Fire Rescue Master Plan

EVERGREEN FIRE PROTECTION DISTRICT

FINAL REPORT

January 17, 2024

matrix consulting group

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Introduction and Executive Summary

Evergreen Fire Protection District (EFPD) retained the Matrix Consulting Group to facilitate a Master Plan. This document includes the project team's research and analysis of the EFPD and community, which includes risk assessment, staffing, response capabilities, and deployment analysis.

Scope of Work

The scope of this study included assessing the current fire protection system operations, response capabilities, staffing, and other resources necessary for delivering services to the District. A review of services and the delivery of those services should be performed periodically to ensure needs are being met. This project focused on the emergency services system delivery that included:

- Response capabilities.
- Response time analysis.
- Resource locations.
- Available resources to serve the District.
- Staffing and workforce.

The approaches used in this study were comprehensive, as described below.

Approaches Utilized in the Study

The project team assessed the Fire District to understand and evaluate the District's service level and organizational issues. The principal approaches utilized by the project team in this study included, but were not limited to, the following:

- Internal Interviews – Project team members interviewed numerous executive, management, and supervisory staff members of the district.
- Data Collection – the project team collected a wide variety of external and internal data documenting the structure, operations, and organization, including:
  - Staffing and scheduling.
  - Documentation reflecting operations management.

  - Numerous output data points reflect services provided.
  - Various other performance information and indicators.
- This data was summarized in a 'descriptive profile' of the Evergreen Fire Protection District, which was reviewed and modified by District staff to ensure we had a factual foundation for the study. This approach ensured that the project team understood the EFPD appropriately.

Data was collected over the past several months and presented in interim deliverables. The project team reviewed facts, findings, and conclusions through these interim deliverables with the EFPD throughout this process.

Executive Summary

Evergreen Fire Protection District (EFPD), dba Evergreen Fire/Rescue (EFR), provides emergency services to an area in Jefferson and Clear Creek Counties that covers an area of about 126 square miles and an estimated population of 25,669 residents. The services include fire suppression, fire prevention, public education, fire investigation, and emergency medical services.

Challenges ahead for EFR begin with its organizational structure. There are two organizations, EFPD and the Evergreen Volunteer Fire Department (EVFD). EFPD is the governing body that is responsible for tax collection and the delivery of emergency services.

- The EFPD provides the staffing for emergency medical services, fire prevention and risk reduction services, and wildland mitigation activities.
- The EVFD provides volunteer staffing for the fire suppression services provided by the EFPD and receives donations from the public to the volunteer fire department.

Based on input from staff members from both organizations, there are issues between the two groups that include a feeling of mistrust, a lack of coordination, and command and control. It is time for both organizations to merge into a single organization to become Evergreen Fire/Rescue.

A second challenge for EFR is the physical resources of the District.

- Station One is functionally obsolete and should be replaced.

- Station Four will require significant investments to remain a viable facility and is only used for emergency medical services as the bays are insufficient to house modern fire apparatus.

Combining the two stations into a single facility would allow cross-staffing, improved working conditions, and expandability as services warrant. This project will be delayed as the building currently on the site has a lease through November 2025, and with the demolition and construction, the new facility will not be operational until 2027. Several stations are built for volunteer staffing and do not have living quarters for staffed stations. This configuration may need to change as growth occurs, especially in the northern section of the district. EFR must begin planning to expand these stations, especially Stations 3, 6, and 7.

A third challenge is the response system. The current system utilizes a career staffing model for emergency medical services delivery and a volunteer-staffed model for fire suppression and rescue services. In the community meetings, focus groups, and internal meetings, response time and staffing are priorities. Comments in the internal groups alluded to a combination type system of career and volunteer staffing for fire suppression. Focus groups highlighted the need for in-house staffing of fire stations for the fire suppression response.

Completing the Standard of Cover document will assist with these challenges. EFR staff have begun the process and have an excellent foundation to complete the document. There are data challenges to achieving the report's completion, but its completion will provide additional improvement opportunities for the EFR.

Strategic Improvement Opportunities

The goals established in this report are numbered in the order in which they appear. The following tables place these goals in order of priority for improved planning and service delivery options.

Goal 6:	Improve the availability of fire apparatus.
Accountability:	**Fire Chief**
Objective 6A	Create a staffing model using career and volunteer staff to staff an Engine Company at Station 2, including paramedics, to cross-staff a third ambulance.
Estimated Cost:	$321,733 for year 1, $673,021 for year 2
Objective 6B	Once the new facility is operational, staff a second Engine Company.
Estimated Cost:	$757,491 for year 1 (FY2028)

Goal 5:	Consolidate Stations One and Four into a new facility.		
Accountability:	**Fire Chief**	**Estimated Cost:**	**$8 to 10M**
Objective 5A	Finalize the current site and building plans.		
Objective 5B	Secure a general contractor and sign a contract.		
Objective 5C	Monitor construction of the new facility.		
Objective 5D	Upon completion, collapse Stations One and Four into the new facility.		
Objective 5E	Dispose of the old facilities.		

Goal 1:	Formally transition to a single organization to provide emergency services and another to provide benevolent support to the Fire District.		
Accountability:	**Fire District Board of Directors**	**Estimated Cost:**	**Staff Time**
Objective 1A	Form a merger working group comprised of personnel from the Fire District and Volunteer Department.		
Objective 1B	Identify legal and financial concerns between the two organizations.		
Objective 1C	Develop a timeline for the aspects of the merger.		
Objective 1D	Edit and change the EVFD Bylaws to conform to the new mission.		
Objective 1E	Review the legal documents and bylaws to remain current.		

Goal 2:	Realign the Fire District organization to provide more clarity and accountability to the organization and the personnel.
Accountability:	**Fire District Board of Directors Estimated Cost: Staff Time**
Objective 2A	Assess the changes to the operational chart for clarity in the organization.
Objective 2B	Obtain input from critical positions in the organization.
Objective 2C	Draft a new organizational chart for review by the Board of Directors.
Objective 2D	Develop a plan to implement the new organization.
Objective 2E	Implement the plan
Objective 2F	With the staffing of Engine Companies, hire a Human Resources Professional to ensure appropriate laws and regulations are adhered to.
Objective 2G	Ongoing evaluation for accountability within the organization.

Goal 3:	Create a formal Succession Plan for the Evergreen Fire Protections District aligning with the organization and operational alignment.
Accountability:	**District Board of Directors Estimated Cost: Staff Time**
Objective 1A	Assess current and future needs.
Objective 1B	Identify critical positions to include in the plan.
Objective 1C	Create training and development plans for these positions.
Objective 1D	Create a mentorship program to guide the future leaders of the organization.
Objective 1E	Communicate the plan to all staff members in the organization.
Objective 1F	Review the plan to ensure its effectiveness.

Goal 10:	Improve the training and education system within the EFR.
Accountability:	**Training Officer Estimated Cost: Staff Time**
Objective 10A	Connect the training schedule to the Community Risk Assessment to address the community needs.
Objective 10B	Adjust the training schedule to include daytime opportunities for staffed units.
Objective 10C	Assess the need for additional staff for training as the staffed apparatus becomes a reality.
Objective 10D	Evaluate and assess training programs.

Goal 4:	Enhance the development of the financial plans for capital improvements.		
Accountability:	**Support Division**	**Estimated Cost:**	**Staff Time**
Objective 4A	Shorten the time between assessments of apparatus.		
Objective 4B	Create a detailed itemized list of components in the fire stations that will need to be replaced and their expected life cycle.		
Objective 4C	Review the apparatus assessment tool to ensure it is up to date.		
Objective 4D	Separate equipment and supplies from the station capital improvement funds.		
Objective 4E	With the completion of the new station, create a detailed plan that will allow for the costs for each station to be identified.		
Objective 4F	Create a detailed plan that will allow for the replacement costs for each apparatus to be identified.		
Objective 4G	Create a detailed plan that will allow for the replacement costs for equipment and supplies to be identified.		
Objective 4H	Review and update the replacement cost and replacement time.		

Goal 8:	Continue to enhance wildland mitigation and response capabilities.		
Accountability:	**Wildland Division Chief**	**Estimated Cost:**	**Unknown**
Objective 8A	Update the CWPP		
Objective 8B	Review pay scale for the seasonal workforce to aid recruitment efforts.		
Objective 8C	Review funding sources for sustainable funding for wildland mitigation efforts.		
Objective 8D	Review emerging technologies to enhance mitigation and response efforts.		
Objective 8E	Incorporate CWPP findings in the Community Risk Assessment.		
Objective 8F	Evaluate and assess mitigation strategies and efforts.		

Goal 9:	Continue the ECARES/CHICS program and monitor the progress for additional resources.		
Accountability:	**ECARES Coordinator**	**Estimated Cost:**	**Staff Time**
Objective 9A	Utilize the Community Risk Assessment and response data to identify other groups needing assistance.		
Objective 9B	Explore other partnerships and funding opportunities to maintain or expand services.		
Objective 9C	Evaluate and assess services provided		

Goal 11:	Monitor and continuously update prevention and risk data.		
Accountability:	**CRR Deputy Chief**	**Estimated Cost:**	**Staff Time**
Objective 11A	Ensure the data for inspectable properties is current.		
Objective 11B	Establish performance objectives for the completion of plan reviews and fire safety inspections.		
Objective 11C	Connect public education programs to the Community Risk Assessment and response data.		
Objective 11D	Update the Community Risk Assessment		

Goal 7:	Complete the Standard of Cover document to assist Evergreen Fire/Rescue with future needs and direction.		
Accountability:	**Fire Chief**	**Estimated Cost:**	**Staff Time**
Objective 7A	Work with JeffCom911 to get the appropriate timestamps for medic units and fire apparatus.		
Objective 7B	Attend training and education events related to the Standard of Cover development.		
Objective 7C	Monitor the progress of data collection with JeffCom911.		
Objective 7D	Analyze data collected related to response time components to ensure validity and accuracy.		
Objective 7E	Develop a Standard of Cover document with the updated data.		
Objective 7H	Update and assess the Standard of Cover.		

Financial Projections

With the addition of career and volunteer staffing at Station 2 and eventually at Station 1, the cost of these additional services needs to be considered for future budgets. The following tables illustrate a five-year projection based on the 2024 budget.

Revenue Projections

Line Item	2024 Budget	2025 Projection	2026 Projection	2027 Projection	2028 Projection	2029 Projection
Property Tax - Jefferson County	$7,796,331	$8,030,221	$8,271,128	$8,519,261	$8,774,839	$9,038,084
Ambulance Billing	$725,000	$746,750	$769,153	$792,227	$815,994	$840,474
Property Tax - Clear Creek County	$977,675	$1,007,005	$1,037,215	$1,068,332	$1,100,382	$1,133,393
Specific Ownership Tax - Jefferson County	$467,780	$481,813	$496,268	$511,156	$526,491	$542,285
Grant Revenue	$152,100	$156,663	$161,363	$166,204	$171,190	$176,326
Rental Income	$87,000	$89,610	$92,298	$95,067	$97,919	$100,857
State Pension Contribution	$80,000	$82,400	$84,872	$87,418	$90,041	$92,742
Vehicle/Maintenance Income	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593
Specific Ownership Tax - Clear Creek County	$73,326	$75,526	$77,792	$80,125	$82,529	$85,005
Wildland Deployment	$38,800	$39,964	$41,163	$42,398	$43,670	$44,980
Abatement Refund - Jefferson County	$12,266	$12,634	$13,013	$13,403	$13,805	$14,220
Fire Prevention	$7,000	$7,210	$7,426	$7,649	$7,879	$8,115
MVA Revenue	$4,500	$4,635	$4,774	$4,917	$5,065	$5,217
CPR Class Income	$4,000	$4,120	$4,244	$4,371	$4,502	$4,637
Abatement Refund - Clear Creek County	$1,538	$1,584	$1,632	$1,681	$1,731	$1,783
Energy Credit Reimbursement	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159
Donations	$0	$0	$0	$0	$0	$0
Grants - Walmart	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0
Portfolio Interest Income	$400,150	$412,155	$424,519	$437,255	$450,372	$463,884
Interest- Property Tax - Clear Creek County	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159
Interest- Property Tax - Jefferson County	$7,500	$7,725	$7,957	$8,195	$8,441	$8,695
Proceeds from the Sale of Assets	$0	$0	$0	$0	$0	$0
Total Revenues	**$10,846,966**	**$11,172,375**	**$11,507,546**	**$11,852,773**	**$12,208,356**	**$12,574,606**

For this projection, a 3% increase is used. Over the past several years, economic conditions and state mandates have influenced the revenue streams for fire districts and will likely continue to do so.

Expenditure Projections

Line Item	2024 Budget	2024 Adjusted Budget	2025 Projection	2026 Projection	2027 Projection	2028 Projection	2028 Projection
Salaries and Wages	$3,562,666	$3,562,666	$3,669,546	$3,779,632	$3,893,021	$4,009,812	$4,130,106
Station 2 Career Positions Salaries and Wages	$0	$197,340	$406,520	$418,716	$431,277	$444,216	$457,542
Station 2 Volunteer Stipends	$0	$54,750	$109,500	$112,785	$116,169	$119,654	$123,243
Station 1 Career Positions Salaries and Wages	$0	$0	$0	$0	$0	$0	$457,542
Station 1 Volunteer Stipends	$0	$0	$0	$0	$0	$0	$123,243
Employee Benefits	$670,403	$707,537	$767,012	$790,022	$813,723	$838,135	$949,376
Flex Account Admin Fee	$2,592	$2,736	$2,966	$3,054	$3,146	$3,241	$3,671
Worker's Comp.	$104,353	$110,133	$119,391	$122,973	$126,662	$130,462	$147,777
Employer Payroll Taxes (FICA)	$283,231	$298,919	$324,046	$333,768	$343,781	$354,094	$401,091
Career Pension	$315,347	$332,814	$360,790	$371,614	$382,762	$394,245	$446,572
Volunteer Pension	$355,000	$355,000	$406,158	$418,342	$430,893	$443,819	$502,725
Call credits	$205,000	$205,000	$211,150	$217,485	$224,009	$230,729	$237,651
Commodities and Supplies	$988,988	$988,988	$1,018,658	$1,049,217	$1,080,694	$1,113,115	$1,146,508
Contractual Services	$1,434,720	$1,434,720	$1,477,762	$1,522,094	$1,567,757	$1,614,790	$1,663,234
Other Operating Expenses	$1,232,972	$1,232,972	$1,269,961	$1,308,060	$1,347,302	$1,387,721	$1,429,352
Total Operating Expenditures	**$9,155,272**	**$9,483,576**	**$10,143,459**	**$10,447,763**	**$10,761,196**	**$11,084,032**	**$12,219,636**
Capital Building Improvements	$46,000	$46,000					
Capital Vehicle Improvements	$0	$0					
Capital Tools and Equipment	$13,000	$13,000					
Total Fire District Expenditures	**$9,214,272**	**$9,542,576**	**$10,143,459**	**$10,447,763**	**$10,761,196**	**$11,084,032**	**$12,219,636**

This projection uses a 3% increase for salaries and wages, commodities, contractual services, and other operating expenses. Those line items attached to salaries and wages, such as Employee Benefits, are a percentage of the salaries

and wages line item. For example, Employee Benefits are 18.82% of the salaries and Wages in the 2024 Budget; that percentage is carried forward in the projections. The 2024 Budget is adjusted to account for the staffing changes at Station Two anticipated in July. Changes to the staffing at Station One will not occur until the new station is completed and operational in 2028.

Evergreen Fire/Rescue Organization

Evergreen Fire/Rescue provides all-hazard fire suppression and emergency medical services to Evergreen Fire Protection District residents. This chapter provides an overview of the general characteristics, organization, and operations of Evergreen Fire/Rescue.

Background

The Evergreen Fire Protection District (EFPD), dba Evergreen Fire/Rescue (EFR), is located in the foothills west of Denver in Jefferson and Clear Creek Counties, Colorado. Within Jefferson County, the District encompasses 69 square miles, mainly in the Bear Creek Basin and 57.2 square miles in the eastern portion of Clear Creek County, for a total of 126 square miles.

Fire protection services in the Evergreen area began in 1926 with the formation of the Mountain Parks Protective Association, which provided fire protection services and supported law enforcement operations. In 1948, the Evergreen Volunteer Fire Department was formed to provide fire protection services. Through donations from various community members, the fire department acquired a Dodge power wagon, hose, and a pump to create their first fire apparatus. A gift of land allowed a fire station to be built on Main Street. While EVFD originally began offering fire suppression services, EFR is now comprised of team members trained to mitigate all-hazard threats through expertise in fire suppression (structural and wildland), rescue, and emergency medical services. EFR does not perform trench, confined space, high angle, or dive rescue services.

The EFPD was officially formed in 1950 as allowed in Colorado Revised Statute Title 32 as a special district. The EFPD is governed by a five-member Board of Directors elected to a 4-year term by the voters. The District is responsible for collecting the organization's tax funding, management, and financial support.

The Evergreen Ambulance Service was formed in 1952 following a tragic incident involving a young girl. Many citizens who helped create the volunteer fire department formed the ambulance service. By 1986, the Evergreen Ambulance Service had merged with the Evergreen Fire Protection District.

The Evergreen Volunteer Fire Department (EVFD) is a 501c(4) non-profit corporation that was the original organization formed in 1948. It is designed to accept donations and

provide the workforce for delivering fire and rescue services to the EFPD. The Fire Operations Division is led by the Division Chief of Fire Operations (a full-time position), and reporting to the Division Chief is the volunteer Deputy Chief of Fire Operations. The Volunteer Board of Directors governs the EVFD, with members of the board and the Volunteer Deputy Chief of Fire Operations elected from the membership of the Volunteer Fire Department. The EFPD and EVFD work together as Evergreen Fire/Rescue (EFR).

Demographic Profile

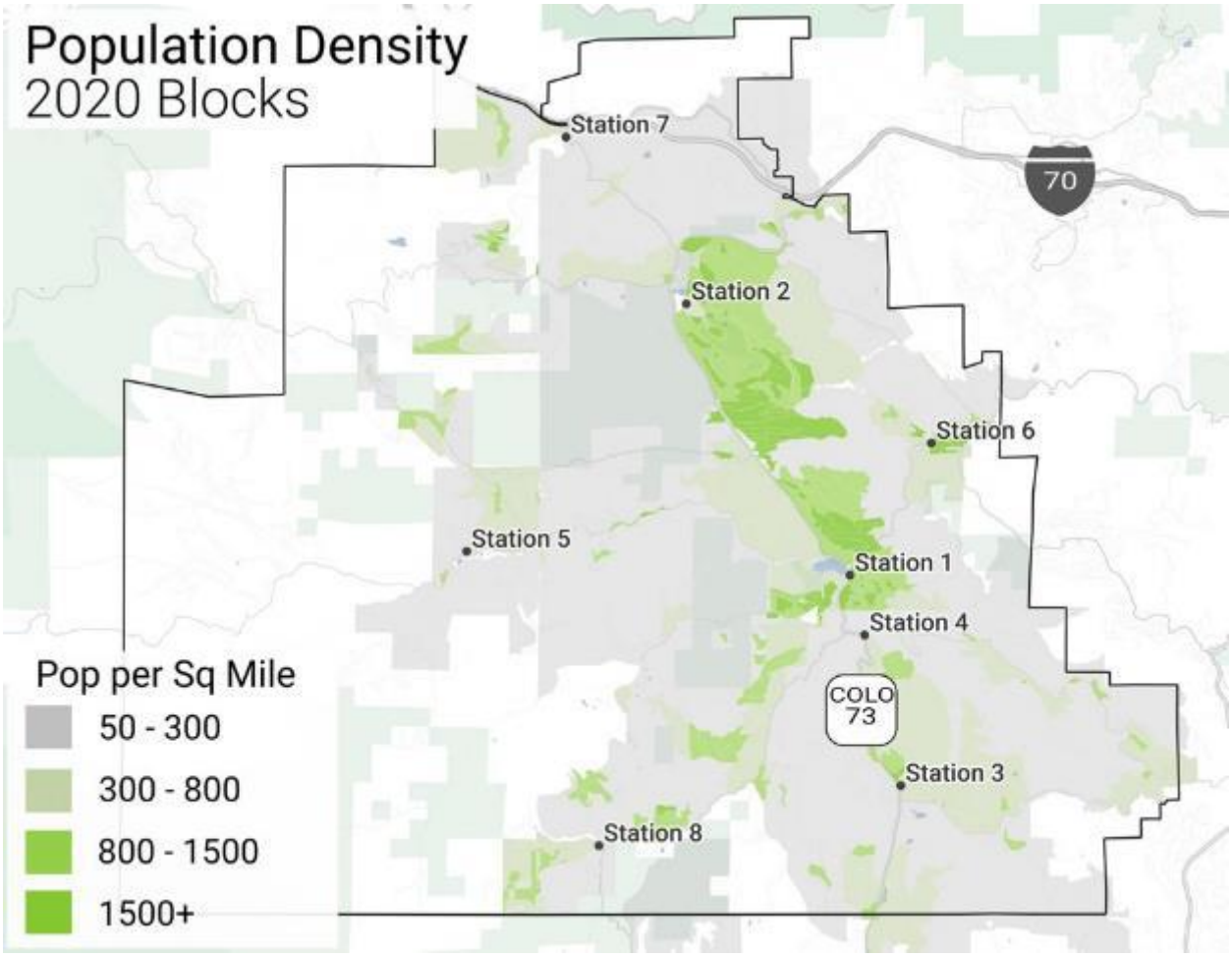
The following table illustrates the demographic profile of the District and the changes that have occurred since 2011.

Table 1: Evergreen Demographics

US Census Bureau	2011	2015	2021
Estimated Population	23,160	24,473	25,669
Median Age	42.9	40	44.6
Children Under Age 5	8.1%	6.2%	3.3%
Children Ages 5 to 19 years	18.7%	22.3%	20.0%
Persons Age 20 to 59 years	60.4%	55.3%	46.4%
Persons Age 60 and Over	12.8%	16.2%	30.3%
Employment Sectors:			
Education, Health Care, Soc. Svc.	18.7%	16.8%	19.5%
Retail Trade	5.7%	7.7%	9.8%
Professional, Scientific, Mgmt.	20.4%	21.1%	22.1%
Finance, Insurance, Real Estate	9.8%	8.9%	10.6%
Entertainment, Recreation, Food	7.6%	9.2%	8.5%
Construction	7.8%	7.8%	4.8%
Manufacturing	4.7%	7.0%	5.6%
Transportation, Warehousing, Util.	5.4%	4.9%	4.1%
Public Administration	4.8%	4.2%	5.0%
Other Services	4.9%	4.7%	4.3%
Wholesale	4.0%	2.8%	1.9%
Information	4.3%	2.7%	2.1%
Agriculture, Forestry, Fishing	1.8%	2.2%	1.7%

The population of the District has increased by approximately 11% since 2010, adding an estimated 2,509 residents. Data in the previous table is based on the zip codes 80439 and 80457, representing the district's predominant zip codes. It is essential to note the median age is increasing in the District from 42.9 in 2011 to 44.6 in 2021, with a significant increase in the age range of those over 60 from 13% to 30% of the population.

The following map provides a view of population density by census blocks.



As illustrated, the largest population center is along Colorado 74 in the Evergreen area, with other pockets in Kittredge (Station 6) and in the areas of Fire Stations 3 and 8.

Organization

Reporting directly to the Fire Chief are six Divisions, including Administration, Community Risk Reduction, Wildland, Maintenance, Emergency Medical Services, and Fire Operations. Each of these Divisions consists of a Division Head with direct reports to achieve the mission of the Division. The following table illustrates the staffing levels for each of the Divisions.

Table 2: Authorized and Current Staffing Levels

	Administration		Community Risk Reduction		Wildland		Maintenance		EMS		Fire Operations		Total	
	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled
Full Time	3	3	4	4	7	5	4	4	15	14	3	3	34	34
Part-Time			1	1					2	2			3	3
PRN									10	8			10	8
Seasonal					10	10							10	10
Volunteer		14									100	87	114	101

As illustrated, the seasonal positions are filled to the authorized level. For the Administration and Community Risk Reduction, the staffing levels are at the authorized levels. Fire Operations is below the authorized level at present. Volunteers in the administration division are called the Turnouts and don't have a set level as these are community members assisting with everything from special events to rehab on scene. The Fire Operations division shows the level set by EVFD as 100 volunteers. There are 61 firefighters, six MedTech reserves, seven reserve members for DE/tender and other operations, and twelve in the academy process.

EMS operations have two staffed units operating from Stations 2 and 4 with three shifts rotating through a two-day on-duty, four-day off-duty schedule. Fire operations are staffed using on-call staff from seven of the district's eight stations (Station 4 is EMS only). This system leverages a community response model where members respond from their homes or work within the district and crew from Stations 1 and 2. All other staffing is a typical 40-hour workweek schedule with changes made as operations may dictate.

Mission Statement

Protect life, property, and the environment through prevention, preparedness, education, and emergency response.

Vision: Achieve our highest potential by:

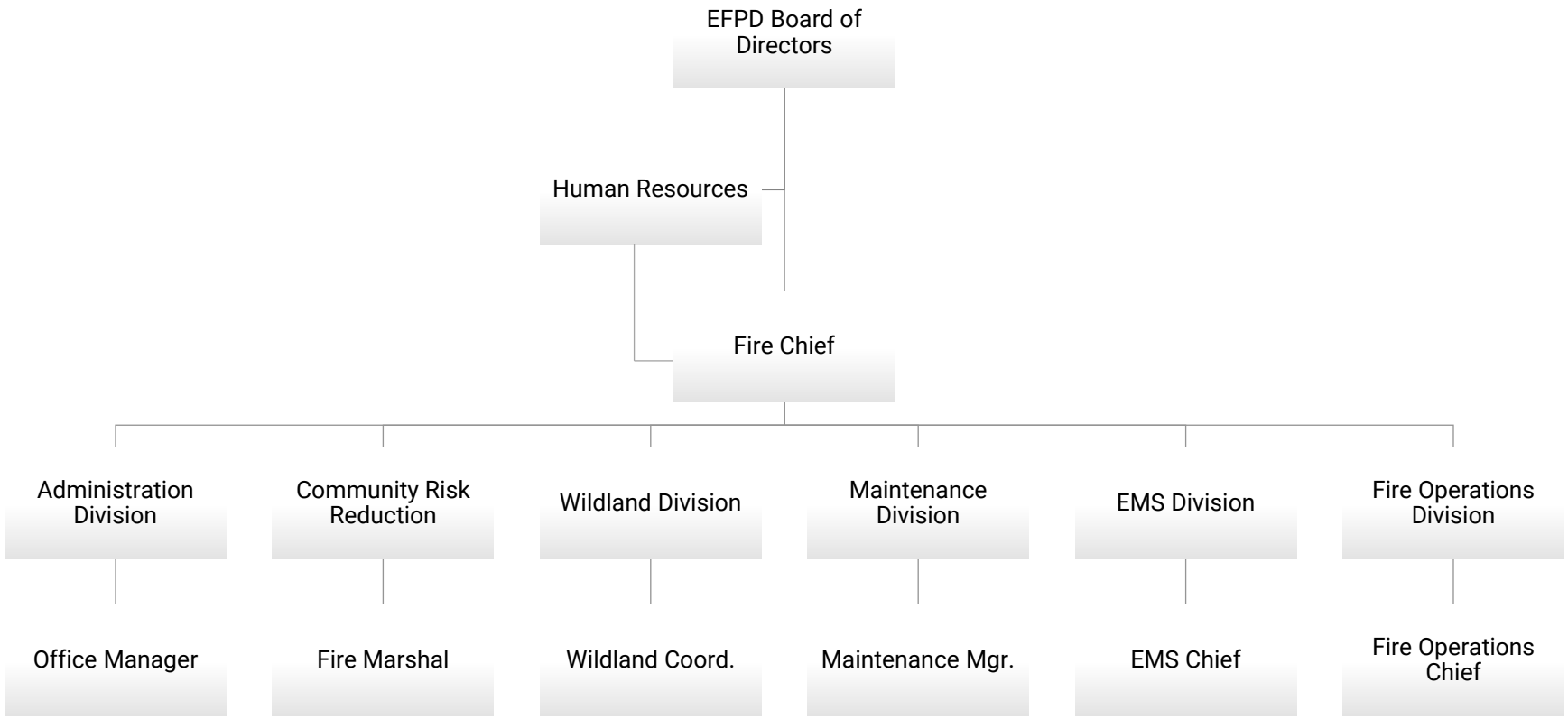
- Recognize change in our community and respond accordingly.
- Cultivate a safe and effective environment for the public and our members.
- Create a positive work environment through effective internal communication, relationships, and leadership.
- Strive to be role models in the community and leaders in our profession.
- Promote responsible stewardship of the resources afforded to us by the community.
- Utilize technologies and methods to evaluate and enhance current practices.

Values:

- Respect and Integrity
- Effective Communication
- Responsibility and Accountability
- Teamwork
- Encourage and value all contributions
- Commitment and Pride

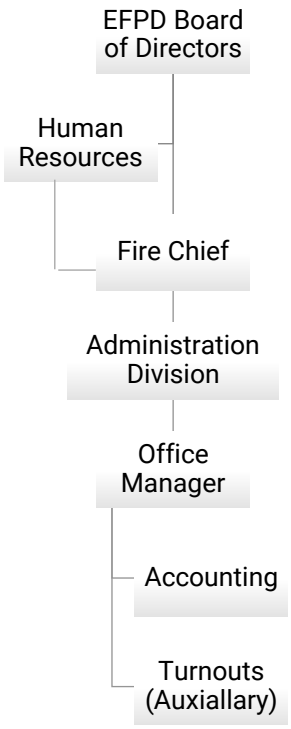
The organizational charts that follow illustrate the current EFPD organization.

Evergreen Fire Protection District Organization Chart



Administration Division

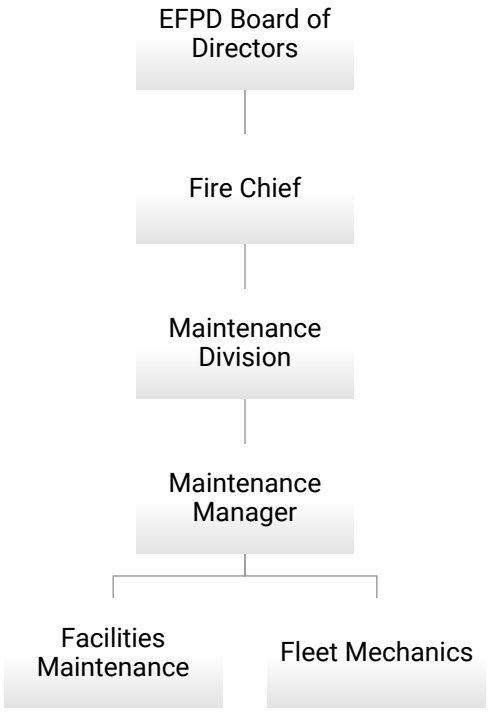
The Administration Division houses the Office of the Fire Chief and the business operations of EFR, as illustrated in the following organizational chart.



Included in this Division is the auxiliary unit known as the Turnouts. This unit supports operations and other facets through community outreach, event coordination, volunteer recruitment, and assistance before, during, and after an emergency incident. Several components are outsourced to external contractors for efficiency. The human resources component is an external contractor that provides those support functions to the Board of Directors and the Fire Chief. Financial and payroll services are contracted to Pinnacle Consulting Group, and IT services are performed by Axiom Group to manage servers and cyber security.

Maintenance Division

This Division supports operations by maintaining apparatus and facilities and is organized as outlined in the following organizational chart.



This Division also contracts with surrounding districts to provide maintenance services. These include Indian Hills Fire, Highland Rescue, Foothills Fire, Genesee Fire, and the Evergreen Metro District. In 2022, fleet maintenance spent 358 hours on contract maintenance operations on fleet vehicles.

Wildland Division

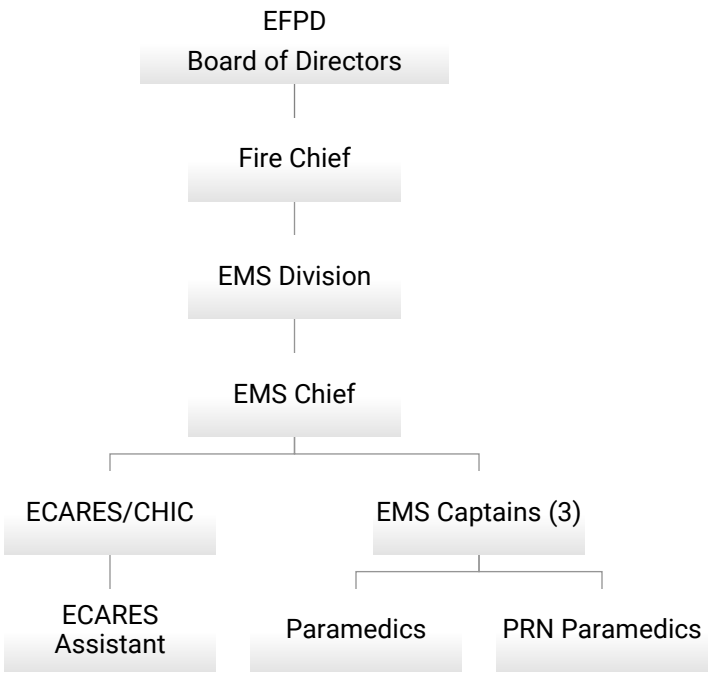
This Division is responsible for mitigation and education. It supports operations for Wildland fire activities as outlined in the Community Wildfire Protection Plan and is organized as outlined in the following organizational chart.

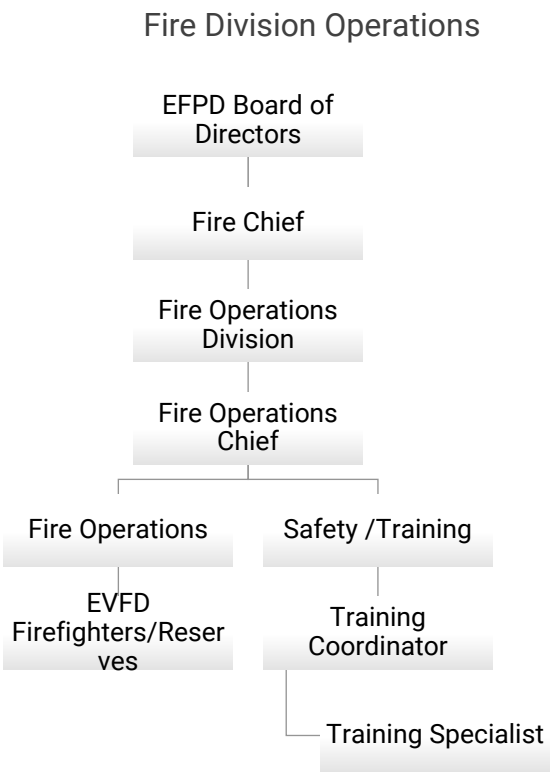
The Division operates a chipping program to reduce fuels, performs tree-cutting work through grant projects, and provides defensible space inspections for the residents of the District. The Division conducts community education events and programs to provide information to the public. A seasonal fuels crew is also implemented to help with wildfire operations support, the chipping program, and cut projects. Working through the Community Wildfire Protection and Implementation Plan, the mitigation activities are directed at clearing evacuation routes, fuel reduction, and public education activities.

Emergency Operations

There are two Divisions to provide services to the visitors and residents of the District. The organizational charts that follow illustrate these two divisions.

EMS Division

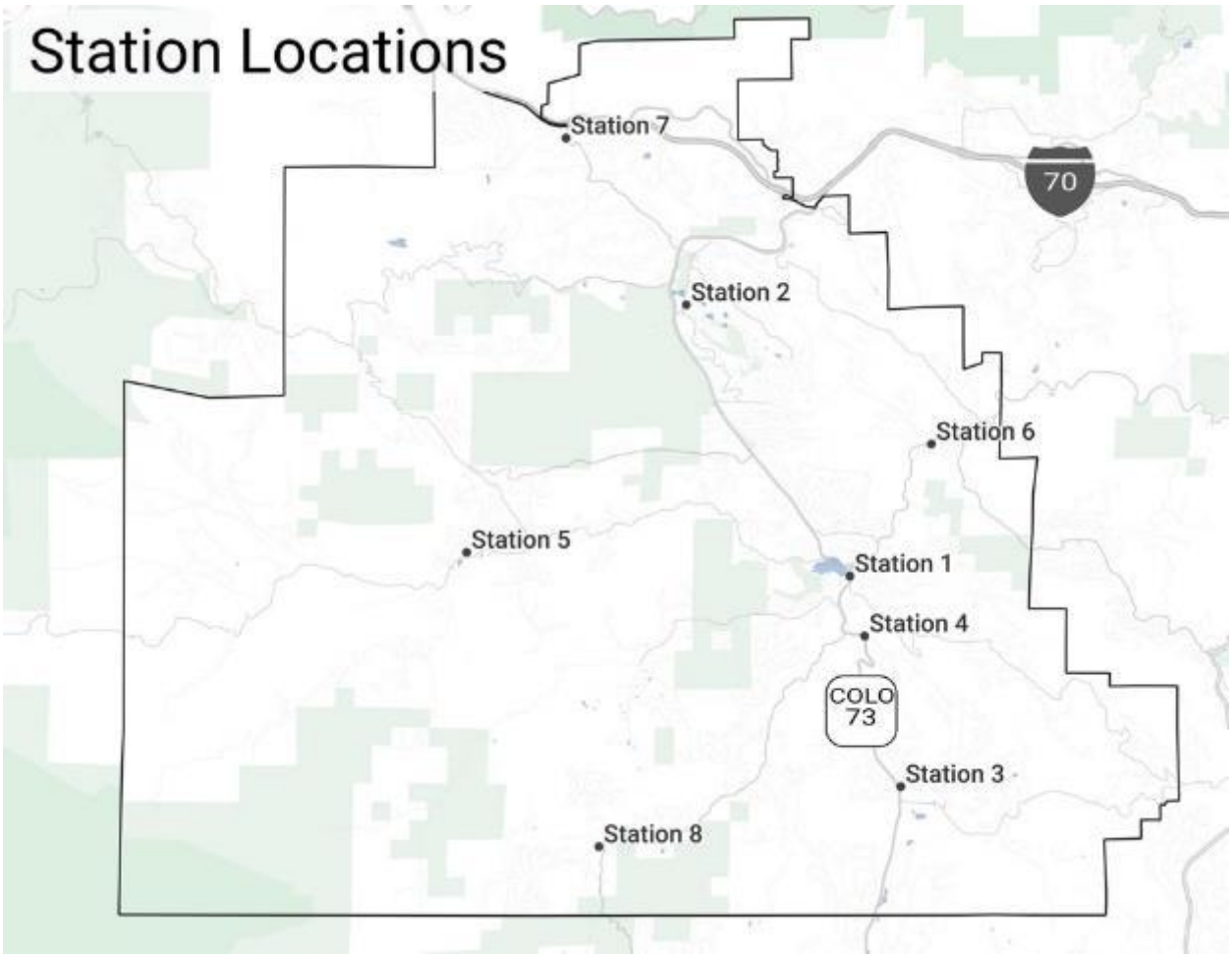




Both Divisions provide emergency response services to the District.

Physical Resources

Service to the District is currently provided from eight fire stations. The following map illustrates the locations of the fire stations and headquarters.



The tables below outline the apparatus and staffing for each station.

Station 1

4751 Highway 73

Description of Use	Provides service to the Evergreen area.				
Apparatus Space	7 back-in style apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	E131	1995	Pierce Dash	Type 1 Engine	On-Call
	R141	1998	Navistar 4900	Utility Fire	On-Call
	P1	2000	Ford F-450	Pump Truck	On-Call
	B151	2011	Ford F-350	Type 7 Engine	On-Call
	B151b	2002	Ford F-550	Type 6 Engine	On-Call
	Te171	1994	Navistar Paystar	Tender	On-Call
	Te161	2010	Freightliner	Tender	On-Call
	U191	2022	Dodge 1500	Command/Medic Transport	On-Call

Station 2

1802 Berge Parkway

Description of Use	Provides service to the northern section of the Evergreen area and Bergen Park. This station houses one of the staffed EMS units and the EFPD Administration.				
Apparatus Space	Three drive-through apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	M112	2018	Dodge 4500	Ambulance	2
	M122	2019	Dodge 4500	Ambulance	On-Call
	R142	2007	Pierce Dash	Heavy Rescue	On-Call
	E132	2005	Pierce Dash	Type 1 Engine	On-Call
	Te162	2018	Smeal/Kenworth	Tender	On-Call
	B152	2012	Ford F-350	Type 7 Engine	On-Call
	To182	2004	Pierce Dash	Aerial	On-Call
	U192B	2007	GMC Yukon	Ambulance Chase	(1) 0700 – 1900

Station 3

6940 Highway 73

Description of Use Apparatus Space	Provides service to the southern end of the District and the Evergreen Meadows area Four back-in style apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	Te173	1987	Freightliner	Type 2 Tender	On-Call
	E133	1997	Pierce Arrow	Type 1 Engine	On-Call
	B153	2003	Ford F-550	Type 6 Engine	On-Call
	E183	2020	BME/International	Type 3 Engine	On-Call

Station 4

5411 Highway 73

Description of Use Apparatus Space	Provides service to the south central area of the District. This station houses one of the staffed EMS units. Four back-in style apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	M114	2022	Dodge 4500	Ambulance	2
	M124	2014	Dodge 4500	Ambulance	On-Call
	M Reserve	2011	Ford F450	Reserve Ambulance	On-Call
	U194	2007	GMC Yukon	Utility	On-Call

Station 5

53 Echo Lake Drive

Description of Use Apparatus Space	This station is in the Mount Blue Sky area on the District's west side. Two apparatus bays.				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	E135	2004	Pierce Dash	Type 2 Engine	On-Call
	Te175	2003	International 5600	Type 2 Tender	On-Call

Station 6

26370 Highway 74

Description of Use	Located in Kittredge, this station serves the east side of the District and the Kittredge area.				
Apparatus Space	Two back-in style apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	E136	1992	Pierce Dash	Type 1 Engine	On-Call
	B156	2002	Ford F-550	Type 6 Engine	On-Call

Station 7

157 County Road 65

Description of Use	Provides service to the northern sections of the District, including I-70.				
Apparatus Space	Two apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	E137	2004	Pierce Dash	Type 2 Engine	On-Call
	B157	2002	Ford F-550	Type 6 Engine	On-Call
	Te177	1997	Navistar Paystar	Type 2 Tender	On-Call

Station 8

33377 Forest Estates Road

Description of Use	Provides service to the southwest section of the District, including Brook Forest and Evergreen Heights and Estates.				
Apparatus Space	Two back-in style apparatus bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Minimum Staffing
	E138	2004	Pierce Dash	Type 2 Engine	On-Call
	Te178	2014	International 7600	Type 2 Tender	On-Call
	ResE1476	1966	Mack	Engine	On-Call

Historical Workload and Performance

EFR responds to emergency and non-emergency calls for service. The following table illustrates the calls for service of the EFR organized by the type of incident.

Table 3: Calls for Service

	2020	2021	2022	Total	Pct.
Auto Accidents	145	142	189	476	7.1%
Medical Calls	1,249	1,364	1,469	4,082	60.9%
Medical Transfers/Inter-facility	2	3	4	9	0.1%
Total Medical and Auto Accidents	1,396	1,509	1,662	4,567	68.2%
Fire Alarm - False	0	0		0	0.0%
Fire Alarm - Malfunction	0	0		0	0.0%
Fire Alarm - Activation	233	217	243	693	10.3%
Mutual Aid	0	2		2	0.0%
Other Type Fire	2	1		3	0.0%
Smoke Scare	171	116	97	384	5.7%
Structure Fire	39	28	41	108	1.6%
Overpressure/Rupture/Explosion	0	0	0	0	0.0%
Vegetation/Brush/Debris Fires	64	48	23	135	2.0%
Vehicle Fire	11	20	14	45	0.7%
All Fire Calls	520	432	418	1,370	20.4%
Rescue Calls - Extrication	6	3	1	10	0.1%
Rescue Calls - Elevator	2	6	9	17	0.3%
Rescue Calls - Search	0	0	0	0	0.0%
Rescue Calls - Technical	0	1	0	1	0.0%
Rescue Calls - Water	2	2	3	7	0.1%
Rescue Calls - Other	8	14	7	29	0.4%
All Rescue Calls	18	26	20	64	1.0%
Dispatched/Canceled	0	0		0	0.0%
Severe Weather	0	3		3	0.0%
Good Intent	0	0		0	0.0%
Hazardous Material	13	4	4	21	0.3%
Hazardous Conditions	86	88	97	271	4.0%
Service Calls	97	123	185	405	6.0%
Other Types of Calls	196	218	286	700	10.4%
Total Calls for Service	**2,130**	**2,185**	**2,386**	**6,701**	

Medical calls represent approximately 61% of the call volume, with auto accidents accounting for an additional 7%. Fire alarm activations and smoke scare calls account for about 16% of the call volume.

The following table displays the total number of calls for service managed by EFR by each hour and day of the week for the past three years. Both emergency and non-emergency

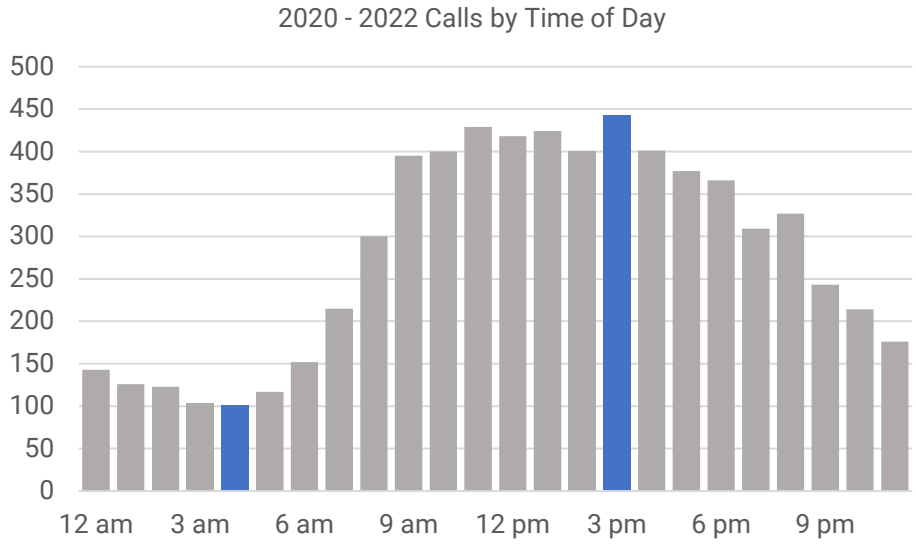
calls for service are included to provide an overall view of the call demand on the emergency services system.

Table 4: 2020 – 2022 Calls for Service by Hour and Weekday

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12 am	29	22	21	12	19	13	27	143
1 am	22	15	16	25	13	18	17	126
2 am	19	10	18	15	13	24	24	123
3 am	19	13	11	12	15	11	22	103
4 am	14	16	16	11	16	16	12	101
5 am	16	23	20	18	13	14	13	117
6 am	20	27	23	25	15	26	16	152
7 am	20	38	33	21	41	30	32	215
8 am	30	59	44	48	40	45	34	300
9 am	50	68	57	66	61	45	48	395
10 am	46	70	48	47	70	57	62	400
11 am	48	59	74	62	71	49	66	429
12 pm	59	62	56	51	48	78	64	418
1 pm	49	65	60	65	61	62	62	424
2 pm	39	59	68	61	57	61	55	400
3 pm	50	53	57	84	71	61	66	442
4 pm	64	55	40	60	56	67	59	401
5 pm	44	60	55	58	48	53	59	377
6 pm	41	50	52	62	55	59	47	366
7 pm	40	44	46	38	51	49	41	309
8 pm	51	48	39	38	47	49	55	327
9 pm	41	29	41	30	30	39	33	243
10 pm	29	33	25	34	25	40	28	214
11 pm	30	21	29	18	22	29	27	176
Total	**870**	**999**	**949**	**961**	**958**	**995**	**969**	**6,701**

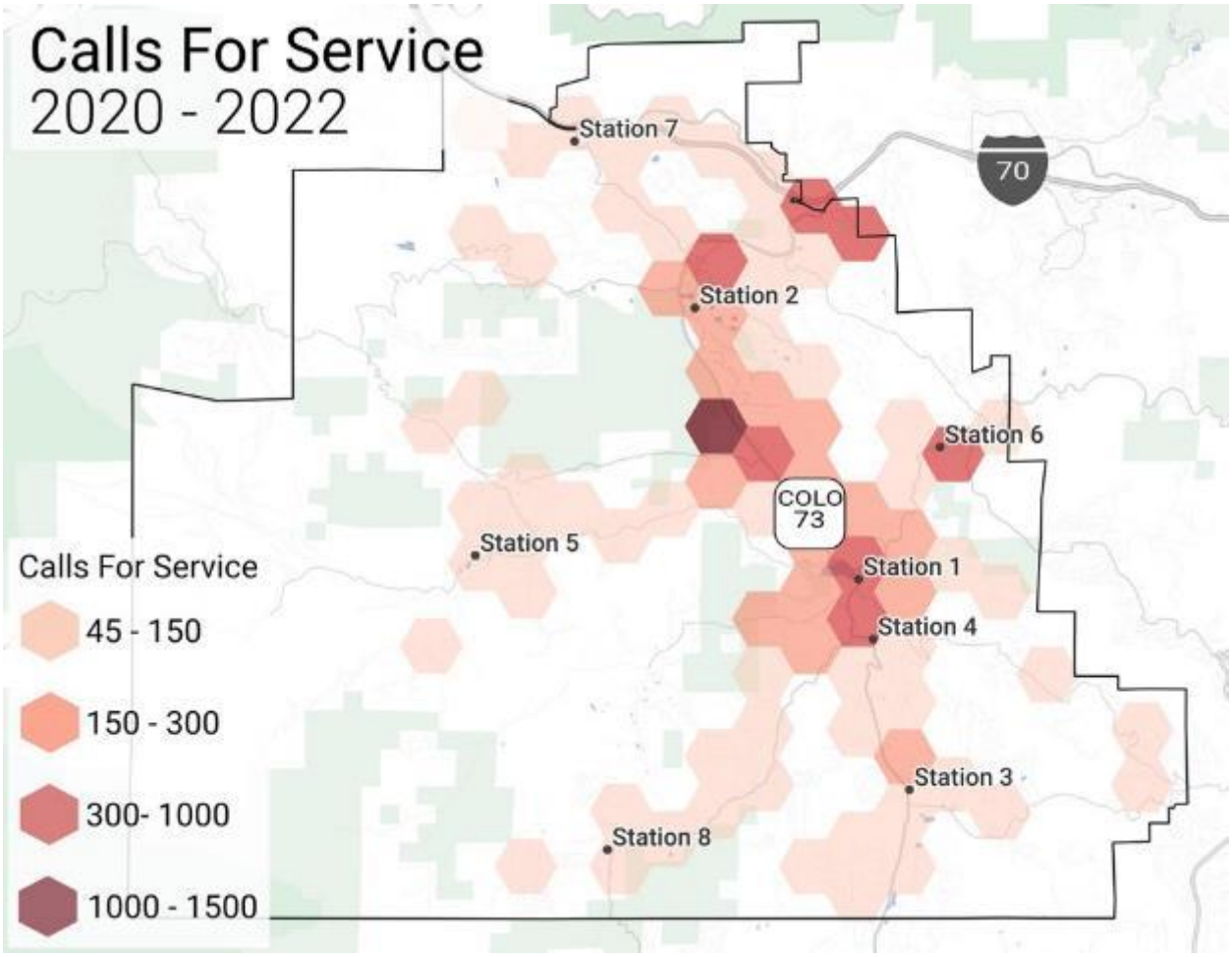
The call volume is heaviest during the middle part of the day, from mid-morning to the early evening, with every day of the week relatively even regarding the number of calls for service. The calls for service vary by time of day and day of the week. The busiest hour of the day is 3 pm, with the slowest hour being 4 am. The weekend days, as dynamic as the workweek days, indicate an active area for recreation and other activities.

The following chart further illustrates the calls for service by hour of the day.



As illustrated above, calls increase sharply at the 8 am hour, peaking at 3 p.m., but remain relatively steady from 9 a.m. to 5 p.m. The calls begin to gradually decline at the 6 p.m. hour and continue to steadily decline, with 4 am being the slowest hour of the day.

The following map illustrates the call demand using GIS technology to outline where the majority of the calls for service occurred.



As illustrated, higher calls occur along the Colorado 74 highway from the Evergreen area north to the Bergen Park area. There is also a significant clustering of calls around Station 6 in the Kittredge area.

Training and Education

The training unit operates as a part of the Fire Operations Division to provide in-service training support for firefighters and a mountain area academy to provide recruits with basic certification training. The mountain area fire academy may include firefighters from the adjacent districts of Foothills, Genesee, and Indian Hills fire departments. Firefighters

must maintain, at a minimum, Colorado State Firefighter I certification, Hazardous Materials Operations/Awareness, Emergency Medical Responder, and a Cardio-Pulmonary Resuscitation (CPR) certification. For wildland fire response, they are required to maintain a National Wildfire Coordinators Group (NWCG) Red Card certification. These certifications are obtained through the academy classes and recertified annually or as required by the state. In the past, the academy was held once a year but was revamped in 2022 to allow for entry at multiple points. This schedule change was done to attract and retain the on-call firefighters.

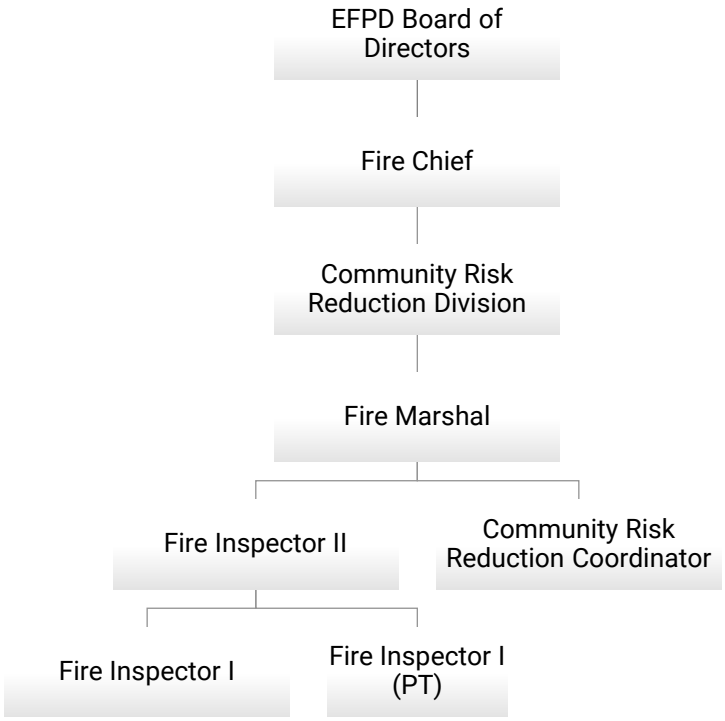
In-service training hours are offered weekly on various topics to maintain skill levels and knowledge. In 2022, 10,410 person-hours of training were conducted with 142 participants. Additional certification areas, such as swift water, driver engineer, wildland response, and emergency medical, are available. The district also offers an out-of-district firefighter program where firefighters who do not live in the community will work shift hours responding from Station 1 or 2 with an officer or driver engineer.

ECARES/CIHCS

Evergreen Community Assistance Referral and Education Services (ECARES) and the Community Integrated Health Care Service (CIHCS) are two programs designed to provide medical assistance for the community's residents. This community paramedicine program offers help in locating additional medical resources as needed by the residents. In addition, the programs provide home health visits to assist with medication management and post-hospital care to help identify potential hazards in the home, with the goal of keeping the members of the aging population in their homes. In 2022, the program had 400 client or community contacts, an increase of 115% over 2021.

Community Risk Reduction

This Division provides risk reduction activities that include fire safety inspections, plan review, and public education programs. The following organizational chart illustrates the Community Risk Reduction structure.



Fire Prevention

In December 2018, the EFPD adopted the 2018 International Fire Code, and in October 2021, it adopted the 2021 Wildland Urban Interface Code as amended by the resolution. The following table illustrates the activity of the fire inspection and plan review programs. After several years of being short-staffed, the division has filled all positions in 2023.

Table 5: Fire Prevention Activity

Activity	2020	2021	2022
Number of Inspections	343	74	111
Plan Check Reviews	59	96	152
Fire Investigations	8	5	10

The Community Risk Reduction Division is also responsible for fire investigations. As illustrated in 2022, ten fire investigations were conducted in the District. Fire investigations in 2020 included six structure fires and two wildland fires.

Public Education

Public education efforts are ongoing and continue to improve. During the fourth quarter of 2022, it was reported that 929 contacts were made through public education efforts. In March 2023, 156 events were held, with 600 contacts made in 128 hours. April reports indicate 107 events, with 1,041 contacts made in 114 hours. The public education programming continues to improve and expand.

Financial Resources

The EFPD has an annual budget with the fiscal year ending on December 31. The budget is prepared by the Executive Staff of the District and approved by the Board of Directors.

Revenues

The primary funding source for the District is property taxes, which accounted for approximately 75% of the revenues in FY 2023. The following table is a summary of the revenues for the District for FY 21– FY 2024. 2023 Actual to date is as of November 30, 2023.

Table 6: Fire District Revenues

Line Item	2021 Audited	2022 Audited	2023 Actual To Date	2024 Budget
Property Tax - Jefferson County	$5,595,482	$6,185,149	$6,200,812	$7,796,331
Ambulance Billing	$1,558,435	$1,834,255	$1,744,059	$725,000
Property Tax - Clear Creek County	$821,148	$904,046	$870,628	$977,675
Specific Ownership Tax - Jefferson County	$476,384	$466,805	$452,170	$467,780
Grant Revenue	$88,250	$1,700	$23,279	$152,100
Rental Income	$97,507	$96,544	$84,620	$87,000
State Pension Contribution	$80,000	$80,000	$0	$80,000
Vehicle/Maintenance Income	$135,839	$74,023	$38,889	$10,000
Specific Ownership Tax - Clear Creek County	$72,110	$73,897	$71,673	$73,326
Wildland Deployment	$488,045	$21,474	$555,589	$38,800
Abatement Refund - Jefferson County	$26,580	$26,559	$26,025	$12,266
Fire Prevention	$31,063	$37,825	$23,565	$7,000
MVA Revenue	$8,637	$1,900	$6,760	$4,500
CPR Class Income	$1,470	$3,301	$2,116	$4,000
Abatement Refund - Clear Creek County	$3,891	$3,879	$3,653	$1,538
Energy Credit Reimbursement	$4,563	$6,292	$5,711	$1,000
Donations	$43,765	$26,510	$1,817	$0
Grants - Walmart	$0	$0	$0	$0
Other	$5,080	$42,892	$252,231	$0
Portfolio Interest Income	$2,953	$189,438	$580,124	$400,150
Interest- Property Tax - Clear Creek County	$1,756	$1,442	$1,858	$1,000
Interest- Property Tax - Jefferson County	$4,865	$12,083	$12,846	$7,500
Proceeds from the Sale of Assets	$342,077	$0	$0	$0
Total Revenues	**$9,889,900**	**$10,090,014**	**$10,958,425**	**$10,846,966**

As shown, ambulance billing accounts for about 15% of FY 2023 total revenues.

Expenditures

The following table illustrates the EFPD operating budget for FY 21 – FY 2024. 2023 2023 Actual to date is as of November 30, 2023.

Table 7: Fire District Expenditures

Line Item	2021 Audited	2022 Audited	2023 Actual To Date	2024 Budget
Salaries and Wages	$2,579,389	$2,394,150	$2,847,804	$3,562,666
Employee Benefits	$366,081	$420,119	$494,367	$670,403
Flex Account Admin Fee	$0	$2,627		$2,592
Worker's Comp.	$158,747	$84,385	$78,686	$104,353
Employer Payroll Taxes (FICA)	$210,107	$174,133	$237,767	$283,231
Career Pension	$116,337	$163,683	$165,432	$315,347
Volunteer Pension	$275,001	$355,001	$252,084	$355,000
Call credits	$177,484	$175,000	$0	$205,000
Commodities and Supplies	$534,511	$872,901	$565,881	$988,988
Contractual Services	$1,010,316	$1,068,406	$592,543	$1,434,720
Other Operating Expenses	$1,633,147	$2,056,766	$2,450,559	$1,232,972
Total Operating Expenditures	**$7,061,120**	**$7,767,171**	**$7,685,123**	**$9,155,272**
Capital Building Improvements	$15,498	$24,980	$90,246	$46,000
Capital Vehicle Improvements	$0	$0	$0	$0
Capital Tools and Equipment	$0	$3,835	$37,451	$13,000
Total Fire District Expenditures	**$7,076,618**	**$7,795,986**	**$7,812,820**	**$9,214,272**

In FY 2023, salaries and benefits, including volunteer stipends, comprise approximately 55% of the operating expenditures. Not shown in the expenditures are Mandated Contractual Write-off Allowances that, as of November 30, 2023, is $701,655. This write-off allowance is related to Medicare and Medicaid reimbursements. The allowance represents the difference between the set fees Medicare and Medicaid will pay and the service's actual cost. The user, insurance, or other government agency does not reimburse these allowances.

Reserve Funds

The EFPD has established three capital reserve funds to accumulate funds to meet capital needs in the future. The following table illustrates the balance as of November 30, 2023.

Table 8: Fire District Reserve Funds

Fund Name	FY 2023 Balance
Strategic Capital Reserve	$1,854,038
Apparatus Replacement Reserve	$2,698,552
Station 1 Reserve	$6,540,394

Community Contributions

The project team utilized an online survey in the Evergreen Fire/Rescue district as a part of the development of a Master Plan. The anonymous survey was designed to measure residents' and businesses' views of services provided, the value of those services, and the quality of the services.

While the following sections provide a detailed analysis of the survey results, the overall themes of responses to the survey include:

- Respondents are satisfied with the response times of their Fire District but, at the same time, have concerns about maintaining that level of service.
- Based on comments, respondents support an initiative to explore transitioning to a combination staffing model utilizing paid and volunteer firefighters to provide a more robust and effective response.
- Residents are concerned about the wildland fire threats, and mitigation efforts must be increased and better communicated.

In addition to the online survey, two community meetings were held on July 25, 2023, and July 26, 2023. Participation was very low, with 30 participants, 17 on July 25, 2023, and 13 on July 26, 2023. In both sessions, there were robust discussions about staffing and response time. Comments from these sessions are included in the online survey results.

Community Identifiers

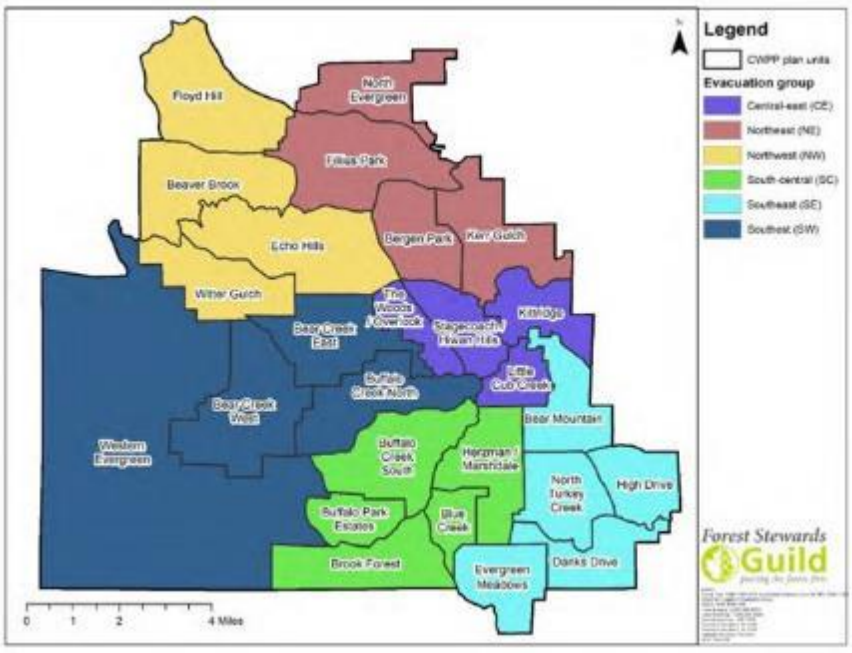
The survey was distributed through the Evergreen Fire/Rescue website, social media, local publications, and meetings with civic groups. The online survey was opened to the public on June 28, 2023, and remained available through August 4, 2023. Due to some areas not having access to an internet connection, paper copies of the survey were distributed, with 20 surveys entered into the online survey by the project team. A total of 727 responses were received, and all responses were anonymous. In this summary, the actual number of reactions may differ from the total number of surveys as not all respondents answered all the questions.

The project team asked respondents to identify their status within the Fire District as their primary residence, secondary residence, rental residence, or business relationship.

Response	Count	Pct.
Primary Residence	618	86.8%
Secondary Residence	18	2.5%
Rental Residence	14	2.0%
Business Owner	7	1.0%
Business Manager	5	0.7%
Business Employee	8	1.1%
Both Resident and Business Owner	42	5.9%

Of the 712 respondents who answered this question, 91.3% indicated they were residents of the Fire District, and 5.9% were both residents and business owners.

Within the survey, a map from the Forest Stewards Guild was provided for the respondents to identify the area they resided in or worked in. This will allow for additional analysis of the survey results and provide Evergreen Fire/Rescue with an improved insight into the needs and expectations of the different areas.



Area/Region of the Fire District	Count	Pct
Central East (CE) (Purple Area)	179	25.0%
Northeast (NE) (Red Area)	155	21.7%
Northwest (NW) (Yellow Area)	81	11.3%
South Central (SC) (Green Area)	124	17.3%
Southeast (SE) (Light Blue Area)	74	10.3%
Southwest (SW) (Dark Blue)	102	14.3%
Total	**715**	

As illustrated, 715 of the 727 respondents provided this information in the survey. The Central East (purple area) and the Northeast (red area) provided the most responses in the survey. The remaining areas are relatively even in terms of the response percentages.

Respondents were asked about their longevity in the Evergreen area.

Length of Time	Count	Pct
1 to 3 years	110	15.3%
3 to 5 years	67	9.3%
5 to 10 years	129	17.9%
10 to 15 years	72	10.0%
Over 15 years	341	47.4%
Total	**719**	

Nearly 50% of the respondents have been in the Evergreen area for over 15 years, and approximately 93% indicate this is their primary residence.

The Evergreen Fire District is governed by a Board of Directors that meets regularly. To promote open communications and transparency, respondents were asked about their preferences for attendance at Board meetings.

Preferences	Count	Pct
I would attend if the meeting started at 12:00 pm (Noon)	24	3.4%
I would attend if the meeting started at 4:00 pm.	68	9.5%
I would attend if the meeting started at 6:00 pm.	142	19.9%
I would prefer to attend remotely/virtually.	319	44.7%
I would not attend a Board Meeting of the Evergreen Fire Protection District.	160	22.4%
Total	**713**	

Most of the respondents, approximately 45%, would prefer to attend virtually, while about 20% would attend if the meetings began at 6 pm.

Services Provided

Respondents were asked to prioritize each of the services provided by their Fire District on a scale of 1 through 9, with 1 being the most important and 9 being the least important. Of the 727 respondents, 650 (89%) provided a ranking of these services. Respondents' #1 choice was given the number 8; their second choice was given the number 7, and so on through the rest of their selections.

In the following table, each statement is ranked according to a weighted average.

Services	1	2	3	4	5	6	7	8	9	Weighted Average
Fire Suppression	54.8%	23.2%	10.3%	4.9%	2.2%	1.4%	0.5%	0.6%	2.1%	8.02
Emergency Medical Services	28.1%	33.9%	23.4%	6.7%	2.7%	3.1%	0.3%	1.1%	0.8%	7.57
Rescue - Basic and Technical	7.3%	29.4%	37.2%	13.8%	5.1%	1.7%	2.5%	1.9%	1.0%	6.89
Wildland Mitigation Inspections	6.5%	7.2%	9.8%	16.8%	16.6%	15.7%	10.3%	5.9%	11.2%	4.85
Hazardous Materials Response	1.4%	1.1%	6.1%	31.7%	16.9%	10.8%	13.7%	9.3%	8.9%	4.51
Fire Investigations	0.2%	2.4%	5.4%	9.0%	20.9%	17.7%	12.5%	17.7%	14.4%	3.74
Public Fire/EMS Education	1.7%	2.2%	3.7%	8.4%	16.3%	17.9%	20.3%	18.3%	11.1%	3.72
Home Fire Safety Inspections	0.9%	1.6%	3.5%	6.2%	12.8%	15.7%	21.7%	21.4%	16.3%	3.33
Business Inspections	1.3%	0.3%	1.0%	3.0%	6.4%	14.5%	17.5%	22.9%	33.2%	2.60

Respondents' opinions on the issue of prioritized services include the following:

- **Fire suppression is the top service:** Fire call responses are shown at 8.02 weighted average, the highest average.

- **Emergency medical call response is the second most crucial service:** Emergency medical call response is close behind the fire call response at a 7.57 weighted average. Rescues were immediately behind EMS services.
- **Other services** were not ranked nearly as high as fire suppression and EMS.

Respondents were provided a forum in the online survey to express their views on other services the Fire District should be providing. A synopsis of those responses follows:

- **Wildfire Mitigation and Prevention:** Many respondents expressed concerns about wildfire threats and emphasized the importance of proactive measures like slash collection, tree limb shredding, and defensible space inspections. There's a strong emphasis on preventing wildfires through proper forest management, mitigation efforts, and creating evacuation plans.
- **Emergency Services Enhancement:** There's a strong emphasis on improving emergency services, including expanding access to defibrillators (AEDs), training in CPR and first aid, and maintaining emergency vehicles for quick response. Additionally, there's a call for more outreach and education about emergency procedures for residents and newcomers.
- **Community Collaboration:** Collaboration among residents, local departments, and businesses is highlighted as essential for effective fire mitigation and emergency response. This involves coordinating with businesses and developers to ensure fire safety in new constructions and working with neighboring departments to expand wildfire response capabilities.
- **Evacuation Planning and Routes:** Several statements focus on the importance of evacuation plans, routes, and access during emergencies. There's an emphasis on developing and maintaining alternative evacuation routes, especially in areas prone to traffic congestion during fires.
- **Education and Outreach:** Education and outreach are key themes, with suggestions for providing resources and information to newcomers, schools, and residents. Many responders express a desire for more public education about fire prevention, evacuation procedures, and general safety measures.
- **Senior and Vulnerable Population Support:** There's a focus on the needs of senior citizens and vulnerable populations, with suggestions for programs that could provide daily check-ins or assistance in emergencies.
- **Grants and Funding:** Many respondents mention the availability of grants to support wildfire mitigation projects and community-wide efforts. Access to funding is seen as crucial for implementing effective wildfire prevention strategies.
- **Wildland and Structural Firefighter Training:** A few statements emphasize the importance of cross-training firefighters to handle both wildland and structural

fires. This highlights the need for versatile firefighting capabilities to address various emergencies.

- **Communication and Transparency:** Several respondents stress the importance of clear communication, transparency, and community involvement in decision-making processes, especially regarding new developments, fire safety regulations, and emergency planning.
- **Community Engagement and Volunteering:** Engaging residents in volunteer efforts, such as slash pick-up, community workdays, and youth education programs, is highlighted to enhance fire safety and preparedness.
- **Technology and Tools:** Some respondents mention the usefulness of specific tools, services, or technologies, such as the $50 tree limb shredding service, which aids in reducing fire risks by disposing of flammable debris.

Overall, the common thread throughout these statements is a strong commitment to improving fire safety, emergency response, and community preparedness to mitigate the risks associated with wildfires and other emergencies.

Staffing Model

The current staffing model for Evergreen Fire/Rescue includes career personnel to staff the emergency medical transport units and response and volunteer personnel to staff the fire apparatus and response. Respondents were asked if this staffing was acceptable.

Response	Count	Pct.
Yes	422	66.6%
No	212	33.4%
Total	634	

A majority of the respondents opined this staffing model is acceptable. This topic also generated considerable discussion in the community meetings, most of which centered on how the emergency services system operates, the need for volunteer staff members, and the support for those who do volunteer. However, of the 30 participants in the community meetings, 16 would like to see a change.

Service Expectations and Satisfaction

Respondents were asked to identify their top three service expectations related to the Fire District. They were provided with eight expectations.

Service Expectations

Respondents were asked to select their top three expectations for the fire district. There were 617 (85%) respondents who answered the question, with 110 non-responses.

Service Expectations

Expectation	1	2	3	4	5	6	7	8	Weighted Average
Rapid Response	77.0%	16.1%	4.7%	1.3%	0.2%	0.0%	0.2%	0.5%	7.65
Well Trained	17.9%	70.3%	10.1%	0.8%	0.0%	0.2%	0.5%	0.2%	7.02
Good Equipment	1.3%	10.2%	70.4%	12.3%	3.6%	1.3%	0.6%	0.2%	5.86
Adequate Facilities	0.9%	0.3%	9.6%	47.0%	22.3%	11.7%	7.5%	0.6%	4.42
Community Focused	5.1%	4.3%	14.9%	6.8%	12.5%	16.3%	16.5%	23.6%	3.50
Accessible to the Community	2.9%	3.2%	7.8%	7.5%	18.3%	29.9%	23.8%	6.7%	3.47
Fiscally Responsible	2.7%	2.4%	9.7%	8.8%	17.1%	18.6%	28.6%	12.1%	3.34
Professional Appearance	1.0%	1.3%	1.6%	2.2%	18.1%	13.0%	13.7%	49.2%	2.25

A rapid response to a call for service ranked first as the highest expectation of the respondents based on a weighted average. This response is closely followed by well-trained personnel and good equipment.

Service Concerns

The following table outlines the responses to the concerns or worries regarding the Fire District. There were 614 (85%) respondents who answered the question, with 113 respondents skipping it. The statement, “Please select the top three concerns or worries you may have about the fire district with the understanding that firefighters are volunteers, and medical personnel are staffed 24 hours a day, 7 days a week.” was open to all respondents whether a service was used.

Service Concerns

Concerns	1	2	3	4	5	6	7	8	9	Weighted Average
Response Times	64.7%	18.4%	10.8%	3.2%	1.3%	0.4%	0.2%	0.4%	0.7%	8.34
Staffing Levels	12.6%	24.3%	32.6%	14.7%	10.6%	4.3%	0.4%	0.4%	0.2%	6.96
Training	8.0%	37.6%	23.2%	14.2%	7.7%	3.8%	2.9%	1.5%	1.1%	6.87
Wildland Fire Response	29.3%	31.1%	26.1%	12.3%	7.9%	4.1%	4.1%	5.0%	21.4%	6.15
Equipment - Fire Apparatus and Ambulances	3.4%	11.3%	27.0%	29.8%	2.8%	17.6%	6.6%	0.6%	0.9%	5.95
Expanding Services to meet current and projected Growth	9.6%	13.3%	15.0%	5.2%	7.9%	7.4%	18.9%	16.5%	6.4%	4.93
Facilities - Fire Stations	0.3%	2.6%	4.3%	6.4%	19.9%	31.5%	21.4%	9.8%	3.8%	4.05
Fiscal Responsibility	3.4%	2.0%	5.3%	0.8%	5.3%	20.2%	23.3%	27.5%	12.1%	3.33
Community Focused	1.5%	1.5%	3.5%	1.5%	1.5%	2.6%	13.5%	29.9%	44.6%	2.21

The weighted average provides an overall view of the opinions of the respondents. Response times are the highest concern of respondents, which also coincided with their expectations. Staffing levels, training, and the wildland fire response also ranked high on the list of concerns. The high wildland fire response ranking is supported by the comments about the service provided in the previous section that leaned heavily toward preparedness and mitigation of the wildland fire threat.

Response Time

The following tables outline the responses about expectations for response time. There were 638 (88%) respondents who answered the question, with 89 respondents skipping it. The statement, “If you dial 911 for an emergency, what is your expectation for how long it should take for help to arrive?” was open to all respondents whether a service was used.

Response Time	Count	Pct
3 to 5 minutes	178	27.9%
5 to 7 minutes	226	35.4%
7 to 9 minutes	97	15.2%
9 to 11 minutes	90	14.1%
Greater than 11 minutes	47	7.4%
Total	**638**	

This same question was also discussed in the community meetings with the following results.

Response Time	Count	Pct
3 to 5 minutes	1	4.8%
5 to 7 minutes	7	33.3%
7 to 9 minutes	3	14.3%
9 to 11 minutes	4	19.0%
Greater than 11 minutes	6	28.6%
Total	**21**	

Discussion in the community meetings also included questions about the response time regarding standards or other regulations. This inquiry intends to gauge the residents' expectations and not necessarily to match a standard or regulation. The Fire District Board of Directors will use this information within the Master Planning process to manage expectations either through additional resources, education, or both.

The following tables illustrate the respondents' expectations related to the area or region they are from. Once again, this will allow the Fire District Board of Directors to make an informed decision relative to the service expectations of the respondents.

Central East Region (purple)		
Answered	162	
Skipped	17	
	179	90.5%
3 to 5 minutes	59	36.4%
5 to 7 minutes	63	38.9%
7 to 9 minutes	20	12.3%
9 to 11 minutes	14	8.6%
Greater than 11 minutes	6	3.7%
	162	

Northeast Region (red)		
Answered	140	
Skipped	15	
	155	90.3%
3 to 5 minutes	45	32.1%
5 to 7 minutes	57	40.7%
7 to 9 minutes	17	12.1%
9 to 11 minutes	21	15.0%
Greater than 11 minutes	0	0.0%
	140	

Northwest Region (yellow)		
Answered	67	
Skipped	14	
	81	82.7%
3 to 5 minutes	16	23.9%
5 to 7 minutes	12	17.9%
7 to 9 minutes	10	14.9%
9 to 11 minutes	9	13.4%
Greater than 11 minutes	20	29.9%
	67	

South Central Region (green)		
Answered	106	
Skipped	18	
	124	85.5%
3 to 5 minutes	20	18.9%
5 to 7 minutes	45	42.5%
7 to 9 minutes	15	14.2%
9 to 11 minutes	17	16.0%
Greater than 11 minutes	9	8.5%
	106	

Southeast Region (light blue)		
Answered	67	
Skipped	7	
	74	90.5%
3 to 5 minutes	15	22.4%
5 to 7 minutes	14	20.9%
7 to 9 minutes	15	22.4%
9 to 11 minutes	17	25.4%
Greater than 11 minutes	6	9.0%
	67	

Southwest Region (dark blue)		
Answered	93	
Skipped	9	
	102	91.2%
3 to 5 minutes	21	22.6%
5 to 7 minutes	34	36.6%
7 to 9 minutes	20	21.5%
9 to 11 minutes	12	12.9%
Greater than 11 minutes	6	6.5%
	93	

As noted, each table represents the area or region. In the Central East area, 90.5% of the respondents responded. Of those responses, 36.4% have a response time expectation of 3 to 5 minutes, and 38.9% have an expectation of 5 to 7 minutes.

Service Satisfaction

Respondents were asked about their satisfaction with the services provided by their Fire District. There were 569 (78%) respondents who answered the question, with 158 respondents skipping it. The following table illustrates the responses to the statement, "For each of the service areas listed below, please select a response indicating how satisfied you are with the service in your community."

Statement	Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	No Opinion
Response time to emergency calls.	28.3%	24.4%	18.4%	4.4%	3.2%	21.4%
Capabilities to handle the situation.	31.4%	28.4%	16.6%	4.4%	1.9%	17.1%
Hazardous materials response to chemical spills.	8.7%	7.1%	33.7%	1.6%	1.4%	47.5%
Attending public and community events.	24.3%	25.7%	24.5%	3.5%	0.4%	21.5%
Home safety inspections	19.1%	16.6%	28.1%	4.9%	1.2%	30.0%
Business fire safety inspections	8.5%	10.7%	29.1%	3.2%	0.7%	47.8%
Public education programs	20.8%	30.4%	24.7%	7.8%	1.4%	15.5%

- In terms of response time and capabilities of handling calls for service, most respondents are satisfied with their Fire District. Most respondents (28%) are very satisfied with the response time to emergency calls for service, with a combined 53% of respondents satisfied with the response time.

- Most (48%) respondents did not express a clear opinion about responding to hazardous materials spills. In comparison, 34% were neither satisfied nor dissatisfied, indicating a lack of experience with that response.
- Respondents (48%) did not express a clear opinion about business inspections, with 29% indicating they were neither satisfied nor dissatisfied. The same holds true for home inspections, with 30% having no opinion and 28% neither satisfied nor dissatisfied.
- Approximately 51% of the respondents are satisfied with public education programs, with 15% not expressing an opinion. About 24% were neither satisfied nor dissatisfied.

As noted previously, 77% of the respondents expect a rapid response, and 52% are satisfied with the response time. However, they also expressed concerns about this issue. Similarly, 60% of the respondents are satisfied with the ability to handle the situation but expressed concerns about staffing, training levels, and the wildland fire response.

Value of Services

The community was asked about the value of services from their service providers. There were 567 (78%) respondents who answered the question, with 160 respondents skipping it. Four statements were used, and the respondents were provided five responses from excellent to no opinion. The following table illustrates the results.

	Excellent	Good	Fair	Poor	No Opinion
Rate how effectively money is being used for fire services	9.9%	24.0%	12.3%	4.4%	49.2%
The value of the fire services for the funding provided.	19.9%	28.2%	10.4%	1.4%	39.9%
The overall direction of the Fire Department/District is taking to provide services.	18.3%	36.2%	11.5%	3.7%	29.8%
The openness of the Fire Department/District to community input.	25.6%	30.5%	13.4%	5.8%	24.7%

- The overall direction and openness of the Fire District received favorable responses from approximately 55% and 56% of the respondents, respectively.

- 34% of the respondents felt the funds were used effectively, with 49% not expressing a clear opinion.
- Value of the fire services received approximately 48% of the respondents expressing their satisfaction while another 40% did not express an opinion.

In addition to the value of services, respondents were queried about other programs that could benefit from enhanced funding. With the heightened awareness and risk of wildland fires, the programs listed in the survey were directed at those issues. The following table illustrates the results of this question.

Program	Pct
Wildfire Mitigation	74.0%
Specialized response apparatus	29.2%
Wildfire early detection camera system	55.6%

There were 538 (74%) respondents who provided a response and were not limited to a single answer. Most respondents (74%) opined that Wildfire Mitigation is a higher priority regarding enhanced funding. Respondents were provided a forum in the online survey to express their thoughts on other programs and services that would benefit from enhanced funding. A synopsis of those responses follows:

- **Transition to paid Firefighters:** There's a consistent theme of advocating for paid firefighters rather than relying solely on volunteer firefighters. A key trend is a desire for adequately compensated and available around-the-clock staffing.
- **Enhanced Facilities and Equipment:** Respondents want to improve fire district/department facilities, equipment, and staffing levels. This includes calls for updated apparatus, facilities, and technology to enhance the district/department's capabilities.
- **Community Engagement and Education:** Many respondents emphasize the importance of community involvement in emergency preparedness and education. This involves outreach, training, and resources to ensure residents are well-informed and can respond effectively in emergencies.
- **Evacuation and Planning Routes:** Evacuation routes, modeling, and testing are prominent concerns. There's a focus on enhancing the planning and implementation of evacuation strategies to ensure the safety of residents during emergencies.

- **Wildfire Mitigation and Prevention:** Like the fire safety trends, there's a strong interest in wildfire mitigation and prevention efforts. This includes community risk reduction education, equipment support for residents, and collaboration on strategies to reduce wildfire risks.
- **Funding and Resources:** Respondents often expressed a desire for enhanced funding to support various aspects of EMS, including staffing, equipment, facilities, and grant opportunities for homeowners to improve their properties' fire safety.
- **Collaboration and Interagency Efforts:** There's a recognition of the importance of collaboration between different agencies, such as emergency services, law enforcement, and local government, to improve emergency response and preparedness.
- **Communication and Transparency:** Clear communication, transparency in decision-making, and sharing information with the community are highlighted as essential factors for building trust and ensuring effective emergency response.
- **Technology and Equipment:** Some respondents mention the importance of up-to-date technology, equipment, and facilities to ensure emergency services can operate efficiently and respond effectively to emergencies.
- **Healthcare Services:** A few respondents specifically mention the need for medical staff or paramedics to be available on shifts. There's an interest in having medical expertise readily accessible to handle emergencies that require medical intervention.
- **Public Safety in Development Planning:** Some respondents expressed concern about the impact of new developments on fire safety and emergency response. They highlight the need for adequate resources and infrastructure to accommodate new residents without compromising safety.
- **Livestock and Animal Evacuation:** A few respondents suggest implementing programs to assist with evacuating livestock and animals during emergencies, recognizing the need to address the needs of pets and larger animals in evacuation plans.

Overall, the trends in these statements indicate a strong focus on improving emergency response, fire safety, and community preparedness through a combination of paid staffing, enhanced resources, education, collaboration, and proactive mitigation efforts.

Wildland Fire Threat

During the past several decades, wildland fires have increased in number and intensity, bringing the wildland-urban interface issues to the forefront. These issues and threats are evident in the Evergreen area, and respondents were asked several questions about the wildland fire threat.

Wildland Fire Plans

Respondents were asked if they knew of plans to prevent or mitigate wildland fires in their community. There were 589 (81%) respondents who answered the question, with 138 respondents skipping it.

Response	Overall
Yes	63.2%
No	36.8%

Respondents were then asked if they knew of any plans to respond to wildland fires in their community. There were 590 (81%) respondents who answered the question, with 137 respondents skipping it.

Response	Overall
Yes	39.5%
No	60.5%

The community is aware of mitigation and prevention plans (63%) related to the wildland fire threat. However, they are not as well informed regarding the response plan (61%) for a wildland fire. Discussions during the community meetings on this topic included using regional and state partners in the event of a wildland fire.

Respondents were further queried on the wildland threat to their home or property. The following table is based on the 591 (81%) of those who responded to the question.

Threat Level	Count	Pct.
Minimal	3	0.5%
Low	43	7.3%
Moderate	192	32.5%
High	195	33.0%
Very High	158	26.7%
Total	**591**	

Most respondents opine the threat level to their property is between moderate and very high. The following table illustrates the opinions of the respondents based on the area or region they previously identified.

Threat Level	Central East Region (purple)		Northeast Region (red)		Northwest Region (yellow)		South Central Region (green)		Southeast Region (lt. blue)		Southwest Region (dk Blue)	
Minimal	0	0.0%	2	1.5%	0	0.0%	0	0.0%	0	0.0%	1	1.2%
Low	13	8.8%	17	13.0%	2	3.3%	5	5.1%	1	1.5%	4	4.7%
Moderate	60	40.8%	49	37.4%	13	21.7%	20	20.2%	25	38.5%	23	26.7%
High	42	28.6%	38	29.0%	18	30.0%	39	39.4%	26	40.0%	32	37.2%
Very High	32	21.8%	25	19.1%	27	45.0%	35	35.4%	13	20.0%	26	30.2%
Total	**147**		**131**		**60**		**99**		**65**		**86**	

Those respondents closer to the center parts of Evergreen opine their threat level is more moderate (purple and red). Those respondents further out in the district (yellow, light blue, and dark blue) opine their threat level is more high and very high. Given the region's geography and roadway network, this response is expected. However, the respondents are very aware of the wildland fire threat and the potential impact on their property and the community.

Personal Mitigation Efforts

Mitigation is a two-pronged approach between personal and community efforts. Respondents were asked to identify mitigation strategies they have completed around their residences and businesses.

Statement	Overall
Created a 30-foot buffer zone around your home or business	58.1%
The house siding is fire resistant	30.8%
The roof is made of non-combustible materials	63.7%
Vents are covered with a wire mesh	45.2%
Created a secondary buffer of 100 feet around the home or business	23.8%
Have an evacuation plan	69.6%
Thinned out and maintain vegetation around the home or business	86.1%
Removed slash with chipping or burn permit	56.3%

Respondents indicated they had implemented many of the mitigation efforts around their home or business. The lowest number of responses involved creating a secondary buffer.

Within the context of personal mitigation efforts, respondents were asked when any of these activities were last performed.

Time Frame	Count	Pct
In the past year	442	75.3%
In the past 3 years	70	11.9%
In the past 5 years	31	5.3%
Have not performed any of these measures	44	7.5%
Total	**587**	

Those who have not performed these measures indicated they were renting the property or house. Others cited the cost of having these services completed. It should be noted that with the high threat levels cited by the respondents, over 75% of the respondents have completed some or all the personal mitigation activities in the past year and over 87% in the past three years.

The Evergreen Fire District is in two counties, Jefferson and Clear Creek Counties. Each county has its own notification system. Respondents were asked if they had registered for at least one of the notification systems. There were 580 (80%) respondents who answered the question, with 147 respondents skipping it.

Notification System	Count	Pct
Lookout Alert	358	61.7%
CodeRed	422	72.8%
Did not know of these notification systems	77	13.3%

A small percentage (13%) of the respondents were unaware of these notification systems. An overwhelming majority have registered for at least one of the systems.

Community Mitigation

Respondents were provided with a series of statements regarding the community mitigation efforts.

	Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied
Alerting and warning systems for wildland fires or other emergencies.	24.7%	41.7%	24.8%	7.2%	1.6%
Capacity of evacuation routes to handle a large volume of evacuees.	3.5%	13.7%	18.0%	27.9%	36.9%
Mitigation efforts in the parks or forest areas around your community.	13.3%	35.6%	24.4%	19.7%	6.9%
Capability of the Fire District to handle a small wildland fire near your home or business.	32.6%	40.1%	19.6%	5.7%	1.9%
Education Programs offered to residents and business owners	27.4%	32.5%	32.1%	7.1%	0.9%
Water supply for wildland firefighting efforts.	10.9%	26.9%	38.3%	15.3%	8.7%
Mitigation efforts in your neighborhood.	12.2%	29.0%	27.4%	22.4%	9.0%

- Approximately 93% of the respondents believe the fire district can handle a small wildland fire.
- Respondents (66%) are satisfied with the warning and alerting systems for wildland fire notifications.
- Less than 17% of the respondents are satisfied with the capacity of the evacuation routes.

Service Level Interaction

The survey inquired if the respondents had used the emergency services provided by the fire district in the past five years.

Service Level Interactions

Respondents were asked if they had utilized the emergency services provided by the fire district. Of the 573 respondents who answered this question, approximately 30% had used the services.

Yes	29.7%
No	70.3%

Those 170 respondents who used the service were asked to provide their opinions about their interactions.

Statement	Excellent	Good	Fair	Poor
Response time to your 911 call for assistance.	70.7%	18.9%	6.7%	3.7%
Knowledge of the personnel.	77.4%	17.7%	3.0%	1.8%
Responsiveness of the personnel.	80.2%	15.6%	3.6%	0.6%
Courtesy of the personnel	85.5%	10.9%	2.4%	1.2%
Your overall impression of the personnel.	85.5%	9.6%	3.6%	1.2%

Most of the respondents are satisfied with the service they received. This response supports the previous section on service satisfaction, where respondents indicated they were satisfied with their service provider's response time and capabilities. When asked about their overall quality of services, 95% of the respondents opined it was excellent or good, as shown in the following table.

	Excellent	Good	Fair	Poor
Overall Quality	70.5%	24.7%	4.8%	0.0%

Of those surveyed, the residents are satisfied with the service they receive.

Respondents were allowed to comment on their interactions and experiences with personnel within service utilization. Most of the comments were related to the use of the EMS System, as noted in the following:

Response Time and Effectiveness:

- Comments on both quick and slow response times.
- Appreciation for efficient and effective emergency services.
- Instances where delays in response impacted the situation negatively.
- Acknowledgment of professional handling of emergencies, such as fires and medical issues.

Professionalism and Knowledge:

- Positive feedback on the knowledge, training, and expertise of EMS personnel.
- Recognition of personnel's professionalism, training, and communication skills.
- Some instances of disappointment are due to perceived dismissiveness or lack of familiarity with specific medical conditions.

Community Impact and Support:

- Recognition of the importance of having a strong fire and rescue team in the community.
- Gratitude for the care provided to loved ones during emergencies.
- Praise for the responsiveness and support during mental health emergencies.

Transport and Hospital Care:

- Feedback on decisions related to ambulance transport based on medical condition and hospital affiliation.
- Instances where families believed transport decisions should have been more straightforward.

Communication and Interpersonal Interaction:

- Importance of effective communication and understanding between responders and family members.
- Comments on instances where responders communicated well and listened to explanations.

Need for Improved Training and Awareness:

- Instances where responders lacked awareness of certain medical conditions.
- Calls for improved training, understanding, and sensitivity when dealing with specific situations.

Overall Satisfaction and Gratitude:

- General satisfaction with the fire and rescue team's professionalism and services.
- Expressions of gratitude for the dedication and hard work of the personnel.
  Room for Improvement.
- Acknowledgment of the volunteer fire department's positive attributes while suggesting there is still room for improvement.
- Recognition of the importance of continuous improvement for the organization.

These themes and trends highlight the community's experiences with EMS services, the importance of prompt and effective response, the role of communication and understanding in emergencies, and the ongoing efforts to enhance the quality of emergency services provided by the Evergreen Fire/Rescue team.

Open Ended Responses

The final section of the survey provided open-ended statements to allow the respondents to expand on or explain their responses to the previous questions and statements. It also provided an avenue for the respondents to express their thoughts about the Fire District that may not have been addressed in any of the previous sections.

Additional Rating Comments

The statement for this section is as follows: Please elaborate on any ratings you gave the Fire District regarding their service or employees that you believe need further explanation. There were 727 responses to the survey, with 106 (15%) respondents providing additional comments.

Positive Experiences: Many individuals express gratitude and appreciation for the services provided by EFR, including emergency medical services, fire mitigation, property assessments, and educational programs.

Response Times and Staffing: Several people mention concerns about response times during emergencies, particularly wildfire incidents. Some believe there should be a shift towards more paid and trained firefighters to ensure prompt and effective responses.

Wildfire Mitigation: Many individuals stress the importance of wildfire mitigation efforts, given the high-risk nature of the area. They call for increased focus on preventing wildfires and improving evacuation routes, especially considering the influx of new residents.

Communication and Community Engagement: Several respondents mention a desire for better communication between EFR and the community. They suggest more outreach, information sharing, and awareness campaigns to educate residents about fire prevention and safety.

Training and Professionalism: Some comments indicate a desire for well-trained and professional staff, both in terms of firefighting and medical response—some express concerns about the level of training and experience of volunteer firefighters.

Financial Allocation and Budgeting: Some individuals question how the fire district's budget is allocated and managed, especially in relation to the level of services provided and the compensation of firefighters.

Disagreements and Differing Opinions: There are varying opinions within the community about the effectiveness, efficiency, and priorities of EFR. Some believe improvements are necessary, while others express satisfaction with the services provided.

Emergency Preparedness: Several respondents mentioned the need for better community-wide emergency preparedness and education. They want to see more proactive efforts to educate residents about evacuation plans and safety measures.

Volunteers and Paid Staff: There's a discussion about the balance between volunteer and paid staff in the fire department. Some feel that more paid staff are needed for consistent response and leadership, while others appreciate the contributions of volunteers.

Additional Open Comments

The statement for this section is as follows: Please elaborate on any questions or provide additional comments for the Fire District. There were 727 responses to the survey, with 157 (22%) of the respondents providing additional comments on this statement.

Wildfire Mitigation and Prevention:

- There's a strong appreciation for the increased wildfire mitigation efforts and community engagement in the past few years.

- Concerns are raised about homeowners not taking sufficient steps for fire mitigation on their properties.
- Some respondents appreciate the proactive approach and are grateful for the mitigation work being done. In contrast, others express concerns about the extent of tree cutting, clear-cutting, and the impact on the natural landscape.

Emergency Services and Response:

- There's an overall satisfaction with the emergency services provided, including EMS response times.
- There's a desire for better utilization of EMS personnel and potentially hiring full-time firefighters for quicker response times.
- Concerns about response times, especially in areas with limited access, are noted.

Community Engagement and Education:

- Positive feedback is given about community engagement efforts, such as classes and resources on fire preparedness.
- Residents express interest in attending more classes and workshops on fire safety and mitigation.

Development and Evacuation Routes:

- Concerns are raised about proposed developments that could strain evacuation routes and access in case of fire.
- Some residents are worried about the impact of significant housing developments on evacuation plans and community safety.
- Calls for more transparency from the fire district/department and involvement in evaluating proposed housing developments.
- Concerns are raised about limited road access in some neighborhoods and the potential challenges in case of evacuations.

Staffing Improvements:

- A recurring theme of the community outgrowing the volunteer firefighter model leads to discussions about the need for paid staff.

- Some residents express support for exploring the transition to a combination department with volunteer and paid staff.
- Some believe that a combination of career and volunteer firefighters might provide more effective coverage and response.

Equipment and Resources:

- Requests for more resources, such as defibrillators and chippers for slash removal, are mentioned.

Mitigation Methods:

- Some residents express skepticism about the effectiveness of tree-cutting as a primary wildfire mitigation strategy.

Communication and Mapping:

- Some residents express difficulty with communication systems like Code Red, suggesting more targeted and relevant alerts.
- There's mention of the challenge of accurately representing locations on maps in the survey.

County Collaboration:

- Calls for collaboration between the fire district and county officials in planning and development decisions.

Funding and Budget Concerns:

- Residents express concerns about funding allocations, transparency, and potential tax increases.

These trends reflect the community's various concerns, opinions, and suggestions. Wildfire mitigation, emergency response, development planning, and community engagement are significant topics of interest and importance to the respondents.

Employee Contributions

As part of the Matrix Consulting Group's study for the Evergreen Fire District, the project team distributed an anonymous survey to Fire District/Department members and employees to gauge their opinions on various topics relevant to the study. This survey generally asked three types of questions:

- **General questions:** At the beginning of the survey, respondents were asked to provide information about their Evergreen Fire/Rescue assignment. These responses are used in this analysis to explore differences in responses between groups of respondents.
- **Multiple Choice Statements:** Respondents were presented with multiple choice statements indicating their level of agreement or disagreement with statements on various topics related to the Fire District. Response options were "strongly agree" (SA), "agree" (A), "disagree" (D), and "strongly disagree" (SD). Respondents could also opt out of responding to the statement, in which case they were not counted among the responses received for that statement.
- **Open-ended response questions:** Respondents were allowed to provide additional comments after each section. At the end of the survey, staff were given space to give opinions about the district/department's strengths and weaknesses in their own words.

The survey was distributed electronically to all 101 Fire District/Department members and employees. The online survey was opened on June 28, 2023, and remained available through August 4, 2023. A total of 92 responses were received, in varying degrees of completion, for an overall response rate of 91.1%.

In addition to the online survey, a meeting was held on July 24, 2023, with the volunteer group, and on July 26, 2023, a meeting was held with the career group. These forums allowed the members and employees to express their opinions and thoughts on various Fire District/Department operations topics. Each forum used an open participant-driven format, enabling the participants to discuss their issues. Comments from these sessions are included in the online survey results.

Summary of Findings

A complete analysis can be found in the following chapters. The following sections summarize key findings of the responses received in this survey.

Respondent Demographics

While the survey was anonymous, the project team asked respondents to indicate their current classification and years of service within the organization. The following tables and charts summarize demographic data collected from these questions.

Classification	Number of Respondents	Percentage
Volunteer	44	47.8%
Career	48	52.2%
Total	**92**	**100%**

Approximately 91% of the Fire District/Department members and employees responded to the question; as illustrated, the participation is reasonably even in the number of participants. The seniority of the respondents is shown in the following table.

Time	Number of Respondents	Percentage
Less than 5 years	51	55.4%
5 – 10 years	20	21.7%
10 – 15 years	7	7.6%
Over 15 years	14	15.2%
Total	**92**	**100%**

As shown, approximately 55% of the respondents have less than five years of service with the Fire District/Department. About 22% are between 5 and 10 years of service. With such a young organization, in terms of seniority, it is imperative that the more senior members become mentors to those younger members to create a more robust workforce.

Strengths of the Fire Department

The following bullet points summarize the strengths of the Fire District/Department as noted in the responses to this survey:

- Respondents believe that they provide a high level of service to the community and enjoy a healthy, positive relationship with the community.
- Staff believe that supervision is sufficient and performance expectations are made clear.
- The training programs are well received and believed to provide appropriate training and education.
- Respondents felt the equipment and apparatus were good and appropriate for the work to be performed.

Fire District/Department Improvement Opportunities

The following bullet points summarize the opportunities to improve the Fire District/Department as noted in the responses to this survey:

- Begin the discussion about the advantages and disadvantages of various staffing models and the combined use of paid and volunteer staff.
- Focus on improving the culture between the paid and volunteer staff to promote a positive culture.
- Move to provide a clear vision and direction for the Fire Department and the future of the organization.
- Recognize some of the overlooked aspects of the organization, such as non-emergency interactions, risk reduction, and community engagement.

Service to the Community

This section provided nine statements related to the service provided to the community by the Fire District/Department. The respondents were asked to provide their opinions based on these statements. The response options were “strongly agree” (SA), “agree” (A), “disagree” (D), and “strongly disagree” (SD). Respondents could also choose “neither agree nor disagree” to indicate neutral feelings or opinions. Respondents could also opt out of responding to the statement, in which case they were not counted among the respondents for that statement.

Community Relationships

Respondents were asked to indicate their level of agreement with five statements regarding their perception of the department’s relationship with the community. In

general, the respondents believe they provide a high level of service to the district and enjoy a positive relationship with those they serve.

Community Relationships

Statement	SA	A	Neither Agree nor Disagree	D	SD
Our Department provides a high level of service to the community.	41%	48%	6%	4%	1%
Residents view our Department as a high priority.	39%	40%	15%	5%	1%
Our Department has positive relationships with our residents.	48%	48%	4%	0%	0%
Our approach to providing services improves the quality of life in our service area.	43%	39%	9%	7%	2%
Our Department operations/makeup is well known by the community.	7%	20%	30%	33%	10%

As shown, most respondents opined they provide a high level of service and are respected by the community. They feel the approach to delivering service improves the quality of life, and they have a positive relationship with the residents. In the open responses section, strong community support, well respected, and a positive image were listed as strengths of the Fire Department.

In terms of the public knowledge of the operations and make-up of the organization, they opine the public is not very well informed. This sentiment was confirmed in the public meetings; there was considerable discussion about the response system and the combined use of career and volunteer staff. As illustrated, 33% of the respondents disagreed with the statement, and another 30% did not express an opinion.

External Agency Relationships

In this sub-section, the respondents provided their opinions on their relationships with other regional emergency service providers. Mutual aid received and provided was asked separately. About 80% of the respondents felt the district provides effective mutual aid, and 76% felt the mutual aid received is effective.

Partnerships

Statement	SA	A	Neither Agree nor Disagree	D	SD
Our department has positive relationships with our response partners.	28%	59%	9%	4%	0%
We provide effective mutual aid to neighboring fire departments.	29%	51%	17%	2%	1%
We receive effective mutual aid from our neighboring fire departments.	20%	56%	21%	2%	1%
There are opportunities to improve shared services with neighboring agencies.	34%	50%	14%	2%	0%

Respondents generally believe the partnerships with other agencies are working well, but there are opportunities to improve shared services, with an 84% positive response.

Management and Administration

This section provided sixteen statements related to the management and administration of the Fire Department. The respondents were asked to provide their opinions based on these statements. The response options were “strongly agree” (SA), “agree” (A), “disagree” (D), and “strongly disagree” (SD). Respondents could also choose “neither agree nor disagree” to indicate neutral feelings or opinions. Respondents could also opt out of responding to the statement, in which case they were not counted among the respondents for that statement.

Fire District Vision and Direction

Respondents provided their opinions related to the future direction of the Fire District. Individual performance expectations received a 75% positive response, but 29% had no opinion about a lack of an effective communication plan with the residents. The expression of no opinion could be related to a lack of knowledge or understanding, creating an opportunity to improve communications with the public and the district's employees.

Statement	SA	A	Neither Agree nor Disagree	D	SD
Our Department has a clear vision / direction for the future.	2%	27%	40%	20%	11%
I am kept informed of important Department information.	7%	36%	39%	13%	5%
My performance expectations are made clear.	22%	53%	17%	6%	2%
We have an effective communication plan to engage the community.	4%	44%	29%	17%	6%
Evergreen Fire/Rescue operates efficiently.	4%	34%	31%	23%	8%
Evergreen Fire/Rescue does a good job in recruiting local residents for positions in the district.	2%	24%	50%	18%	6%

Approximately 40% of the respondents did not provide an opinion related to a clear vision or direction for the Fire Department. This may be an added opportunity for improvement in communicating the vision to the employees of the Fire Department.

Respondents did not express an opinion about local recruitment efforts. Comments in the open responses noted a national recruitment crisis and recruiting new volunteers and staff members is a concern for the future.

Fire District Policies

Respondents were asked to indicate their level of agreement with five statements regarding their perception of the district's policies and procedures.

Statement	SA	A	Neither Agree nor Disagree	D	SD
I know Department policies or where to find them.	29%	58%	11%	2%	0%
Department policies are current.	9%	42%	24%	23%	2%
Policies related to operations are adequate and clearly defined.	10%	41%	30%	17%	2%
Department policies are routinely reviewed.	5%	28%	42%	24%	1%
Department policies are consistently updated to improve our operations.	6%	22%	43%	25%	4%

Most respondents know the Fire Department policies or where to find the most current edition. In addition, most respondents opine the policies are current and clearly defined. However, 67% of the respondents either did not express an opinion or disagreed with the policies being routinely reviewed. Additionally, 72% of the respondents did not express an opinion or disagreed that the policies are not consistently updated.

Comments from the online survey support simplifying and clarifying policies and procedures to reduce confusion. There is an opportunity to improve by reviewing and updating the policies and procedures in the Fire Department.

Organizational Structure

Respondents were asked to indicate their level of agreement with three statements regarding their perception of the Fire District's organizational structure.

Statement	SA	A	Neither Agree nor Disagree	D	SD
The current organizational structure is appropriate for our department.	6%	22%	26%	35%	11%
The supervision at emergency scenes is usually appropriate for the type of call.	17%	49%	18%	12%	4%
Spans of control in Evergreen Fire/Rescue are appropriate.	12%	50%	26%	7%	5%

While most respondents agree the supervision and span of control are appropriate and sufficient, 46% indicate the organizational structure needs to be reviewed, with another 26% having no opinion.

In the open response section, there are comments on several different issues related to the organization and its culture. A summary of those comments follows:

- A push for a clear distinction and resolution between EVFD and EFR to promote positive progress.
- Lack of clear direction and vision for the future.
- Highlighting the benefits of a merit-based appointment process for volunteer officer positions.
- Focus on improving the culture between volunteer and paid staff and other divisions within the organization.
- There seems to be a silo effect between the two organizations.

Finance and Budget

These statements are directed at the operating budget and capital planning. Respondents were mostly favorable regarding the operating budget and allowing for effective operations.

Statement	SA	A	Neither Agree nor Disagree	D	SD
Budgeted funds allow our Department to operate effectively.	19%	33%	23%	17%	8%
The Department is effective at capital planning.	7%	33%	40%	15%	5%

Overall, the respondents are split in terms of capital planning, with 40% in agreement and 40% with no opinion.

Staffing and Operations

This section provided fourteen statements related to staffing and operations of the Fire Department. The respondents were asked to provide their opinions based on these statements. The response options were “strongly agree” (SA), “agree” (A), “disagree” (D), and “strongly disagree” (SD). Respondents could also choose “neither agree nor

disagree" to indicate neutral feelings or opinions. Respondents could also opt out of responding to the statement, in which case they were not counted among the respondents for that statement.

Staffing Resources

In this first sub-section, staffing of the Fire District is addressed. The respondents feel they work well with each other on calls for service, with 98% in agreement.

Statement	SA	A	Neither Agree nor Disagree	D	SD
Staff resources are adequate to meet the current Fire Department needs.	4%	25%	33%	24%	14%
Evergreen Fire/Rescue is adequately staffed to meet demands for services.	1%	23%	27%	34%	15%
Our personnel work well with each other on calls for service to which they respond.	26%	57%	11%	6%	0%
There is a strong cooperative culture between career and volunteer personnel	18%	29%	23%	22%	8%
The current staffing model works well.	7%	9%	37%	34%	13%

Approximately 38% of the respondents opine there is not adequate staff to meet the needs of the Fire Department, and 49% opine the staffing does not meet the demands for services. Only 16% of the respondents believe the current staffing model works well, with 47% believing it does not work well.

The staffing model was discussed in the open forum sessions, and in both groups, there is a desire to explore the use of staffed stations for fire response. In the open response section of the online survey, additional comments included:

- Cross-training willing paramedics
- Consider the different staffing models to include the right balance of paid and volunteer staff to ensure an adequate response.

Two additional questions were asked specifically for emergency medical and fire calls to define the staffing issues further.

Statement	SA	A	Neither Agree nor Disagree	D	SD
The current staffing model for medical calls allows us to perform our duties on emergency scenes.	19%	50%	20%	6%	5%
Our current staffing model for fire calls allows us to perform our duties on emergency scenes.	10%	29%	29%	22%	10%

Approximately 69% of the respondents opine the staffing is suitable for emergency medical calls, but only 39% opine the staffing for fire calls is adequate. In contrast, approximately 45% of the career staff opine that emergency medical calls have sufficient personnel and 84% of volunteer staff think that emergency medical calls are staffed appropriately. However, comments in the open forum sessions and the online survey indicate the staffing is not adequate:

- There is a need for increased staffing and reduced reliance on volunteer fire drivers for EMS calls.
- There is a need for paid responders during daytime shifts when additional support is needed for EMS calls.
- Consider utilizing wildland crews as drivers for EMS calls when no volunteer members are available.

Communications

About 82% of the respondents agree the current dispatch system works well for the Fire District.

Communications

Statement	SA	A	Neither Agree nor Disagree	D	SD
The 911 Dispatch system works well for Fire/Rescue calls,	36%	46%	12%	5%	1%
Dispatch information provided to us on incidents is accurate.	29%	48%	21%	2%	0%
Dispatch information provided to us on incidents is received in a timely fashion.	36%	48%	13%	1%	2%

Approximately 77% of the respondents opined the information was accurate, while 21% did not have an opinion.

Training and Education

Respondents were asked to indicate their level of agreement with four statements regarding their perception of the department's training needs.

Statement	SA	A	Neither Agree nor Disagree	D	SD
We receive the practical training we need to keep all of our skills high.	19%	61%	15%	1%	4%
Our Department places a high value on ensuring proper training for personnel.	28%	51%	14%	5%	2%
Training facilities are adequate for practical training evolution's and activities.	32%	48%	10%	10%	0%
Our Department places a high value on Health and Wellness programs.	15%	39%	32%	11%	3%

The response here supports the training programs as being adequate and appropriate.

Physical Resources

This section provided eight statements related to the physical resources of the Fire Department. The respondents were asked to provide their opinions based on these statements. The response options were "strongly agree" (SA), "agree" (A), "disagree" (D), and "strongly disagree" (SD). Respondents could also choose "neither agree nor disagree" to indicate neutral feelings or opinions. Respondents could also opt out of responding to the statement, in which case they were not counted among the respondents for that statement.

Apparatus and Equipment

Respondents were asked to indicate their level of agreement with four statements regarding their perception of the department's apparatus and equipment.

Statement	SA	A	Neither Agree nor Disagree	D	SD
We have the appropriate apparatus to provide high levels of service.	28%	48%	7%	15%	2%
Our apparatus has the appropriate equipment to provide effective service.	29%	42%	22%	7%	0%
Our fire apparatus is well maintained.	37%	45%	13%	5%	0%
Our fire equipment is well maintained.	28%	49%	16%	7%	0%

Respondents were overwhelmingly agreeable to the apparatus and equipment being appropriate and well-maintained.

Facilities

Respondents were asked to indicate their level of agreement with four statements regarding their perception of the district's facilities.

Statement	SA	A	Neither Agree nor Disagree	D	SD
The locations of our fire stations are effective in meeting the needs of the service area.	26%	49%	17%	4%	4%
Our staffed stations provide a safe workplace.	28%	45%	16%	9%	2%
Our fire stations are well maintained.	23%	40%	15%	17%	5%
Our fire stations meet the needs of the service area.	16%	43%	28%	10%	3%

Respondents were overwhelmingly agreeable to the facilities providing a safe workplace and located appropriately to meet the service area's needs. However, 22% of the respondents opine the maintenance of the facilities needs attention, and in terms of meeting the needs of the service area, 13% feel there needs to be changes. Approximately 15% and 28%, respectively, had no opinion on these two issues. There has been considerable discussion regarding Fire Station 1 and its potential move.

Open Ended Responses

This section of the survey provided three open-ended statements to allow the respondents the opportunity to explain or expound upon their responses to the above-noted sections. It also provided a mechanism for the respondents to express their thoughts on strengths and opportunities for improvement within the Fire District.

Strengths of the Fire District

Of the 92 respondents, 27 provided comments addressing their views of the strengths of the Fire Department.

Volunteers:

- A strong tradition of committed volunteers.
- Volunteer personnel have a community-centric focus.
- Longevity and dedication of volunteers.
- High level of training and access to different training opportunities.
- Positive community engagement and support for volunteers.
- The neighborhood response model is successful across different locations.
- Willingness to build for the future and involve new staff.

Equipment:

- Abundance of apparatus and equipment.
- Focus on equipment maintenance and safety.
- Up-to-date equipment and maintenance are a priority.
- Plentiful equipment and physical assets.
- Well-maintained equipment supports community impact and positive image.
- The department has good resources to take care of the community.

Training Opportunities:

- Strong emphasis on training.
- Access to different training opportunities to improve skills.

- Good training plans with dedicated training areas.
- High level of training and response coordination.
- Availability of training facilities, including a burn facility.
- Training is a key aspect of community relations and engagement.

Committed Personnel:

- Dedication and commitment of personnel.
- Hardworking individuals who care about the department's future.
- Positive work culture and environment.
- Passion and commitment of the members.
- Positive reputation earned by community members and volunteers.

Community Relations:

- Strong community engagement and support.
- Positive image and well-respected in the district and among neighboring departments.
- The community appreciates and values the department's efforts.
- Effective communication and community outreach.
- Focus on community risk reduction and fire prevention.

EMS and Teamwork:

- Positive EMS division with active participation from the Medical Director and Educators.
- Effective operations between volunteer fire and EMS.
- Strong inter-agency relations and teamwork.
- Competent paramedics on scenes and dedicated ambulance personnel.

Opportunities and Cooperation:

- Willingness to go beyond what is asked.
- Cooperation among all personnel.

- Opportunity to learn and grow beyond training.
- Value is placed on improved services to the community.
- Neighbors serving neighbors as a priority.

Budget and Funding:

- Robust tax funding and low-cost labor.
- The tax base supports department operations.
- The size of the budget contributes to the level of service provided.

There is a recurring emphasis on cooperation, community engagement, and the value of personnel who go above and beyond to serve the community's needs. Additionally, training, equipment maintenance, and positive interactions with the community are consistently mentioned as contributing factors to the department's success.

Improvement Opportunities

The survey had 92 respondents, with 27 providing comments on opportunities to improve the Department or the level of service.

Retention:

- Concerns about retaining both paid staff and volunteer firefighters.
- Suggestions to improve culture, leadership, and communication to enhance retention.
- Emphasizing health and wellness programs to support firefighters' well-being.
- Encouraging family involvement and rewarding their commitment.

Culture:

- Focus on improving the culture between volunteer and paid staff and other divisions within the organization.
- Addressing division and infighting issues, fostering cooperation, and eliminating the "us vs. them" mentality.
- Emphasizing fitness and promoting a positive culture of fitness among all members.

Communication:

- Improving communication between different divisions and levels of staff.
- Simplifying and clarifying policies and procedures to reduce confusion.
- Strengthening relationships between the district and volunteers through transparent communication.
- Enhancing community outreach efforts to promote awareness and education about the department.

Paid Staff vs. Volunteer Relationships:

- Consider a move towards paid positions to ensure adequate response and coverage.
- Balancing the need for paid personnel with the potential reduction in responders on the scene.
- Discussing the advantages and disadvantages of various staffing models, including volunteers, paid staff, and a combination approach.

Construction of Station 1:

- Emphasizing the need to proceed with the construction of a new Station 1.
- Suggesting the construction of a modern station with facilities to support training, fitness, and other essentials.

Leadership:

- Identifying challenges with leadership, including infighting and lack of guidance from senior leadership.
- Addressing power imbalances and politics within the organization.
- Training and developing new leaders and officers.

Wildland Division:

- Advocating for creating a dedicated wildland division due to the wildfire risk in the area.
- Expanding efforts and funding for wildland firefighting and mitigation.
- Developing and maintaining a year-round, well-trained wildland crew.

Organizational Structure:

- Considering a shift towards a combined model of paid and volunteer firefighters.
- Highlighting the benefits of a merit-based appointment process for volunteer officer positions.

Budget and Funding:

- Advocating for increased budget for vehicles, equipment, and salaries.
- Addressing future budget challenges and potential mill increase to support apparatus replacement.

Training and Development:

- Enhancing training opportunities for volunteers and paid staff.
- Establishing mentorship programs and clear paths for skill development and advancement.

Overall Improvement and Growth:

- Emphasizing the need for a clear vision and direction for the organization's future.
- Focusing on the big picture and long-term planning while avoiding micromanagement.
- Encouraging a cohesive approach between different departments and divisions within the organization.

Additional Comments

This last section is an area that was established to allow the respondents to address issues they felt they needed to address based on the previous statements. It also allowed the respondents to express further comments related to the ratings they provided.

Distrust and Communication:

- There's a lingering sense of distrust between the administration and volunteers.
- Transparency in the termination/discipline process is lacking, leading to frustration and confusion.
- There is a need for better collaboration and less conflict among volunteers and administration.

Transition to Paid Department:

- A call for the organization to move towards a paid department model.
- Emphasis on cross-training willing paramedics to enhance services.

Recruitment and Retention:

- The national recruitment crisis is affecting fire departments, with a need to identify what potential recruits seek and adapt recruitment strategies.
- Focus on attracting experienced firefighters and addressing the challenge of increasing call volumes.

Community Paramedic Program and Growth:

- Emphasis on advancing the community paramedic program for improved citizen care.
- The potential for growth and improvement by housing paramedics and having dedicated paid engines.

Organizational Structure and Culture:

- A push for a clear distinction and resolution between EVFD and EFR to promote positive progress.
- There is a need to address cultural issues, accountability, and standards within the volunteer subsect.

Wildland Division and Preparedness:

- The importance of creating an efficient and adequately funded wildland division for wildfire preparedness.
- Addressing concerns about underfunded projects and potential danger from overgrowth.

Focus on EMS and Medical Services:

- A desire to focus more on medical services, which constitute a significant portion of the department's activities.
- Increased staffing and reduced reliance on volunteer fire drivers for EMS calls are needed.

Budget Management and Efficiency:

- Concerns about efficient use of budgets, including addressing the perceived wastefulness of certain initiatives.

Improved Training and Education:

- Emphasis on improving training opportunities, task book signoffs, and fitness programs.

Community Engagement and Perception:

- Recognizing the community's perception and preferences, such as favoring a dedicated wildland division.

Challenges in Leadership and Team Dynamics:

- Challenges in leadership dynamics and team cooperation, with a call to focus on the larger mission.

Communication Beyond Emergency Response:

- A desire to address non-emergency public interactions, education, wildfire mitigation, and public information.

This summary of comments reflects a range of concerns and suggestions related to organizational structure, culture, communication, recruitment, resources, and community engagement. Addressing these thoughts and opinions could require changes in policy, communication strategies, resource allocation, and fostering a positive working environment.

Goals and Strategic Initiatives

This section of the report provides the goals and strategic initiatives developed for the fire district through the analysis conducted during this study. The following tables illustrate the goals and strategic initiatives (objectives) for each goal to allow progress to be tracked. Suggested objectives are included with each goal and can be adjusted, added to, or eliminated. The timelines shown are defined as follows:

- Short-term: One to three years.
- Intermediate: longer than three years but less than five years.
- Long-term: more than five years.

Timelines are shown to provide guidance related to the anticipated completion of the goal.

Goal 1:	**Formally transition to a single organization to provide emergency services and another to provide benevolent support to the Fire District.**
Accountability:	**Fire District Board of Directors**
Overall Timeline:	**Short Term 1 – 3 years** **Estimated Cost:** Staff Time
Objective 1A	Form a merger working group comprised of personnel from the Fire District and Volunteer Department.
Assigned To:	Fire District and Volunteer Boards
Objective Timeline	6 months
Objective 1B	Identify legal and financial concerns between the two organizations.
Assigned To:	Merger Working Group
Objective Timeline	9 – 12 months
Objective 1C	Develop a timeline for the aspects of the merger.
Assigned To:	Merger Working Group
Objective Timeline	12 months
Objective 1D	Edit and change the EVFD Bylaws to conform to the new mission.
Assigned To:	Merger Working Group
Objective Timeline	18 months
Objective 1E	Review the legal documents and bylaws to remain current.
Assigned To:	Fire District Board of Directors
Objective Timeline	Annually

Goal 2:	**Realign the Fire District organization to provide more clarity and accountability to the organization and the personnel.**
Accountability:	**Fire District Board of Directors**
Overall Timeline:	**Short Term 1 – 3 years** **Estimated Cost:** Staff Time
Objective 2A	Assess the changes to the operational chart for clarity in the organization.
Assigned To:	Fire Chief
Objective Timeline	12 months
Objective 2B	Obtain input from critical positions in the organization.
Assigned To:	Fire Chief
Objective Timeline	18 months
Objective 2C	Draft a new organizational chart for review by the Board of Directors.
Assigned To:	Fire Chief
Objective Timeline	24 months
Objective 2D	Develop a plan to implement the new organization.
Assigned To:	Fire Chief
Objective Timeline	24 months
Objective 2E	Implement the plan
Assigned To:	Fire Chief
Objective Timeline	30 months
Objective 2F	With the staffing of Engine Companies, hire a Human Resources Professional to ensure appropriate laws and regulations are adhered to.
Assigned To:	Fire Chief
Objective Timeline	6 to 12 months
Objective 2G	Ongoing evaluation for accountability within the organization.
Assigned To:	Fire Chief
Objective Timeline	Annually

Goal 3:	**Create a formal Succession Plan for the Evergreen Fire Protections District aligning with the organization and operational alignment.**
Accountability:	**District Board of Directors**
Overall Timeline:	**Intermediate 3 – 5 years** **Estimated Cost:** Staff Time
Objective 1A	Assess current and future needs.
Assigned To:	Fire Chief
Objective Timeline	12 months
Objective 1B	Identify critical positions to include in the plan.
Assigned To:	Fire Chief
Objective Timeline	18 months
Objective 1C	Create training and development plans for these positions.
Assigned To:	Fire Chief / Training Officer
Objective Timeline	24 months
Objective 1D	Create a mentorship program to guide the future leaders of the organization.
Assigned To:	Fire Chief / Fire Operations Division Chief
Objective Timeline	24 months
Objective 1E	Communicate the plan to all staff members in the organization.
Assigned To:	Fire Chief
Objective Timeline	24 months
Objective 1F	Review the plan to ensure its effectiveness.
Assigned To:	Fire Chief
Objective Timeline	Annually

Goal 4:	**Enhance the development of the financial plans for capital improvements.**
Accountability:	**Support Division**
Overall Timeline:	**Intermediate 3 – 5 years** **Estimated Cost:** Staff Time
Objective 4A	Shorten the time between assessments of apparatus.
Assigned To:	Maintenance Manager
Objective Timeline	6 months
Objective 4B	Create a detailed itemized list of components in the fire stations that will need to be replaced and their expected life cycle.
Assigned To:	Maintenance Manager
Objective Timeline	12 months
Objective 4C	Review the apparatus assessment tool to ensure it is up to date.
Assigned To:	Maintenance Manager
Objective Timeline	12 months
Objective 4D	Separate equipment and supplies from the station capital improvement funds.
Assigned To:	Accounting / Finance
Objective Timeline	18 months
Objective 4E	With the completion of the new station, create a detailed plan that will allow for the costs for each station to be identified.
Assigned To:	Accounting / Finance
Objective Timeline	24 – 30 months
Objective 4F	Create a detailed plan that will allow for the replacement costs for each apparatus to be identified.
Assigned To:	Accounting / Finance
Objective Timeline	24 – 30 months
Objective 4G	Create a detailed plan that will allow for the replacement costs for equipment and supplies to be identified.
Assigned To:	Accounting / Finance
Objective Timeline	24 – 30 months
Objective 4H	Review and update the replacement cost and replacement time.
Assigned To:	
Objective Timeline	Annually

Goal 5:	**Consolidate Stations One and Four into a new facility.**		
Accountability:	**Fire Chief**		
Overall Timeline:	**Short Term 1 – 3 years**	**Estimated Cost:**	$8 - $10 million
Objective 5A	Finalize the current site and building plans.		
Assigned To:	Fire Chief		
Objective Timeline	6 months		
Objective 5B	Secure a general contractor and sign a contract.		
Assigned To:	Fire Chief		
Objective Timeline	12 months		
Objective 5C	Monitor construction of the new facility.		
Assigned To:	Fire Chief		
Objective Timeline	18 months		
Objective 5D	Upon completion, collapse Stations One and Four into the new facility.		
Assigned To:	Fire Chief		
Objective Timeline	24 months		
Objective 5E	Staff an Engine Company in the new facility.		
Assigned To:	Fire Chief		
Objective Timeline	30 months		
Objective 5F	Dispose of the old facilities.		
Assigned To:	Fire Chief		
Objective Timeline	30 months		

Goal 6:	**Improve the availability of fire apparatus.**		
Accountability:	**Fire Chief**		
Overall Timeline:	**Intermediate 3 – 5 years**	**Estimated Cost:**	$1,752,245
Objective 6A	Create a staffing model using career and volunteer personnel to staff an Engine Company at Station 2, including paramedics, to cross-staff a third ambulance.		
Assigned To:	Fire Operations Division Chief		
Estimated Cost:	Year 1 - $321,733 Year 2 - $673,021		
Objective Timeline	6 to 12 months		
Objective 6B	Once operational, staff an Engine Company at the new station.		
Assigned To:	Fire Operations Division Chief		
Estimated Cost:	Year 1 - $757,491 (FY2028)		
Objective Timeline	30 months		
Objective 1H	Assess the staffing model for efficiency with scheduling and operation.		
Assigned To:			
Objective Timeline	Quarterly		

Goal 7:	**Complete the Standard of Cover document to assist Evergreen Fire/Rescue with future needs and direction.**
Accountability:	**Fire Chief**
Overall Timeline:	**Long-term, more than five years** **Estimated Cost:** Staff Time
Objective 7A	Work with JeffCom911 to get the appropriate timestamps for medic units and fire apparatus.
Assigned To:	Fire Chief
Objective Timeline	6 to 12 months
Objective 7B	Attend training and education events related to the Standard of Cover development.
Assigned To:	Fire Chief
Objective Timeline	6 to 12 months
Objective 7C	Monitor the progress of data collection with JeffCom911.
Assigned To:	Fire Chief
Objective Timeline	24 months
Objective 7D	Analyze data collected related to response time components to ensure validity and accuracy.
Assigned To:	Fire Chief
Objective Timeline	24 – 30 months
Objective 7E	Develop a Standard of Cover document with the updated data.
Assigned To:	Fire Chief
Objective Timeline	30 – 48 months
Objective 7H	Update and assess the Standard of Cover
Assigned To:	Fire Chief
Objective Timeline	Annually

Goal 8:	**Continue to enhance wildland mitigation and response capabilities.**		
Accountability:	**Wildland Division Chief**		
Overall Timeline:	**Long-term, more than five years**	**Estimated Cost:**	Dependent on Findings
Objective 8A	Update the CWPP		
Assigned To:	Wildland Division Chief		
Objective Timeline	12 – 18 months		
Objective 8B	Review pay scale for the seasonal workforce to aid recruitment efforts.		
Assigned To:	Wildland Division Chief		
Objective Timeline	12 months		
Objective 8C	Review funding sources for sustainable funding for wildland mitigation efforts.		
Assigned To:	Wildland Division Chief		
Objective Timeline	18 – 24 months		
Objective 8D	Review emerging technologies to enhance mitigation and response efforts.		
Assigned To:	Wildland Division Chief		
Objective Timeline	Ongoing		
Objective 8E	Incorporate CWPP findings in the Community Risk Assessment.		
Assigned To:	Wildland Division Chief		
Objective Timeline	Ongoing		
Objective 8F	Evaluate and assess mitigation strategies and efforts.		
Assigned To:	Wildland Division Chief		
Objective Timeline	Annually		

Goal 9:	**Continue the ECARES/CHICS program and monitor the progress for additional resources.**		
Accountability:	**ECARES Coordinator**		
Overall Timeline:	**Long-term, more than five years**	**Estimated Cost:**	Staff Time
Objective 9A	Utilize the Community Risk Assessment and response data to identify other groups needing assistance.		
Assigned To:	ECARES Coordinator		
Objective Timeline	12 months and ongoing		
Objective 9B	Explore other partnerships and funding opportunities to maintain or expand services.		
Assigned To:	ECARES Coordinator		
Objective Timeline	6 to 12 months and ongoing		
Objective 9C	Evaluate and assess services provided		
Assigned To:	ECARES Coordinator		
Objective Timeline	36 to 48 months		

Goal 10:	**Improve the training and education system within the EFR.**		
Accountability:	**Training Officer**		
Overall Timeline:	**Long-term, more than five years**	**Estimated Cost:**	Staff Time
Objective 10A	Connect the training schedule to the Community Risk Assessment to address the community needs.		
Assigned To:	Training Officer		
Objective Timeline	12 months and ongoing		
Objective 10B	Adjust the training schedule to include daytime opportunities for staffed units.		
Assigned To:	Training Officer		
Objective Timeline	6 to 12 months and ongoing		
Objective 10C	Assess the need for additional staff for training as the staffed apparatus becomes a reality.		
Assigned To:	Training Officer / Fire Chief		
Objective Timeline	36 to 48 months		
Objective 10D	Evaluate and assess training programs.		
Assigned To:			
Objective Timeline	Annually		

Goal 11:	**Monitor and continuously update prevention and risk data.**		
Accountability:	**CRR Deputy Chief**		
Overall Timeline:	**Long-term, more than five years**	**Estimated Cost:**	Staff Time
Objective 11A	Ensure the data for inspectable properties is current.		
Assigned To:	CRR Deputy Chief		
Objective Timeline	6 to 12 months		
Objective 11B	Establish performance objectives for the completion of plan reviews and fire safety inspections.		
Assigned To:	CRR Deputy Chief		
Objective Timeline	12 – 18 months		
Objective 11C	Connect public education programs to the Community Risk Assessment and response data.		
Assigned To:	CRR Deputy Chief		
Objective Timeline	12 months and ongoing		
Objective 11D	Update the Community Risk Assessment		
Assigned To:	CRR Deputy Chief		
Objective Timeline	Annually		

Community Risk Assessment

Risk Factors and Categories

Risk is the possibility of loss, injury, or other unwelcome adverse circumstances or events. As a community, we try to reduce the effects of unwanted occurrences through mitigation efforts before an emergency and using services such as police departments, public works, and fire departments to mitigate the incident once it occurs. Determining the fire and non-fire risks in a community provides the foundation to develop mitigation strategies and the resources needed should that incident occur. Components used in the risk assessment are further defined in the following sections.

Identification

The first step is to identify the risks in a community. These are determined by the emergency services' responses, including emergency medical calls and fires. Further identification of the types of emergency medical calls and fires will allow a more defined risk assessment. In addition to the types of response by the emergency services, natural and manufactured hazards also impact a community. These events range from earthquakes and floods to hazardous material incidents and acts of terrorism. These events may not occur as often as an emergency medical call, but they can have a lasting effect on the community.

Risk Evaluation

Risk assessment models typically used for a community risk assessment use a two-axis probability and consequences model to evaluate a designated risk. A three-axis risk categorization is a framework used to assess and classify risks based on three key dimensions or axes. Each axis represents a specific aspect or characteristic of risk, allowing for a more comprehensive understanding and analysis of potential threats. Here are three common examples of risk categorization axes:

- **Probability Axis:** The probability axis assesses the likelihood of an event occurring. It typically ranges from low to high or can be represented numerically from 1 to 5 or 1 to 10. A low probability suggests that the risk event is improbable, while a high likelihood indicates a greater chance of occurrence.

- **Consequence Axis:** This axis evaluates an event's potential consequences or impacts. It considers the severity, magnitude, or extent of harm or damage resulting from the event. The impact axis can also be represented on a scale, such as low to high or 1 to 5, reflecting the level of damage or disruption caused by the risk.
- **Emergency Services Axis:** The emergency services axis focuses on the extent to which effective response capabilities or mitigation strategies are in place to manage the risk. The emergency services axis helps determine the level of preparedness and the ability to respond to and mitigate the identified hazards.

By combining these three axes, fire departments can assess and categorize risks based on their likelihood, impact, and the response capabilities in place. This categorization enables a more nuanced understanding of risks and facilitates prioritization and allocation of resources for risk management efforts.

Probability

Probability is the likelihood of an unwanted event occurring within a given period. Events that occur weekly are highly probable, while those that occur annually are less likely. The following matrix provides a method to score the probability of an event occurring. While there are various methods to quantify the probability, the following table was adapted from the Community Risk Assessment guide developed as a part of the Vision 20/20 project[1].

Table 9: Probability

Probability Score	Descriptor	Description
2	Unlikely	• Events may only occur in exceptional circumstances. • Greater time span than annually.
4	Possible	• It might occur at some time – annually. • There are no recent recorded incidents.
6	Probable	• Likely to or may occur/recur – quarterly. • Strong anecdotal evidence it will occur.
8	Highly Probable	• Likely to or may occur/recur – weekly. • High level of recorded incidents or strong anecdotal evidence.
10	Frequent	• Occurs at least daily to multiple times each day.

[1] Community Risk Assessment https://strategicfire.org/

Consequence

Consequence measures a disparate outcome defined by loss of life, property, or historic values. There may also be additional economic considerations, such as loss of jobs and tax revenue. The following matrix provides a method to score the consequences to the community that an event may create.

Table 10: Consequence

Consequence Score	Descriptor	Description
2	Insignificant	• 1 or 2 people affected, minor injuries/property damage • A small number are displaced, and little outside support is needed. • No environmental concerns.
4	Minor	• A small number (<10) of injuries but no fatalities. • Minor medical treatment is required. • Some displacement is possible (less than 24 hours) with minimal support needed. • No lasting environmental effects.
6	Moderate	• Limited number of people affected (11 – 50). • Some hospitalizations but no fatalities. • Dozens may be displaced for up to 24 hours and need outside support. • Some environmental impacts with short-term effects.
8	Significant	• More than 25 people are affected. • Multiple serious injuries and hospitalizations with possible multiple fatalities. • Large numbers are displaced, and there is a definite need for outside resources. • Significant environmental impact with long-term effects.
10	Catastrophic	• Large numbers of people (>100) are affected with multiple hospitalizations and fatalities. • Widespread, long-term displacement with a definite need for outside resources. • Damage to infrastructure and loss of critical services. • Significant long-term environmental impact and the community needs long-term support.

Impact on Emergency Services

The risk assessment model being utilized is a three-axis model that allows a deeper look at how a community is affected by hazards. Evergreen Fire/Rescue (EFR) is accountable

for fire response, medical response, rescue response, wildfire response, and hazardous materials response. This third axis of the risk assessment scores the impact on the fire department to provide the service needed and additional services to the community during certain hazards. The formula below provides an impact score on a 10-point scale, consistent with the other axes.

(Staff assigned to incident / On-Duty Staffing) x 10 = Impact Score

For EFR, when fully staffed, four career personnel are on duty at two stations, with on-call (volunteer) staff members providing additional station staffing when available. Additional on-call members also respond from outside the stations when available. The Insurance Services Office (ISO) credits a volunteer/on-call firefighter as one-third of an on-duty firefighter. Using the 77 volunteer staff members on the roster provides credit for 25 on-duty staff members (77/3) or eight engine/ladder companies staffed with three personnel. The four career personnel staff EMS units with a minimum staffing of two personnel are not considered a part of the fire suppression response force.

Using the previous calculation, a single engine response that uses three personnel would score 1.2 (3 divided by 25 times 10). The following matrix illustrates the impact score and what may be an example of the type of call creating that impact. However, the score is ultimately based on using the primary personnel resource.

Table 11: Impact on Evergreen Fire/Rescue

Impact Score	Descriptor	Description
2	Minimal	• 5 or less personnel – Example – Low-risk EMS calls (sick person, minor injury). (1 to 2 units)
4	Minor	• 6 – 8 personnel – Example – Low-risk fires, service calls, moderate-risk EMS calls. (2 units)
6	Moderate	• 9 – 12 personnel – Example – Low-risk hazardous materials calls, auto accidents with entrapment. (3 units)
8	Significant	• 13 – 18 personnel – Example – Moderate risk structure fire, high-risk hazardous materials. (4 to 6 units)
10	Catastrophic	• > 18 personnel – Example – Maximum/High-risk structure fires, large wildland fires, natural disasters. (more than 6 units)

Risk Assessment Methodology

Considering the three-axis model, Heron's Formula is used to calculate a score for the risk. The formula uses the scores from probability(P), consequence(C), and impact(I) to create the overall quantitative score.

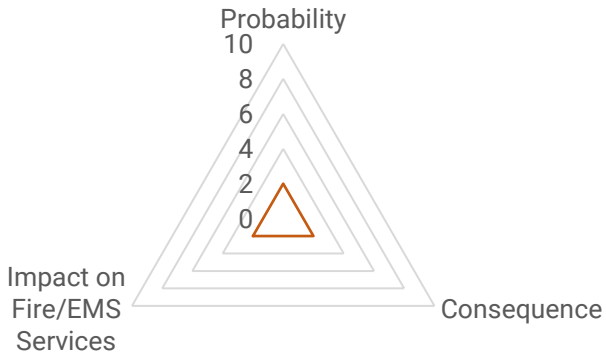
$$\text{Risk} = \sqrt{\frac{(PC)^2+(CI)^2+(IP)^2}{2}}$$

Using the score derived from the previous calculation provides a mechanism to rank the various risks faced by the community and the EFR. The following table highlights the level of risk based on the score.

Table 12: Level of Risk

Score	Overall Level of Risk
0 – 24.99	Low
25 – 49.99	Moderate
50 – 74.99	High
75 – 100	Severe

Graphically, the score is within the shaded lines of the chart. The score calculated previously is the area of the highlighted triangle and may range from 4.9, the lowest impact, to 122.5, the maximum impact. More importantly, this chart visually illustrates each of the three axes and the resulting impact on the community or fire department.



In this example, each axis is assigned a value of 2 with a risk score of 4.9. As the various values change, the total risk score changes, as does the triangle shape, highlighting the impact on each axis.

Natural Hazard Assessment

The Jefferson County 2021 Hazard Mitigation Plan[2] included an annex for each municipality and fire district in Jefferson County. This plan is a good source of natural hazard identification, probability, and vulnerability of the various hazards that may impact the residents and businesses of the Evergreen Fire Protection District. The following table illustrates the various hazards and their impacts on the fire district.

Table 13: Evergreen Fire Protection District Hazard Summary

Hazard	Geographic Extent	Potential of Future Occurrence	Potential Severity Magnitude	Overall Significance
Drought	Extensive	Likely	Critical	High
Flood	Limited	Likely	Critical	High
Hailstorm	Significant	Likely	Critical	High
Pandemic	Extensive	Occasional	Critical	High
Severe Winter Storms	Extensive	Likely	Critical	High
Wildfire	Significant	Highly Likely	Critical	High
Cyber Attack	Significant	Likely	Limited	Medium
Dam Failure	Limited	Occasional	Critical	Medium
Earthquake	Significant	Unlikely	Catastrophic	Medium
Erosion and Deposition	Significant	Likely	Critical	Medium
Landslide, Debris flow, Rockfall	Limited	Likely	Limited	Medium
Lightning	Limited	Highly Likely	Limited	Medium
Tornado	Limited	Likely	Limited	Medium
Windstorm	Significant	Highly Likely	Limited	Medium
Avalanche	Negligible	Unlikely	Negligible	Low
Expansive Soils	Negligible	Likely	Limited	Low
Extreme Temperatures	Extensive	Likely	Limited	Low
Subsidence	Limited	Occasional	Limited	Low

To further define the terminology used in the previous table, the following table provides context to the impacts.

[2] https://www.jeffco.us/488/Hazard-Mitigation-Plan

Table 14: Evergreen Fire Protection District Hazard Summary Definitions

Geographic Extent	Probability of Future Occurrences
Negligible: Less than 10 percent of planning area or isolated single-point occurrences	Unlikely: Less than 1 percent probability of occurrence in the next year or has a recurrence interval of greater than every 100 years.
Limited: 10 to 25 percent of the planning area or limited single-point occurrences	Occasional: Between a 1 and 10 percent probability of occurrence in the next year or has a recurrence interval of 11 to 100 years.
Significant: 25 to 75 percent of planning area or frequent single-point occurrences	Likely: Between 10 and 90 percent probability of occurrence in the next year, or has a recurrence interval of 1 to 10 years
Extensive: 75 to 100 percent of planning area or consistent single-point occurrences	Highly Likely: Between 90 and 100 percent probability of occurrence in the next year or has a recurrence interval of less than 1 year.

Potential Magnitude/Severity	Overall Significance
Negligible: Less than 10 percent of property is severely damaged, facilities and services are unavailable for less than 24 hours, injuries and illnesses are treatable with first aid or within the response capability of the jurisdiction. Limited: 10 to 25 percent of property is severely damaged, facilities and services are unavailable for between 1 and 7 days, injuries and illnesses require sophisticated medical support that does not strain the response capability of the jurisdiction, or results in very few permanent disabilities. Critical: 25 to 50 percent of property is severely damaged, facilities and services are unavailable or severely hindered for 1 to 2 weeks, injuries and illnesses overwhelm medical support for a brief period of time or result in many permanent disabilities and a few deaths. Catastrophic: More than 50 percent of property is severely damaged, facilities and services are unavailable or hindered for more than 2 weeks, the medical response system is overwhelmed for an extended period of time or many deaths occur.	Low: Two or more of the criteria fall in the lower classifications or the event has a minimal impact on the planning area. This rating is also sometimes used for hazards with a minimal or unknown record of occurrences and impacts or for hazards with minimal mitigation potential. Medium: The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is also sometimes utilized for hazards with a high impact rating but an extremely low occurrence rating. High: The criteria consistently fall along the high ranges of the classification and the event exerts significant and frequent impacts on the planning area. This rating is also sometimes utilized for hazards with a high psychological impact or for hazards that the jurisdiction identifies as particularly relevant.

The Jefferson County 2021 Hazard Mitigation Plan included a list of critical facilities within the fire district's boundaries, as illustrated in the following table.

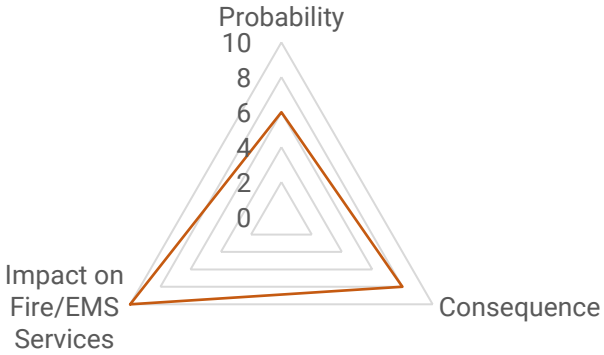
Table 15: Evergreen Fire Protection District Critical Facilities

FEMA Lifeline	Critical Facility Type	Count
Communications	Cellular	3
	FM Transmission	1
	Land Mobile Private Towers	33
	Microwave Service Towers	8
Energy	Electric Substation	1
Food, Water, Shelter	Wastewater Plant	3
Hazardous Material	Tier II	3
Health and Medical	Nursing Home	2
Safety and Security	Fire Station	7
	Government Facility	4
	Law Enforcement	1
	School	11
Transportation	Bridge	37
	Government Facility	3

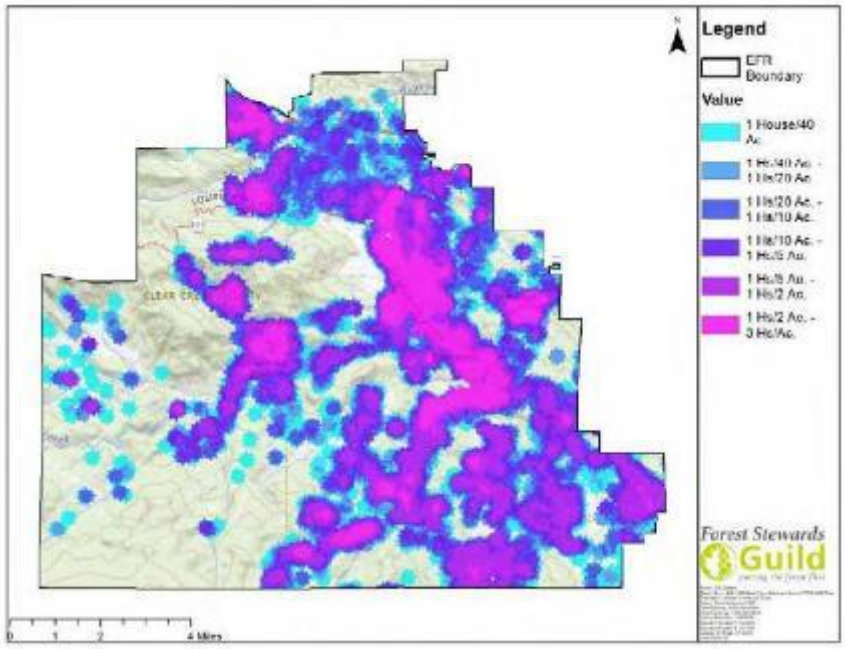
Based on the Jefferson County 2021 Hazard Mitigation Plan, the EFR mitigation plan's goals and objectives target the wildfire hazard. While there are other high-significant hazards, as illustrated, the wildfire hazard is the most prominent in the EFR response district.

Wildland Urban Interface

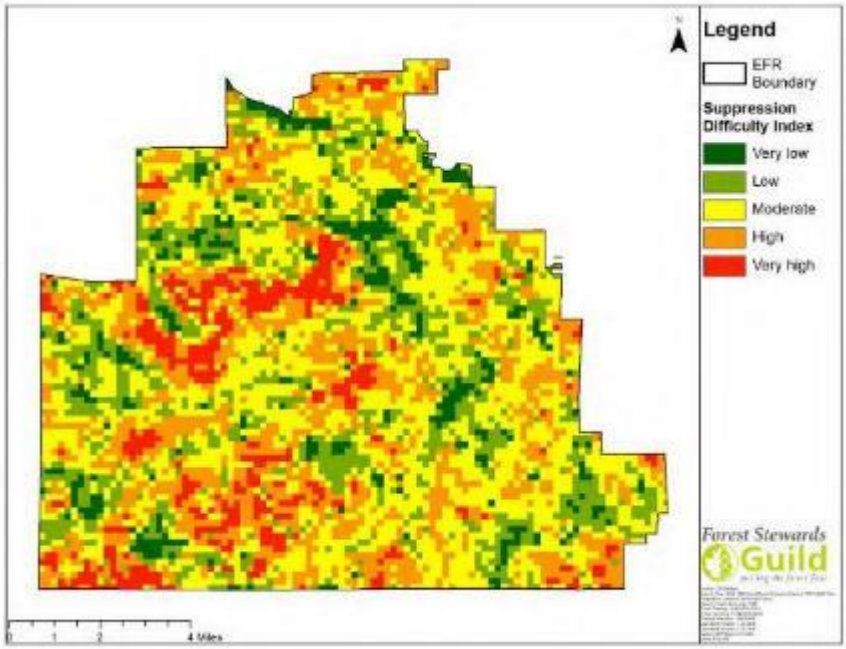
As the population grows and expands towards the forested and grassy areas, an interface between the urban setting and the wildlands is established. This expansion can create a significant hazard to life and property due to wildland fires. EFR has prioritized this hazard and implemented several projects to mitigate the wildland fire risk.



The Wildland Division is responsible for mitigation, education, and support operations for wildland fire activities, including a chipping program, tree-cutting work, and defensible space inspections. A seasonal fuels crew is used to help with wildfire operations support, the chipping program, and cut projects.

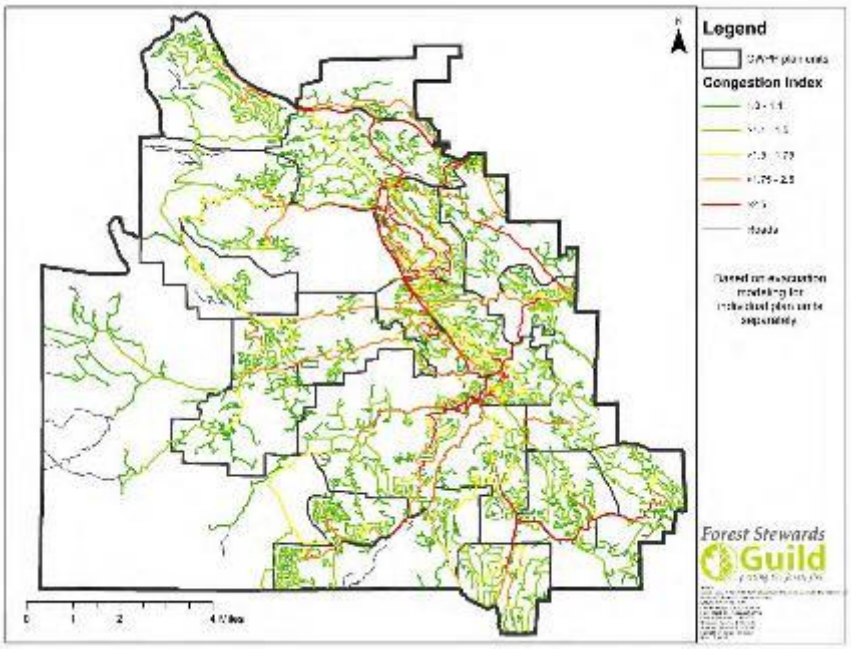


The Forest Stewards Guild updated the Community Wildfire Protection Plan in 2020[3] to provide a detailed risk analysis and mitigation plans to assist mitigation efforts further. Throughout the plan, several significant points should be reiterated. The following map highlights the Wildland Urban Interface in the fire district. According to the report, this map uses housing density per acre, with the lowest density being one house per 40 acres and the highest density of three homes per acre. This map provides a clear visual of the location of the most vulnerable structures in terms of risk. The report also notes the increase in population and the extensive Wildland Urban Interface.



The second significant point is related to the suppression difficulty. This index identifies areas most likely to exhibit extreme fire behaviors

that will be unsafe for firefighters and first responder personnel. The index is based on vegetation rather than structural data and provides information for strategic and tactical decisions in managing fire attack.



The evacuation routes have been widely discussed throughout the risk assessment process, community surveys, and meetings. The CWPP recognizes this issue and modeled traffic flows for an evacuation event. The map produced highlights the congested routes. While this map and associated data should not be used to suggest alternate routes, it does provide pinch points that can be used by law enforcement for traffic control measures.

EFR has made this hazard a high priority and has implemented a Wildland Division with the department. This Division is responsible for the mitigation activities of the Fire District. Activities include fuel management and defensible space inspections. Public education is another part of the Wildland Divisions' efforts to help mitigate the wildland fire hazard.

Physical Environment Hazard Assessment

The EFR is responsible for responding to and mitigating unwanted fires, emergency medical calls, hazardous materials, and wildfires. Each of these incidents presents different hazards and requires different responses to mitigate the incident.

The following sections highlight these responses in terms of risk and the impact on the community and the EFR.

Transportation Hazards

Evergreen is located along the I-70 corridor west of the Denver Metro Area. This corridor is in the northern section of the district. The district has several primary and secondary roads, including the Evergreen Parkway, Highway 74, and Highway 73. The following table illustrates the traffic counts and related projections based on data from the Colorado Department of Transportation for Highway 74.

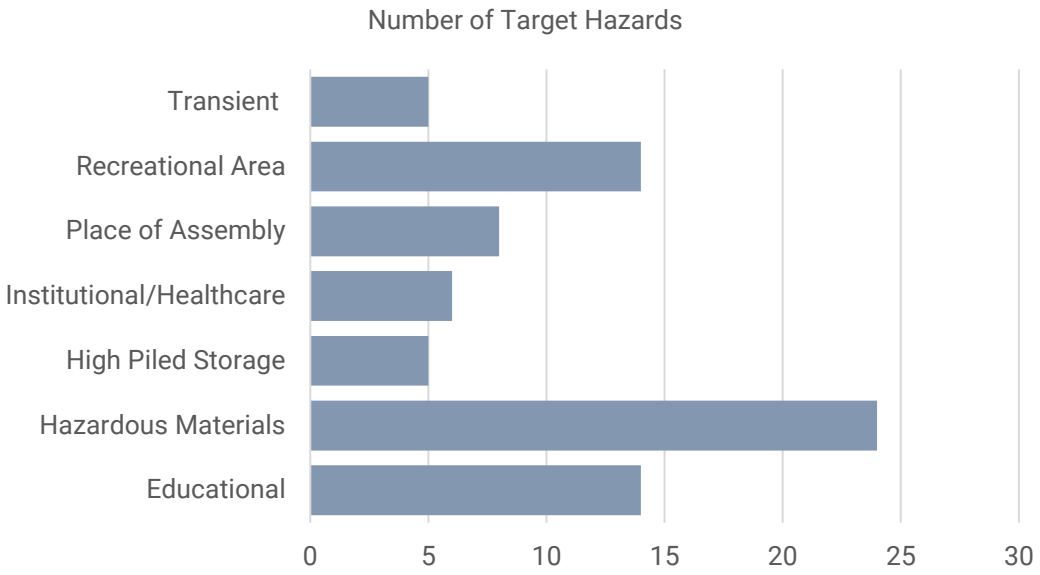
Station ID	Location	2022	2030	2040	2050	Pct Increase
101083	Highway 74 at Bergen Parkway (north intersection)	18,000	18,504	19,134	19,764	9.8%
103318	Highway 74 at County Road 65	20,000	20,480	21,080	21,680	8.4%
101084	Highway 74 at Squaw Pass	19,000	19,380	19,855	20,330	7.0%
103319	Highway 74 at Bergen Parkway (south intersection)	22,000	22,528	23,188	23,848	8.4%
103320	Highway 74 at Lewis Ridge Road	22,000	22,616	23,386	24,156	9.8%
103321	Highway 74 at Stagecoach Blvd.	20,000	20,720	21,620	22,520	12.6%
103323	Highway 74 at Palo Verde Road	23,000	23,552	24,242	24,932	8.4%
103325	Highway 74 at Douglas Park Drive (north intersection)	23,000	23,736	24,656	25,576	11.2%
103326	Highway 74 at Highway 73	18,000	18,360	18,810	19,260	7.0%
103327	Highway 74 at Douglas Park Drive (south intersection)	6,900	7,073	7,211	7,383	7.0%
103328	Highway 74 at Meadow Drive	5,800	5,945	6,061	6,306	8.7%

Highway 74 (Evergreen Parkway) is a major north-south roadway through the district from I-70 south into Evergreen. As illustrated, the average daily counts range from 18,000 to 23,000 vehicles. In 2022, Highway 74 and Highway 73 intersections' traffic count was 18,000 vehicles. The next traffic count station is on Highway 74 at the south intersection with Douglas Park Drive, with a count of 6,900 vehicles in 2022. The traffic count indicates

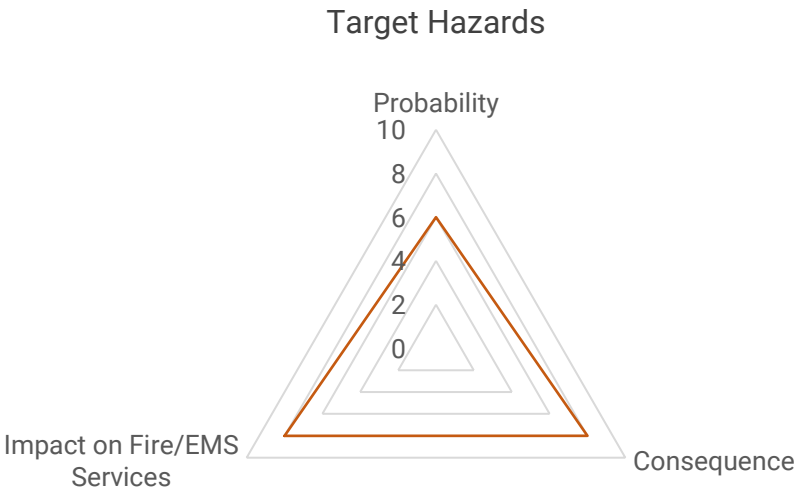
the difference of 11,000 vehicles is either continuing south on Highway 73 or terminating at the Evergreen Lake recreational area. In either scenario, this area is a heavily traveled roadway that likely creates issues for apparatus responding from Station One.

Target Hazards

Target hazards are facilities in the built upon area that may present a unique challenge for the fire department. The Federal Emergency Management Agency (FEMA) defines target hazards as those facilities either in the public or private sector that provide essential products and services to the public, are otherwise necessary to preserve the welfare and quality of life in the community or fulfill crucial public safety, emergency response, or disaster recovery functions. The following chart highlights the number of target hazards based on the data from EFR.



Each of these target hazards presents a significant risk in varying ways, including mass casualty incidents, loss of a business, loss of a cultural asset, or the loss of dwelling units. The following chart illustrates the overall risk score of 55.4 due to the impact on the community and the fire department.



Target hazards were considered an annual occurrence and significantly impacts the fire department.

Emergency Services Delivery

As noted, the fire department is responsible for responding to and mitigating unwanted fires, emergency medical calls, hazardous materials, and wildfires; each incident presents different hazards and requires different responses to mitigate the incident. The following sections highlight these responses in terms of risk and the impact on the community and the fire department.

Low Risk Calls

Using the risk scale previously described, low-risk calls for service are those calls that have a total risk score of 24.99 or less. These calls usually involve only 1 or 2 people and, in terms of resources, do not significantly impact the fire department's response. Many calls occur daily, such as medical calls for service, but may also happen weekly. Evergreen has an average of 4.7 low-risk calls for service each day based on the past three years of calls examined.

Table 16: Low-Risk Calls for Service

- Fire Alarm Calls
- Good Intent Calls
- Hazardous Condition Calls
- Medical Calls
- Overpressure Rupture/Explosion/Overheat
- Rescue Calls – Elevator
- Rescue Calls – Other
- Rescue Calls – Search
- Service Calls
- Smoke Scares
- Vehicle Fire

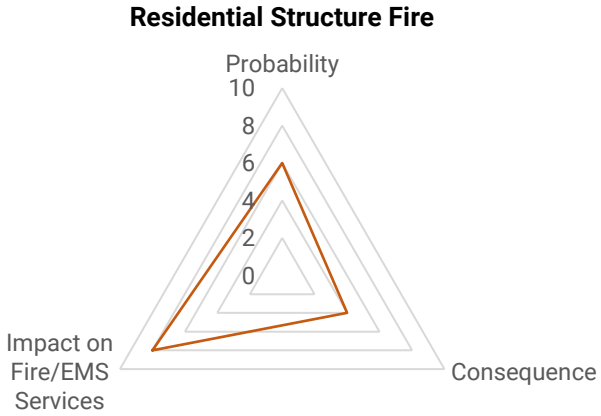
Using medical calls for service as an example, the probability of a call occurring is high, and the consequence is low as it usually involves 1 or 2 residents. The impact on the fire department is low as the response is typically a single unit response with 2 to 3 personnel. The total risk score for a medical call for service is 20.2.

Moderate Risk Calls

Moderate risk calls for service are those calls that have a total risk score of 25 to 49.99. These calls may involve less than ten people and, in terms of resources, may significantly impact the EFR response as two or more resources may be needed. While some of these calls may occur daily, in Evergreen, these calls occur approximately twice a week based on the past three years of calls examined.

Table 17: Moderate-Risk Calls for Service

- Auto Accidents
- Hazardous Materials
- Rescue Calls – Extrication
- Rescue Calls – Technical
- Rescue Calls – Water
- Residential Structure Fire
- Vegetation/Brush



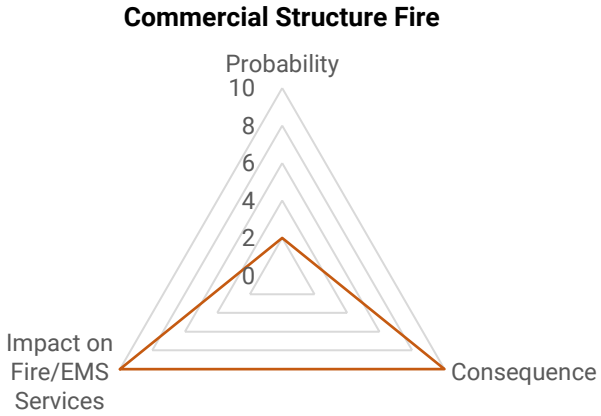
Using a residential structure fire as an example, the probability of a call occurring is probable, and the consequence is moderate as it usually involves 3 to 4 residents. The impact on the fire department is significant as the response will require multiple units and 16 to 17 personnel. The total risk score for a residential structure fire is 44.2.

High Risk Calls

High-risk calls for service are those calls that have a total risk score of 50 to 74.99. These calls may involve less than ten people and, in terms of resources, may have a catastrophic impact on the fire department response and require assistance from other agencies. In the past four years, there have not been any calls that fit this category.

Table 18: High-Risk Calls for Service

- Commercial Structure Fire
- Multi-Casualty over 10 patients
- Target Hazard Structure Fire
- Terrorism Event



As noted, there have not been calls in Evergreen in the past three years that fit this risk category. It is included here to identify the risk and the potential effect of one of these events.

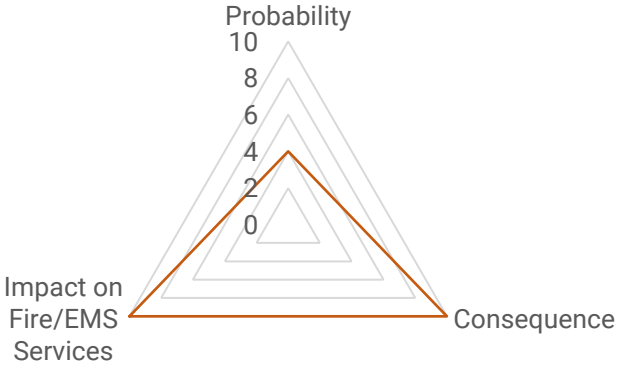
Severe Risk Calls

Severe risk calls for service are those calls that have a total risk score of 75 to 100. These calls will involve more than 100 people, could be spread over a large area, and include specific targets. A response from the fire department will require assistance from other agencies. In the past three years, there have not been any calls that fit this category.

Table 19: Severe Risk Calls for Service

Terrorism Event

- Target Hazard Structure Fire
- Terrorism Event
- Wildland Urban Interface



As noted, there have not been calls in Evergreen in the past three years that fit this risk category. It is included here to identify the risk and the potential effect of one of these events.

Supplemental Risk Factors

This section provides an overview and analysis of factors that can and will impact the delivery of services and the recovery of the community from emergency events.

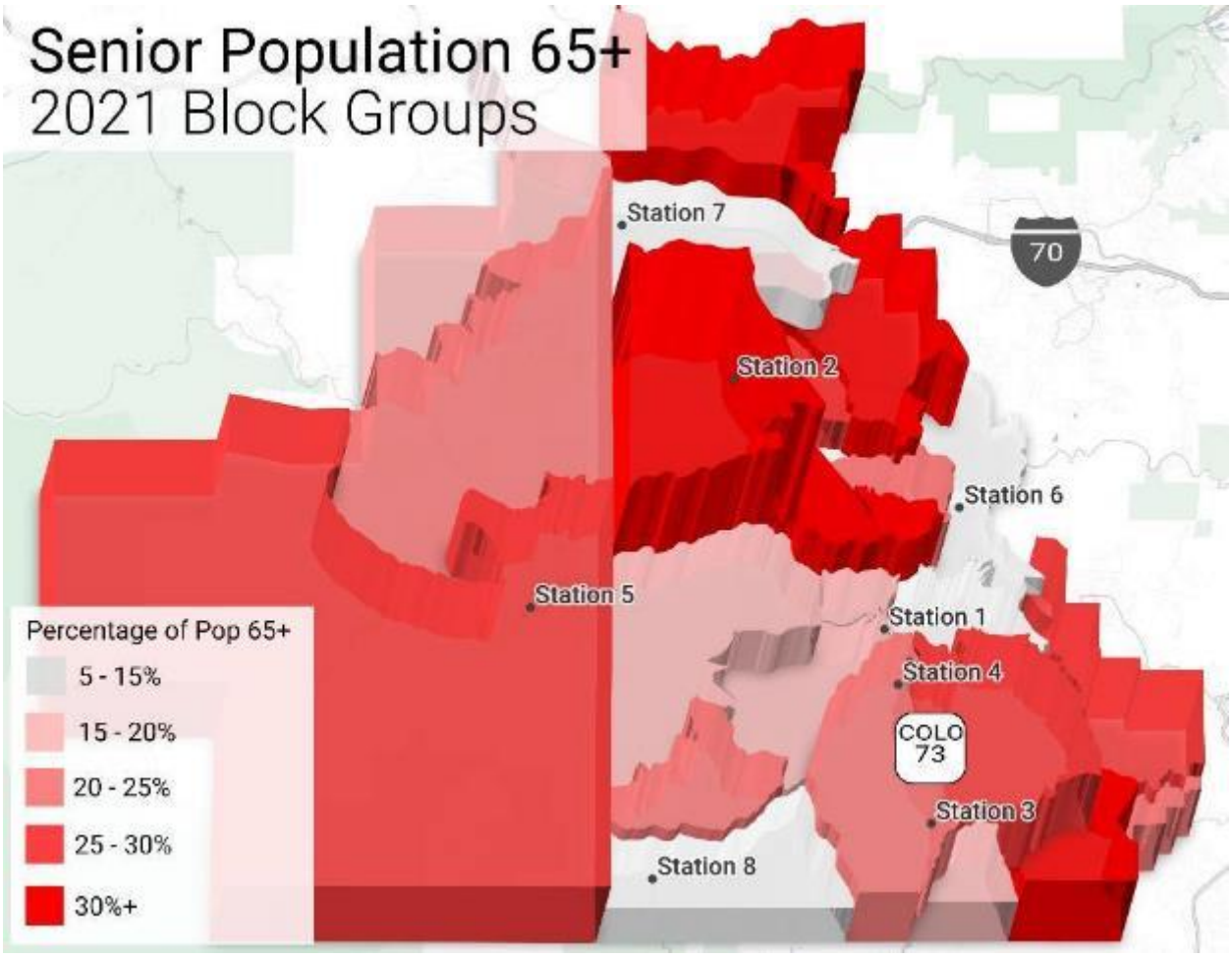
Demographic Vulnerabilities

Aging Population

Like many other demographic groups, senior citizens may be vulnerable to a range of physical, emotional, and financial challenges. It's important to note that vulnerability can vary significantly among individuals, and not all seniors will experience the same issues. Some common vulnerabilities for senior citizens include:

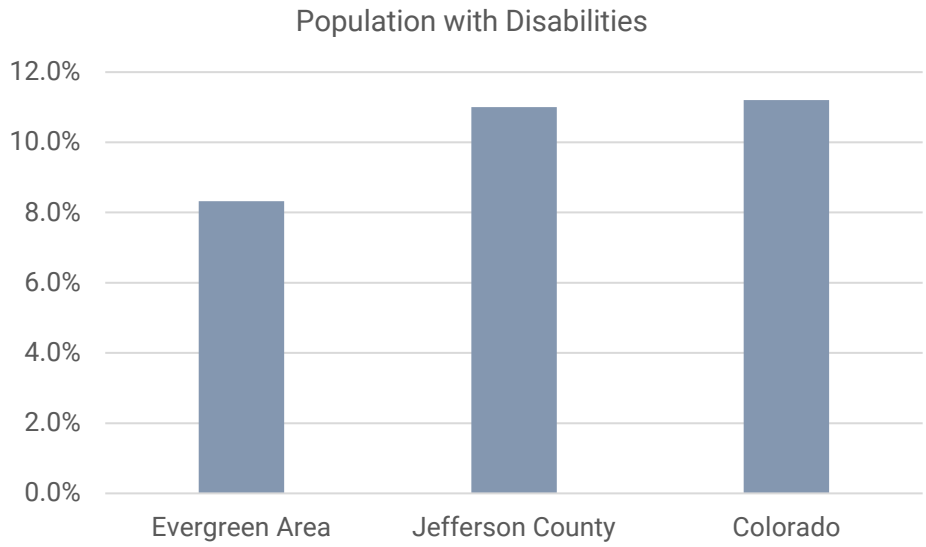
- Physical Health Issues
- Isolation and Loneliness
- Financial Vulnerability
- Elder Abuse
- Healthcare Access and Quality
- Housing Insecurity
- Nutrition and Health
- Technology and Digital Literacy
- Emergency Preparedness
- Legal and End-of-Life Issues

In the Evergreen area, the senior citizen population is increasing. According to the US Census Bureau, residents over 60 were 13% of the total population in 2011. In 2021, that number increased to approximately 30% of the total population. The following map illustrates the distribution of senior citizens within the Evergreen area.

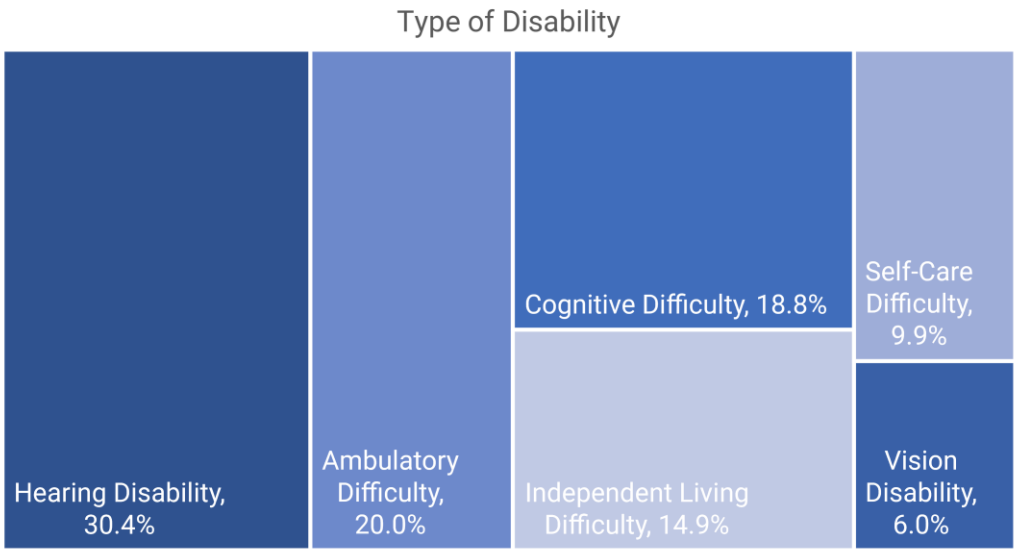


Population with Disabilities

Another population group that will likely require additional assistance is those with disabilities. Those within this population group may need additional medical services due to their disability, or they may be unable to self-evacuate from their home or other building during an emergency. This may be exacerbated if a wildland fire evacuation is necessary. The following chart illustrates the percentage of the population with disabilities compared to Jefferson County and the State of Colorado.



To further highlight the issue of disabilities, the following chart illustrates the types of disabilities in the Evergreen area.

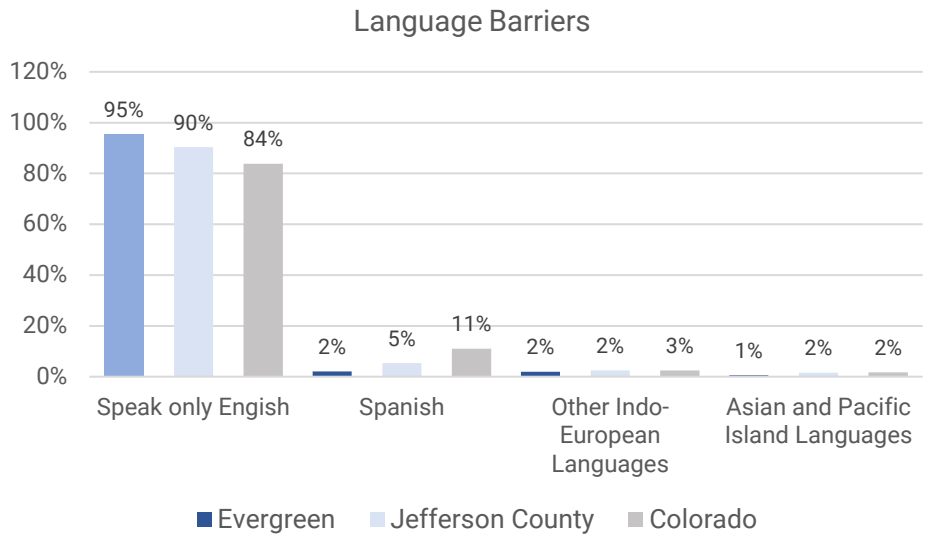


The hearing disability is the largest group, with ambulatory issues close behind.

Language Barriers

As more individuals and families come to the United States from other countries, the language barriers are also increasing. EFR personnel may encounter an individual or family needing another type of communication. These encounters could be on calls for

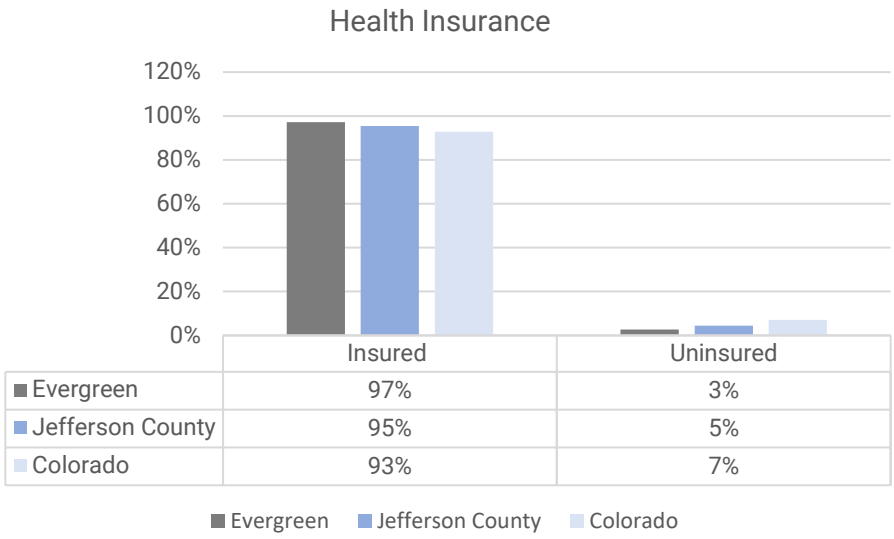
service, public education events, or evacuation notices. The following chart highlights the percentage of people over the age of 5 who may have a language barrier based on the language spoken at home.



In the Evergreen area, approximately 2% of the population speaks Spanish in the home compared to 11% in Colorado.

Health Care Insurance

The lack of health care insurance can impact the community and EFR. Those with insurance can typically access healthcare services and will have a reduced financial burden. Insured individuals are less likely to use emergency rooms for non-emergency care and other emergency services. Lack of health insurance may affect lower-income populations at a higher rate since they cannot pay for medical visits.



	Insured	Uninsured
Evergreen	97%	3%
Jefferson County	95%	5%
Colorado	93%	7%

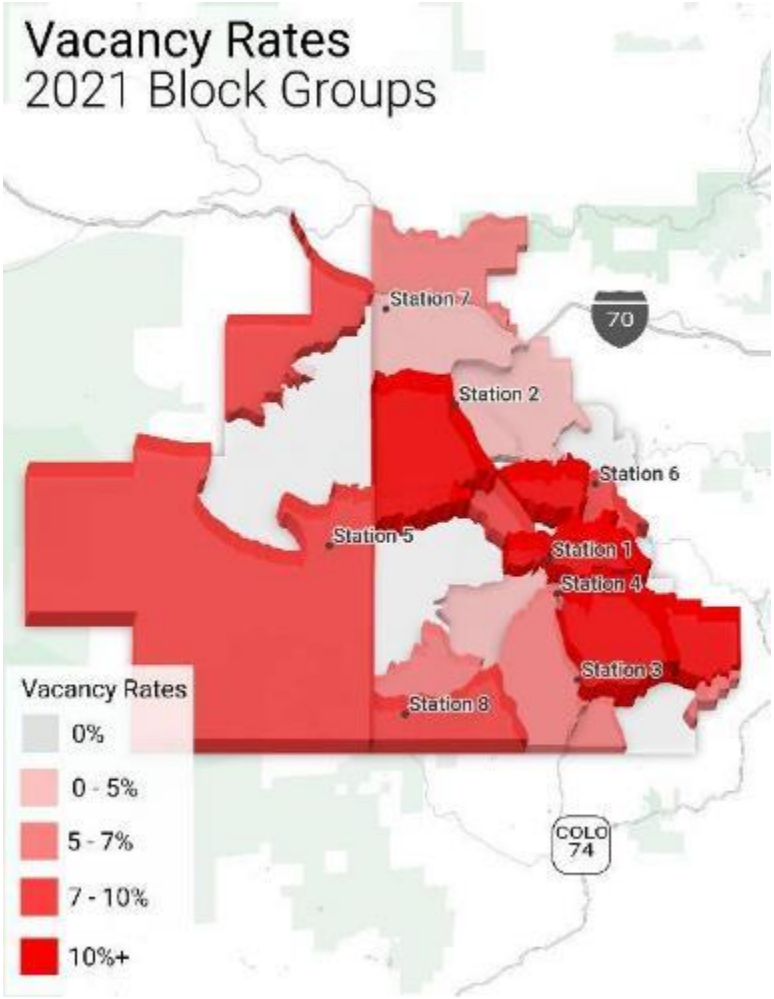
In Colorado, approximately 7% of the population is without healthcare insurance, which is higher than in the Evergreen area, with about 3% uninsured.

Housing

Using the zip codes 80457 and 80439, the US Census Bureau estimated approximately 11,241 housing units in the Evergreen area. Of the occupied housing units, about 93% are single-family residences, and the remaining are multi-family. About 89% of these units were constructed before 2000. Additionally, 12% were renter-occupied housing. The fire risk is more significant in older buildings with outdated building codes, which may have a building construction, type of materials, or wiring that increases the risk and spread of fire. Research from the National Fire Protection Association has also noted rental property as a factor in fires involving unsafe human behavior and fatal fires.

In Colorado, numerous homes are owned by second homeowners, investment buyers, and vacation rentals. Evergreen has recognized the vacation rental and air b-n-b rentals as an issue; however, there is no mechanism to know the actual number of these homes.

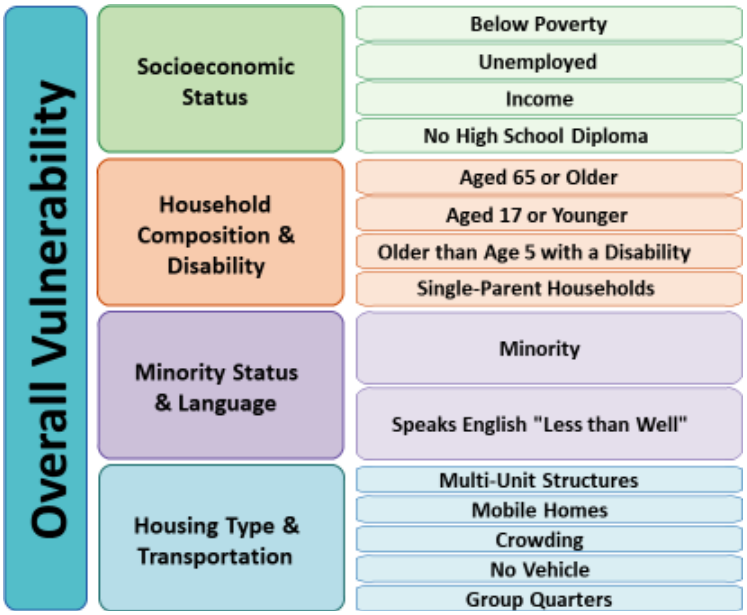
The National Fire Protection Association (NFPA) reports that from 2011 to 2015, fire departments responded to an average of 30,200 structure fires per year in vacant properties. According to the report, fires in vacant buildings are more likely to have been intentionally set and spread beyond the building than in other structures. The following map illustrates the vacant buildings by census tract, based on estimates from the U.S. Census Bureau for 2021.



The higher vacancy rate areas to the east of Stations 3 and 4 are rural areas with limited numbers of residences. Other areas, such as west of Station Two, are large recreational areas.

Social Vulnerability

The Centers for Disease Control and Prevention (CDC) created the Social Vulnerability Index (SVI) to assist public health and emergency response organizations in identifying and mapping the areas of a community that will most likely need support before, during, and after a hazardous event. The SVI is determined by examining socioeconomics, housing composition, and residents with disabilities. The following chart from the CDC illustrates the United States (US) Census Bureau data used to calculate the areas' SVI.



As noted, 15 social factors are grouped into four themes to create a vulnerability index. Each element receives a ranking that is combined into the overall theme. It is possible to have an area that has a lower ranking in terms of housing but has a higher ranking due to the age of the residents and the type of household, such as single-parent households. The intent is not to identify impoverished areas of a community but to identify areas that may require additional assistance following an emergency event.

This tool uses specific socially and spatially relevant information to assist public health officials and local planners better prepare communities to respond to emergencies such as severe weather, floods, disease outbreaks, or chemical exposure.

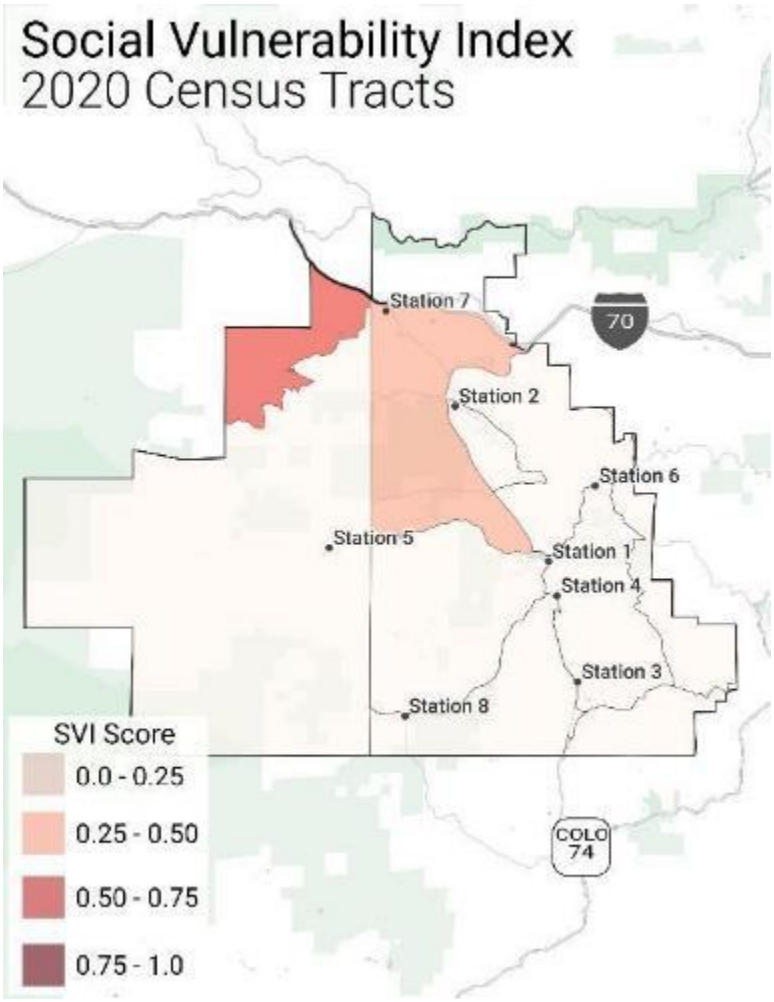
The tool can be used to:

- Allocate emergency preparedness funding by community need.
- Estimate the amount and type of needed supplies such as food, water, medicine, and bedding.
- Decide how many emergency personnel are required to assist people.
- Identify areas in need of emergency shelters.
- Create a plan to evacuate people, accounting for individuals with unique needs, such as those without access to transportation, those with limited mobility or

medical requirements, or those with communication barriers such as language access.

- Identify communities needing continued support to recover following an emergency or natural disaster.

The following map illustrates the SVI score by census blocks for the District.



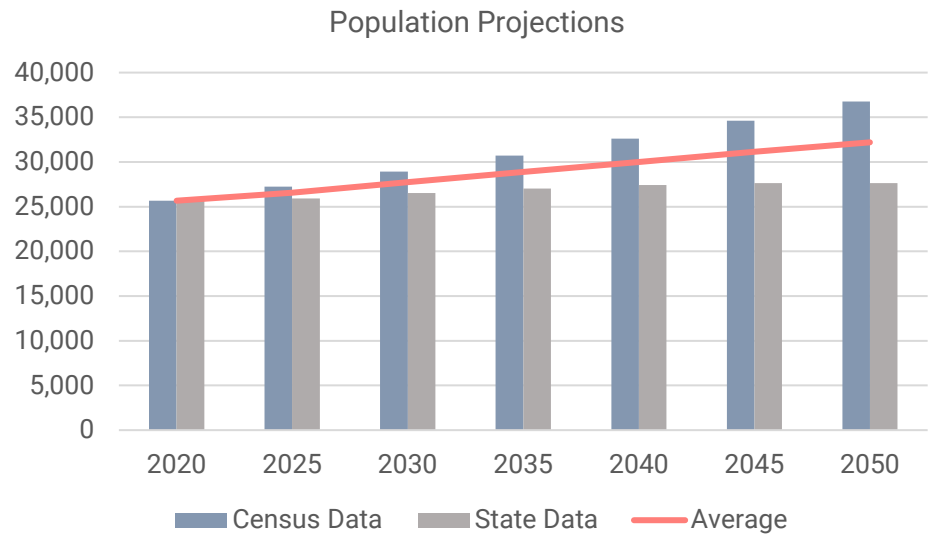
The highest SVI scores are in the Floyd Hill and Beaver Brook areas and the area west of Bergen Park in the Echo Hills and Fillius Parks areas. The elevated SVI score in these areas may be partly due to the types of housing and residential units or, most likely, topography and access. This is not an indication these areas are deprived. It is an indication these areas will probably need additional assistance in the event of an emergency or other significant incident.

Community Growth and Development

This section provides an overview of the anticipated growth within the District and the projection of the demand for services.

Population Changes

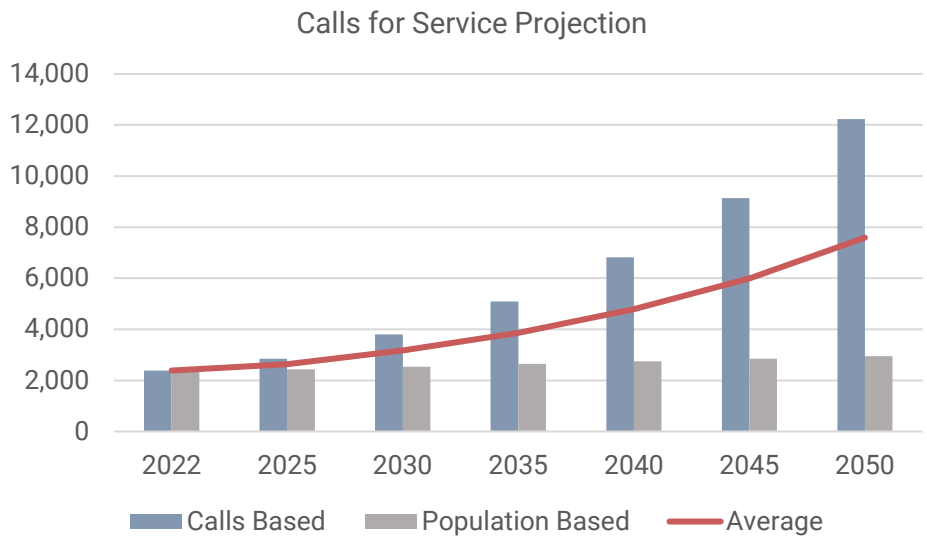
In 2022, the Colorado Department of Local Affairs published population growth projections for each county to 2050. Jefferson County was projected to have an average 0.2% population increase yearly from 2021 through 2050. Extrapolating similar projections for Evergreen, the population would be projected to increase from 25,669 in 2020 to 27,637 in 2050. The following chart illustrates the population growth based on the Colorado Department of Local Affairs projections and data from the US Census Bureau.



Using US Census data for the past ten years, the annual growth rate is approximately 1.2%, which translates to a population projection of 36,754 in 2050, provided that the growth rate continues. The Colorado Department of Local Affairs data is more conservative with the growth projections. Using the average between the two data sets provides a population projection of approximately 32,195 by 2050.

Emergency Services Demand Projection

As the population in an area continues to grow and new buildings are constructed, the demand for services will also increase. These services take many forms for local government, including public works, parks, law enforcement, and fire and emergency medical services. For Evergreen Fire/Rescue, the calls for service have increased an average of 6% each year from 2020 to 2022. Population growth has risen approximately 1.2% annually for the past ten years. The following chart illustrates the projected calls for service through 2050.

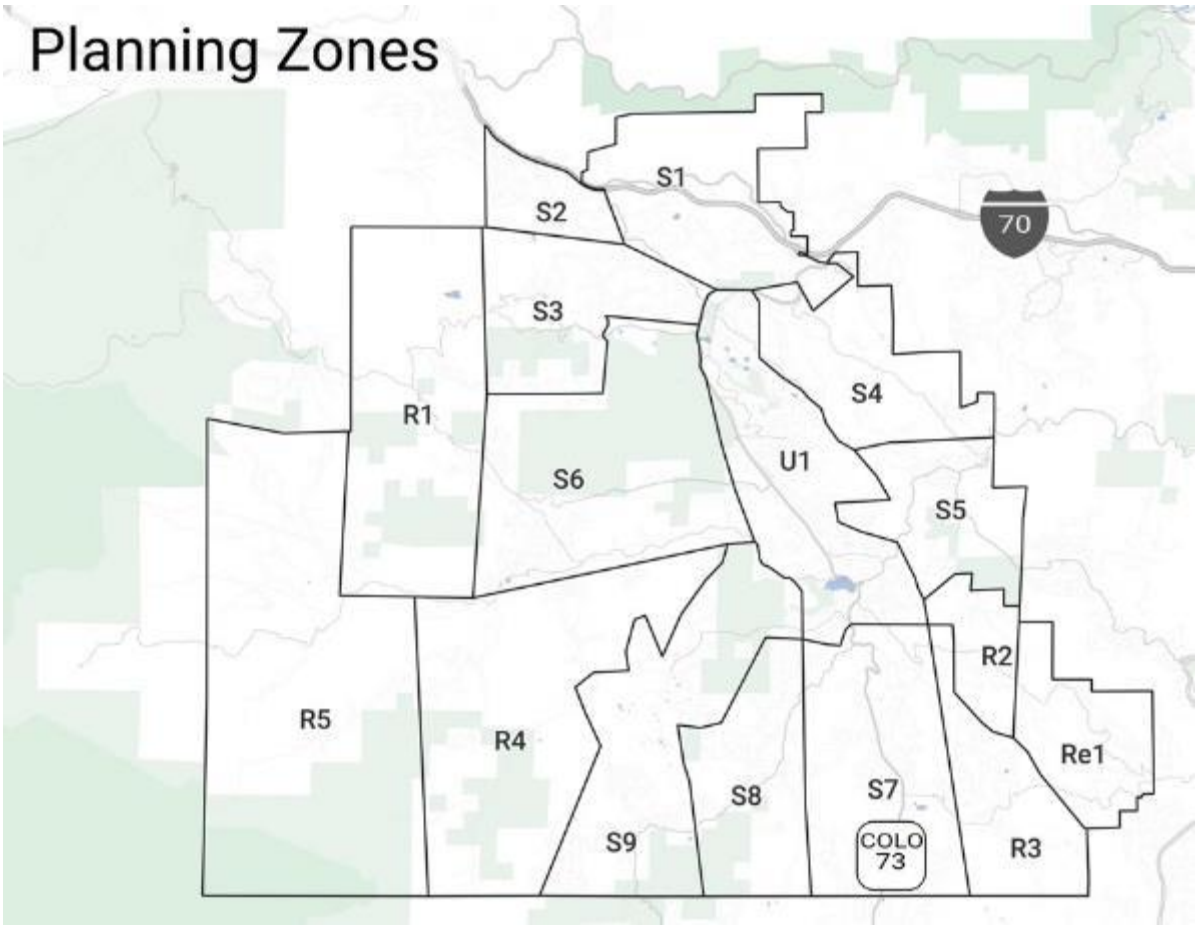


The calls for service projection are shown based on population growth and historical call volume. Over the past three years, the average call volume has been 0.09 calls per person. Based on the population projections, the calls for service in 2050 are projected to be 2,952 per year. Over the past three years, the call volume has increased an average of 6% per year. Using the historical calls for service as a base, in 2050, the number of calls will be 12,227. The average between the two methods is 7,590 in 2050.

It should be noted that a few factors may contribute to the differences between these two estimating methods. First, the pandemic in 2020 was responsible for many departments nationwide experiencing a drop or minimal growth in call volume. Then, the following year, the same departments experienced a significant increase in call volume. Considerations should also be given to the population estimates from the two sources, with the Colorado Department of Local Affairs being much more conservative with their projections.

Planning and Assessment Zones

Using planning zones allows the fire district to document various categories and classes of risk. These areas will also be used in the response analysis using baseline and benchmark performance objectives to determine incident response distribution and resource allocations. The following map illustrates that the fire district has sixteen planning zones.



The planning zones were developed using the population centers in the fire district and those areas with anticipated growth. This will allow the Fire District to monitor and evaluate service needs in the future.

The previous map used numbers to designate the planning zone, making it easier to view the zones. The following table provides a brief description of the zone and a summary of each zone.

Table 20: Planning Zone Overview

Zone	Area	Pct of Population	Pct of Area	Pct of Calls for Service
Remote 1	High Drive	1.1%	9.1%	2.0%
Rural 1	Witter Gulch	2.0%	1.7%	1.0%
Rural 2	Bear Mountain	3.0%	3.7%	1.3%
Rural 3	North Turkey Creek	1.9%	10.6%	1.7%
Rural 4	Bear Creek West	0.4%	16.1%	1.3%
Rural 5	Western Evergreen	3.2%	3.3%	0.7%
Suburban 1	North Evergreen	2.9%	5.8%	8.2%
Suburban 2	Floyd Hill	2.7%	1.6%	1.8%
Suburban 3	Beaver Brook	4.7%	4.6%	2.8%
Suburban 4	Kerr Gulch	5.7%	4.5%	3.9%
Suburban 5	Kittridge	6.4%	3.7%	5.5%
Suburban 6	Echo Hills	7.3%	9.4%	5.9%
Suburban 7	Marshdale	9.6%	7.0%	8.8%
Suburban 8	Blue Creek	6.8%	4.6%	4.7%
Suburban 9	Buffalo Creek South	9.1%	7.6%	6.8%
Urban 1	Bergen Park/Hiwan Hills	33.1%	6.6%	45.2%

The urban zone that includes Bergen Park and Hiwan Hills has the largest percentage of the population and the calls for service. The following sections provide a detailed view of each planning zone.

Planning Zone U1 – Bergen Park/Hiwan Hills

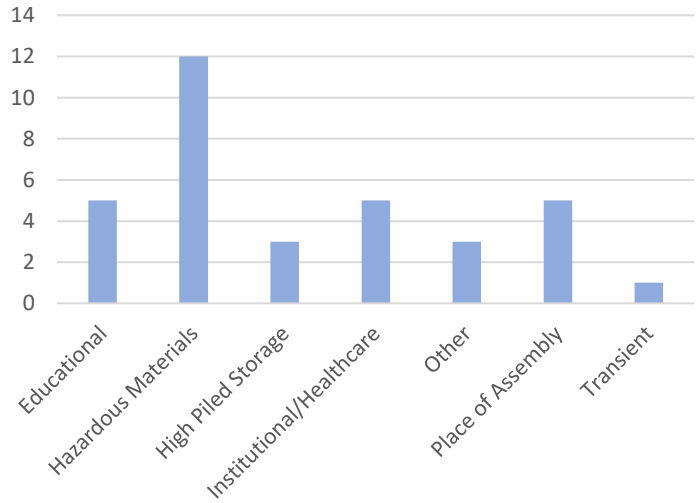
This zone is in the center section of the district and represents the most densely populated area, with slightly more than 1,000 people per square mile. The following illustration highlights the key points for this planning zone.

Table 21: Planning Zone U1 – Bergen Park/Hiwan Hills

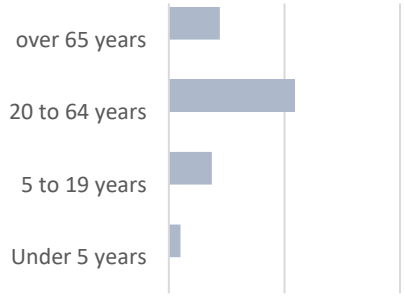
Population:	8,155
Housing Units:	3,569
Square Miles:	7.65
Density:	1,066.0
Avg Per Household	2.3

Calls for Service		
		Pct of Total
2020	889	41.7%
2021	964	44.1%
2022	1,043	50.0%

Target Hazards



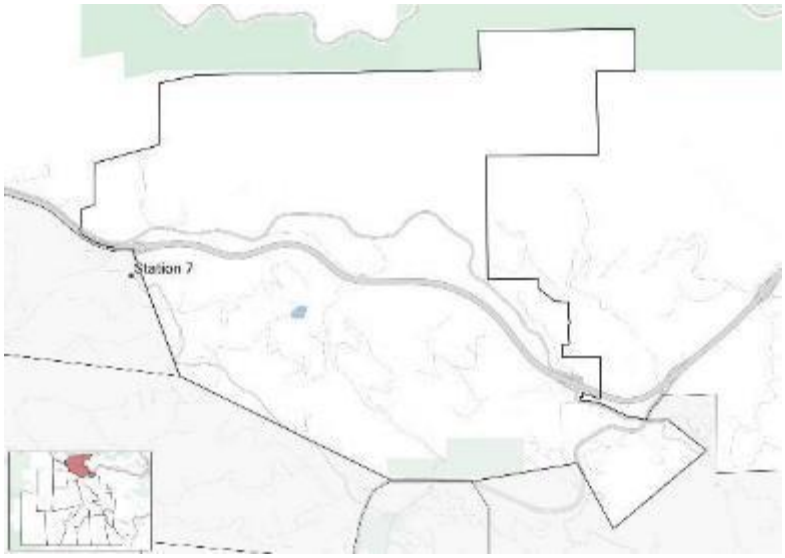
Age Demographics



Planning Zone S1 – North Evergreen

This zone is in the district's northern section, which includes the I-70 corridor and a growing area for new housing units. The following illustration highlights the key points for this planning zone.

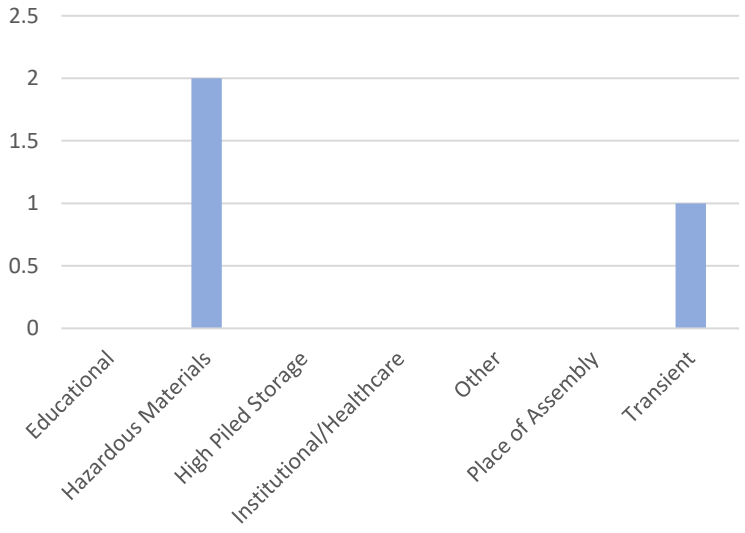
Table 22: Planning Zone S1 – North Evergreen



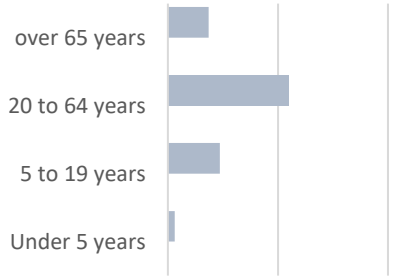
Population:	726
Housing Units:	311
Square Miles:	6.77
Density:	107.2
Avg Per Household	2.3

Calls for Service		
		Pct of Total
2020	180	8.5%
2021	144	6.6%
2022	198	9.5%

Target Hazards



Age Demographics



Planning Zone S2 – Floyd Hill

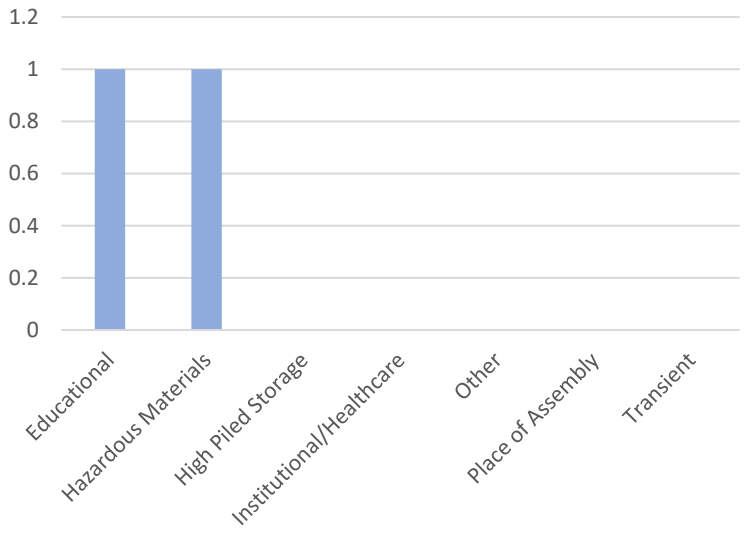
This zone is in the northern section of the district that borders the I-70 corridor and includes areas of housing growth. The following illustration highlights the key points for this planning zone.

Table 23: Planning Zone S2 – Floyd Hill

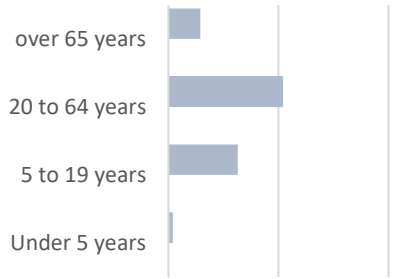
Population:	664
Housing Units:	309
Square Miles:	1.89
Density:	350.6
Avg Per Household	2.1

Calls for Service		
		Pct of Total
2020	28	1.3%
2021	44	2.0%
2022	44	2.1%

Target Hazards



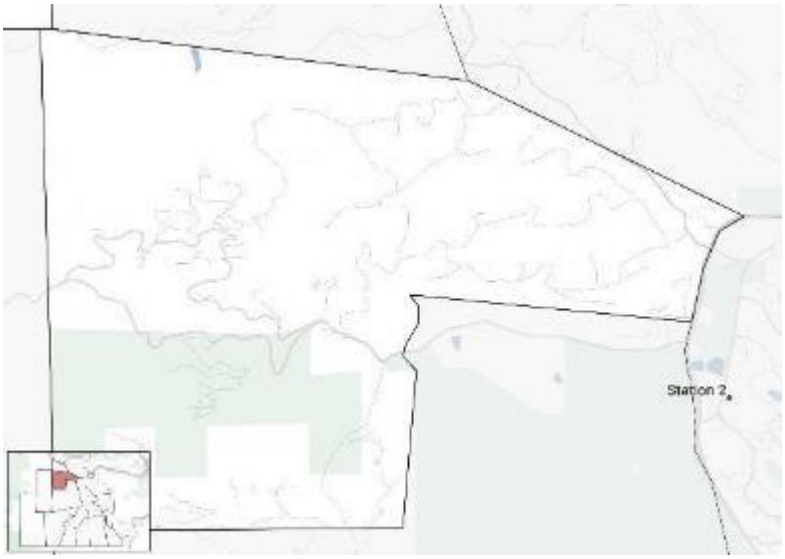
Age Demographics



Planning Zone S3 – Beaver Brook

This zone is in the northwestern section of the district and is adjacent to the urban center of the district. The following illustration highlights the key points for this planning zone.

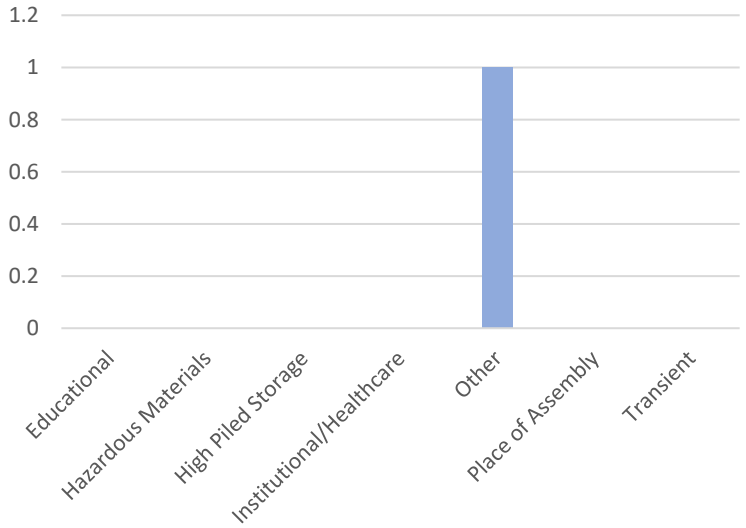
Table 24: Planning Zone S3 – Beaver Brook



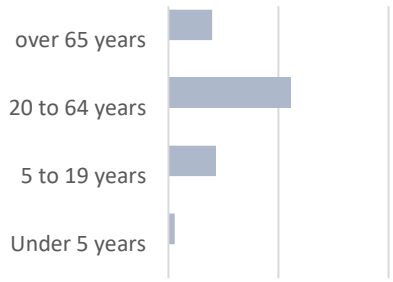
Population:	1,152
Housing Units:	503
Square Miles:	5.37
Density:	214.4
Avg Per Household	2.3

Calls for Service		
		Pct of Total
2020	62	2.9%
2021	51	2.3%
2022	69	3.3%

Target Hazards



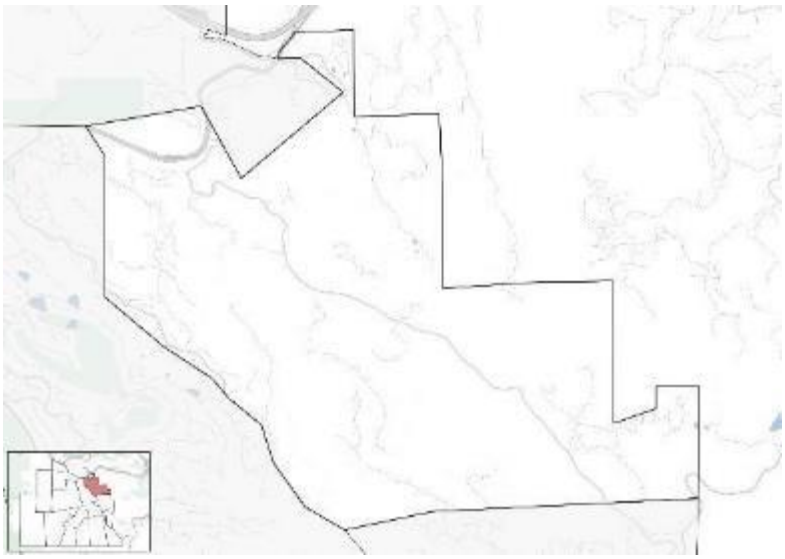
Age Demographics



Planning Zone S4 – Kerr Gulch

This zone is in the northeastern section of the district and is adjacent to the urban center of the district. The following illustration highlights the key points for this planning zone.

Table 25: Planning Zone S4 – Kerr Gulch

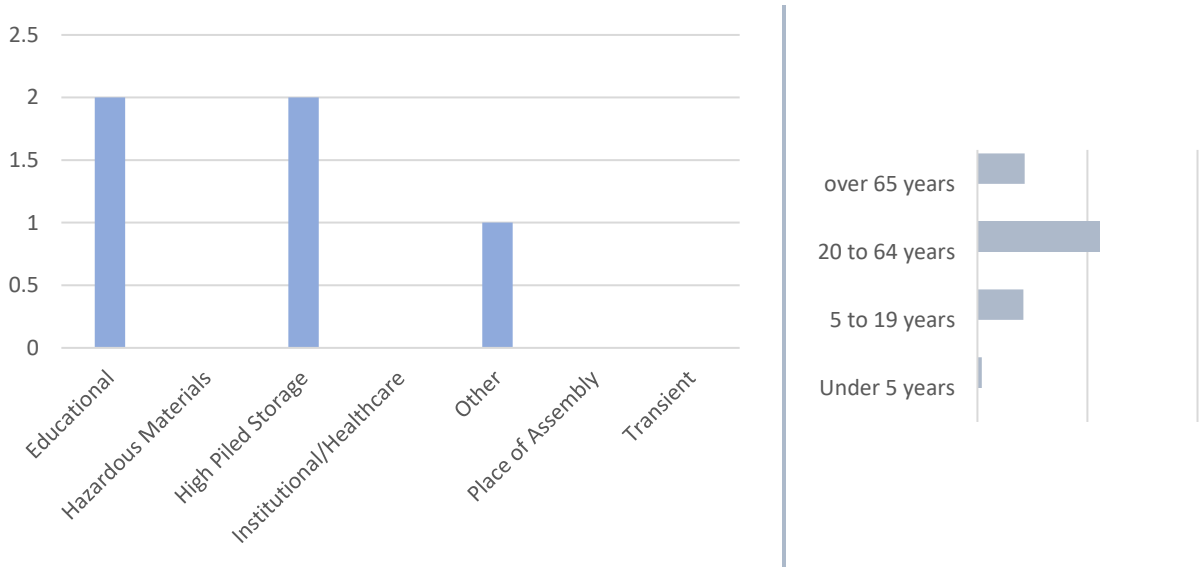


Population:	1,394
Housing Units:	543
Square Miles:	5.21
Density:	267.4
Avg Per Household	2.6

Calls for Service		
		Pct of Total
2020	108	5.1%
2021	61	2.8%
2022	82	3.9%

Target Hazards

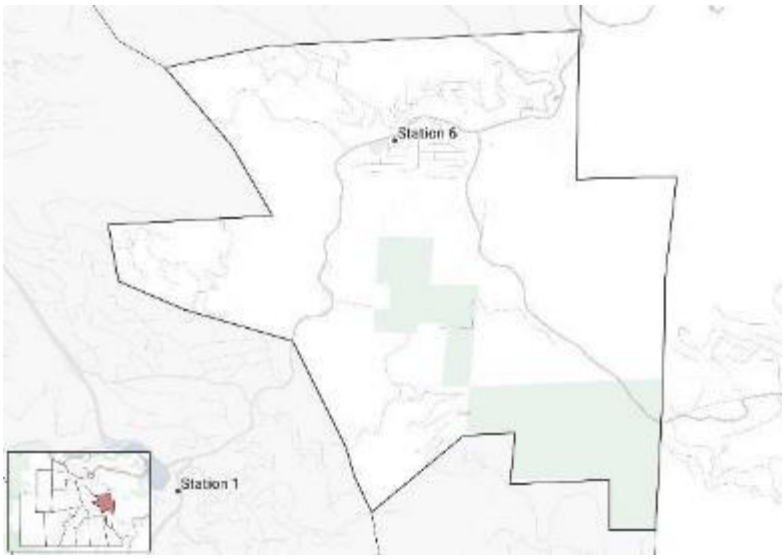
Age Demographics


2.5
2
1.5
1
0.5
0
Educational
Hazardous Materials
High Piled Storage
Institutional/Healthcare
Other
Place of Assembly
Transient
over 65 years
20 to 64 years
5 to 19 years
Under 5 years

Planning Zone S5 – Kittredge

This zone is in the eastern section of the district, including the Kittredge area. The following illustration highlights the key points for this planning zone.

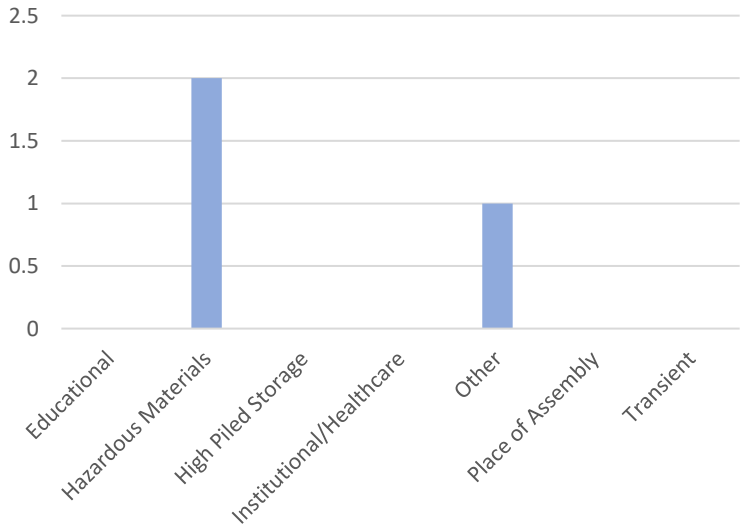
Table 26: Planning Zone S5 – Kittredge



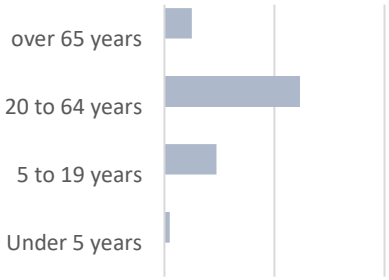
Population:	1,583
Housing Units:	712
Square Miles:	4.28
Density:	370.3
Avg Per Household	2.2

Calls for Service		
		Pct of Total
2020	97	4.6%
2021	115	5.3%
2022	138	6.6%

Target Hazards



Age Demographics



Planning Zone S6 – Echo Hills

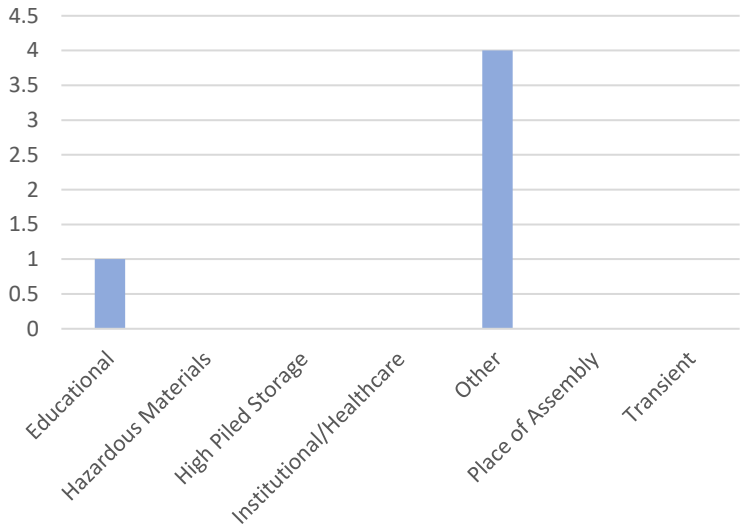
This zone is in the central western section of the district and is adjacent to the urban center along the Evergreen Parkway. This zone also includes areas of anticipated housing growth. The following illustration highlights the key points for this planning zone.

Table 27: Planning Zone S6 – Echo Hills

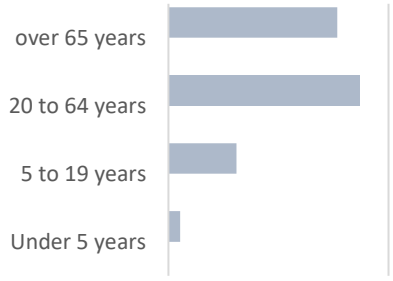
Population:	1,798
Housing Units:	922
Square Miles:	10.87
Density:	165.4
Avg Per Household	2.0

Calls for Service		
		Pct of Total
2020	138	6.5%
2021	126	5.8%
2022	116	5.6%

Target Hazards



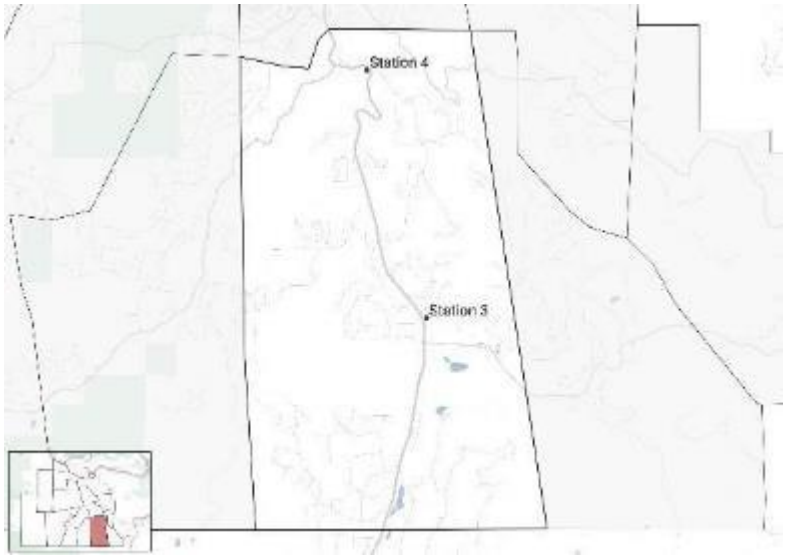
Age Demographics



Planning Zone S7 – Marshdale

In the central southern section of the district, this zone includes Highway 73 from Evergreen south to the southern end of the district. This zone also contains areas of anticipated housing growth. The following illustration highlights the key points for this planning zone.

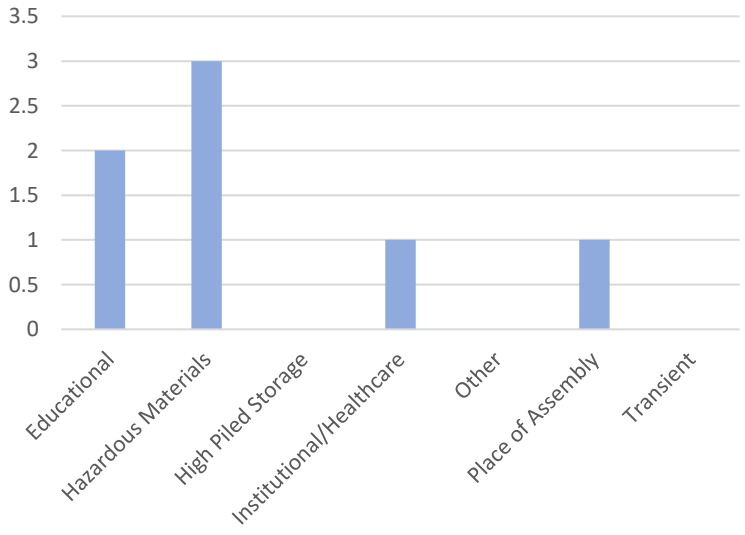
Table 28: Planning Zone S7 – Marshdale



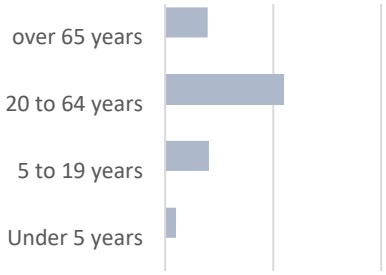
Population:	2,376
Housing Units:	1,001
Square Miles:	8.15
Density:	291.6
Avg Per Household	2.4

Calls for Service		
		Pct of Total
2020	164	7.7%
2021	188	8.6%
2022	210	10.1%

Target Hazards



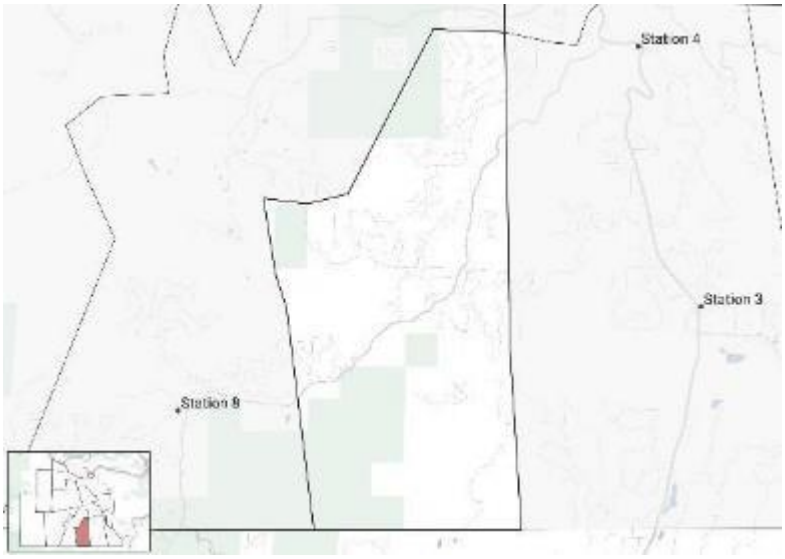
Age Demographics



Planning Zone S8 – Blue Creek

In the central southern section of the district, this zone is along the western border of Marshdale and includes areas such as Evergreen Heights and Estates. The following illustration highlights the key points for this planning zone.

Table 29: Planning Zone S8 – Blue Creek

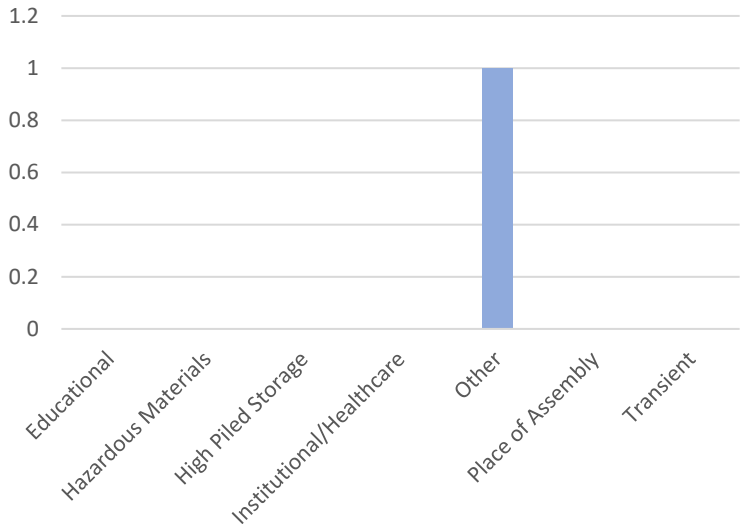


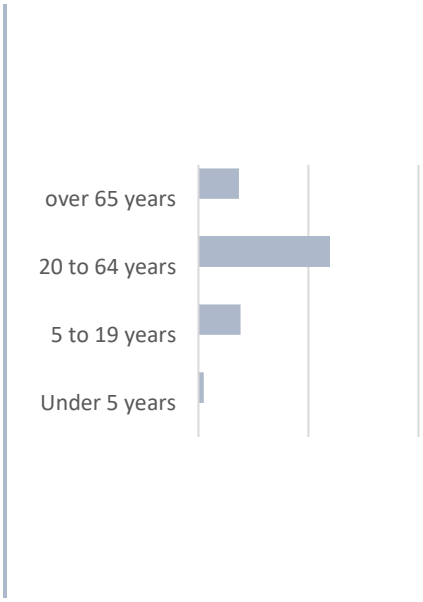
Population:	1,677
Housing Units:	734
Square Miles:	5.30
Density:	316.4
Avg Per Household	2.3

Calls for Service		
		Pct of Total
2020	92	4.3%
2021	106	4.9%
2022	105	5.0%

Target Hazards

Age Demographics


1.2
1
0.8
0.6
0.4
0.2
0
Educational
Hazardous Materials
High Piled Storage
Institutional/Healthcare
Other
Place of Assembly
Transient


over 65 years
20 to 64 years
5 to 19 years
Under 5 years

Planning Zone S9 – Buffalo Creek South

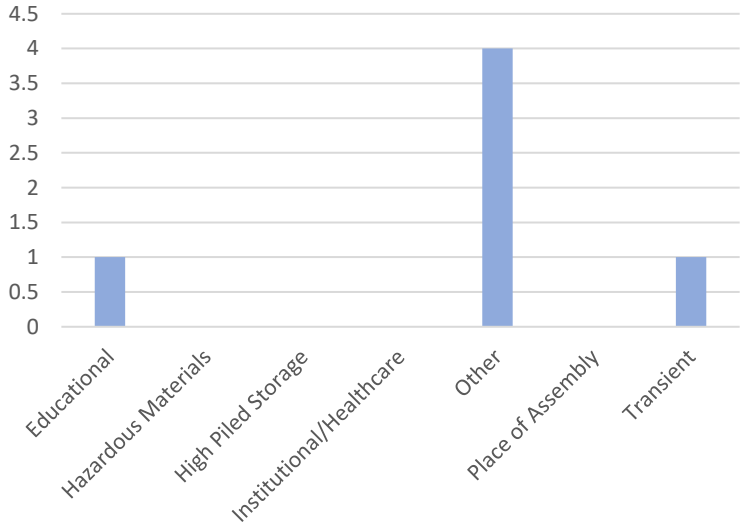
In the southwestern section of the district, this zone includes several small pockets of suburban densities, such as Brook Forest. The following illustration highlights the key points for this planning zone.

Table 30: Planning Zone S9 – Buffalo Creek South

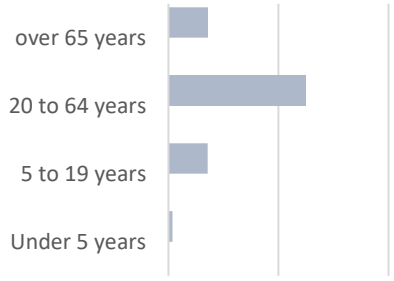
Population:	2,239
Housing Units:	995
Square Miles:	8.82
Density:	253.8
Avg Per Household	2.3

Calls for Service		
		Pct of Total
2020	146	6.9%
2021	155	7.1%
2022	135	6.5%

Target Hazards



Age Demographics



Planning Zone R1 – Witter Gulch

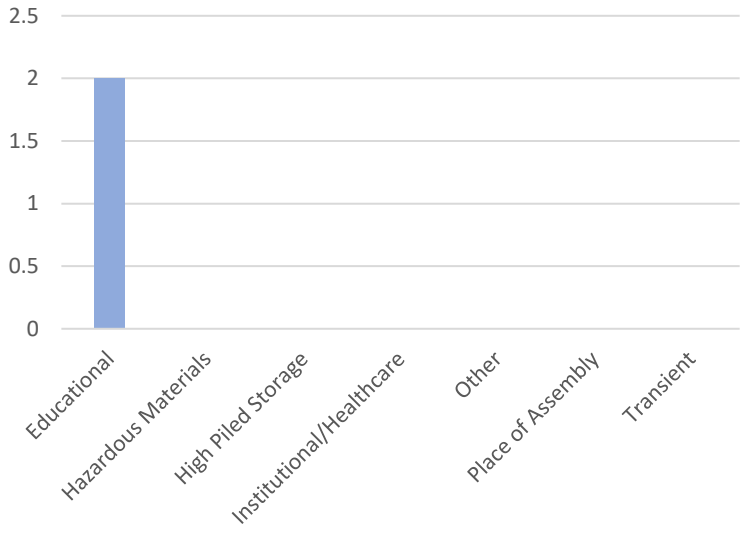
This zone is a rural area located in the western section of the district with several recreational areas. The following illustration highlights the key points for this planning zone.

Table 31: Planning Zone R1 – Witter Gulch

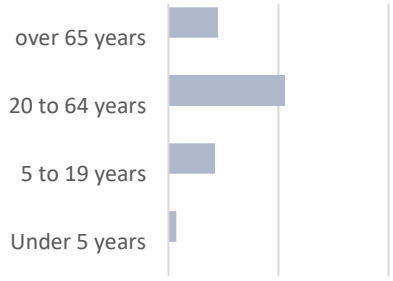
Population:	491
Housing Units:	223
Square Miles:	2.00
Density:	245.4
Avg Per Household	2.2

Calls for Service		
		Pct of Total
2020	20	0.9%
2021	23	1.1%
2022	21	1.0%

Target Hazards



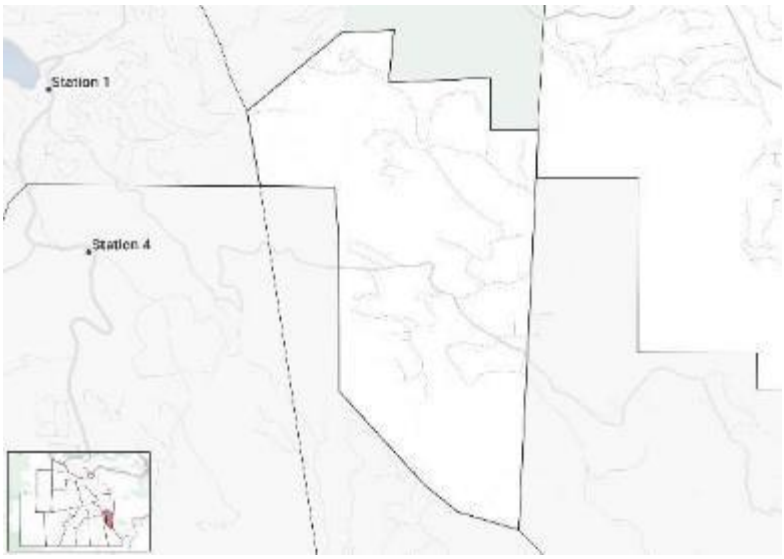
Age Demographics



Planning Zone R2 – Bear Mountain

In the southeastern section of the district, this zone is a rural area adjacent to Evergreen. The following illustration highlights the key points for this planning zone.

Table 32: Planning Zone R2 – Bear Mountain



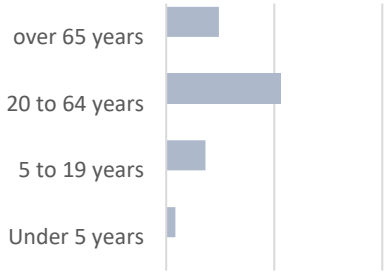
Population:	733
Housing Units:	333
Square Miles:	4.27
Density:	171.9
Avg Per Household	2.2

Calls for Service		
		Pct of Total
2020	24	1.1%
2021	31	1.4%
2022	26	1.2%

Target Hazards

No Target Hazards in this Planning Zone

Age Demographics



Planning Zone R3 – North Turkey Creek

In the far southeastern section of the district, this zone is a rural area adjacent to the Marshdale area. The following illustration highlights the key points for this planning zone.

Table 33: Planning Zone R3 – North Turkey Creek

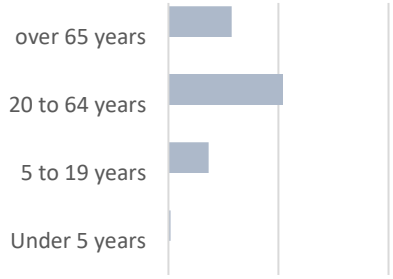
Population:	480
Housing Units:	239
Square Miles:	12.31
Density:	39.0
Avg Per Household	2.0

Calls for Service		
		Pct of Total
2020	38	1.8%
2021	28	1.3%
2022	46	2.2%

Target Hazards

No Target Hazards in this Planning Zone

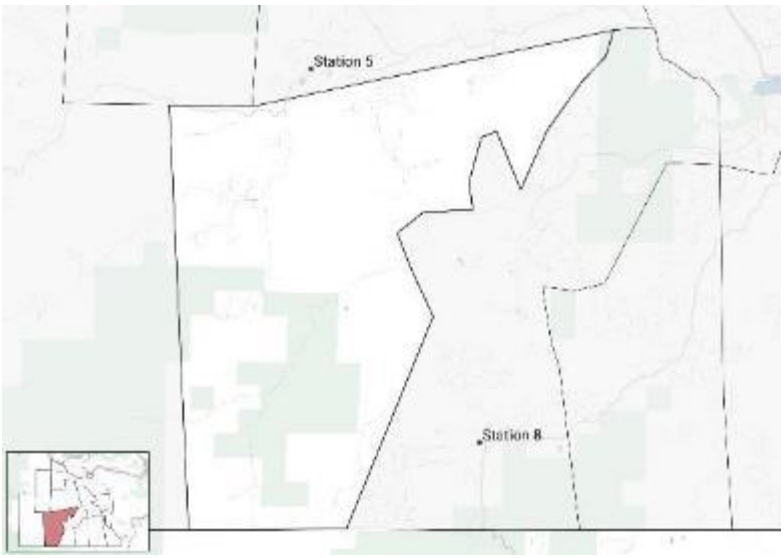
Age Demographics



Planning Zone R4 – Bear Creek West

This rural planning zone is located in the southwestern section of the district. The following illustration highlights the key points for this planning zone.

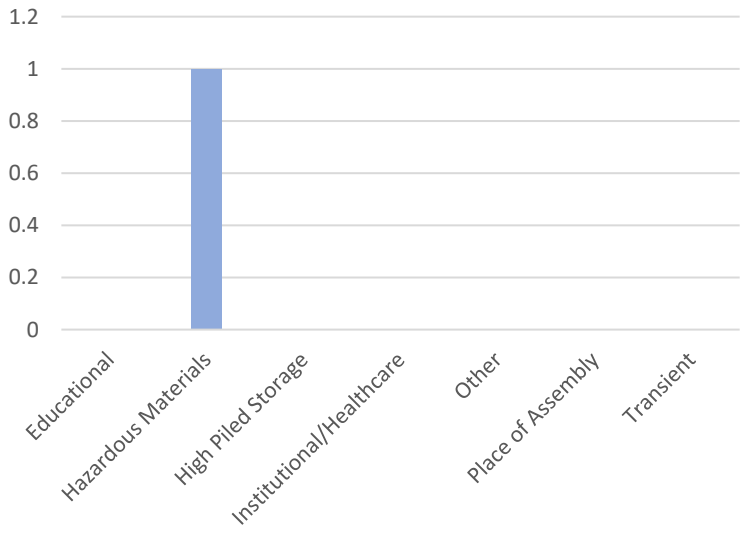
Table 34: Planning Zone R4 – Bear Creek West



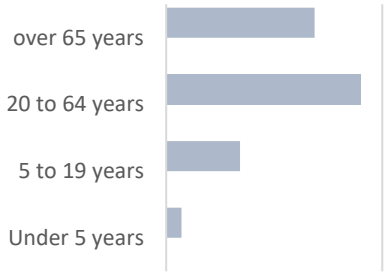
Population:	101
Housing Units:	61
Square Miles:	18.68
Density:	5.4
Avg Per Household	1.7

Calls for Service		
		Pct of Total
2020	17	0.8%
2021	26	1.2%
2022	41	2.0%

Target Hazards



Age Demographics



Planning Zone R5 – Western Evergreen

This planning zone is in the far southwestern section of the district. The following illustration highlights the key points for this planning zone.

Table 35: Planning Zone R5 – Western Evergreen

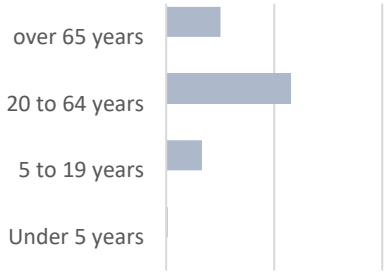
Population:	784
Housing Units:	353
Square Miles:	3.83
Density:	204.9
Avg Per Household	2.2

Calls for Service		
		Pct of Total
2020	10	0.5%
2021	14	0.6%
2022	20	1.0%

Target Hazards

No Target Hazards in this Planning Zone

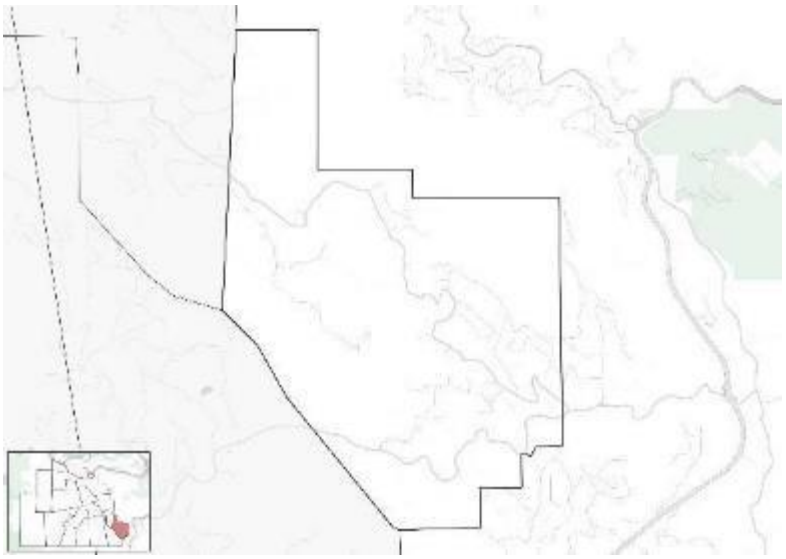
Age Demographics



Planning Zone Re1 – High Drive

Located in the far southeastern section of the district, access to this area is minimal. The following illustration highlights the key points for this planning zone.

Table 36: Planning Zone Re1 – High Drive



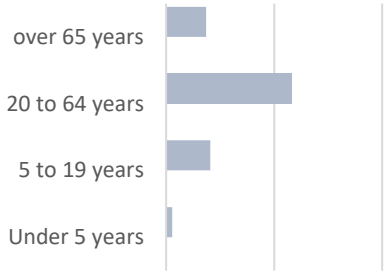
Population:	270
Housing Units:	124
Square Miles:	10.54
Density:	25.6
Avg Per Household	2.2

Calls for Service		
		Pct of Total
2020	51	2.4%
2021	45	2.1%
2022	34	1.6%

Target Hazards

No Target Hazards in this Planning Zone

Age Demographics



Administrative Services and Structure

The primary purpose of the Evergreen Fire Protection District is to respond to and mitigate fire and emergency medical services. There are a variety of other functions and responsibilities, such as administration and support services. Historically, the fire service has been tasked only with fire suppression. However, in the past few decades, there have been changes that now entail a fire protection system to provide a wide range of services to the community.

Organizational Structure

The design of an organizational structure to best meet the needs of an agency is not only predicated on the traditional command and control within the Fire District but also to help define job duties and responsibilities, ensure efficient and effective workflow, establish a reporting hierarchy, and ultimately determine appropriate lines of authority and accountability. Organizational structure and placement of employees within the organization should be based on fundamental principles that provide the organizational cohesion necessary to accomplish the primary mission of the Fire District. These principles include:

- **Accountability and responsibility are clearly identified:** The organizational structure must be consistent with the concept that clear lines of authority and decision-making are essential for any organization to achieve excellence. Areas of responsibility are clearly delineated, and points of accountability are readily identifiable.
- **The span of control or communication is optimal:** Effective organizations are structured so that lines of communication are identifiable, and where there are multiple reporting relationships, responsibility for communication and control are clearly identified and understood.
- **Coordination of Work Efforts:** The organizational structure should facilitate communication and working relationships among staff and work units. Many functions need close or indirect alignment to maximize efficiency and effectiveness. The structure should also provide easy identification of job functions to people outside the Fire Company, including other Departments in the County and other fire service agencies.

- **Degree of Organizational Risk:** This relates to how much risk a function incurs if an activity is not performed or is performed poorly. Risk might involve tactical, financial, or political concerns. Generally, higher-risk functions have closer management oversight.
- **Supervisor and Management Span of Control:** This relates to whether supervisors are fully devoted to overseeing a select few primary activities or a broader set of duties and responsibilities. Appropriate spans of control are associated with the number of staff directly supervised and the complexity of activities overseen.

The nationally recognized best practice for the span of control in highly technical and professional positions is to limit direct reports typically to five or six positions, with nine direct reports considered the maximum to mitigate organizational risk.

Fire District Organizational Alignment

As noted, the Evergreen Volunteer Fire Department was formed in 1948, and the Evergreen Fire Protection District was formed in 1950. Further, the Evergreen Ambulance Service, formed in 1952, merged with the Evergreen Fire Protection District in 1986 to complete the Evergreen Fire/Rescue (EFR) alignment.

The Evergreen Volunteer Fire Department (EVFD) is a 501c(4) non-profit corporation that was the original organization formed. It provides the workforce for fire and rescue operations to the EFPD and is designated to accept donations from the public. The Volunteer Board of Directors governs the EVFD, with members of the board and the Volunteer Deputy Chief of Fire Operations elected from the membership of the EVFD.

Essentially, the two organizations provide a workforce for the provision of emergency services to the Fire District. The EVFD provides the workforce for fire suppression and rescue services. The workforce for emergency medical services, fire prevention and risk reduction services, and wildland mitigation activities is provided by the EFPD. While this form of organizational alignment has worked in the past, it does not work well in a modern-day organization. The project team noted several issues during the site visits, interviews, and group meetings.

- Some individuals in the EVFD believe the Volunteer Deputy Chief of Fire Operations is the Fire Chief and only takes orders from this position.
- There is a feeling of mistrust between the rank and file of the volunteer organization and the Fire District organization.

- There also seems to be a general lack of coordination between the volunteer and Fire District organizations regarding programs and processes.
- The apparatus is owned by the EFPD but operated by members of the EVFD.

The Bylaws of the EVFD provide the basis for the EVFD and its operation. Within the EVFD, the Volunteer Deputy Chief of Fire Operations is an elected position and is a member of the Board of Directors. The Bylaws provide several requirements and duties for the Deputy Chief of Fire Operations as follows:

- Section 5.2 (a) No person may serve in the position of Deputy Chief who has not previously held the rank of Captain for a minimum of two (2) years.
- Section 5.10 Deputy Chief. The Deputy Chief, as the first subordinate to the Division Chief, will have fire operations authority under the direction of the Division Chief. The Deputy Chief shall perform such other duties as from time to time may be assigned by the President or the Board of Directors.
- Section 6.2 Standing Committees. There shall be a standing Nominating Committee which shall be appointed by the Board of Directors. The Nominating Committee shall put together a slate of candidates for the offices of Deputy Chief, President, Vice President, Secretary, and Treasurer. The Division Chief of the District must approve the slate for Deputy Chief.

The election of officers for a fire department was a prevalent and accepted practice in the 1960s, 1970s, and, to some degree, the 1980s. However, this practice has long since been replaced by appointing individuals into these positions based on experience, education, training, and testing to ensure the most qualified individual is appointed.

The two organizations need to merge like the ambulance service in 1986, or at the very least have different missions.

The EVFD should continue to exist, transition to a benevolent organization to the EFPD, and maintain the historical connection to the fire services in Evergreen. In this role, the EVFD should support the Fire District through any fundraising efforts or donations that are received.

- The organization can and should continue to provide support to its members.
- The organization should no longer elect any officers to the Fire District as that function should be within the EFPD's scope.

- The EFPD should no longer provide tax-generated funding to the EVFD, as all funds would be through fundraising efforts or donations.

The EFPD would continue to operate as Evergreen Fire/Rescue.

- All existing volunteer members of the EVFD would become volunteer members of the EFPD.
- Any new volunteer members would be processed and accepted as volunteers wholly through the EFPD system.
- All officers of the EFPD would be selected based on the current process of the Fire District.

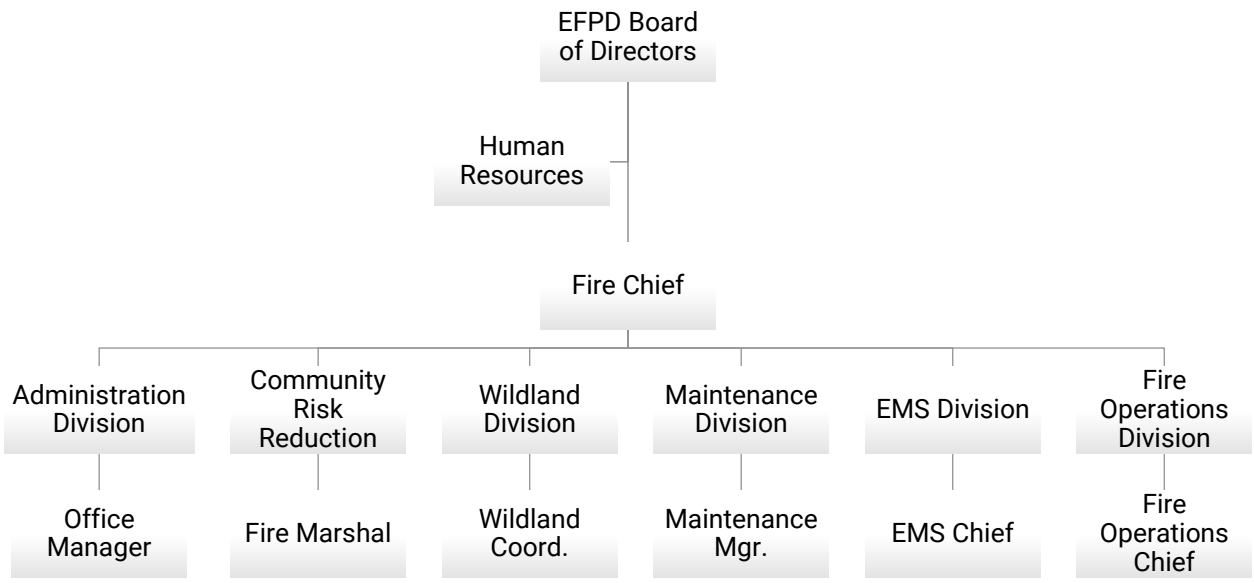
The purpose of this transition is to place all personnel related to fire and EMS operations under the umbrella of the EFPD. This transition will also allow for the future staffing of the fire stations by volunteers, career staff, or both to be managed within a single organization.

Goal 1	**Formally transition to a single organization to provide emergency services and another to provide benevolent support to the Fire District.**

Fire District Operational Alignment

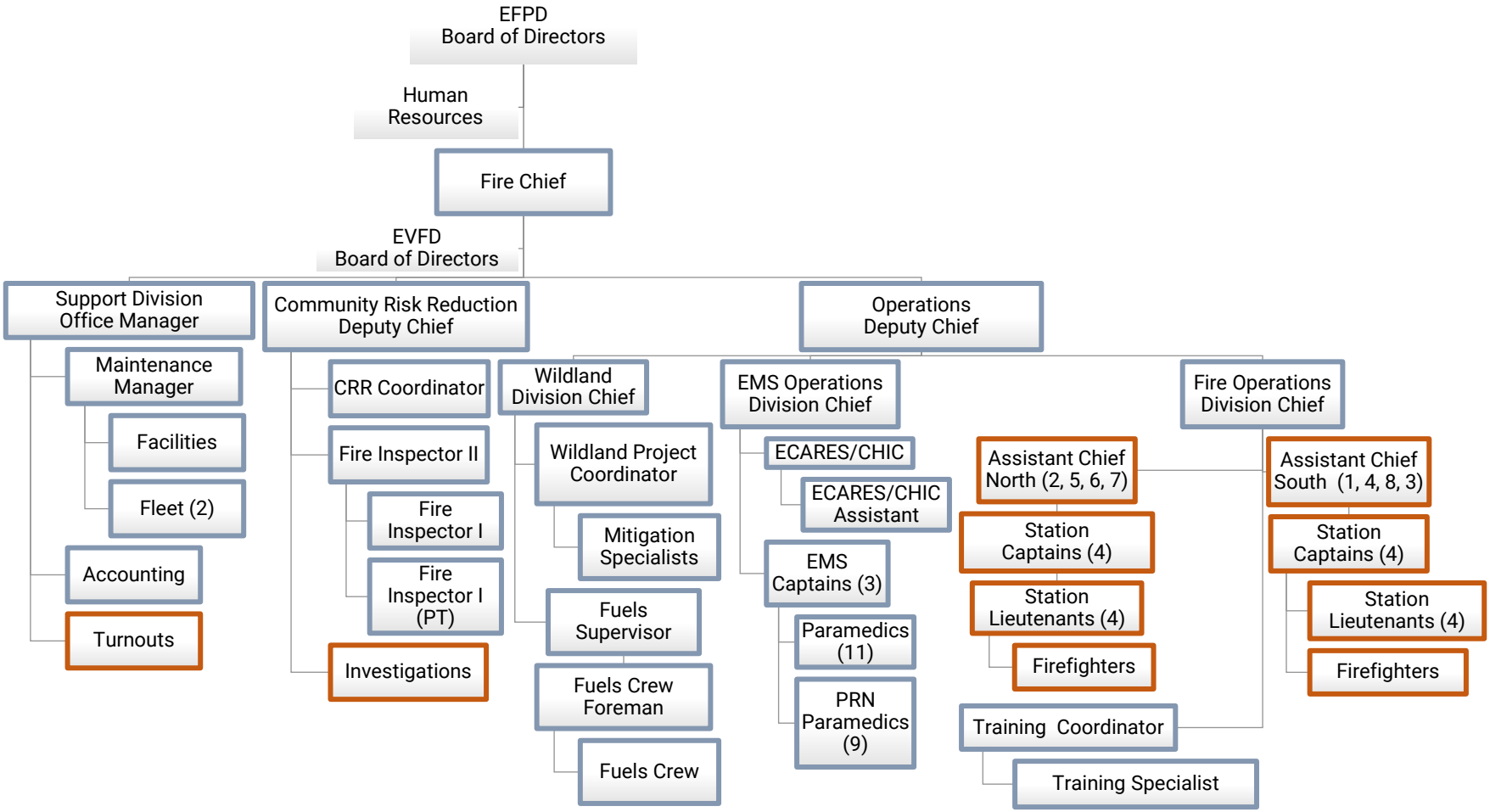
Within the Fire District, an organizational chart delineates the chain of command and, to some degree, accountability of various operational functions. There exists a means to allow for expansion should that need arise. An organizational structure should enable the organization to be responsive to the needs of their customers and agile enough to react to those needs promptly. The existing organizational chart is illustrated in the following:

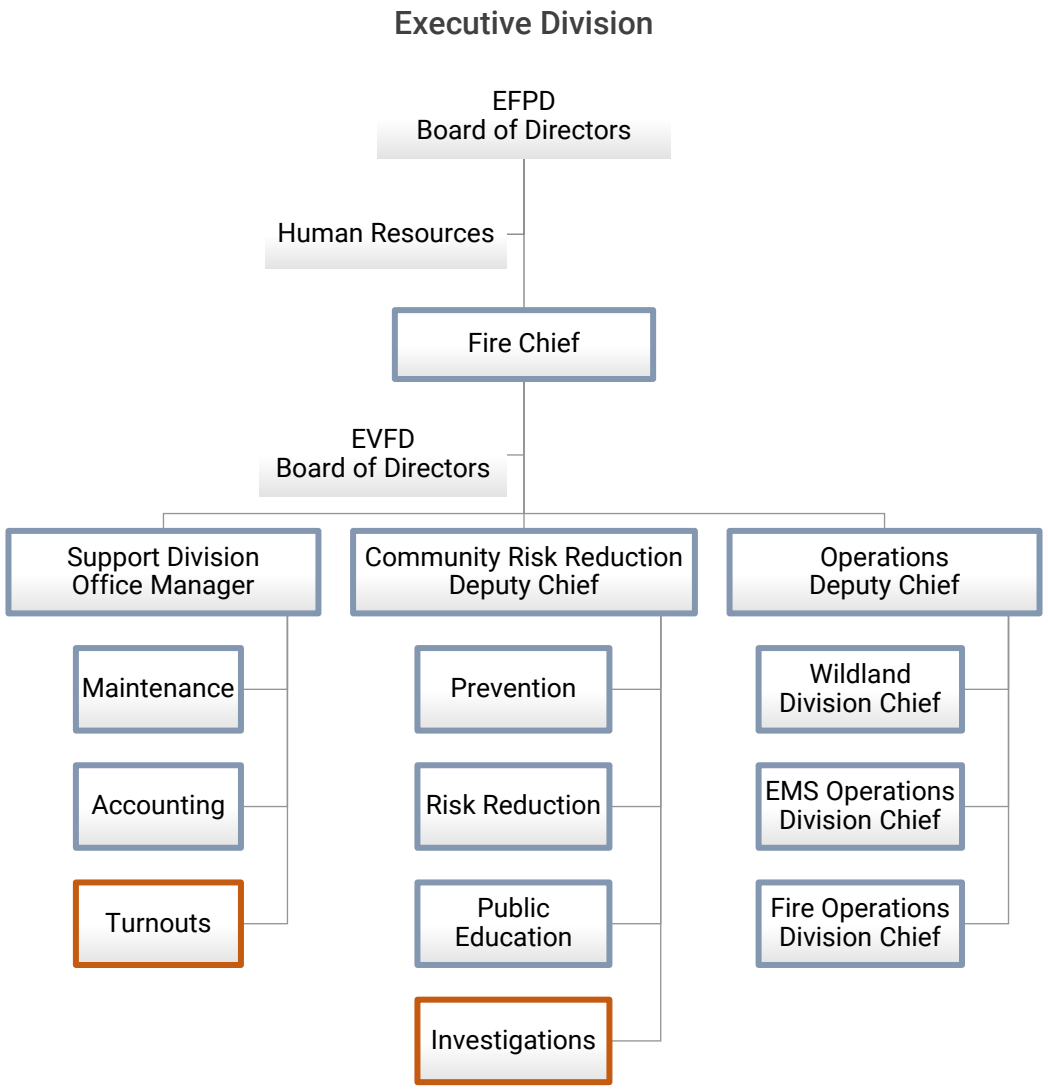
Evergreen Fire Protection District Existing Organizational Chart



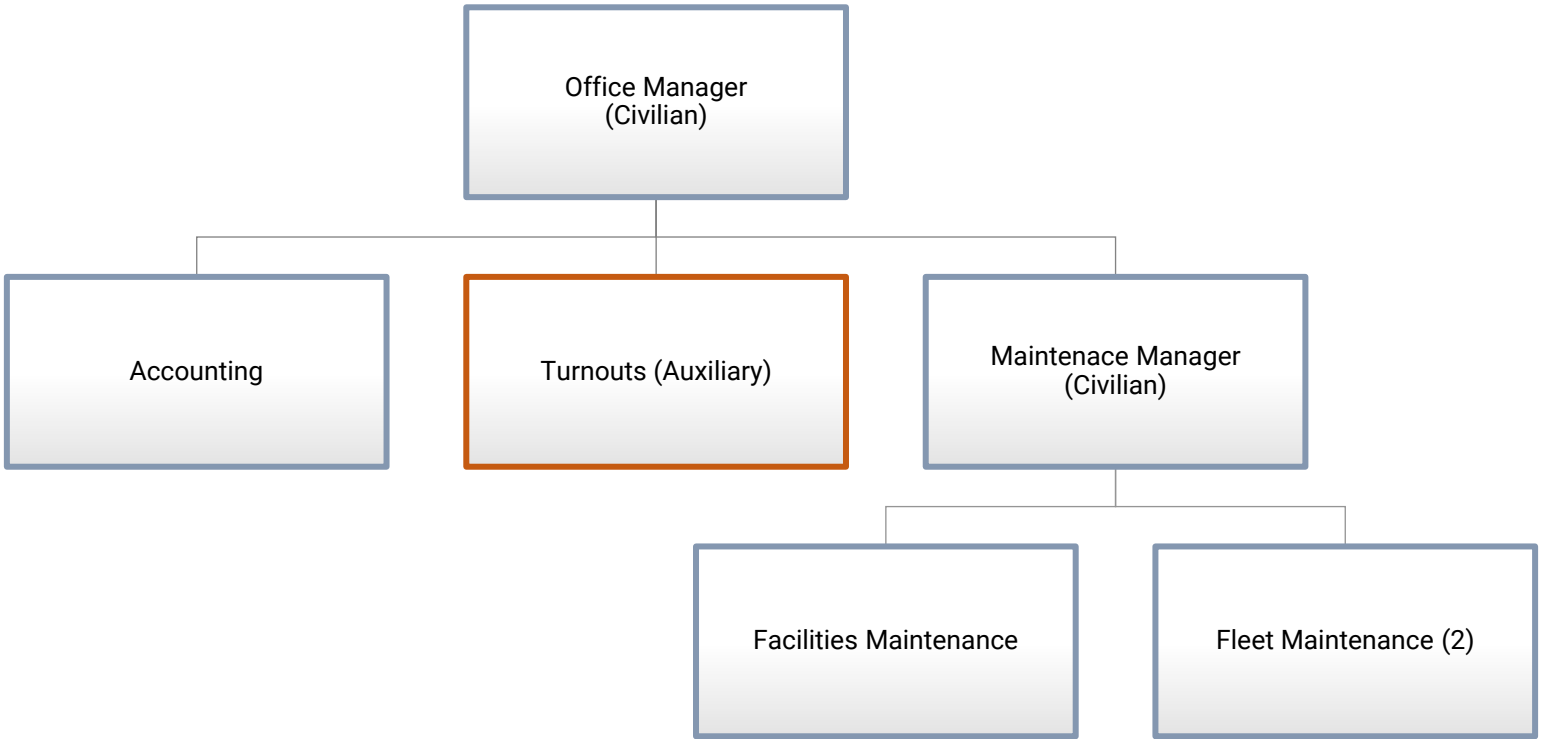
The Fire Chief has six direct reports. With the movement of the EVFD to a benevolent role, it would make sense to realign the Fire District organization. The following charts illustrate a realigned organization. The first chart shows the executive organization, with the following charts representing the different divisions. Contained in the charts are blue-outlined boxes and orange-outlined boxes. The blue outlines represent career positions, and the orange outlines represent volunteer positions that follow the current organization.

Evergreen Fire Protection District Realigned Organizational Chart

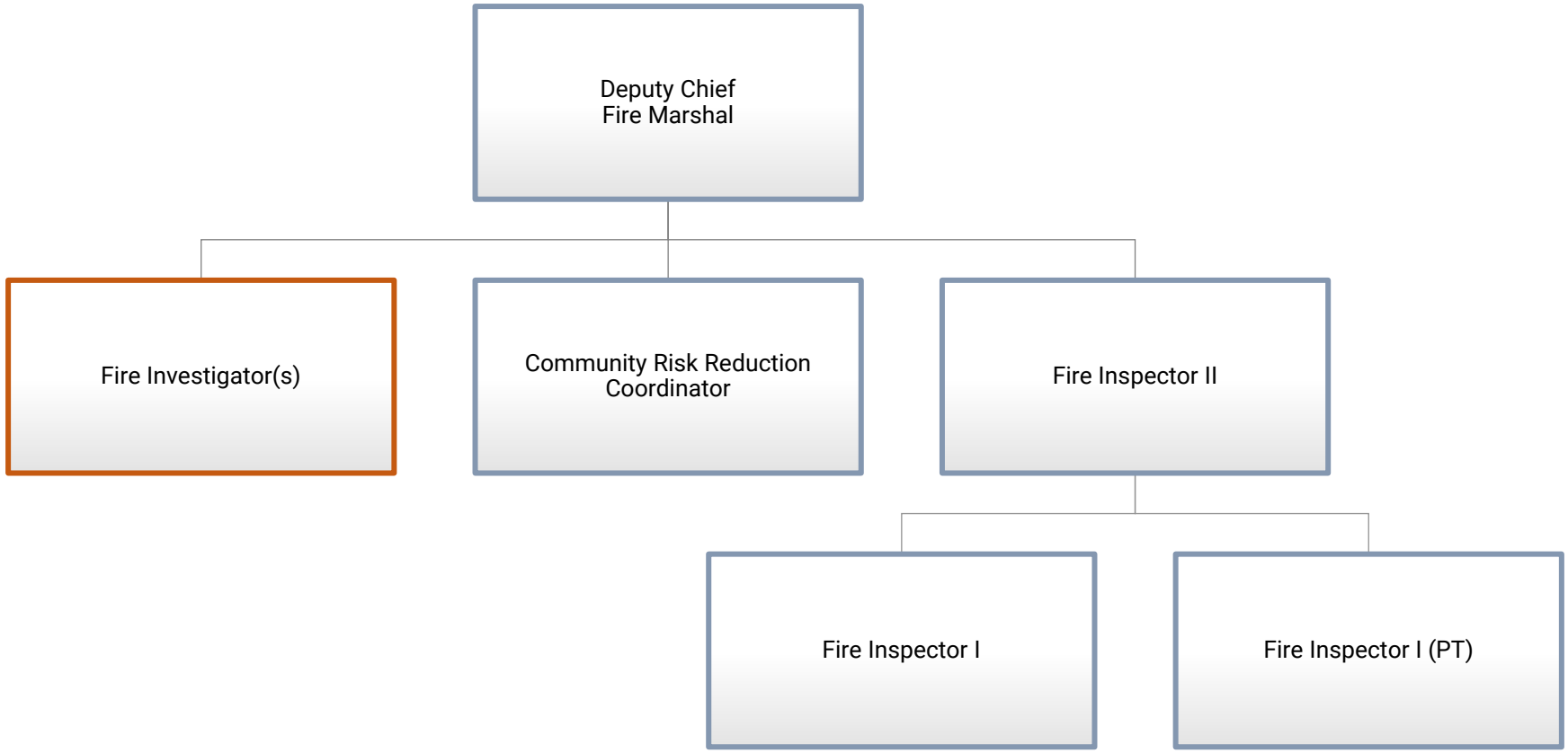



Executive Division
EFPD
Board of Directors
Human Resources
Fire Chief
EVFD
Board of Directors
Support Division
Office Manager
Community Risk Reduction
Deputy Chief
Operations
Deputy Chief
Maintenance
Accounting
Turnouts
Prevention
Risk Reduction
Public
Education
Investigations
Wildland
Division Chief
EMS Operations
Division Chief
Fire Operations
Division Chief

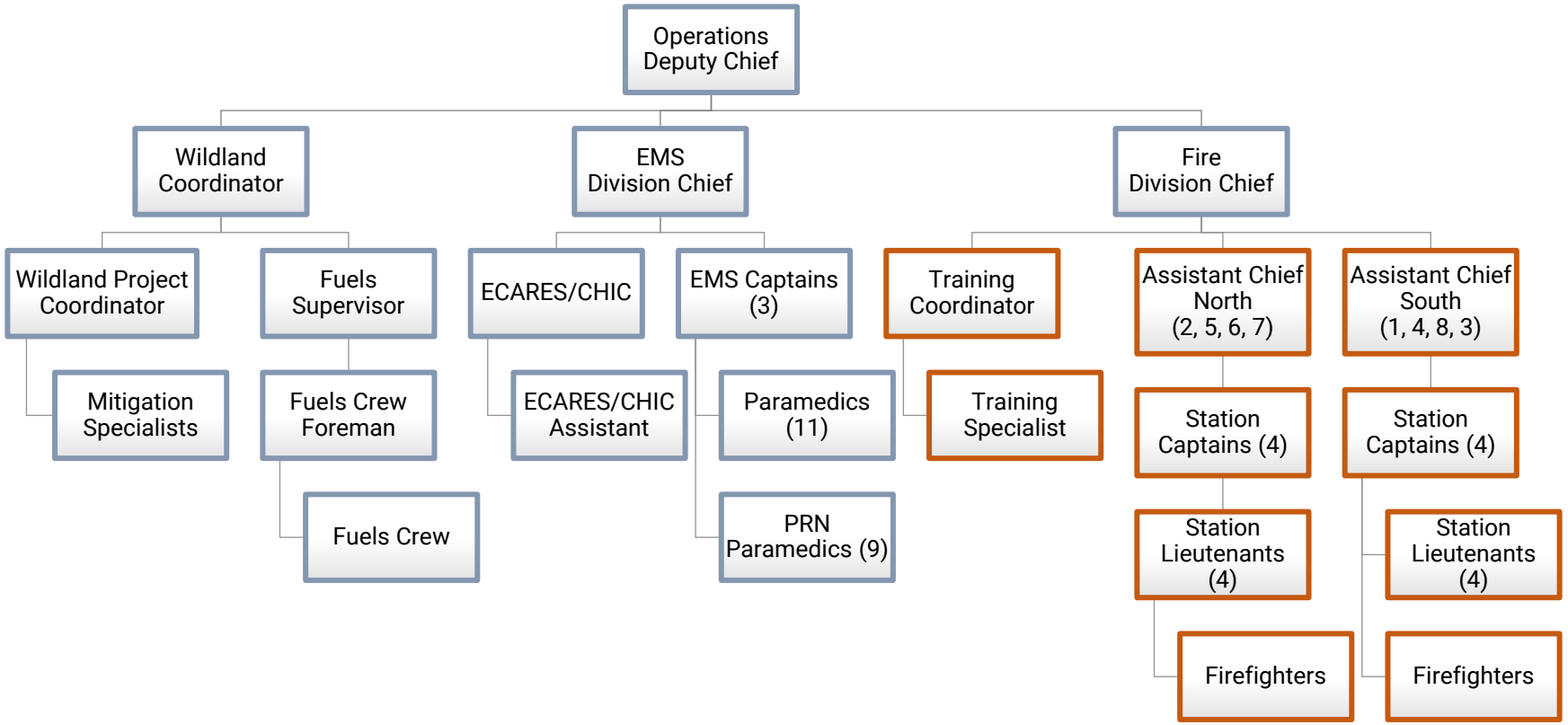
Support Division



Community Risk Reduction Division



Emergency Operations Division



This realignment is designed to take advantage of a single organization and support several objectives.

- The new organization will create two Deputy Chief positions for the two largest Divisions.
- All operations are within one Division.
- All risk reduction programs are within one Division.
- The Support Division continues to operate mainly as a civilian style to support the organization.
- The realignment reduces the direct reports of the Fire Chief from six to three individuals.
- The organization would remain the same in terms of reporting and accountability for those positions below the Division Chief level.

This realignment also provides for any expansion that may be needed in the future at the division level or the executive level.

Goal 2	**Realign the Fire District organization to provide more clarity and accountability to the organization and the personnel.**

Organization Continuity

Succession planning is a necessary function in every organization, regardless of size. It is a process whereby the organization develops employees to fill critical roles. This plan ensures an employee is prepared to fill that essential role if and when it opens. However, most organizations tend to plan informally or verbally for succession. Promoting the most tenured people in the organization to positions that control the organization may not be the best use of this resource. Key reasons for developing a formal succession plan include

- **Continuity of Leadership and Operations:** Succession planning ensures there is always someone ready and qualified to step into critical roles when they become vacant. This continuity is vital for maintaining the operational integrity of the department, especially in emergency response, where leadership and experience are crucial.

- **Risk Mitigation:** It reduces the risk of sudden loss of key personnel. An unexpected departure can lead to a leadership void without a plan, potentially hindering the department's effectiveness and response capabilities.
- **Talent Development and Retention:** It helps identify and develop internal talent for future leadership roles. This investment in personnel prepares them for higher responsibilities and can increase their job satisfaction and loyalty to the department, reducing turnover rates.
- **Adaptability to Change:** Succession planning prepares the department to adapt to changes in personnel, community needs, and the emergency services landscape. It ensures the department remains robust and capable of meeting new challenges.
- **Ensuring Quality and Standards:** A well-prepared succession plan helps maintain high service delivery standards. Trained and prepared successors can uphold the quality of operations and decision-making.
- **Strategic Planning and Vision Alignment:** Succession planning is a part of strategic planning, aligning future leadership with the long-term goals and vision of the department. It ensures that future leaders are competent and committed to the department's mission and values.

Formal succession planning is a proactive strategy that prepares organizations for future changes, ensures leadership continuity, develops internal talent, and maintains operational effectiveness and community trust. Changing the organizational and operational structure of the organization provides an opportune time to formally establish a succession plan for EFR.

Goal 3	**Create a formal Succession Plan for the Evergreen Fire Protections District aligning with the organization and operational alignment.**

Physical Resources

This chapter analyzes the physical resources required to provide emergency services to the city.

Fire Station Facilities

The fire stations were toured in July 2023, and a "walk-through" assessment of the facility's exterior, interior, and technical systems was completed. The evaluation is not based on a detailed analysis but rather as a broad index of each facility's relative physical condition and viability. Conditions were rated on a scale of Excellent, Good, Fair, or Poor, as defined below.

- **Excellent** – conditions are newly renovated or constructed; basic standards are met or exceeded.
- **Good** – conditions meet basic standards, and the potential exists for expansion or redevelopment at low expense.
- **Fair** – conditions may be reasonable for improvement or redevelopment at substantial expense.
- **Poor** – conditions do not meet basic standards and have little potential for improvement without significant effort and resources.

The following sections provide detailed assessments for each of the fire stations.

Fire Station 1 – Evergreen

This station is in downtown Evergreen and serves the Fire District's central core. Apparatus at this station include a Type 1 Engine, a Type 6 Engine, a Type 7 Engine, two Water Tenders, and other support apparatus. The facility has seven apparatus bays.

Evergreen Fire/Rescue Station 1 – Evergreen

4751 Highway 73

Overall Condition: **Poor**
Date of Construction: **1965**
Gross Square Footage: **8,200**

Parking for this station is across the street, as only two spaces are on the lot. The road is also being reconfigured, which will remove these spaces with an eventual island in the street, limiting the direction in which the apparatus can exit the facility.

Site Conditions and Building Exterior	Total Parking Spaces: **2**	ADA Parking Spaces: **0**
	Apron: **There is just enough room for apparatus to clear the bay doors.**	
	Exterior Walls: **Fair**	Roof: **Fair** Windows: **Fair**
	Expansion Capability:	**None. The west and south sides of the station are built into a hillside, and there is limited accessibility to the north.**
Building Interior	Overall Layout: **Fair**	Lighting: **Fair**
	Smoke Detectors: **Present**	CO Detectors: **Present**
	Properly Marked Exits: **No**	Kitchen Facilities: **Full Kitchen**
	Sleeping Quarters	Bedrooms: **4** Beds: **4** Dorm Beds: **0**
	Bathroom Facilities:	Men: **0** Women: **0** Unisex: **1**
	Shower Facilities:	Men: **0** Women: **0** Unisex: **1**
	Renovation Suitability: **Poor**	
Technical Systems	Plumbing: **Poor**	Mechanical (HVAC): **Poor**
	Electrical: **Poor**	Back-Up Power: **None Present**
Apparatus Bays	Number of Bays: **7**	Drive Through Bays: **0**
		Back-In Bays: **7**
	Depth of Bays: **35'**	Bay Door Clearance for Apparatus: **Poor**
	Vehicle Exhaust System:	**Exhaust fans activated by the bay doors**
	Workspace Clearance between Apparatus:	**Good. There is no space to the rear of the apparatus.**
	Turnout Gear Storage: **In the apparatus bays**	Turnout Gear Extractor: **Yes**
	Decontamination Room: **None**	

This station has several issues besides the lack of ability to expand the station. On-site parking is limited to three spots; however, parking is available directly across the street. There is a significant renovation and rehabilitation project for the roadway. This work includes widening that will eliminate the parking availability across the street and the installation of a center median. This median will eliminate access to the northbound lanes of the roadway. The apparatus bay door height is exceptionally tight, so overinflating the tires could cause the apparatus not to fit. The depth of the apparatus bays is an issue as there is little to no room to work and, sometimes, to walk behind the apparatus. This station does not meet the needs of a modern fire station.

Fire Station 2 – Bergen Park

This station is located north of downtown Evergreen and serves the northern end of Evergreen and the northeast region of the fire district. It houses one of two staffed career medic units and is part of the Evergreen Fire Protection District complex that also houses the administration and vehicle repair facility. Apparatus at this station include a Type 1 Engine, a Type 7 Engine, a Water Tender, a heavy Rescue, an Aerial ladder, and two medic units.

Evergreen Fire/Rescue Station 2 – Bergen Park

1802 Berge Parkway

Overall Condition: **Fair**
Date of Construction: **1978**
Gross Square Footage: **12,600**

This station is part of a larger complex with administration and vehicle maintenance buildings. This station houses one of two career-staffed medic units. Recent repairs include a new roof in 2021, with stucco reworked in 2019.

Site Conditions and Building Exterior	Total Parking Spaces: **20**	ADA Parking Spaces: **0**
	Apron:	**Asphalt construction with numerous cracks. Water drainage is an issue being repaired at the time of the assessment. Replacement will be needed.**
	Exterior Walls: **Good**	Roof: **Excellent** Windows: **Good**
	Expansion Capability:	**There is limited expansion capability to the south end of the building, but any expansion would encroach on the parking areas.**
Building Interior	Overall Layout: **Fair**	Lighting: **Good**
	Smoke Detectors: **Present**	CO Detectors: **Present**
	Properly Marked Exits: **Yes**	Kitchen Facilities: **Full Kitchen**
	Sleeping Quarters	Bedrooms: **7** Beds: **7** Dorm Beds: **0**
	Bathroom Facilities:	Men: **1** Women: **1** Unisex: **0**
	Shower Facilities:	Men: **1** Women: **1** Unisex: **0**
	Renovation Suitability: **Fair**	
Technical Systems	Plumbing: **Good**	Mechanical (HVAC): **Good**
	Electrical: **Good**	Back-Up Power: **Yes**
Apparatus Bays	Number of Bays: **5**	Drive Through Bays: **3**
		Back-In Bays: **2**
	Depth of Bays: **Varies**	Bay Door Clearance for Apparatus: **Good**
	Vehicle Exhaust System:	**Combination of Plymovent and overhead exhaust**
	Workspace Clearance between Apparatus: **Good**	
	Turnout Gear Storage: **In apparatus bays**	Turnout Gear Extractor: **Yes – 2**
	Decontamination Room: **None**	

The expansion of this facility is limited to the south side of the building as the maintenance facility is on the north side, and an elementary school is on the east side. Any expansion would encroach on the available parking of the complex. While this facility is somewhat compartmentalized, it is functional. There is potential for renovation should the need arise; however, the current structure is 44 years old. Expanding on the east side

is possible as the school is set to close before the 2024 – 2025 academic year. This potential site will depend on the School Board's intentions for the property.

Fire Station 3 - Marshdale

This station is located at the southern end of the fire district, providing service to the south-central area, including Buffalo Creek South, Blue Creek, and Brook Forest. Apparatus at this station includes a Type 1 Engine, a Type 2 Tender, a Type 3 Engine, and a Type 6 Engine.

Evergreen Fire/Rescue Station 3 - Marshdale

6940 Highway 73

Overall Condition: **Fair**
Date of Construction: **1995**
Gross Square Footage: **4,400**

This volunteer fire station also houses the seasonal wildland fuels crew. The station recently flooded due to water from the hillside behind the station. Repairs are ongoing during the assessment. There is a 30,000-gallon cistern, but no potable water is on site.

Site Conditions and Building Exterior	Total Parking Spaces: **10**	ADA Parking Spaces: **0**
	Apron:	**Concrete construction in good condition with adequate space between the station and the roadway.**
	Exterior Walls: **Good**	Roof: **Good** Windows: **Good**
	Expansion Capability:	**The station can be expanded on three sides of the current building. The rear of the building is somewhat limited to the terrain.**
Building Interior	Overall Layout: **Good**	Lighting: **Good**
	Smoke Detectors: **Present**	CO Detectors: **Present**
	Properly Marked Exits: **No**	Kitchen Facilities: **None**
	Sleeping Quarters	Bedrooms: **0** Beds: **0** Dorm Beds: **0**
	Bathroom Facilities:	Men: **0** Women: **0** Unisex: **1**
	Shower Facilities:	Men: **0** Women: **0** Unisex: **0**
	Renovation Suitability: **Fair**	
Technical Systems	Plumbing: **Good**	Mechanical (HVAC): **Good**
	Electrical: **Good**	Back-Up Power: **None**
Apparatus Bays	Number of Bays: **4**	Drive Through Bays: **0**
		Back-In Bays: **4**
	Depth of Bays: **25'**	Bay Door Clearance for Apparatus: **Good**
	Vehicle Exhaust System:	**Exhaust fans activated by the bay doors**
	Workspace Clearance between Apparatus: **Good**	

Turnout Gear Storage:	**In apparatus bays**	Turnout Gear Extractor:	**None**
Decontamination Room:	**None**		

This volunteer station is also the base of operations for the seasonal wildland fuels crew. No potable water is available at this facility as the well is contaminated. Any expandability for this facility will depend on potable water availability.

Fire Station 4 – Cub Creek

Located in the south-central section of the fire district, this station is dedicated to providing emergency medical services. One of the two staffed medical units operates from this facility. Apparatus at this station include two medic units, a reserve medic unit, and a utility vehicle.

Evergreen Fire/Rescue Station 4 – Cub Creek

5411 Highway 73

Overall Condition: **Fair**
Date of Construction: **1984**
Gross Square Footage: **4,800**

This station houses one of two staffed career medic units; there are no fire suppression resources housed at this station. The leach field for the station may need to be replaced.

Site Conditions and Building Exterior	Total Parking Spaces: **10**	ADA Parking Spaces: **0**				
	Apron: **Concrete and asphalt construction are in good condition.**					
	Exterior Walls: **Fair**	Roof: **Poor**	Windows: **Fair**			
	Expansion Capability: **None. There is a floodway to the south, a highway to the north, and a leech field to the east.**					
Building Interior	Overall Layout: **Fair**	Lighting: **Fair**				
	Smoke Detectors: **Present**	CO Detectors: **Present**				
	Properly Marked Exits: **Yes**	Kitchen Facilities: **Full Kitchen**				
	Sleeping Quarters	Bedrooms: **2**	Beds: **2**	Dorm Beds: **0**		
	Bathroom Facilities:	Men: **0**	Women: **0**	Unisex: **1**		
	Shower Facilities:	Men: **0**	Women: **0**	Unisex: **1**		
	Renovation Suitability: **Fair**					
Technical Systems	Plumbing: **Fair**	Mechanical (HVAC): **Fair**				
	Electrical: **Good**	Back-Up Power: **Present**				
Apparatus Bays	Number of Bays: **4**	Drive Through Bays: **0**				
		Back-In Bays: **4**				
	Depth of Bays: **30'**	Bay Door Clearance for Apparatus: **Good**				
	Vehicle Exhaust System: **None**					
	Workspace Clearance between Apparatus: **Good**					
	Turnout Gear Storage: **No turnout gear**	Turnout Gear Extractor: **None**				
	Decontamination Room: **None**					

The facility is bordered by a floodway to the south and a highway to the north, limiting expansion. The leach field needs to be replaced, as well as the roof. There is no vehicle exhaust system in the apparatus bays.

Fire Station 5 - Brookvale

This station is located at the western end of the fire district, providing service to the west area, including Bear Creek, Western Evergreen, and Buffalo Creek North. Apparatus at this station includes a Type 2 Engine and a Type 2 Tender.

Evergreen Fire/Rescue Station 5 - Brookvale

53 Echo Lake Drive

Overall Condition: **Good**
Date of Construction: **2004**
Gross Square Footage: **2,700**

This is a volunteer station. The siding has holes that are being repaired at the time of assessment. There is a 20,000-gallon cistern on the north side of the building. The parking area is gravel.

Site Conditions and Building Exterior	Total Parking Spaces: **6**		ADA Parking Spaces: **0**			
	Apron: **Concrete construction in good condition. Adequate space between the building and the roadway.**					
	Exterior Walls: **Good**		Roof: **Good**		Windows: **Good**	
	Expansion Capability: **Only on the south side of the building.**					
Building Interior	Overall Layout: **Good**		Lighting: **Good**			
	Smoke Detectors: **Present**		CO Detectors: **Present**			
	Properly Marked Exits: **Yes**		Kitchen Facilities: **Limited to sink-only**			
	Sleeping Quarters	Bedrooms: **0**	Beds: **0**	Dorm Beds: **0**		
	Bathroom Facilities:	Men: **0**	Women: **0**	Unisex: **1**		
	Shower Facilities:	Men: **0**	Women: **0**	Unisex: **0**		
	Renovation Suitability: **Fair**					
Technical Systems	Plumbing: **Good**		Mechanical (HVAC): **Good**			
	Electrical: **Good**		Back-Up Power: **None**			
Apparatus Bays	Number of Bays: **2**		Drive Through Bays: **0**			
			Back-In Bays: **2**			
	Depth of Bays: **35'**		Bay Door Clearance for Apparatus: **Good**			
	Vehicle Exhaust System: **None**					
	Workspace Clearance between Apparatus: **Good**					
	Turnout Gear Storage: **Apparatus bay**				Turnout Gear Extractor: **None**	
	Decontamination Room: **None**					

This station works well for a volunteer fire station. Any expansion would require extensive renovations to make it usable as a staffed station.

Fire Station 6 - Kittredge

Located in the Kittredge area of the fire district, it provides service to the eastern area, including Little Cub Creek and Kerr Gulch in addition to Kittredge. Apparatus at this station includes a Type 1 Engine and a Type 6 Engine.

Evergreen Fire/Rescue Station 6 - Kittredge

26370 Highway 74

Overall Condition: **Good**
Date of Construction: **2004**
Gross Square Footage: **2,700**

This is a volunteer station. The siding has holes that are being repaired at the time of assessment. The parking area is gravel.

Site Conditions and Building Exterior	Total Parking Spaces: **12**			ADA Parking Spaces: **0**			
	Apron: **Concrete construction with gravel to the roadway.**						
	Exterior Walls: **Good**		Roof: **Good**		Windows: **Good**		
	Expansion Capability: **Only to the north side, but that would eliminate parking spaces.**						
Building Interior	Overall Layout: **Good**		Lighting: **Good**				
	Smoke Detectors: **Yes**		CO Detectors: **Yes**				
	Properly Marked Exits: **Yes**		Kitchen Facilities: **None**				
	Sleeping Quarters	Bedrooms: **0**	Beds: **0**	Dorm Beds: **0**			
	Bathroom Facilities:	Men: **0**	Women: **0**	Unisex: **1**			
	Shower Facilities:	Men: **0**	Women: **0**	Unisex: **0**			
	Renovation Suitability: **Fair**						
Technical Systems	Plumbing: **Good**		Mechanical (HVAC): **Good**				
	Electrical: **Good**		Back-Up Power: **None**				
Apparatus Bays	Number of Bays: **2**		Drive Through Bays: **0**				
			Back-In Bays: **2**				
	Depth of Bays: **35'**		Bay Door Clearance for Apparatus: **Good**				
	Vehicle Exhaust System: **Bay doors activate exhaust fans.**						
	Workspace Clearance between Apparatus: **Good**						
	Turnout Gear Storage: **Apparatus bays**				Turnout Gear Extractor: **None**		

Decontamination Room: **None**

As with Fire Station 5, this station works well for a volunteer fire station. Any expansion would require extensive renovations to make it usable as a staffed station.

Fire Station 7 – Floyd Hill

Located in the northern area of the fire district, it provides service to the northern area, including Beaver Brook and the I-70 corridor, in addition to Floyd Hill. Growth in the North Evergreen area may also impact this station. Apparatus at this station includes a Type 2 Engine, a Type 6 Engine, and a Water Tender.

Evergreen Fire/Rescue Station 7 – Floyd Hill

157 County Road 65

Overall Condition: **Good**
Date of Construction: **2004**
Gross Square Footage: **2,700**

This is a volunteer station. The siding has holes that are being repaired at the time of assessment.

Site Conditions and Building Exterior	Total Parking Spaces: **8**		ADA Parking Spaces: **0**			
	Apron: **Concrete and asphalt construction in good condition.**					
	Exterior Walls: **Good**		Roof: **Good**		Windows: **Good**	
	Expansion Capability: **Expansion is possible on all sides of the building.**					
Building Interior	Overall Layout: **Good**		Lighting: **Good**			
	Smoke Detectors: **Present**		CO Detectors: **Present**			
	Properly Marked Exits: **Yes**		Kitchen Facilities: **None**			
	Sleeping Quarters	Bedrooms: **0**	Beds: **0**	Dorm Beds: **0**		
	Bathroom Facilities:	Men: **0**	Women: **0**	Unisex: **1**		
	Shower Facilities:	Men: **0**	Women: **0**	Unisex: **0**		
	Renovation Suitability: **Fair**					
Technical Systems	Plumbing: **Good**		Mechanical (HVAC): **Good**			
	Electrical: **Good**		Back-Up Power: **None**			
Apparatus Bays	Number of Bays: **3**		Drive Through Bays: **0**			
			Back-In Bays: **3**			
	Depth of Bays: **35'**		Bay Door Clearance for Apparatus: **Good**			
	Vehicle Exhaust System: **None**					
	Workspace Clearance between Apparatus: **Good**					
	Turnout Gear Storage: **Apparatus bays**				Turnout Gear Extractor: **None**	
	Decontamination Room: **None**					

Expansion is possible on all sides of this facility, and with the growth occurring to the north of the I-70 corridor, there is a possibility that it may be needed. However, there would need to be a considerable investment into the station for it to be usable by a staffed unit.

Fire Station 8 – Brook Forest

Located in the southwestern area of the fire district, it provides service to the south and western regions, including Western Evergreen, Buffalo Park Estates, and Brook Forest. Apparatus at this station includes a Type 2 Engine and a Water Tender.

Evergreen Fire/Rescue Station 8 – Brook Forest

33377 Forest Estates Road

Overall Condition: **Good**
Date of Construction: **2006**
Gross Square Footage: **2,700**

This is a volunteer station. There is a cistern on the west side of the building.

Site Conditions and Building Exterior	Total Parking Spaces: **8**		ADA Parking Spaces: **0**				
	Apron: **Asphalt construction is in good condition.**						
	Exterior Walls: **Good**		Roof: **Good**		Windows: **Good**		
	Expansion Capability: **Expansion is possible on the building's north, south, and east sides.**						
Building Interior	Overall Layout: **Good**		Lighting: **Good**				
	Smoke Detectors: **Present**		CO Detectors: **Present**				
	Properly Marked Exits: **Yes**		Kitchen Facilities: **None**				
	Sleeping Quarters	Bedrooms: **0**	Beds: **0**	Dorm Beds: **0**			
	Bathroom Facilities:	Men: **0**	Women: **0**	Unisex: **1**			
	Shower Facilities:	Men: **0**	Women: **0**	Unisex: **0**			
	Renovation Suitability: **Fair**						
Technical Systems	Plumbing: **Good**		Mechanical (HVAC): **Good**				
	Electrical: **Good**		Back-Up Power: **None**				
Apparatus Bays	Number of Bays: **2**		Drive Through Bays: **0**				
			Back-In Bays: **2**				
	Depth of Bays: **35'**		Bay Door Clearance for Apparatus: **Good**				
	Vehicle Exhaust System: **Exhaust fans activated by bay doors**						
	Workspace Clearance between Apparatus: **Good**						
	Turnout Gear Storage: **Apparatus bays**				Turnout Gear Extractor: **None**		
	Decontamination Room: **None**						

As with Fire Stations 5 and 6, this station works well for a volunteer fire station. Any expansion would require extensive renovations to make it usable as a staffed station.

Facilities Summary

The life expectancy of a fire station can vary significantly depending on various factors, including the quality of construction, materials used, maintenance practices, and environmental conditions. Generally, a well-built and properly maintained fire station can last for 50 years or more. However, the functional life of a fire station could be shorter due to changes in technology, equipment size, and the fire district's needs. Over time, renovations or upgrades may be required to keep the facility up-to-date and accommodate modern firefighting equipment and practices.

At 58 years old, Station One is the oldest facility. It is functionally obsolete and does not meet the needs of a modern fire station. Apparatus bay doors are not tall enough to accommodate newer, more modern apparatus. Clearance for the current apparatus is within inches of the top of the bay doors. There are three on-site parking spots and very little apron space in front of the apparatus bays. Plans for the road include widening it and installing a median in front of the fire station. This road project will eliminate parking availability across the street that has been used in the past.

Station Four is the only station that does not house fire suppression apparatus and is only used for emergency medical services. This station has limited expansion capabilities, with a roadway to the north, a floodway to the south, and a leach field to the east. The leach field for the septic system may need to be replaced, as well as the roof. The apparatus bays are sufficient for the existing apparatus, but the bays are not adequate to house any fire apparatus should the need arise.

Station Two is one of three stations that can house staffing for apparatus. This station is 45 years old, and while some maintenance issues must be addressed, it is in fair condition overall. If there is any need to add staffing to this station, there may need to be some renovation to the living quarters for the staff. With the station's age, it may be better to rebuild rather than renovate it.

The remaining five stations were built in the same era, about twenty years ago, and were designed as volunteer-staffed stations. These stations have limited facilities for in-house staffing, such as no sleeping quarters or kitchens. If there is any need to add staffing to

these stations, there will be a need to renovate the stations to accommodate in-house staffing.

Apparatus and Equipment

One of the more difficult tasks facing a community is the replacement of fire apparatus due in large part to available funding, the timing of when to replace, and the cost associated with replacing the apparatus. As the apparatus ages, maintenance becomes more challenging, fewer parts are available for replacement, and the pumps fail their annual testing. Like the distribution and concentration of resources, a one-size-fits-all approach does not work well with apparatus. Some vehicles and apparatus do not last as long as others. This could be due to higher call volumes, extreme wear and tear, and varied preventive maintenance measures.

An effective apparatus replacement program will have benchmarks established to drive the replacement schedule. These benchmarks should establish a replacement guideline to categorize the various units and their target replacement date, definitions for the determination of the condition of the vehicle, and other criteria to be used in the evaluation of the vehicle. EFR has a formal evaluation schedule that includes the first assessment at ten years and then moves to the twenty-year mark. This program has served the EFR well in the past. However, the current production time for the new fire apparatus is being quoted at 30 to 36 months. EFR should consider increasing the assessment time to a biennial schedule to ensure the apparatus is replaced on time.

Capital Improvement Funding

The EFPD has three capital reserve funds established to accumulate funds to meet future needs. In the reserve funding are long-term financial plans for replacing and maintaining structural components and apparatus. A well-structured reserve funding plan is essential for the financial health and sustainability of the Fire District. By proactively managing the reserve fund, the Fire District can ensure that it is well-prepared for future repair and replacement needs, thereby maintaining the quality and value to the community. One of the three reserve funds is established to replace Station One. The other two reserve funds are set for the maintenance of facilities and the replacement or refurbishment of apparatus.

As noted, apparatus replacement is becoming more of an issue with the long delivery times being quoted and the price increases. The plan appears to have addressed the increasing costs through notes in the document, although the plan shows the fund being depleted at the end of 2029, even with a scheduled contribution of $1.4M in 2029. The financial plan for replacing the apparatus must be reviewed to provide more detail to ensure appropriate funds are available and the annual contributions are sufficient.

The financial plan for facilities also includes equipment and services for operations and community risk reduction. These expenses include thermal imagers in 2028, EMS cots and CWPP update in 2030, and EMS monitors in 2031. There are other issues with the facilities that include

- Station Two is approaching fifty years old and may reach the end of its life cycle soon.
- Station Three has no potable water as the well has been contaminated and unusable for staffing purposes.
- Other facilities are set up as volunteer stations and do not have facilities to house personnel should that need arise

For facilities, consideration will need to be given to the complete replacement of Station Two over the next ten years. There is also a potential for other stations to be expanded to house personnel as the community continues to grow. For example, Station Seven may need to be expanded as the area north of I-70 grows. Future consideration for living quarters is to allow volunteer staff to stay at the station during high fire danger days or other weather events.

The financial plans for facilities, equipment, and other large items should be separated to clarify the expenses related to these items. Facilities should include items attached or a part of the facility. Equipment could be included in the apparatus fund as these items are typically attached to a specific truck or medic unit. These items could also be included in a separate reserve fund, including supplies such as turnout gear and special projects such as the CWPP. In either case, separating these items provides additional clarity for the cost for the different asset categories.

Current financial plans for these capital improvements and major repairs and renovations provide an excellent foundation for capital funding. The financial plans could be redesigned for more accessible analysis and monitoring. For example, the total cost for renovations and repairs for Station Two is not readily accessible. Also, the type of

renovation or repairs is not easily accessible. A redesign of the financial plans would assist with ensuring the funding meets the needs of the EFPD.

Goal 4	**Enhance the development of the financial plans for capital improvements.**

Emergency Services System Dynamics

In making decisions about the emergency services system, the leadership and residents of the District need to understand the science behind the location of resources, the deployment strategies of those resources, and other parts necessary to form an effective emergency services system. For many years, the Insurance Services Office (ISO) has set the standard for deployment through its Public Protection Classification system. This system was designed to provide insurers with a basis for setting insurance rates and to limit their exposure to significant losses and catastrophic events. While these efforts provided a good starting point, there is much more for the leadership and residents to know while making decisions about the emergency services in the District.

Nationally, the National Fire Protection Association (NFPA), Center for Public Safety Excellence (CPSE), American Heart Association (AHA), United States Fire Administration (USFA), Underwriters Laboratories (UL), Factory Mutual (FM), National Institutes of Standards and Technology (NIST), and Insurance Services Office (ISO) have put considerable effort into data collection, analysis, and the eventual development of performance objectives for the delivery of fire, rescue, and emergency medical services (EMS). This effort is critical for local governments making decisions about deployment and location of emergency resources. The objectives promoted for Fire/Rescue and EMS providers have their basis derived from research that has been conducted on these two critical issues:

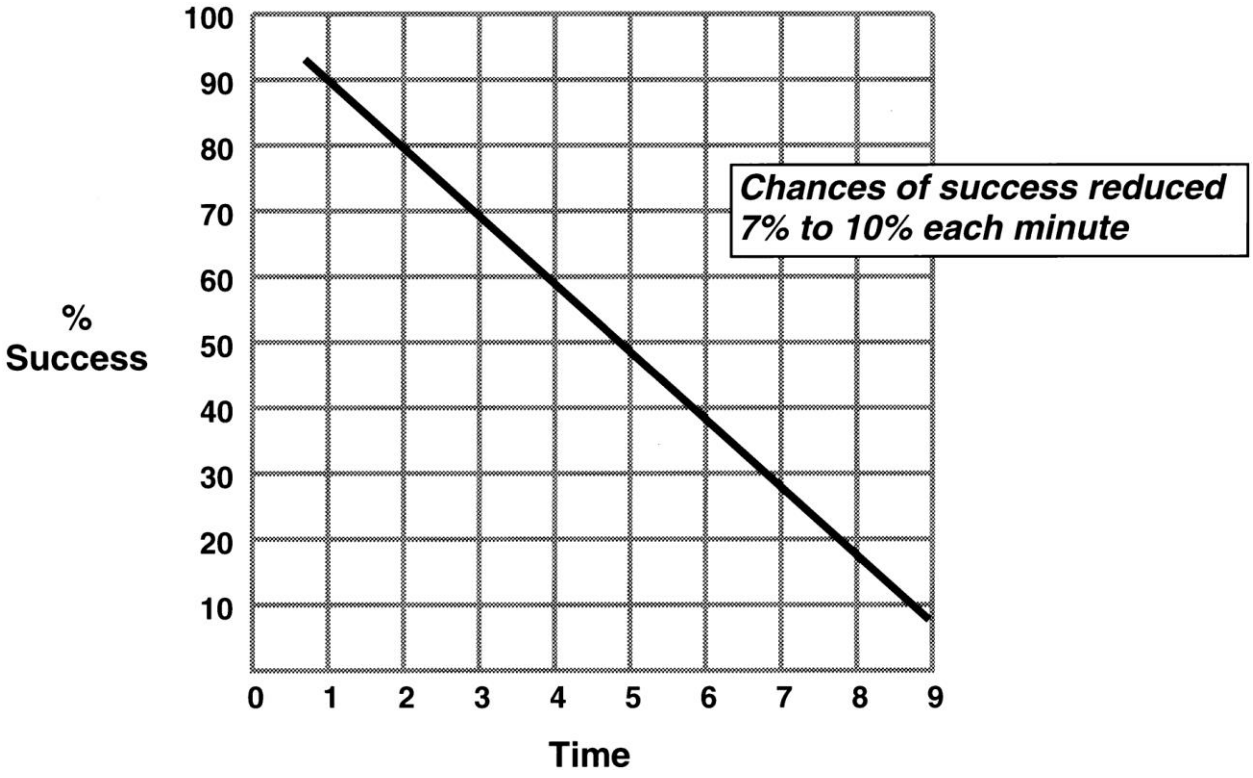
- What is the impact of the passage of time on survivability for victims of cardiac arrest?
- What is the key point in a fire's "life" for gaining control of the blaze while minimizing the impact on the structure of origin and those around it?

The following sections describe the decision points for these factors.

Emergency Medical Services

Delivery of EMS is a function of the emergency services system to be considered. Emergency medical calls are rising within the Evergreen area, and the types of calls are wide-ranging. However, as a part of a community's healthcare system, one of the primary factors in the design of the emergency medical response is the ability to deliver high-quality cardiopulmonary resuscitation (CPR) that emphasizes correct hand position,

proper depth and compression rate, full recoil, and minimization of pauses in combination with timely defibrillation to victims of cardiac arrest. The graph below demonstrates the survivability of cardiac arrest patients as related to time from onset:



This graph[4] illustrates that the chances of survival of sudden cardiac arrest diminish by approximately 10% for each minute that passes before the initiation of CPR or defibrillation. These dynamics are the result of extensive studies of the survivability of patients suffering from cardiac arrest. While the demand for EMS is wide-ranging, the survival rates for cardiac arrests are often utilized as benchmarks for response time standards as they are more readily evaluated because of the ease of defining patient outcomes (a patient either survives or does not). This research results in the recommended objective of providing basic life support (BLS) within four minutes of notification and providing advanced life support (ALS) within eight minutes.

[4] https://www.ahajournals.org/doi/full/10.1161/circ.102.suppl_1.I-60

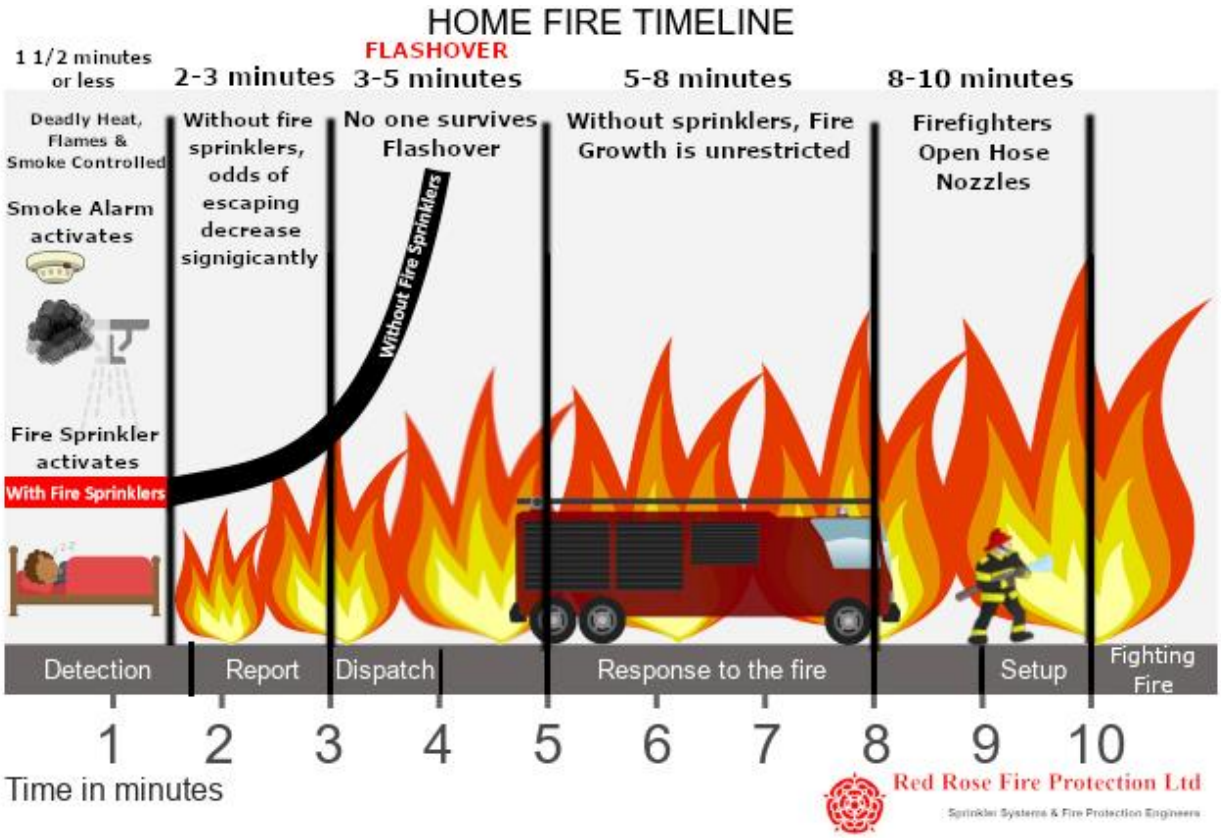
Considering the response time continuum, the response time goal for EMS is to provide BLS within 6 minutes of the onset of the incident (including detection, dispatch, turnout, and travel time) and ALS within 10 minutes. This is often used as the foundation for a two-tier system where fire resources function as first responders, with additional ALS assistance provided by responding ambulance units and personnel.

Additionally, research has shown the impact and efficacy of rapid deployment of an automated external defibrillator (AED) to cardiac arrests. This research – conducted in King County (WA), Houston (TX), and as part of the Ontario Prehospital Advanced Life Support (OPALS) study in Ontario, Canada – shows that the AED can be the most significant single contributor to the successful outcome of a cardiac arrest – particularly when accompanied by early delivery of CPR. It is also important to note that these medical research efforts have been focused on a small fraction of the emergency responses managed by typical EMS systems – non-cardiac events make up most EMS and total system responses, and this research does not attempt to address the need for such rapid (and expensive) intervention on these events.

Fire Suppression Services

The following chart[5] shows a typical flashover curve for interior structure fires based on NFPA, NIST, and ISO data. The point in time represented by the occurrence of flashover is critical because it defines when all the contents of a room become involved in the fire. The flashover is also the point at which a fire typically shifts from room and contents to a structure fire – involving a wider area of the building and posing a potential risk to the structures surrounding the fire's original location.

[5] https://homefiresprinkler.org/wp-content/uploads/2018/03/flashover-chart.jpg



Note that this illustration depicts a fire from the inception, not when a fire is detected or reported. This demonstrates the importance of early detection, fast reporting, and rapid dispatch of responding units. This also shows the critical need for a rapid (and sufficiently staffed) initial response – by quickly initiating the attack on a fire, a flashover can be averted. The points below describe the significant changes that occur at a fire when a flashover occurs:

- It is the end of time for effective search and rescue in a room involved in the fire. It means the likely death of any person trapped in the room – either civilian or firefighter.
- After the flashover is reached, portable extinguishers can no longer have a successful impact on controlling the blaze. Only larger diameter fire hoses will have enough water supply to affect a fire after this point.
- The fire has reached the end of the growth stage and has entered the fully developed stage. During the fully developed stage, every combustible object is subject to the full impact of the fire.

- This also signals the changeover from contents to structure fire. This is also the beginning of collapse danger for the structure. Structural collapse begins to become a significant risk and reaches the highest point during the decay stage of the fire (after the fire has been extinguished).

It should be noted that not every fire will reach flashover – and that not every fire will wait for the eight-minute mark to reach flashover. A quickly responding fire crew can do things to prevent or delay the occurrence of flashovers. These options include:

- Use of a master stream device, using a handline through a window, or other fast attack methodology.
- Ventilating the room to allow hot gases to escape before they can cause the ignition of other materials in the room.
- Not ventilating a room – under some circumstances, this will stifle a fire and prevent flashover from occurring.

Each of these techniques requires the rapid response of appropriately trained fire suppression resources that can safely initiate these actions. Without automatic fire suppression systems, access to interior fires can again be limited by a safety requirement related to staffing levels. The Occupational Safety and Health Administration (OSHA) and related industry standards require the presence of at least two firefighters on the exterior of a building before entry can be made to a structure in which the environment is "immediately dangerous to life or health (IDLH)" due to being contaminated by fire, unless "life is in jeopardy." Staffing levels also impact property damage, loss of business, and other economic impacts such as utilities, sales tax, income tax, and property taxes.

The results of the research efforts previously noted have been utilized by communities and first responders, often on their own with no single reference, to develop local response time and other performance objectives. However, there are four primary sources of information to which responders and local policymakers can refer when determining the most appropriate response objectives for their community:

- The ISO provides basic information regarding distances between fire stations. However, this objective does little to recognize the unique nature of every community's road network, population, calls for service, call density, etc.
- The NFPA promulgated a document entitled: "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." This document (NFPA 1710) was last published in 2020.

- The Commission on Fire Accreditation International (CFAI), in its "Community Risk Assessment: Standards of Cover" manual, places the responsibility for identifying appropriate response objectives on the locality. These objectives should be developed following a comprehensive exercise in which the risks and hazards in the community are compared to the likelihood of their occurrence.
- The AHA provides information on the response to cardiac events, the preferred methods of treatment, and the timing of the delivery of medical care and treatment.

The following section examines the issue of response time.

National Response Time Criteria

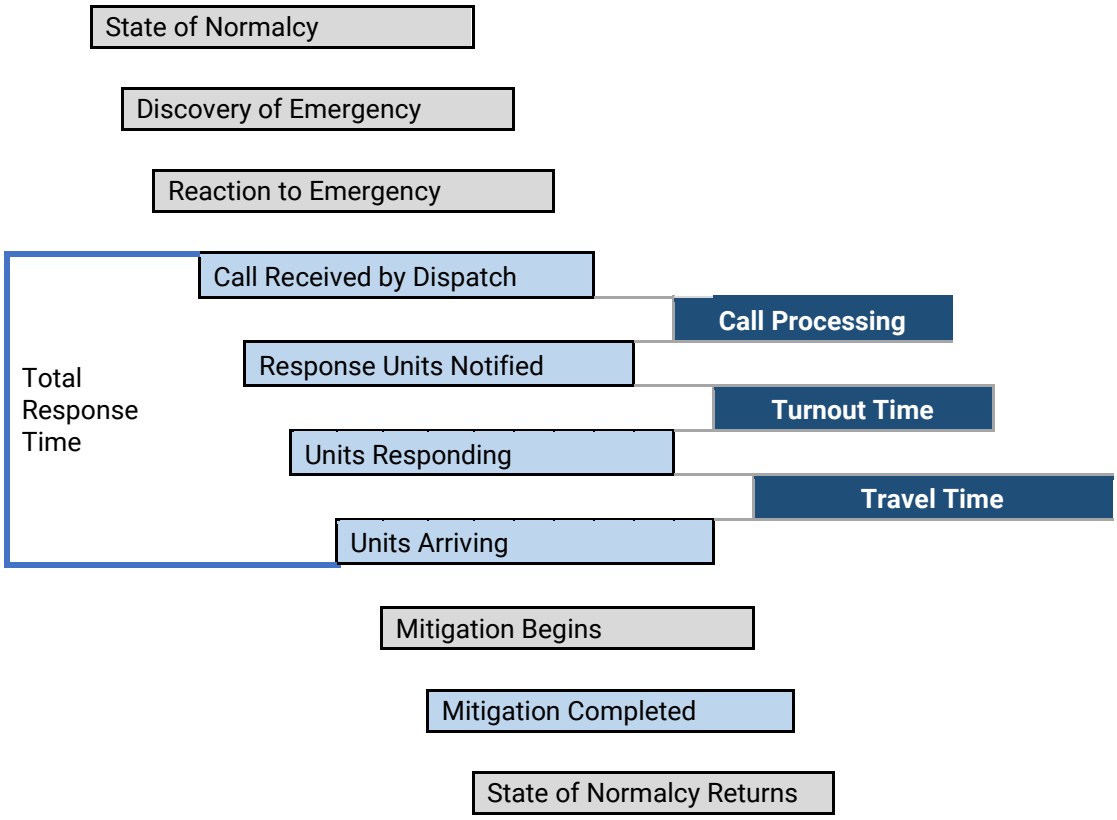
The expression of response time has changed. In years past, the measurement was expressed as an average of time. Using averages essentially represents how the emergency services system or department performs 50% of the time and is not a true reflection of how a fire department performs most of the time. With the research that has been conducted in developing performance standards and practices, using fractal time has become the best practice in measuring and presenting response time components. Fractal response time measures how often (as a percentage of calls) a department can perform within each response time component. The NFPA and CPSE use the 90th percentile as the standard to meet benchmark and baseline criteria. The definitions for baseline and benchmark performance follow.

- **Baseline performance** is what the agency is currently able to perform and is based on the performance of call processing, turnout time, and travel time over the previous four years.
- **Benchmark performance** is the agency's target performance level and should show what the agency is striving to perform based on community risk and expectations.

Response time to an emergency or call for service has been broken down into measurable and non-measurable segments. The response time continuum begins when the state of normalcy changes to a recognizable emergency. The following chart outlines the cascade

of events that occur once an emergency starts or is recognized. The highlighted points represent hard, quantitative data versus soft data, which is subjective and unknown.

Response Time Continuum



The highlighted points in the chart above represent three segments that can be used for evaluation: call processing, turnout time, and travel time. Each of these components represents a different point in the response time continuum, and through their measurement and evaluation, areas for improvement can be identified. Below are the definitions for the three components:

- Call Processing is defined as the beginning when the call taker answers the call and ending with the dispatching of appropriate emergency services.
- Turnout Time begins when the emergency service receives the dispatch notification and ends when personnel are on the apparatus responding (wheels rolling) to the call.

- Travel Time is defined as beginning when the apparatus and personnel begin the response (wheels rolling) and ending once on the location of the emergency (wheels stopped).

The National Fire Protection Association (NFPA), Center for Public Safety Excellence (CPSE), and the Insurance Services Office (ISO) offered reference points for communities to follow relative to fire service responses; however, only 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 offers any specificity. It is essential to note the performance objectives (in terms of response times) provided in the NFPA 1720 document are derived from the basic research previously described. The following table is from NFPA 1720, illustrating the response time and staffing for the response to structural fires.

Table 37: NFPA 1720 Response Time and Staffing

Demand Zone	Demographics	Minimum Staff	Response Time	Meets Objective
Urban	Greater than 1,000 per sq. mile	15	9 minutes	90%
Suburban Area	500 - 1,000 per sq. mile	10	10	80%
Rural Area	Less than 500 per sq. mile	6	14	80%
Remote Area	Travel Distance greater than / equal to 8 miles	4	Dependent on Travel Distance	90%

It is also critical to note that these time objectives apply to emergency calls for service – there is nothing in the NFPA documents (nor in any other objective) that suggests that communities cannot establish a differential response to calls for service determined to be non-emergency.

Previously, the Center for Public Safety Excellence defined benchmark and baseline response times for each component. They have since determined they are not a standard-making organization and decided to leave the establishment of response time standards to others. However, their body of work is significant and has been used by numerous communities nationwide.

It is critical to note that Appendix A, contained in 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 document, provides additional information and background as it pertains to service delivery objectives for the jurisdiction as follows:

> "There can be incidents or areas where the response criteria are affected by circumstances such as response personnel who are not on duty, unstaffed fire station facilities, natural barriers, traffic congestion, insufficient water supply, and density of population or property. The reduced level of service should be documented in the written organizational statement by the percentage of incidents and geographical areas for which the total response time criteria are achieved. Additional service delivery performance objectives should be established by the AHJ for occupancies other than those identified within the standard for benchmark single-family dwellings. Factors to be considered include specific response areas (i.e., suburban, rural, and wilderness) and occupancy hazards."

This passage acknowledges the authority having jurisdiction (AHJ), in this case, the Evergreen Fire Protection District, is responsible for determining the level of service to be provided by the District. Considerations for the level of service include but are not limited to how the fire department responds, travel time, staffing, emergency calls versus non-emergency calls, roadways, financial resources, and those calls involving different occupancies and demographics. The levels of service provided to the District should be written and documented so the residents know and understand the expectations of their emergency services system.

Effective Response Force

Several tasks must occur simultaneously to combat diverse types of fires adequately. The absence of adequate personnel to perform these tasks requires each assignment to be prioritized and completed chronologically. These fire ground tasks include command, scene safety, search and rescue, water supply, fire suppression, pump operations, ventilation, backup, and rapid intervention.

An initial full alarm assignment should be able to provide personnel, an effective response force (ERF), to accomplish the following tasks:

- Establish incident command outside of the hazard area. This will allow coordination and direction of the incoming emergency response personnel and apparatus. A minimum of one person should be dedicated to this task.

- Establish an uninterrupted water supply of at least 400 gallons per minute for 30 minutes. Once established, the pump operator can maintain the supply line to ensure an uninterrupted water supply. A minimum of one person is assigned to this task who can then assume a support role.
- Establish an effective water flow rate of 300 gallons per minute. This will be supplied to a minimum of two hand lines, each operating at a minimum flow of 100 gallons per minute. Each hand line must have two individuals assigned, with one hand line as the suppression line and the other as a backup line.
- Provision of one support person to manage the hydrant hookup, utility control, forcible entry, and assist in deploying fire hose lines.
- Establish a search and rescue team. Each team will consist of a minimum of two personnel.
- Establish a ventilation team. Each team will consist of a minimum of two personnel.
- If an aerial ladder is used in the operations, one individual can function as an aerial operator.
- Establish an initial rapid intervention team (RIT). Each RIT team shall consist of a minimum of two properly trained and equipped personnel.
- A total effective response force with a minimum of 16 (17 if an aerial ladder is in operation)

Critical tasks will vary depending on the size and nature of the incident. The previous list from NFPA 1710 and templates provided in the “Community Risk Assessment: Standards of Cover” manual from CPSE also provides a basis for the critical tasks. The EFR has previously established critical tasks for the response to associated risks, which are included in the following tables.

Table 38: Low-Risk Structure Fire Critical Tasks

Structural Smoke Investigation/Panel Fire Alarm – Hydrant – Urban/Suburban

Unit Response	Task/Assignment	
• Engine	Per department SOP individual assumes command, size up, initial incident safety officer	1
	Driver operator (DO) operates pump and ties into FDC if appropriate	1
	Officer, and/or DO, and/or firefighters investigate	2
	Total Personnel	**4**

Structural Smoke Investigation/Panel Fire Alarm – Non-Hydrant – Rural/Remote

Unit Response	Task/Assignment	
• Engine • Water Tender	Per department SOP individual assumes command, size up, initial incident safety officer	1
	Driver operator (DO) operates pump and ties into FDC if appropriate	1
	Officer, and/or DO, and/or firefighters investigate	2
	Water Tender DO	1
	Total Personnel	**5**

Table 39: Moderate-Risk Structure Fire Critical Tasks

Single-Family Residence or Out-Building – Hydrant District
Urban/Suburban – Room Contents Fire

Unit Response	Task/Assignment	
• Engine or Tower • Rescue • POV's	Per Department SOP individual assumes command, size up, initial incident safety officer	1
	DO operates pump	1
	Firefighter hooks up hydrant and joins initial attack when complete	1
	Officer and/or Firefighters extend appropriate hose line and begin initial attack or rescue.	2
	Officer and/or Firefighters provides ventilation (rapid intervention)	2
	Officer and/or Firefighters provides ventilation (rapid intervention)	2
	Officer and/or Firefighters provides forcible entry and secures utilities (rapid intervention)	2
	Total Personnel	**11**

Single-Family Residence or Out-Building – Non-Hydrant District – Rural/Remote – Room and Contents Fire

Unit Response	Task/Assignment	
• Engine or Tower • Rescue • POV's • Water Tenders (2)	Per Department SOP individual assumes command, size up, initial incident safety officer.	1
	DO operates pump.	1
	Firefighter hooks up hydrant and joins initial attack when complete.	1
	Officer and/or Firefighters extend appropriate hose line and begin initial attack or rescue.	2
	Officer and/or Firefighters provides primary search	2
	Officer and/or Firefighters provides ventilation (rapid intervention)	2
	Officer and/or Firefighters provides forcible entry and secures utilities (rapid intervention)	2
	DO Water Tenders	2
	Total Personnel	**13**

Table 40: High-Risk Structure Fire Critical Tasks

Heavily Involved Single-Family/Multi-Family Residence or Commercial Building, Hydrant District – Urban/Suburban

Unit Response	Task/Assignment	
• Engine or Tower • POVs • Engine or Rescue • Tower or Rescue	Per Department SOP individual assumes command, size up, initial incident safety officer	1
	DO operates pump	1
	Firefighter hooks up hydrant and joins initial attack when complete.	1
	Officer and/or Firefighters extend appropriate hose line and begin initial attack or rescue	2
	Officer and/or Firefighters provides primary search.	2
	Officer and/or Firefighters provides ventilation (rapid intervention)	2
	Officer and/or Firefighters provides forcible entry and secures utilities (rapid intervention)	2
	Additional Hand crews and crews for tower/rescue as needed	6
	Total Personnel	**17**

Heavily Involved Large Single-Family/Multi-Family Residence or Commercial Building, Non-Hydrant District – Rural/Remote

Unit Response	Task/Assignment	
• Engine or Tower • Rescue • POVs • Engine or Rescue • Tower or Rescue • Water Tenders (6)	Per Department SOP individual assumes command, size up, initial incident safety officer.	1
	Water Supply Officer	1
	DO operates pump.	1
	Firefighter hooks up hydrant and joins initial attack when complete.	1
	Officer and/or Firefighters extend appropriate hose line and begin initial attack or rescue.	2
	Officer and/or Firefighters provides primary search.	2
	Officer and/or Firefighters provides ventilation (rapid intervention).	2
	Officer and/or Firefighters provides forcible entry and secures utilities (rapid intervention)	2
	Officer and/or Firefighters provide an additional hose line.	2
	DO's (1 staffing on water tenders per NWCG)	6
	DO – Engine Drop Site	1
	DO – Engine/Pump Fill Site	1
	Crew for Dump Site	2
	Total Personnel	**24**

Adding to the critical tasks and staffing issues is the OSHA 1910.134(g)(4) requirement of two in – two out. These regulations state that if entry into an IDLH atmosphere is necessary, two firefighters must enter together and remain in contact with each other. In

addition, two firefighters must be outside the IDLH atmosphere for potential rescue if needed. This is a mandatory requirement unless life is in jeopardy.

The concept of an ERF carries through to other response types by the fire department. The tables below outline the critical tasks for an ERF for those response types.

Table 41: Emergency Medical Services Critical Task Analysis

Single Patent Intervention

Unit Response	Task/Assignment	
• Medic Unit • POVs	Assumes command; size up, initial incident safety officer, initiate patient care, lifting, equipment shuttle	3
	Total Personnel	**3**

Multiple Patents/Auto Accidents/Extrication/Rescue

Unit Response	Task/Assignment	
• Officer • Medic Unit • Engine • Rescue • POVs	Per Department SOP individual assumes command, size up, initial incident safety officer	1
	Initiate patient care, lifting, equipment shuttle, transport	2
	DO blocking/auto accidents/incident command	1
	DO, extrication	4
	Assist in patient care, lifting, equipment shuttle,	2
	Total Personnel	**10**

Mass Casualty

Unit Response	Task/Assignment	
• Officer • First Due Paramedic • Medic Units (4) • Engine or Rescue	Per Department SOP, the individual assumes command, size up, and initial incident safety officer	1
	Triage Officer	1
	Paramedic with driver, patient care, lifting, equipment shuttle, transport	2
	Paramedic with driver, patient care, lifting, equipment shuttle, transport	2
	Paramedic with driver, patient care, lifting, equipment shuttle, transport	2
	Paramedic with driver, patient care, lifting, equipment shuttle, transport	2
	DO – Engine/Rescue	1
	All available rescue personnel	*
	Total Personnel	**11**

Assumption: On a single patient, the POV response is a first responder trained in first responder EMS with basic equipment. The medic unit responds as a transport unit and may arrive on the scene first, but the goal is patient stabilization through basic medical intervention. Once that individual arrives with the patient, they can stabilize a viable patient with CPR/AED, hemorrhage intervention, etc.

Table 42: Low-Risk Wildland Fire Critical Tasks

Smoke Checks

Unit Response	Task/Assignment	
• Brush Engine • POVs	Incident command, investigation	3

Table 43: Moderate-Risk Wildland Fire Critical Tasks

Confirmed Wildland Fire – Moderate Fire Conditions - All Population Zones

Unit Response	Task/Assignment	
• Officer	Per Department SOP, the individual assumes command, size up, initial incident safety officer, type 5 incident command	1
• Type 6/7 Engine	Wildland Fire Operations	3
• Tactical Water Tender	Support, Wildland Fire Operations	2
	Total Personnel	**6**

Type 7 engines' minimum staffing is 2 per National Wildlife Coordinating Group (NWCG). For the Effective Response Force and safety, the minimum staffing of 3 is used for EFR. The minimum staffing for a tactical water tender is 2, per NWCG.

Table 44: High-Risk Wildland Fire Critical Tasks

Confirmed Wildland Fire – High Risk – High/Red Flag Warning Fire Conditions – Urban/Suburban (Urban Interface/Hydrants)

Unit Response	Task/Assignment	
• Task Force Leader and/or officer	Per department SOP individual assumes command, size up, initial incident safety officer, Task Force/Strike team management and operations; type 4/5 incident command	1
	Structural protection	3
• Type 3 Engine (4)	Structural protection	3
	Structural protection	3
• Type 6/7 Engine or Type 3 Engine	Structural protection	3
	Wildland fire operations or structural protection	4
	Total Personnel	**17**

Confirmed Wildland Fire – High Risk – High/Red Flag Warning Fire Danger Rating – Rural/Remote

Unit Response	Task/Assignment	
	Per Department SOP, the individual assumes command, size up, initial incident safety officer, Engine Task Force management, and operations	1
• Task Force Leader	Wildland fire operations	3
• Type 6/7 Engine (4)	Wildland fire operations	3
	Wildland fire operations	3
• Tactical Water Tender	Wildland fire operations	3
	Wildland fire operations	2
	All available personnel	*
	Total Personnel	**15**

Assumption: Any task force can be formed around any type of resource. Formation into task force/strike teams with leaders provides a manageable span of control. The organization above should be considered a minimum for safe wildland fire operations during complex urban interface fire operations during high fire conditions. Mutual aid should be used to fill gaps in staffing. If conditions warrant, the engines can be parked, and the firefighters can be formed into squads, squad leaders, and crew bosses.

Extended operations for any Wildland Fire incident will require additional staffing depending on the suppression operations, complexity of the incident, and other support needs.

Table 45: Critical Tasks for Hazardous Materials

Critical Task	High Risk	Low Risk
Command/Safety	2	1
Liaison	1	1
Decontamination	4	4
Research Support	2	1
Team Leader, Entry Team, Backup Team	6	6
Total Personnel	**15**	**13**

Table 46: Critical Tasks for Technical Rescue Operations

Critical Task	Swift Water	High/Low Angle	Confined Space
Command/Safety	1	1	2
Rescue Team	3	2	2
Backup Team	2	2	2
Patient Care	2	2	2
Rope Tender	2	0	0
Upstream Spotter	2	0	0
Downstream Safety	2	0	0
Rigger	0	1	1
Attendant	0	1	1
Ground Support	0	4	4
Edge Person	0	1	0
Shoring	0	0	0
Total Personnel	**14**	**14**	**14**

The previous tables illustrate the resource needs for a sampling of hazardous materials, wildland-urban interface, and technical search and rescue incidents, keeping in mind that numerous other response types exist. Each of the technical rescue incidents will require similar numbers of personnel or more depending on the complexity of the incident. Further, many positions require personnel to be certified in those positions or that particular discipline.

Performance Appraisal of the Emergency Services System

This chapter compares and evaluates the current deployment and performance of the Fire District as it relates to the benchmark performance objectives outlined and described in the previous chapter.

Response Time

Computer Aided Dispatch (CAD) data for 2020, 2021, and 2022 was examined and evaluated. The data has coding problems, transcription errors, and equipment failures. The project team used the following mechanism to address these issues.

Only qualified data is used to calculate response time and any related components. To be considered, the data must meet the following criteria:

- The incident must have been unique.
- The incident must have involved at least one Fire and Rescue Department unit being dispatched to the call.
- Calls missing data are not used in the computations for call processing, turnout time, travel time, or call duration.
- Any calls with usually long times or times sorted incorrectly (arrived before dispatch time) were removed.
- Non-emergency responses are removed; only emergency responses are included.

After filtering the data using the methodology outlined above, the remaining incidents represent the response time for calls for service handled by the fire department. With the pandemic in 2020, many departments and agencies had different experiences, from decreased call volumes to different types of calls and deviations in call times. Many of these same departments and agencies are now reporting their call volumes have increased significantly over pre-pandemic times. While these differences will interfere with any trends, it is equally important to note how a global event can affect an emergency services system.

Call Processing

Performance Standards

Jeffcom911 provides police, fire, and emergency medical dispatch services to 24 agencies in Jefferson County, including Evergreen Fire/Rescue. The NFPA 1221 Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems establishes the call processing benchmarks outlined in the chart below.

Table 47: NFPA 1221 Performance Objective

Component	Target	Performance
Calls Answered	Within 15 seconds	90%
	Within 20 seconds	95%
Call Processing	Within 60 seconds	90%
Call Processing for: * Language Translation * TTY/TDD Device Services * Hazardous Materials * Technical Rescue * Text Message * Calls Received during a Disaster * Unable to Determine Location	These types of calls are exempt from the call processing time illustrated above.	

Both CPSE and ISO use the 60-second call processing time benchmark performance objective as outlined in NFPA 1221 for their requirements. NFPA 1720 does not address call processing in any statements or reference NFPA 1221.

System Performance

The table below summarizes Jeffcom911's performance.

Table 48: Call Processing Performance

All Emergency Calls – 90th Percentile Times		2020 - 2022	2020	2021	2022	Benchmark
Call Processing	Pick-up to Dispatch	2:47	3:12	2:40	2:32	1:00

Over three years, the communications center has processed emergency calls in 2 minutes and 47 seconds for 90% of the emergency calls handled for the fire district.

Turnout Time

Performance Standards

Turnout time is a measurable time segment that begins when the emergency service unit receives the call and is on the apparatus responding (wheels rolling). The following tables compare the four models for benchmark performance objectives.

Table 49: Turnout Time – Benchmark Performance Objectives

Call Type	NFPA 1710	NFPA 1720*	ISO	CPSE
Emergency Medical Calls	60 seconds or less 90% of the time	60 seconds or less 90% of the time	No Requirement	60 seconds or less 90% of the time
Fire or Special Operations Calls	80 seconds or less 90% of the time	90 seconds or less 90% of the time	No Requirement	80 seconds or less 90% of the time

*Only applies to staffed stations or units

System Performance

Turnout time in the following table is for staffed units only.

Table 50: Turnout Time Performance

All Emergency Calls - 90th Percentile Times 2020 - 2022	2020 - 2022	2020	2021	2022	NFPA Benchmark
Turnout Time	2:59	2:55	3:00	3:02	1:00

All times shown are the 90th percentile for each of the three years. The performance objective time displayed to the far right represents the turnout time established by NFPA 1720. For the three years, the staffed units are over the performance objective by 1 minute and 59 seconds. The following table illustrates the turnout time for each staffed medic units.

Table 51: Turnout Time Performance – Staffed Units

All Emergency Calls - 90th Percentile Times 2020 - 2022		2020 - 2022	2020	2021	2022	NFPA Benchmark
Turnout Time	Medic 112	2:56	2:54	2:56	3:04	1:00
	Medic 114	2:59	2:53	3:03	3:00	1:00

Distribution of Resources

Distribution is the measure of getting initial resources to an emergency to begin mitigation efforts. This is measured in various ways, including percentage of square miles, percentage of road miles, and travel time. The Insurance Services Office (ISO) has used road miles for many years, advocating one and a half miles for an engine company and two and a half miles for a ladder company. With the advent of GIS technology and improved computer-aided dispatch (CAD) systems, the use of actual travel time is another more accurate measure for the distribution of resources.

Performance Standards

Travel time is a measurable time segment that begins when the apparatus and personnel begin the response (wheels rolling) and ends once at the location of the emergency (wheels stopped). It is the most appropriate measurement available for the distribution of resources with a proven record of success. The following table is used for the travel time dynamics of the emergency services system.

Table 52: First Arriving Benchmark Performance Objectives

Demand Zone	Demographics	NFPA 1710	NFPA 1720	ISO	CPSE
Urban	Greater than 1,000 per sq. mile	4 minutes or less 90% of the time.	No Requirement	1.5 road miles in the built-upon area	4 minutes or less 90% of the time
Suburban	500 - 1,000 per sq. mile	4 minutes or less 90% of the time.	No Requirement	1.5 road miles in the built-upon area	5 minutes or less 90% of the time
Rural Area	Less than 500 per sq. mile	4 minutes or less 90% of the time.	No Requirement	1.5 road miles in the built-upon area	10 minutes or less 90% of the time
Remote Area	Travel Distance greater than / equal to 8 miles	4 minutes or less 90% of the time.	No Requirement	1.5 road miles in the built-upon area	No Requirement

There are several notable items contained in the previous table. First, NFPA 1720 does not address the first arriving unit as it only addresses the arrival of the full response, which does not lend itself to any resource distribution performance. NFPA 1710 does not address the various demographics or population densities. CPSE addresses the travel time for multiple demographics with differing travel times, and ISO only addresses the built upon area defined as those with available fire hydrants.

Based on the 2021 – 2025 Strategic Plan, Evergreen has established benchmark performance objectives utilizing the requirements of NFPA 1720. However, NFPA 1720 does not provide a performance objective for the first arriving unit or travel time.

System Performance

Response policies for EFR allow volunteer staff to respond directly to the location of the call for service. Given the vast area of the district, the purpose is to get assistance to the scene as quickly as possible. The following table illustrates the travel time for all units, including privately owned vehicles (POV), medical units only, and fire apparatus only, compared to CPSE performance benchmark objectives.

Table 53: Travel Time Performance

All Emergency Calls – 90th Percentile Times 2020 - 2022			All Units	EMS Apparatus Only	Fire Apparatus Only	CPSE Benchmark Performance
Travel Time	1st Unit – Distribution	Urban Zones	7:14	8:48	7:20	4:00
		Suburban Zones	12:33	15:24	11:53	5:00
		Rural Zones	19:46	21:11	19:48	10:00
		Remote Zones	15:33	17:45	14:52	No Requirement

The travel time calculation is the difference between the recorded enroute time and arrival time.

Concentration of Resources

The concentration of resources is generally described as the ability of the fire department to get the appropriate number of personnel and resources to the scene of an emergency within a prescribed time to mitigate the incident effectively. The effective response force is based on the critical tasks outlined in the previous chapter and depends on the incident type.

Performance Standards

The concentration component has two segments: travel time and the personnel for the first alarm assignment. The following table summarizes the differing viewpoints on the travel time for the arrival of an effective response force.

Table 54: First Alarm Assignment - Benchmark Performance Objectives

Demand Zone	Demographics	NFPA 1720	ISO	CPSE
Urban	Greater than 1,000 per sq. mile	7 minutes and 30 seconds or less 90% of the time	No time or mileage requirement	8 minutes or less 90% of the time
Suburban	500 - 1,000 per sq. mile	8 minutes and 30 seconds or less 80% of the time	No time or mileage requirement	10 minutes or less 90% of the time
Rural Area	Less than 500 per sq. mile	12 minutes and 30 seconds or less 80% of the time	No time or mileage requirement	14 minutes or less 90% of the time
Remote Area	Travel Distance greater than / equal to 8 miles	Dependent on travel distance	No time or mileage requirement	No Requirement

The travel time shown for NFPA 1720 is derived by subtracting the turnout time for staffed stations or units. The following table summarizes NFPA, ISO, and CPSE standards for the number of personnel arriving for a first alarm assignment for a single-family dwelling.

Table 55: First Alarm Assignment - Recommended Personnel

Demand Zone	Demographics	NFPA 1720	ISO	CPSE
Urban	Greater than 1,000 per sq. mile	15 personnel	No specific requirement	16 personnel
Suburban	500 - 1,000 per sq. mile	10 personnel	No specific requirement	16 personnel
Rural	Less than 500 per sq. mile	6 personnel	No specific requirement	16 personnel
Remote	Travel Distance greater than / equal to 8 miles	4 personnel	No specific requirement	16 personnel

As illustrated, ISO does not specify the number of personnel expected or anticipated to arrive. Instead, it provides points for the personnel - meaning the more on-duty personnel, the more points are added to the overall evaluation. CPSE based their personnel requirements on creating an effective response force using critical tasking for a single-family dwelling. NFPA 1720 based its effective response force on an Ontario Fire Marshal's Office report published in 1993.

System Performance

CAD data did not provide enough detail to analyze the performance of the EFR related to the concentration of resources. The issue is primarily related to the use and arrival of the POV. JeffCom911 only captures and records the time of arrival of the first POV; any of these units that arrive after the first unit arrives are not recorded.

System Reliability

Other contributing factors, including unit utilization and concurrent calls for service, can influence the distribution and concentration of resources.

Unit Utilization

Unit utilization is another factor in determining whether there is an appropriate emergency services response. Unit utilization is calculated by taking the total hours the unit is committed to an incident divided by the total hours in a year. Expressed as a percentage, it identifies the amount of time the unit is committed but, more importantly, the amount of time it is available. The committed time can impact meeting the standard within the 80th and 90th percentile performance standards framework. If utilization rates are too high, the units are often unavailable for immediate response.

In 2016, Henrico County, Virginia, conducted a study of unit utilization. Through their research, they developed a scale to identify the community impact on travel time and availability of their emergency medical units.[6]

[6] https://www.fireengineering.com/apparatus-equipment/how-busy-is-busy/#gref

Table 56: Henrico County Unit Utilization Impact

Factor	Indicator	Description
16% to 24%	Ideal Commitment Range	Personnel are able to maintain training requirements and physical fitness and can consistently achieve response time benchmarks. Units are available to the community more than 75 percent of the day. Units below 0.16 should be evaluated for more efficient use as additional operating capacity is available.
25%	System Stress	Community availability and unit sustainability are not questioned. First-due units are responding to their assigned community 75 percent of the time, and response benchmarks are rarely missed. At this level, agency leaders must understand that commitment factor increases are imminent. The community this unit serves will begin to see increasingly longer response times as neighboring stations send apparatus during one out of four calls.
26% to 29%	Evaluation Range	In this range, the community served will experience delayed incident responses. Just under 30 percent of the day, first-due ambulances are unavailable; thus, neighboring responders will likely exceed goals. Agency leadership should immediately begin identifying funding sources to provide relief. At this range, commitment factors are only expected to increase.
30% or more	Line in the Sand	Not Sustainable: Commitment Threshold – shows our community has less than a 70 percent chance of timely emergency service and immediate relief is vital. Personnel assigned to units at or exceeding 0.3 may show signs of fatigue and burnout and may be at increased risk of errors. Required training and physical fitness sessions are not consistently completed.

The following table illustrates the unit utilization for the past three years for the medic units.

Table 57: Unit Utilization for Medic Units

Unit	2020			2021			2022		
	Duration	Pct. of Time	Avg.	Duration	Pct. of Time	Avg.	Duration	Pct. of Time	Avg.
Medic 112	742:13:57	8.5%	0:53:39	832:23:12	9.5%	0:56:34	963:51:17	11.0%	0:56:42
Medic 114	703:32:20	8.0%	0:56:58	794:26:36	9.1%	1:01:30	818:30:06	9.3%	0:59:45
Medic 122	45:48:05	0.5%	0:45:03	42:59:07	0.5%	0:51:35	74:16:08	0.8%	0:57:08
Medic 124	28:00:06	0.3%	0:54:12	36:03:50	0.4%	1:14:47	12:13:25	0.1%	0:56:25
Medic 124a	0:00:00	0.0%	0:00:00	0:00:00	0.0%	0:00:00	27:35:00	0.3%	0:48:41
Medic 124b	0:00:00	0.0%	0:00:00	0:00:00	0.0%	0:00:00	2:18:56	0.0%	0:15:26

Medic 112 is the most active in terms of committed time. During 2022, Medic 112 was committed approximately 11% of the time, and Medic 114 was committed about 9% of the time. The medic units are under the ideal commitment range based on the Henrico County scale. However, the issue appears to be the average duration of the calls; all four medic units have an average call duration of approximately 1 hour.

Concurrent Calls

It is common for a fire protection system to have multiple requests for service occurring simultaneously. The larger the system, the more frequently this will happen. With the appropriate resources, this can be handled efficiently. The following table summarizes the number of concurrent calls for the emergency services system for the past three years.

Table 58: Concurrent Calls for Service

Calls	2020	2021	2022	Total	%
1	1,672	1,767	1,947	5,386	85.74%
2	264	251	284	799	12.72%
3	23	25	31	79	1.26%
4	2	3	12	17	0.27%
5	1	0	0	1	0.02%
Total	**1,962**	**2,046**	**2,274**	**6,282**	**100%**

Of the 6,282 calls for service over the past three years, there were 799 instances that two calls occurring simultaneously. Likewise, there were 79 instances where three calls were occurring simultaneously. Over the past three years, approximately 13% of the calls occurred with at least two simultaneous calls.

Total Response

Previous sections in this chapter reviewed and evaluated the different response time components individually. Call processing and turnout time are two components that are controllable either by the dispatch center or the fire department. Travel time is less controllable as this utilizes a stationary location, a fire station, as the starting point, and the existing roadway network to arrive at the call for service. For this reason, this component is a primary source used for distributing and concentrating resources.

The following table illustrates two points of view. The first set of times, labeled fire rescue response time, illustrates those components that EFR controls. The second set of times, labeled total response time, includes the call processing time, which is not controllable by EFR but does provide a view of what the resident experiences.

Table 59: Total Response Time Performance

All Emergency Calls – 90th Percentile Times 2020 – 2022			All Units	EMS Apparatus Only	Fire Apparatus Only	CPSE Benchmark Performance
Fire Rescue Response Time	1st Unit Distribution	Urban Zones	9:26	10:50	16:37	5:00
		Suburban Zones	15:01	17:27	23:10	6:00
		Rural Zones	21:15	23:03	36:38	11:00
		Remote Zones	18:42	20:12	30:24	NR
Total Response Time	1st Unit Distribution	Urban Zones	12:25	13:01	18:37	6:00
		Suburban Zones	18:57	19:42	25:03	7:00
		Rural Zones	26:34	26:12	38:59	12:00
		Remote Zones	24:01	23:01	32:13	NR

The Fire Rescue time is measured from when EFR receives the call to the initial arrival of resources. With how EFR responds, three views are provided: all units, including POVs, medical units, and fire apparatus. This view illustrates the impact turnout time has on the response time continuum.

The total response time is measured from when the call is initiated to the initial arrival of resources. Again, with how EFR responds, three views are provided: all units, including POVs, medical units, and fire apparatus. The resident's perspective is highlighted with this view and illustrates the impact of call processing and turnout time on the overall response time continuum.

Deployment Improvement Opportunities

In the previous chapter, several gaps in service levels were illustrated, presenting opportunities to improve the deployment of services. This chapter provides recommendations intended to enhance the deployment of resources in the emergency services system within the Fire District.

Call Processing

As noted, the Jefferson County Communications Center Authority (JeffCom911) provides fire and emergency medical dispatch services to EFR. EFR is one of eight member agencies of JeffCom911 and a voting member of the Board of Directors. Fifteen user agencies also receive dispatch services from the center. Throughout this analysis, several issues were identified with the data regarding time stamps for the responding apparatus. EFR should continue to work with JeffCom911 to ensure the dispatch services are appropriate and work to improve the service provided by JeffCom911.

Turnout Time

Several factors will influence the turnout time for the apparatus, including the station layout. Such considerations include stairs, detours to the restroom, a policy for signaling enroute, opening the bay doors, gathering response information, and the personal protective gear that must be donned. NFPA 1720 has a turnout time performance benchmark for staffed stations only. For EFR, the only staffed stations are those for the emergency medical service response units.

As noted, the CAD data was insufficient to analyze the staffed units. It is unclear whether the units are contacting JeffCom911 properly or if JeffCom911 is not recording the timestamp properly. This issue will require working with JeffCom911 to improve the service being provided.

Secondarily, EFR does not have a benchmark performance objective for turnout time for staffed units. This objective should be established to inform staff about the EFR's expectations for their performance. This is typically outlined in the standard of cover document.

Deployment of Resources

In the deployment of resources for a fire department, there are three components defined as follows:

- Distribution – The measure of getting initial resources to an emergency to begin mitigation efforts.
- Concentration – Generally described as the ability of the fire protection system to get the appropriate number of personnel and resources to the scene of an emergency within a prescribed time to mitigate the incident effectively.
- Reliability - Other contributing factors, including unit utilization and concurrent calls for service, can influence the distribution and concentration of resources.

NFPA 1720: Objective for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments addresses response time to include turnout and travel times as a single measurement. The standard only addresses the arrival of an effective response force and does not lend itself to an effective evaluation of the placement of resources. NFPA 1710: Objective for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments does not use any demographic information to set the travel times in this document. The Center for Public Safety Excellence had previously provided travel time performance objectives for the various demographics, providing benchmark and acceptable objectives for each. The following table is used for the travel time dynamics of the fire protection system.

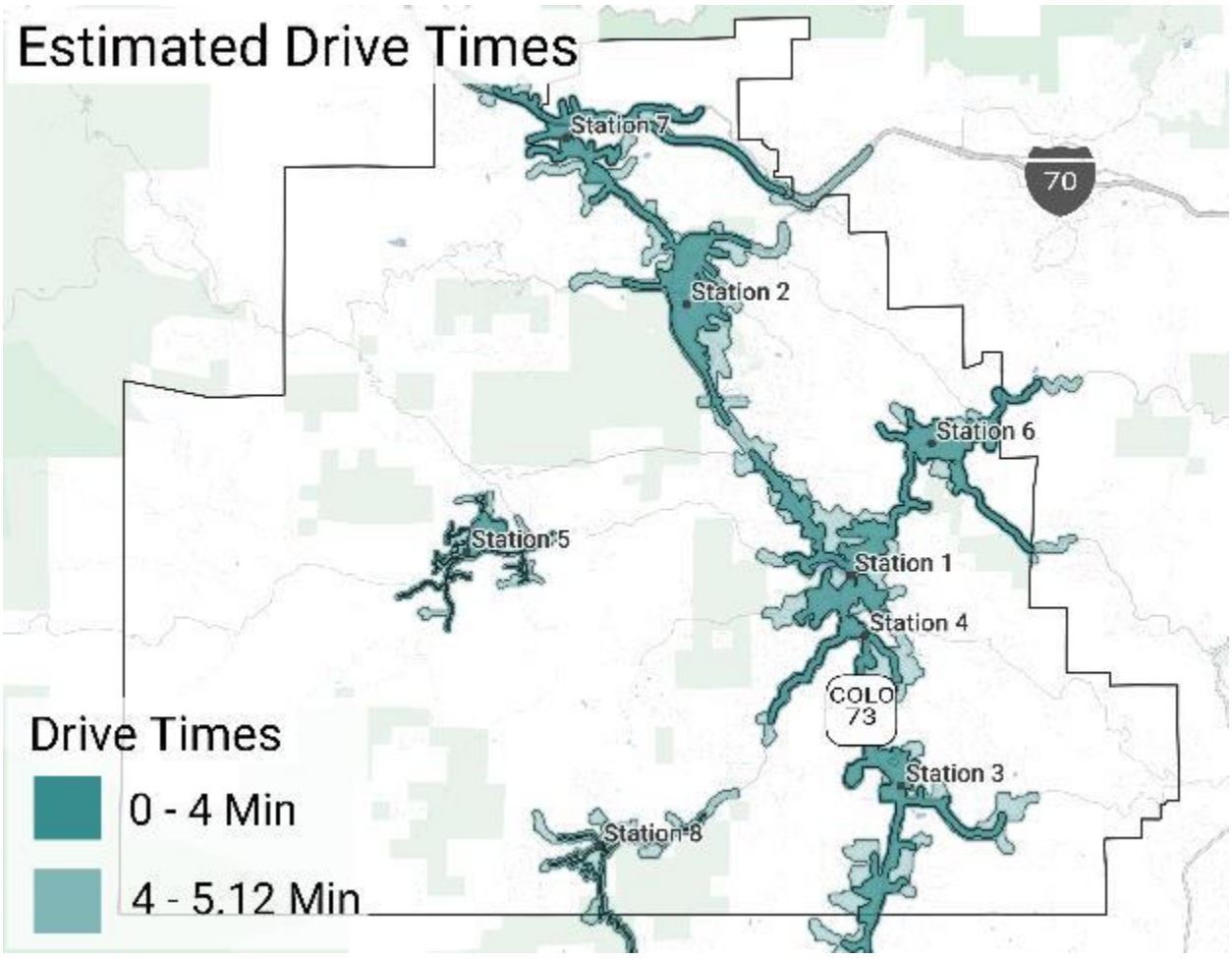
Table 60: Service Area/Population Density Travel Time Objectives

	1st Unit	2nd Unit	1st Alarm Balance	Performance
Urban: Population density of over 1,000 per square mile				
Benchmark	4 minutes	8 minutes	8 minutes	90%
Acceptable	5 minutes/12 seconds	10 minutes 24 seconds	10 minutes/24 seconds	90%
Suburban: Population density between 500 and 1,000 per square mile				
Benchmark	5 minutes	8 minutes	10 minutes	90%
Acceptable	6 minutes/30 seconds	10 minutes/24 seconds	13 minutes	90%
Rural: Population density of less than 500 per square mile				
Benchmark	10 minutes	14 minutes	14 minutes	90%
Acceptable	13 minutes	18 minutes/12 seconds	18 minutes/12 seconds	90%

For this analysis, the travel time performance objectives produced by the CPSE will be used as these objectives address first-arriving resources and varying demographics.

Urban Planning Zone

The urban planning zone is primarily serviced from Stations One and Two. Station Four will respond into this zone but only for medical calls. The following map illustrates the travel time from the fire station network using the urban benchmark objectives and the suggested acceptable performance objectives.



The urban planning zone is a long and relatively narrow zone along Highway 74 from Evergreen to Bergen Park. The area to the east of Highway 74 is developed with a roadway network that is not conducive to faster vehicle movement due to the width and curviness of the roadways. The area to the west of Highway 74 is mainly undeveloped. However, there are areas along Stagecoach Blvd. that are available for development. The following table illustrates the current travel time for the medic and fire units based on available CAD data.

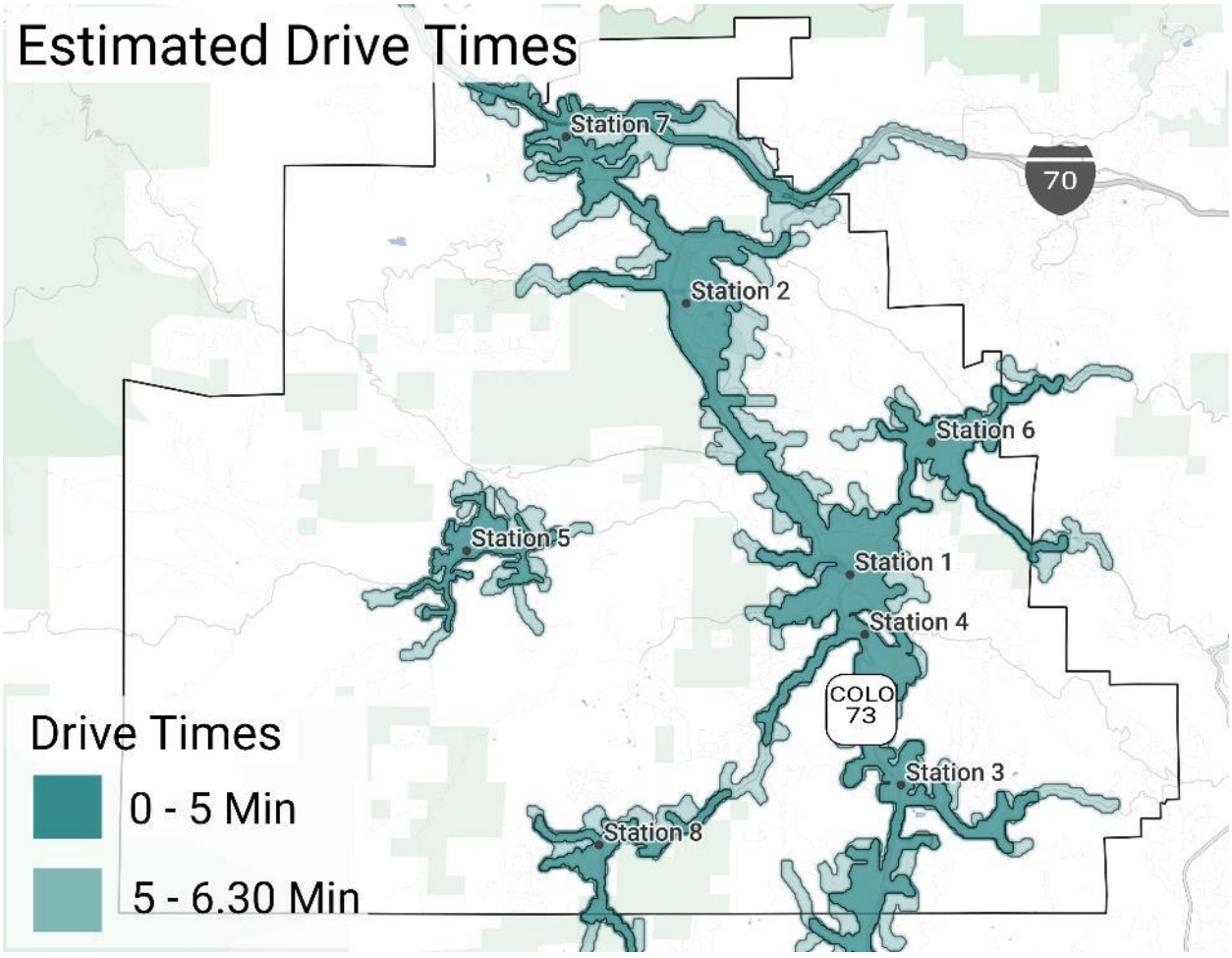
Table 61: Urban Zone Travel Time

Zone	Area	Medic Units	Fire Units
Urban 1	Bergen Park/Hiwan Hills	8:48	7:20

As the area to the west of Highway 74 develops, EFR may need to consider adding a station to maintain the desired response time to the area. The addition of a station is contingent upon call volume and travel time as the area develops.

Suburban Planning Zones

As defined in the community risk assessment, nine planning zones have a suburban demographic. Stations Three, Six, Seven, and Eight serve these areas. The following map illustrates the travel time from the fire station network using the suburban benchmark objectives and the suggested acceptable performance objectives.



While most of these zones fit the suburban demographic, much of the population density is concentrated in smaller areas. For example, in Suburban Zone 7, Evergreen Meadows is located just south of Station Three and within the illustrated travel times. The following

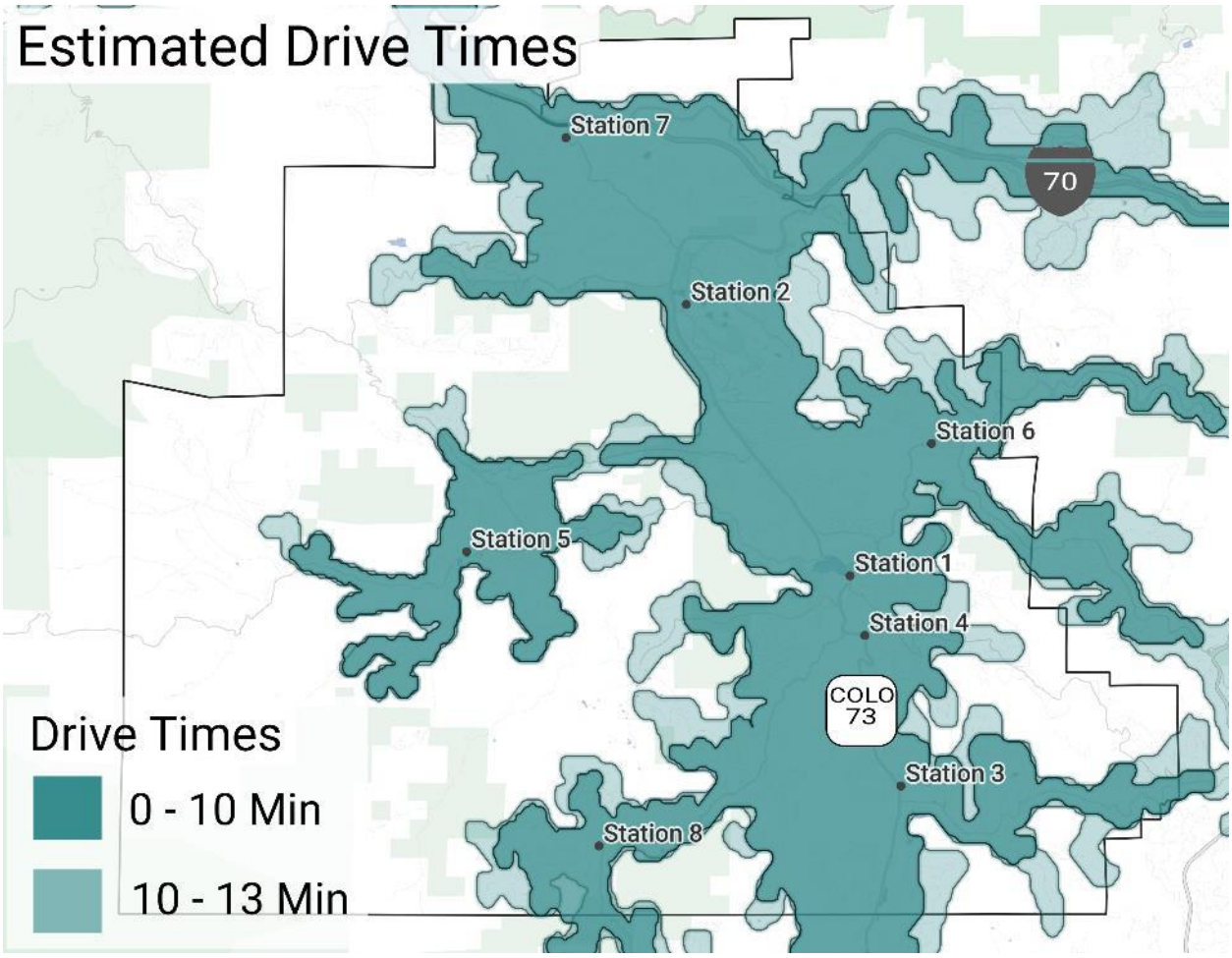
table illustrates the current travel time for medic and fire units based on available CAD data.

Table 62: Suburban Zones Travel Time

Zone	Area	Medic Units	Fire Units
Suburban 1	North Evergreen	12:12	9:41
Suburban 2	Floyd Hill	16:35	14:15
Suburban 3	Beaver Brook	17:00	11:46
Suburban 4	Kerr Gulch	13:27	7:40
Suburban 5	Kittridge	13:11	8:34
Suburban 6	Echo Hills	16:54	14:16
Suburban 7	Marshdale	12:54	12:26
Suburban 8	Blue Creek	15:09	12:11
Suburban 9	Buffalo Creek South	18:03	15:02

Rural Planning Zones

As defined in the community risk assessment, there are five planning zones with a rural demographic. All the stations in the network provide some level of service to these zones; however, Station Five is the only station that is solely in the rural area. The following map illustrates the travel time from the fire station network using the rural benchmark objectives and the suggested acceptable performance objectives.



As illustrated, all stations impact the travel time to the rural areas. Some of the rural areas to the far west section of the district have limited roadway access, as do the areas to the southeast. The following table illustrates the current travel time for medic and fire units based on available CAD data.

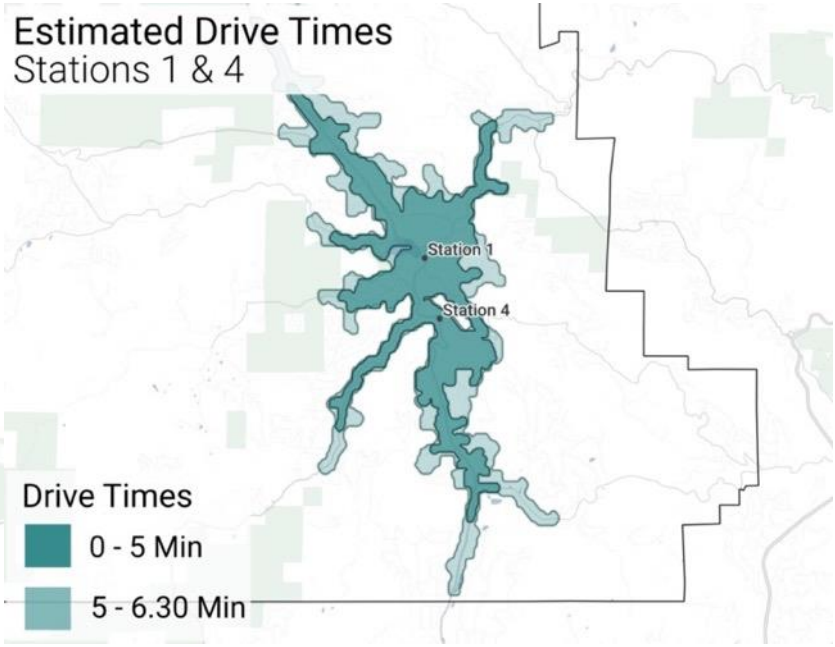
Table 63: Rural Zones Travel Time

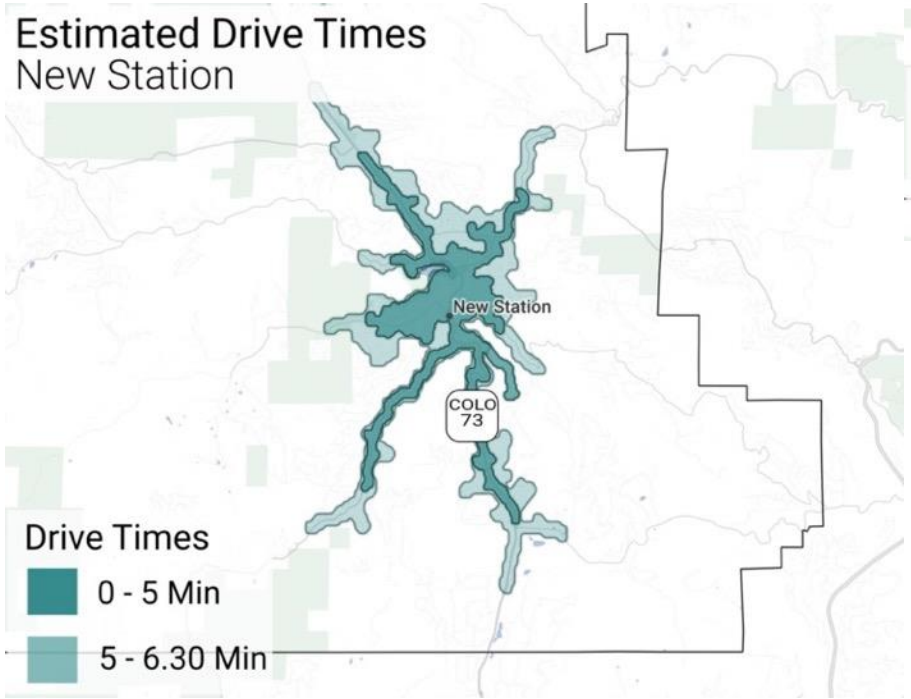
Zone	Area	Medic Units	Fire Units
Rural 1	Witter Gulch	20:32	20:34
Rural 2	Bear Mountain	16:23	14:15
Rural 3	North Turkey Creek	20:07	11:20
Rural 4	Bear Creek West	20:04	23:18
Rural 5	Western Evergreen	33:07	21:41
Remote 1	High Drive	17:45	14:52

Distribution Improvements

EFR has an opportunity to consolidate Stations One and Four with the acquisition of property at 5071 Highway 73. The location of this property splits the distance between the two stations. Station One does not meet the needs of a modern fire station and is functionally obsolete. Station Four needs considerable renovation and repairs to maintain its operability, such as a new roof, leach fields, and eventual renovation of the living quarters. Also, Station Four does not have enough bay space to house fire apparatus, limiting its future use. Constructing a station at this new site will allow EFR to consolidate the two stations and, more importantly, build a facility that can expand as services warrant. The following maps illustrate the travel time differences between the existing and proposed locations.

The map to the right illustrates the travel time using the suburban performance objectives of five minutes, six minutes, and thirty seconds. The map below shows the same travel time from the new single location. The new station location appears to have a smaller footprint related to travel time. However, Station Four only houses medical units; moving these units slightly north will provide better service to the urban zone.





This also removes Station One from the current location's traffic congestion and roadway issues. It is more efficient to come through the traffic congestion than to come out of the middle of the congestion. The new roadway configuration includes a median that will also cause delays in the response to calls for service.

In the urban zone, the area to the west of Highway 74 between Evergreen and Bergen Park is largely undeveloped. As the area along Stagecoach Blvd. develops, EFR may need to consider adding a station in the area to maintain the desired response time to the area. The addition of a station is contingent upon call volume and travel time as the area develops.

Goal 5	Consolidate Stations One and Four into a new facility.

Concentration of Resources

Concentration is generally described as the ability of the fire protection system to get the appropriate number of personnel and resources to the scene of an emergency within a prescribed time to mitigate the incident effectively. An effective response force is based on the critical task analysis for a specific type of incident. Through the SOC document, EFR has established an effective response force for different types of incidents.

The issue is the time to get the resources to the scene. Due to the size and breadth of the district, EFR allows volunteer staff to respond to the location of a call for service. This manner of response gets resources to the scene quicker and enables mitigation efforts to begin. However, no system is in place to timestamp or otherwise record the arrival of the volunteer staff beyond the first arriving POV. Fire apparatus is recorded, but no minimum staffing is assigned. For example, there may be three personnel on one call; on the next, there may be one person. Due to the limits of the CAD data and staffing of units, the arrival of an effective response force cannot be analyzed.

Reliability, Response Time, and Staffing

Three response components need to be addressed together as they are interrelated. For reliability, the issue is not unit utilization or concurrent calls, as neither metric impacts the response system. The unit hour utilization for Medic 112 is 11%, the highest utilized unit. The following table illustrates concurrent calls for auto accidents and medical calls only.

Table 64: Concurrent Auto Accident and Medical Calls

Calls	2020	2021	2022	Total	%
1	1,172	1,297	1,463	3,932	89.9%
2	128	143	132	403	9.2%
3	8	11	10	29	0.7%
4	2	1	6	9	0.2%
Total	**1,310**	**1,452**	**1,611**	**4,373**	**100%**

About 10% of the time, multiple medical calls occur. The following table compares the average call duration for all calls to those with a hospital transport component.

Table 65: Call Duration Comparison

2022	Total Calls		Transport Calls Only	
Unit	Average Duration	Number of Calls	Average Duration	Number of Calls
Medic 112	0:56:42	1,020	1:35:54	517
Medic 114	0:59:45	822	1:43:50	411
Medic 122	0:57:08	78	1:42:54	31
Medic 124	0:56:25	13	2:50:26	3
Medic 124a	0:48:41	34	1:52:15	11

Those calls in the transport column are medical calls that include a transport component based on the CAD data. In 2022, about 50% of the calls for Medics 112 and 114 have a transport component included compared to the total calls. As illustrated, the duration of the call increased by about 45 minutes. The reliability issue is the duration of each call, including hospital transport. There are additional points as follows:

- During the interview process, there were several comments about the need for a third person to assist in transporting patients, which included using volunteer staff. Volunteer staff were not always available for this purpose. Opinions were expressed that the duration of the call (transport) deterred volunteers from responding or being available.
- There is some doubt about when the medic unit was making themselves available. Concerns were expressed that the medic units were advising JeffCom911 that they were available before their arrival back in the district.

The next component is the response time as it relates to the different types of units. The following table compares the response time to fire-related calls for service between the different unit types.

Table 66: Fire-Related Calls Response Time Comparison

Fire-Related Calls – 90th Percentile Times 2020 - 2022			All Units	POV	Medic Units Only	Fire Apparatus Only
Total Response Time	1st Unit Distribution	Urban Zones	14:24	13:28	13:18	19:15
		Suburban Zones	21:01	19:47	20:10	25:14
		Rural Zones	29:11	27:01	28:36	38:14
		Remote Zones	29:46	29:32	23:39	32:13

The response time shown is from the CAD data and is calculated from when the call is dispatched to the arrival on the scene. The arrival of a fire apparatus is generally five to seven minutes after the arrival of a medic unit or a volunteer staff member (POV). Also, note that the arrival of a medic unit and POV are generally within a minute of each other.

This is not an indictment of the POV program as it provides a valuable service to the district, given the large area of the district. However, waiting ten minutes to get the equipment needed to mitigate the emergency is a problem. Those attending the focus group meetings also recognized this as a concern. The medic units respond from two stations, mirroring the POV units' response time. Using the medic unit response data, it would seem reasonable that the fire apparatus would have similar results.

Improvement to the response time issues will necessitate staffing two fire units. Using the medic unit response time data, placing a staffed fire unit at Station One and one at Station Two would improve the response time. These staffed units would ensure the equipment arrived at an acceptable time.

Throughout the staff interviews and meetings, there were some concerns and thoughts about staffing a third medic unit. While the number of calls, unit hour utilization, and concurrent call data do not necessarily support adding a third medic unit, the call duration creates a pause. To address this particular issue, one of the staffed fire units could cross-staff the third medic unit and become the last out medic unit should the need arise. Cross-staffing units is a common practice in the fire service and would serve the EFR well in this instance.

Staffing Model

The staffing for the fire units could utilize any number of configurations. Many departments use volunteer staff to create the staffed unit by scheduling volunteer staff to remain at the station during a scheduled shift. In these instances, a stipend is offered to pay the volunteer staff. Other departments use a combination of career and volunteer staff to create the staffed unit. The fire units should be staffed with at least four personnel per shift. This configuration allows one crew member to assist with medical transport and still have a three-person crew remaining in the district. Also, with a four-person crew, two crew members staffing the third medic unit would leave a two-person fire unit. A two-person unit is not ideal, but it allows fire apparatus to respond more quickly.

There are numerous staffing options at the disposal of the EFR. The staffing model illustrated in the following section utilizes two career positions and two stipend volunteer positions to staff an engine company. The career positions would be firefighter/paramedics, and the volunteer positions would be firefighter positions. The following table illustrates the number of people needed to cover the shifts.

24/48 Schedule

Single Position	
122	Shifts for one Position
9	Paid Time Off
113	Shifts Available to work
1.08	People to cover 122 shifts
3.24	People to cover 24 / 7 / 365

With two career positions per shift, six people would be needed to cover the positions but will require some overtime to cover paid time off. Current annual salary ranges for a paramedic begin at $57,200, with a high of $85,800. Considering the new positions require a firefighter certification, the beginning pay range should be increased by 15% or $8,580 to a starting salary of $65,780. Based on the current benefit package, the total cost for a single career position is $88,994; six people would have an annual cost of $533,966. The following table illustrates the cost for the career personnel.

Salaries and Wages	$65,780	$394,680
Employee Benefits	$11,131	$66,785
Worker's Comp.	$2,869	$17,213
Employer Payroll Taxes (FICA)	$5,032	$30,193
Career Pension	$4,182	$25,095

Total Cost	**$88,994**	**$533,966**

For the stipend volunteer positions, there are two positions to be staffed. Stipends are regulated by the Fair Labor Standards Act (FLSA), and some rules need to be followed. A volunteer is defined as an individual who receives no compensation or is paid expenses, reasonable benefits, or a nominal fee to perform the services for which the individual volunteered.

The following points are from an opinion letter written by the Wage and Hour Division of the United States Department of Labor dated December 18, 2008, as it relates to the use of stipends:

- A public agency volunteer cannot receive any compensation, but may be paid "expenses, reasonable benefits, or a nominal fee, or any combination thereof."
- The regulations allow volunteer firefighters to be paid a nominal fee even if paid on a "per call" or similar basis, as long as such payment is consistent with certain factors denoting the relative "sacrifice" of the volunteer. (listing among the factors to be considered: the distance traveled, time and effort expended by the volunteer; whether the volunteer has agreed to be available around the clock; and whether the volunteer provides services throughout the year, even if those services are provided periodically).
- A nominal fee cannot substitute compensation or be tied to productivity.
- The Department finds that the fee paid is (apart from expenses) nominal as long as it does not exceed 20 percent of the amount that otherwise would be required to hire a permanent employee for the same services. For example, if a volunteer firefighter staffs the equivalent of three shifts during a month, the nominal fee should not exceed 20 percent of what it would cost to employ a firefighter to staff these three shifts.

The International Fire Chief's Association (IAFC) posed several hypothetical scenarios to the Department of Labor (DOL). The DOL found the following payments may qualify as nominal fees.

Amount of Payment	Requirements	Additional Payments	Average Worked (Minimum)
$1,200 per year	Regardless of the number of shifts or amount of time spent responding to calls	n/a	24 shifts and/or 60 hours responding to calls per year
$100 per month	Regardless of the number of shifts or amount of time spent responding to calls	n/a	4 shifts and/or 8 hours responding to calls per month
$100 per month	Minimum of 2 shifts and/or 5 hours responding to calls	$25 for each additional shift over 4 and/or each additional 2.5 hours responding to calls over 12 hours	n/a
$25 per 4-hour block of time	Regardless of the amount of time spent at the station house or responding to calls	n/a	n/a
$20 per shift	Regardless of the length of shift or amount of time spent responding to calls	n/a	6-hour shift and/or 2 hours responding to calls per shift
$25	Minimum of 8 hours per shift and/or 2.5 hours responding to calls	$15 per shift that exceeds 8 hours and/or 5 or more hours responding to calls	n/a
$15,000 annual fee	n/a	n/a	3,000 hours waiting and responding to calls per year*
$20 per shift	Regardless of the length of shift or amount of time spent responding to calls	Fee increases by $1 per shift for each year with a minimum of 12 shifts**	n/a

* Fair Labor Standards found that the payment of $15,000 annually may qualify as nominal under the 20% rule but also observed that 3,000 hours of service or 57 hours a week is excessive for an individual to be considered a volunteer.

The International Association of Fire Chiefs (IAFC) posed these hypothetical scenarios to obtain guidance in applying the Department of Labor (DOL) rules and regulations pertaining to stipends for volunteer firefighters. This table should not be considered a final determination from the DOL in applying their rules and regulations. While it provides guidance in applying these rules and regulations, it remains the responsibility of the fire departments and fire districts to ensure they are in compliance.

The following table illustrates one stipend pay method.

Rank	24-hour Shift	Day Shift	Sleeper Shift
Firefighter I/EMT	$150.00	$100.00	$50.00

As illustrated, a twenty-four-hour shift would be paid at $150, with the shift having the ability to split into two twelve-hour shifts. The sleeper shift is paid at a lower rate as the crew will be able to sleep on an overnight shift. The total annual cost for these two positions is $109,500.

Goal 6	Improve the availability of fire apparatus.

Financial Projection

With the addition of career and volunteer staffing at Station 2 and eventually at Station 1, the cost of these additional services needs to be considered for future budgets. The following tables illustrate a five-year projection based on the 2024 budget.

Table 67: Revenue Projections

Line Item	2024 Budget	2025 Projection	2026 Projection	2027 Projection	2028 Projection	2029 Projection
Property Tax - Jefferson County	$7,796,331	$8,030,221	$8,271,128	$8,519,261	$8,774,839	$9,038,084
Ambulance Billing	$725,000	$746,750	$769,153	$792,227	$815,994	$840,474
Property Tax - Clear Creek County	$977,675	$1,007,005	$1,037,215	$1,068,332	$1,100,382	$1,133,393
Specific Ownership Tax - Jefferson County	$467,780	$481,813	$496,268	$511,156	$526,491	$542,285
Grant Revenue	$152,100	$156,663	$161,363	$166,204	$171,190	$176,326
Rental Income	$87,000	$89,610	$92,298	$95,067	$97,919	$100,857
State Pension Contribution	$80,000	$82,400	$84,872	$87,418	$90,041	$92,742
Vehicle/Maintenance Income	$10,000	$10,300	$10,609	$10,927	$11,255	$11,593
Specific Ownership Tax - Clear Creek County	$73,326	$75,526	$77,792	$80,125	$82,529	$85,005
Wildland Deployment	$38,800	$39,964	$41,163	$42,398	$43,670	$44,980
Abatement Refund - Jefferson County	$12,266	$12,634	$13,013	$13,403	$13,805	$14,220
Fire Prevention	$7,000	$7,210	$7,426	$7,649	$7,879	$8,115
MVA Revenue	$4,500	$4,635	$4,774	$4,917	$5,065	$5,217
CPR Class Income	$4,000	$4,120	$4,244	$4,371	$4,502	$4,637
Abatement Refund - Clear Creek County	$1,538	$1,584	$1,632	$1,681	$1,731	$1,783
Energy Credit Reimbursement	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159
Donations	$0	$0	$0	$0	$0	$0
Grants - Walmart	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0
Portfolio Interest Income	$400,150	$412,155	$424,519	$437,255	$450,372	$463,884
Interest- Property Tax - Clear Creek County	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159
Interest- Property Tax - Jefferson County	$7,500	$7,725	$7,957	$8,195	$8,441	$8,695
Proceeds from the Sale of Assets	$0	$0	$0	$0	$0	$0
Total Revenues	**$10,846,966**	**$11,172,375**	**$11,507,546**	**$11,852,773**	**$12,208,356**	**$12,574,606**

For this projection, a 3% increase is used. Over the past several years, economic conditions and state mandates have influenced the revenue streams for fire districts and will likely continue to do so.

Table 68: Expenditure Projections

Line Item	2024 Budget	2024 Adjusted Budget	2025 Projection	2026 Projection	2027 Projection	2028 Projection	2028 Projection
Salaries and Wages	$3,562,666	$3,562,666	$3,669,546	$3,779,632	$3,893,021	$4,009,812	$4,130,106
Station 2 Career Positions Salaries and Wages	$0	$197,340	$406,520	$418,716	$431,277	$444,216	$457,542
Station 2 Volunteer Stipends	$0	$54,750	$109,500	$112,785	$116,169	$119,654	$123,243
Station 1 Career Positions Salaries and Wages	$0	$0	$0	$0	$0	$0	$457,542
Station 1 Volunteer Stipends	$0	$0	$0	$0	$0	$0	$123,243
Employee Benefits	$670,403	$707,537	$767,012	$790,022	$813,723	$838,135	$949,376
Flex Account Admin Fee	$2,592	$2,736	$2,966	$3,054	$3,146	$3,241	$3,671
Worker's Comp.	$104,353	$110,133	$119,391	$122,973	$126,662	$130,462	$147,777
Employer Payroll Taxes (FICA)	$283,231	$298,919	$324,046	$333,768	$343,781	$354,094	$401,091
Career Pension	$315,347	$332,814	$360,790	$371,614	$382,762	$394,245	$446,572
Volunteer Pension	$355,000	$355,000	$406,158	$418,342	$430,893	$443,819	$502,725
Call credits	$205,000	$205,000	$211,150	$217,485	$224,009	$230,729	$237,651
Commodities and Supplies	$988,988	$988,988	$1,018,658	$1,049,217	$1,080,694	$1,113,115	$1,146,508
Contractual Services	$1,434,720	$1,434,720	$1,477,762	$1,522,094	$1,567,757	$1,614,790	$1,663,234
Other Operating Expenses	$1,232,972	$1,232,972	$1,269,961	$1,308,060	$1,347,302	$1,387,721	$1,429,352
Total Operating Expenditures	**$9,155,272**	**$9,483,576**	**$10,143,459**	**$10,447,763**	**$10,761,196**	**$11,084,032**	**$12,219,636**
Capital Building Improvements	$46,000	$46,000					
Capital Vehicle Improvements	$0	$0					
Capital Tools and Equipment	$13,000	$13,000					
Total Fire District Expenditures	**$9,214,272**	**$9,542,576**	**$10,143,459**	**$10,447,763**	**$10,761,196**	**$11,084,032**	**$12,219,636**

This projection uses a 3% increase for salaries and wages, commodities, contractual services, and other operating expenses. Those line items attached to salaries and wages, such as Employee Benefits, are a percentage of the salaries and wages line item. For example, Employee Benefits are 18.82% of the salaries and Wages in the 2024 Budget; that percentage is carried forward in the projections. The 2024 Budget is adjusted to account for the staffing changes at Station Two anticipated in July. Changes to the staffing at Station One will not occur until the new station is completed and operational in 2028.

Community Standards

As noted previously, four nationally recognized models are used to design and improve a fire protection system in our communities. Each model is based on different aspects of a community, from population density, the type of fire department, and the road miles in the area.

The applicability of the NFPA models is based on the definitions of the fire department servicing the community.

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 was last published in 2020.

- A career fire department is defined as one that utilizes full-time or full-time equivalent (FTE) station-based personnel immediately available to comprise at least 50 percent of an initial full alarm assignment.

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 was last published in 2020.

- A combination fire department is defined as one having emergency service personnel comprising less than 85 percent majority of either volunteer or career membership.
- A volunteer fire department is defined as one having volunteer emergency service personnel comprising 85 percent or greater of its department membership.
- Defines four demographic components based on population density as urban, suburban, rural, and remote.

ISO continues to use its standard 1.5-mile and 2.5-mile criteria for engine company and ladder company placement. However, they now accept a systematic performance evaluation demonstrating the department can meet the time constraints outlined in NFPA 1710.

Appendix A, contained in the NFPA 1710 document, provides additional information and background as it pertains to service delivery objectives for the jurisdiction as follows:

> “There can be incidents or areas where the response criteria are affected by circumstances such as response personnel who are not on duty, unstaffed fire

> station facilities, natural barriers, traffic congestion, insufficient water supply, and density of population or property. The reduced level of service should be documented in the written organizational statement by the percentage of incidents and geographical areas for which the total response time criteria are achieved.
>
> Additional service delivery performance objectives should be established by the AHJ for occupancies other than those identified within the standard for benchmark single-family dwellings. Factors to be considered include specific response areas (i.e., suburban, rural, and wilderness) and occupancy hazards."

This passage acknowledges the authority having jurisdiction (AHJ), in this case, EFPD, is responsible for determining the level of service to be provided by the fire district. Considerations for the level of service include but are not limited to how the fire district responds, travel time, staffing, emergency calls versus non-emergency calls, roadways, financial resources, and those calls involving different occupancies. The levels of service provided to the district should be written and documented so the fire district residents know and understand the expectations of the emergency services system.

Evergreen Fire/Rescue Standard of Cover

A Standard of Cover (SOC) is a comprehensive document that defines a fire department's services to its community, establishes performance benchmarks, and sets forth the resources and strategies necessary to meet the community's expectations and needs. The SOC lays the foundation for effective and efficient service delivery, ensures accountability, and fosters continuous improvement. It requires a thorough understanding of the community served, clear objectives, measurable performance metrics, appropriate resource allocation, and a commitment to excellence. This document provides an effective means to define the level of service and the individual components to support the defined level of service.

Through the efforts of EFR staff, there is a standard of cover document for structure fires, wildland fires, and, to some extent, emergency medical responses. However, the documents are incomplete and do not adhere to all the components necessary for an effective standard of cover. For example, the current document addresses the critical tasks and establishes an effective response force and response time but does not provide how well the EFR is performing. The current documents provide an excellent foundation for completing the remaining sections.

Additional components are necessary for the standard of cover to be effective and provide essential support for future decisions.

- Establish clear benchmark performance objectives for the differing call types for the distribution and concentration of resources.
- Create a single document instead of a series of documents.
- Create an improvement plan based on the gap analysis incorporated in the document.

A completed standard of cover document would provide the fire district with written and documented levels of service and inform the residents of the expectations of the emergency services system. Included in a Standard of Cover is an improvement plan; this plan identifies the gaps and creates a plan to improve the level of service.

Data

Throughout the analysis of the response system, some elements could not be effectively analyzed due to lapses in data. Turnout time for staffed units is not being recorded in a manner that can be examined. As noted, 91% of the calls in 2022 for M112 did not have timestamps for an enroute time. Without enroute timestamps, turnout time is concealed in call processing or travel time. This time component is one of the components that the fire department can control. Correcting this issue will allow EFR to create an improvement plan.

Additional data points will be necessary to analyze the arrival of an effective response force. The practice of JeffCom911 is to record the first arriving POV and not any others. EFR will need to create a way to electronically record the arrival of the other POVs to establish the arrival of an effective response force. Additionally, there needs to be a mechanism to account for the staffing of the apparatus, as this is not consistent.

Reliability of the response system uses two components: unit hour utilization and concurrent calls for service. During the analysis, it was noted the available timestamps for the medic units may not be consistent. Some units may be noting they are available before arriving back in the district, while others are waiting until they are back there. This issue may also be part of the practice with JeffCom911 and the dispatcher timestamping the units available too early.

Goal 7	**Complete the Standard of Cover document to assist Evergreen Fire/Rescue with future needs and direction.**

Essential Functions

The primary purpose of Evergreen Fire/Rescue is to respond to and mitigate fire and medical emergencies within the district. Various other functions and responsibilities, such as fire prevention and training, are assigned to the fire district to support the response capabilities. Historically, the fire service has been tasked only with fire suppression; however, in the past few decades, there have been changes that now entail a fire protection system to provide service to the community.

Wildland Division

The primary function of this division is the mitigation of the wildfire threat. Mitigation efforts are accomplished through various programs, including chipping programs, tree-cutting work, and defensible space inspections. Several issues need to be addressed.

The Community Wildfire Protection Plan (CWPP) was last updated in 2020 by the Forest Stewards Guild. CWPPs are essential tools in managing and mitigating the risks associated with wildfires in areas where human development intersects with wildland areas, referred to as the Wildland-Urban Interface (WUI). These plans offer a strategic approach to reducing the risk and impact of wildfires on communities, ensuring both public safety and environmental preservation. A CWPP should be updated or rewritten depending on various factors, including changes in community needs, environmental conditions, development patterns, and the effectiveness of current strategies. It's commonly recommended that CWPPs be reviewed and potentially updated every five years. This timeframe allows for assessing the efficacy of current strategies and incorporating new information or changing conditions. However, if a major wildfire or a significant change in land use or community structure occurs, it may be necessary to update the CWPP sooner. Such events can alter the risk profile and require new strategies. With the last update in 2020, the CWPP will be ready for an update within the next 12 to 18 months.

Additional issues for the Wildland Division include

- Recruitment and retention of the seasonal workforce used to perform the mitigation activities is becoming more complex. There are many reasons for this problem; pay is most common due to the high living expenses in the Evergreen area.

- Funding is either grant funding or funding being transferred from other services. There needs to be sustainable funding for these programs.

The seasonal crews are used for mitigation projects and are part of the wildfire response when necessary.

Emerging Technologies

Emerging technologies are playing a pivotal role in enhancing wildland firefighting capabilities. These technologies aim to improve the safety of firefighters, increase the efficiency of firefighting operations, and provide real-time data for better decision-making. Some of the emerging technologies are illustrated in the following list.

- Drones (Unmanned Aerial Vehicles - UAVs)
- Satellite Imaging
- Wildfire Simulation and Predictive Analytics
- Wearable Technologies for Firefighters
- Fire-Resistant Materials
- Communication Enhancements
- Fire Detection Cameras
- Robotics

Sensors placed in forests can monitor temperature, humidity, and other factors. When these sensors detect conditions conducive to wildfires, they can alert authorities.

These technologies can significantly enhance the effectiveness of wildland firefighting operations when combined with traditional firefighting methods. However, it's essential to ensure that these technologies are used responsibly, considering the safety of both firefighters and the environment.

One such advancement is the use of artificial intelligence (AI) technologies. Time Magazine recently selected CAL FIRE, the University of California ALERTCalifornia program, and Digital Path's AI fire detection tool as one of the best inventions of 2023[7].

[7] https://today.ucsd.edu/story/alertcalifornia-and-cal-fires-fire-detection-ai-program-named-one-of-times-best-inventions-of-2023

Through cameras and AI technologies, the system is designed to alert fire suppression resources quicker and can assist in scaling the response based on real-time data.

> "On September 11, 2023, the AI detected and alerted firefighters to a potential ignition on the ALERTCalifornia Wolf Mountain 1 camera at 5:19 a.m. near Grass Valley, Calif. Even though this fire was near a residential area, the first 911 call was not reported until 6:01 a.m., and firefighters were already at the scene. Early detection and rapid response allowed firefighters to keep the fire contained to less than ¼ of an acre."

The system is designed to continuously learn through feedback from CAL FIRE and the detection system as it continues to improve.

Goal 8	Continue to enhance wildland mitigation and response capabilities.

ECARES/CIHCS

Evergreen Community Assistance Referral and Education Services (ECARES) and the Community Integrated Health Care Service (CIHCS) are two programs designed to provide medical assistance for the community's residents. This program represents a shift in the role of paramedics towards a more integrated, preventive, and patient-centered approach to healthcare. It not only enhances the scope of paramedic practice but also plays a crucial role in improving healthcare accessibility, reducing costs, and meeting the specific health needs of communities. These programs are funded through a property tax to support these activities financially.

These innovative programs are being widely used nationwide with success in reducing the dependence on the community's emergency services. Between 2021 and 2022, EFR witnessed a 115% increase in contacts. In the community meetings, the public was unaware of the availability of these services. Participants noted this service is needed and welcomed. The number of contacts will increase as this program expands and becomes more well-known.

The EFR must monitor these programs to ensure the financial and physical resources are available to continue the progress.

Goal 9	**Continue the ECARES/CHICS program and monitor the progress for additional resources.**

Training and Education

A training division is a significant function in a fire department as personnel must maintain perishable skills and proficiently handle low-frequency – high consequence events. The volunteer officers manage training with support from the Training Coordinator.

Probationary training is those hours and coursework designed to meet the minimum requirements and certifications necessary for the positions. These classes are held twice a year to accommodate the schedules of new volunteer members.

Company Training is provided every Monday night, and according to the Standard Operating Guidelines (SOG) 442, the requirements for attendance include:

- Thirty-six hours of Core training are required per year.
- Firefighters shall attend a minimum of eight regularly scheduled Company Trainings per year.

Included in the thirty-six hours of Core training, the following training and job performance requirements (JPR) must be completed annually to be a member in good standing:

- Don & Doff SCBA JPR FFI 1&2
- SCBA Emergency - Air Conservation JPR FFI - 3
- SCBA Emergency - Exit Haz Area JPR FFI - 4
- Clean & Check SCBA JPR FFI - 5
- Ropes & Knots JPR FFI- 9
- Set Up Drafting Operations JPR FFI - 25
- DCFO approved Wildland Safety
- Live Fire Training

An annual schedule is developed in December for the following year to meet the requirements outlined in SOG 442. Also, officers in the EVFD provide training needs for their respective areas to assist with the schedule development. Online training is also available through Vector Solutions.

Training topics for the annual schedule should also be connected to the community risk assessment. For example, the district has a significant risk of wildfire, so additional training should be directed at wildland firefighting activities. Another identified risk is impaired hearing, so further education may be necessary to help responders handle those individuals with this disability.

Goal 10	Improve the training and education system within the EFR.

Community Risk Reduction

Community Risk Reduction (CRR) is a proactive approach to identify and mitigate potential hazards and risks in a community. It involves working collaboratively with various stakeholders, including fire department personnel, local government officials, community leaders, and the public, to reduce the likelihood and impact of emergencies, disasters, and other adverse events.

Fire Prevention

Fire prevention and loss control is the first defense against unwanted fires. The goal of any fire prevention program is to prevent the fire from occurring, prevent the loss of life, reduce the severity of a fire if one does happen, and enable the fire suppression forces to perform their tasks more effectively in the event of a fire. These goals are accomplished through pre-planning before construction and building inspections during and after construction.

Based on the EFR Standard Operating Guidelines (SOG) 501, all occupancies will be inspected annually. These inspections include multi-family dwellings, three or more dwelling units, schools, and licensed daycare facilities. For new construction, occupancy permit inspections are to be conducted, and acceptance tests for fire protection systems are to be conducted. Equally important is to ensure the records are up-to-date and accurate.

The CRR Division has been short-staffed until this past year. The number of inspections dropped significantly between 2020 and 2022. With the positions filled, the activity for fire safety inspections will increase. The efforts for inspections, plan reviews, and investigations must be monitored to ensure the staffing matches the workload.

Public Education

The COVID pandemic that began in 2020 extended into 2021 and early 2022, limiting public education contacts. Reports for the fourth quarter totaled 929 contacts. In March of 2023, 1,041 contacts were reported within 114 hours, resulting in an average of 6½ minutes per contact. These efforts need to continue to provide safety information to the general public. Educational programs should be developed based on risks identified in the response data, such as the type of calls and fire causes, or those risks identified through the risk assessment, such as age-related issues or language barriers.

Risk Management

Once risks are identified, strategies are developed to mitigate them. Data analysis of the responses and the information in the risk assessment will provide the data necessary to support public education and fire safety inspections. After implementing the strategies, public education programs, and inspection activities, gathering feedback to evaluate their effectiveness is essential. Also, continuously updating the risk assessment will identify new challenges and evolving risks.

Goal 11	**Monitor and continuously update prevention and risk data.**

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