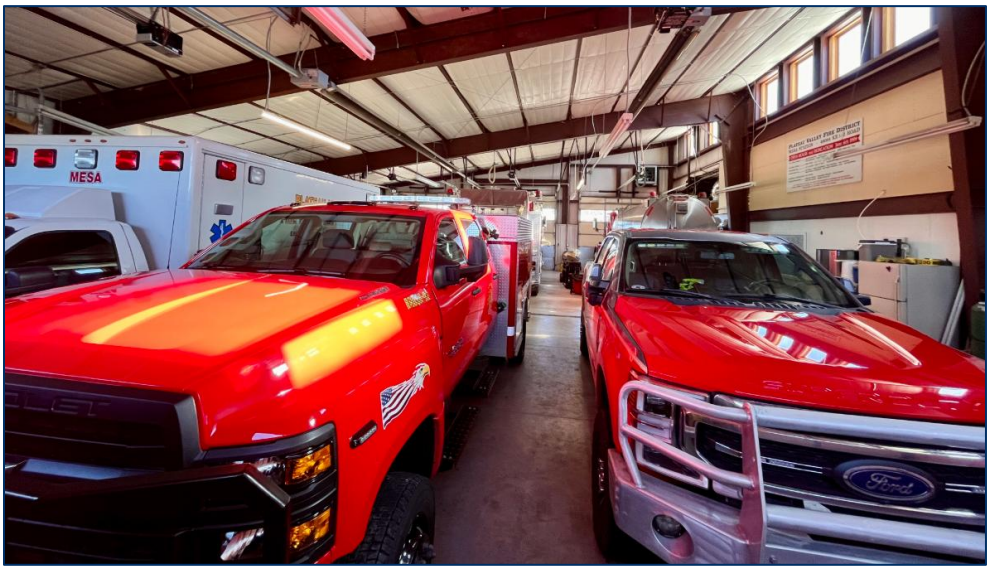
*Safety Features

- Smoke Detector/Fire Alarm Systems
- Diesel Exhaust Management Systems
- SCBA Air Compressor Isolation Areas
- Fire Sprinkler Systems
- PPE Isolation Areas

Examples of the existing fire stations and conditions are below.

Station 91 – Collbran

Station 92 – Mesa


MESA

Station 93 – Georgia Mesa

All of the fire stations are steel structures. The stations are utilitarian in nature, with only Station 92 having full facilities to accommodate career staffing. Station 93 is not owned by the fire district, but is leased from a private citizen. The age of the stations ranges from ten years old to twenty-eight years old and the size of the facilities ranges from a minimal 1,040 square feet, with just enough space to house apparatus, to 6,800 square feet. The average age for the facilities is 20 years old. Fifty years is the typical lifespan used for the serviceable life of a fire station. Two thirds of the stations were rated by the chief as being in fair condition. All of the apparatus parking within the stations utilizes back in processes verses drive through, which increases the chance of accidents or injury. Station 92 is in need of varying degrees of repair. This affects the quality of life and potentially the health and wellness of the personnel responding to and operating out of the stations. None of the stations, except for Station 92, have any basic safety features such as smoke detectors. Stations do not have diesel exhaust management systems, air compressor, or personal protective equipment isolation areas to limit exposure of equipment and personnel to diesel exhaust fumes and carcinogens. A summary of the available features in the stations includes:

Table 19: PVFPD Station Features

Station Feature	Number of Stations with Feature	Percentage of Stations
Dormitory Facilities	1	33%
Bathroom Facilities	3	100%
Shower Facilities	2	66%
Kitchen Facilities	2	66%

The fire district stations, in terms of the type of construction, and presence or lack of certain features is indicative of a typical volunteer fire system. The stations were built with no frills and only to house fire apparatus for response. When originally constructed, there was no need for dormitory or shower facilities as the volunteers would just respond from home and if returning from a fire incident, they would return home to shower and clean up.

The current lack of dormitory, shower and kitchen facilities limits the ability of PVFPD volunteers to adequately provide 24/7 coverage using duty crews. Duty crews may be used to allow volunteer personnel to live in the fire stations for defined coverage periods such as during storms or weather-related events to minimize response times and use of personal vehicles in bad weather conditions. The current lack of facilities also limits the ability to provide part-time or full-time career staffing coverage at the Collbran or Molina stations, if so desired at some point in the future. Significant renovations or remodeling would have to be done to accommodate such staffing. In addition, none of the station facilities have diesel exhaust capture systems to reduce the carcinogen risk to the firefighters. Those stations without shower facilities result in personnel having to travel home to shower and clean up. This can result in the possible transmission of carcinogens and fire by-products to the firefighter's personal vehicles and homes. Station 92 (Mesa) has a personal protective equipment washer, which is a positive to ensuring protection for firefighters.

While the MissionCIT team was onsite, there was discussion among some fire district officials about possibly building a new Station 93 at a different location to be more central between Station 91 and 92. If and when the fire district looks to construct another fire station, MissionCIT has provided some general guidelines/recommendations for the construction, layout and size of a new fire station in Appendix F.

The fire district was notified of a matching grant award for the installation of diesel exhaust capture systems in all three fire stations. This is anticipated to occur in 2025.

Recommendation 8.1	The fire district should develop a station improvement plan through its capital budgeting process to upgrade the living and safety conditions within the existing stations.

Recommendation 8.2	Consideration should be given through the district's long-term planning process to construct a new Station 93 to provide better facilities for personnel and provide more centralized service delivery. An assessment should be made as to the best location for a new facility to improve or minimize response times to incidents.

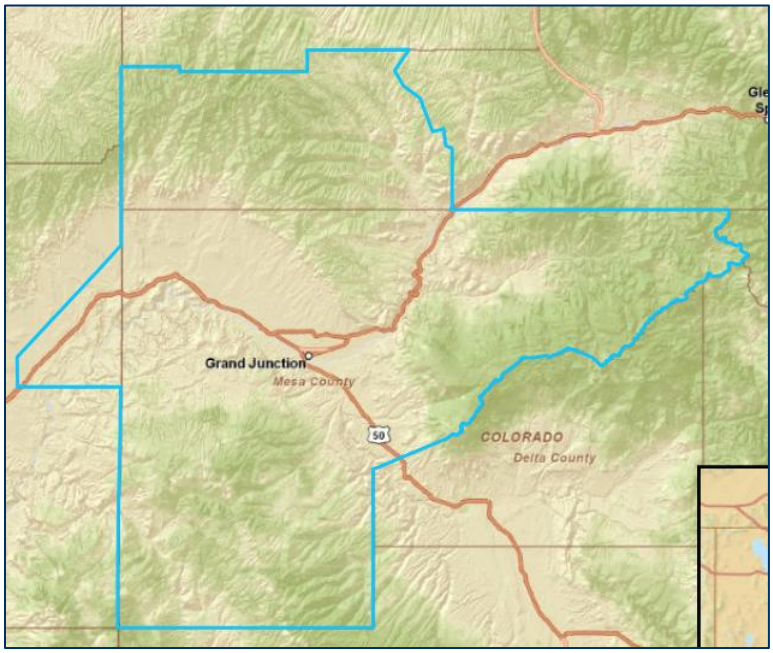
Recommendation 8.3	With the installation of diesel exhaust systems in all three fire stations, it will be critical that effective procedures are developed for their use and maintenance. The department leadership should ensure these procedures are followed to reduce the exposure of personnel to carcinogens.

Recommendation 8.4	Based on the continued development and workload within the Powderhorn area, long term consideration should be given to construction of a station within the GMMD area in conjunction with the GMMD board.

SECTION 9: DISPATCH/COMMUNICATIONS

Plateau Valley FPD uses the Grand Junction Regional Communications Center (GJRCC) for the processing of 9-1-1 calls and dispatching of emergency calls through Mesa County. The GJRCC is a division of the Grand Junction Police Department and is staffed with 43 emergency communications specialists (telecommunicators) and additional support personnel. The center dispatches 12 law enforcement and 14 fire and EMS organizations.

Figure 28: Grand Junction Regional Communications Area



GJRCC employs a computer-aided dispatch system (CADS) to assist dispatchers with call taking and incident dispatch. GJRCC has telecommunicators working 10-hour shifts in which a primary fire / EMS dispatch channel and one additional tactical radio channel are managed. The GJRCC also maintains an Incident Dispatch Team which provides on-scene dispatch resources and a mobile command vehicle to jurisdictions during incidents of significance.

The GJRCC employs the Medical Priority Dispatch System maintained by the International Academies of Emergency Dispatch (IAED). Using a process known as Emergency Medical Dispatch (EMD), this system maintains call taking protocols that allow trained emergency telecommunicators to triage EMS calls and provide per-arrival instructions to ensure the proper emergency resources are dispatched.

GJRCC is governed by the Grand Junction Regional Communication Center Authority Board and the Grand Junction Emergency Telephone Safety Authority Board and provides services based on intergovernmental agreements. For 2024, the GJRCC dispatched 32,021 total fire and EMS calls for service. Of this total, 388 calls for service were attributed to the Plateau Valley FPD:

Table 20: GJRCC Total Dispatched Calls for Service, 2023-2024

Fire /EMS Agencies CFS	2023	2024
Clifton FD	4,346	4,314
DeBeque FD	278	202
EOM FD	78	79
Gateway FD	97	91
Glade Park FD	98	114
Grand Junction Regional Airport	80	69
Grand Junction FD	21,683	22,459
Lower Valley FD	2,655	2,680
Mesa County Fire authority	364	380
Mesa County Fire Marshal	145	152
Palisade FD	1,057	1,026
Plateau Valley FD	414	388
St Mary's Care Flight Transport	80	67
Total Fire/EMS:	31,375	32,021

Source: GJRCC Executive Director

Using an intra-governmental agreement, the Grand Junction Fire Department (GJFD) is the underlying mutual aid agency responsible for all fire and EMS emergency responses throughout the valley if another fire district's resources are unavailable or out of service. GJFD maintains hazardous materials and technical rescue response capabilities for Mesa County. The Mesa County Sheriff's Department is responsible for managing water, and search and rescue incidents. The Mesa County Fire Authority has responsibility for fire incidents in rural, unincorporated areas of the county which are not formally protected by a fire district. Several of the larger fire departments in the valley conduct morning conference calls to share information and coordinate resources with the other organizations.

Mesa County fire districts maintain two automatic aid agreements and a general mutual aid agreement covering the county. Staff from the GJRCC stated they are aware that automatic and mutual aid agreements exist, but do not have copies of these agreements. The GJRCC CADS uses digital run cards which are geographically derived apparatus assignments based on the type of incident, the required apparatus and personnel needed, and the availability of apparatus based

on the dynamic status of units. Within the GJRCC CADS, only the GJFD uses these run cards with all other fire districts being manually dispatched based on fire district maps and aid agreements.

Except for Grand Junction Fire Department (GJFD), most fire and EMS departments in the valley are cross staffed, using the same people to staff multiple riding positions on a given shift. GJFD is staffed to maintain dedicated riding positions in which a person is assigned a specific apparatus and riding assignment (ex, medic on an EMS transport unit) for a given shift. This is the common way that many career, combination (career and volunteer) and even some volunteer fire and EMS organizations are staffed.

Cross-staffing results in the same personnel being responsible for performing different services on fire apparatus and EMS transport units, dependent on a number of situational conditions. The conditions that dictate an emergency response include the type of emergency, the time of day, and the availability of staffed fire and EMS apparatus in each fire district.

Because the valley departments, except for GJFD, do not have dedicated riding positions, fire district leaders have chosen to manage emergency responses on a case-by-case (or manual) basis. An example would be a fire district receiving one or more EMS calls in a short period of time depleting their on-duty staffing and then having the need to respond to a structure fire in that same district. In current practice, as additional calls are dispatched in a district with depleted resources, mutual aid agreements are enacted and personnel in these districts interact with the GJRCC via radio or telephone to guide the dispatching of fire and EMS resources. This is the manual dispatching process used in lieu of standardized CADS run cards in which the computer makes dispatch recommendations based on the geographic location of the incident, using the closest available resource appropriate for the type of call in question.

GJRCC leadership who were interviewed for this study stated they were comfortable with this manual arrangement and had confidence in their supervisors and telecommunicators who were tasked with making complex decisions without the advantage of using the CADS run cards. GJRCC staff did express frustration that they were left out of regional coordinating efforts applied to managing daily emergency response operations. Conversely, multiple chief officers and line personnel noted that the manual dispatch process was inconsistent and led to varying outcomes for the same types of incidents with similar underlying circumstances. The manual dispatching process also requires on and off duty personnel to monitor emergency radio dispatch traffic to intervene when needed to guide or recommend dispatching resources. These interactions with the GJRCC may occur via radio when personnel are responding to other emergency calls for service.

Recommendation 9.1	The GJRCC should receive copies of any Mesa County automatic aid and mutual aid agreements for reference in managing the communications center.

Recommendation 9.2	The Mesa County fire districts should work with the GJRCC to develop a countywide geographic based run card system for the valley to eliminate the manual dispatching process that is currently in place. The run cards that are developed should be based on existing automatic and mutual aid agreements.

Recommendation 9.3	The GJRCC and fire district leaders should conduct periodic reviews of automatic and mutual aid agreements to ensure that the documents are accurate, valid and are useable when managing emergency communications dispatching functions.

SECTION 10: HEALTH, SAFETY, AND WELLNESS

The most valuable asset of any organization is its people. Fire departments are no different, and this is more acute with volunteer fire departments, who are struggling nationwide to maintain rosters of properly trained and qualified personnel. Maintaining a viable volunteer and career response force requires many resources to properly outfit, equip, and train personnel. Often overlooked, however, is the physical and mental health needs of responders.

With better data and research, we know that firefighters are dying in greater numbers from non-firefighting trauma. While firefighters are still dying in fires, when compared to occupational diseases, notably cardiac issues and cancer, the numbers are much larger. Additionally, firefighters are now falling victim to suicide at an unprecedented rate.

Fortunately, over the last thirty years, through advanced research by many organizations, great insight has been gained into the root causes of Line of Duty Deaths (LODDs). This research has led to improvements in creating awareness among responders of the many and varied factors which contribute greatly to LODDs and debilitating illnesses. Never has there been so much research and so many programs available to combat LODDs. The National Institute of Occupational Safety and Health (NIOSH), in combination with the United States Fire Administration (USFA), the International Association of Firefighters (IAFF), the International Association of Fire Chiefs (IAFC), the National Fallen Firefighters Foundation (NFFF), the National Fire Protection Association (NFPA), and other industry stakeholders, have developed strategies to reduce LODD events, improve the health and wellness of firefighters, and to create a culture of survival in the fire service.

Over the last thirty-year period, there has been a downward trend in the number of firefighter LODDs. Except for the 9/11 tragedy (and the on-going "9/11 related cancer" LODDs) and losses related to COVID-19, firefighter deaths have averaged less than one hundred per year, or down approximately 30% from past decades.

The NFPA provides an annual summary of firefighter injuries and LODDs. Their data for 2023 revealed:

- A total of 89 on-duty U.S. firefighter fatalities
- Of these deaths, 50 were volunteer firefighters (including two part-time firefighters), 30 were career firefighters, seven were non-municipal wildland firefighters, and two were military firefighters

- Cardiac-related events accounted for the largest number of reported firefighter injuries and deaths

The report details work activities which resulted in LODDs:

- 32 firefighters died from performing fireground activities
- 19 firefighters died from while responding or returning from emergencies
- 10 firefighters died while engaged in training
- 10 firefighters died while in the performance of non-firefighting emergencies
- 7 firefighters died in course of normal station duties
- 5 firefighters died from performance in EMS
- 3 firefighters died while performing station maintenance
- 3 firefighters died performing unspecified duties

The charts below outline the causes and nature of the 89 LODDs for 2023:

Table 21: Cause and Nature of LODDs for 2023

Cause of Injury	Fatalities	Percentage
Overexertion/stress/medical	48	54%
Crashes	18	20%
Rapid fire progress/backdraft	5	6%
Caught, trapped	4	5%
Struck by vehicle or falling object	7	8%
Fall from height	3	3%
Electrical contact/other exposure	2	2%
Gunshot	1	1%
Undetermined	1	1%
Total	89	100%
Nature of Injury	**Fatalities**	**Percentage**
Sudden cardiac	36	40%
Traumatic injury	31	35%
Unspecified medical	8	9%
Asphyxiation	4	4%
Burns	3	3.5%
Gunshot	2	2%
Drowning	1	1.5%
Embolism/stroke	3	3.5%
Other	1	1.5%
Total	89	100%

Years of data show that the most LODDs result from occupational health and other non-firefighting causes. The following overview highlights nationally recognized current trends, issues and challenges to firefighter health, safety, and wellness.

Cardiovascular Disease

Firefighters are among the highest risk groups for serious medical conditions, notably cardiovascular disease (resulting in sudden cardiac arrest) and cancer. The prevalence of cardiovascular disease is associated with many job-related factors. These include:

- Lack of sleep
- Poor diet
- Tobacco use
- Dehydration
- Lack of proper exercise
- Physical demands of the job
- Adrenaline "rush" cycle
- Exposure to the environment
- Lack of "down time" in between work shifts

Consistently, cardiovascular disease is the most common cause of death among firefighters. In 2023, the NFPA reported that 40% of all firefighter duty related fatalities were caused by cardiac events. Volunteer firefighters led this statistic as compared to career employees (65% to 35%).

Cancer

Occupational cancer has rapidly emerged as the greatest threat to firefighter health. It is now well known that fires expose personnel to various hazardous substances, many of which are known carcinogens. During firefighting operations, firefighters are exposed to hundreds of different chemicals in the form of gases, vapors, and particulates. Some of these hazardous substances are byproducts of combustion or burning, such as benzene and formaldehyde. Others come from the materials burning or in the post-fire debris, such as asbestos from older structures.

NIOSH has been a leader in cancer research and has determined that firefighters had an increase in cancer diagnoses (9% percent increase) and cancer-related deaths (14% increase) when compared to the number of cancers expected using U.S. population rates. Other entities have developed additional research and support programs to assist firefighters in prevention and mitigation of this disease. These include the American Cancer Society, IAFF, and IAFC. In 2018, Congress passed the Firefighter Cancer Registry Act which mandated the Centers for Disease Control (CDC) create a voluntary registry to collect health and occupational information to

determine cancer incidence in the nation's fire service. Over 10,000 firefighters have signed up on the registry. In 2022, the International Agency for Research on Cancer found sufficient evidence to link firefighting with several types of cancer.

The NFPA data presently does not include the number of LODDs caused by cancer. This could change with better research showing the increasing scientific link between working as a firefighter and developing cancer. More recent research now points to the presence of Polyfluoroalkyl Substances (PFAS), a compound found in firefighting foams and turnout gear as contributing to occupational cancer in the fire service.

Firefighters can encounter toxic chemicals by breathing them in, getting them on their skin or in their eyes, or by ingesting them. If personal protective equipment (PPE), known as turnout gear, and firefighting equipment are not properly cleaned after a fire response or training event, chemicals on the gear or equipment can contaminate people, vehicles and the fire station. Reusing dirty turnout gear or respiratory protection can result in exposure to hazardous substances. These exposures can occur by skin contact with contaminated PPE or by breathing in or ingesting particles from contaminated PPE.

Suicide

The Firefighter Behavioral Health Alliance (FBHA) identified 79 firefighter suicides in 2023. Again, because of the lack of a conclusive link to the job of a firefighter, it is difficult to reliably include this number in the annual NFPA report. Suicide is a newly identified issue which is considered by some as the greatest cause of firefighter fatalities. The National Fallen Firefighters Foundation (NFFF) estimates that the number may be higher than reported by FBHA, and it is clearly a rate higher than experienced by the general population. The CDC has done research which reveals that firefighters are at an elevated risk for suicide because of the environments in which they work, compounded by the "macho" culture which is very prevalent in the profession. Stress plays a role here as it may be acute and or chronic, caused by exposure to violent incidents (Post Traumatic Stress Disorder, or PTSD), substance abuse, and the work schedules which can result in strained personal relationships. Without adequate intervention, feelings of hopelessness, depression, and anxiety often lead to suicide. There is often no formal program, such as an Employee Assistance Program (EAP) to address assistance for volunteer members.

Roadway Incidents

"Struck by" roadway incidents have become a common danger to firefighters, as well as other first responders, highway workers, and pedestrians. In 2023, NFPA cited six firefighter fatalities caused by being struck on the roadway. The Emergency Responder Safety Institute (ERSI), which closely tracks such incidents, has the 2023 LODD number at seventeen. The ERSI data includes all types of responders to include towing operators. Impaired driving due to being drowsy,

drugged, drunk or distracted (the four D's) has led ERSI, in collaboration with the National Volunteer Fire Council (NVFC), NFFF, NFPA, and law enforcement to focus on public awareness, apparatus visibility standards and training for first responders to address this problem. Training is available through several organizations which highlight preventive measures and promote emergency responder safety practices to reduce these incidents and their effects.

Active Shooter

Communities across the country must increasingly deal with gun violence. Active shooter incidents have devastated communities both large and small and have forced a more coordinated response by the fire service and law enforcement. One common tactic is known as a Rescue Task Force (RTF). Using an RTF, the two primary missions of neutralizing the shooter and conducting rapid patient extrication now run concurrently and are closely coordinated versus in the recent past where EMS waited outside until the building or area was cleared. Historically, many lives have been lost, during active shooter incidents, due to large volume blood loss from the extended time to initiate patient care. Now, thanks to federal Assistance to Firefighters (AFG) funds availability for ballistic vests for the fire service and more aggressive exsanguination protocols, more lives may be saved. Apart from the physical danger associated with entry into a shooter's area, the effects on short and long-term mental health of first responders are at the forefront of recovery and survival intervention efforts.

16 Firefighter Life Safety Initiatives- "Blueprint for Safety"

In 2004, at a fire safety summit in Tampa, Florida sponsored by the NFFF, the "Everyone Goes Home" program was developed. The hallmark "16 Firefighter Life Safety Initiatives" was produced as "blueprint" for reducing firefighter fatalities by 25% within five years and 50% within 10 years. In 2014, a second gathering, called "Tampa 2" was convened to assess the data at the 10-year mark. While substantial progress had been made in reducing firefighter fatalities, it was determined that much more work was and is needed. Most recently, in 2024, the NFFF hosted a summit to again evaluate the initiatives and there are revisions pending to this effort.

After two decades, the 16 Firefighter Life Safety Initiatives are still very relevant, and should be considered for any fire service health, safety, and wellness program. The elements are as follows:

1. Define and advocate the need for a cultural change within the fire service relating to safety; incorporating leadership, management, supervision, accountability, and personal responsibility.
2. Enhance the personal and organizational accountability for health and safety throughout the fire service.
3. Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical, and planning responsibilities.

4. All firefighters must be empowered to stop unsafe practices.
5. Develop and implement national standards for training, qualifications, and certification (including regular recertification) that are equally applicable to all firefighters based on the duties they are expected to perform.
6. Develop and implement national medical and physical fitness standards that are equally applicable to all firefighters, based on the duties they are expected to perform.
7. Create a national research agenda and data collection system that relates to the initiatives.
8. Utilize available technology wherever it can produce higher levels of health and safety.
9. Thoroughly investigate all firefighter fatalities, injuries, and near misses.
10. Grant programs should support the implementation of safe practices and/or mandate safe practices as an eligibility requirement.
11. National standards for emergency response policies and procedures should be developed and championed.
12. National protocols for response to violent incidents should be developed and championed.
13. Firefighters and their families must have access to counseling and psychological support.
14. Public education must receive more resources and be championed as a critical fire and life safety program.
15. Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers.
16. Safety must be a primary consideration in the design of apparatus and equipment.

Department Safety and Operating Conditions

MissionCIT reviewed the current health, safety and wellness operating guidelines/programs/ processes available to PVFPD personnel. Several notable areas of needed improvement were found which could improve firefighter safety. These include:

Firefighter Accountability System

The department has a firefighter accountability system of name tags that can be removed from their PPE and placed on a board, in the apparatus, but personnel do not utilize it. In Policy 200.14, it states that the Accountability System should be used "*whenever possible*". Due to the extremely low number of interior firefighting operations that are performed and the low number of personnel who respond to incidents, the chief indicated that he manages firefighter accountability on a piece of paper or as part of the daily shift roster. It is not known what other methods may be used if the fire chief is not the incident commander. A workable personnel accountability system, that all are trained on and expected to use, is critical to the safety of all personnel on all types of incidents.

Medical Examinations

The fire district does not conduct annual medical examinations for its personnel. An NFPA based physical is provided during the intake process for new members only. As previously noted, firefighters' health is a critical issue nationwide. The research is clear that success in the early detection of occupational diseases, principally cardiovascular disease, and cancer, is greatly enhanced by the administration of both entry level and on-going comprehensive medical examinations. NFPA 1500, "*Standard on Fire Department Occupational Safey, Health, and Wellness Program*", requires that members meet the medical requirements of NFPA 1582, "*Standard on Comprehensive Occupational Medical Program for Fire Departments*". NFPA 1582 is considered the "best practice" for addressing firefighter health issues. This standard applies to all members and membership candidates. On October 10, 2023, the United States Fire Administration (USFA) affirmed that "every firefighter in the United States should receive a comprehensive annual medical examination".

Station Fire Safety

It is customary that primarily volunteer staffed fire services often rely on "home response" for coverage. In these systems, stations often are designed for apparatus storage, with space for periodic company meetings or training space. This is generally the case in Plateau Valley. Only one of the three fire existing stations has reasonable accommodations to permit members to live in the station. Overall, the stations were observed to be in good physical condition, but there was evident a need for improvement. These include reducing clutter (trip or fall hazards), including work tools and projects being worked on during the MissionCIT site visit, the improper storage of flammable liquids, lack of smoke alarms, and a lack of fire sprinklers. These concerns will become more important as the district seeks to improve response times by using more duty crews.

"Clean" Practices

Overall, none of the fire stations had comprehensive procedures or a "risk reduction" plan to ensure facilities, equipment, and policies are designed and maintained to reduce exposure to known carcinogens. One station was equipped to clean gear to remove the embedded products of combustion which are known to be carcinogens. None of the stations were equipped with vehicle exhaust removal/filtration systems to reduce the exposure to apparatus exhaust, although the fire district recently received a grant to remedy the situation. There was a relatively small amount of turnout gear observed in storage at the stations (owing to a large percentage of members responding in personal vehicles), but the stored gear is stored in open lockers and regularly subjected to vehicle exhaust exposure. For members whose turnout gear was stored in a member's personal vehicle, gear bags are provided to limit off-gassing of contaminates and protect the fabrics from ultra-violet exposure.

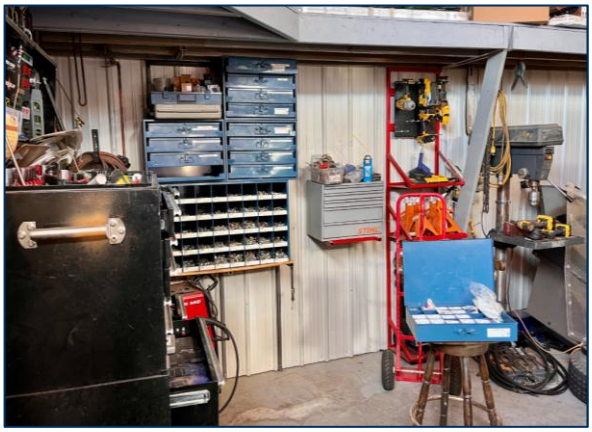
Mesa Station Work Area

November 2024

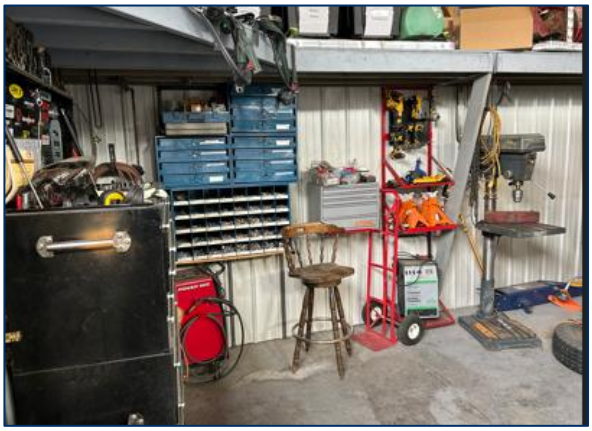
February 2025

Mesa Station Maintenance Area

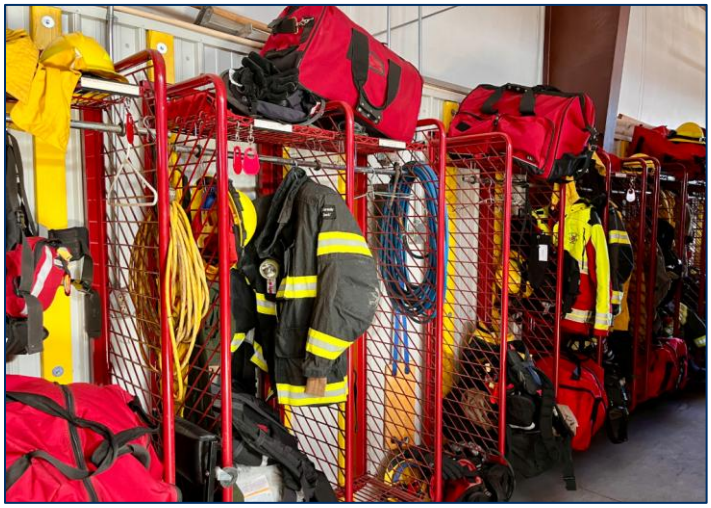
November 2024



February 2025



Mesa Station PPE Storage



Operating Guidelines and Practices

From the review of the current operating guidelines and policies in the fire district handbook, several specific areas are also noted.

- None of the guidelines and policies have dates on them. It is not known how old they are. All policies and procedures should include dates of implementation. It is also helpful to track document revisions for continuity purposes.
- The current policies do not reflect the hiring of career personnel. Specific consideration should be made to ensure personnel related policies reflect all personnel types.
- The policies have the rank of Station Captain in them, which currently does not exist within the district.
- In Section 300 of the policies, consideration should be given to establishing guidelines for handling electric vehicle fires.
- There is no mention in Section 300 of the OSHA requirement for utilizing "Two-In and Two-out" during entry into an Immediately Dangerous to Life and Health (IDLH) situations.
- In Section 300.03, there is no current information or updated operational procedures for structural firefighting as has been developed by the Fire Safety Research Institute (FSRI). The FSRI has done extensive research and published best practices on ventilation, fire stream management, fire attack practices, etc.
- In Section 500, *Back Country Rescues*, there is no information in the guidelines addressing general safety considerations or operating guidelines for these types of incidents.

Tobacco Use

The fire district has a policy regarding tobacco usage, which allows members to smoke and use smokeless tobacco products, just not within fire district facilities or vehicles. To promote member health and welfare, the fire district should encourage no smoking at all from its members and encourage them to seek smoking cessation treatment through their healthcare plans.

<u>Injuries and Accidents</u>

The annual number of firefighter injuries over the last three years within the fire district has shown the following;

- 2022 - 1 injury
- 2023 – 3 injuries
- 2024 – 3 injuries

District apparatus accidents included only one in 2024 involving an ambulance hitting a calf.

Recommendation 10.1	The fire district should work to provide annual health assessments to its career and volunteer personnel based on NFPA 1582, "*Standard on Comprehensive Occupational Medical Program for Fire Departments*" in addition to the current entry physicals.

Recommendation 10.2	The fire district should research to find an effective firefighter accountability system to utilize in order to meet NFPA 1500, "*Standard on Fire Department Occupational Safety, Health and Wellness Program*" and NFPA 1561, "*Standard on Emergency Services Incident Management System and Command Safety*".

Recommendation 10.3	Using NFPA 1500, "*Standard on Fire Department Occupational Safety, Health and Wellness Program*", the fire district should conduct an organizational audit to develop a long-term plan to meet the safety requirements recommended within the document.

Recommendation 10.4	The fire district should regularly review and update operating policies and procedures to ensure they reflect the current operating conditions within the department and of the fire service, to include: • Electric vehicle fires • New firefighting, ventilation or fire attack practices as published by the Fire Safety Research Institute These reviews should be conducted every three to five years.

Recommendation 10.5	The fire district should investigate purchasing and placing a second PPE washer at Station 91 so that personnel do not have to transport their PPE in their vehicles to Station 92 for cleaning.

Recommendation 10.6	Fire district leadership should work to ensure appropriate safe firefighting operations, including the use of SCBA, even on structure fires without interior fire attacks, to reduce the risk to personnel of toxic smoke and carcinogens.

SECTION 11: TRAINING

Fire training in the State of Colorado is overseen by the Colorado Division of Fire Prevention and Control (DFPC). The DFPC maintains a Professional Qualifications and Training (PQT) Section that manages fire training certifications using the International Fire Service Accreditation Council (IFSAC) and Pro Board criteria. As the DFPC website notes: "The general purpose of these certification programs is to measure the level of knowledge, skills and abilities possessed by firefighters and emergency medical responders (EMR), and to attest that these individuals meet nationally recognized standards. These competency-based standards permit evaluation of training programs and promote uniformity in firefighter and EMR (emergency medical responder) training".

The DFPC maintains an extensive policy and procedure manual which notes that the DFPC certification program is voluntary and there is no statutory requirement that firefighters, hazardous materials (hazmat) responders and EMRs become certified. The voluntary certification programs were enacted by law by the Colorado legislature in 1979.

Emergency medical response within the state is the responsibility of the Colorado Department of Public Health and Environment (CDPHE). CDPHE manages education, training, and certification oversight for all levels of emergency medical services within the state. The agency maintains extensive education, certification, and scope of practice rules for Colorado EMS providers. Locally, the Mesa County Emergency Medical Services (EMS) is a branch of the Emergency Services Division of the Mesa County Sheriff's Office. This branch provides medical direction under a county medical director and has a county EMS coordinator. The agency also conducts EMS oversight by virtue of ensuring that agencies within Mesa County are compliant with state rules and regulations and that quality assurance services are provided for pre-hospital care. Mesa County EMS provides local training opportunities for EMS responders and maintains an EMS Protocols Committee. Some of this statutory oversight was just assumed by the State of Colorado and there is uncertainty as to the relationship and requirements between County EMS and the State.

PVFPD is one of eight agencies within Mesa County that are approved to provide pre-hospital care and emergency transport. Two other fire departments within the county maintain status as first response only.

PVFPD ensures that all full and part-time employees are minimally, emergency medical technicians (EMTs) and are qualified as Firefighter I. All full-time and part-time employees have some level of wildland firefighter certification. Including the fire chief, five members are currently

certified to Firefighter II and 8 are certified to Firefighter I. For EMS service delivery, there are 5 paramedics, and 8 certified as EMT-B-IV.

The fire district has one person trained as a Hazmat Technician and two additional members trained to the Hazmat-Operations level. Other than the fire chief, no members hold any fire officer training certifications.

The fire district will bring in new employees who are only EMS certified and then manage the training needed for them to become certified as a firefighter. There is no timeline to accomplish this.

Currently, not all volunteer firefighters are trained and certified as firefighters. The fire chief noted that this is an issue which is being addressed. The district is working to improve the task books (i.e. a list of training items to accomplish) associated with firefighter training and are developing a firefighter academy for new volunteer recruits. The training certifications for the volunteer personnel include the following breakdown:

Table 22: Number of Personnel with Training Certifications

Training Certification	Number of Personnel
CPR/AED Only	8
First Responder EMR	3
EMT-B IV	5
Paramedic	1
Firefighter I or II	3
Wildland FF Type 1 or II	15
Haz Mat Operations or Tech.	3

The department provides monthly training to all personnel. In a review of their training topics, it appears to be balanced between fire and EMS training subject deliveries. Topics include basic firefighting, different types of orientation training for new and existing firefighters, administrative training on topics such as bloodborne pathogens, HIPPA and sexual harassment, EMS refreshers, and station/apparatus familiarization. The average number of training hours, per member, from 2021 to 2024 was 53.4 hours. The lowest number of yearly training hours received, per member, was 3 with the highest being 151.5 hours per year.

The district currently responds to a low number of structure fires annually. Due to the size of the fire district, associated response times, and staffing levels, the fire chief noted that most structure fires are well involved upon arrival resulting in defensive operations (exterior firefighting only).

Consequentially, many if not most of the PVFPD members have little experience with interior firefighting practices.

The Mesa County Medical Director requires extensive training and precepting (providing services under the guidance of a more experienced provider) be done by advanced life support (ALS) providers prior to being released to provide service by themselves. This requires PVFPD to ensure that new ALS providers have experienced providers responding with them to ensure that precepting tasks are monitored and completed. Due to the staffing levels of the district and the low number of ALS calls for service, successfully precepting a new ALS provider within the district takes time and adds to the complexity of bringing new members onboard the organization.

The last complexity that must be addressed by the fire chief and the district board is the remoteness of the district resulting in scheduling and logistical challenges to ensure that career and volunteer staff requiring training can travel to the valley to attend training sessions offered by the appropriate authorities. This may require backfilling positions or paying overtime which impacts the finances of the fire district.

Recommendation 11.1	The district should integrate information and research from the Fire Safety Research Institute, a part of Underwriters Laboratory (UL), into its training program to ensure firefighter safety and improved effectiveness on the fireground, especially due to the rural nature of their firefighting operations. This is especially warranted for fire attack, ventilation and search practices.
Recommendation 11.2	PVFPD should continue to ensure that all career personnel are minimally trained as Firefighter I and EMTs, with the recommended preference being Firefighter II.
Recommendation 11.3	PVFPD should develop position expectations and processes that all volunteer personnel are minimally trained as Firefighter I and EMRs.
Recommendation 11.4	PVFPD should ensure that all personnel who respond to emergency calls are minimally trained to the Hazmat Awareness level.

Recommendation 11.5	PVFPD should work with Mesa County partner agencies to allow PVFPD ALS providers to ride-along with busier agencies to expedite the Mesa County precepting process.

Recommendation 11.6	PVFPD should work with Mesa County partner agencies to allow PVFPD members to attend live burn training for interior structural firefighting.

Recommendation 11.7	PVFPD should work with Mesa County EMS to move towards providing Advanced Practice Paramedic services to limit the number of full transports needed and allow the district to continue to bill for its EMS services.

Recommendation 11.8	The district should work to identify critical training topics needed and develop a year-long training calendar for all personnel.

Recommendation 11.9	The district should regularly conduct EMS certification and vehicle operator license audit checks to ensure up to date certifications and license qualifications.

SECTION 12: COMMUNITY RISK REDUCTION

Programs

The fire district does not have an active fire prevention and risk reduction program. The district does not employ or designate a district fire marshal and they do not provide fire inspections for existing commercial properties within the district. The fire district contracts with a private contractor, Dynamic Planning, for plans review and fire code enforcement of new commercial construction. Dynamic Planning references the 2018 International Fire Code for its work and it uses the 2019 International Fire Code for its fire systems review and testing. Mesa County administers the building code and enforces that during construction until the certificate of occupancy (CO) is issued. For reference, the International Fire Code has been updated several times since 2018 with the most recent version published in 2024.

The lack of a formal fire prevention inspection program increases the risk of fire for a community. Even when buildings are built to the most current standards of safety, over time, circumstances can change which can cause unsafe conditions for the public, employees, and firefighters. Excessive storage of combustible materials, blocked exits, damaged or disabled fire alarm and fire suppression systems, and other unsafe practices, compromise the ability of a building to effectively withstand the effects of a fire. This concern was mentioned numerous times by fire department representatives as a gap in public protection within the fire district.

Apart from fire prevention code enforcement, the most effective way to protect lives from fire and reduce building damage is through community-based outreach and education on high-risk behaviors. When people are made aware of the prevalence of fire in America and are equipped with accurate information about causes and actions they may undertake, the risk of accidental fires is reduced.

Presently, the fire district does not have a uniform, data driven program to educate the public on fire and life safety. The members of the fire district do provide some public safety messaging to community groups through the delivery of the Firewise program and their participation in the Safety Days at the local school.

Wildfire Programs

There are no dedicated resources or programs that the fire district has for wildfire prevention. At some select events, like the pancake breakfast or community events in Collbran, district members may work to communicate some fire prevention information regarding wildfires and risks, but there is not a focused effort towards these hazards. With the recent events in

California, and the extremely high-risk areas identified in the Community Risks section of this report, the fire district should work to put more resources and efforts into this risk reduction activity. The 2023 Mesa County Community Wildfire Protection Plan has several identified mitigation objectives for the Plateau Valley FPD regarding some of the more high-risk areas.

Water Supply

The fire district has a limited municipal water supply for firefighting operations. Water supply within the fire district is primarily through the use of tenders for shuttle and/or drop tank operations. There are 67 fire hydrants located within Collbran, Mesa and Powderhorn areas. A total of all hydrants (73) within PVFPD, includes the following;

Table 23: PVFPD Fire Hydrants

District Area	Number of Fire Hydrants
Collbran	38
Powderhorn	22
Mesa	7
Ute	3
School	3

These hydrants are operated and maintained by multiple water districts.

Recommendation 12.1	The fire district should consider initiating annual fire inspections for existing commercial occupancies to ensure the reduction of risks to the public and firefighters. The district could either develop an individual to become certified to conduct such inspections or consider contracting with a qualified vendor to develop and conduct an annual fire inspection program within the district.

Recommendation 12.2	If Dynamic Planning is not involved in the plans review process for development at Powderhorn, the fire district should work with the Grand Mesa Metro District to have them involved, or ensure that someone capable of reviewing construction plans for fire code enforcement is involved.

Recommendation 12.3	The fire district should consider creating a life safety committee to develop consistent fire and life safety messages to communicate to the public. These can be seasonal messages, wildland prevention messages, etc.
Recommendation 12.4	The fire district should actively work with Powderhorn, Collbran and other communities within its response area to encourage the installation of fire sprinkler systems, as may be required in the fire code, in assembly, commercial and multi-family dwelling units, or in those residential properties a significant distance from a fire station or access by the fire district resources.
Recommendation 12.5	The fire district should actively work with Powderhorn, Collbran and the other communities to ensure adequate coverage by fire hydrants, with appropriate flow and distance spacing to ensure an appropriate level of fire protection in developing areas.
Recommendation 12.6	The fire district should work with Dynamic Planning and any future contractors to explore the need to update the version of the International Fire Codes being used for fire prevention and building construction plans review.
Recommendation 12.7	The fire district should have assigned resources/personnel to work with Mesa County staff to develop comprehensive wildland fire safety and prevention initiatives to work towards the objectives in the 2023 Mesa County Community Wildfire Protection Plan.
Recommendation 12.8	Due to the remoteness and variety in residential structures within the fire district, the fire district should consider regular, active, smoke detector give-away and installation campaigns to reduce the risks to the public.

SECTION 13: ISO RATING INFORMATION

The Insurance Services Office (ISO) provides underwriting services to the insurance industry to include the assessment and rating of fire service organizations. The rating system is a determination of how well a fire department is prepared to serve a community.

The ISO rating scale runs from 1-10 with lower scores indicating a better rated fire department. An on-site assessment is conducted and gathered information and data are then analyzed using an ISO Fire Suppression Rating Schedule (FSRS). A Public Protection Classification (PPC©) grade is then assigned to the community. There is extra credit available for fire departments with community risk reduction (CRR) efforts.

The PPC program evaluates communities according to a uniform set of criteria, incorporating nationally recognized standards developed by the National Fire Protection Association and the American Water Works Association. A community's PPC grade depends on:

- **Needed Fire Flows**, which are representative building locations used to determine the theoretical amount of water necessary for fire suppression purposes.
- **Emergency Communications**, including emergency reporting, telecommunicators, and dispatching systems.
- **Fire Department**, including equipment, staffing, training, geographic distribution of fire companies, operational considerations, and community risk reduction.
- **Water Supply**, including inspection and flow testing of hydrants, alternative water supply operations, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires up to 3,500 GPM.

In 2014, ISO conducted an assessment and provided a rating of the Plateau Valley fire district and assigned a rating of Class 05/5Y. The Class 05 rating applies to properties within five road miles of a fire station. The class 5Y ratings apply to properties that lie more than 1000 feet from a fire hydrant but are within five road miles of a fire station. The Y rating also is based on every station having the ability to respond, “haul” and supply, at least 4,000 gallons of water. A summary of the ISO scoring is provided for reference.

Figure 29: PVFPD ISO Scoring Summary

FSRS Item	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	1.95	3
422. Credit for Telecommunicators	2.80	4
432. Credit for Dispatch Circuits	3.00	3
440. Credit for Emergency Communications	7.75	10
Fire Department		
513. Credit for Engine Companies	5.06	6
523. Credit for Reserve Pumpers	0.00	0.5
532. Credit for Pumper Capacity	3.00	3
549. Credit for Ladder Service	1.28	4
553. Credit for Reserve Ladder and Service Trucks	0.00	0.5
561. Credit for Deployment Analysis	6.57	10
571. Credit for Company Personnel	3.16	15
581. Credit for Training	1.93	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	23.00	50
Water Supply		
616. Credit for Supply System	13.12	30
621. Credit for Hydrants	2.81	3
631. Credit for Inspection and Flow Testing	6.57	7
640. Credit for Water Supply	22.50	40
Divergence	-2.05	--
1050. Community Risk Reduction	3.72	5.50
Total Credit	54.92	105.5

The ISO ratings program provides an objective, countrywide standard that helps fire departments in planning and budgeting for facilities, equipment, and training. ISO ratings are used by insurance underwriters and better ratings may lower fire insurance premiums for communities.

The ISO usually rates fire departments every 3-5 years. Departments may request a rating sooner if changes have been made that may positively affect the PPC score.

Based on the last ISO rating for the fire district, PVFPD is only 5.08 points from improving to a Class 4 department. There are several possible areas that the fire district can improve to enhance their operations and lower their ISO rating. Some of these categories are sub-areas within the larger categories, so the points awarded may not necessarily equate to whole points out of the total of 105.50 in the rating system. These areas included:

- Deployment Analysis - 6.57 out of 10 points
  This area involves the number and location of fire stations and apparatus. It looks at the percentage of built-up areas within 1 ½ miles from the closest pumper and within 2 ½ miles from the closest ladder company. *(Source: ISO Public Protection Classification Document)*

- Company Personnel - 3.16 out of 15 points
  This area looks at the available, on-duty personnel to respond to incidents. From the report, ISO credited the fire district with 1.13 on-duty personnel and an average of 9.87 on-call (volunteer) personnel responding to first alarm structure fires.
- Water Supply – Inspection and Flow Testing of Fire Hydrants - 3.91 out of 7 points
  Fire hydrants are expected to be inspected and flow tested on a regular basis.
- Training - 1.93 out of 15 points
  This section looks that the number of hours of training, the class content taught and the type of training, such as new member training, officer training, driver training. The fire district obtained the following points in this category:
    - Company training - 6.47 out of 25 points
    - Officer training - 0 out of 12 points
    - Driver training - 2.5 out of 5 points

Recommendation 13.1	As the district's apparatus replacement plan is reviewed, consideration should be given to developing reserve engines to back up front line apparatus and improve future ISO ratings.

Recommendation 13.2	As department staffing is evaluated resulting from this strategic and master planning effort, consideration should be given to efforts to increase daily staffing to satisfy national standards recommendations and improve ISO ratings.

Recommendation 13.3	The 2014 ISO report rated the PVFPD low in training areas to include the number of training hours conducted to satisfy NFPA recommendations, officer training efforts, driver training and pre-planning and inspections. A review of current practices and a long-term training plan should be developed to improve training efforts to promote safer and more effective operations and improve ISO ratings.

Recommendation 13.4	The fire district should work with the appropriate water districts to ensure appropriate flow testing and inspections are being conducted annually.

SECTION 14: GRANTS

There are several federal grant programs available to the PVFPD to assist with the hiring of career personnel, the recruitment and retention of volunteer personnel and the purchase of firefighting equipment. These programs are administered through the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA). The two programs include the Assistance to Firefighter Grant (AFG) Program and the Staffing for Adequate Fire and Emergency Response (SAFER) Program. These grant programs open for a set period each year to accept applications and then close while applications are reviewed, and awards made. The information on the grant programs comes from the most recent FY23 Notice of Funding Opportunities (NOFO). Any new information or changes to these programs should be announced early in 2025.

Within the current AFG program, fire departments can apply to purchase firefighting equipment such as personal protective equipment, breathing apparatus, fire apparatus, and safety equipment such as fire station vehicle exhaust systems, etc. During each yearly cycle, program requirements and priority funded items are published. In the AFG program, departments are typically only required to provide 5% of the necessary funds for the purchase of approved items. Departments who are experiencing significant fiscal stress can apply for a waiver to DHS to have the 5% match waived.

The SAFER grant program is available to departments for the hiring of career personnel or for the recruitment and retention of volunteer firefighters. Typically, priority is given to those departments which do not currently meet national NFPA standards regarding staffing. In this program, recipient departments are awarded funds to hire and pay full time personnel for a three-year period at no cost share by the department. Funds can also be provided to pay for the initial personal protective equipment and training of these personnel.

Departments desiring to increase their volunteer membership can apply for SAFER grants to fund volunteer recruitment campaigns, entry level physicals, training, uniform, and personal protective equipment costs and even fund salaries and benefits for volunteer recruitment and retention program managers. Departments are limited to submitting only one application per year for either the hiring of career personnel or volunteer recruitment and retention.

Recommendation 14.1	The fire district should consider applying for a SAFER grant in early 2025 for volunteer recruitment and retention initiatives, including funding for a full-time or part-time volunteer recruitment and retention specialist to help with the processes. As an alternative, the fire district could consider applying for additional career firefighter positions.

Recommendation 14.2	The fire district should seek out a grant writer in Mesa County and determine if they would be able to assist in writing grants for the fire district. In lieu of that, the district should consider developing an in-house grant writer through training programs that are available for such purposes. MissionCIT also provides this service to departments, if desired.

BENCHMARK DATA

Using benchmark data from other fire departments can be an alternate way to assess the performance or operations of an organization. In this study, data analysis can show how the PVFPD compares to other similarly managed fire service organizations regarding its funding and service delivery. As part of this project, MissionCIT, LLC conducted a basic benchmark survey with three other fire departments identified by PVFPD as being similar. Of the three departments surveyed, only two responded, for a 66% return rate. MissionCIT did reach out to the non-responding department multiple times with no success. As a result, the Plateau Valley Fire Chief asked that we add Clifton FPD into the matrix for comparison. The data below represents 2023 data.

Table 24: 2023 Benchmark Data At-A-Glance

Department Characteristics	Plateau Valley FPD	DeBeque FPD	Oak Creek FPD	Clifton FPD
Coverage Area (sq. mi.)	767	780	300	15
Population Protected	5,000	1,000	3,000	35,000
Funding Source	District Millage Vol. Pension Millage EMS Transports	Title 32 District	Title 32 District Sales Tax Fuel Mitigation	District Millage EMS Transports
Annual Budget	$1,303,705	$3,243,300	$2,552,567	$6,466,838
Number of Fire Stations	3	1	2	1
Total Operational Staffing	6 Full time 5 Part time 17 Volunteers	9 Full time 6 Part time	7 Full time 1 Part time 3 Vol./Pd. on call	18 Full time 7 Part time
Number of Pumpers	3	2	2	2
Number of Ladders/Quints	0	1	1	1
Total Calls	416	278	263	4,348
Number of Structure Fires	3	2	4	54
Number of EMS calls	321	116	171	3,548
Avg. Structure Fire Personnel Response	4.6	6	5	6-7
Avg. Wildland Fire Personnel Response	5.6	3	4	6-7

Comparing the benchmark results across several areas, the results showed the following:

Figure 30: Benchmark Data - Calls per 1,000 Population

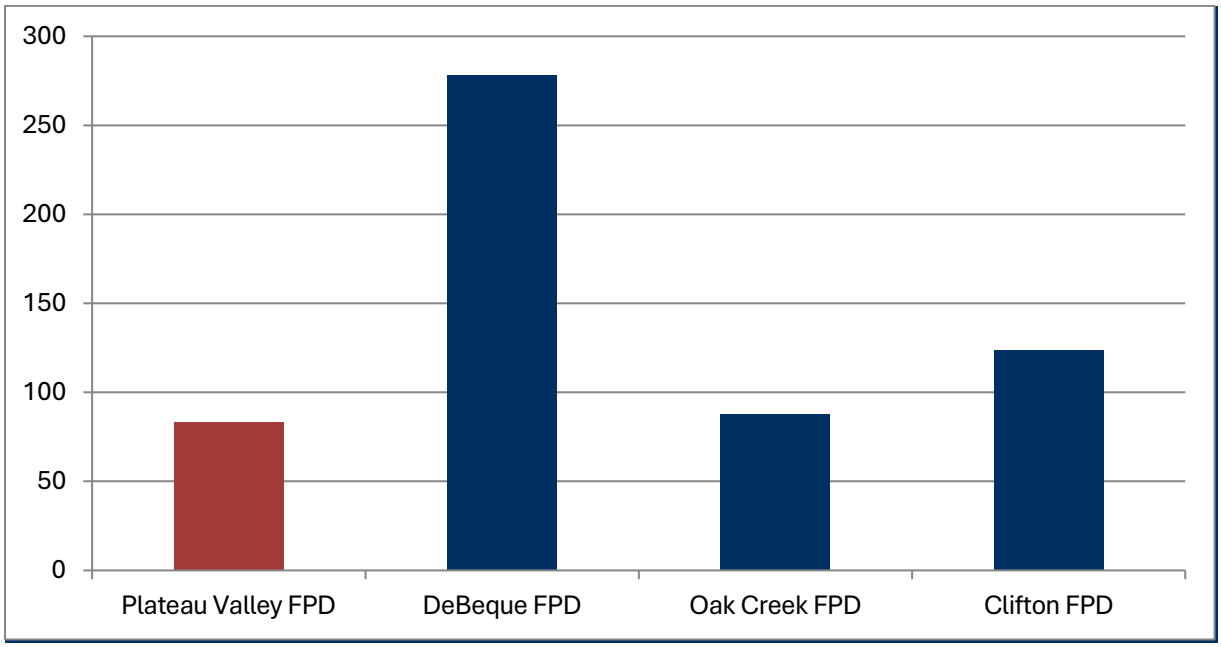


Figure 31: Benchmark Data - Square Miles Coverage per Fire Station

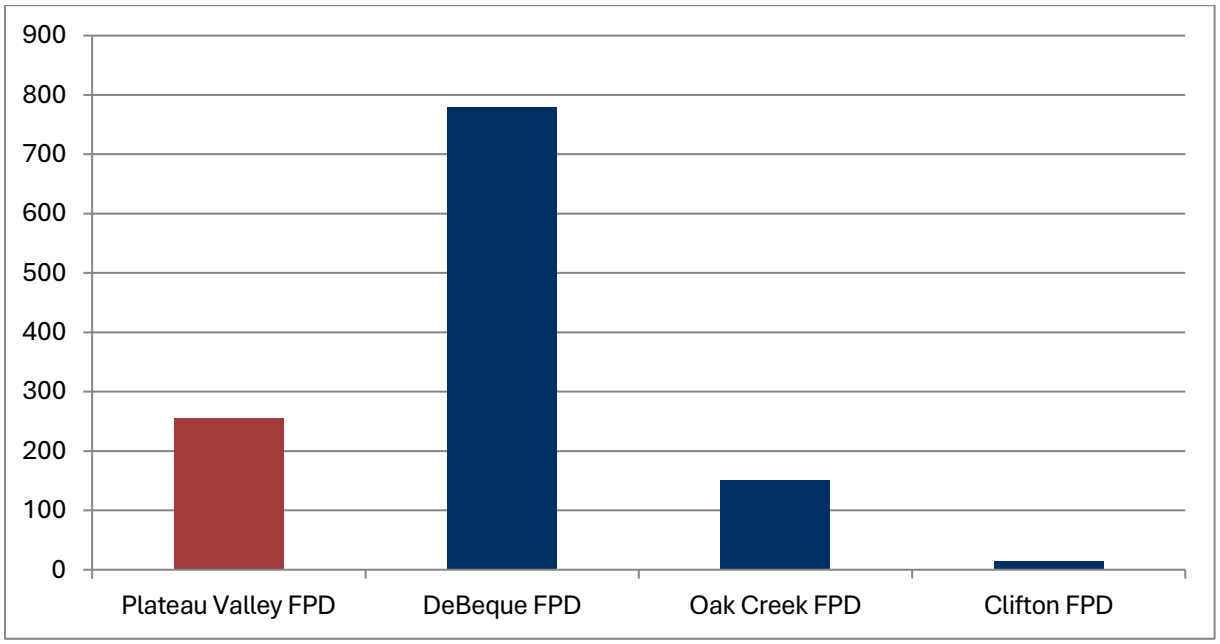


Figure 32: Benchmark Data - Firefighters per 1,000 Population

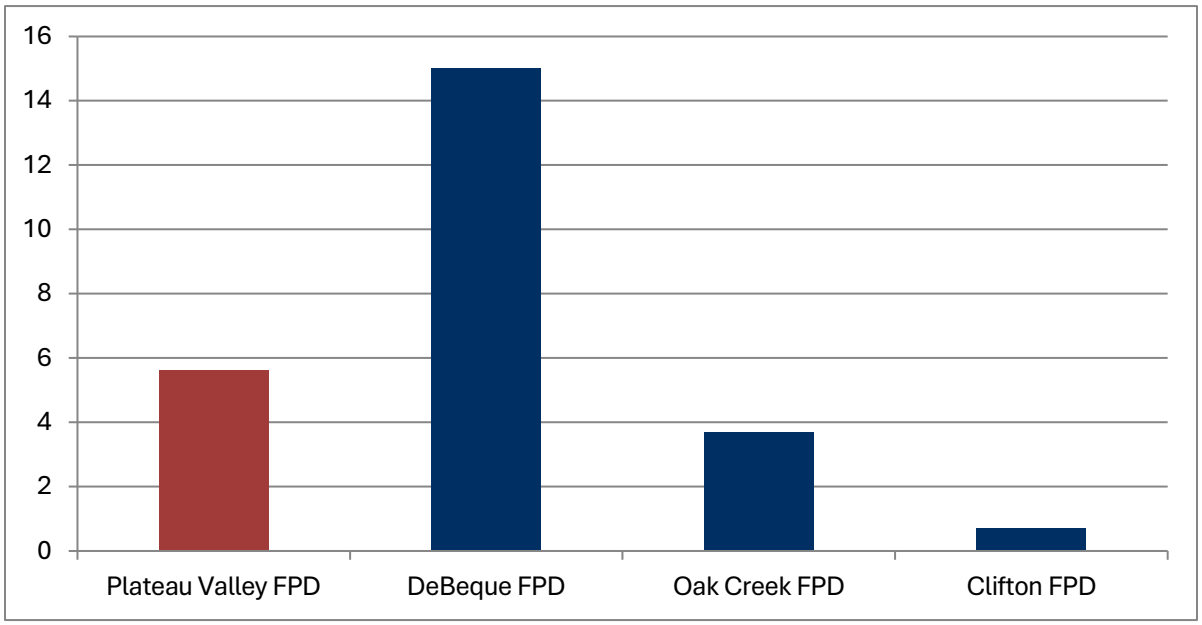
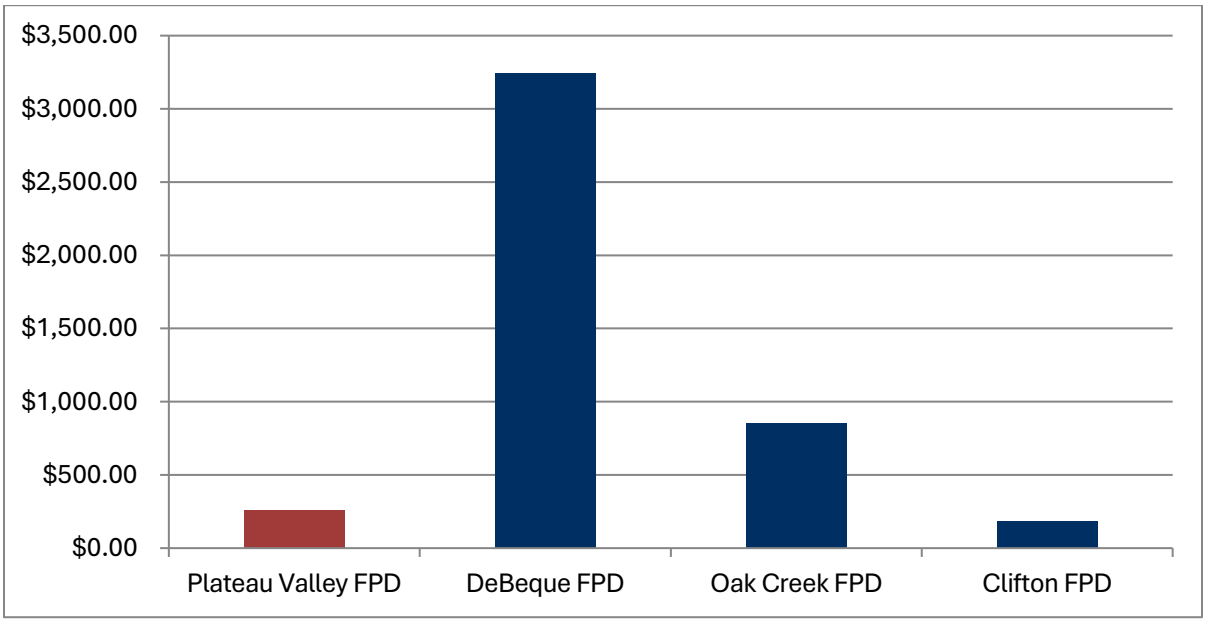


Figure 33: Benchmark Data - Cost per Capita



From the benchmark survey results, Plateau Valley FPD is located from the middle to the more efficient end within the departments completing the surveys. They are the lowest in measuring calls per 1,000 population (**Good**), and the second highest for square miles per fire station. This can be expected due to the rural/remote nature of the district. The fire district is the second highest in number of firefighters per 1,000 population (**Good**) and the second lowest in cost per capita (**Good**) for services delivered.

FUTURE PICTURE OF VOLUNTEER EMERGENCY SERVICES SYSTEM

The current volunteer component of the PVFPD is under stress, which has a negative effect on the fire district. More specifically, the volunteers are under stress due to:

- Training requirements
- Call volume
- Lack of available time
- Declining numbers due to aging out of the system
- Reduced interest in volunteering by new residents of the fire district

All these issues impact the availability of current volunteers for the fire district, when its calls for service, particularly EMS calls, are increasing. The same issues can have a negative effect on the recruitment and retention of future volunteers. To provide greater stability for the volunteer system, much greater emphasis will need to be placed on:

- Proactive recruitment of new members - This should include non-operational volunteers who can serve in support roles and ease time commitments for fire and EMS volunteers.
- Proactive efforts and programs to incentivize and retain existing volunteers
- Flexible and innovative training programs to accommodate personal schedules and needs

RECOMMENDATIONS

MissionCIT has made multiple recommendations throughout this report for improvements to the Plateau Valley Fire Protection District. These recommendations along with the Goals and Objectives in the Strategic Plan can help to improve the organization in the following areas:

- Staffing
- Volunteer Recruitment and Retention
- Funding
- Safety
- Organizational Processes and Procedures

These improvements will take time, effort, and funding to accomplish. To be successful, the Board of Directors and the Fire Chief will have to commit to action and prioritizing a long-term focus on these items.

IMPLEMENTATION PLAN

The implementation plan for improvements for the fire district will focus on the primary areas of funding, staffing and safety. In addition, there is some funding allocated to replacing district reserves (if needed) due to rollback measures. If rollback or other negative financial/legislative decisions continue to impact the fire district, other funding and staffing measures may have to be taken. There are multiple additional recommendations that are no-cost or low-cost that the district can consider and that are included within the study.

Funding Plan

- 2025 Comprehensive Ballot Measure for Millage Increases
  - Two mils beginning in 2026 ($416,000)
  - Two additional mils beginning in 2027 ($832,000 cumulative)
  - Two additional mils beginning in 2028 ($1,248,000 cumulative)
- Develop a capital equipment funding plan

Total additional revenue beginning in 2028 - $1,248,000
Additional revenue from Powderhorn - $25,000 +/- based on the mil increases

Staffing Plan *(Assumption of funding plan ballot measure success)*

- FY2027
  - One additional full time Firefighter/ALS provider at Collbran FS 24/7 (3 total additional positions)
  - Creation of Career and Volunteer Lieutenant positions for improved supervision
- FY2028
  - Addition of second full time Firefighter/ALS/BLS provider at Collbran FS 24/7 (3 total additional positions)
  - Implementation of a Peak/Daytime Ambulance in Powderhorn (14 weeks of season, 3 days a week, for 8 hours a day)

Safety Plan

- SCBA equipment testing
- Annual health assessments for career and volunteer personnel

IMPLEMENTATION COSTS

Personnel and equipment costs are calculated at a 3% increase each year. For projection purposes, the assumption is the current revenues for the fire district will remain static.

Annual costs are cumulative.

FY2026	
Task	**Cost**
Annual Department Physicals	$18,600
Annual SCBA Flow/Hydro Testing	Unknown
Replenish reserves/Initiate capital fund saving plan	$397,400
Total	$416,000

FY2027	
Task	**Cost**
Hire 3 FF/ALS providers to provide QRV at Station 91	$346,117
PPE/Uniforms	$22,500
Promote personnel to create 3 Lt. positions for Station 92	$34,611
Entry and Annual Physicals	$21,012
Annual SCBA Flow Testing	est. $5,000
Add to reserves	$300,000
Add to capital fund plan	$102,760
Total	$832,000

FY2028	
Task	**Cost**
Hire 3 FF/BLS providers – Two person staffing at Station 91	$301,776
FY2027 Personnel costs (New hires and Lts.)+ 3%	$392,150
Entry and Annual Physicals	$23,550
Annual SCBA Flow Testing	est. $5,150
Add to reserves	$200,000
Add to capital fund plan	$325,374
Total	$1,248,000

Initiate 3 day/week (8 hrs./day) part time at Powderhorn (Self-Funded by GMMD Mil Increase)	$16,915

FY2029	
Task	**Cost**
FY2028 Personnel costs	$739,000
Purchase new engine – Capital funds - Part 1	$509,000
Total	$1,248,000

Powderhorn service (Self-Funded)	$17,422

FY2030	
Task	**Cost**
FY2029 Personnel costs + 3%	$761,170
Funds for new engine - Part 2	$486,830
Total	$1,248,000

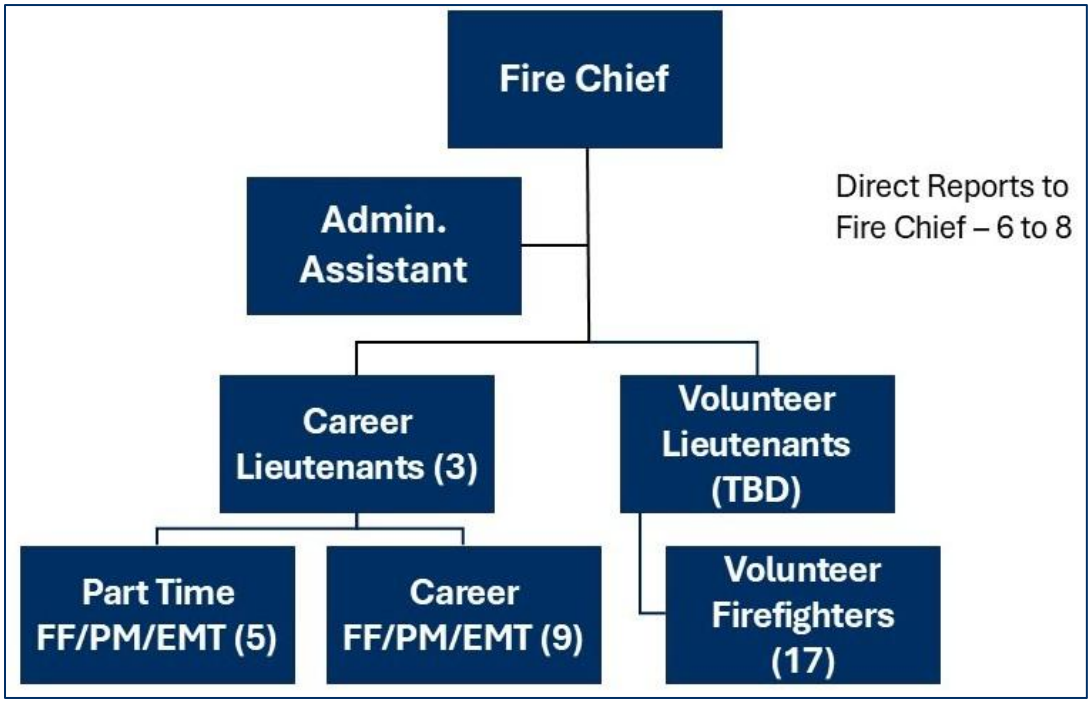
Powderhorn service (Self-Funded)	$17,944

Financial considerations beyond 2030 involve too much uncertainty in fire district funding to project. Other potential items for consideration beyond FY2030 may include the following:

- Merge with DeBeque Fire District
- Work with Powderhorn to build fire station to house an engine and ambulance – depending on the growth within the GMMD
- Consider hiring a full-time wildfire mitigation coordinator to work with the county and community on mitigation projects

From the recommendations by MissionCIT, the future organizational structure of the fire district, as shown below, would greatly reduce the number of direct reports to the fire chief and would allow him to delegate work and projects to more members.

Figure 34: PVFPD Future Organizational Structure



SURVEY INFORMATION

Internal Survey Summary

The internal organizational survey was open from October 22, 2024 to November 7, 2024 and received 17 responses. The respondents identified as eleven volunteer and six career members. Fourteen of the respondents identified as firefighters, one as a probationary firefighter, one as an administrative member, and one as an auxiliary member. The entire survey results are included as Appendix C.

The survey topics included Communication, Safety, Environment, Training and Professional Development, Leadership Direction, Equipment and Facilities, Service Delivery, and How Well Services are Delivered. The surveys showed a majority of positive responses (Agree and Strongly Agree) with a few outliers on some topics.

An appraisal of the department showed positive responses for 5 of the 7 response categories. The features of Wellness/Fitness Programs and Volunteer Recruitment Programs had an equal number of members who disagreed or strongly disagreed as with those who agreed or strongly agreed. These two features should be considered for review for improvement. Similarly, the majority of the respondents agreed to 7 of the 8 Volunteer Recruitment and Retention statements and there were equal amounts of persons who disagree as agreed with the statement, “We actively recruit in our community”. As has been noted, proactive volunteer recruitment efforts are an important aspect of maintaining volunteers in the department.

Respondents were asked to choose from a list of reasons as to why they volunteer and were given the ability to choose all that apply. Respondents chose an average of three reasons each. Fourteen of the seventeen respondents chose “Opportunity to give back” with “Community engagement” and “Camaraderie” as the next highest responses.

Four volunteer respondents indicated they considered quitting in the past 6 months, with two respondents unsure. Eleven indicated they did not consider quitting in the past 6 months. Respondents were asked for the deterrents to volunteering and were able to choose all that applied. The respondents chose an average of two deterrents out of ten. The top two deterrents were “Time” and “Personal Conflict – family, work and school”.

The internal survey responses indicate a cohesive work environment and team. Answers indicate a combination team that supports change and improvements for each other and members who appreciate their leadership’s direction, engagement, and support. Respondent concerns appear

to be the lack of recruitment and community engagement, lack of a strong onboarding program and maintenance of accurate training records, and the need to enhance benefits to improve volunteer and career retention and recruitment.

External Survey Summary

The external survey was open from November 15, 2024 to November 22, 2024 and received 16 responses. Fifteen of the respondents were citizens, and one was a local emergency service provider – police, EMS, EM, Dispatch. No responses were received from local government elected officials, local government administrators, or neighboring fire departments. The full survey results are included in Appendix E.

Respondents were asked what their Top 5 Service Priorities were for the fire district. They listed in order:

- Emergency Medical Services
- Wildland Firefighting
- Fire Prevention
- Fire Suppression
- Community Risk Reduction

There is certainly a desire on behalf of the public for strong EMS and firefighting services, but also for strong fire prevention and overall community risk reduction programs to reduce the residents' risks to fires.

The survey also asked those external to the fire district what their Top 5 Service Expectations were. The responses included, in order:

- Well trained firefighters
- Fast response time
- Clear external communications
- Reasonable cost
- Strong organizational leadership

The survey asked respondents to choose the top two strengths and challenges of the fire department from a drop-down menu. The drop-down menu of four options was provided for strengths and five drop-down options for challenges. Some respondents provided only one challenge. The respondents noted the strengths as: 1. Dedicated members, 2. Fast response, 3 and 4 (tie): Low cost to the community and Good equipment. The respondents noted the challenges as: 1. The need for additional staffing, 2 and 3 (tie): Low finances and Slow response

time, 4. Not open to change, 5. Other. The 'Other' comments showed: Poor leadership and Stations need replacement.

Respondents were asked "As a citizen of the community, would you be willing to support additional funding allocated to the fire district in order to hire more personnel"? Fourteen of the sixteen respondents supported providing additional funding to hire more personnel. Two respondents did not support additional funding with the reasons as: "No more taxes" and "I feel like we give enough to them already."

Lastly, respondents were given the option to provide general comments. One comment suggested a new staffed station and two responses provided recognition to the members of the department.

Strengths, Weaknesses, Opportunities and Challenges (SWOC) Summary

From our various SWOC sessions with internal and external stakeholders, the following summarizes their comments. The specific responses are listed in Appendix D.

The PVFPD team has numerous strengths, including experienced and knowledgeable members, ongoing training opportunities, and strong support from the district board. They maintain high-quality apparatus and equipment with effective maintenance practices, including regular rotation to manage lifespan. Communication technology ensures effective incident-related communications and the department fosters open, efficient internal communications, including an open-door policy with the fire chief. They maintain positive relationships with the community and volunteer members, supported by a volunteer retirement program. Additionally, the team collaborates well with other agencies and community members, secures grant funding, and benefits from a structured volunteer system and dedicated EMS and training coordinators.

The district SWOC analysis identified several deficiencies, including a shortage of volunteers and inexperienced new members due to the retention of career personnel. Attracting new volunteers and employees is challenging because of insufficient funding, competitive pay, and high housing costs. The district's size and staffing of only one fire station location leads to coverage and response time issues. There is also a lack of law enforcement support from the Mesa County Sheriff. There are difficulties in coordinating volunteer responses and a lack of development opportunities for career members. ALS skills can degrade due to low call volumes, and there is no current apparatus and PPE replacement plan. Additionally, the district has an insufficient website and social media presence, limited fitness equipment and workout space, and inadequate cold weather training and specialized equipment for such responses.

The fire district has several opportunities for improvement. In volunteer recruitment and development, they can acquire new volunteers and develop a junior firefighter program and or utilize Collbran Job Corps students. For funding and financial support, they can pursue a levy increase, develop additional grant funding sources, consider charging for long-distance EMS transports, seek reimbursement for wildland fire deployments, and secure grant money from district wildland mitigation projects. Training and personnel development opportunities include additional training for new and existing personnel and improving fitness and health by providing gym memberships for both career and volunteer personnel. Community engagement can be enhanced by improving community relations and education, increasing the district's web and social media presence, improving interagency cooperation, and fostering better relations with the Powderhorn Ski Resort. Finally, staffing and recruitment can be bolstered by increasing both career and volunteer staffing levels, developing new recruitment sources, and increasing the number of part-time personnel.

The district faces challenges in the areas of staffing and recruitment, funding and financial management, operational concerns, community and external relations, and technology and communication. Issues include recruiting and retaining both career staff and volunteer members, securing funds for capital equipment, establishing sustainable funding sources, and addressing an increasing call volume. Operational challenges involve coordinating responses with volunteers, maintaining a balance between career and volunteer staff, staffing from a single fire station location, developing new medics under county ALS protocols, and managing apparatus and equipment replacement schedules. Additionally, the district must prepare for a possible increase in full and part-time residents, adapt to an influx of visitors, anticipate community growth, and manage district business within the state financial and regulatory environments. Concerns also exist about the fire district board's knowledge level as new members are brought on and improving relations with the Powderhorn Ski Resort. Lastly, technology and communication challenges include improving the district’s website and social media presence and enhancing data availability for decision-making and business management.

STRATEGIC PLANNING PROCESS

MissionCIT, LLC conducted a multi-faceted process in developing the Strategic Plan for the Plateau Valley Fire Protection District. Online assessment surveys, as previously described, were distributed by the department, to both internal and external stakeholders. The surveys provided anonymity to respondents and were designed to obtain the perspective of each group regarding the operations of the department, and where they can improve. The surveys provided to the external stakeholders were also designed to capture the priorities of services that should be provided by the department and where the fire district needs to concentrate their efforts.

In addition to the survey instruments, the MissionCIT team conducted five in-person meetings with internal and external stakeholders to gain their perspective on the Strengths, Weaknesses, Opportunities and Challenges (SWOC) within the fire district, as also previously described. It is important when looking at an organization and developing long term goals and objectives for the Strategic Plan that the perspective of both members and outside stakeholders be taken into consideration. Each group has its own, unique view of the organization and can add value to the report and positively influence the direction of the organization. The following groups are included in the SWOC summaries:

External SWOC Groups	Internal SWOC Groups
Area local government groups	Volunteer Fire Personnel
Citizens	Career Fire Personnel
	PV Board of Directors

Volunteer focus group meeting at Collbran FS

STRATEGIC THEMES

As a result of the site visit by the MissionCIT team, the internal and external survey results, and the Strengths, Weaknesses, Opportunities and Challenges sessions, several common themes and need areas rose to the surface. These were consistent across the board. These theme areas included:

- Fire district funding
- Additional career staffing
- Volunteer recruitment and retention
- Standardized and improved organizational management processes
- Improved training
- Personnel/Public Safety

These themes form the basis of the strategic goals developed for Plateau Valley and for the specific objectives and steps with which to work towards them.

STRATEGIC GOALS AND OBJECTIVES

From all of the interviews conducted, data reviewed and meeting sessions held, the identified strategic goals and objectives for the Plateau Valley Fire Protection District for the next 5 years include the following. These are not in any priority order.

Goal #1 – Ensure firefighter and citizen safety as a priority in the Plateau Valley Fire Protection District
Objective 1A Review NFPA 1500 and develop a long-term organizational safety improvement plan.
Objective 1B Develop a comprehensive career and volunteer firefighter entry and assessment process to include the following: • Physical test • Entry and annual health assessments • Entry and annual SCBA fit testing
Objective 1C Ensure all significant vehicle repairs and maintenance affecting major safety/operational components is conducted by a certified Emergency Vehicle Technician (EVT) and properly documented.
Objective 1D Ensure a comprehensive SCBA and equipment maintenance program to include: • Annual SCBA flow testing • SCBA hydrostatic testing of air bottles • Annual testing of ground ladders
Objective 1E Develop, implement and regularly train on a reasonable and workable firefighter accountability system.
Objective 1F The fire district should develop a long-term approach to a regular fire inspection process of existing commercial occupancies within the district.
Objective 1G The fire district should have assigned resources/personnel to work with Mesa County staff to develop comprehensive wildland fire safety and prevention initiatives to work towards the objectives in the 2023 Mesa County Community Wildfire Protection Plan.

Goal #2 – Improve staffing and response capabilities within the fire district
Objective 2A Utilize a staffing factor to effectively cover career shift employee leave obligations.
Objective 2B Hire additional career staffing for the Collbran area to maintain deployment capabilities to meet NFPA 1720 and future/concurrent call volumes.
Objective 2C Investigate the use of an advanced life support (ALS) quick response vehicle (QRV) to provide coverage when the career staff are unavailable or limited due to call volume and long transport times.
Objective 2D Work toward increasing the number of EMS qualified (EMT or Paramedic level) volunteer personnel to assist with staffing EMS units as call load dictates.
Objective 2E Implement company officer level positions within the career and volunteer ranks to improve crew supervision, task completion, organizational communications and leadership span of control.
Objective 2F Investigate peak time/seasonal staffing of an EMS unit at Powderhorn to help provide increased coverage and relieve the EMS workload within the fire district.
Objective 2G Begin discussions with GMMD/Powderhorn regarding the feasibility of constructing a basic fire/EMS station facility onsite for future coverage, especially coinciding with future development.
Objective 2H Work with the Mesa County medical director to obtain the ability to provide Advanced Practice Paramedic services within the fire district.

Goal #3 – Improve the organizational management processes to ensure fire district operations effectiveness, efficiency, and consistency of service delivery
Objective 3A Develop organizational position descriptions for career, volunteer and non-operational volunteer personnel.
Objective 3B Regularly review and update fire district administrative and operational policies and procedures.
Objective 3C

Develop a long-term capital equipment, facilities and apparatus replacement schedule and funding mechanism.
Objective 3D Document all current and future automatic aid and mutual aid agreements with regional partners.
Objective 3E Work with the Grand Junction Regional Communications Center to formalize dispatch processes and procedures to reduce "on the fly" operational decision making.
Objective 3F Work with the Grand Junction Regional Communications Center to develop response zones and minimum response resource packages to those zones for various call types within the fire district.

Goal #4 – Develop and implement long-term career and volunteer member recruitment and retention efforts
Objective 4A Establish a volunteer recruitment working group within the organization to address recruitment and retention issues.
Objective 4B Using the volunteer working group, develop and implement a volunteer recruitment and marketing program/plan to enhance volunteer participation within the fire district, particularly those with EMS certifications.
Objective 4C Begin discussions with the Mesa County School System to implement a Junior FF program at the high school.
Objective 4D Investigate the training and use of Collbran Job Corps students to provide volunteer fire or medical coverage.
Objective 4E Review current career and volunteer retention incentives and make improvements where necessary.
Objective 4F Develop, recruit and utilize non-response volunteer personnel for key administrative and support functions, such as logistics, maintenance, fundraising, etc.

Goal #5 – Develop a long-term training and career development plan for members of the fire district
Objective 5A

Develop and implement standard training requirements for career and volunteer personnel, including position certification requirements.
Objective 5B Improve the recordkeeping processes and practices for tracking training hours for career and volunteer personnel.
Objective 5C Develop a department training calendar/schedule that includes appropriate training classes for officer development, drivers training and special hazards to meet ISO requirements.
Objective 5D Increase the joint training efforts with other surrounding fire districts.

Goal #6 – Diversify and increase the funding sources for the fire district
Objective 6A Begin the process to increase the millage rate for the fire district for the FY2026 budget year.
Objective 6B Develop a comprehensive marketing and social media communications plan for working towards a millage rate increase to provide the “why” and “benefits” to the community.
Objective 6C Increase the number of grant opportunities solicited and applied for by the fire district to increase its funding sources and revenues.
Objective 6D Work with the fire district EMS billing vendor to increase collection amounts and improve fire district report documentation to increase approval rates.
Objective 6E Investigate and implement the use of impact fees or a lodging tax in the Powderhorn area to help fund fire protection and EMS services in the district.
Objective 6F Continue to work through the Colorado Special Districts Association to ensure appropriate level funding for the fire district from property assessments and that those assessments are fair and equitable.
Objective 6G Work to improve the Powderhorn/GMMD intergovernmental agreement to ensure the fire district receives the proper funding for current and anticipated growth impacts in the development.
Objective 6H Investigate the implementation of treat and release processes/capabilities within EMS to improve funding and reduce out of service time for ambulances.

MISSION, VISION AND VALUES STATEMENTS

As part of the MissionCIT strategic planning process with the fire district, we reviewed the district's current mission statement, vision statement and organizational values (dated 2009) with career and volunteer personnel to validate if they felt these were still relevant and appropriate today. From our SWOC sessions, participants made several suggestions regarding the organizational mission statement, vision statement and values statements and changes they would like to see. Their comments and suggestions are in Appendix B. MissionCIT integrated those comments into revised statements below for consideration by the district and its members.

Current Mission Statement

"Plateau Valley Fire Protection District strives to provide the highest level and standards of Emergency Medical Services, Fire Protection and Awareness, Public Service, Education and Protection of Life and Property for our Neighbors, Community and Cooperating Entities."

Proposed Mission Statement

The Plateau Valley Fire Protection District is dedicated to delivering exceptional fire protection, emergency medical services, community risk reduction and support services. We are committed to safeguarding life, property, and the well-being of our neighbors, our community, and partnering organizations through the highest standards of professional service and care.

Current Vision Statement

"We identify, hire and retain the best people available. Our district performs as a highly productive team dedicated to our mission. All members of our team feel their work is personally fulfilling. We work innovatively with our customers and promote a good image of the district in the community. We use only quality materials during the course of our service activities, while focusing on safety and wellness. Our district consistently strives to follow policies in an effort to provide equitable services throughout the Plateau Valley Fire District. We foster a climate of high trust and open timely communication across all functions and levels of the organization. Every member of the district feels a strong social responsibility for a safe, environmentally clean operation. We are efficient in our endeavors and support of the Plateau Valley Fire District vision."

Proposed Vision Statement

The Plateau Valley Fire Protection District's vision is to:

- Attract and retain talented individuals, fostering a safe, productive, and fulfilling work environment
- Implement cost-effective and innovative business practices

- Maintain a positive community image, focusing on safety and wellness
- Provide equitable and valued community services
- Uphold high trust and open communication with our community and members
- Prioritize safe operational practices and environmental responsibility

Current Values Statements

- *"We view our family, friends, neighbors and visitors as those who deserve our concern, care and attention.*
- *We recognize our staff and volunteers as our most valuable resource and we are committed to them and their safety.*
- *We recognize that our personal conduct is inseparable from the professional reputation of the district.*
- *We support our organizational climate of mutual trust and respect.*
- *We believe in a team oriented, positive and honest environment for all staff and volunteers.*
- *We strive for excellence, through teamwork, unity, leadership, personal and professional development, training and preparedness.*
- *We believe in open communications and mutually beneficial partnerships with neighboring fire agencies and communities.*
- *We recognize the responsibility of cost-effective resource management.*
- *We encourage innovation and ownership within the district."*

Proposed Values Statements

- We care for our district family, friends, neighbors, and visitors.
- We value and prioritize the safety of our members and the community.
- Our personal conduct reflects the district's professional reputation.
- We support a climate of mutual trust and respect.
- We believe in a positive, team-oriented, and honest environment.
- We value open communication and partnerships with neighboring agencies and communities.
- We are committed to cost-effective business practices and resource management.
- We encourage organizational innovation and ownership.

Appendix A: Apparatus Inventory

Vehicle Identifier	Year	Make	Type	Tank Size	Pump Size	Engine Hours	General Visible Condition	Safety Features**
Engine 91 Type 1	2008	Spartan Crimson	Pumper	1,000 Gal.	1500 GPM	710	Good	Rollover Protection
Engine 92 Type 1	2008	Spartan Crimson	Pumper	1,000 Gal.	1500 GPM	1189	Good Rebuilt Engine	Rollover Protection
Engine 93 Type 3	2020	International HV507 Rosenbauer	Pumper	500 Gal.	1,000 GPM	388	Excellent	DPF
Tender 91	2010	Freightliner FLD120	Tender	3,500 Gal.	350 GPM	490	Good	DPF
Tender 92	2007	Freightliner FLD120	Tender	3,500 Gal.	350 GPM	10,761 Miles	Good Pump Work Done	None
Tender 93	1991	Ford LN8000	Tender	2,000 Gal.	Unknown	388	Fair	No
Brush 91 Type 6	2024	Chevy 5500	Brush Truck	300 Gal.	115 GPM	54	Excellent Pump Rebuilt	DPF Airbags
Brush 92 Type 6	2024	Chevy 5500	Brush Truck	300 Gal.	115 GPM	81	Excellent Pump Rebuilt	DPF Airbags
Brush 93 Type 6	2002	Dodge 3500	Brush Truck	275 Gal.	150 GPM	193,086 M	Fair	
Brush 94 Type 4	2020	International HV507	Brush Truck	1,000 Gal.	294 GPM	265	Excellent - Remount	DPF
Brush 95 Type 4	1994	International 4800	Brush Truck	750 Gal.	50 GPM	2,947	Fair	None
Ambulance 91	2015	Ford F550	Amb.			49,896 Miles	Good	DPF
Ambulance 92	2018	Ford F550	Amb.			1,832	Good	DPF
Ambulance 93	2009	Ford F450	Amb.			66,891 Miles	Good	DPF

**Safety Features

- Clean Cab Concept
- Rollover Protection
- In-Apparatus Diesel Exhaust System (DPF – Diesel Particulate Filter)

Appendix B: Mission, Vision and Values Comments from District Personnel

Volunteer Personnel on 11/20/24

- Mission: Still valid
- Vision:
  - Shorten it
  - The first sentence sets the right tone
- Values:
  - The 2nd statement is reinforced with volunteers
  - Training reflects values
  - Make the mission, vision, and values statements more visible
  - Review the mission, vision and values statements periodically

Shift Personnel on 11/21/24

- Mission: Valid and appropriate
- Vision:
  - Remove 1st line, start with 2nd line
  - Redundant wording / too wordy
  - Focus on key items: collaboration ~ innovation ~ safety ~ training and equipment ~ community engagement (to include visitors)
- Values:
  - 1st line – remove "deserve"
  - Concentrate on:
    - Safety
    - Education and training
    - Systems and equipment
    - 4th from the bottom is good
    - 3rd from the bottom is good (add business)
    - Cost effective / responsible

Appendix C: Internal Survey Results

Figure 35: PVFPD Current Position and Status

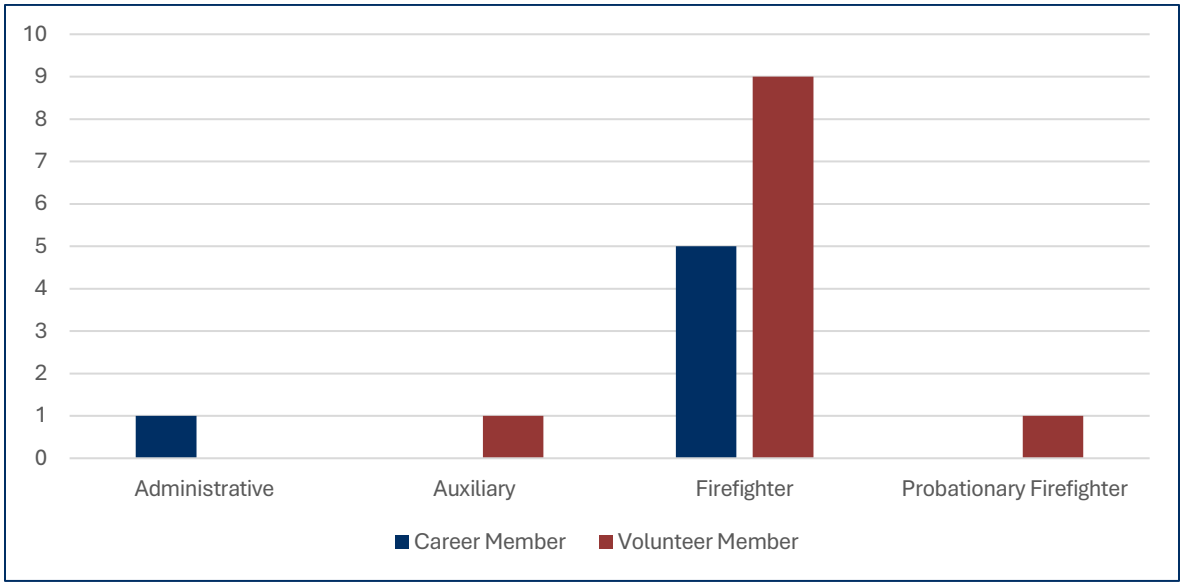


Figure 36: Communication Questions

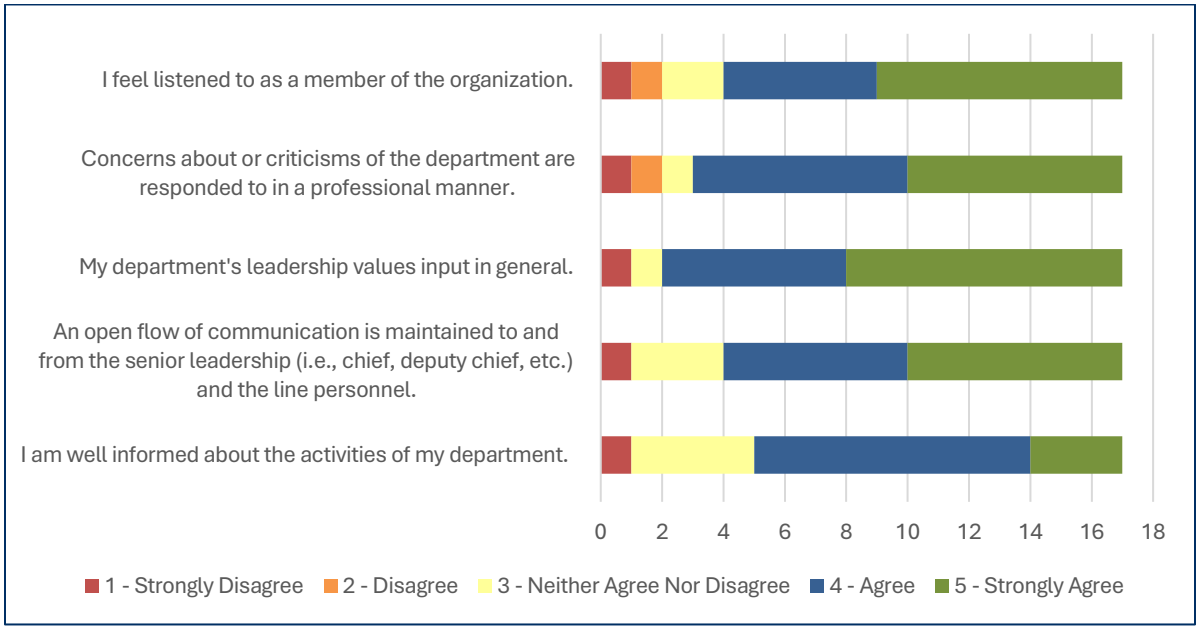


Figure 37: Question - Organizational Environment

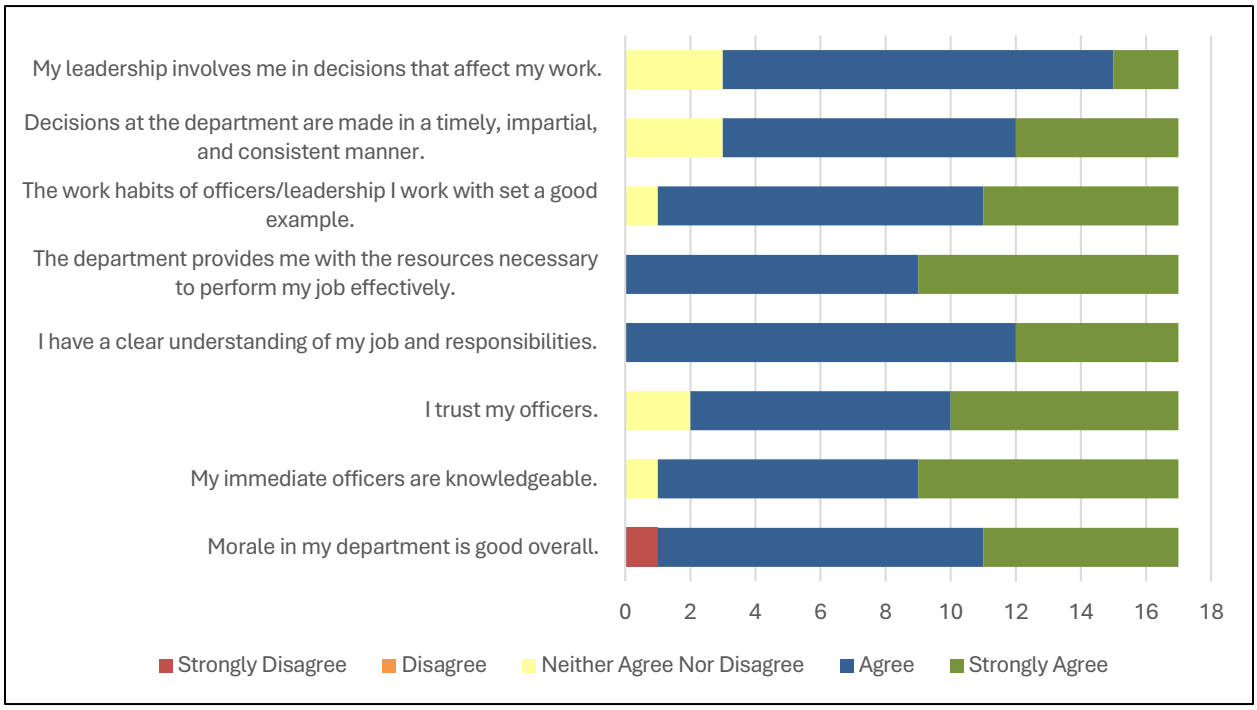


Figure 38: Question - Safety

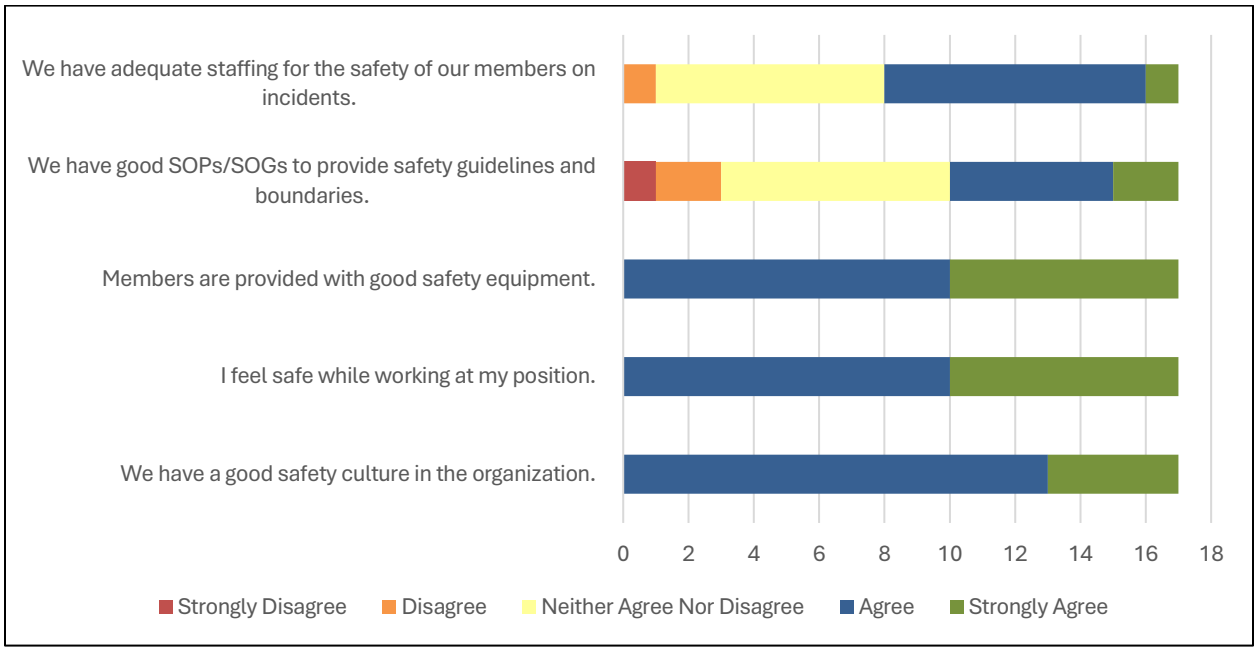


Figure 39: Question - Training and Professional Development

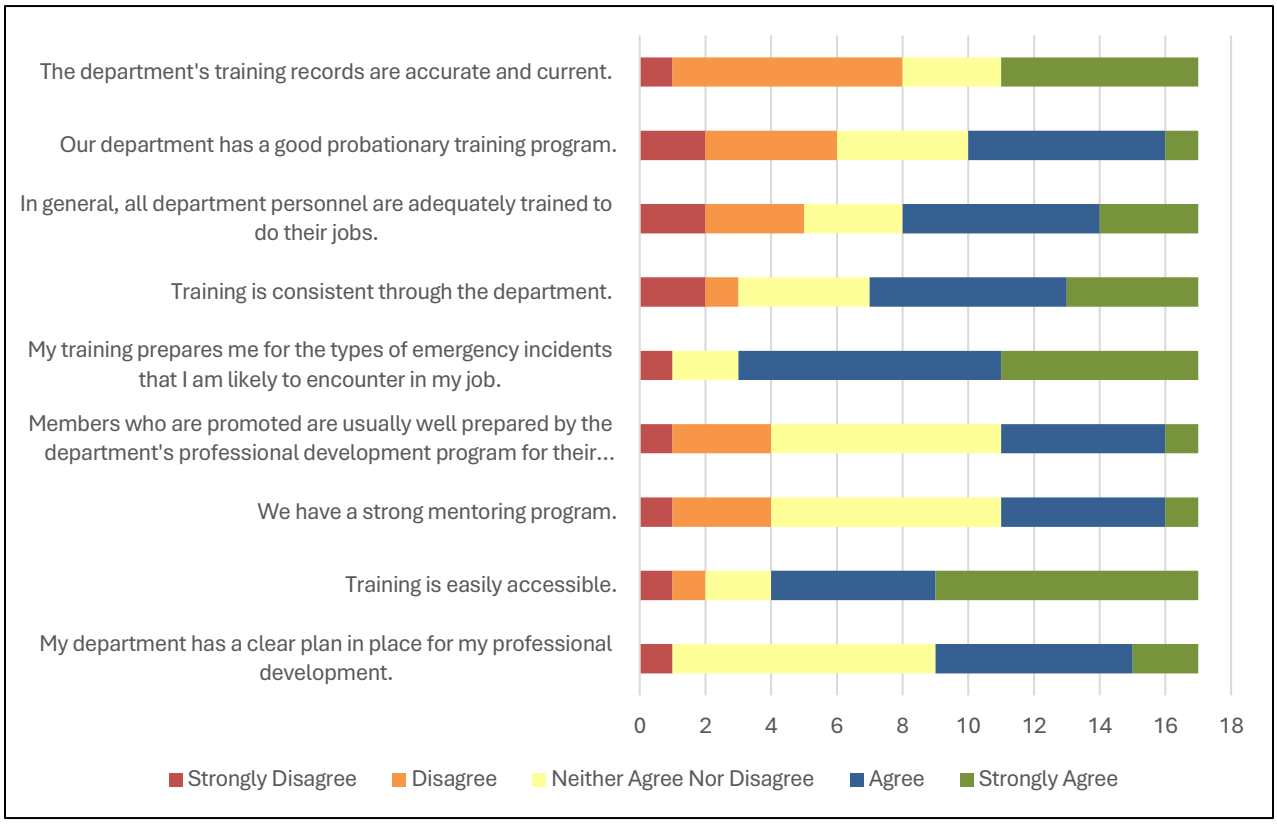


Figure 40: Question - Leadership Direction

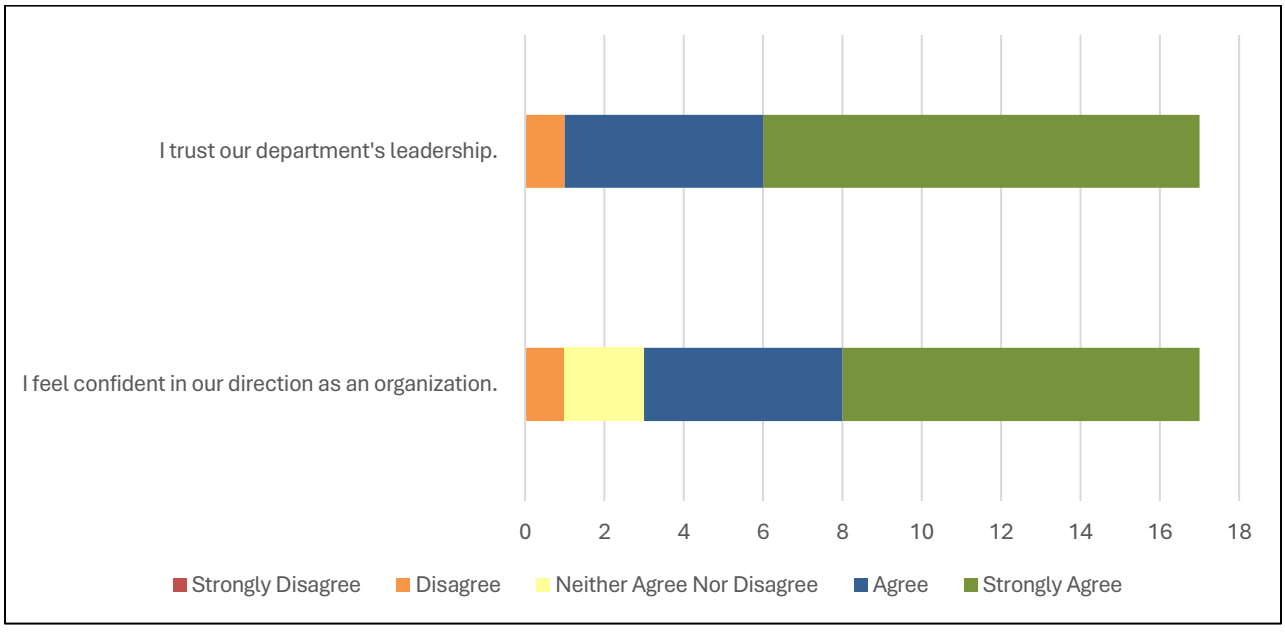


Figure 41: Question - Equipment and Facilities

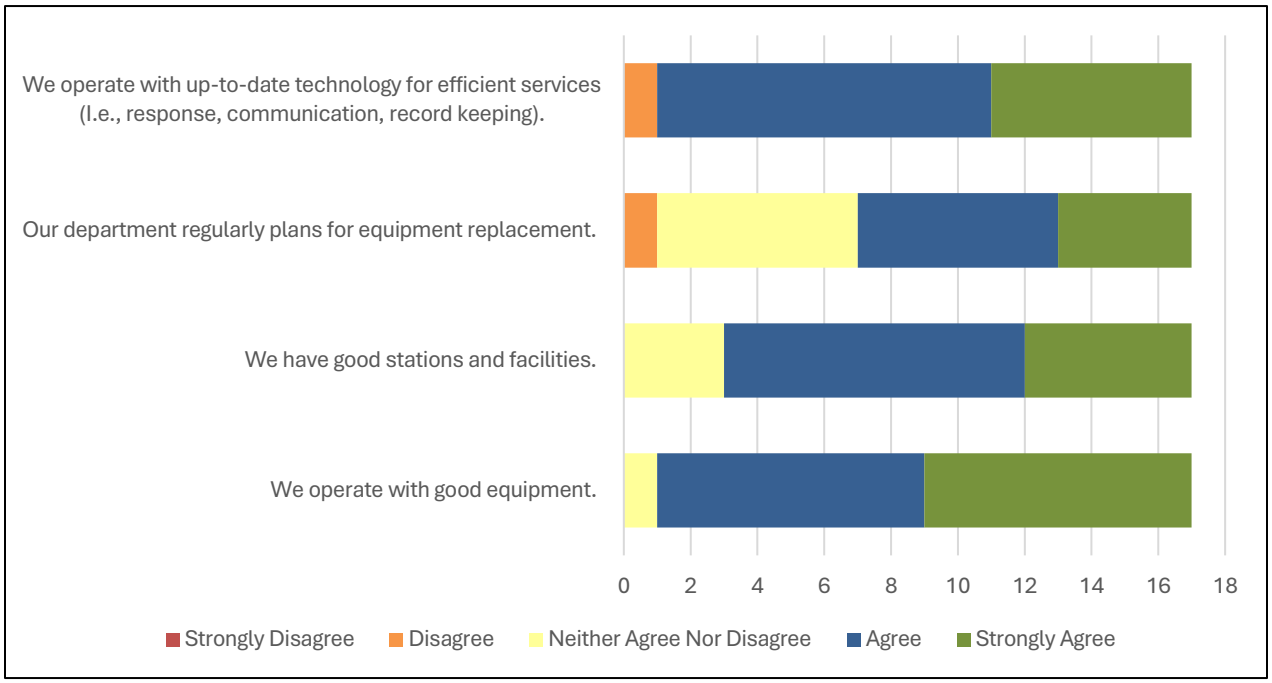


Figure 42: Question - Service Delivery

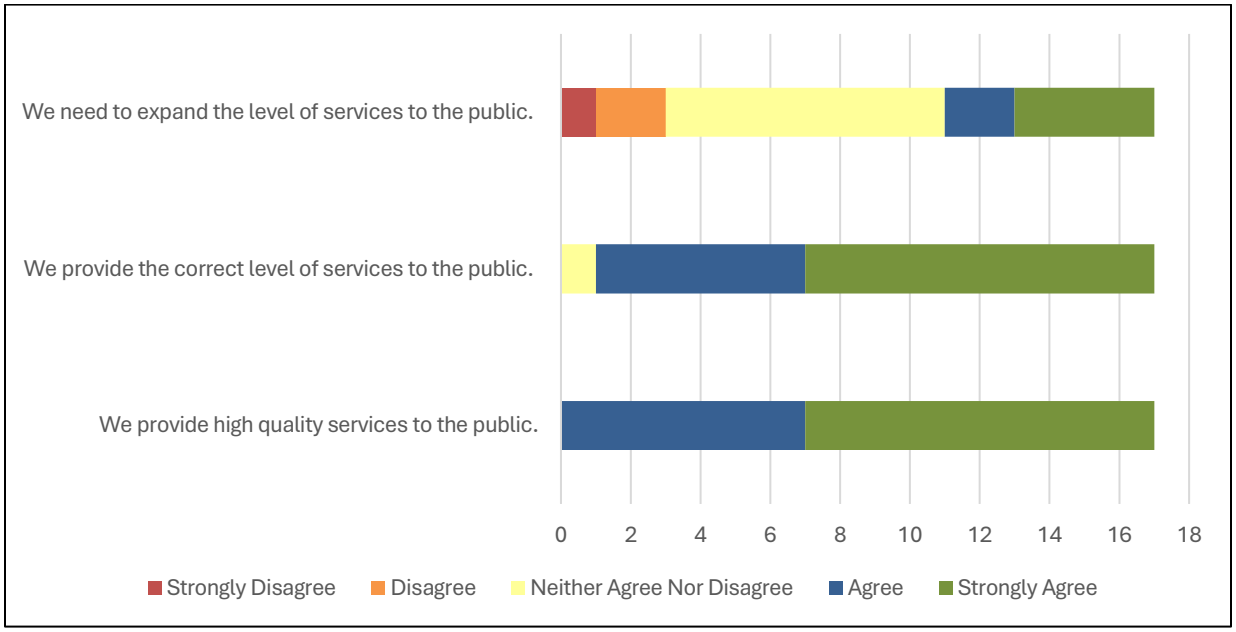


Figure 43: Question - How well are services delivered

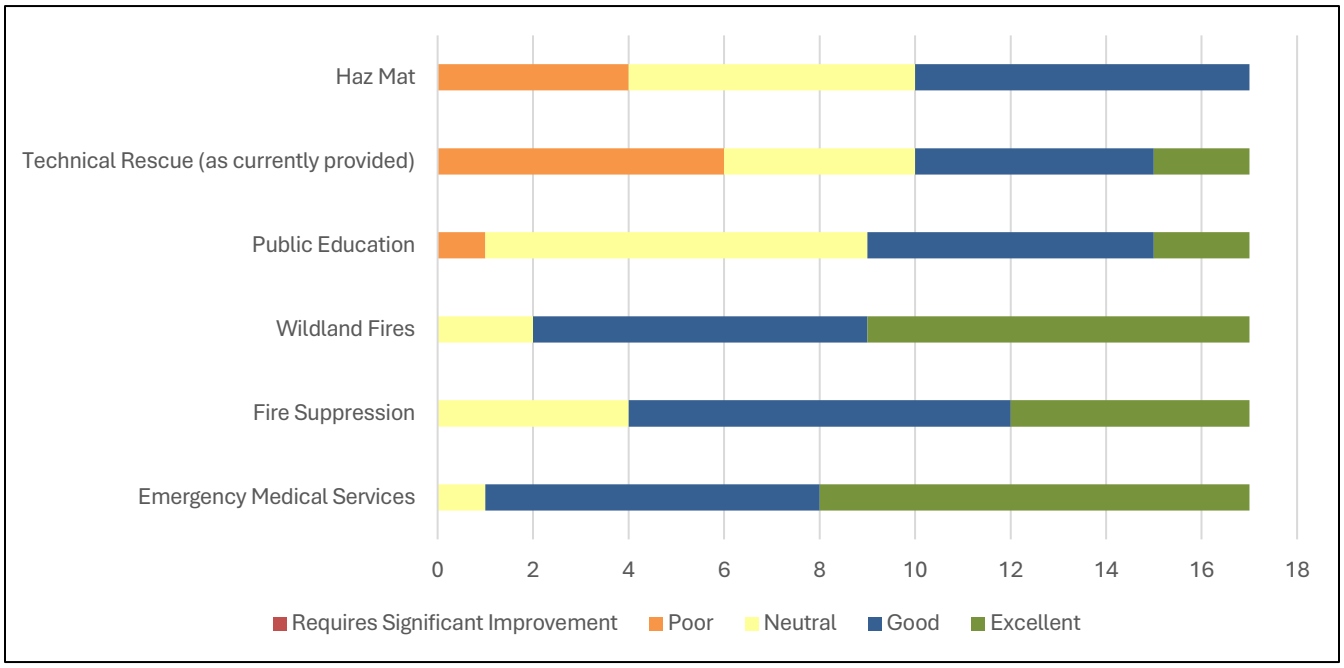


Figure 44: Question - Organizational Features

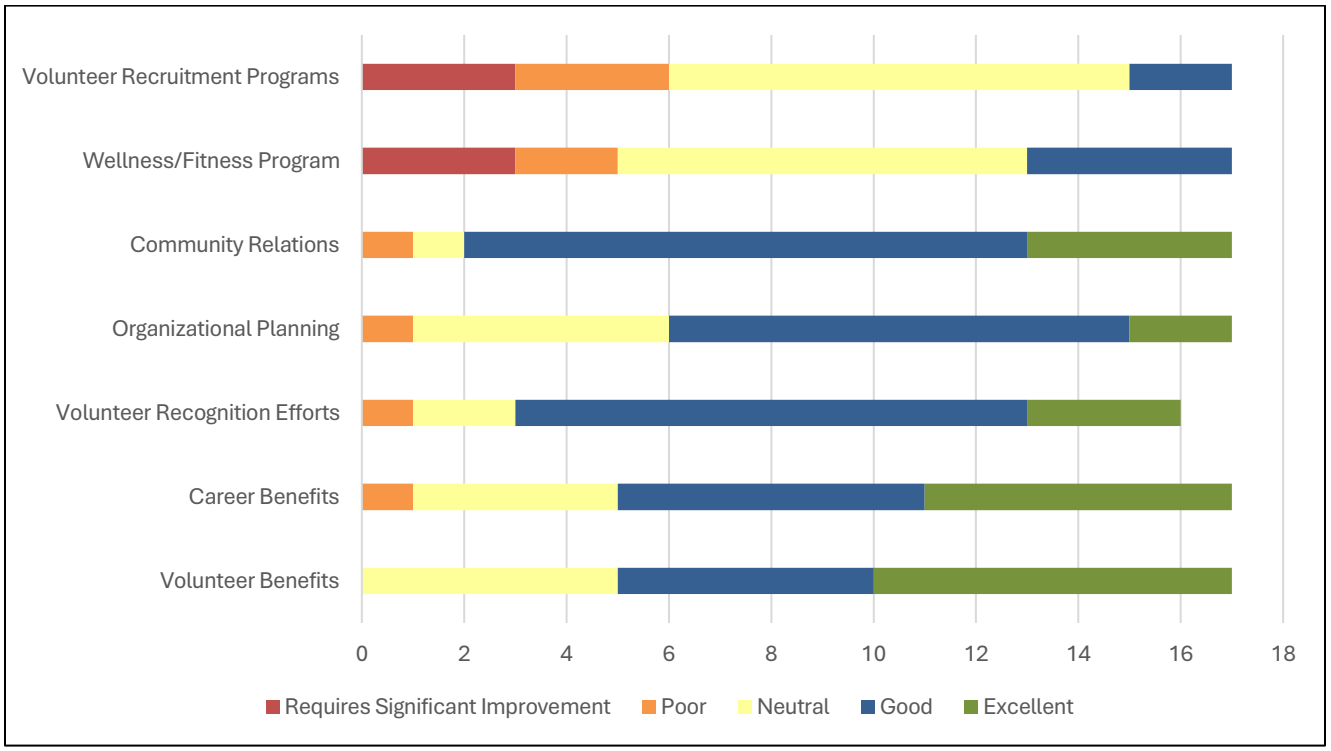


Figure 45: Question: Volunteer Recruitment and Retention Efforts

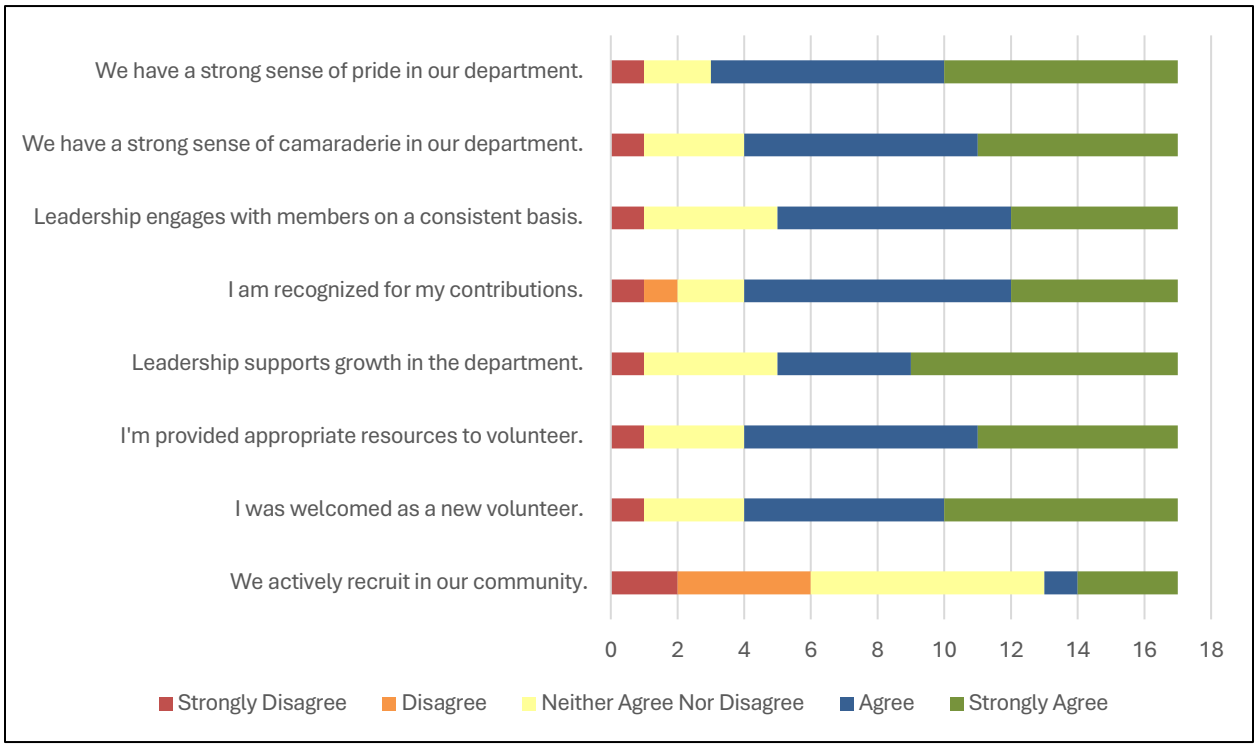


Figure 46: Question - Reasons You Volunteer

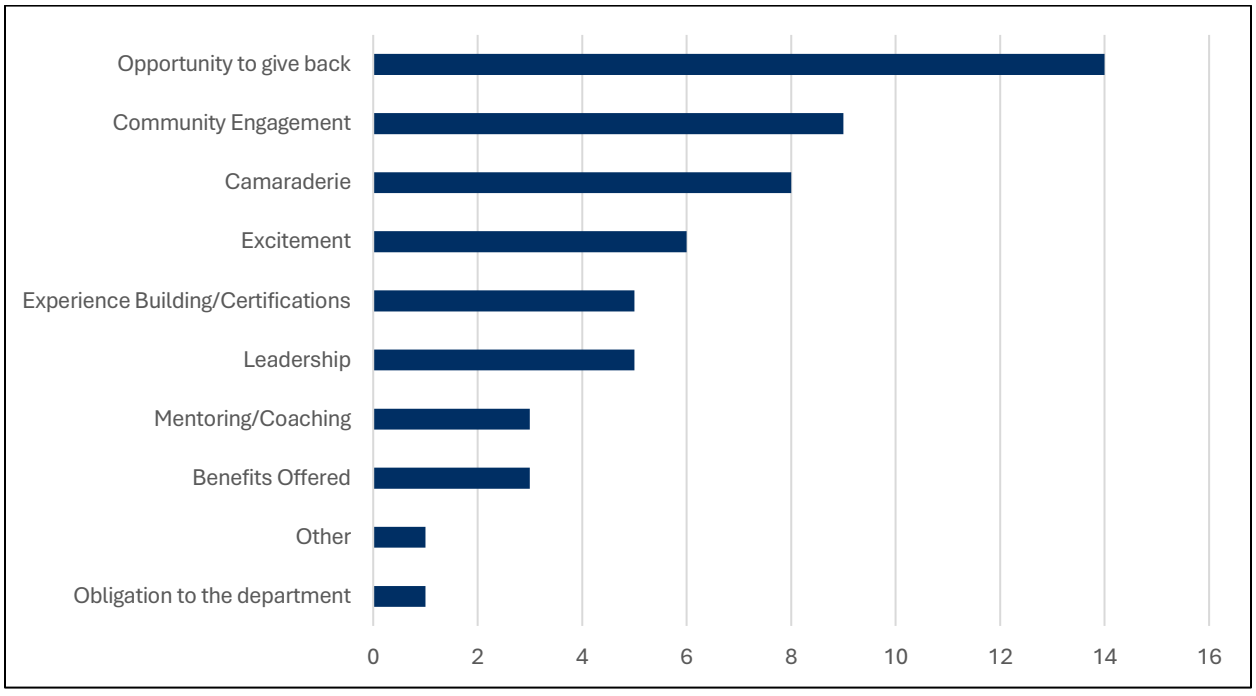


Figure 47: Question - In the last 6 months, have you felt like quitting?

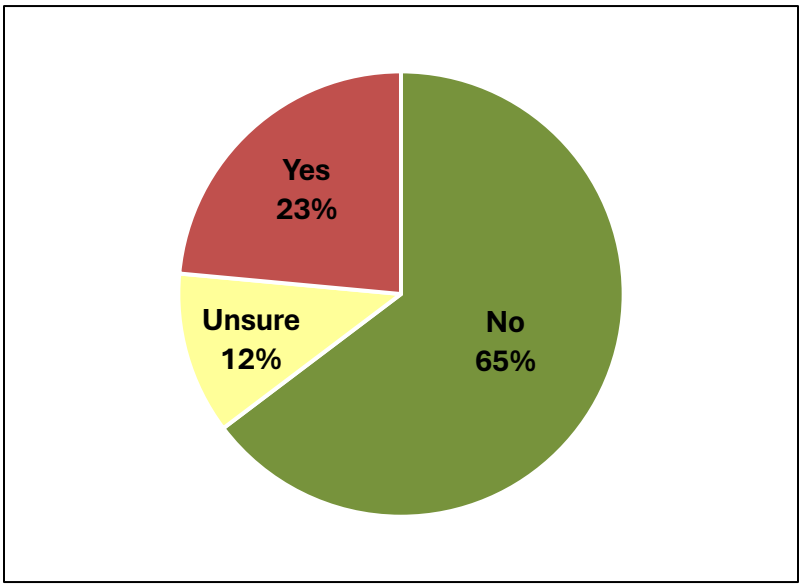
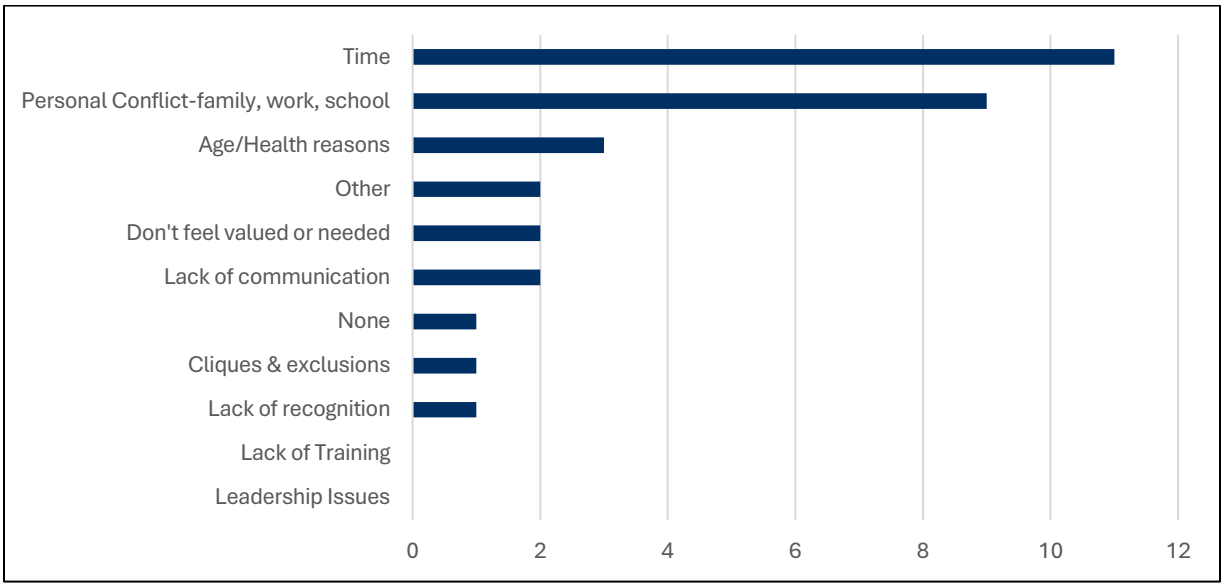


Figure 48: Question - Reasons you feel are deterrents to volunteering in the fire district



Please add any additional comments.

- If we're going to grow as a department, we need to build up our volunteer skills/knowledge, we need to require more out of them since their getting paid well (pension) and don't provide a lot of value currently, and we need to build up our part time employee roster to allow for wildland deployments. If we can start deploying, we can start bringing in revenue to make departmental improvements.
- I'm anxious to see what the future brings.
- Need to figure out a better way to recruit new younger volunteers, we have a lot of older volunteers that are not able to do the physical work required on calls.
- There has been a huge transformation in communication, camaraderie and mentorship in the department with the recent leadership change and newer paid staff. Only suggestion at this time is to find a way to increase salary/benefits for paid staff for retention, as well as, expanding opportunities to serve our community more fairly instead of only have staffed location on one side of district.
- This is the first adult job I've had that I genuinely enjoy going to work every week. I have never had a boss that is so supportive and caring about his employees. I love that our department is making improvements every week and the chief has an excellent end goal in mind of what he wants this department to be. I'm very excited for the future with this department

Appendix D: Strengths, Weaknesses, Opportunities and Challenges

Volunteer Personnel - 11/20/24	
Strengths	**Weaknesses**

• Knowledge and experience (of members)
• Volunteer retirement program
• Good equipment and equipment maintenance
• Training
• Seasoned staff
• Community relations
• Volunteer relations
• Communication technology (apps)
• Rotation of apparatus
• Department communications
	• Lack of volunteers
	• Retention of career personnel
	• Funding (no increases)
	  ○ Competitive pay
	  ○ Apparatus replacement
	• Size of district
	• New career members (inexperience with district)
	• Cost of housing
	• Lack of law enforcement support (Mesa Co. Sheriff)

Opportunities	**Challenges**

• Acquiring new volunteers
• Levy increase
• Junior firefighter program development
  ○ Possible use of Collbran Job Corps
• Grant funding
• Training support
	• Retaining career staff
	• Increase in call volume
	• Acquiring enough (new) volunteers
	• Influx of visitors (all seasons now)
	• Funding for capital equipment
	  ○ Replacement schedule
	• Bringing on more career staff
	  ○ Concerns about the career / volunteer balance and volunteers being left out of responses

Career Personnel on 11/21/24	
Strengths	**Weaknesses**
• Community participation (members of PVFPD) • Apparatus (type and number) • Interagency relations • People work well together • Apparatus maintenance • Training opportunities • Open door policy for all members • Availability (off duty members backfilling) • Community relations • Grant money • Volunteer system • EMS and training coordinators (Mesa County)	• Staffing at one fire station location (i.e. size of district) • Size of district (coverage issues) • Coordinating volunteer response • Volunteer development opportunities • Retaining career staff • Recruitment and retention (both career and volunteer) • ALS skills degradation (due to low call volume) • Funding • Apparatus replacement plan • Website / social media presence • PPE replacement plan • Fitness equipment and workout space
Opportunities	**Challenges**

• Long distance transports (charging for services)
• Wildland fires deployments (reimbursement for services)
  ○ May also be a recruitment incentive
• Grant monies from wildland mitigation projects
• Levy increase
• Training and development of personnel
• Community relations and education
  ○ Increased web and social media presence
• Interagency cooperation
• Increased staffing
• New recruitment sources
• Increasing the number of part-time personnel
• Gym membership (fitness)
	• Staffing from a single location
	• Recruitment and retention
	• Funding
	• Regulatory environment (local and state)
	• District board knowledge
	  ○ SDA involvement
	  ○ Recruiting new board members
	• Community growth
	• County ALS protocols (developing new medics)
	• Response coordination with volunteers
	• Apparatus replacement
	• Oil and gas industry changes (ups and downs)
	• Website / social media
	• District data

District Board – 11/21/24	
Strengths	**Weaknesses**
• Staff (career and volunteer) • Apparatus and equipment • Volunteer knowledge and experience • Chief Henderson	• Recruitment and retention (career and volunteer) • Funding • Size of fire district • Cold weather training and specialized equipment
Opportunities	**Challenges**
• Develop a junior firefighter program • Explore use of the Collbran Job Corps program • Extra training for career members • Relations with Powderhorn ski resort • Increase the number of volunteers • Communicating with the community	• Recruiting new members • Sustainable funding • Increasing funding • Retaining current members

Plateau Valley Citizens – 11/21/24	
Strengths	**Weaknesses**
• EMS staff • Quality of PVFPD people • Knowledgeable • Quick response	• Staffing • Response times due to size of the district
Opportunities	**Challenges**
• Training new members	• Recruiting new people • Training time commitments for volunteer members • Career and volunteer staff retention

Appendix E: External Survey Results

Figure 49: Question - Stakeholder Roles

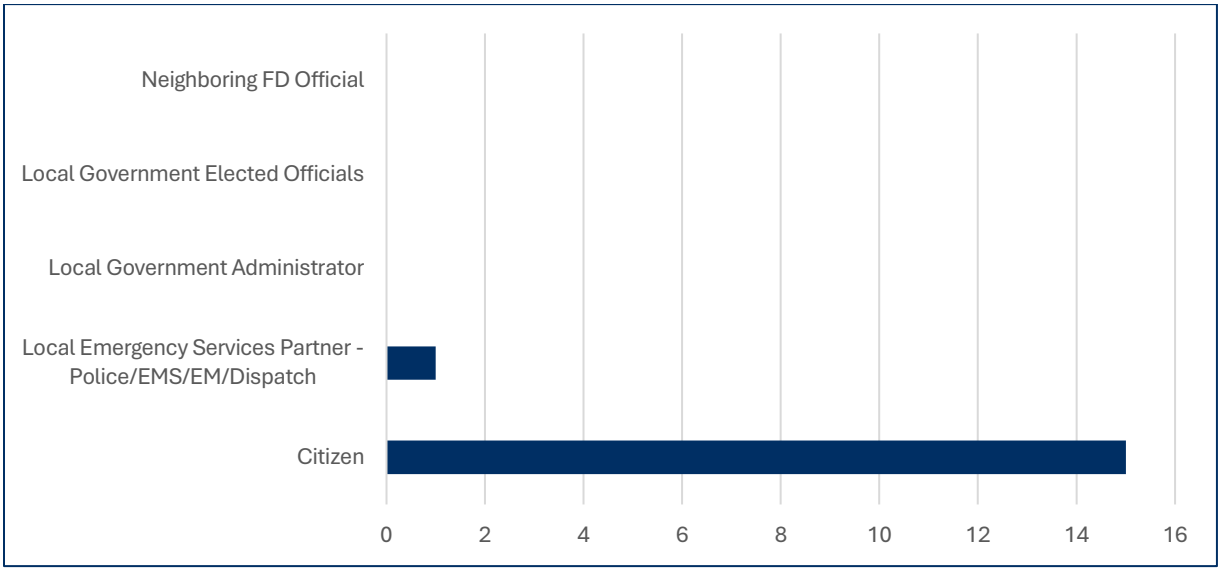


Figure 50: Question - Top 5 Expectations

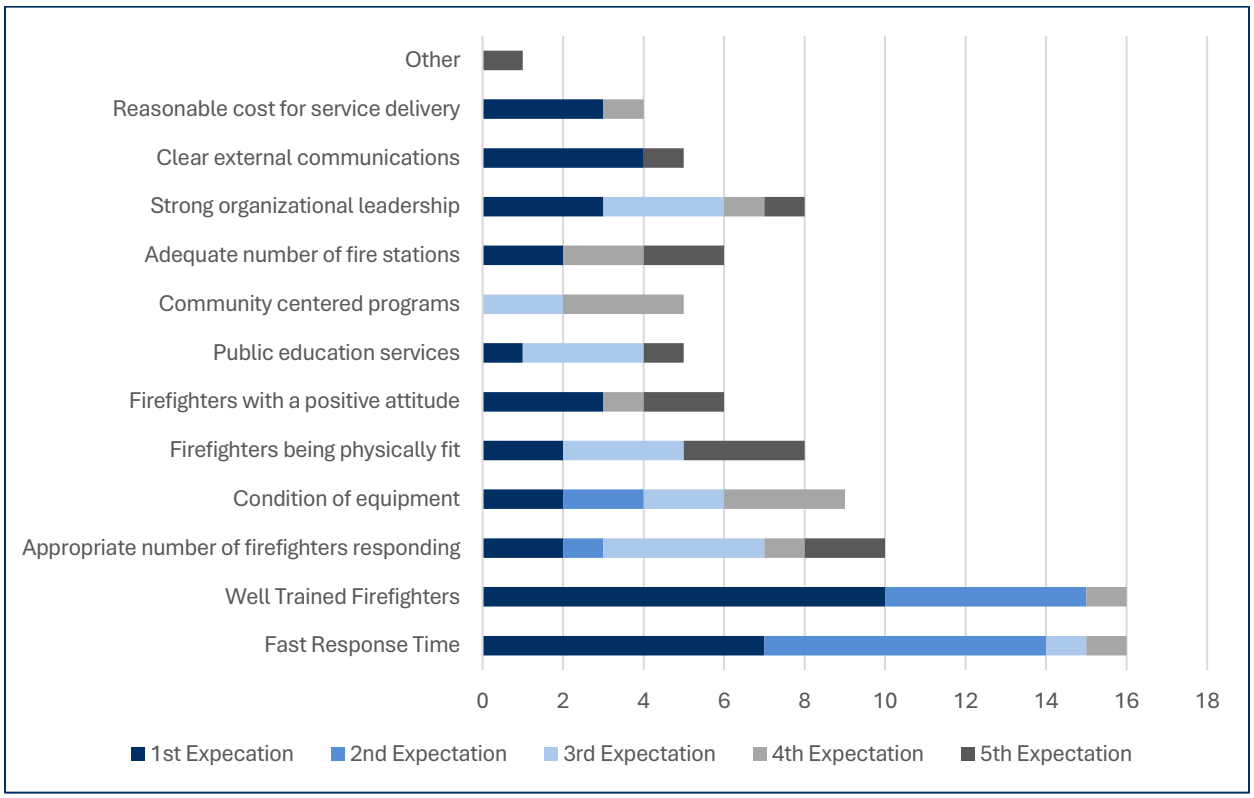


Figure 51: Question - Top 5 Priorities

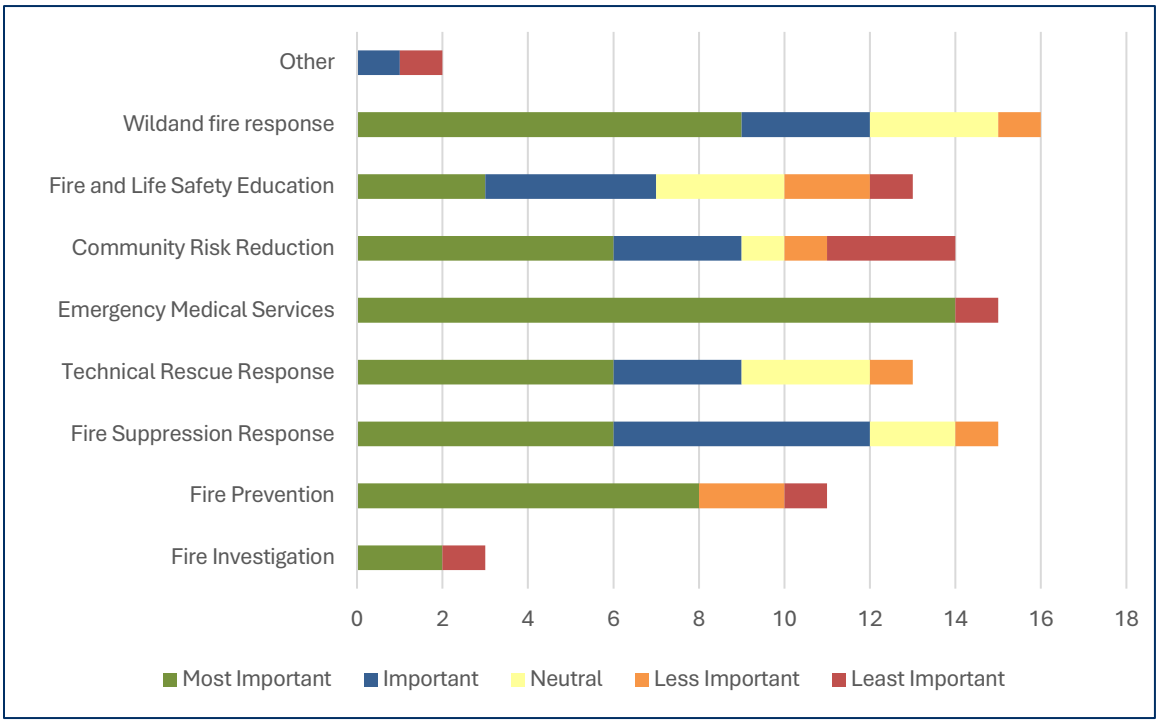


Figure 52: Question - Strengths

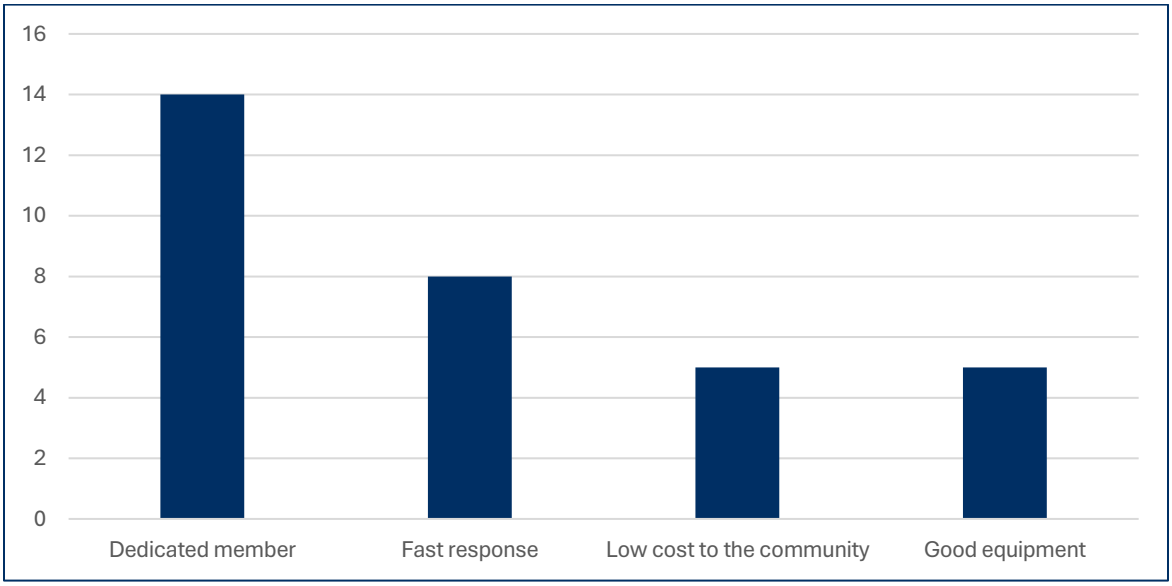


Figure 53: Question - Challenges

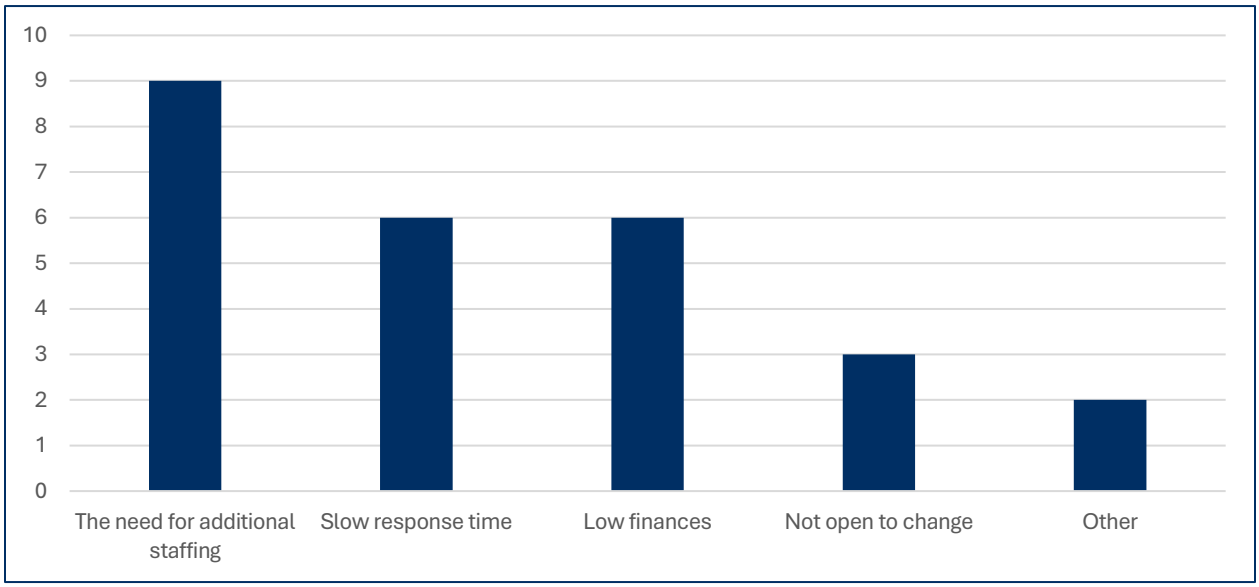
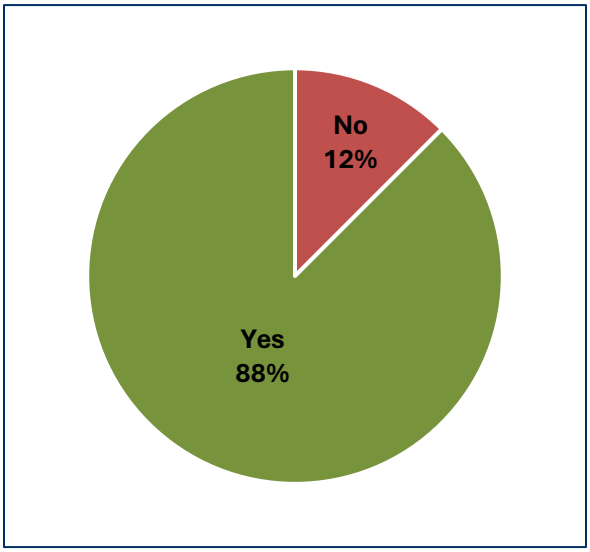


Figure 54: Question - As a citizen, would you be willing to support additional funding allocated to the fire district in order to hire more personnel?



Optional general comments related to the fire district.

- Having more than one staffed fire station would be helpful. I believe for response times in the Collbran area when Mesa is staffed that still is at least a 20-minute response from Mesa to Collbran.
- Love having the full-time staff and a paramedic on duty. I appreciate each and every one of you!
- Overall, a great service to the community.

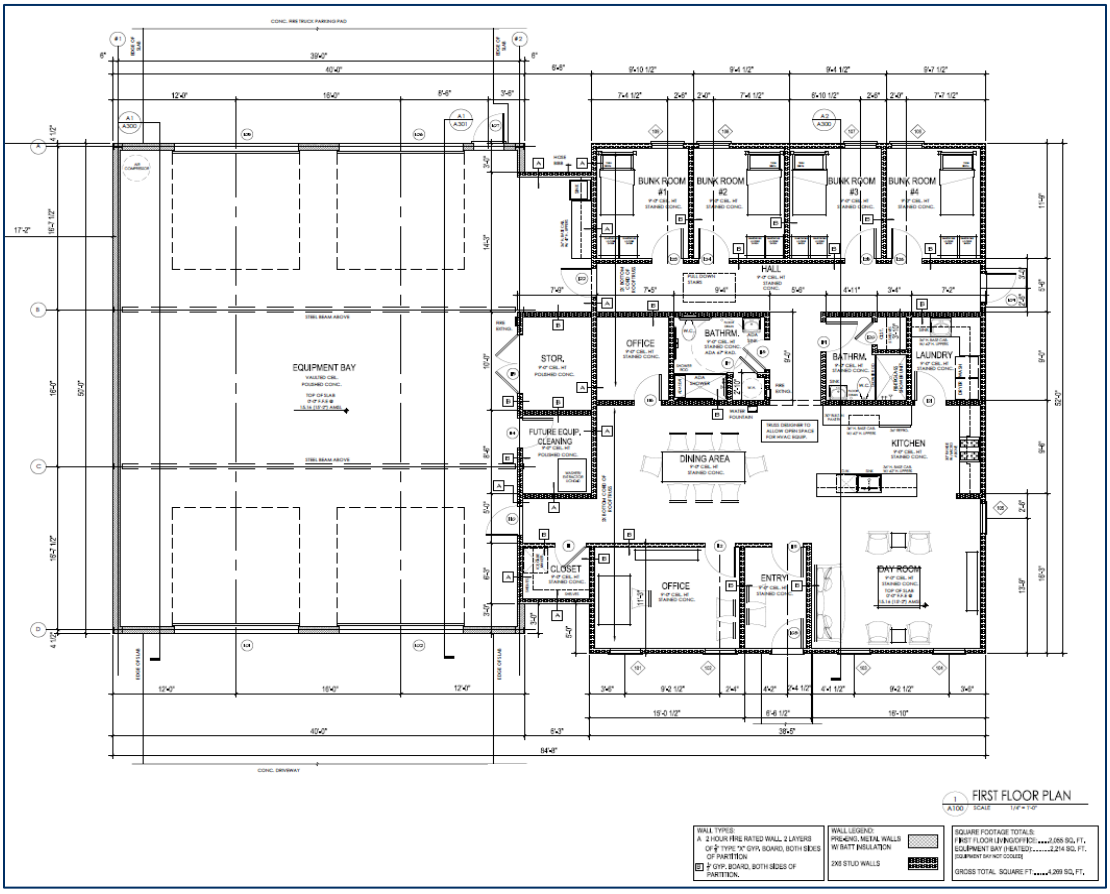
Appendix G: Minimum New Fire Station Requirements

New Fire Stations

- Construction and materials used to last a minimum of 50 years.
- Sited on property to allow for expansion if needed.
- Minimum of two drive through apparatus bays – Three bays should be preferred.
- Minimum of 5,500 square footage of space, to include a minimum of 2,500 square feet of living area.
- Establishment of hot, warm and cold zones within the station (See example below).
- Living area should include the following:
    - Full kitchen
    - Day room/Meeting room
    - Office/report writing space
    - Full bathroom and shower facilities – Minimum of two sets
    - Dormitory space for 4 bunks/beds
- Stations designed for live-in members should have dormitory pods consisting of a central bathroom. facility with adjoining dormitory facilities on each side with two beds each.
- Diesel exhaust systems for fire apparatus.
- EMS equipment decontamination cleaning and storage areas.
- Generator to run essential components of station.
- Separate, contained and well-ventilated storage area for personal protective equipment off of the apparatus bays.

Examples of fire stations:

Examples of two bay fire station with dormitory, bathroom, kitchen and PPE storage areas:



Source: Grady Woods Architects, Ridgeland, SC

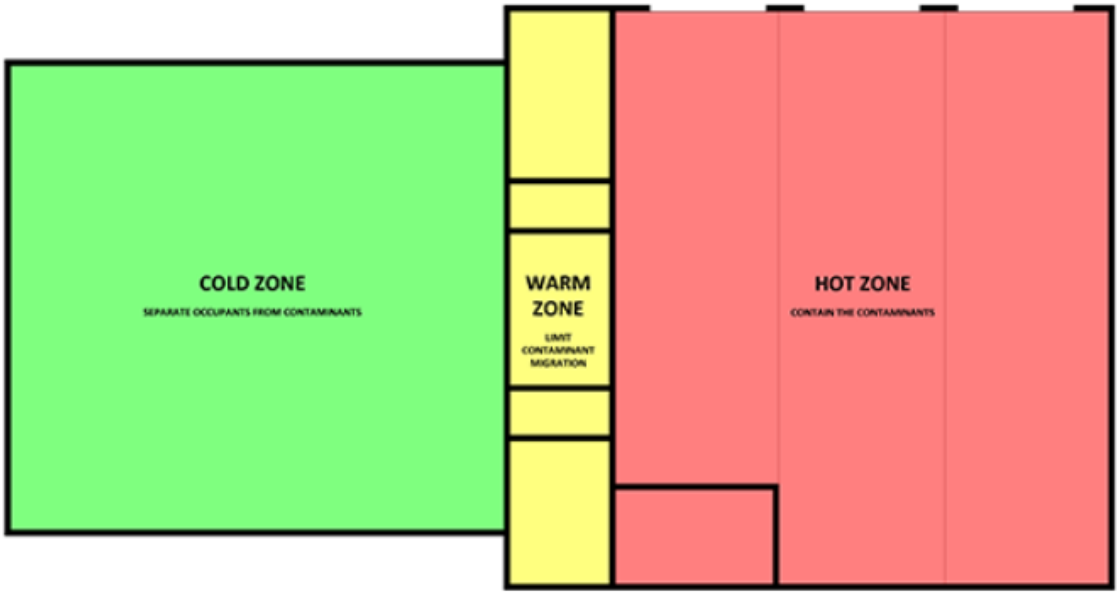
Designs of new stations should include zones to reduce the risk of transmission of carcinogen or other toxic agents to firefighter personnel or the sleeping/working areas of the station. See below as an example of the layout.

Per the new 2025 NFPA 1585 Standard, "*Standard for Exposure and Contamination Control*", fire stations should be constructed considering the following;

5.3.2

Areas inside a facility shall be designated as follows:

- *Red – Spaces likely to be exposed to contaminants*
- *Yellow – Transition spaces between a contaminated (red) area and a clean (green) area, where contamination control takes place*
- *Green – Clean spaces, such as living, administrative, or public areas*



Source: EVstudio. "Designing Fire Stations That Keep Fire Fighters Safe." EVstudio, 4 Aug. 2020, evstudio.com/designing-fire-stations-that-keep-fire-fighters-safe.

Appendix G: Suggested District Response and Staffing Performance Metrics

Plateau Valley FPD will need to precisely define what areas of their district are considered rural and possibly remote and modify these draft standards.

Rural Areas (Mesa, Molina, Collbran and Powderhorn Areas)
The Plateau Valley Fire Protection District will have a turnout time (Dispatch to first unit enroute) within 120 seconds for EMS incidents and 240 seconds for fire incidents 90% of the time.

The Plateau Valley Fire Protection District will respond (Dispatch to arrival of the first arriving unit) within the identified rural areas (Mesa, Collbran and Powderhorn) within 14 minutes 80% of the time.

The Plateau Valley Fire Protection District will assemble an effective response force in the rural areas of at least 6 fire suppression personnel for structure fire incidents within 20 minutes from the time of dispatch.

Remote Areas (Outside of the Immediate Mesa, Molina, Collbran and Powderhorn areas)
The Plateau Valley Fire Protection District will have a turnout time (Dispatch to first unit enroute) within 120 seconds for EMS incidents and 240 seconds for fire incidents 90% of the time.

The Plateau Valley Fire Protection District will respond (Dispatch to arrival of the first arriving unit) within the identified remote areas (Outside of Mesa, Molina, Collbran and Powderhorn) within 25 minutes 90% of the time.

The Plateau Valley Fire Protection District will assemble an effective response force in the remote areas of at least 4 fire suppression personnel for structure fire incidents within 30 minutes from the time of dispatch.