

Roaring Fork Fire Rescue Authority

Basalt, Colorado



July 2022

Master Plan Study

ESCI Emergency Services
Consulting International

Providing Expertise & Guidance that Enhances Community Safety

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EXECUTIVE SUMMARY

Towards the end of 2021, the Roaring Fork Fire Rescue Authority engaged ESCI to conduct a Master Plan study. The purpose was to identify issues within the agency that might impact future service and identify risks and future demands that may be unknown to RFFRA. Staff furnished information about the Authority's operations by the end of 2021. ESCI reviewed the data and, in January of 2022, conducted a site visit to interview staff and other jurisdictions that interact with RFFRA. ESCI gathered information about the anticipated growth in the communities served that may impact the future. ESCI evaluates current conditions within the agency, develops a view of future service demand, and attempts to identify conditions that may need to change to meet the future adequately.

ESCI appreciates the trust placed in selecting it for the study, and it hopes that the findings of this study will assist the Authority in advancing into the future. It is helpful to have an external review of the organization utilizing multiple subject matter experts basing their recommendations on prior experience and knowledge. However, it is essential to understand that the organization is in the best position to contemplate the recommendations considering the expectations and norms of the communities served, as it best understands these realities. For this reason, not all suggestions are likely to be accepted by RFFRA. Nevertheless, ESCI encourages discussion about the recommendations before dismissing an idea. The best solutions start with an idea that is not workable but prompts a more perfect solution.

RFFRA is a relatively young organization. It consolidates the Basalt and Rural Fire Protection District and the Snowmass Wildcat Fire Protection District. ESCI observes a department performing well but facing growth issues both as an organization and in the communities it serves. Internal growth problems are common to all organizations, but unique challenges can occur in unified organizations. Increased community growth is happening all around Colorado; RFFRA has some challenges that are unique to tourist destination locations.

This summary will explain some of the areas examined and highlight some of the findings.

Organization, Management Components

The Authority is relatively new, but the management structure is well established to maintain efficient operations. Outside organizations and other governmental agencies

speak highly of RFFRA. The high regard is impressive for a relatively new organization and essential for inter-agency cooperation. ESCI review of the management components determined that documentation is good, with some documents needing a structured schedule for periodic review. Scheduling document reviews tend to accompany an organization that has matured, but it is not too early for RFFRA to do so. Data collection and utilization of data is an area of concern that is developed within the report. Identifying response performance is difficult due to the lack of accurate data. Fixing the data issue is difficult as it needs interaction with the communication center, and it will probably require procedure changes and some cost to both agencies.

Financial Condition

ESCI evaluated the current financial condition of the Authority and the underlying districts. Growth in the area looks positive and steady. The organization seems healthy financially. ESCI made recommendations for long-term sustainability. ESCI conducted five-year modeling based on a set of assumptions. The analysis is usually conservative, tending to underestimate revenues, so the actual results are generally more positive. Voters in both of the districts in RFFRA have removed revenue reductions due to changes in State set residential assessments. This is important for the stability of the Authority. Revenues due to property taxes are increasing; however, the beginning fund balances are dropping. This is caused by capital outlays which have been relatively high. A discussion of how to moderate the capital outflow is in the report.

Planning Components

RFFRA is doing some strategic planning and master planning; both are important for the efficient operation and sustainability of the Authority. RFFRA works with the counties and other agencies in planning for major incidents. The inclusion of goals from the master plan study into the strategic plan is recommended.

Capital Assets and Capital Improvement Programs

Facilities are a mix of new and older stations. The Authority is planning remodels for the older stations to make them more efficient and effective for staffed operations. A new station is currently under construction. The general condition of the apparatus and facilities is good. For facilities, major equipment, and apparatus, ESCI recommends that RFFRA establish an infrastructure improvement/replacement schedule. This will allow for the planning of cash flow for these more significant expenditures.

Staffing and Personnel Management

The staffing and personnel management analysis revealed an appropriate level of administration compared to operations. This level should be capable of handling more growth in the line personnel before needing additional personnel. ESCI recommended line staffing levels increase, suggesting higher minimum staffing. The analysis of the relief factor indicated an increase in additional staffing to cover vacancies to maintain minimum staffing. The level of volunteer participation offsets some of the recommended increases. The number of volunteers currently filling vacant positions when employees are out for vacations, sick, and other leaves was unclear but it is helping staffing levels.

Improved compensation and some living accommodations available at reduced rates for employees help mitigate the difficulty in hiring personnel. Living within a reasonable commute distance is expensive. Attracting and retaining can be an issue in this environment.

The workload analysis for line personnel does not reveal an unusually high load on any single unit. The concurrency analysis demonstrated that through a five-year period for 2017 to 2021, the Authority is handling only one incident at a time 58% of the time and only two incidents at a time 31% of the time. Therefore, the Authority is tasked with three or more incidents 11% of the time.

RFFRA has well-established human resource functions. Most functions for best practices are in place, and there are adequate procedures.

Service Delivery and Performance

Service demand dropped in 2020 for RFFRA, as it did for many agencies across the nation, but generally, the RFFRA trend is increasing over the study period. The service demand is higher than expected for an agency serving a permanent population of this size, likely due to the nature of a resort destination with higher seasonal demand. The percentage of alarms and good intent type calls is slightly higher than normally seen, but EMS and service calls are somewhat lower than expected. ESCI reviewed the service demand for the temporal and geographical aspects. The results were consistent with other fire departments; however, the calls for service by month of the year reflect higher seasonal needs. Geographically the density of service demand demonstrates higher demand proportionate to the population density centers.

ESCI could not determine the standard performance measures due to some data points not being able to be collected. Acquiring a full set of accurate data may require technology able to record times directly from the units in the field. Implementation will require a joint effort between the Authority and the communication center.

Emergency Medical Support and System Oversight

RFFRA provides effective fire-based EMS ALS transport to the jurisdiction. Some recommendations were offered, including updating administrative guidelines, integrating the quality improvement component with the established quality management program, developing a performance measures system, and establishing an annual training calendar.

Training

Suggestions for the current training program include creating a training committee and assigning shift officers as training liaisons to establish consistent training delivery throughout the Authority. The overall training program should review evolutions per NFPA 1410 *Standard on Training for Emergency Scene Operations*. Assure that low-frequency, high-risk operations receive the appropriate level of training. ISO required training is essential and should be scheduled throughout the year to assure completion.

A facility to do fire training regionally is already under consideration by the Authority, and the ESCI evaluation supported this goal.

Life Safety Services

A robust certification and training opportunities exist for the fire and life safety personnel, which should continue. The interaction with the county and municipal agencies is excellent. Implementing automatic fire sprinklers in many occupancies, including residential ones, is vital to maintain and improve as possible. ESCI recommends developing a Community Risk Reduction (CRR) plan for the Authority. Due to the prevention workload, an additional inspector is recommended.

Community Risk Assessment

The population in RFFRA has steadily increased over the last ten years. Assuming the continuation of the growth rate, RFFRA's population base in ten years will be close to 20,000. The service demand will be nearly 3,000 calls for service annually. There will be some higher EMS demand likely as the resident population over 65 years continues to grow.

Wildfire and flood risks will be a perpetual concern to the Authority. The impact will increase as more individuals build homes in the wildfire interface areas.

Recommendations Implementation

ESCI has made short- and mid-term recommendations and others that will be more long-term some of which have been highlighted in this summary. The management team will set priorities and the completion timeframe to keep the organization moving forward without overloading the staff. A five-year model has been used to identify RFFRA sustainability in the future. Three forecasts are created. One forecast uses historical trends based on a relatively status quo operation. The second and third forecasts assume that the ESCI recommendations are implemented. The second forecast assumes that the revenue for balancing the budget is generated by increasing mill levies. Forecast three balances the budget by a combination of growth and mill levy increases. These three will provide a picture of what might be done to maintain the sustainability of the Authority in the future.

ORGANIZATION OVERVIEW

The Roaring Fork Fire Rescue Authority was formed in 2018 by an intergovernmental agreement between the Basalt and Rural Fire Protection District and the Snowmass Wildcat Fire Protection District. Both districts have existed since the early 1970s. Staffing for RFFRA is 58 career and 31 volunteer firefighters with 5 volunteer reserve and auxiliary volunteers. This staff provides traditional fire and EMS rescue services. RFFRA operates with five stations and with a sixth under construction. Career personnel staff three of the five stations on a full-time basis. Volunteers staff two stations and fill positions with career staff. The area covered is 525 square miles. Most of the population is in or near the three towns within the fire jurisdiction, Basalt, El Jebel, and Snowmass Village.

The Authority provides an all-hazards response, including the primary services of fire suppression and emergency medical services (EMS), including Advanced Life Support (ALS) medical transport. Additional services are technical rescue services for motor vehicle crash extrication and low angle rope rescue. Operational-level personnel provide hazardous material incident response. New construction plans review and fire/life safety maintenance inspections are provided to businesses by the Authority Fire and life-safety education is provided by the department, including school and pre-school classes. Child car seat inspectors are available. RFFRA also provides a juvenile fire-setter intervention program to the community.

The Insurance Service Office (ISO) classification for the department is Class 3, obtained in 2020. Out of the 552 rated communities and fire departments in Colorado, RFFRA is one of 175 with a Class 3 rating or better.

Figure 1: ISO Classifications in Colorado¹

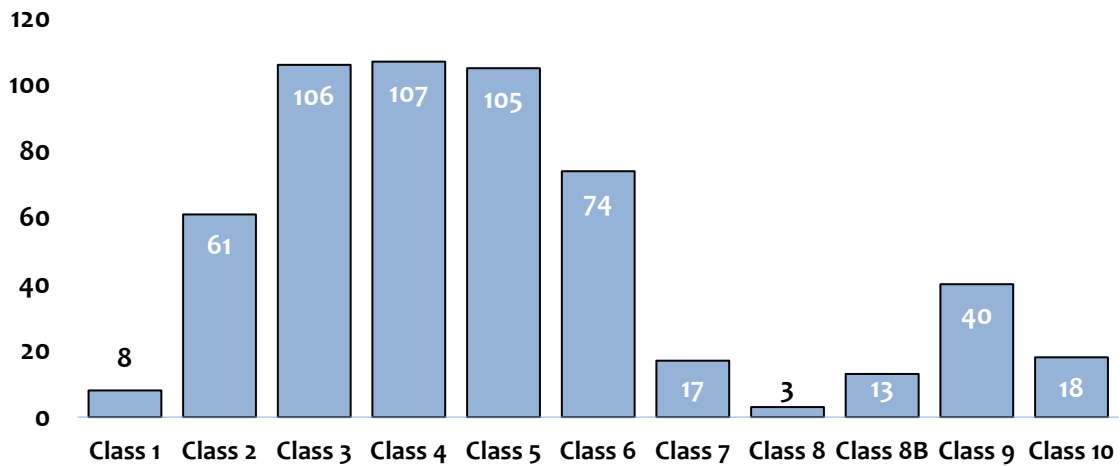
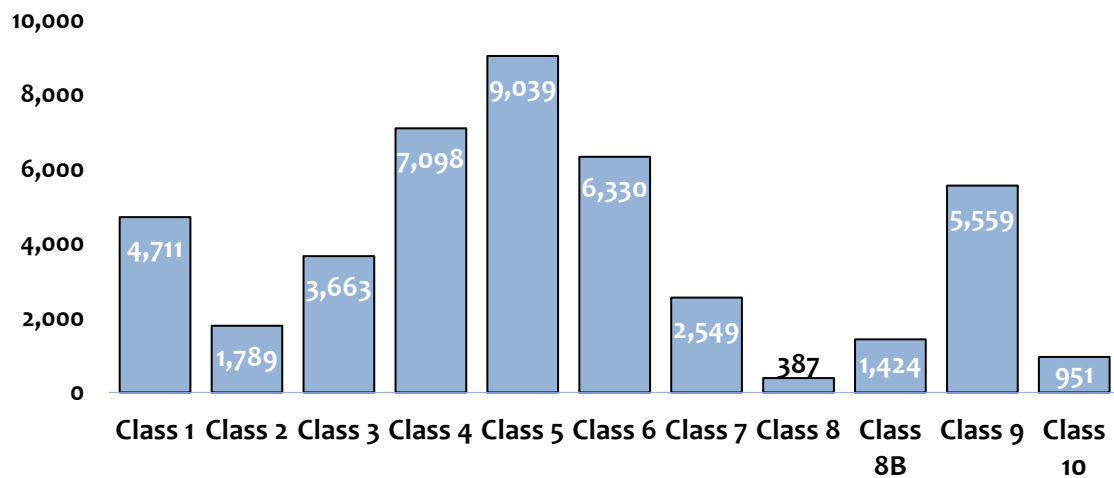


Figure 2: ISO Classifications within the Country²



The class 3 rating is significantly better than most rated departments within the United States.

The composition of the Authority board is three directors from each of the fire districts. The board of directors oversees the operation of the RFFRA. The two fire districts certify their mill levies annually. Each is individually responsible for its debt service and pension plans but transfers revenue for the function of RFFRA as a fee for service to the Authority. The fire chief reports to the Authority board of directors.

¹ <https://www.isomitigation.com/ppc/program-works/facts-and-figures-about-ppc-codes-around-the-country/>

² <https://www.isomitigation.com/ppc/program-works/facts-and-figures-about-ppc-codes-around-the-country/>

The fire chief's employment contract with the Fire Authority has no specific termination date. The fire chief is evaluated for performance annually. The fire chief has the responsibility to lead the department and make operational decisions for the function of the Authority. The Authority retains legal counsel who is available to the fire chief. Labor attorney services are available as well.

The chief's span of control is four direct reports. The organization's hierarchy is typical for fire departments of this size and responsibility.

MANAGEMENT COMPONENTS

Effective fire department management is a common challenge for fire service leaders. Today's fire department must address management complexities that include an effective organizational structure, a qualified workforce, maintenance of personnel competencies, adequacy of emergency response, and financial sustainability for the future.

The management of a fire department requires several components to be effective. These components are in two main categories:

1. Foundational management elements
2. Management documents and processes

Foundational Management Elements

Developing baseline management components in an organization enables it to move forward effectively. In the absence of foundational management elements, the organization will tend to operate randomly and generally ineffectively.

The fire department incorporation documents are a critical key document. With fire districts, this will consist of the districts' service plans. For the Authority, it must also have the formation agreement that creates the Authority. These establish that the entities that underly the Authority structure have the legal authority to operate, and that the Authority is legally authorized to function.

Another essential management tool is the creation of a master plan. This plan is a roadmap for the future. It should answer three questions: Where is the Authority now? Where does the Authority need to go in the future? How will it get there? That is partly the function of this study. It should define the risks and future challenges and suggest ways to prepare for them.

The strategic plan is another critical document. A strategic plan is usually a three-to-five-year view of how to meet the plan initiatives. The foundation of a strategic plan has three foundational elements: the mission statement, the vision statement, and the values statement. It guides and focuses all members of RFFRA on the priorities of the entire organization, ensuring every member is pulling in the same direction. The Authority Board adopting the strategic plan ensures alignment from the very top of the organization to the newest firefighter. RFFRA started the Strategic Plan in 2020.

An annual action plan has work assignments that accomplish the goals, objectives, and deadlines. The annual budget should support the goals and objectives by funding the actions for that year. RFFRA has already embarked on a strategic plan with timelines and deadlines and designating the responsible parties to accomplish the goals and objectives. This plan incorporates a survey of the Authority's membership to define needed improvements. It strongly emphasizes aspects of organizational development and appears well done. It allows the board to oversee the plan's progress and ensure it moves forward. The Strategic Plan is subject to ongoing review. ESCI recommends that the Strategic Plan be revised to include goals related to service levels and performance with timelines, responsibilities, and deadlines established following the delivery of the master plan study.

The foundational elements also include mission, vision, and values statements. The formation of these statements is entirely in the Authority's purview to design as it sees fit. ESCI will offer some thoughts to consider. ESCI recommends that these statements should answer the following questions for the members and for the public served:

- **Mission Statement:** What is the purpose of the organization?
- **Vision Statement:** Where is the organization going or desire to go? It can be aspirational. It may express what the organization wishes regarding service delivery or competence, recognizing that it may not have achieved that level but desires to attain it.
- **Values/ Guiding Principles:** How will the members treat each other and their customers?

Mission

The mission statement should state why the Authority exists. It may include what the Authority does, how it will be done, and the degree or quality to which it is done. RRFA has a mission statement that is:

Solving Serving Saving

Or also seen on coffee cups as:

Serving our Neighbors - Solving Problems - Saving Lives

Also seen on the webpage as:

Serving Neighbors. Saving Lives. Solving Problems.

These are virtually the same, but it may be helpful to standardize so that it is consistent everywhere. The statement indicates to the reader that the Authority's mission is to serve the community through solving problems and saving lives. It is shorter than most mission statements that ESCI sees and leaves some interpretation to the reader's knowledge, such as does this include protecting property? The advantage is that it is short and easily remembered and can be verbalized by the personnel. Some departments have a mission statement with more words and utilize a statement like this for a motto on department documents and vehicles. ESCI believes that the mission statement should be the anchor that keeps a department from drifting from its primary purpose. Any function that serves the community and saves something through solving an issue, problem, or difficulty could lie within the Fire Authority's mission. This broad interpretation may be what the Authority desired. On the other hand, functions could fall into the broad definitions that the Authority would not wish to do.

Organizations will sometimes reference other things in their mission statement, such as how they will do their job safely or cost-effectively or with a certain level of quality. The mission statement should communicate what the fire department is organized to do to the internal personnel and citizens. It should be published on the website and social media and posted in the stations. Also, it can be printed on fire department employees' business cards and stationery as well. RFFRA is advertising its mission statement on the webpage. While not directly stated on the Facebook page, there was a reference to the mission in a story about freeing an elk tangled in a barbed-wire fence. That is the mission statement in action.

Vision

The vision statement articulates the direction the Authority is going. It reflects the long-term ambitions of the Authority. It should anticipate what is desired for the performance and is usually aspirationally reaching beyond where the Authority is currently capable. The vision statement for the Authority is:

To be a trusted and valued community partner dedicated to the health and safety of our citizens and visitors through the delivery of professional, caring, and industry-leading emergency response services.

Perhaps this is where the organization desires to be in several years. ESCI did not find this published elsewhere except in the Strategic Plan. Possibly due to its recent development in 2021.

Values

The values statement should enumerate those common standards and principles held by all, or nearly all, of the members. Usually, if a member does not share the values, that will become obvious in behaviors and cause difficulties. These values should be the framework of the Authority's code of conduct. When members violate the values they have agreed to, they should be held accountable for their actions.

ESCI did not find a published Values Statement; however, the Strategic Plan contains input themes and values stated in the Strategic Statement on Organizational Culture. It reads:

RFFRA is dedicated to the value of a blended organization culture built upon trust, understanding, mutual respect, and service balanced with a forward-thinking, engaged, and innovative spirit.

This statement reflects some fundamental values that the department desires to uphold. While the intent was to define the desired organizational culture, many of these same values can apply to how the organization's members treat the people who need their services. A group of Authority members that reflect the entire organization developed these values, which is precisely this process that ESCI recommends.

Management Documents and Processes

Similarly, an organization should establish appropriate documentation, policies, procedures, and identification of internal and external issues that affect the agency. RFFRA as part of Strategic Planning is developing an internal processes to address the flow of information and communication within the fire department and to its constituents.

There are two documents essential to guiding and standardizing operations in many departments. These can be called various names, such as the standard operating guidelines (SOG) or procedures (SOP) and a policy or policy and procedure (P&P) manual. Sometimes the latter is called the employee manual. The P&P manual guides the expectations of both agency and the individual, whereas the SOG are procedures meant to assure functions are uniform. RFFRA has Administrative Guidelines, Standard

Operating Guidelines, and Membership Guidelines available through the Vector Solutions software. RFFRA reviews these documents every year unless a legal change triggers a change more often.

As the number of procedures and policies grows, reviewing them all in one year becomes cumbersome. The ESCI recommends that there be a process of periodic review and changes. An excellent way to ensure this review is to have a fire department committee review one-third of the guidelines each year, recommending changes. Also, create a process to trigger changes to a guideline due to a new method or a technology change.

Other administrative documents reviewed by ESCI demonstrate many well-organized functions within the organization. ESCI believes that as the Authority grows in responsibility and personnel, it is prepared with the structure to support the larger organization.

Internal and External Communications

There are multiple channels for internal communications within the Authority: monthly meetings, weekly newsletters, and a place for information to be found within the Vector Solutions software. RFFRA holds monthly meetings with all personnel, executive staff, volunteer and career officers, and chief officers. In addition, the fire chief and his officers have an open-door policy for anyone in the organization. All paid staff and some volunteer members have departmental email addresses. Those who do not have departmental emails have their outside emails placed into the Global Address list for contact.

The methods used by RFFRA are sufficient to keep all members apprised of what is happening and changes occurring within the agency.

The Authority's website is robust and contains good information for the jurisdiction's residents, businesses, and visitors to find important information. Board meeting minutes are posted with meeting videos also available online through YouTube. Facebook is also used for disseminating information to external customers. In addition, RFFRA sends out an annual community newsletter. The Authority generates an annual report posted on social media and the website and emailed to all members.

Records and Reporting

Reports on incidents that the department responds to are documented in the department incident reporting system by Zoll Fire Reports®. The information received

from the computer-aided dispatch system through a “rip and run” transmission must be re-entered into the Zoll EMS Charts®, which transfers to the Zoll Fire Reports®. RFFRA retains and archives incidents and patient care reports, including personnel exposure reports.

ESCI found that parts of the data required for analysis are missing or inaccurate due to several issues. First, the call received time and the dispatched time are usually the same. Second, the timestamps in the computer-aided dispatch system (CAD) may be entered by dispatchers as they hear the radio traffic from the fire units. When dispatchers are busy, they may delay in entering the status change. This elongates the time and distorts the interval recorded. Third, the times, addresses, and other pertinent data are taken from the CAD data printout and entered manually by the fire officer into the records management system. All of these can or do introduce errors into the data. Without accurate data, it is not possible to produce accurate reports. ESCI will address recommendations regarding data collection later in this report.

Retention of other types of documents varies some. RFFRA contracts some equipment testing to private companies qualified to do so. This equipment includes testing self-contained breathing apparatus (SCBA) units and the quality of air that refills the air bottles, ground ladders, aerial ladders, and apparatus pump testing. The Authority personnel conducts hose testing in-house and maintains the records of all testing. The Fleet Manager maintains all vehicle maintenance records. He produces and delivers monthly management, operations, and financial reports to the governing body. There is no fleet maintenance software in use.

Security

Keypad access door locks accomplish station security, with each user having a unique code. Some offices are lockable for security. Computers require individual passwords to make access. Vehicles are stored indoors or outdoors; those held outdoors have keys locked in key boxes in the station.

FISCAL ANALYSIS

Considerable financial information and background data were provided to ESCI by the Roaring Fork Fire Rescue Authority (RFFRA) staff, which ESCI reviewed in detail along with various Annual Audited Financial Reports and annual budgets. This data has enabled ESCI to develop the following discussion providing stakeholders with historical, current, and future viewpoints on RFFRA's financial picture.

Current Conditions

The Districts and the Authority operate on an accrual basis for the General Fund. Each of the two districts has outstanding bond issues for a fire station and several apparatus and vehicles in the amount of \$ 15,595,000 on December 31, 2021. This debt is split as follows: \$2,770,000 is Basalt & Rural Fire Protection District (BRFPD) and \$12,825,000 is Snowmass Wildcat Fire Protection District (SWFPD).

RFFRA and the two districts operate on a calendar year basis. The two districts have taxable assessed value as follows: BRFPD has \$440,395,580, and SWFPD has \$519,926,260 of taxable assessed value for the 2022 budget year for a total of \$960,321,840. BRFPD is in two counties, a mill levy of 8.822 was charged to the Pitkin County portion of the district, and 8.800 was charged to the Eagle County portion of the district. BRFPD is expected to collect \$3,813,136 in 2022.³ SWFPD charged a mill levy of 9.602 on their taxable value resulting in budgeted revenue of \$4,992,333 for the 2022 budget. Each of the two Districts retains enough fund balance to pay their debt service, pension fund, treasurer's fees, and some incidental expenses. The rest is transferred to RFFRA to operate and maintain the fire and EMS operations. The total budgeted revenue for 2022 is \$12,078,524. Expenditures are budgeted at \$12,222,952, decreasing the fund balance by \$144,428.

The counties send out preliminary assessed values in late August. The chief prepares the budgets and presents them to the Boards in September. The Boards and staff review the budgets and hold public hearings. In early December, the counties finalize the assessed values, and the Board approves the final budgets and presents the certification of mill levies to the counties on or before December 15.

³ Actual received amount for 2022 was \$3,879,193.

Local Economic Profile

The local economy in BRFPD, in both Pitkin and Eagle Counties, is growing. The growth in SWFPD is not as fast as the jurisdiction is nearly built out. There are 642,000 square feet of residential and 20 individual residences at a minimum of 5,000 square feet proposed in the Snowmass area. In Basalt, construction on several affordable housing, the Basalt Mini-Storage project with 80,000 square feet, the Basalt River Park, which is commercial and residential, and the Basalt Center Circle. There are 43 new single-family homes to be built in BRFPD in 2022. The Tree Farm Development project has already started to construct part of the planned 300,000 square feet plus of residential development to the Basalt area. Additional commercial is planned for this area as well.

Housing and Property Values

The average price of a home in the Authority is \$678,948. The average home value in Basalt is \$648,200, which is considerably higher than the average for Eagle County, which is \$562,300, and for the state, which is \$343,300. The residential home value for Snowmass Village is \$884,400, which is higher than the Pitkin County average of \$615,900. The change in actual residential values in the Authority, including new construction, has averaged 5.23% per year for the last five years.

The *Total Assessed Value (TAV)* figures display certified total taxable assessed property values for Basalt & Rural Fire Protection District from 2016 to 2022. The change in TAV from 2016 to 2022 is 26.96 %. The figures below show the Total Taxable Assessed Values for BRFPD and SWFPD.

Figure 3: Taxable Assessed Value for BRFPD

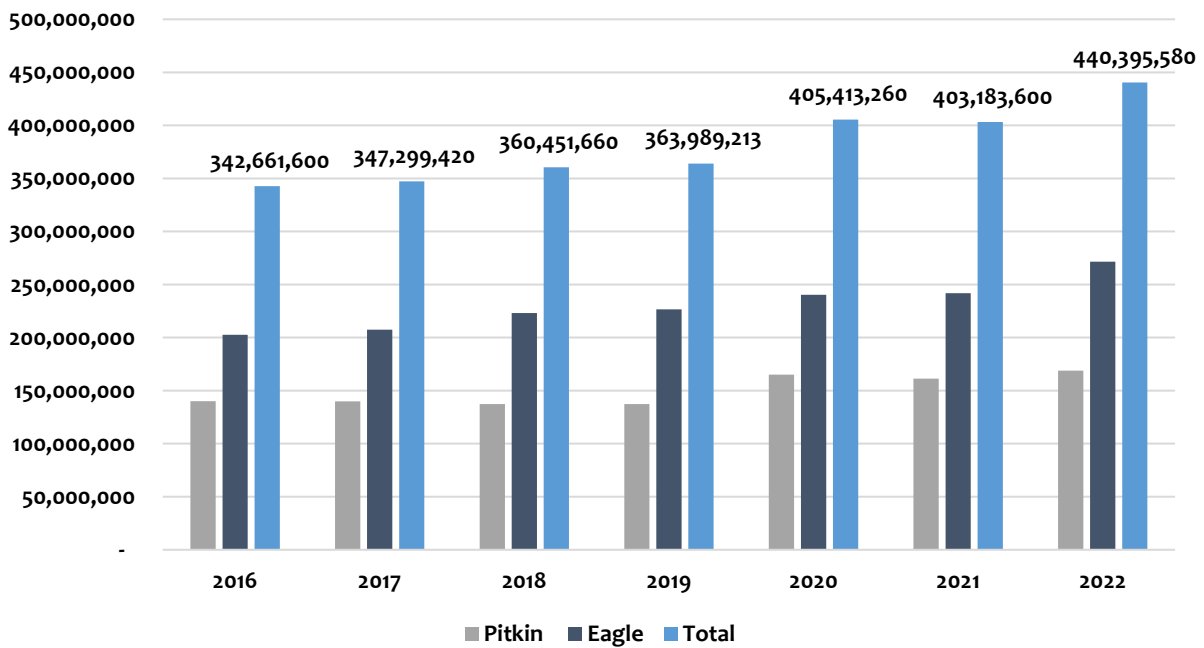
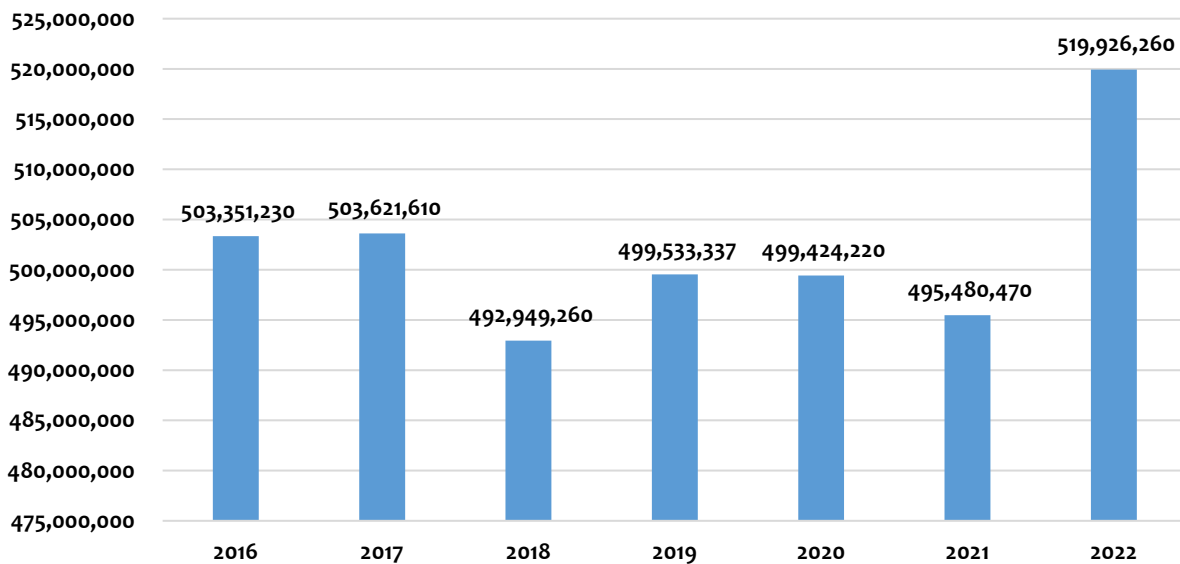


Figure 4: Taxable Assessed Value for SWFPD



In Colorado, properties are re-evaluated and reassessed every two years, the latest being June 30, 2020. Those values will be used in the estimations and assessments for 2022 and 2023. Colorado's governing law for residential assessment is in the Colorado Constitution.

Voters repealed the Gallagher Amendment's requirement causing the periodic lowering of the residential property assessment rate in 2020. In 2021 the Senate passed Bill 21-193 creating multiple sub-classifications and temporarily reducing assessment rates for two years. The residential sub-classes for 2022 and 2023 were reduced from 7.15% to either 6.8% or 6.95% (depending on the subtype), and non-residential sub-classes would either remain at 29% or be reduced for 2022 and 2023 to 26.4%.

In 1992, Colorado voters also passed the Colorado Taxpayer Bill of Rights, also known as the TABOR amendment. That amendment prohibits tax increases without a vote of the people living or owning property within a specific jurisdiction. When the residential assessment rate needs to go down, the State Property Tax Administrator and the State Board of Equalization adjust it without a vote of the people. Conversely, if the residential assessment needs to go up, then a vote of Colorado taxpayers is required.

Colorado's fire protection districts are dependent on property taxes. BRFPD, SWFPD, and RFFRA are no different. In 2018, BRFPD and SWFPD electors approved ballot measures that allowed the districts to charge a mill levy equal to the tax dollars lost due to reducing the ratio set on the residential property class. The base rate is 7.20%. The measure provides for calculating a Gallagher Adjustment Mill Levy necessary to collect the difference between the 7.20% residential-class ratio, the current residential ratio of 6.95%, and the multi-family ratio of 6.80%. The percent of residential assessed value for BRFPD ranges from a high of 64.66% in 2022 to a low of 63.20% in 2018. The percent of the assessed residential value for SWFPD ranges from a high of 76.81% in 2022 to a low of 73.49% in 2017. The two following figures show BRFPD and SEFPD residential assessed value compared to total assessed value.

Figure 5: BRFPD - Taxable Residential Assessed Value as Compared to Total Taxable Assessed Value

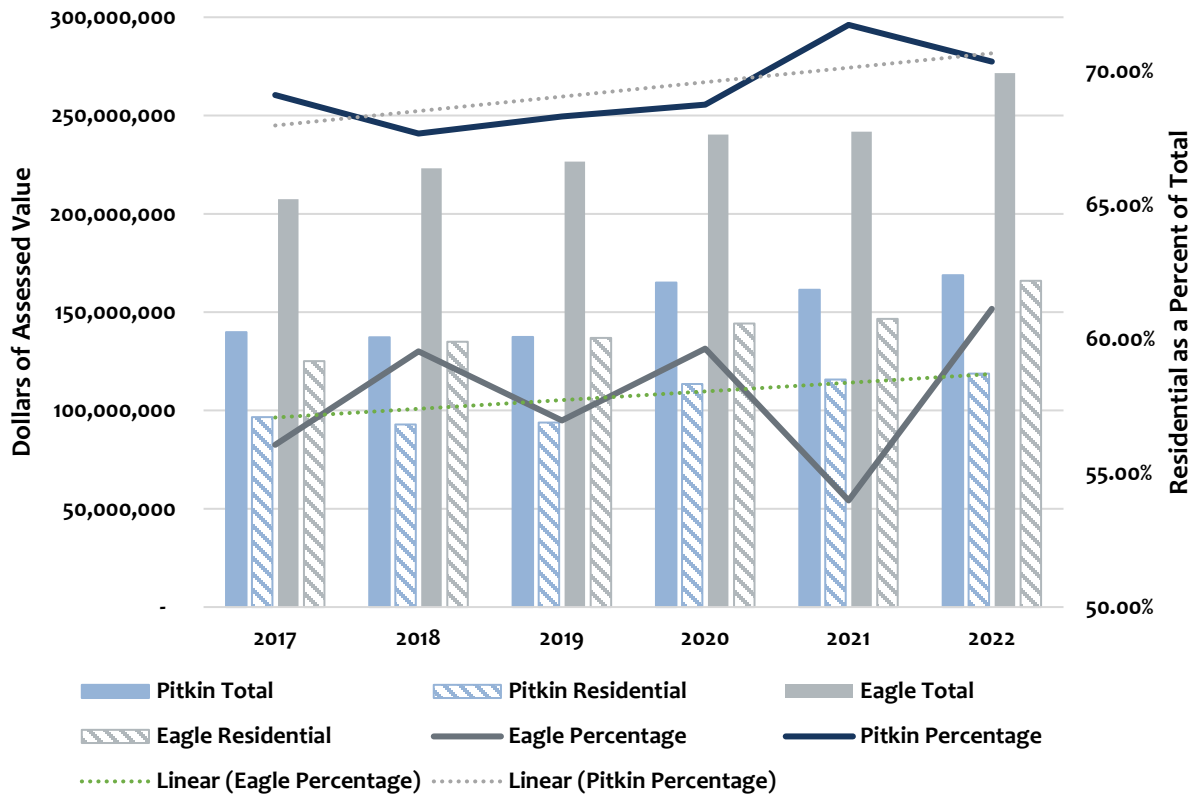
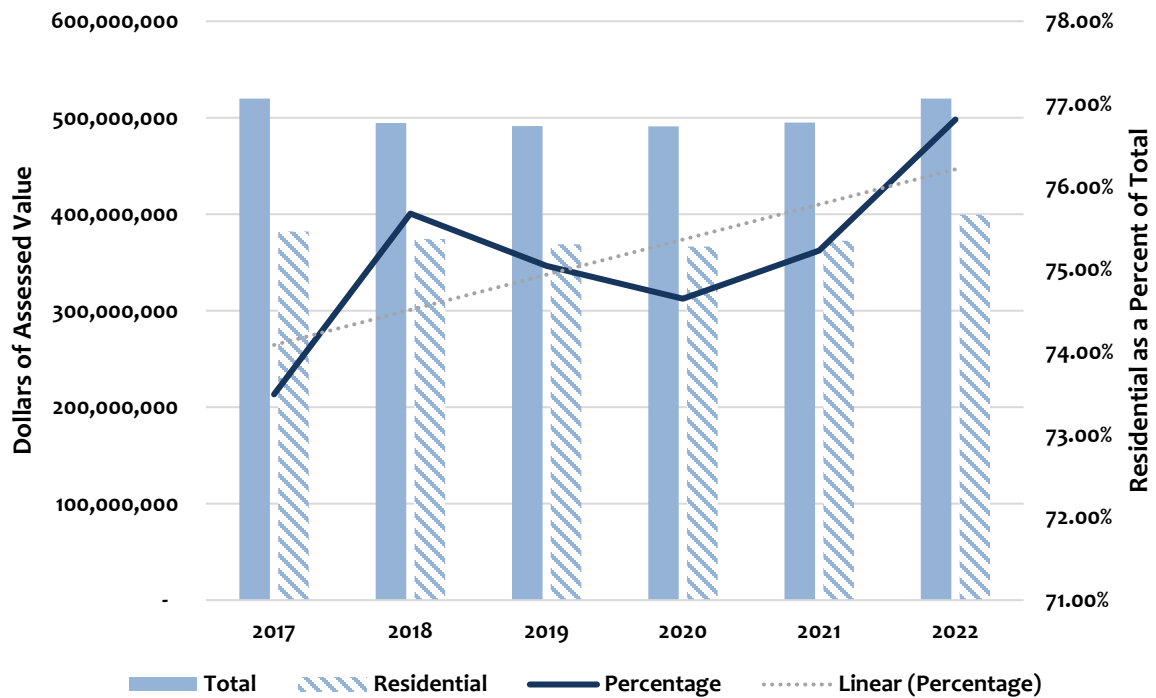


Figure 6: SWFPD - Taxable Residential Assessed Value as Compared to Total Taxable Assessed Value



As shown in the preceding figures, the residential percentage for SWFPD of 76.81% for the total taxable assessed value is very high. The rate for BRFPD is 64.66% which is lower than SWFPD; however, the percentage of residential assessment in both districts is slowly increasing on average.

Revenues

ESCI completed an analysis of the districts’ historical revenues and expenses to help identify relevant financial trends, strengths, and weaknesses and lay the groundwork for the financial scenarios presented later in this report.

The historical analysis helps illustrate how the districts fund their services—where the money comes from and where it goes. RFFRA staff provided historical budget data for both districts, supplemented with a review of past audited financial statements. The historical analysis should give the administration and elected officials a basis to evaluate recommendations and develop a sustainable future.

The following figures are a short tabular version of the financial resources of each district and the Authority funds.

Figure 7: BRFPD Resources - Fiscal Years 2016 to 2022

Financial Resources by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget	2022 Budget
AV Pitkin County	140,002,320	139,813,690	137,256,910	137,375,383	165,045,620	161,363,770	168,834,670
AV Eagle County	202,659,280	207,485,730	223,194,750	226,613,830	240,367,640	241,819,830	271,560,910
Mill Rate Pitkin County	9.102	8.892	8.852	8.852	8.893	9.115	8.822
Mill Rate Eagle County	9.102	8.892	8.852	8.852	8.893	8.781	8.800
Levied \$	3,118,906	3,088,186	3,190,718	3,222,033	3,605,340	3,594,251	3,879,195
Collection Rate	99.68%	100.16%	99.20%	98.75%	98.28%	100.00%	100.00%
Beginning Fund Balance	2,261,885	6,776,235	4,545,512	3,900,173	685,497	618,832	581,392
Property Taxes	3,050,807	3,034,804	3,107,395	3,123,373	3,483,605	3,533,770	3,813,136
Specific Ownership Tax	127,013	137,782	142,206	148,193	151,381	133,000	133,000
Wildland Deployments	221,013	281,230	269,225	206	-	-	-
Interest	3,463	12,890	34,134	9,919	127	550	450
Service Income	286,527	302,934	416,428	8,117	50	-	-
Grants	22,520	16,410	314,244	200	5,000	975,000	950,000
WCS Donation	-	-	-	-	-	975,000	950,000
Impact Fees	80,168	137,753	140,181	49,140	80,917	102,490	68,500
Sale of assets	3,110	6,303	500	-	-	-	-
Proceeds from Debt Issuance	3,630,000	-	-	-	-	-	-
Bond Premium Proceeds	368,488	-	-	-	-	-	-
Miscellaneous	11,032	8,798	11,388	6,835	3,924	-	-
Total Revenue	7,804,141	3,938,904	4,435,701	3,345,983	3,725,004	5,719,810	5,915,086

Figure 8: SWFPD Resources - Fiscal Years 2016 to 2022

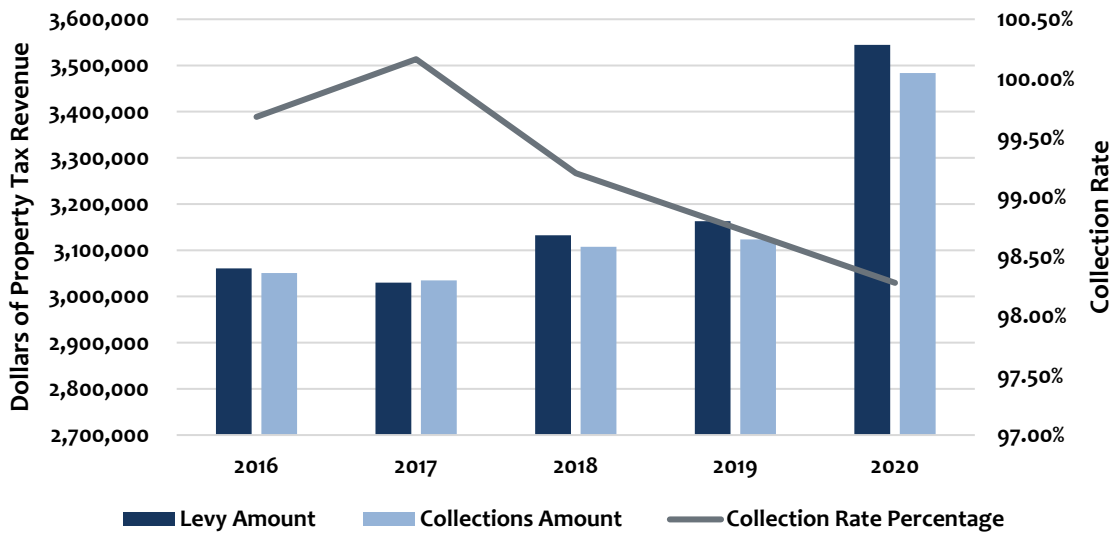
Financial Resources by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget	2022 Budget
AV Pitkin County	0.85	503,621,610	492,949,260	499,533,337	499,424,220	495,480,470	519,926,260
Mill Rate Pitkin County	7.494	9.036	9.854	9.858	9.865	10.080	9.602
Levied \$	3,772,114	4,550,725	4,857,522	4,924,400	4,926,820	4,994,443	4,992,332
Collection Rate	99.93%	99.99%	100.01%	100.10%	97.01%	100.00%	100.00%
Beginning Fund Balance	6,776,757	6,836,369	18,554,962	8,886,647	1,831,291	1,680,718	805,909
Property Taxes	3,769,446	4,550,491	4,858,132	4,929,079	4,779,488	4,994,641	4,992,333
Specific Ownership Tax	124,648	163,128	176,430	167,488	161,307	135,000	145,000
Interest on Delinquent Taxes	6,063	6,939	7,739	-	-	-	-
Wildland Deployments	59,700	236	114,206	-	-	-	-
Interest	37,035	116,086	115,406	16,521	4,324	2,450	2,225
Service Income	378,256	314,684	305,436	22,401	7,302	-	-
Grants	106,675	82,458	11,308	113,808	-	-	-
Fire Prevention	24,069	83,855	102,722	-	-	-	-
Rental Income	10,100	11,300	9,600	-	-	-	-
Special Event	37,623	17,539	31,319	3,910	-	-	-
Scholarship Income	16,485	23,581	25,401	800	-	-	-
Sale of assets	37,800	41,179	-	-	-	-	-
Proceeds from Debt Issuance	-	15,310,000	-	-	-	-	-
Bond Premium Proceeds	-	1,864,297	-	-	-	-	-
Miscellaneous	7,629	3,179	35,462	25,872	2,680	-	-
Total Revenues	4,615,529	22,588,952	5,793,161	5,279,879	4,955,101	5,132,091	5,139,558

Figure 9: RFFRA Resources - Fiscal Years 2019 to 2022

Financial Resources by Type	2019 Actual	2020 Actual	2021 Budget	2022 Budget
Beginning Fund Balance	-	10,801,045	9,741,315	8,577,253
Charge for Service BRFPD	2,856,329	3,230,597	3,175,000	3,500,000
Charge for Service SWFPD	3,621,662	3,519,567	3,200,000	3,400,000
Charge for Service Impact Fees	-	-	80,000	70,000
Charge for Service Capital Fund	-	-	380,000	375,000
Charge for Service Ambulance	1,131,101	1,060,962	600,000	600,000
EMS Supplemental	-	24,754	-	-
Sale of Assets	1,004,530	102,800	75,000	50,000
Rental Income	100,848	108,776	109,200	112,380
Interest Income	54,349	30,107	30,000	25,000
Donations	261,469	-	-	10,000
Wildfire Contracts	-	123,966	-	-
Grants	13,286	113,620	-	-
Fire Prevention	-	-	45,000	75,000
Scholarship Donations	7,575	-	7,500	-
Special Event Income	24,740	14,000	15,000	20,000
Miscellaneous	3,096	26,538	185,000	130,000
Contributed cash	10,083,085			
Total Revenues	19,162,070	8,355,687	7,901,700	8,367,380

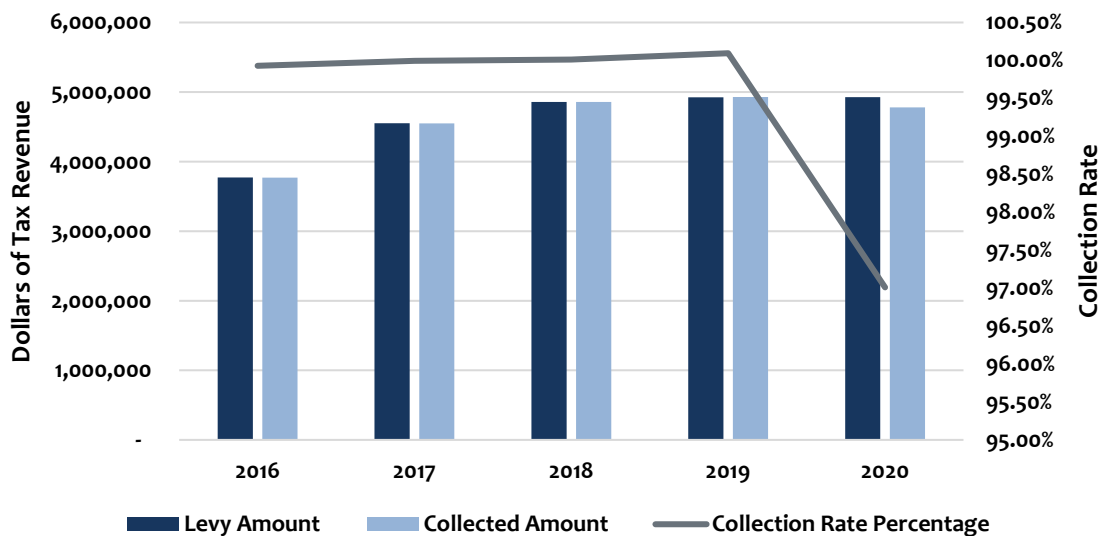
The following figures graphically compare actual property taxes versus levied taxes and the collection rate for the districts. The variations are mainly due to assessor adjustments. The districts have a policy of collecting abatements by an abatement mill levy in the following year.

Figure 10: BRFPD General Fund Property Tax Collection, Levied Amount, and Collection Rate, 2016 to 2020



The collection rate average for BRFPD for the five years of actual revenues reported for 2016 to 2020 is 99.21%.

Figure 11: SWFPD General Fund Property Tax Collection, Levied Amount and Collection Rate, 2016 to 2020

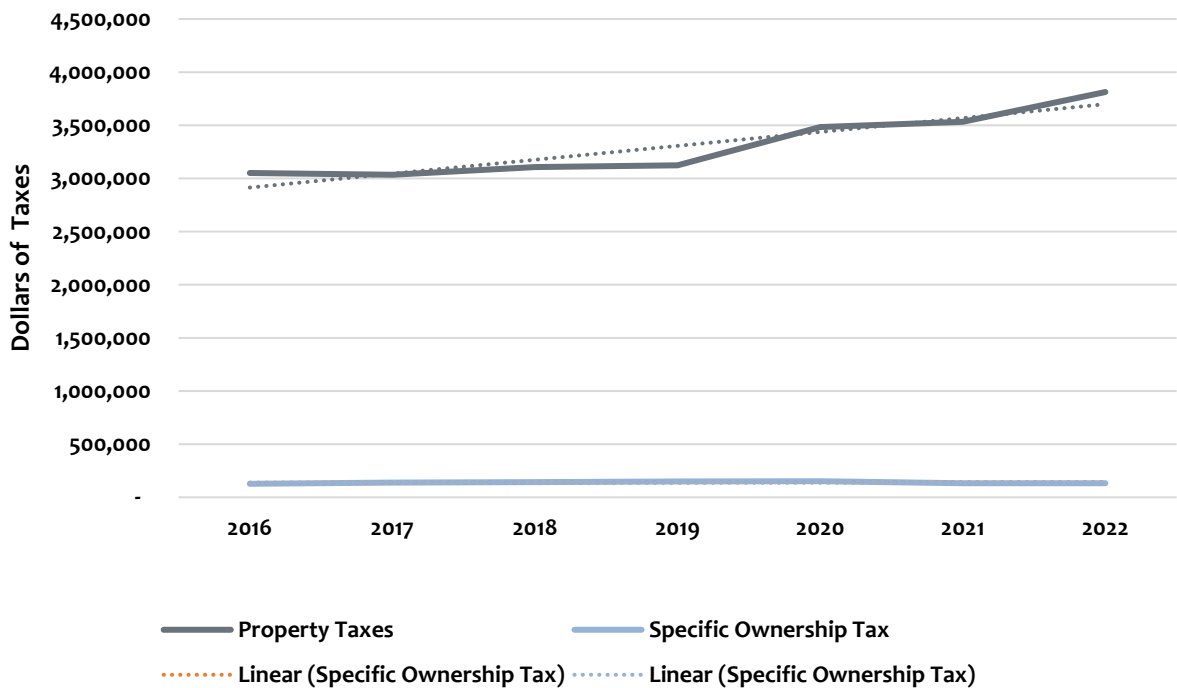


The collection rate for SWFPD averages 99.41% from 2016 to 2020. Any variances are adjustments made by the county to assessed values.

Property and Specific Ownership Taxes

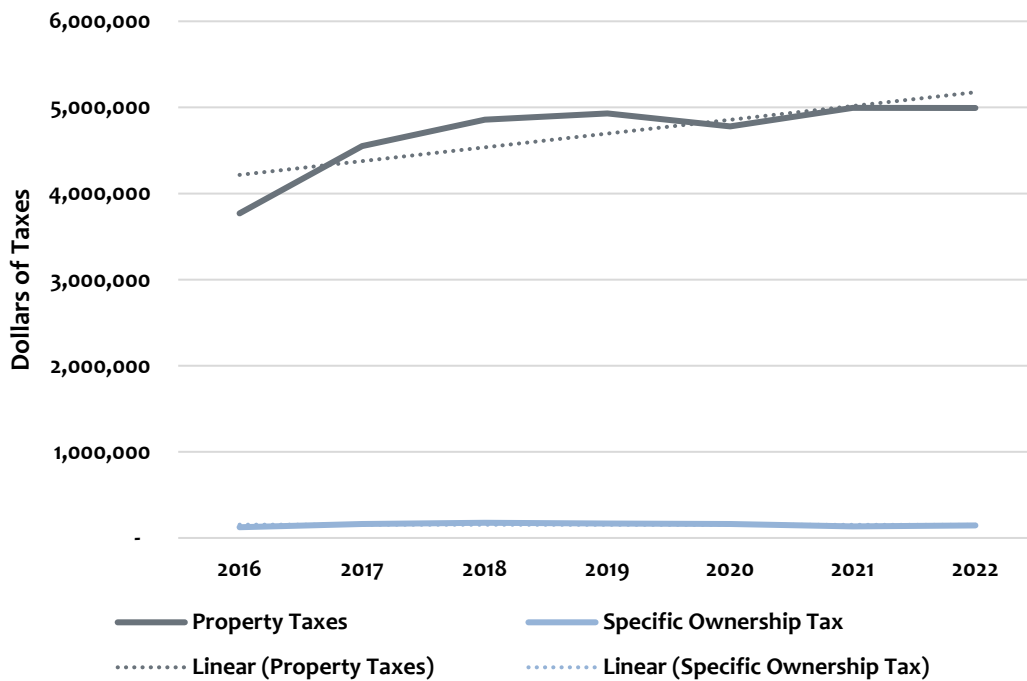
Property and specific ownership taxes for BRFPD comprise anywhere from 64.11 to 97.78% of the district's 2016 to 2022 revenues. The district has experienced an overall increase in property tax revenues since 2016. From 2016 to 2020, BRFPD realized a \$432,798 increase (or 14.19% change) in property tax revenues, while specific ownership taxes increased \$24,368 from 2016 to 2020 (19.19% change). The following figures show (graphically) increases along with linear trend lines.

Figure 12: BRFPD Property and Specific Ownership Taxes, 2016 to 2022



Property tax and specific ownership taxes for SWFPD have comprised anywhere from 64.75 to 99.96% of the district's revenues from 2016 to 2022. From 2016 to 2020, SWFPD realized a \$1,010,042 increase (or 26.80 percent change) in property tax revenues, while specific ownership taxes increased \$36,659 from 2016 to 2020 (29.41 percent change).

Figure 13: SWFPD Property and Specific Ownership Taxes, 2016 to 2022



Wildland Revenues

Wildland revenues comprise anywhere from 0 to 7.15% of BRFPD 2016 to 2020 revenues. Wildland revenues have been very volatile as they range from nothing to \$281,230 over the five years. SWFPD wildland revenues range from 0 to 1.97% of total revenues. RFFRA wildland revenues are 0 to 1.48%.

Impact Fees

Only BRFPD charges Impact fees which are restricted for capital expenditures. Impact fees have been anywhere from 1.47 to 3.5% of total revenues from 2016 to 2020 actual revenues for BRFPD.

Ambulance Revenues – Service Income

Ambulance revenues comprise anywhere from 0 to 8.26% of revenues from 2016 to 2022 for SWFPD. Ambulance revenues for BRFPD range from 0 to 9.39% of total revenues. The receipt of ambulance revenues was transferred to RFFRA in 2019 when BRFPD and SWFPD transferred the operation of the fire districts to the Authority. RFFRA ambulance revenue went from 12.46% in 2019 to 12.70% in 2020. Insurance (42.92%) pays the most significant percentage of EMS revenue, followed by Medicare (24.96 %) and private pay (21.3%). The payer of ambulance revenues is monitored daily by a third party and the Finance Director reviews it monthly. This is a good practice to identify any

shifts to higher percentages of Medicare as the population ages could have a dramatic effect on income. Additionally, the Authority should monitor the total billed and total amounts collected to manage the revenue stream effectively.

Miscellaneous, Interest, Fire Prevention, Rental Income, Special Event, Donations, and Grants

Combined, these comprise anywhere from 0.24 to 9.39% of BRFPD's 2016 -2020 revenues. SWFPD's percentage of total income for the above items ranges from 0.14 to 6.42%. RFFRA's percentage of total income for 2019 and 2020 are 5.13% and 3.51%.

Sources for Capital

The Districts and the Authority are using a capital reserve fund. It has been set up as a separate fund in the accounting system; however, there is no funding for the cost of replacements and remodels. ESCI recommends that the Authority use the Capital Reserve or Projects Fund to set aside dollars for capital projects and record any capital expenditures. There is a separate Debt Service Fund in each District to collect and pay the debt service for the outstanding bond issues.

One last financial resource available to the districts is the beginning fund balance. The following figures show the beginning fund balances for 2016 to 2022 for both districts, the Authority, and the three entities combined.

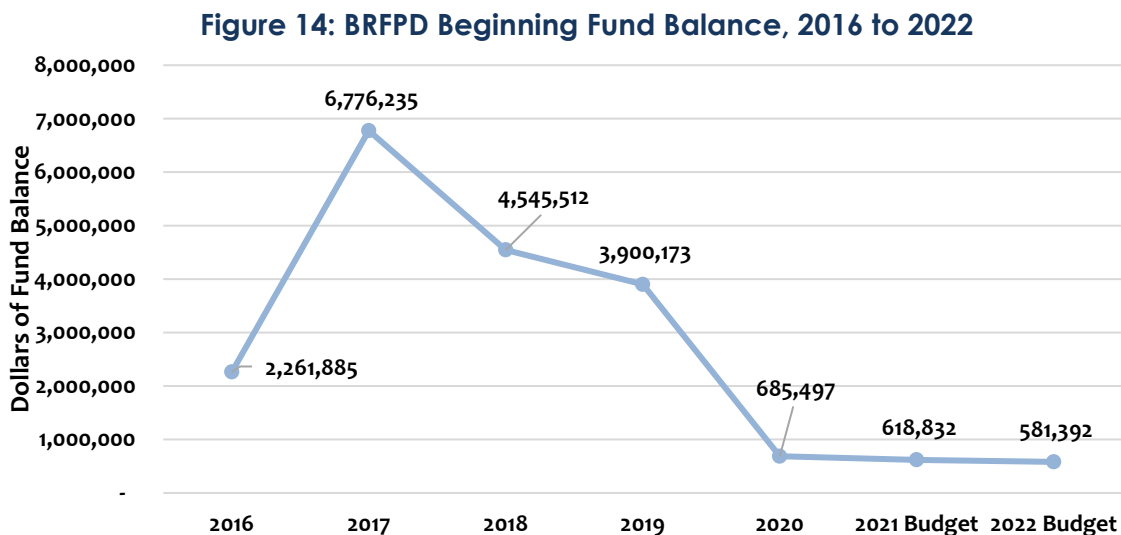


Figure 15: SWFPD Beginning Fund Balance, 2016 to 2022

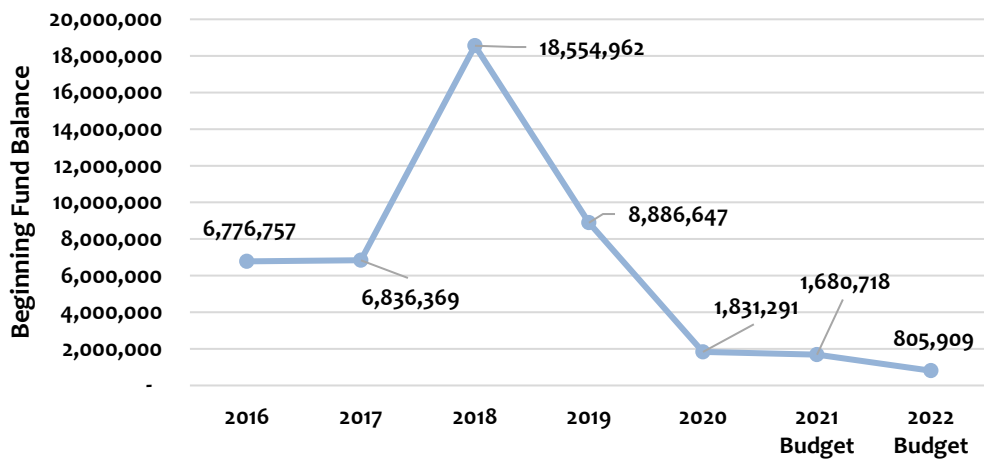


Figure 16: RFFRA Beginning Fund Balance, 2019 to 2022

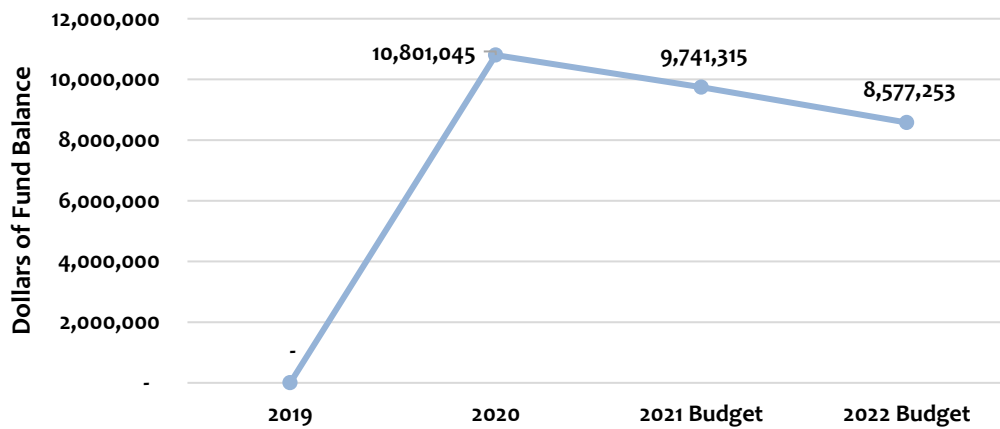
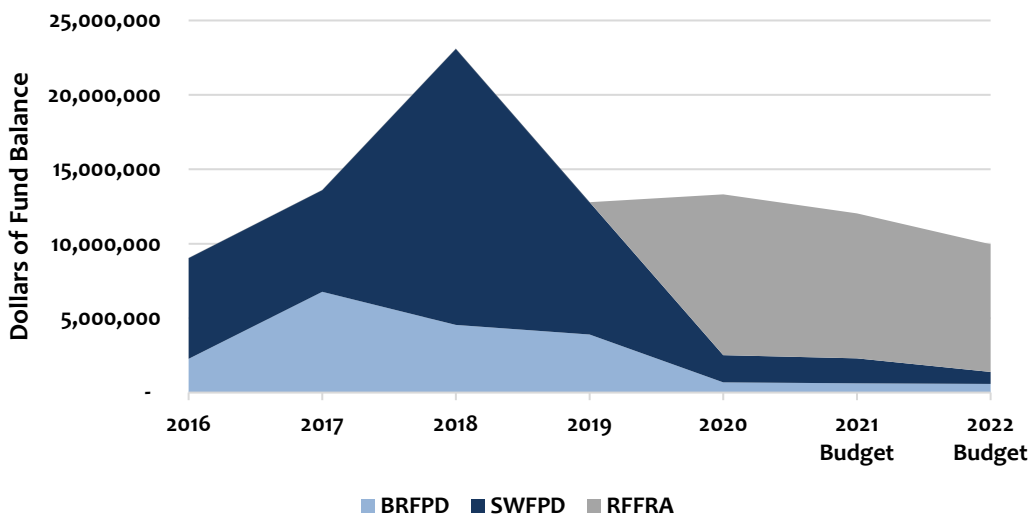


Figure 17: BRFPD, SWFPD, RFFRA Beginning Fund Balances, 2016 to 2022



The high increases in ending balances are due to the issuance of bonds of \$3,630,000 by BRFPD in 2016, \$15,310,000 by SWFPD in 2017, and the transfer of \$10,801,045 of cash to RFFRA by the districts in 2019.

The beginning fund balances of all the entities have decreased by \$1,571,736 (11.55 percent change) between FY 2016 and FY 2020. RFFRA needs to monitor the impacts of the legislature's assessed value ratio reduction for specific classes and sub-classes of properties. Both districts have been proactive by having an electors-approved measure that allows the districts to increase their mill levies to adjust for any reduction of revenues due to changes in the law regarding the methods used to calculate the ratio for the residential real property classification. Since the residential class is the highest percentage of all property classes, RFFRA is somewhat insulated from possible future changes.

Expenditures

All the districts' expenditures are budgeted in the general fund, debt service fund, or capital project fund. For ease of presentation, all the expenditures are included in one fund. The following figure shows, in tabular format, the respective expenses for FY 2016 through FY 2020 actual and 2021 and 2022 Budget.

Figure 18: BRFPD Expenditures Actual 2016 to 2020, Budget 2021 to 2022

Financial Expenditures by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget	2022 Budget
Treasurer's Fees	119,053	117,510	120,022	120,982	137,903	133,000	163,000
Wages	76,569	74,408	88,863	-	-	-	-
Benefits	-	-	-	-	-	-	-
Administration	828,584	891,704	1,243,990	79,586	9,245	100,100	50,100
Building	224,832	337,275	344,955	3,058	3,321	-	-
Communications	51,586	37,335	49,911	-	-	-	-
Fire Prevention	222,000	175,429	180,851	-	-	-	-
Firefighting	97,870	87,748	147,213	-	-	-	-
Medical	826,609	928,284	1,188,139	-	-	-	-
Training/Education	46,506	64,615	112,094	180	-	-	-
Vehicles	115,542	140,950	134,993	-	-	-	-
Capital Outlay	391,163	3,053,319	1,211,859	14,743	58,353	1,950,000	1,900,000
Transfer to RFFRA	-	-	-	2,856,329	3,230,597	3,175,000	3,500,000
Impact Fee Transfer to RFFRA	-	-	-	-	90,000	140,000	70,000
Debt Issuance Costs	88,490						
Total Debt Service	200,987	261,050	258,150	260,250	262,250	259,150	261,050
Cash Transfer to RFFRA	-	-	-	3,225,531	-	-	-
Total Expenditures	3,289,791	6,169,627	5,081,040	6,560,659	3,791,669	5,757,250	5,944,150
Total Revenues	7,804,141	3,938,904	4,435,701	3,345,983	3,725,004	5,719,810	5,915,086
Ending Fund Balance	6,776,235	4,545,512	3,900,173	685,497	618,832	581,392	552,328

Figure 19: SWFPD Expenditures Actual 2016 to 2020, Budget 2021 to 2022

Financial Expenditures by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget	2022 Budget
Treasurer's Fees	188,781	246,483	243,459	246,281	239,302	218,000	275,000
Wages	1,887,827	2,074,153	1,992,493	1,150	1,100	-	-
Benefits	597,748	654,174	728,434	181	639	-	-
Administration	266,258	199,739	277,823	30,067	14,111	100,200	75,200
Building	94,538	540,337	140,348	91			
Communications	131,281	50,558	-	-	-	-	-
Fire Prevention	-	-	-	-	-	-	-
Firefighting	84,211	189,119	215,645	14	-	-	-
Medical	5,400	5,491	4,950	-	-	-	-
Training/Education	23,065	28,796	35,102	-	-	-	-
Vehicle	86,533	74,344	75,449	-	-	-	-
Scholarship Awards	103,520	-	67,953	-	-	-	-
Capital Transfers to RFFRA	-	-	-	369,156	357,437	375,000	375,000
Capital Outlay	1,036,755	5,765,000	10,469,120	328,615	120,853	900,000	-
Transfer to RFFRA	-	-	-	3,252,507	3,162,130	3,200,000	3,400,000
Pension Transfer Out	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Debt Issuance Cost	-	165,465	-	-	-	-	-
Debt Service		826,700	1,160,700	1,160,700	1,160,100	1,163,700	1,161,300
Cash Contributions to RFFRA	-	-	-	6,857,554	-	-	-
Total Expenditures	4,555,917	10,870,359	15,461,476	12,296,316	5,105,672	6,006,900	5,336,500
Total Revenues	4,615,529	22,588,952	5,793,161	5,279,879	4,955,101	5,132,091	5,139,558
Prior Period Adjustment			-38,919				
Ending Fund Balance	6,836,369	18,554,962	8,886,647	1,831,291	1,680,720	805,909	608,967

Figure 20: RFFRA FY 2019 to 2020 Actual, FY 2021 to 2022 Budget

Financial Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Budget
Wages	3,997,480	4,104,010	4,263,081	4,559,787
Benefits	1,362,528	1,557,578	1,633,037	1,789,015
General & Administration	347,735	397,093	441,044	471,700
Building Maintenance	348,380	370,750	501,500	517,500
Communications	122,018	108,579	164,300	249,000
Fire Prevention	10,813	8,446	60,100	74,100
Fire Operations	587,494	587,297	176,000	162,000
Training	-	-	135,500	225,000
Medical	-	-	60,700	60,700
Vehicles	150,969	203,054	185,500	178,500
Capital Outlay	1,433,607	2,078,608	1,445,000	1,277,900
Total Expenditures	8,361,025	9,415,416	9,065,762	9,565,202
Total Revenues	19,162,070	8,355,687	7,901,700	8,367,380
Ending Fund Balance	10,801,045	9,741,316	8,577,253	7,379,431

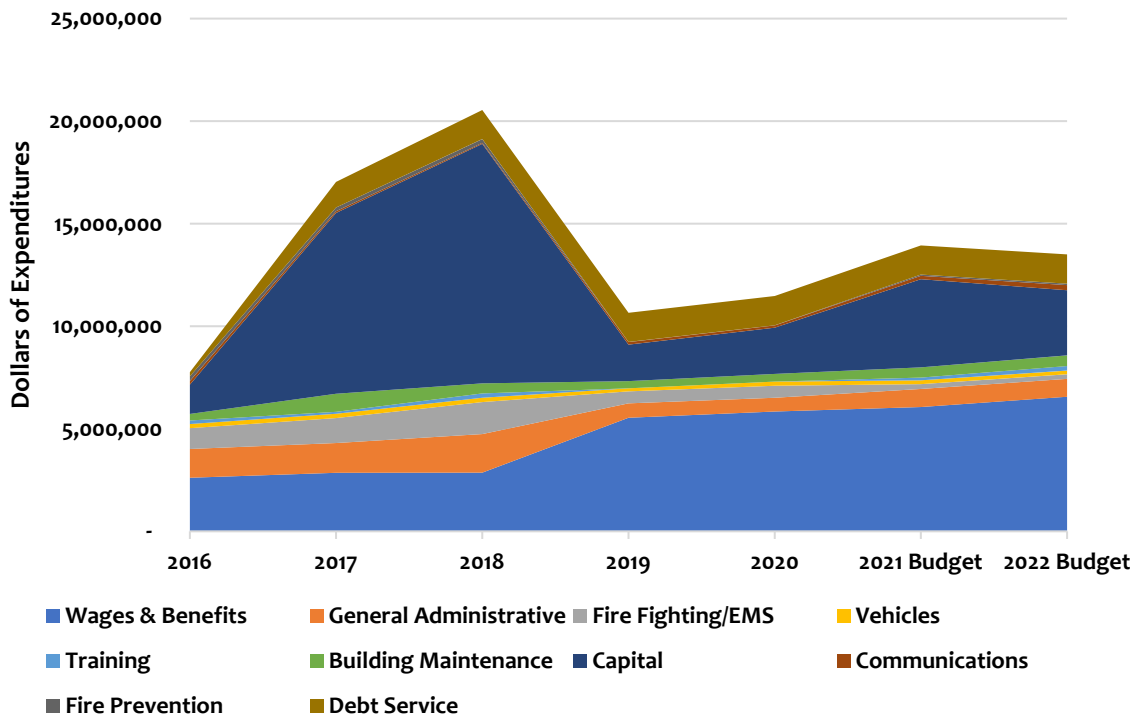
The previous figures show total expenditures for BRFPD and SWFPD from 2016 through 2020 (actuals) and 2021 and 2022 (budgeted). RFFRA began operating in 2019; total expenditures are actuals for 2019 and 2020 and budgeted for 2021 and 2022.

- BRFPD increased \$2,654,359 or 80.68% from 2016 to 2022
 - Subtract the transfer to RFFRA of \$3,500,000 is a decrease of (\$845,641) or (25.71%)
 - Subtract \$1,900,000 Station 46 decrease of \$2,745,641 or 83.46%
- SWFPD increased \$780,583 or 17.13% from 2016 to 2022
 - Subtract the transfer to RFFRA of \$3,400,000 for operations and \$375,000 for capital a decrease of (\$2,994,417) or (65.73%)
- RFFRA increased \$1,204,177 or 14.40 percent from 2019 to 2022.
- BRFPD fund balance decreased (\$6,223,907) or (189.19%) from 2016 to 2022
 - Add the cash transfer to RFFRA of \$3,225,531 the decrease is (\$2,998,376) or (44.25%)
- SWFPD fund balance decreased (\$6,227,402) or (91.09%) from 2016 to 2022
 - Add the cash transfer to RFFRA of \$6,857,554 an increase of \$630,152 or 9.22%
- RFFRA fund balance decreased by (\$3,421,614) or (31.68%) from 2019 to 2022.

Combined Expenditures

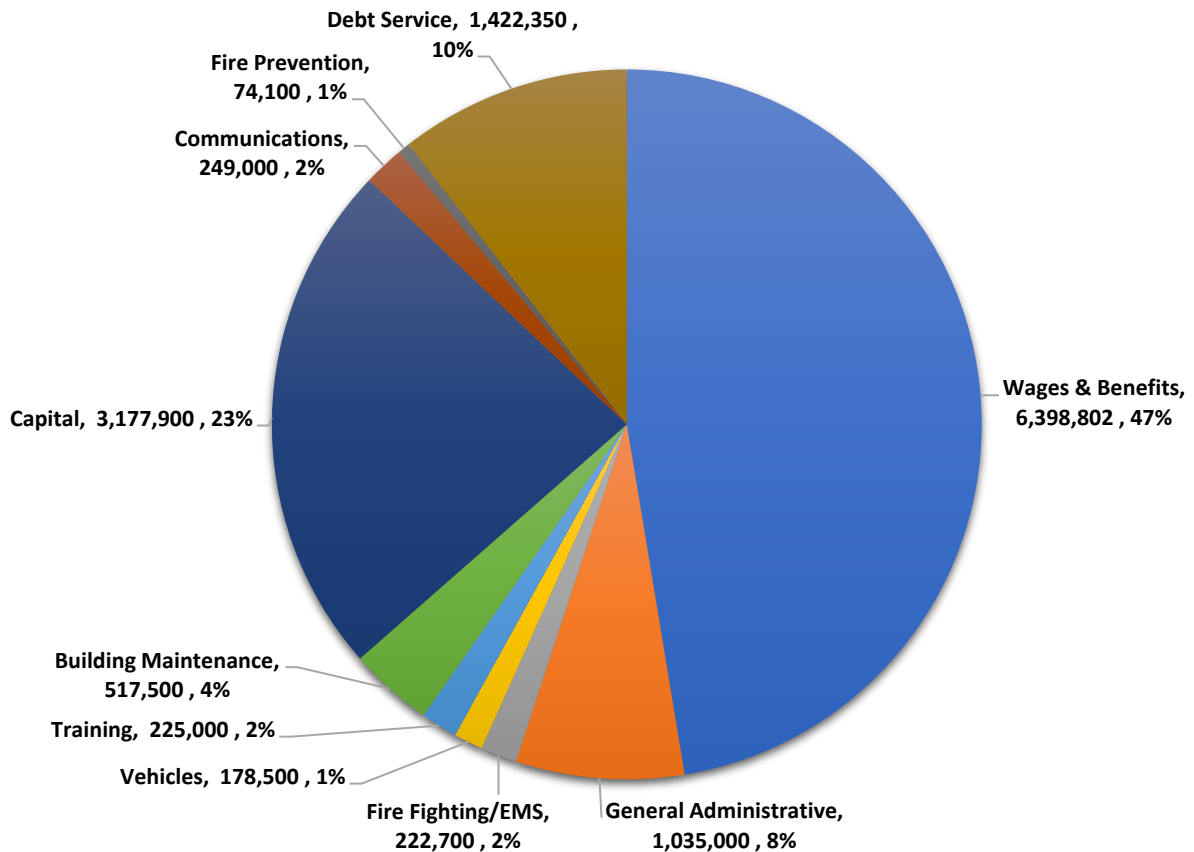
The following figure graphically displays all the districts' expenditures for the entire period of 2016 to 2022 and 2019 to 2022 for RFFRA.

Figure 21: BRFPD, SWFPD and RFFRA Expenditures by Type, 2016 to 2022



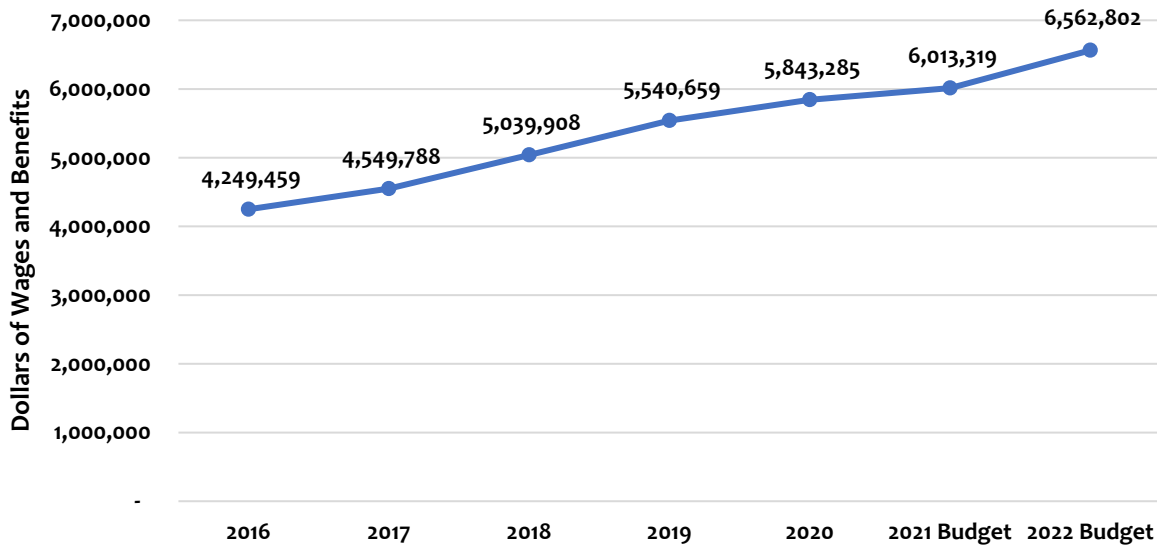
The following figure breaks down the major categories of expenditures for all three entities as budgeted for 2022. It shows the dollar amounts and the percentage for each major expense category.

Figure 22: Combined BRFPD, SWFPD, and RFFRA Budget 2022



Wages and Benefits. Clearly, at 47%, wages and benefits are the highest cost to the Authority. This is low for most career-staffed fire districts around the country. Generally, the number is in the 70 to the 80% range. The reason for this may be due to the 31 volunteers helping to cover the shifts of the Authority. Wages and benefits comprise the largest portion of the budget for most fire districts. The wages and benefits vary from 24.53 to 51.99% from 2016 to 2022, depending on the capital expenditures each year. Compared to the rest of the budget, the percentage of wages and benefits has increased as the Authority has increased salaries and benefits to induce individuals to apply for the positions.

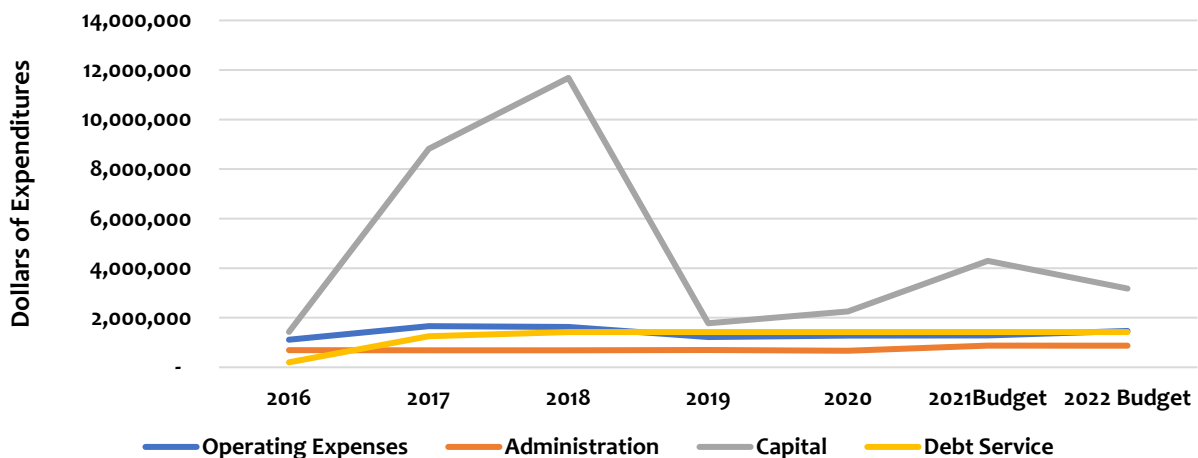
Figure 23: Combined BRFPD, SWFPD, and RFFRA Wages and Benefit Totals



Operating Expenditures, Administration, Capital, and Debt Service

These charges encompass 44.23 to 75.03% of the expenditure budget. Depending on the year, capital expenditures vary from 16.67 to 56.86%. The debt service payments are between 2.59% and 13.33% of spending.

Figure 24: BRFPD, SWFPD, and RFFRA Operating Expenditures, Administration, Capital, and Debt Service 2016 to 2022

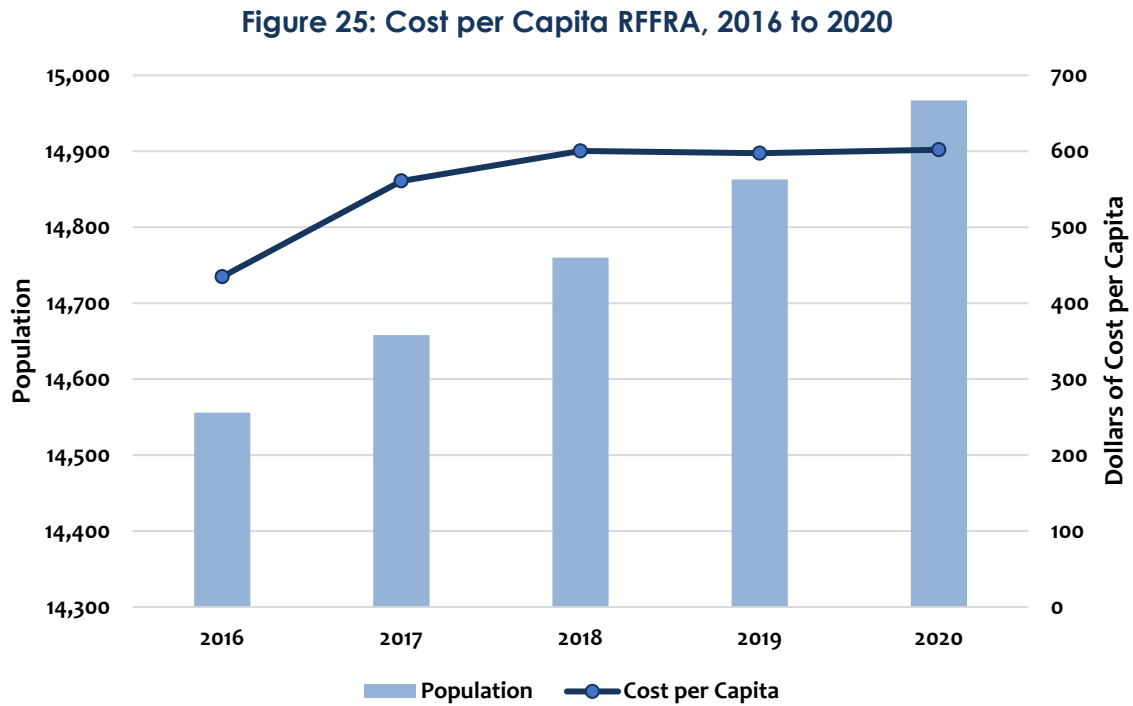


Cost per Capita

This cost measure is sometimes used to compare departments to determine the comparative cost of operation. The following figures display, from 2016 to 2020, per capita cost. Fundamentally, per capita costs are derived by taking the operating budget less capital and distributing it over the estimated population of the district to arrive at a dollar value per capita. This measure for RFFRA will be higher than other departments due to a couple of reasons. First is that the service demand is higher than just for the resident population. The NFPA annual fire department comparison of communities uses the resident population. Second, in communities where the population is spread over a large geographical area, the cost of providing effective services typically increases. More fire stations with additional personnel are required to provide reasonable response times to all portions of the service area.

The population for the RFFRA was estimated at 14,967 in 2020. The Authority encompasses the towns of Basalt, Snowmass Village, and El Jebel, and other unincorporated areas of the two counties. The data suggest that per capita costs have ranged from \$435 (2016) to \$602 (2020). However, the average over this period is \$559 per capita. Based on this average, one of the years was below the average. For comparison, the NFPA reports that the 2018 Cost per Capita was \$157.86 per capita for the Western Region of the US.⁴ The 2018 statistics are the latest available.

⁴ US Fire Department Profile- 2018 Supporting Tables, National Fire Protection Association, February 2020.



Cost per Call

A similar methodology was utilized for cost per call, replacing population with the number of calls for service. For 2020, the average cost per call was \$4,526 compared to \$2,929 in 2017. The average cost per call over the four years was \$3,860. Two of the four years were below the average cost per call for service. This measure is affected by the expenditures and the number of calls. The number of calls varied from 1,962 in 2020 to 2,188 in 2018. This measure should also be used with discretion as the cost of maintaining the “standing army” remains the same regardless of the number of calls for service. It is perverse to desire more calls to lower the measure, and if the service demand reduces due to the excellent work of the Authority’s prevention activities, this cost measure becomes greater.

Figure 26: Cost per Call, 2017 to 2020

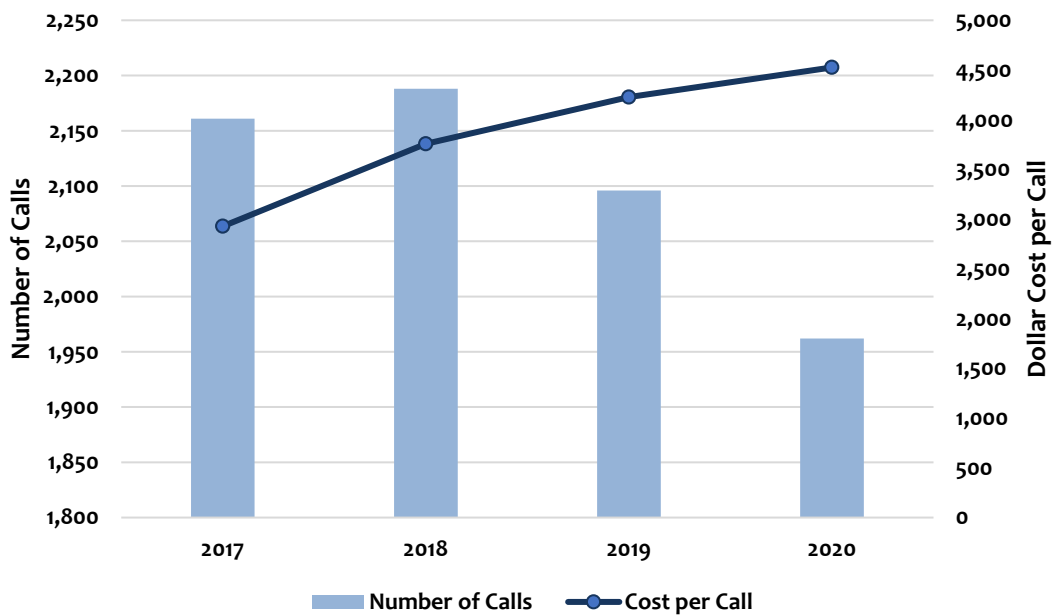
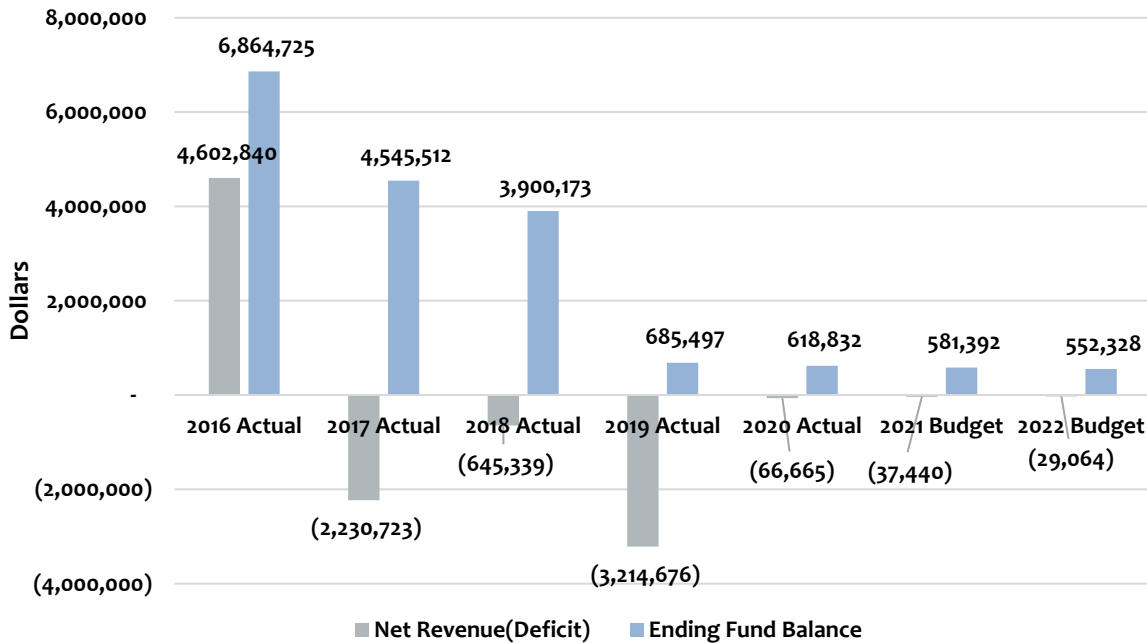


Figure 26 shows that the lower number of calls causes an increasing cost per call.

Net Revenue/(Deficit) and Ending Fund Balances

The following four figures display net income/(deficits) and actual ending fund balances for 2016 to 2020 and the projected ending balances for 2021 and 2022 for all Funds.

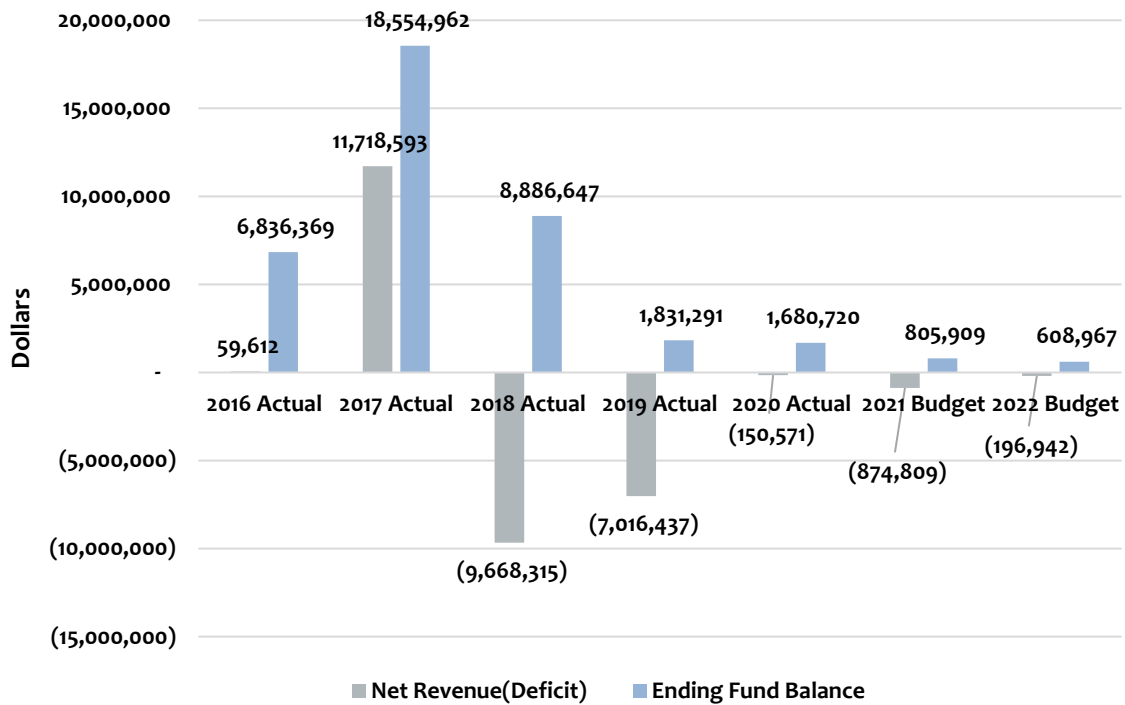
Figure 27: BRFPD Net Revenue (Deficit) and Ending Fund Balance, 2016 to 2022



When revenues are less than expenditures, such as in FY 2017, 2018, 2020, 2021, and 2022 (Figure 27), then the funds show an operating loss and fund balances are reduced. Conversely, when the revenue exceeds expense, such as in FY 2016, then the funds show an operating gain, and fund balances are increased. Ending Fund Balances become Beginning Fund Balance for the next year.

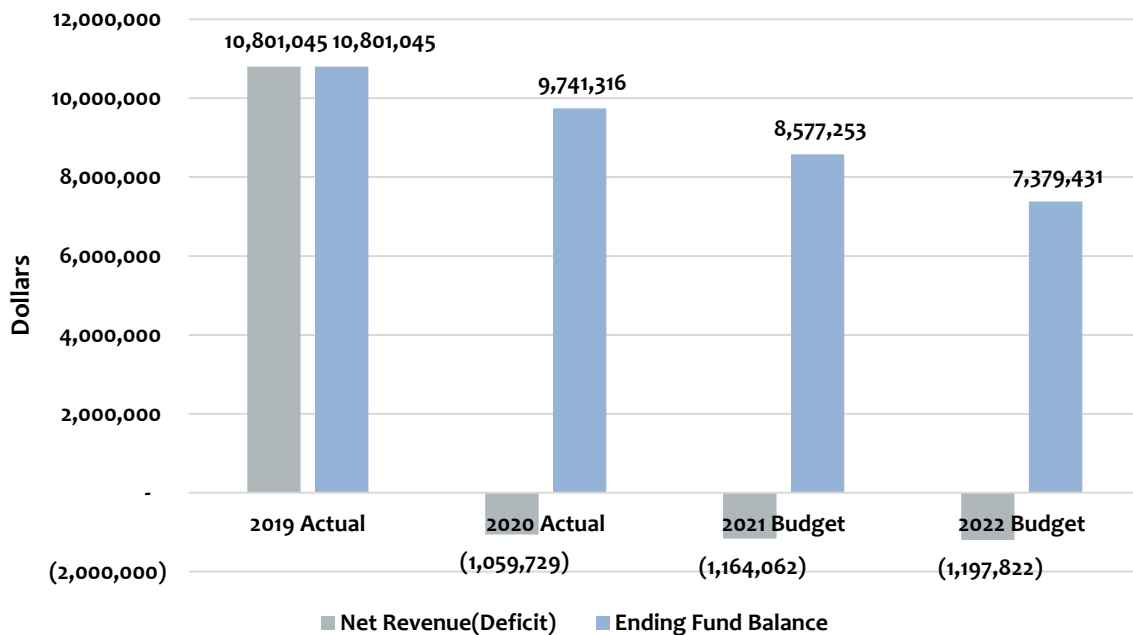
The three entities' fund revenues have been less than fund expenditures over most of the study period due mostly to bond issues for capital expenditures received in one year and paying the capital costs over a couple of years. This loss is shown in the following figures, which show the effect of the net gain or loss on the fund balance each fiscal year. As revenues have increased over time, the fund balance has not increased, mainly due to capital projects. The Ending Fund balances for BRFPD have decreased from \$6,864,725 in FY 2016 to \$552,328, as estimated in the Budget for 2022. A bond issue for \$3,630,000 in 2016 caused the ending balance to increase. Capital expenditures of \$3,053,319 in 2017 and \$1,211,859 in 2018 reduce the ending fund balance. With the formation of the Authority in 2019 and the transfer of \$3,225,531 of cash to the Authority, the ending fund balance was further reduced to its current level.

Figure 28: SWFPD Net Revenue (Deficit) and Ending Fund Balance



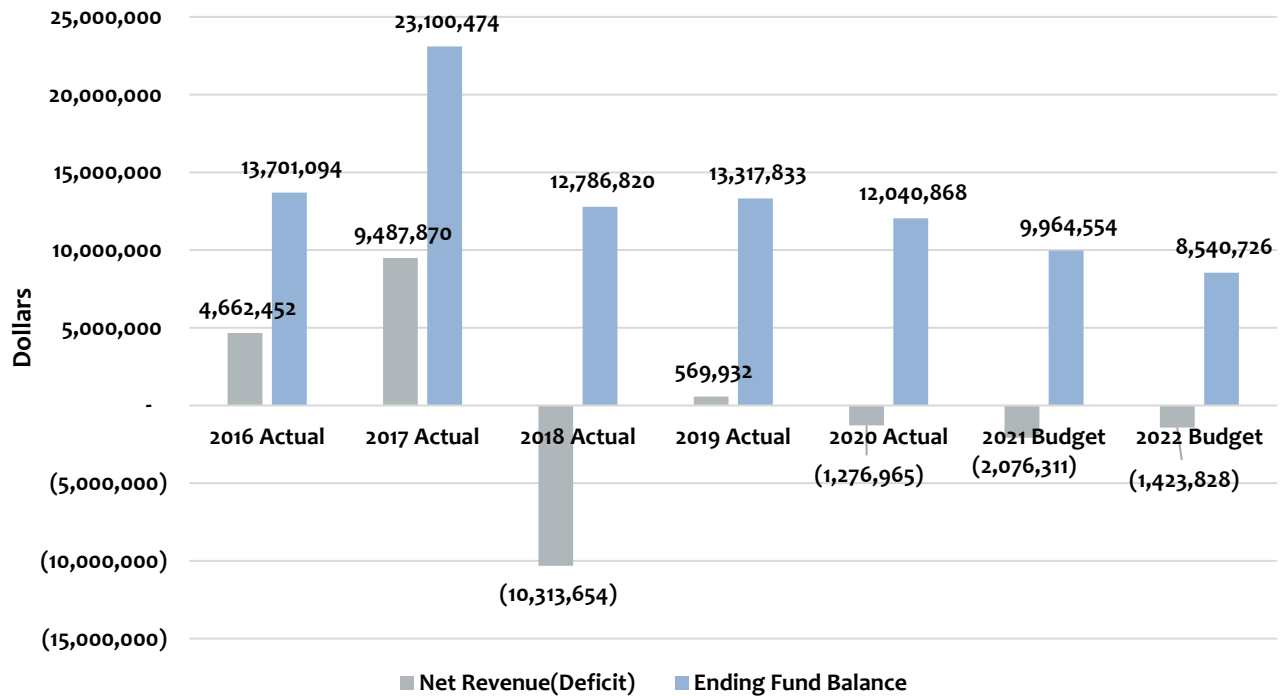
The ending fund balance for SWFPD has decreased from \$6,836,369 in FY 2016 to \$608,967, as estimated in the Budget for 2022. A bond issue for \$15,310,000 in 2017 caused the ending balance to increase. Capital expenditures of \$1,036,755 in 2016, \$5,765,000 in 2017, and \$10,469,120 in 2018 reduced the ending fund balance. The transfer of \$6,857,554 cash to the Authority at its formation in 2019 reduced the ending fund balance to its current level.

Figure 29: RFFRA Net Revenue (Deficit) and End Reserve Balance



The ending fund balance for RFFRA has decreased from \$10,801,045 in FY 2019 to \$7,379,431, as estimated in the Budget for 2022. The two districts transferred \$10,801,045 of cash into RFFRA upon the formation of the Authority in 2019. Capital expenditures of \$1,433,607 in 2019, \$2,078,608 in 2020, \$1,445,000 in 2021, and \$1,277,900 in 2022 reduced the ending fund balance. The balances in the Authority fund are being reduced by close to one million dollars per year. This is a concerning trend with the amount of money needed to maintain the apparatus and facilities over the next 20 years.

Figure 30: Combined BRFPD, SWFPD, RFFRA Net Revenue (Deficit), and Ending Fund Balance



Future Revenue Concerns

The districts have insulated themselves from the uncertainty of the residential property assessment ratio with the voter-approved Gallagher Stabilization Authorization in 2018. The governor and the legislature have changed some of the ratios on other categories of properties besides residential. They may make other changes in the future. These statutory changes become a behind-the-scenes problem that most people do not understand or of which perhaps they may not even be aware. These legal changes need to be monitored to prevent unanticipated reductions in property tax revenues.

ESCI recommends that the Authority's accounting system tracks costs for the services charged as fees. This assures that the Authority covers its costs and provides the service as efficiently as possible. The entity may want to set up a special revenue fund or a proprietary fund for the ambulance services to collect the costs associated with this service more effectively.

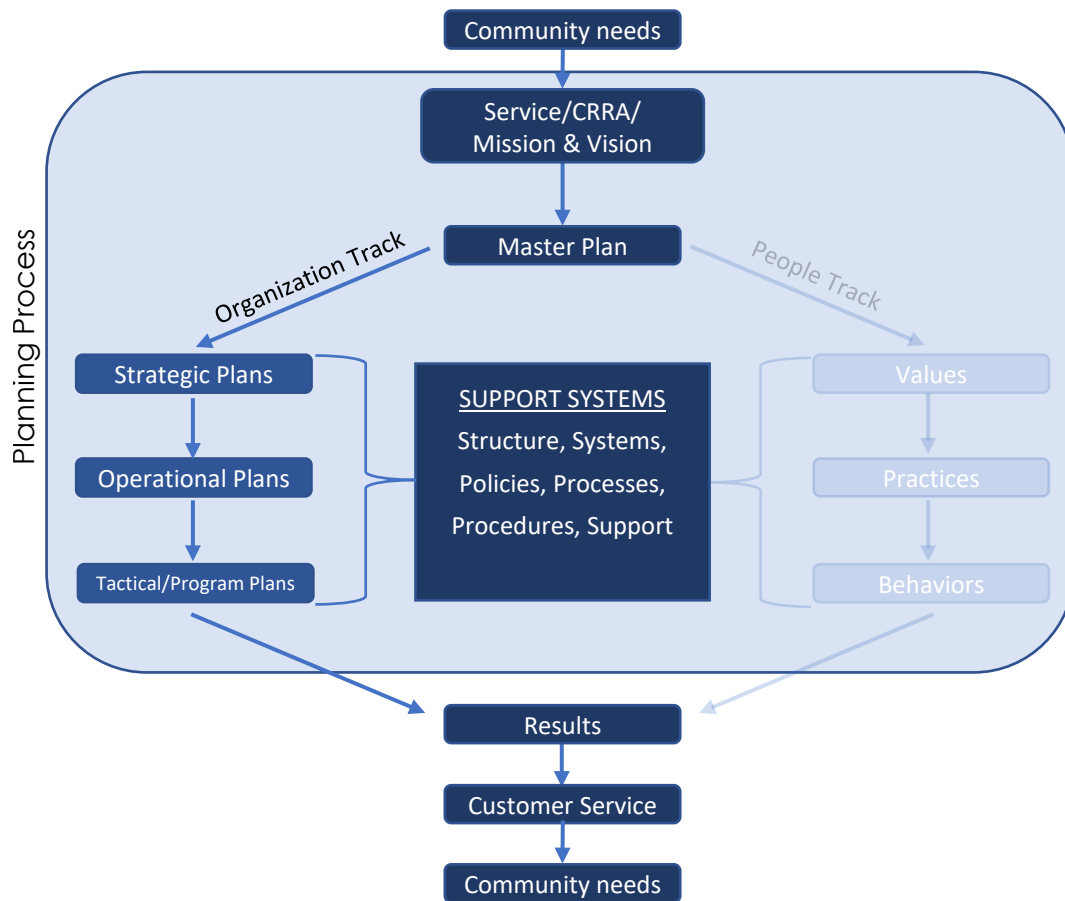
Best Practices in Financial Management

As part of the fiscal analysis, ESCI's project team offers measures of effective organizational performance in comparison to financial industry standards. These are found in *Appendix B*.

PLANNING FOR FIRE PROTECTION AND EMS SERVICES

Emergency services continually contend with a rapidly changing environment. Improved tools, technologies, increased regulation of activities, and changing risk profiles, are all challenges that, if not planned for, create a reactionary management style instead of proactive management. Departments can avoid service complications through continuous evaluations of the internal and external environment and aligning themselves around the needs of these environments. By analyzing data and trends and implementing course corrections, an organization will stay on the leading edge of service delivery.

Figure 31: Organizational Alignment



To remain highly effective and improve service delivery, an organization must identify programs and activities that may no longer serve the community's changing needs. The process illustrated above is called organizational alignment, adapted from the Vector

Group to meet the fire service's needs.⁵ This process aligns the entire organization by examining the community needs and cascading those needs down through the service plan, community risk reduction assessment plan (CRRA), and mission. The service plan primarily applies to special districts. This service plan outlines the services provided by the Authority and is submitted to the county authorities for approval. At this point, a master plan creation occurs. There are separate processes that mirror each other for both the organization and the people planning.

The organizational track looks at strategic, operational, and tactical/program plans. The people track details of the individuals' values, practices, and behaviors. Both pathways come back together to measure results. Keep in mind that these processes are not exclusive of each other and many times come together into a single plan. Finally, we compare service delivery to the community needs to measure results. A fire department can stay true to its core mission and competencies through proper planning while sculpting its vision to serve the new environment. The quality and accuracy of the planning processes determine the organization's success.

To be truly effective, an emergency services agency must consider planning on many distinct levels:

1. Master planning
2. Strategic and values planning
3. Operational and practices planning, including emergency preparedness
4. Tactical/project and behavior planning
5. Infrastructure support for these plans

Master-level planning is the formulation of a long-term outlook bringing together the service plan, CRRA, and the stated mission to create the Authority's vision establishing the Authority's long-term effectiveness as its operating environments change over time. Considering the current and future needs of the community and Authority is vital to a successful planning process. The master plan lays out a comprehensive roadmap that will take the organization to its desired future state from its current form.

Strategic and values level planning establishes the direction for the organization, determining its operational objectives and cultural values and formulating the strategies required to achieve its mission and vision in the master plan. In addition, strategic

⁵ Group, Vector. *MODEL: Strategic Alignment*. PDF. Denver: Vector Group, 2016.

planning involves creating guidelines for the department management to follow to accomplish the objectives of the organization formulated in the master plan.

On the other hand, operational and practices planning guides the organization in the routine undertaking and emergency preparedness to mitigate potentially damaging events that could compromise an organization's or constituents' ability to function. It involves short-term activities to be achieved by employees, integrates the agency into other local, regional, or national response networks, and lays out how the organization demonstrates its values. These activities directly accomplish the operational objectives and indirectly support the master plan vision.

Tactical/program and behavior planning is the development of strategies for potential emergency incident response and program projects like SCBA maintenance or facilities construction. Finally, the behavior level takes the people practices and translates these practices into behaviors that demonstrate the identified values of the Authority. All of which support the operational plans, strategic plan, master plan, and in turn, the Authority's mission.

The following figure summarizes the current planning efforts in place in RFFRA.

Figure 32: Current Planning Efforts in RFFRA

SURVEY COMPONENT	RFFRA
CURRENT PLANNING PROCESS	
Planning group established	County Emergency managers
Current and future environmental analysis	Hazard Mitigation plans completed by Eagle, Pitkin Counties
Schedule for evaluation and revision	Mandated by State
INTEREST GROUP ASSISTANCE IN PLANNING PROCESS	
Customer survey	No
Citizen involvement	Involved with Strategic Plan
Business community involvement	No
Elected official involvement	No
Staff participation	Yes, in Strategic Plan
MASTER PLANNING	
Mission statement developed	N/A
Vision statement developed	Yes
Values developed	Yes
STRATEGIC PLANNING	
Strategies formulated (goals)	Yes
Benchmarks (performance objectives)	Yes
OPERATIONAL PLANNING	
Response planning (run cards, fire management zones)	Response plans
Performance statements by division	None

SURVEY COMPONENT	RFFRA
Monitored	None
Used in performance evaluations	None
Regional incident command	All incidents are managed using ICS
Mutual aid planning	Yearly Wildland Fire tabletops
TACTICAL PLANNING	
Pre-fire planning	Set forth with IGAs
Specific hazard plans	None
Hazardous materials planning	None
EMERGENCY PREPAREDNESS PLANNING	
Preparedness & response (EOP, ⁶ EAP, ⁷ RMP, ⁸ radiological preparedness)	
Plans/documents	Unknown
EMERGENCY MANAGEMENT RESOURCES	
Internal personnel resources	None
External personnel resources	County Emergency Managers
Community notification system	Yes, Text and 911 reverse system is in place

The survey illustrates that RFFRA relies on the counties to lead planning efforts for the Authority. As a result, Authority-specific planning is limited, although minimal response planning is accomplished through response plans and the limited auto aid.

Master Planning

Master planning, also called long-range planning, is a process that seeks to answer several questions:

- Where is our organization today (mission)?
- Where will we need to be in the future (vision)?
- What service do we need to provide (service)?
- How do we affect the risks our community faces (CRRA)?
- How do we get there (plan)?

RFFRA has recognized the need for a long-range planning effort by undertaking this master planning process. This study gives the Authority a clear understanding of today based on evaluating current conditions. Then it contemplates the Authority's future requirements and builds strategies to meet them. These strategies are detailed in the report's Future Service Demand and Future Strategies sections. The design of this Master Plan study is to provide a view of the organization for a ten-year time frame.

⁶ Emergency Operations Plan.

⁷ Emergency Action Plan.

⁸ Risk Management Plan.

Organizational Planning

Strategic Planning

A strategic plan considers a three-to-five-year planning window and establishes prioritized goals and objectives for the organization. The strategic plan evaluates, prioritizes, and implements the recommendations of the master plan. Strategic planning involves creating guidelines for the department management to follow to accomplish the objectives of the organization formulated in the master plan. The following figure represents examples of different organizational inputs that might be considered when creating a strategic plan.

Figure 33: Strategic Plan Examples



Strategic plans should ensure that the speed, strength, and depth of response are adequate when deployed to an emergency within an agency. This process creates a standard of cover (SOC) document. Creating this standard involves:

- Identification of potential risk types,
- Identifications of critical tasks for objectives for each risk type,
- Calculation of the number of resources needed to perform each essential task,
- A methodology assuring adequate resources are dispatched to an incident via 911 center protocols.

Operational plans need to address the timely implementation of mutual and automatic aid to meet the requirements of the SOC. In addition, mutual aid agreements should

incorporate resource needs and responsibilities. One of the most critical aspects is integrating these agreements into the 911 center's Computer Aided Dispatch (CAD) systems for the seamless automatic activation of mutual aid deployment.

Establishing a customer-oriented strategic plan accomplishes the following:

- Identification of the strengths, weaknesses, opportunities, and challenges of the agency
- Determination of the community's service priorities
- Understanding the community's expectations of the agency
- Establishment of realistic goals and objectives for the future
- Definition of service outcomes in the form of measurable performance objectives and targets

The Authority began working on a strategic plan in 2020, which is sophisticated and seeks to tackle several initiatives from organizational communication to team building. Based on ESCI's review of completed sections the strategic plan is inclusive and well planned out. The scope may be bold for a three to five-year time frame; the Authority is extending that time frame to cover the initiatives they need to cover. The Authority's strategic plan does not address any operational or financial planning.

It is recommended that the Authority refresh the strategic plan upon completing this Master Plan.

Operational Planning

Operational planning includes establishing guides for the organization about routine undertakings such as divisional plans, response plans, staffing policies, mutual and automatic aid (locally and regionally), and specialty resource identification.

The following figure represents the organization's primary divisions that should be considered when an organization is in the planning process.

Figure 34: Operational Planning Divisions Examples

Divisional plans such as training, EMS, support services, administration, etc., should have operational plans instituted. These divisional plans outline responsibilities, staffing, schedules, goals, objectives, and other needs that are specific to the division. Many of these plans are broken down into smaller groups that require specialized needs, i.e., special teams, apparatus maintenance, etc. The following figure demonstrates how a divisional plan like wildland operations can be separated to build more detail.

Figure 35: Wildland Divisions Examples

These plans allow the organization to understand the duties of each division and how the divisions support the overall strategic, master plans, and mission of the fire department.

Tactical /Program Planning

This area of planning is where the rubber meets the road. These plans are detailed and task driven. This planning section has two main areas, tactical response, and program areas. Tactical planning is the pre-incident, target hazard, response, and emergency planning.

Tactical

When responding to a building or property during an emergency, there is limited time to sort out the special hazards or the location and treatment of critical components. A lack of familiarity with buildings and property can easily lead an emergency crew to use valuable time planning the incident, become disoriented, or even worse, suffer an injury. The following figure shows the different parts of the tactical plans that need to be considered when formulating them.

Figure 36: Tactical Planning Components Example

It is critical that firefighters and command staff have information readily at hand to identify hazards, direct tactical operations, and use built-in fire-resistive features to their advantage. This situational awareness can only be accomplished by building familiarization tours, developing pre-incident plans, conducting tactical exercises, and identifying needed specialty resources.

Currently, RFFRA does not perform pre-incident plans or hazard-specific plans; however, there is tribal knowledge of local hazards. This information is not integrated into response resources or dispatch protocols; therefore, the hazard information is not available or communicated to responders during an incident. The Authority is encouraged to develop and maintain effective pre-incident and special hazard plans and incorporate the plans routinely into dispatch communications following NFPA 1620 (soon to be NFPA 1660). A defined list of "target hazards" should be developed, and focused effort given to ensuring response personnel has ready access to pre-incident plans. FEMA defines target hazards as: "facilities in either the public or private sector that provide essential products and services to the general public, are otherwise necessary to preserve the welfare and quality of life in the community, or fulfill important public safety, emergency response, and disaster recovery functions." Many fire departments will define target hazards by:

- Facilities that can have a substantial economic impact on the community
- Buildings with large potential occupant loads
- Buildings with populations who are partially or entirely non-ambulatory
- Buildings of considerable size (greater than 12,000 square feet)
- Buildings that contain process hazards, such as hazardous materials or equipment

Pre-incident plans and target hazard planning should be regularly updated, easy to use, and quickly accessible for company officers and command staff.

NFPA 1620 (1660) provides excellent information on the development and use of pre-incident plans and is a vital reference. Once pre-plans are established, providing training to all personnel who may respond to an incident at those locations is essential. In addition, copies of pre-incident plans and drawings should be available on each response vehicle and incorporated into dispatch procedures.

Emergency Management

Once a low priority, emergency management has increased importance in assisting emergency response, incident support, and recovery after the incident. By developing and maintaining emergency action plans and regularly exercising and updating the plans, local governments help limit (or manage) the consequences of a disaster. The common term for governmental disaster preparedness is emergency management.

The Superfund Amendment and Reauthorization Act, found in Title III of the Federal Code (SARA Title III), defines requirements for tracking hazardous materials used in fixed facilities and establishes requirements for emergency response planning. Therefore, the Authority should be involved with the Local Emergency Planning Committee (LEPC) at the county level. The LEPC is responsible for identifying and collecting information on the use of hazardous materials by private and public entities. Information collected includes the type of material, quantity, and location at each site. Additionally, the LEPC ensures local response plans are adequate based on the potential risk.

SARA Title III requires industries that use over a threshold limit of certain highly hazardous materials (extremely hazardous substance facilities – EHS) must develop comprehensive emergency plans for their facility. In addition, the Act requires that local fire departments coordinate with the involved industry to ensure a quality response to the emergency.

The Authority is meeting with Pitkin County Public Safety Council, Eagle County Public Safety Council, Basalt Emergency Management Council, as well as the Pitkin/Eagle County Emergency Managers to look at Community Wildfire Protection Plans and Hazard Mitigation Plans. It is paramount that RFFRA staff remain updated on plans content and understand the district's role in their execution.

People Planning

As part of the planning process, fire departments typically publish a set of values that set the foundation for culture. These values support the mission and vision of the Authority and are vital to the planning for personnel management in the fire department. The values are examined in an alternate section of the master plan.

Discussion

Planning efforts are generally limited in the Authority throughout the organizational alignment process. There is no adopted planning process, and historically planning is restricted to basic strategic planning efforts, simple intergovernmental agreements (IGAs), and limited emergency management. In addition, there is lacking comprehensive long-range planning that contemplates a holistic view of the customer needs through results analysis, including the need for a standard of cover, capital improvement planning, and operational planning.

CAPITAL ASSETS & CAPITAL IMPROVEMENT PROGRAMS

In conjunction with a long-range Master Plan, fire departments often utilize Capital Improvement Programs (CIP). The reason is to identify present and future needs and conditions of an organization's infrastructure (facilities, apparatus, and equipment). These plans determine the appropriate type and timing of maintenance, renovation, or replacement measures; and rank those needs based on the state of the asset and its function in the organization. Such plans operate for a shorter duration, up to ten years. Paying attention to financial factors during the development of master plans allows for consistent long-range plans, which lessens the impact on the CIP and future operating budgets. Subsequently, district leadership should use master plans as a framework for capital project requests placed into the CIP.

ESCI surveyed capital replacement planning efforts at RFFRA, summarized in the following figure.

Figure 37: Capital Assets, Capital Improvement, and Replacement Programs

SURVEY COMPONENT	RFFRA
FACILITIES	
Capital Improvement Plan maintained?	No
APPARATUS	
Apparatus Replacement Plan maintained?	Yes
Period of the plan (from-to)	20 years
Funding mechanism clearly identified?	No
SUPPORT EQUIPMENT	
Capital Equipment Replacement Plan maintained?	No

The survey illustrates the need for RFFRA to institute a comprehensive capital asset management plan. Capital assets can consume financial resources quickly, and without a comprehensive plan to identify and manage costs, a department can soon find itself incapable of funding essential purchases.

Facilities

As the fire service becomes an all-hazards response service, the requirements for facilities have become more demanding. As a result, fire departments must consider standards such as NFPA 1500 and the US Fire Administration's report on Safety and Health Considerations for the Design of Fire and Emergency Medical Services Stations when designing facilities for the fire service. In addition, firefighters' health and wellness and risk reductions are vital factors when assessing fire district facilities. With these factors, ESCI uses the following breakdown when categorizing facilities.

Figure 38: Facilities Categories

<p>Excellent</p>	<p>Like new condition. No visible structural defects. The facility is clean and well maintained. The Interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. No significant defect history. The building's design and construction match its purposes. Age is typically less than ten years.</p>
<p>Good</p>	<p>The exterior has a good appearance with minor or no defects. Clean lines, good workflow design, and only minor wear in the building interior. The roof and apparatus apron are in good working order, absent any significant full-thickness cracks or crumbling of apron surface or visible roof patches or leaks. The building's design and construction match its purpose. Age is typically less than 20 years.</p>
<p>Fair</p>	<p>The building appears structurally sound with a weathered appearance and minor to moderate non-structural defects. The interior condition shows normal wear and tear but flows effectively to the apparatus bay or offices. Mechanical systems are in working order. Building design and construction may not match building purpose well. Showing increasing age-related maintenance but with no critical defects. Age is typically 30 years or more.</p>
<p>Poor</p>	<p>The building appears to be cosmetically weathered and worn with potentially structural defects, although not imminently dangerous or unsafe. Large, multiple full-thickness cracks and concrete crumbling on an apron may exist. The roof has evidence of leaking and/or numerous repairs. The interior is poorly maintained or showing signs of advanced deterioration with moderate to significant non-structural defects. Problematic age-related maintenance and/or significant defects are evident. It may not be well suited to its intended purposes. Age is typically greater than 40 years.</p>

ESCI offers a non-architectural review of the RFFRA facilities on the following pages.

Figure 39: RFFRA Station 41


Station Name/Number:		Roaring Fork Fire Station #41			
Address/Physical Location:		20 School Street, Basalt CO 81621			
		General Description: Station 41 was remodeled in 2018. There are five back-in-style bays deep enough to hold two ambulances. The station houses an engine, ladder, two ambulances, brush truck (summertime), and Battalion Chief. There are four housing units with separate entrances. The facility is in good condition. Space is at a premium, with little storage area available. Equipment and PPE are stored in the bays. Workout equipment is also located in the bays. The building fills the allowable building footprint on the lot.			
Survey Component		Observations			
Structure					
Date of Construction		Remodel 2018			
Auxiliary Power		N/A			
General Condition		Good			
Number of Apparatus Bays		5	Back-in bays		
Special Considerations (ADA, etc.)		N/A			
Square Footage		20,000			
Facilities Available					
Separate Rooms/Dormitory/Other		4	Bedrooms	4	Beds
Maximum Station Staffing Capability		4			
Exercise/Workout Facilities		Yes			
Kitchen Facilities		Yes			
Individual Lockers/Storage Assigned		Yes			
Shower Facilities		Yes			
Training/Meeting Rooms		Yes			
Washer/Dryer		Yes			
Safety & Security					
Sprinklers		Yes			
Smoke Detection		Yes			
Decontamination/Biohazard Disposal		Yes			
Security		Coded door locks and video surveillance			
Apparatus Exhaust System		Yes			

Figure 40: RFFRA Station 42


Station Name/Number:	Roaring Fork Fire Station #42		
Address/Physical Location:	1089 JW Drive, Carbondale CO, 81623		
	<p>General Description: Station 42 is an older facility that combines response crews, admin., and maintenance, resulting in a crowded station in fair condition. There is a nicely sized training room for public use. It houses a crew of 4 that cross staffs an engine, medic unit, water tender, and brush unit. The workspace for the mechanic is crowded with little storage leading to equipment and fluids being stored on the floor. There are four drive-through apparatus bays, all double stacked with apparatus along with ample parking.</p>		
Survey Component	Observations		
Structure			
Date of Construction	1999		
Auxiliary Power	N/A		
General Condition	Fair		
Number of Apparatus Bays	4	Drive-through bays	
Special Considerations (ADA, etc.)	N/A		
Square Footage	25,000		
Facilities Available			
Separate Rooms/Dormitory/Other	4	Bedrooms	4 Beds
Max. Station Staffing Capability	4		
Exercise/Workout Facilities	Yes		
Kitchen Facilities	Yes		
Individual Lockers/Storage Assigned	Yes		
Shower Facilities	Yes		
Training/Meeting Rooms	Yes		
Washer/Dryer	Yes		
Safety & Security			
Sprinklers	Yes		
Smoke Detection	Yes		
Decon/Biohazard Disposal	Yes		
Security	Coded door locks and video surveillance		
Apparatus Exhaust System	Yes		

Figure 41: RFFRA Station 43


Station Name/Number:	Roaring Fork Fire Station #43					
Address/Physical Location:	24265 Frying Pan Road, Meredith, CO 81642					
	General Description:					
	<p>Station 43 is a modest station that is remote from the other stations. It has an office, kitchen, and four back-in-style bays. There is storage for PPE and a loft for workout equipment and storage. There are no sleeping quarters</p> <p>The station currently houses an engine, brush truck, and SUV. The bay length is limited, and the engine is sized just right to fit into the space.</p>					
Survey Component		Observations				
Structure						
Date of Construction	1990					
Auxiliary Power	Yes					
General Condition	Good					
Number of Apparatus Bays	4	Back-in bays				
Special Considerations (ADA, etc.)	None needed accessible.					
Square Footage	5,000					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing Capability	All Volunteer					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage Assigned	No					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	No					
Decon/Biohazard Disposal	No					
Security	Coded door locks and video surveillance					
Apparatus Exhaust System	No					

Figure 42: RFFRA Station 44



Station Name/Number:	Roaring Fork Fire Station #44		
Address/Physical Location:	1909 Snowmass Creek Road, Snowmass CO, 81654		
	<p>General Description: Station 44 is an older station with a living unit attached. The station has a public meeting room and an office without ADA access. This station is mainly used for storage. Wildland units are moved here for storage during the winter. In addition, the station operates as a volunteer response station. Two drive-through bays are double stacked with apparatus and personal vehicles. Overall, the station is in fair condition.</p>		
Survey Component		Observations	
Structure			
Date of Construction	1990		
Auxiliary Power	No		
General Condition	Fair		
Number of Apparatus Bays	2	Drive-Through Bays	
Special Considerations (ADA, etc.)	No		
Square Footage	8,000		
Facilities Available			
Separate Rooms/Dormitory/Other	1	Bedrooms	1 Beds
Maximum Station Staffing Capability	Volunteer		
Exercise/Workout Facilities	No		
Kitchen Facilities	Yes		
Individual Lockers/Storage	No		
Shower Facilities	Yes		
Training/Meeting Rooms	Yes		
Washer/Dryer	Yes		
Safety & Security			
Sprinklers	Yes		
Smoke Detection	No		
Decon/Biohazard Disposal	No		
Security	Single code door lock		
Apparatus Exhaust System	No		

Figure 43: RFFRA Station 45

Station Name/Number:	Roaring Fork Fire Station #45																																																																																													
Address/Physical Location:	5275 Owl Creek Road, Snowmass Village CO, 81615																																																																																													
	<p>General Description: Station 45 is the largest and newest of the RFFRA. It was built for a response crew, administration, and six studio housing units. The station is modern both in technology and construction, with ample storage room. The station has six back-in-style bays with room to move around the apparatus. In addition, there are a training tower and exercise facilities. The station is in excellent condition.</p>																																																																																													
	<table border="1"> <thead> <tr> <th>Survey Component</th> <th colspan="3">Observations</th> </tr> </thead> <tbody> <tr> <td colspan="4">Structure</td> </tr> <tr> <td>Date of Construction</td> <td colspan="3">2018</td> </tr> <tr> <td>Auxiliary Power</td> <td colspan="3">Yes</td> </tr> <tr> <td>General Condition</td> <td colspan="3">Excellent</td> </tr> <tr> <td>Number of Apparatus Bays</td> <td>6</td> <td colspan="2">Back-in bays</td> </tr> <tr> <td>Special Considerations (ADA, etc.)</td> <td colspan="3">Yes</td> </tr> <tr> <td>Square Footage</td> <td colspan="3">33,000</td> </tr> <tr> <td colspan="4">Facilities available</td> </tr> <tr> <td>Separate Rooms/Dormitory/Other</td> <td>7</td> <td>Bedrooms</td> <td>7 Beds</td> </tr> <tr> <td>Max. Station Staffing Capability</td> <td colspan="3">7</td> </tr> <tr> <td>Exercise/Workout Facilities</td> <td colspan="3">Yes</td> </tr> <tr> <td>Kitchen Facilities</td> <td colspan="3">Yes</td> </tr> <tr> <td>Individual Lockers/Storage Assigned</td> <td colspan="3">Yes</td> </tr> <tr> <td>Shower Facilities</td> <td colspan="3">Yes</td> </tr> <tr> <td>Training/Meeting Rooms</td> <td colspan="3">Yes</td> </tr> <tr> <td>Washer/Dryer</td> <td colspan="3">Yes</td> </tr> <tr> <td colspan="4">Safety & security</td> </tr> <tr> <td>Sprinklers</td> <td colspan="3">Yes</td> </tr> <tr> <td>Smoke Detection</td> <td colspan="3">Yes</td> </tr> <tr> <td>Decon/Biohazard Disposal</td> <td colspan="3">Yes</td> </tr> <tr> <td>Security</td> <td colspan="3">Coded door locks and video surveillance</td> </tr> <tr> <td>Apparatus Exhaust System</td> <td colspan="3">Yes</td> </tr> </tbody> </table>			Survey Component	Observations			Structure				Date of Construction	2018			Auxiliary Power	Yes			General Condition	Excellent			Number of Apparatus Bays	6	Back-in bays		Special Considerations (ADA, etc.)	Yes			Square Footage	33,000			Facilities available				Separate Rooms/Dormitory/Other	7	Bedrooms	7 Beds	Max. Station Staffing Capability	7			Exercise/Workout Facilities	Yes			Kitchen Facilities	Yes			Individual Lockers/Storage Assigned	Yes			Shower Facilities	Yes			Training/Meeting Rooms	Yes			Washer/Dryer	Yes			Safety & security				Sprinklers	Yes			Smoke Detection	Yes			Decon/Biohazard Disposal	Yes			Security	Coded door locks and video surveillance			Apparatus Exhaust System	Yes	
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Special Considerations (ADA, etc.)	Yes																																																																																													
Square Footage	33,000																																																																																													
Facilities available																																																																																														
Separate Rooms/Dormitory/Other	7	Bedrooms	7 Beds																																																																																											
Max. Station Staffing Capability	7																																																																																													
Exercise/Workout Facilities	Yes																																																																																													
Kitchen Facilities	Yes																																																																																													
Individual Lockers/Storage Assigned	Yes																																																																																													
Shower Facilities	Yes																																																																																													
Training/Meeting Rooms	Yes																																																																																													
Washer/Dryer	Yes																																																																																													
Safety & security																																																																																														
Sprinklers	Yes																																																																																													
Smoke Detection	Yes																																																																																													
Decon/Biohazard Disposal	Yes																																																																																													
Security	Coded door locks and video surveillance																																																																																													
Apparatus Exhaust System	Yes																																																																																													

Facilities Discussion

RFFRA owns and operates five facilities, all serving as response stations in some capacity, with an additional station under construction due to be complete in late spring 2022. Most stations are in fair condition or better. Two of the stations, 41 and 45 facilities were constructed or substantially remodeled in 2018. The oldest stations, stations 43 and 44, were built in 1990 and have remained essentially unchanged since construction. All stations have a good appearance with only minor defects. All station's roofs and apparatus aprons are in good condition, with no significant cracks or structural issues on the apron surface. The average station age is 19 years old although the recent construction and remodel skews the average. The oldest stations are 31 years old.

Station 41 – This station has clean lines with a good workflow design and only minor wear in the building interior. Storage is at a premium at this station, with PPE and extra equipment stored on the apparatus floor and in between apparatus. The crew quarters are roomy and modern. A single exit from the crew quarters was noted. Workout equipment occupies a portion of an apparatus bay. The administrative part of the building has ample room with a small meeting room. The building has four housing units attached; they were not available for assessment at the time of visitation. The building occupies its maximum footprint as there is no more buildable space between the allowable setback and the property line. There is no backup source of power.

Station 42 – Houses response crews as well as administration functions. The large training/meeting room fits its current use well. The station workflow and layout are choppy, and response crews must pass through administrative areas to get to the apparatus bays and restroom facilities. The mechanic's site is in the back half of two apparatus bays. The area needs organized storage to reduce the trip hazards from the apparatus floor. There is a modest crew sleeping area on the second floor with access from the crew quarters via a staircase. It was noted that there is a fire pole, but it is not in use.

Station 43 – Is remotely located approximately 45 minutes from station 41. The station serves as a volunteer response station. The station has four bays, an office, and a kitchen area. The station serves its intended purpose well. The bay depth limits the size of the apparatus that will fit in the station. There is plenty of storage for PPE and general equipment at this station. There is no vehicle exhaust removal system.

Station 44 – This station is in the "Old Snowmass" area and serves as a volunteer response station. There is an office and meeting area with a housing unit attached to the station. The housing unit was unavailable for evaluation at the time of the station visit. The station is modest and is beginning to show wear. It was noted that the door lock system is different from other stations (new one budgeted for 2022) and that there was no disabled access available or ventilation system for vehicle exhaust. This station is used as storage for wildland vehicles during the winter months. During the visit, it was mentioned that the housing unit would need to be remodeled in 2022.

Station 45 – This is the newest of the RFFRA's stations. It was built for a response crew, administration, and six studio housing units. Unfortunately, the housing units were not available for evaluation during visitation. The station is modern in technology and construction, with ample storage room. The station has seven back-in-style bays with room to move around the apparatus. In addition, there is a training tower, meeting room, and shared exercise facilities with the local law enforcement agencies. The station is in excellent condition with no noted issues.

During ESCI interviews, staff articulated the goal of setting aside facilities funding on a regular cycle. However, a structured capital replacement plan is not in place. A capital reserve fund is in place and funded. Nevertheless, what is missing is remodel schedule that identifies station ages, improvement projects, and project costs. Having an established program is especially important because of the number of facilities due to the need to include residential housing units that need to be maintained.

The process is not entirely without planning; for example, it was mentioned that the Authority would soon need to address upgrading station 42 and multiple residential units. The Authority is aware of the need to remodel residential units, and the required funding is reported to be available for the purpose. So, while requirements are being met, they are simply not organized with a long-range schedule.

The current approach to addressing future needs is funding from a capital account. However, a defined method of how and when to fund facility improvements is not straightforward. The capital fund is a single fund, and capital requests are submitted each year, then prioritized and supported as needed if funds are available.

The following figure illustrates the potential future impact of a facility improvement plan on the district's budget. This figure reflects the desired facility improvement plan that RFFRA articulated.

Figure 44: Facilities Project Tables

Type	Project	Life Expectancy	Cost per foot or by project
1	Appliances	5	\$20,000
2	Station/Condo Remodel	15	\$330
3	New Fire Station	50	\$580
4	Admin Remodel	20	\$300
5	New Administration	50	\$590

Facility	Year	Sq. Foot	Base Replace Cost	Replace Cost w/ Inflation	Current Cash Required	Annual Cash Required	Replace Year
Station 41 Appliances	2018	1	\$20,000	\$26,802	\$10,721	\$2,680	2028
Station 41 Remodel	2018	7000	\$2,310,000	\$3,950,884	\$1,053,569	\$263,392	2033
Station 41 Housing	2010	4500	\$1,485,000	\$1,719,073	\$1,375,259	\$114,605	2025
Station 42 Appliances	1999	1	\$20,000	\$20,000	\$20,000	N/A	OVERDUE
Station 42 Remodel	1999	8000	\$2,640,000	\$2,640,000	\$2,640,000	N/A	OVERDUE
Station 42 Housing	2017	1800	\$594,000	\$967,563	\$322,521	\$64,504	2032
Station 43 Remodel	2013	2000	\$660,000	\$884,463	\$530,678	\$58,964	2028
Station 44 Appliances	2000	1	\$20,000	\$20,000	\$20,000	N/A	OVERDUE
Station 44 Remodel	1990	800	\$264,000	\$264,000	\$264,000	N/A	OVERDUE
Station 44 Housing	2009	1500	\$495,000	\$545,738	\$472,973	\$36,383	2024
Station 45 Appliances	2018	1	\$20,000	\$26,802	\$10,721	\$2,680	2028
Station 45 Remodel	2018	8000	\$2,640,000	\$4,515,296	\$1,204,079	\$301,020	2033
Station 45 Housing	2018	3000	\$990,000	\$1,693,236	\$451,530	\$112,882	2033
Exec Townhome	2014	1200	\$396,000	\$557,212	\$297,180	\$37,147	2029
Total				\$17,831,069	\$8,673,229	\$994,258	

The previous figure reflects all facilities. The tables reflect the replacement costs and five percent assumed inflation factor for all units. Completing all projects on schedule will cost approximately \$17,831,000. Based on what should be in the replacement fund currently, roughly \$8,673,000 and a required annual contribution to the fund of just under \$1,000,000. Also, costs may change depending on the features specified in the projects. The replacement costs may not be accurate for what RFFRA builds. This type of analysis simply helps to determine what future costs may be. RFFRA noted during the survey process that a training center and administration building was desired. The anticipated location for these facilities was at the same location as station 42. A separate bond initiative will fund funding to construct the training and administration facilities. The project would cost approximately 15 million dollars. This new project is not included in the above facilities plan but is contemplated in the financial section of this plan.

Apparatus

Typically, a fire apparatus is designed from the front bumper to the tailboard for specific missions and to hold specific equipment and tools. Nearly every space on the apparatus is designated in advance for functionality by the organization. Vehicles with such a specified design would perform poorly in a different capacity. In addition, fire apparatus is costly and offers little flexibility in use and reassignment. As a result, fire departments have pursued these vehicles' longest service life possible.

Unfortunately, it cannot be expected for a mechanical piece of equipment to last forever. As vehicles age, repairs tend to become more frequent, parts more difficult to obtain, and downtime for repair increases. Given that the emergency mission is critical to the community, this downtime factor is one of the most frequently identified reasons for apparatus replacement.

Because of the considerable expense of fire apparatus, most communities find the need to plan for the cost of replacement. To properly do so, agencies often turn to the long-accepted practice of establishing a life cycle for the apparatus that results in a replacement date being anticipated well in advance. Forward-thinking organizations then set aside incremental funds during the vehicle's life, so replacement dollars are ready when needed.

RFFRA maintains a sizeable fleet of response vehicles that are generally newer and appear to be well maintained. The overall condition of the front-line response fleet is in

good condition overall, with the average age of the fleet reaching ten years. The following figure provides an inventory of apparatus, configuration, and condition.

Figure 45: RFFRA Vehicle Inventory

Apparatus	Make and Model	Year	Condition	Status
Ambulances				
1203	Ford F-450/Lifeline	2012	Good	Reserve
1204	Ford F-450/Lifeline	2015	Good	Reserve
2202	Ford F-450/MedTec	2012	Good	Reserve
2203	Ram 4500/AEV	2016	Good	Front Line
3201	Ford F-450 Lifeline	2019	Good	Front Line
3202	Ford F-450 Lifeline	2019	Good	Front Line
3203	Ford F-450/ Braun NW	2022	Good	Front Line
Engines				
1303	IH/E-One	2005	Good	Reserve
1304	IH/E-One	2005	Good	Reserve
1305	IH/Pierce Pumper/Tender	2014	Good	Front Line
2302	Arrow XT/ Pierce	2010	Good	Front Line
3301	Pierce Enforcer Pumper	2019	Good	Front Line
3302	Pierce Enforcer Pumper	2019	Good	Front Line
Tenders				
1501	Spartan/Saulsbury	1997	Good	Front Line
1502	IH/Pierce	2014	Good	Front Line
3501	IH/BME	2022	Good	Front Line
Wildland				
1401	Ford F-550/Fouts	2007	Good	Front Line
1403	Ford F-550/Fouts	2009	Good	Front Line
1404	IH/Pierce Type 3	2014	Good	Front Line
2301	IH/Pierce *Type 3/Pumper	2008	Good	Reserve
2401	Ford F-550/BFX	2016	Good	Front Line
Aerials				
3601	Pierce 107' Ascendant	2019	Good	Front Line
3602	Pierce 107' Ascendant	2020	Good	Front Line
Specialty				
1402	Ford F-550/Fouts	2007	Good	Reserve
Support				
1101	Ford Ex-Cab 1/2-ton P/U	1996	Fair	Reserve
1103	GMC Yukon XL	2003	Good	Reserve
1105	GMC 2500HD 4-door (plow)	2004	Good	Reserve

1104	Chevy Service Truck	2022	Excellent	Front Line
1108	GMC Sierra/ 4-door (pool 41)	2007	Good	Reserve
1110	Chev. Tahoe (Prevention)	2014	Good	Front Line
1111	GMC Sierra/ 4-door (Training)	2015	Good	Front Line
1112	Ford F-150 XL (Command)	2016	Good	Front Line
1113	Ford F-150 XL (Command)	2016	Good	Front Line
1114	IH 4900 Command Tractor	2022	Excellent	Reserve
1115	Ford Explorer (Training)	2017	Good	Front Line
1116	Ford Explorer (Prevention)	2018	Good	Front Line
1117	Ford F-150 (Command)	2018	Good	Front Line
2101	Chev. Tahoe	2011	Good	Reserve
2102	Chev. Tahoe	2011	Good	Reserve
2103	Chev. Equinox (pool 45)	2012	Good	Reserve
2104	Chev. Tahoe (Prevention)	2014	Good	Front Line
2105	Chev. Tahoe (Prevention)	2014	Good	Front Line
2106	Ford F-350 (Plow)	2016	Good	Reserve
3101	Chev. Tahoe (Chief)	2019	Good	Front Line
3102	Chev. Tahoe (Chief)	2019	Good	Front Line
3103	Chev. Tahoe (Fire Marshal)	2019	Good	Front Line
3104	GMC Canyon (Chief)	2021	Good	Front Line

Apparatus Discussion

The Authority has an extensive inventory of apparatus that is in good condition. This number of vehicles is driving a considerable replacement cost for the RFFRA fleet. A goal of replacing fire vehicles on a 10-year cycle for ambulances and a 20-year cycle for engines was articulated during interviews. However, a structured capital replacement plan is not in place. A capital reserve fund is in place and funded. However, what is missing is a replacement schedule that identifies vehicle ages, projected service lives, replacement cost, and dates. There are numerous support vehicles in the fleet which are replaced as needed or reassigned to other duties. Support vehicles are in fair condition, with the newest vehicles filling response roles. There is an apparatus replacement schedule, although replacement costs and the program's sustainability should be examined. It does not appear that funds are earmarked each year to allow new vehicles to purchase.

The current approach to addressing future needs is by a single capital fund; however, how to consistently fund assets for purchase is not defined. Apparatus is reportedly purchased from this fund with a limited structure.

The following figure illustrates the potential future impact of the apparatus replacement plan on the Authority's budget. This figure reflects the desired vehicle replacement plan that RFFRA articulated.

Figure 46: Vehicle Type Replacement Cost

Vehicle Type	Life Expectancy	Replacement Cost	Vehicle Type	Life Expectancy	Replacement Cost
Squad/Utility	15	\$75,000	Brush	15	\$160,000
Med Rescue Truck	20	\$250,000	Type 3 Engine	15	\$400,000
Heavy Rescue Truck	20	\$525,000	Type I or III Ambulance	10	\$225,000
Commercial Pumper	20	\$560,000	Type II (Van Style)	10	\$150,000
Custom Pumper	20	\$700,000	Support	8	\$75,000
Tanker/Tender	20	\$375,000	Semi-Tractor	30	\$160,000
Ladder	25	\$1,200,000			

Figure 46 reflects the life expectancy for that type of apparatus and the ESCI anticipated replacement costs for the kinds of apparatus. This cost may differ depending on the features required in the replacement unit. Some departments calculate replacement equipment into the replacement costs increasing the base amount. Using these costs and life expectancy, the following replacement plan has been devised.

Figure 47: Vehicle Replacement Plan

Unit	Year	Base Replace Cost	Replace Cost w/ Inflation	Current Cash Required	Annual Cash Required	Replace Year
Ram 4500/AEV	2016	\$225,000	\$273,489	\$164,093	\$27,349	2026
Ford F-450 Lifeline	2019	\$225,000	\$316,598	\$94,979	\$31,660	2029
Ford F-450 Lifeline	2019	\$225,000	\$316,598	\$94,979	\$31,660	2029
Pierce Pumper/Tender	2014	\$560,000	\$1,005,680	\$402,272	\$50,284	2034
Arrow XT/ Pierce	2010	\$700,000	\$1,034,219	\$620,531	\$51,711	2030
IH/E1	2005	\$560,000	\$648,270	\$551,030	\$32,414	2025
IH/Pierce	2008	\$700,000	\$938,067	\$656,647	\$46,903	2028

Unit	Year	Base Replace Cost	Replace Cost w/ Inflation	Current Cash Required	Annual Cash Required	Replace Year
Pierce Enforcer Pumper	2019	\$700,000	\$1,604,413	\$240,662	\$80,221	2039
Pierce Enforcer Pumper	2019	\$700,000	\$1,604,413	\$240,662	\$80,221	2039
Spartan/Saulsbury (To be replaced in 2023)	1997	\$375,000	\$393,750	\$374,063	\$19,688	OVERDUE
IH/BME	2003	\$375,000	\$393,750	\$374,063	\$19,688	2023
IH/Pierce	2014	\$375,000	\$673,446	\$269,378	\$33,672	2034
Ford F-550/Fouts	2007	\$160,000	\$160,000	\$160,000	N/A	2022
Ford F-550/Fouts (Used as a Mini Rescue unit)	2007	\$160,000	\$160,000	\$160,000	N/A	2022
Ford F-550/Fouts	2009	\$160,000	\$176,400	\$152,880	\$11,760	2024
IH/Pierce Type 3	2014	\$400,000	\$562,840	\$300,181	\$37,523	2029
Ford F-550/BFX	2016	\$160,000	\$248,213	\$99,285	\$16,548	2031
Pierce 107' Ascendant	2019	\$1,200,000	\$3,510,313	\$421,238	\$140,413	2044
Pierce 107' Ascendant	2020	\$1,200,000	\$3,685,829	\$294,866	\$147,433	2045
Chevy Service Truck	2022	\$75,000	\$155,920	\$0	\$10,395	2037
Chev. Tahoe (Prevention)	2014	\$75,000	\$75,000	\$75,000	N/A	2022
GMC Sierra/ 4-door (Training)	2015	\$75,000	\$78,750	\$68,906	\$9,844	2023
Ford F-150 XL (Command)	2016	\$75,000	\$82,688	\$62,016	\$10,336	2024
Ford F-150 XL (Command)	2016	\$75,000	\$82,688	\$62,016	\$10,336	2024
IH 4900 Command Tractor	2022	\$160,000	\$541,817	\$0	\$21,673	2047
Ford Explorer (Training)	2017	\$75,000	\$86,822	\$54,264	\$10,853	2025
Ford Explorer (Prevention)	2018	\$75,000	\$91,163	\$45,581	\$11,395	2026
Ford F-150 (Command)	2018	\$75,000	\$91,163	\$45,581	\$11,395	2026
Chev. Tahoe (Prevention)	2014	\$75,000	\$75,000	\$75,000	N/A	2022

Unit	Year	Base Replace Cost	Replace Cost w/ Inflation	Current Cash Required	Annual Cash Required	Replace Year
Chev. Tahoe (Prevention)	2014	\$75,000	\$75,000	\$75,000	N/A	2022
Chev. Tahoe (Fire Marshal)	2019	\$75,000	\$95,721	\$35,895	\$11,965	2027
Chev. Tahoe (Deputy Chief)	2019	\$75,000	\$95,721	\$35,895	\$11,965	2027
Chev. Tahoe (Deputy Chief)	2019	\$75,000	\$95,721	\$35,895	\$11,965	2027
GMC Canyon (Chief)	2021	\$75,000	\$105,533	\$13,192	\$13,192	2029
Total			\$19,534,990	\$6,356,051	\$1,004,458	

Figure 47 reflects the front-line fleet with the replacement cost and a replacement cost with inflation based on the years remaining until the end of life. The assumed inflation factor is five percent for all units. If all units were to be replaced on schedule, it would cost approximately \$19,534,990. Based on the current year, the replacement fund should contain \$6,356,051 with an annual contribution to the fund of \$1,004,458. While the replacement costs may not be accurate for what RFFRA buys, this type of analysis helps determine what future costs may be.

Equipment

The same is true regarding support equipment. Like apparatus, funds are set aside in a capital replacement fund but not explicitly scheduled. The process is not entirely without planning; for example, the staff stated that the Authority would soon need to address the equipment replacement. The need has been anticipated, although funds are not earmarked for the replacement. So, while requirements are being met, they are not organized with a long-range schedule.

Equipment Discussion

It is a goal of RFFRA to replace equipment on a cycle, but a structured capital equipment replacement plan is not in place. A reserve fund is in place and used to purchase items. However, what is missing is a replacement schedule that identifies equipment ages, projected service lives, replacement costs, and dates for replacement. RFFRA recently purchased SCBA, gas detectors, extrication equipment, and thermal imagers. In addition, there is an aging SCBA compressor and fill station at

station 41. Information Technology replacements are on a routine replacement with a certain number of units replaced each year. The goal is to replace workstations on a three to five year schedule and servers on a five to seven year replacement. Other planned replacement of major technology items should also be placed on the equipment replacement schedule. Equipment replacement is on the minds of staff, but it does not appear that funds are set aside each year to allow for equipment replacement. In light of the recent purchases, there is an opportunity to begin setting aside funds for replacement equipment.

Figure 48 reflects the desired replacement schedule that RFFRA articulated.

Figure 49 illustrates the potential future impact of the equipment replacement plan on the district's budget.

Figure 48: Equipment Replacement Schedule

Equipment	Life Expectancy	Replacement Cost
SCBA Packs w/ Bottle	15	\$9,900
SCBA Bottle Only	15	\$1,500
Extrication	10	\$52,000
Thermal Imagers	15	\$8,800
SCBA Compressor and Fill station	25	\$85,000
Gas Detectors	10	\$3,000

Figure 49: Equipment Replacement Plan

Equipment	Year	Qty.	Base Replace Cost	Replace Cost w/ Inflation	Current Cash Required	Annual Cash Required	Replace Year
SCBA	2020	54	\$534,600	\$1,008,068	\$134,409	\$67,205	2035
SCBA Bottles	2018	54	\$81,000	\$138,537	\$36,943	\$9,236	2033
Extrication	2019	4	\$208,000	\$292,677	\$87,803	\$29,268	2029
Thermal Imagers	2021	8	\$70,400	\$139,387	\$9,292	\$9,292	2036
SCBA Comp and Fill	2000	1	\$85,000	\$98,398	\$86,590	\$3,936	2025
SCBA Comp and Fill	2003	1	\$85,000	\$113,908	\$86,570	\$4,556	2028
SCBA Comp and Fill	2018	1	\$85,000	\$236,807	\$37,889	\$9,472	2043
Gas detectors	2014	5	\$15,000	\$16,538	\$13,230	\$1,654	2024
Gas detectors	2019	5	\$15,000	\$21,107	\$6,332	\$2,111	2029
Total				\$1,677,068	\$355,038	\$118,936	

Figure 49 reflects the equipment replacement costs and the life expectancy of the equipment with an assumed inflation factor of five percent for all equipment. The table shows the inflated cost of replacement based on the years of life remaining. If all the equipment were to be replaced on schedule, it would cost approximately \$1,677,000. The replacement fund today should be \$355,038 with an annual contribution to the fund of \$118,936. The price of replacements may vary based on the features of the replacement unit. Therefore, the replacement costs indicated may not be the same as what RFFRA buys. This type of analysis helps to determine what future costs may be. Some capital equipment is not included in the replacement schedule because the replacement cost is budgeted in the annual operating costs, e.g., portable radios and structural firefighting gear.

Capital Replacement Planning Summary

Capital replacement programs are essential to maintaining important assets for fire departments to carry out their mission. By planning the replacement of these crucial assets, the fire department can reduce the impact of unforeseen expenditures. The department can avoid using otherwise needed funds by setting aside funds every year. Also, over time the fire department can save from paying out costly interest to third-party lenders by avoiding loans, leases, or bonds. RFFRA's current approach to addressing future needs is using reserve funding. However, the definition of how assets are funded for purchase is not specified. As a result, there is no consistent schedule of assets replacement or method to prioritize these purchases. It is recommended that RFFRA establish a more clearly defined replacement funding strategy. RFFRA should also consider the quantity of equipment and apparatus to help contain capital costs and reduce future funding. The replacement figures from this section will assist and be incorporated in the financial analysis section of this report.

STAFFING AND PERSONNEL MANAGEMENT

An organization's greatest asset is its people. Special attention must be paid to managing human resources to achieve maximum productivity while ensuring a high level of job satisfaction for the individual. Consistent management practices combined with a safe working environment, equitable treatment, the opportunity for input, and recognition of the workforce's commitment and sacrifice are vital components impacting job satisfaction.

The size and structure of an organization's staffing depend on the organization's specific needs. These needs must directly correlate to the community's needs, and a structure that works for one entity may not necessarily work for another agency. This section provides an overview of RFFRA's staffing configurations.

RFFRA staffing can be divided into two distinctly different groups. The first group is what the citizens typically recognize and is commonly known as the operations unit, which can be generally classified as the emergency response personnel. The second group typically works behind the scenes to provide the support needed by the operation's personnel to deliver an effective emergency response and is commonly known as the administrative section. RFFRA is unique in that even though there are distinct administrative staff designations, some are still required to perform operationally if the need arises during a typical day.

In this section, ESCI explores each of the RFFRA's current staffing levels and evaluates them against the mission, identifying potential gaps and efficiencies that might be gained with their existing operations.

Administrative and Support Staffing

One of the primary responsibilities of the response team's administration is to ensure that the operations segment of the organization has the ability and means to respond to and mitigate emergencies in a safe, efficient, and timely manner. An effective administration and support services system is critical to the success of RFFRA.

Like any other part of a fire protection authority, administration and support functions need appropriate resources to function properly. By analyzing the administrative and support positions within an organization, an agency can achieve a common understanding of the relative resources committed to this function compared to industry best practices and similar organizations. The appropriate balance of

administration and support compared to operational resources and service levels is critical to the success of the Authority in accomplishing its mission and responsibilities.

Typical responsibilities of the administration and support staff include planning, organizing, directing, coordinating, and evaluating the various programs within RFFRA. This list of functions is not exhaustive, and other functions may be added. It is also important to understand these functions do not occur linearly and, more often, coincide. This requires the Fire Chief and administrative support staff to focus on many different areas at the same time.

The following figure reviews the administration and organizational support structure of RFFRA.

Figure 50: RFFRA Administrative and Support Staff

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Admin/Support Staff (full-time & part-time)	<i>Individuals considered full-time or part-time staff primarily assigned to manage, plan, or support the activities of the agency and its programs.</i>		
Fire Chief	1	40	M-F
Deputy Chief	3	40	M-F
Division Chief	1	40	M-F
Deputy Fire Marshal	1	40	M-Th
Assistant Fire Marshal	2	40	T-F
Fire Inspector	1	40	M-F
Fleet Maintenance Supervisor	1	40	M-F
Finance Director	1	40	M-F
HR Director	1	40	M-F
IT Director	1	40	M-F
Administrative/ Accounting Technician	1	40	M-F
Administrative Assistant	1	40	M-F
Total Administrative and Support Staff FTE's	15	-	-
Total Department FTE's	43	-	-
Total Department FTE's, Part Time, and Volunteers	95	-	-

ESCI notes that the current level of administrative and support staffing represents roughly 34% of the RFFRA total FTE staffing and 15% of the overall department staffing. Over the last several months, the administrative team has been working on a re-

organization of current staff to address administrative support issues. Currently staff assigned to operational shift functions are also given administrative tasks.

It is ESCI's experience that effective administrative staffing totals for a fire department operation typically range up to 12 to 15% of agency totals. RFFRA operates right at the expected and experienced normal threshold for effective administrative and support staff percentages. This does not mean they are easily completing required functions and tasks but merely indicates they are operating with the normally experienced staff percentages to complete those functions. Interviews and discussions with staff communicated that they felt able to perform their required work, with the exception of Fire Prevention. These staff members felt there were additional functions or tasks they would like to be able to perform but often cannot because the staff is limited. This is likely because of experienced growth.

RFFRA Administration

The main administrative function within RFFRA is established with the position of Fire Chief. Some of the typical responsibilities of the Fire Chief include planning, organizing, directing, and budgeting for all aspects of the district's operations. RFFRA has three Deputy Chiefs and one Division Chief to assist him. RFFRA has an Administrative Assistant who handles all other aspects of the agency's administration and provides support to the Chief and his Chief Officers.

RFFRA Support Staffing

RFFRA has adequate organizational support staffing. The functions of fire prevention, fire inspections, fire investigations, life-safety education, training, EMS administration, quality improvement, fleet maintenance, and logistics are shared by 14 FTE's. Some of these support functions are assigned to operational staff who perform double duty. Additional detailed information regarding staffing for support functions is outlined in the Fire and Life Safety, Training, and EMS Oversight sections of the report.

Emergency Response Staffing

Every 23 seconds, a fire department in the United States responds to a fire somewhere in the nation.⁹ It takes an adequate and properly trained staff of emergency responders to put the appropriate emergency apparatus and equipment to their best use in mitigating incidents. Overall, local fire departments responded to an estimated

⁹ 2021 National Fire Protection Agency, Fire Loss in the United States During 2020

1,388,500 fires in 2020, resulting in 3,500 civilian deaths, 15,200 civilian injuries, and \$21.9 billion in direct property damage.¹⁰

Insufficient staffing at an emergency scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved. A fire occurs in a structure at the rate of one every 64 seconds, and a home fire occurs every 89 seconds.¹¹ Tasks that must be performed at a fire can also be broken down into three key components: life safety, incident stabilization, and property conservation. Responders determine their life safety tasks based on the number of building occupants, their location, status, and ability to take self-preservation action. Life safety-related tasks involve search, rescue, and evacuation of victims. The incident stabilization element involves delivering enough water to extinguish the fire and create an environment within the building that allows entry by firefighters. Property conservation comes from efficient confinement and extinguishment.

The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat different types and magnitudes of fire. In the absence of adequate personnel to perform concurrent action, the commanding officer must prioritize the tasks and complete some in sequential order, rather than concurrently. These tasks include:

- Command
- Scene safety
- Search and rescue
- Fire attack
- Water supply
- Pump operation
- Ventilation
- Backup/rapid intervention

The first 15 minutes are the most crucial period in the suppression of a fire. The timing of these 15 minutes does not start when the firefighters arrive at the scene but begins when the fire initially starts. How effectively and efficiently firefighters perform during this period has a significant impact on the overall outcome of the event. This general concept is applicable to fire, rescue, and medical situations. Responders must perform critical tasks promptly to control fire or treat a patient. RFFRA is responsible for assuring

¹⁰ 2021 National Fire Protection Agency, Fire Loss in the United States During 2020

¹¹ Ibid.

those responding companies are capable of performing all of the described functions in a prompt, efficient, and safe manner.

Considerable ongoing local, regional, and national discussion and debate draws a strong focus and attention to the matter of firefighter staffing. Frequently, this discussion is set in the context of firefighter safety. The jurisdiction may choose to establish response demand zones and use criteria outlined in the National Fire Protection Association (NFPA) standards. NFPA 1710: *Standard for Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* specifies the number of firefighters assigned to a particular response apparatus, often characterized as a “minimum of four personnel per engine company.” ESCI notes that the more critical issue is the number of firefighters assembled at the scene of an incident in conjunction with the scope and magnitude of the job tasks expected of them, regardless of the type or number of vehicles upon which they arrive. The community should set staffing levels based on risk, capability, and citizen expectations. Staffing levels ultimately becomes a policy decision determined by the governing body. There is not a mandated requirement that fits all situations, although NFPA 1710 has objectives to meet regarding the number required for some typical scenarios.

Some terms are interchangeable, such as assembly of firefighters on an incident, which may also be referred to as “Initial Full Alarm Assignment,” “Effective Firefighting Force” (EFF), or “Effective Response Force” (ERF). In the figures below, ESCI describes the NFPA 1710 level of staffing comprising this effective response force for three different scenarios.¹²

¹² 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 (National Fire Protection Association 2020 ed.) Article 5.2.4 Deployment.

Figure 51: Initial Full Alarm Assignment for Residential Structure Fire

Initial Full Alarm Assignment—2,000 SF Residential Structure Fire	
Incident Commander	1
Water Supply Operator	1
2 Application Hose Lines	4
1 Support Member per line	2
Victim Search and Rescue Team	2
Ground Ladder Deployment	2
Aerial Device Operator	1
Incident Rapid Intervention Crew (4 FF)	4
Total	17

Figure 51 shows the staffing needed to safely and effectively mitigate a single-family, 2,000-square-foot two-story residential structure without a basement and no exposures. The following figure describes an initial full alarm assignment for an open-air strip-type shopping center. As the risk and difficulty become greater, the staffing levels needed for effective mitigation increase.

Figure 52: Initial Full Alarm Assignment for Strip Shopping Center

Initial Full Alarm Assignment Open Air Strip Shopping Center (13,000 SF to 196,000 SF)	
Incident Commander	2
Water Supply Operators	2
3 Application Hose Lines	6
1 Support Member per line	3
Victim Search and Rescue team	4
Ground Ladder Deployment	4
Aerial Device Operator	1
Rapid Intervention Crew (4 FF)	4
EMS Care (1 crew)	2
Total	28

The following is an initial full alarm assignment for a three-story apartment building with a single 1,200-square-foot apartment fire.

Figure 53: Initial Full Alarm Assignment in a Three-Story Apartment Building

Initial Full Alarm Assignment 1,200 SF Apartment (3-story garden apartment)	
Incident Commander	2
Water Supply Operators	2
3 Application Hose Lines	6
1 Support Member per line	3
Victim Search and Rescue Team	4
Ground Ladder Deployment	4
Aerial Device Operator	1
Rapid Intervention Crew (4 FF)	4
EMS Care (1 crew)	2
Total	28

These are generalizations representative of different types of structures and their associated risks. Each fire department may handle these types of fires with fewer or more personnel; however, this describes the work functions that must occur, generally concurrently and, for safe and effective fire handling, promptly.

Additional crews are necessary when a fire escalates beyond the capability of the initial assignment, or the fire has unusual characteristics such as a wind-driven fire, or when involving an accelerant with a highly flammable compound. There are also types of non-fire scenarios, such as mass casualty incidents, explosions, tornadoes, etc., that may need additional staffing. It is difficult or impossible to staff for these worst-case incidents. These incidents require a robust mutual aid or automatic aid plan for assistance and call-back policies.

The following figure depicts the emergency staffing employed by RFBRA.

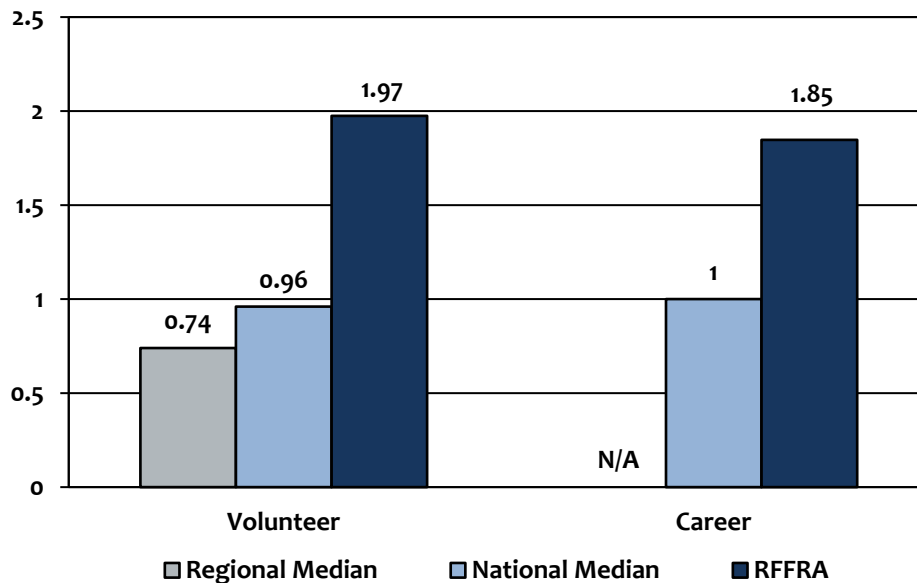
Figure 54: RFBRA Total Emergency Response Staffing

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Operational Staff (full-time & part-time)	<i>Individuals considered full-time or part-time employees, primarily assigned to provide emergency services at the operational level.</i>		
Shift Battalion Chief	3	56	48/96
Lieutenants	6	56	48/96
FF/Paramedics	12	56	48/96
FF/EMT	5	56	48/96
FF/EMT-I	1	56	48/96
Part-time FF/Paramedics	3	Varies	Varies
Part-time FF/EMT	13	Varies	Varies
Volunteers	31	Varies	Varies

A baseline overview of the staffing model, staffing levels, and relief factors provides an opportunity to review and analyze the current staffing patterns, shifts, and options to increase efficiency, effectiveness, and capabilities. The current RFBRA shifts leadership roles of Battalion Chiefs (3 FTEs) and Lieutenants (6 FTEs) to FF/Paramedics and FF/EMTs (18 FTEs) ratio for full-time positions within RFBRA operations is at 35%. When evaluating the entire staffing model, including FTE, part-time, and volunteer staff, the percentage of officer to line members decreases to 24%. It is important to note that the Deputy Chief of Operations currently provides daily leadership support for operations and administrative tasks as well. This oversight falls back to the Battalion Chief after the Deputy Chief goes home for the day. Operational duties can detract from the Deputy Chief's ability to provide administrative support and vice versa.

A means of comparison used nationally is measuring the number of firefighters on staff per 1,000 population of the service area. The following figure illustrates the current comparison of RFBRA's staffing with both national and regional norms.

Figure 55: Comparison of Firefighters Personnel per 1,000 Resident Population¹³



The 2018 National Fire Experience Survey released in 2020 provides a comparison of paid-on-call/volunteer firefighters and career firefighters per 1,000 population. This study indicates the national median rate of firefighters per 1,000 population is 1, and regionally, the number of firefighters per 1,000 population is calculated at zero because this data is not tracked for combination departments. Within RFFRA, the rate of career firefighters per 1,000 citizens is 1.85. When comparing volunteers, the rate of volunteer firefighters per 1,000 citizens regionally is .74, nationally is .96 and within RFFRA is 1.97. These comparisons do not consider the area covered and are general comparisons by populations served. Large geographical areas with sparse populations often require more firefighters to achieve service levels. This comparison in and of itself does not indicate a necessary change in staffing, but it serves as a point of reference for analysis of current operational endeavors. One important note to consider is that the seasonal

¹³ US Fire Department Profile- 2018 Supporting Tables, NFPA February 2020- NFPA stops collecting career firefighter data for populations below 25,000 and stops collecting volunteer firefighter data for populations above 25,000. This means that, as far as the data goes, there is no such thing as a combination department. ESCI pulls the career data from lowest population range for which it is available and moves it into the remaining population categories below that. ESCI then takes the volunteer data from the highest population range for which it is available and moves it into the remaining population categories above that. This allows for plotting a combination staffing chart for any population range. If the population is over 25,000, it is using accurate career ratios, but are using the nearest available volunteer ratios. Likewise, if the population category is under 25,000, it is using accurate volunteer ratios, but using the nearest available career ratio.

population swells to almost 5 times the resident population and equates to a .45 career rate per 1,000 population. This is half of the national median for a similar population.

Emergency Fire Response Staff Allocation

RFFRA uses a three-platoon (shift) system working 48 hours per shift rotations, yielding a 56-hour workweek for shift operations. Each shift is led by one Battalion Chief (3 total) who serves as the shift's senior officer. These individuals are responsible for all aspects of the shift operations and serve as the Fire Chief's representative at significant incidents.

RFFRA operates with a company officer assigned to each fire engine and/or truck company daily. RFFRA does not have promoted apparatus operators to serve as the individual responsible for all aspects of maintaining and operating fire engines and aerial units. This position fills as needed, depending on the availability of daily staffing. The role of driver, engineer, or fire apparatus operator has a significant role in the safe delivery and accomplishment of fire ground activities and should be implemented to ensure accountability of these tasks.

Several career firefighters staff three of the five fire stations daily. When fully staffed, one Lieutenant and three firefighters staff Fire Station 45. Fire Station 42 has one Lieutenant and a firefighter and Fire Station 41 has two firefighters to cross-staff a suppression unit and an ambulance. This staffing across the stations is rarely the case due to vacancies created by scheduled or unscheduled leave. More likely, RFFRA can expect one officer and one firefighter assigned per engine or ladder, often supplemented and achieved through volunteer and/or part-time employees.

RFFRA provides ALS transport services and has three ambulances in service daily. This provides an additional two persons for staffing at Fire Station 42 and Fire Station 45. Fire Station 41 uses cross-staffing of the ambulance and suppression units to achieve the total staffing ability for the shift. The daily staffing for these ambulance units is achieved with a paramedic and an EMT. This combination of ambulances and suppression units across the three career stations represents a total shift staffing of 11 FTEs, not including administrative staff.

RFFRA Administrative Guidelines (AGs) direct the following first alarm assignment for structure fires.

Figure 56: RFFRA Initial 1st Alarm

Initial Full Alarm Assignment—2,000 ft² Residential Structure Fire	
Battalion Chief	1
2 Engines	4
1 Ladder	2
1 Ambulance	2
Volunteers	Varies
Mutual/Auto Aid Companies	4
Total Minimum Personnel	13

The on-duty minimum staffing for a first alarm does not meet the need for a routine house fire without mutual aid assistance. An initial 1st Alarm Assignment is typically not sufficient for a strip shopping mall or an apartment building unless there is fire protection built into these structures. The shopping mall or apartment buildings represent the type of fire that is likely within the jurisdiction and represents a higher level of risk than the typical medium-size residential dwelling. Because RFFRA staffs most response units with a minimum of two firefighters, an initial full alarm force for this level of hazard would commit the majority, if not all, of the on-duty staffing to one fire. Furthermore, due to the geographical size of the jurisdiction, it is not reasonable to expect or plan on this as a means of providing coverage for such an event and still provide required services to the jurisdiction as a whole.

Emergency Medical Staffing

RFFRA provides ALS transport services through the use of three ambulances daily. These ambulances are staffed with Paramedics and EMTs. The staff assigned to the ambulance are firefighters and often are used to achieve the firefighting ERF. Daily staffing requires at least one paramedic at Fire Stations 41 and 42 and two paramedics at Fire Station 45.

Staff Allocation of Various Functions

RFFRA allocates its career staff to three fire stations, each based on the area's specific geographic requirements and service level needs. Two additional fire stations are staffed with an all-volunteer staff. The staff for each fire station receives calls for service and responds in the appropriate apparatus. For example, a fire call would require a fire engine, whereas a brush fire call would require a brush truck. Some fire stations are also equipped with a ladder truck, water tender, and brush truck apparatus in addition to an engine (or pumper). If required to respond in either of these apparatuses, staff must

move from their current apparatus assignment and relocate to the required or requested apparatus. RFFRA Fire Stations 41, 42, and 45 have ambulance units. The RFFRA Battalion Chief is located at Fire Station 41 to provide necessary command and control coverage during incidents and manage the administrative duties for the shift. This allocation of staff for RFFRA across the stations and units is a typical staffing model across the United States for combination organizations. The optimal staffing for RFFRA, according to AG #11 Optimum Staffing is 11 personnel but the minimum staffing available each day could be as low as six personnel for RFFRA. The use of only six personnel for the size of RFFRA jurisdiction is inadequate.

Staff Scheduling Methodology

RFFRA utilizes a traditional three platoon system operating on a 48-hour shift rotation per position to achieve the daily staffing of career personnel. The total number of positions required becomes a policy decision based on the needs of the jurisdiction. The jurisdiction also establishes the number of employees needed above the minimum to allow for vacancies due to vacation, sick, and other types of leave. This staffing requirement above the minimum yields a total number of full-time employees required to ensure the necessary daily minimum staffing is achieved according to policy. Minimum staffing for RFFRA is two firefighters per engine company, ambulance, and/or ladder company. This overall staffing methodology is widespread across the United States for firefighters working on a 24 to 48-hour period and proves effective for agencies with moderate workloads. Most agencies are working to increase staffing above the two-person per suppression apparatus. However, the scheduling methodology is the same. Large agencies with heavy workloads have implemented different staffing models to avoid employee fatigue. Staffing for a 48-hour period reduces the number of crew changes that occur in a given period. The staff has determined staffing for RFFRA at 11 total responders and will sometimes drop to a bare minimum of 6 responders.

The best practice for optimal staffing and efficiency is to determine the appropriate minimum staffing factor and then the appropriate relief factor. The relief factor is based on the needed coverage for sick, vacation, and other unplanned leave. RFFRA does not have an established relief factor, and in most cases, every vacancy requires the use of part-time volunteers and/or overtime to fill.

Minimum Staffing Factor Determination

The starting point for the analysis was to determine the minimum number of personnel needed to fill the minimum six daily staffing positions for fire operations and avoid overtime for unscheduled hours.

Minimum Staffing

- 365 days per year x 24 hours per day = 8,760 hours per year per position.
- 8,760 hours per year x 6 minimum positions daily = 52,560 hours per year that must be staffed for 24/7 coverage.
- 56-hour workweek equals 2,912 scheduled hours per position annually:
 $52,560/2,912 = 18$ FTE positions for minimum staffing.
- RFFRA currently has 27 FTEs budgeted for fire suppression and EMS staffing.

Fifty-Six-Hour Relief Factor

The next staffing factor to be analyzed is the “relief factor,” or the amount of additional FTE positions needed to reasonably cover “off time,” including leave, training, vacancies, etc.

The following is an industry-accepted methodology used to determine a relief factor to cover paid leave, training time off, and vacancies adequately for 48-hour fire department shifts. Determining the relief factor is outlined in the following:

- The average theoretical usage of RFFRA FY2017–21 firefighter paid leave, time off for training, unscheduled time off, and position vacancies are 17,520 hours annually. This is derived from the allowance of 2 employees per day off to account for training, sick, FMLA, or unscheduled vacancies
- 17,520 hours = 365 shifts that need to be filled to account for leave or vacancies annually.
- 365 days/shifts divided by the 56-hour workweek employee minimum staff count of 18 = an average of 20 days/shifts of leave per employee (FTE) per year.
- Number of on-duty shifts per year: $2,912/48 = 60.6$ (61) on-duty shifts.
- Subtract the average 20 days/shifts of leave from the scheduled 61 = roughly 41 on-duty shifts annually per FTE.
- Divide 56-hour workweek 61 scheduled shifts by the 41 on-duty shifts = a relief factor of 1.48 or 9 FTE positions over minimum staffing levels will cover the theoretical average utilized leave.

Current Staffing vs. Current Budgeted FTEs for RFFRA

RFFRA needs 27 budgeted, uniformed FTE personnel to achieve the 1.48 relief factor and currently has 27 budgeted, uniformed FTE available. Therefore, RFFRA has the number of budgeted FTEs for the required minimum staffing numbers based on average theoretical annual leave and vacancy usage to cover operational staffing. It should be noted that the daily minimum staffing established by RFFRA is not adequate based on the evaluation of occupancies and risk located within the jurisdiction.

Maintaining minimum staffing for scheduled and unscheduled leave can be challenging for fire departments. RFFRA should continue using part-time employees and volunteers to achieve minimum staffing requirements. If this practice cannot maintain consistent staffing patterns, then the use of additional career staff should be implemented. RFFRA should evaluate the calculations used to determine the proposed relief factors and determine if increasing the current FTEs per shift is adequate for the service demand and risk established. RFFRA should work to maintain 12 responders per day as the bare operational minimum.

Recommended Minimum Staffing Factor Determination

This section repeats the analysis above to determine the minimum number of personnel needed to fill the recommended minimum 12 daily staffing positions for fire operations and avoid overtime for unscheduled hours.

Minimum Staffing

- 365 days per year x 24 hours per day = 8,760 hours per year per position.
- 8,760 hours per year x 12 minimum positions daily = 105,120 hours per year that must be staffed for 24/7 coverage.
- 56-hour workweek equals 2,912 scheduled hours per position annually:
 $105,120 / 2,912 = 36$ FTE positions for minimum staffing.
- RFFRA currently has 27 FTEs budgeted for fire suppression and EMS staffing.

Fifty-Six-Hour Relief Factor

Determining the relief factor for the recommended minimum staffing is outlined in the following:

- The average theoretical usage of RFFRA FY2017–21 firefighter paid leave, time off for training, unscheduled time off, and position vacancies are 17,520 hours annually. This is derived from the allowance of 2 employees per day off to account for training, sick, FMLA, or unscheduled vacancies.

- 17,520 hours = 365 shifts that need to be filled to account for leave or vacancies annually.
- 365 days/shifts divided by the 56-hour workweek employee minimum staff count of 36 = an average of 10 days/shifts of leave per employee (FTE) per year.
- Number of on-duty shifts per year: $2,912/48 = 60.6$ (61) on-duty shifts.
- Subtract the average 10 days/shifts of leave from the scheduled 61 = roughly 51 on-duty shifts annually per FTE.
- Divide the 56-hour workweek of 61 scheduled shifts by the 51 on-duty shifts = a relief factor of 1.19 or 7 FTE positions over minimum staffing levels will cover the theoretical average utilized leave.

Recommended Staffing vs. Current Budgeted FTEs for RFFRA

RFFRA would need 43 budgeted, uniformed FTE personnel to achieve the 1.19 relief factor for a daily minimum staffing level of 12 firefighters and currently has 27 budgeted, uniformed FTE available. Therefore, RFFRA is short 16 budgeted FTEs based on average theoretical annual leave and vacancy usage to cover operational staffing. Maintaining minimum staffing for scheduled and unscheduled leave can be challenging for fire departments. Again, RFFRA should continue using part-time employees and volunteers to achieve minimum staffing requirements. If this practice cannot maintain consistent staffing patterns, then the use of additional career staff should be implemented. RFFRA should evaluate the calculations used to determine the proposed relief factors and determine if increasing the current FTEs is feasible and sustainable.

Deployment Methods and Staffing Performance for Incidents

Typical fire department responses across the nation include structure fires, vehicle fires, wildland fires, vehicle accidents, hazardous materials responses, technical rescue responses, general calls for service, and emergency medical calls. The latter is the most frequent reason for activating the 911 system.

Emergency Fire Incidents

The current daily operational staffing for RFFRA is 11 individuals per shift starting at 0700 hours. It is important to note that this staffing level is only realized when all personnel are on-duty. Traditional vacation and sick leave regularly affect on-duty numbers. This number does not include the Fire Chiefs or administrative staff. Fully staffed, this equates to a force barely capable of meeting the response needs of the community. Fire departments across the United States typically establish a "minimum staffing" level. This

number reflects the minimum number of personnel a department will have on duty before beginning to hire overtime.

RFFRA has established six personnel as its bare minimum staffing level. This requires crews to choose the appropriate apparatus based on the call for service. This current staffing provides the ability of the Authority to consistently and effectively respond with an appropriate number of personnel to mitigate minor incidents without the assistance of mutual aid companies. More significant incidents pose challenges for RFFRA to provide the necessary response force to mitigate. Because RFFRA uses a minimum staffing of two per engine company, there are times when the on-scene staff is not sufficient to begin interior firefighting operations per NFPA and OSHA standards. Many fire departments across the country are in similar situations. These standards require a "two-in/two-out" rule for firefighter numbers before entering an immediately dangerous to life and health atmosphere (IDLH). Dispatching multiple fire stations is a method to meet this requirement. The periods when a fire station cannot respond to emergency calls within its assigned area is an issue of response reliability and is covered in detail later in this report.

Emergency Medical Incidents

RFFRA provides transport services for the citizens of Snowmass and Basalt. Three staffed units conduct daily operations inside the Authority. This necessary and frequently required delivery of EMS places a drain on the Authority's current ability to handle additional calls for service when units are committed. Across the nation, the majority of emergency systems provide some first responder care until advanced life support resources can arrive if the agency does not provide those services. By design, most systems work together in tandem or with a tiered response; RFFRA is no different. Aspen Ambulance District offers additional support and aid by providing two units staffed daily. These units are ALS and are single-role paramedic/EMT and can provide both mutual and automatic aid when needed. Carbondale & Rural Fire Protection District (CRFPD) provides two units staffed daily. The CRFPD's staff are dual role fire and EMS.

Special Operations Incidents

RFFRA does not have a dedicated hazardous materials team. The resort industry in the local area creates special rescue hazards that require additional training and human resources when responding to those incidents. RFFRA can call for regional assets from the Colorado State Patrol Hazardous Material Team; however, the sheer geographic location of these incidents can make resources delayed in arrival. All full-time and part-time members of RFFRA are operations level trained as are some volunteer staff. They

provide initial response and scene size-up to determine the need for assistance from their regional team. By their physical nature, hazardous materials incidents prove challenging to mitigate and even more difficult with limited staff. NFPA 472: *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents* describes these operations.

Technical Rescue incidents are equally as challenging. RFFRA does not have a dedicated technical rescue team to handle these types of calls. These rescues are so involved that they require specific standards for operations, NFPA 1006: *Standard for Technical Rescuer Professional Qualifications* and NFPA 1670: *Standard for Operations and Training for Technical Search and Rescue Incidents*. These incidents would include vehicle machinery rescue, rope rescue, confined space rescue, trench and excavation rescues, water rescues, and structural collapse rescue incidents. RFFRA has some members with additional training to handle some vehicle machinery, rope rescue, and ice rescue situations.

Wildland Firefighting

In recent years, many people across the nation have understood the dangers and damaging effects that wildland fires cause across the Midwest and the West Coast of the United States, and those dangers are no different in Colorado. RFFRA has wildland firefighting capabilities. Wildland fires are one of the most significant risks facing RFFRA. Wildland fires pose challenges, including their expense, extensive periods to mitigate and bring under control, and sometimes require outside support. These external resources are associated with increased costs for specialized equipment, such as air support and fire retardants.

Responsibilities and Activity Levels of Personnel

In every fire department, some activities are accomplished outside of the “regular” duties of responding to emergency incidents. These typically involve general maintenance of self-contained breathing apparatus (SCBA), hose testing, air monitor calibration, EMS quality assurance, and various committees. RFFRA relies upon individuals who are interested in these additional areas to accomplish the tasks and use some contractors to perform the specific testing or services. In addition to the benefit of completing these tasks, the increased responsibilities serve to develop further knowledge, skills, and abilities of those individuals. These individuals learn project management, time management, and budgeting skills that prepare them for future promotional opportunities.

A continuing test for RFFRA will be making the most prudent staffing and facility placement decisions based on weighing multiple considerations, including risk exposure, response times, access challenges, deployment, community expectations, and response capacity. Those decisions are difficult with financial constraints and service demand increases.

Personnel Management

Although delivering emergency services to the citizens and visitors of a community is critical, effective management and organization of an emergency services agency are just as critical to its success. The personnel that deliver emergency services are the backbone of the system. However, without the proper administrative and support personnel to handle supervision, command, and control, operational personnel may not be able to perform satisfactorily. One of these support roles is the Human Resources Director, who provides personnel management services.

Policies, Rules and Regulations, and Guidelines

The RFFRA HR Policy Manual guides personnel issues and requires board approval for changes. The policy manual is reviewed annually and presented to the board for approval in December. RFFRA combines operational policies and procedures into an Administrative Guidelines (AGs) manual approved by the Fire Chief. AGs are arranged for easy reference. RFFRA uses Vector Solutions® for employee access and management. Changes are communicated through department memos.

ESCI recommends a process of periodic inspection and changes. An excellent way to ensure this review will occur is to have a committee of members review one-third of the guidelines each year and recommend changes.

Job Descriptions

RFFRA employs several positions with job descriptions that are not unlike other agencies of similar size and organization. RFFRA currently employs the positions of Firefighter, Firefighter/EMT, Firefighter/EMT-Intermediate, Firefighter/Paramedic, Lieutenant, Battalion Chief, Fire Inspector, Assistant Fire Marshal, Deputy Fire Marshal, Human Resources Director, Finance Director, Information Technology Director and Administrative Assistant, Division Chief, Deputy Chief, and Fire Chief. Job descriptions should receive periodic reviews and revisions. RFFRA reviews job descriptions annually during the employee performance review.

Compensation

RFFRA's ability to attract, hire, and retain employees directly impacts its ability to effectively and efficiently provide the desired services. Agencies should provide periodic reviews of current compensation structures, market competitiveness, and Authority compensation philosophies. These internal and external comparisons of equitable positions and workloads ensure the agency can attract and maintain an effective workforce. RFFRA evaluates their pay and benefits yearly. Pay structures are reviewed and provide a 40% spread for all positions between the minimum and maximum pay grades. As part of the competitive pay philosophy, RFFRA offers a 7% increase above the minimum pay for area wages.

RFFRA does not have a collective bargaining agreement in place. RFFRA does, however, have a meet and confer agreement with the local union up to four times a year.

Disciplinary Process

Under the existing organizational configuration, personnel-related decisions are made at different levels. The Fire Chief can hire, discharge, and promote. Several levels of the organization can issue discipline based on the severity of the infraction. Discipline policies are defined in the HR policy manual. In most cases, the ability to issue and carry out discipline is done through the chain of command, starting with the company officer. Personnel-related decisions can, and often do, subject an organization to potentially extensive liability exposure. Risk can result from a hiring mistake, improperly processed disciplinary process, wrongful termination claims, etc. Access to legal counsel can reduce this liability. The employees are not afforded a grievance policy but are allowed the ability to contest the discipline, but it is non-binding.

Counseling Services

Our nation's firefighters face emotional needs that are very different and unique to the occupation. The percentage of firefighters struggling with career-related stress is very high, with suicide rates climbing yearly. These issues manifest themselves through higher divorce rates and alcohol, drugs, or gambling addictions. Frequently seen in recent studies, another primary concern is Post-Traumatic Stress Disorder (PTSD). As these symptoms occur, employees need support systems that are readily accessible and provide access to someone who is qualified and genuinely understands the employee's circumstances.

Several programs can assist: critical incident stress management, employee assistance programs, and intervention programs, to name a few. RFFRA offers an Employee Assistance Program and a Critical Incident Stress Management PEER support team through the Hope Center. Employees are offered five sessions per issue for EAP. The Authority also provides three visits to a counselor of choice. Awareness level training is also offered to all members to create awareness of the availability of resources.

Application, Recruitment, and Retention Process

RFFRA periodically advertises through the local paper, social media, and Indeed®. RFFRA also completes background checks on potential volunteers and career candidates for hire. RFFRA uses the Federal Arduous Pack Test as their pre-employment physical agility test. The pack test is a job-related work capacity test. The arduous version consists of a 3-mile hike with a 45-pound pack over level terrain in less than 45 minutes. This test is the standard for wildland firefighters. Because the wildland fire risk is so high in RFFRA it is essential to include these standards during the hiring process. RFFRA then requires a medical exam following the Colorado Heart and Circulatory Trust. RFFRA should implement NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments* medical exam and a psychological evaluation.

Performance Reviews, Testing, Measurement, and Promotion Process

RFFRA provides annual performance reviews for full and part-time employees, including a comprehensive analysis of employee performance goals and objectives. RFFRA conducts periodic physical competency testing and performance reviews of knowledge, skills, and abilities. RFFRA requires an annual Physical Ability Test (PAT), including the Arduous Pack Test. Promotional testing is completed on an as-needed basis to fill open Lieutenant and Battalion Chief positions.

Health and Safety

NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program* is the industry standard for developing and administering a fire department safety program. At the time of this report, RFFRA planned to have the safety committee regroup. It has not had regular meetings. The establishment and empowerment of a safety committee can be one of the best tools to increase the safety of firefighters. ESCI strongly encourages the Authority to ensure all safety committee activities align with Chapter 4 of NFPA 1500. To be effective, safety committees must be diverse in their representation from across the Authority, ensuring representation by shift, rank, function, and interest, including representation from non-uniformed and staff members. The

committee should meet monthly and include in its mission raising awareness and modifying member behaviors that will result in a safe work environment.

Additionally, the committee should review all accidents, injuries, near-miss incidents, and workplace safety suggestions. The committee should analyze the information before them and report the findings to the Fire Chief. As opposed to being reactionary through the development of additional rules, ESCI recommends that the committee should work to implement member safety education programs and encourage members' safety self-awareness. The committee should maintain regular and open meeting times and locations; minutes of the meetings should be recorded and posted for all members of the authority to review. A diverse representation of command staff and labor representatives should constitute the committee. ESCI underscores the importance of maintaining a functioning safety committee.

One practice emerging is separating the safety committee into sub-committees for peer support, fitness, health, and wellness. These sub-committees allow for a more focused effort to address firefighter, EMT, and paramedic needs regarding health and wellness.

SERVICE DELIVERY AND PERFORMANCE

The purpose of an emergency services agency is to provide quality services promptly when a resident or visitor initiates a call for service. This section will address the following elements of service delivery and performance, arming RFFRA leadership with the best knowledge about existing calls for service and future calls for service:

- Service demand
- Resource distribution
- Response performance
- Resource reliability
- Resource concentration
- Mutual aid and automatic aid systems

Service Demand Analysis

Incident Type Analysis

Service demand is a term that refers to the calls for service within the service area of an agency such as RFFRA. A simplistic analysis of service demand would provide a total count of incidents within a specific date range, such as incidents per year. However, for leadership to better prepare to provide for that service, a more in-depth analysis of the types of incidents is necessary. The National Fire Incident Reporting System (NFIRS) was developed to assist agencies. Most departments use this system throughout the United States. The system determines call types by a three-digit code and grouping the codes by the first number of each code.

As illustrated below, this grouping enables leadership to identify the types of incidents to which the agency responds.

Figure 57: NFIRS Incident Types

Incident Series	Incident Heading
100-Series	Fires
200-Series	Overpressure Rupture, Explosion, Overheat (No Fire)
300-Series	Rescue and Emergency Medical Service (EMS) Incidents
400-Series	Hazardous Condition (No Fire)
500-Series	Service Call
600-Series	Cancelled, Good Intent
700-Series	False Alarm, False Call
800-Series	Severe Weather, Natural Disaster
900-Series	Special Incident Type

The figure below shows that RFFRA experienced a 4.3% increase in the overall number of incidents from 2017 to 2021. This includes two years with increases (1.2% from 2017 to 2018 and 14.9% from 2020 to 2021) and two years with decreases (4.2% from 2018 to 2019 and 6.4% from 2019 to 2020). It is important to note that most agencies throughout the United States experienced a decrease in calls for service during 2020 due to the COVID-19 pandemic. The incident types with increases were fire incidents (21.6%), emergency medical incidents (2.6%), canceled/good intent incidents (28.6%), and alarm incidents (1.7%). The incident types with decreases were hazardous condition incidents (1.3%), motor vehicle collision incidents (8.3%), and service call incidents (18%).

Figure 58: RFFRA Service Demand by Incident Type, 2017 to 2021

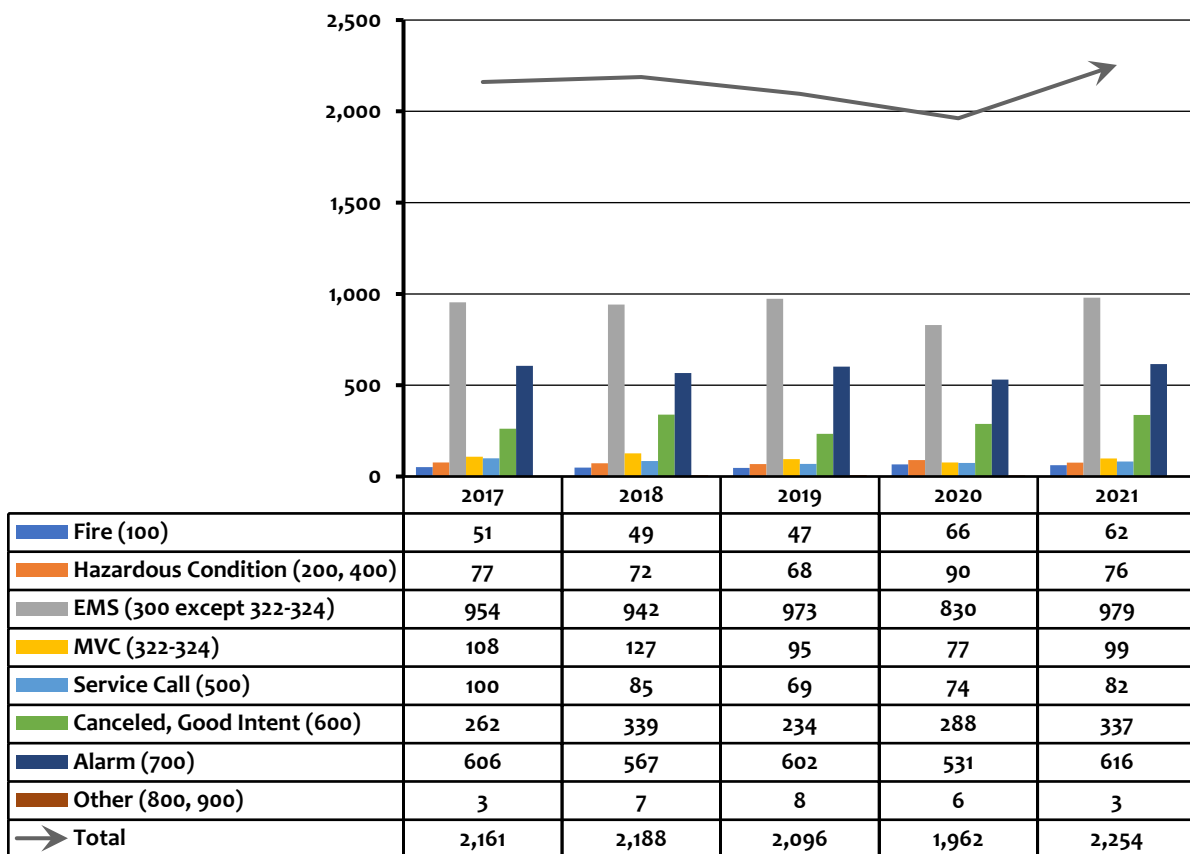
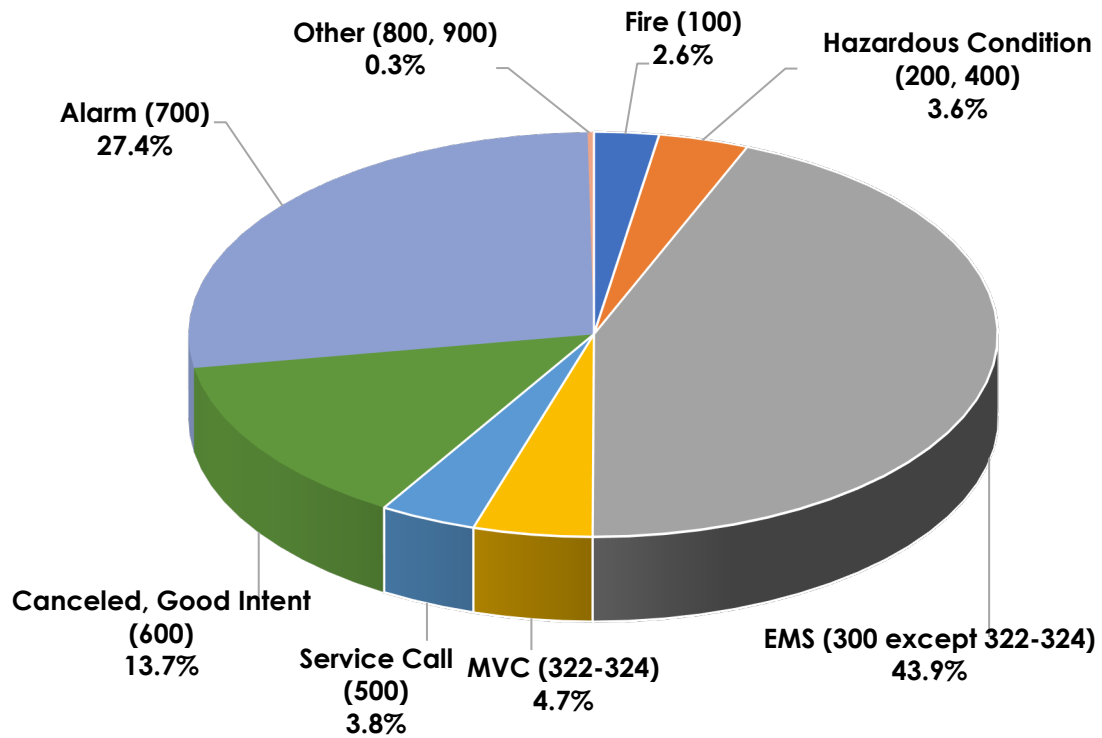


Figure 58 illustrates the year-to-year progression of service demand by incident type. There is value for leadership to view the same incident data, comparing how each incident type compares relative to the whole. Figure 59 demonstrates the greatest demand for service is emergency medical service incidents. EMS is followed, in decreasing order, by alarm incidents, canceled/good intent incidents, motor vehicle collision incidents, service call incidents, hazardous condition incidents, fire incidents, and other incidents.

Figure 59: RFFRA Service Demand by Incident Type, 2017 to 2021



Temporal Analysis

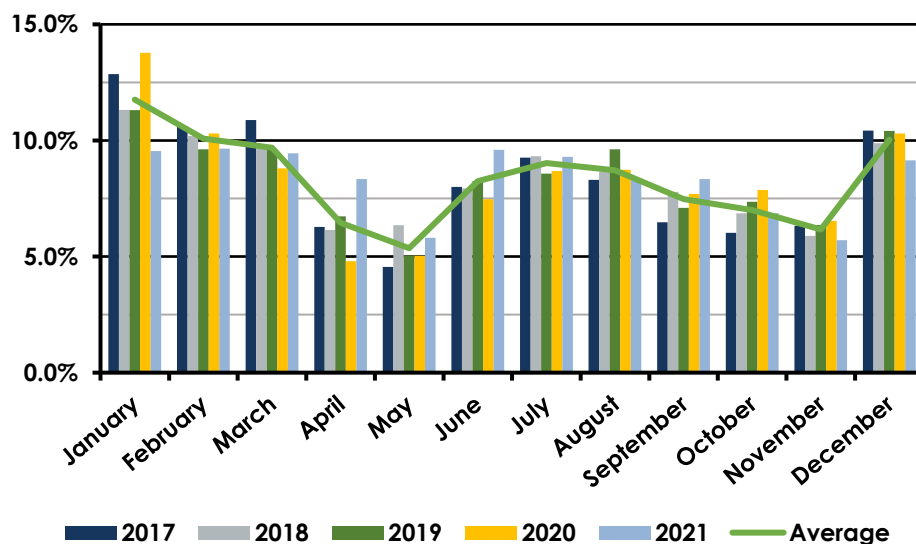
Leadership needs to understand the types of incidents that comprise service demand, but it is also essential to know when incidents occur. The temporal analysis identifies this in detail and provides leadership the tools for decision-making related to staffing, scheduling of non-incident activities, and other factors that may impact the ability to provide service to the community.

Non-incident activities may include:

- Public education events
- Pre-incident planning
- Hydrant testing
- Hose testing
- Training
- Station and apparatus maintenance

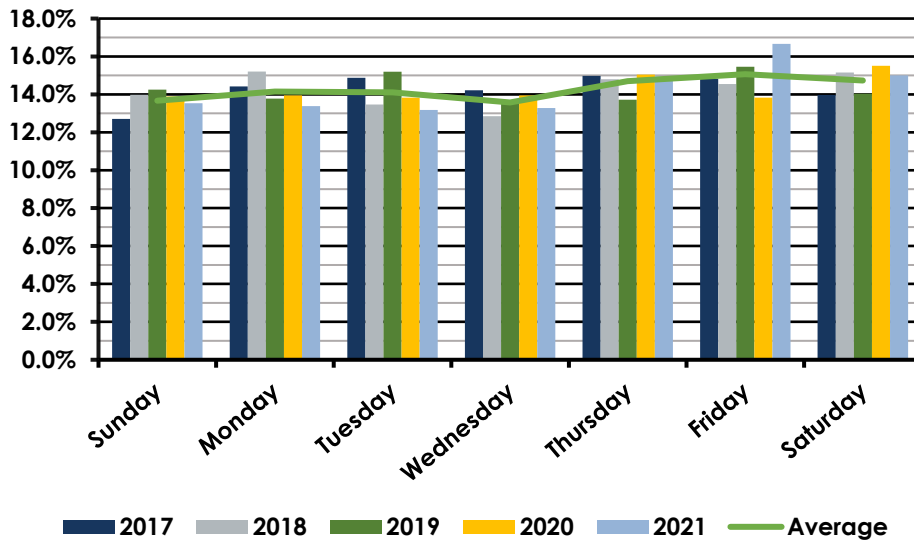
In Figure 60, the temporal analysis of service delivery is impacted by the seasonal nature of the tourism industry within the RFFRA service area. Service demand has two primary peaks—January and July, coinciding with the influx of thousands of visitors for seasonal outdoor activities. The lowest demand for service occurs in May and November.

Figure 60: RFFRA Service Demand by Month, 2017 to 2021



As illustrated in Figure 61 the figure below, the lowest demand for service occurs on Wednesday, with a steady increase going into Friday. Then there is a decrease through Sunday before increasing again until Tuesday.

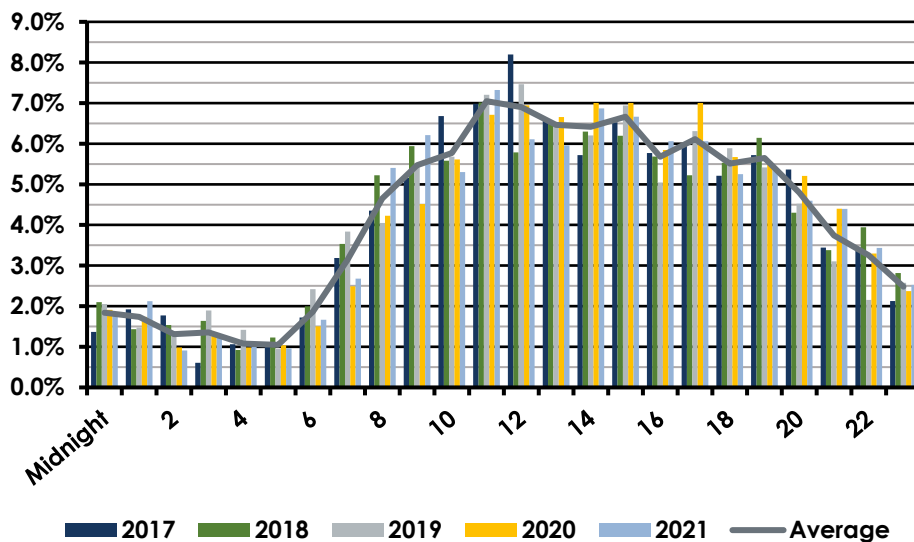
Figure 61: RFFRA Service Demand by Day, 2017 to 2021



As shown in Figure 62, the lowest demand for service occurs at 4 a.m. and then increases over the next few hours. At 7 a.m., the rate of increase steepens until reaching the highest demand for service at 11 a.m. This increasing demand coincides with residents and visitors beginning their daily activities. Overall demand throughout the day gradually decreases, with a couple of peaks, into the evening hours. This trend reflects the residents and visitors participating in many activities within the community. Then, around 8 p.m., the rate of decrease steepens, coinciding with the movement of the residents and visitors back to their homes or rentals, until reaching the lowest demand for service.

While service demand is lowest during those early morning hours, it should be noted that most fatal residential fires occur most frequently late at night or early in the morning. Based on findings from a national study, from 2014 to 2016, deadly residential fires were highest between 1 a.m. to 2 a.m. and 4 a.m. to 5 a.m. The 8-hour peak period (11 p.m. to 7 a.m.) accounted for 48% of fatal residential fires.¹⁴

Figure 62: RFFRA Service Demand by Hour, 2017 to 2021

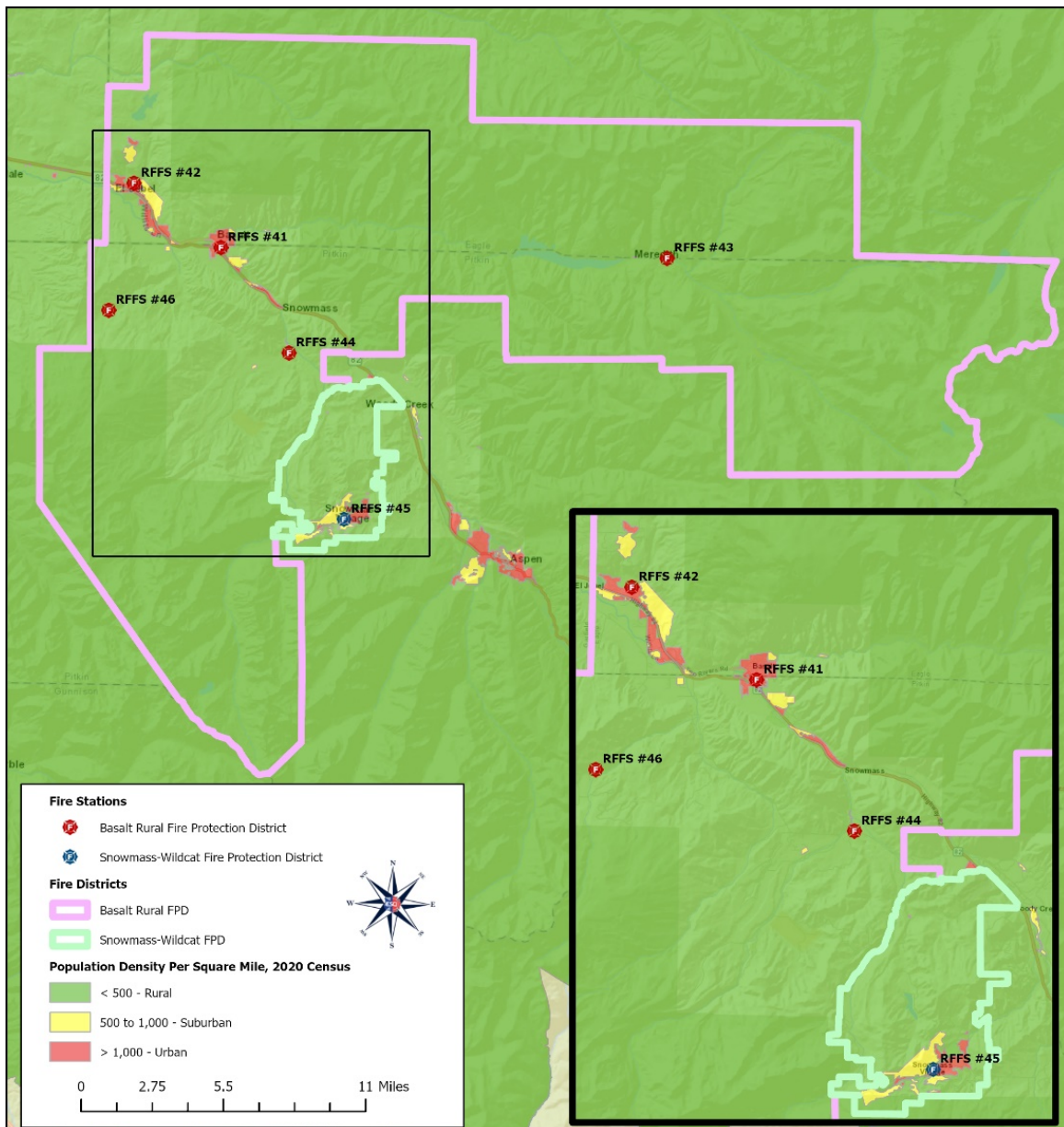


¹⁴ Fatal Fires in Residential Buildings (2014-2016), Topical Fire Report Series Volume 19, Issue 1 /June 18, U.S. Department of Homeland Security, U.S. Fire Administration, National Fire Data Center.

Geographical Analysis

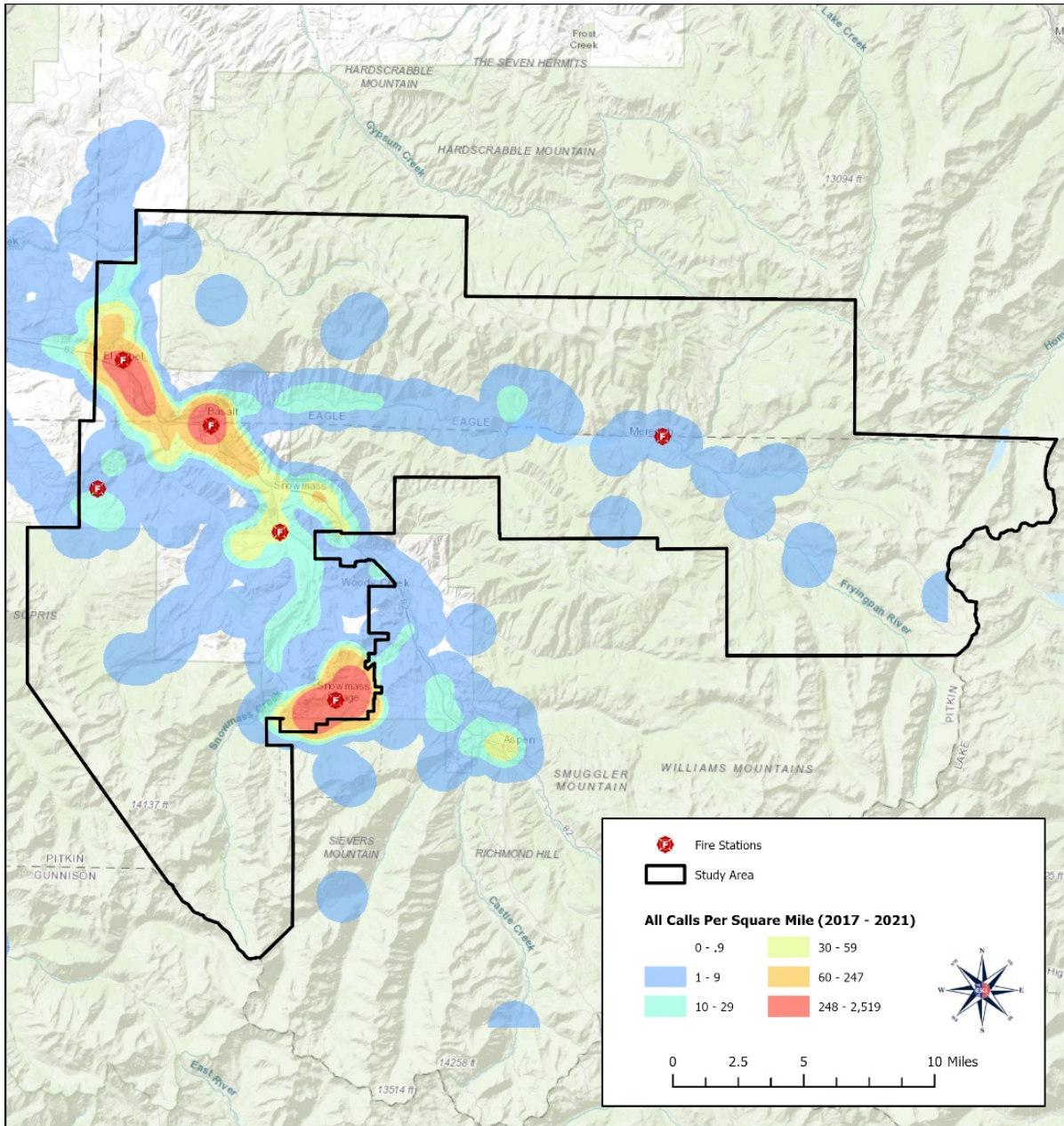
The following analysis provides the tools for considering where these incidents occur. Understanding the geographical nature of service demand requires knowledge of the population density within the service area. As illustrated in the following figure, most RFFRA service areas have a rural population density of less than 500 people per square mile. Pockets of urban/suburban population density coincide with the service area's primary communities or resort areas.

Figure 63: RFFRA Population Density, 2020 Census



In most communities, population density and incident density coincide. Where population density increases, so does incident density. Figure 64 shows the density of incidents follows a pattern similar to where the pockets of population density are located.

Figure 64: RFFRA Incident Density (All incidents)



The following figure demonstrates the density of just fire incidents, and the pattern is similar and coincides with the pockets of increased population density.

Figure 65: RFFRA Incident Density (Fire incidents)

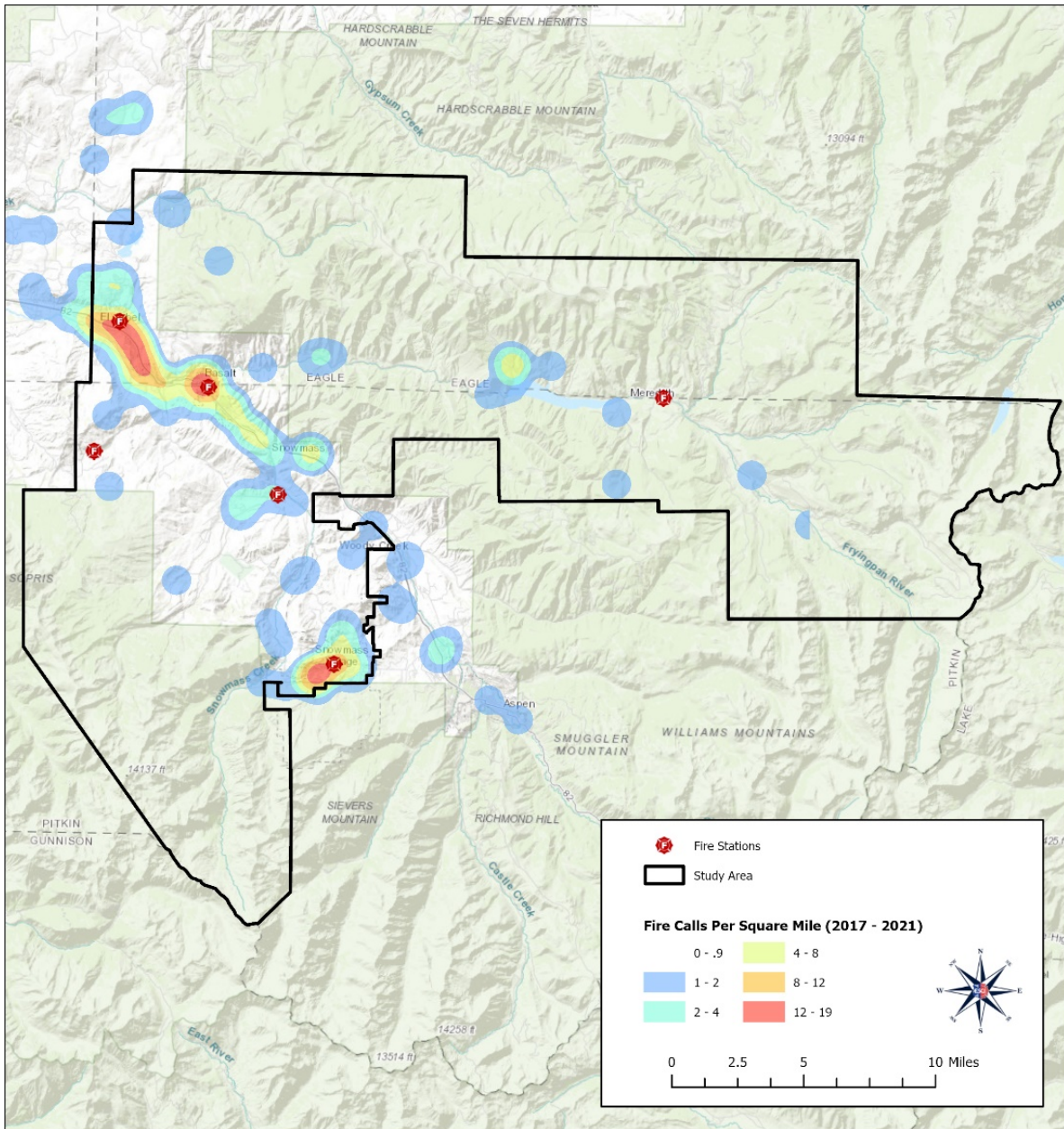
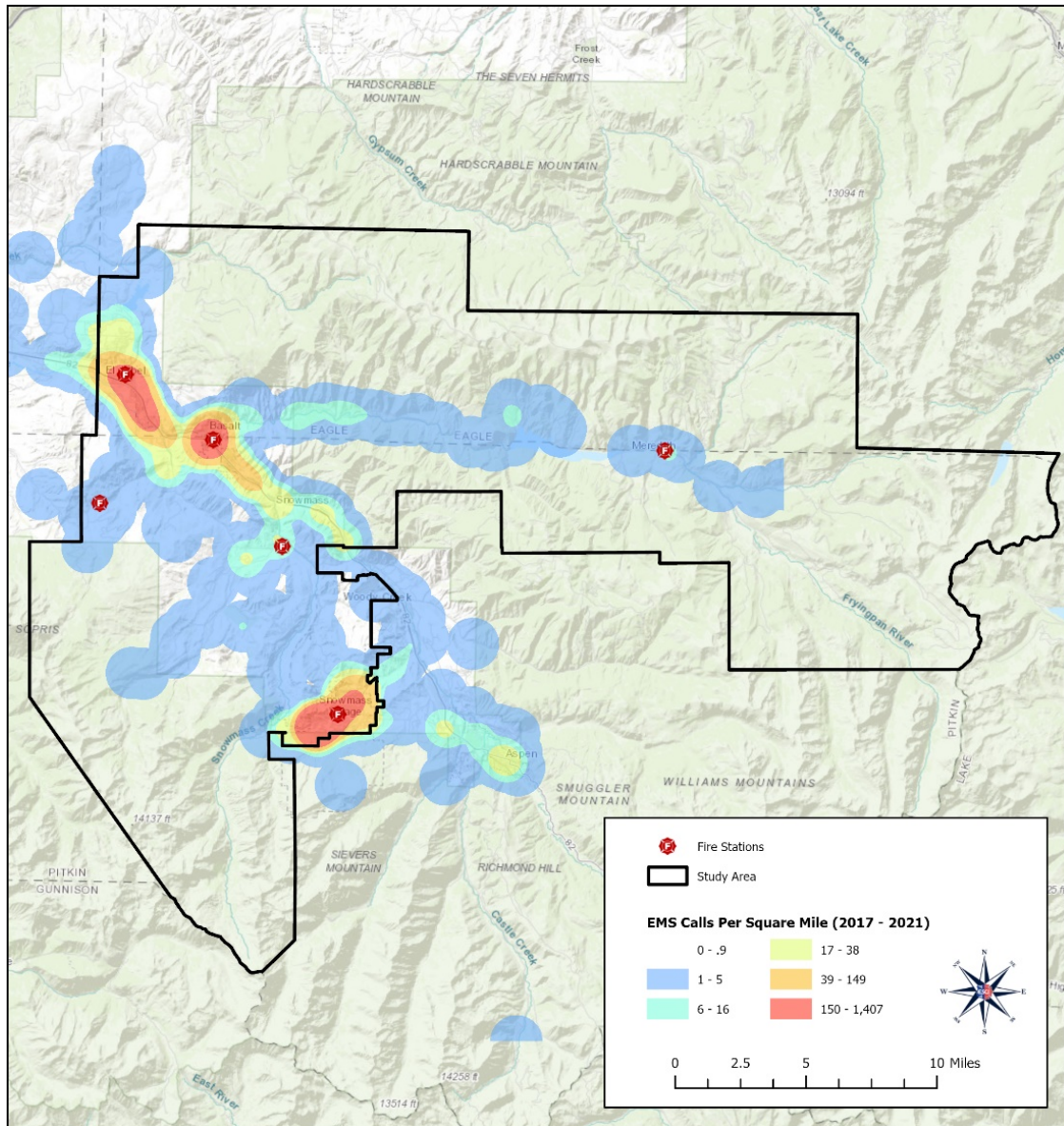


Figure 66 displays the density of just emergency medical incidents; again, the pattern is similar and coincides with the pockets of increased population density.

Figure 66: RFFRA Incident Density (EMS incidents)



Resource Distribution Analysis

Two primary standards exist for communities to compare their distribution of resources to provide service within specified time measures. These are the Insurance Services Office (ISO) criteria and the travel time analysis.

ISO Distribution

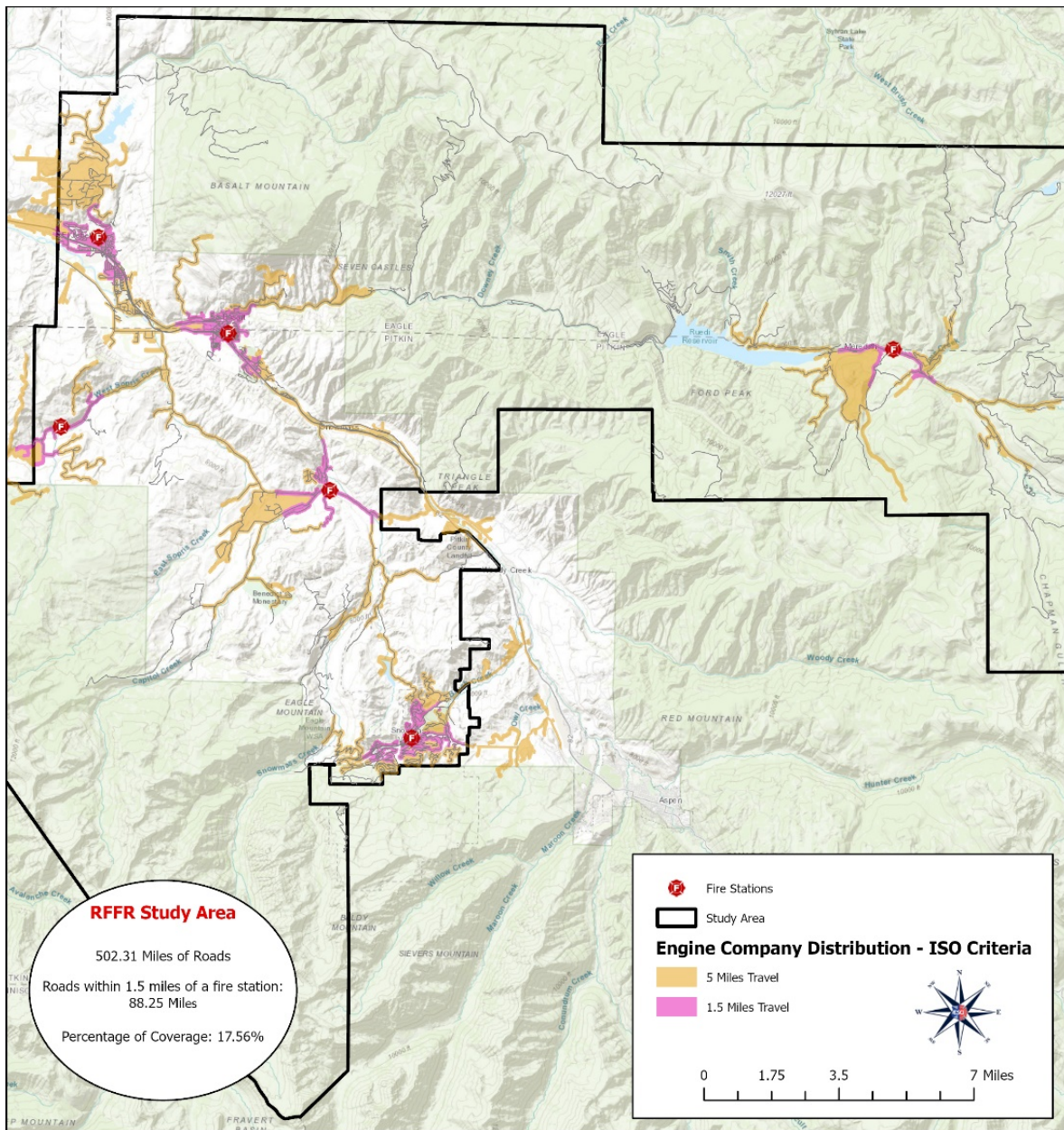
The Insurance Services Office (ISO) is a national insurance industry organization that evaluates fire protection for communities nationwide. ISO assesses all areas of fire protection as broken down into four major categories, including emergency communications, fire department, water supply, and community risk reduction. Following an on-site evaluation, an ISO rating, or specifically, a Public Protection Classification (PPC®) number, is assigned to the community ranging from 1 (best protection) to 10 (no protection). The PPC® score is developed using the Fire Suppression Rating Schedule (FSRS), which outlines sub-categories of each primary four, detailing the specific requirements for each evaluation area.

A community's ISO rating is an essential factor when considering fire station and apparatus concentration, distribution, and deployment due to its effect on the cost of fire insurance for the residents and businesses. To receive maximum credit for station and apparatus distribution, ISO evaluates the percentage of the community (contiguously built upon area) within specific distances of fire stations, central water supply access (fire hydrants), engine/pumper companies, and aerial/ladder apparatus.

Travel Distance from a Fire Station

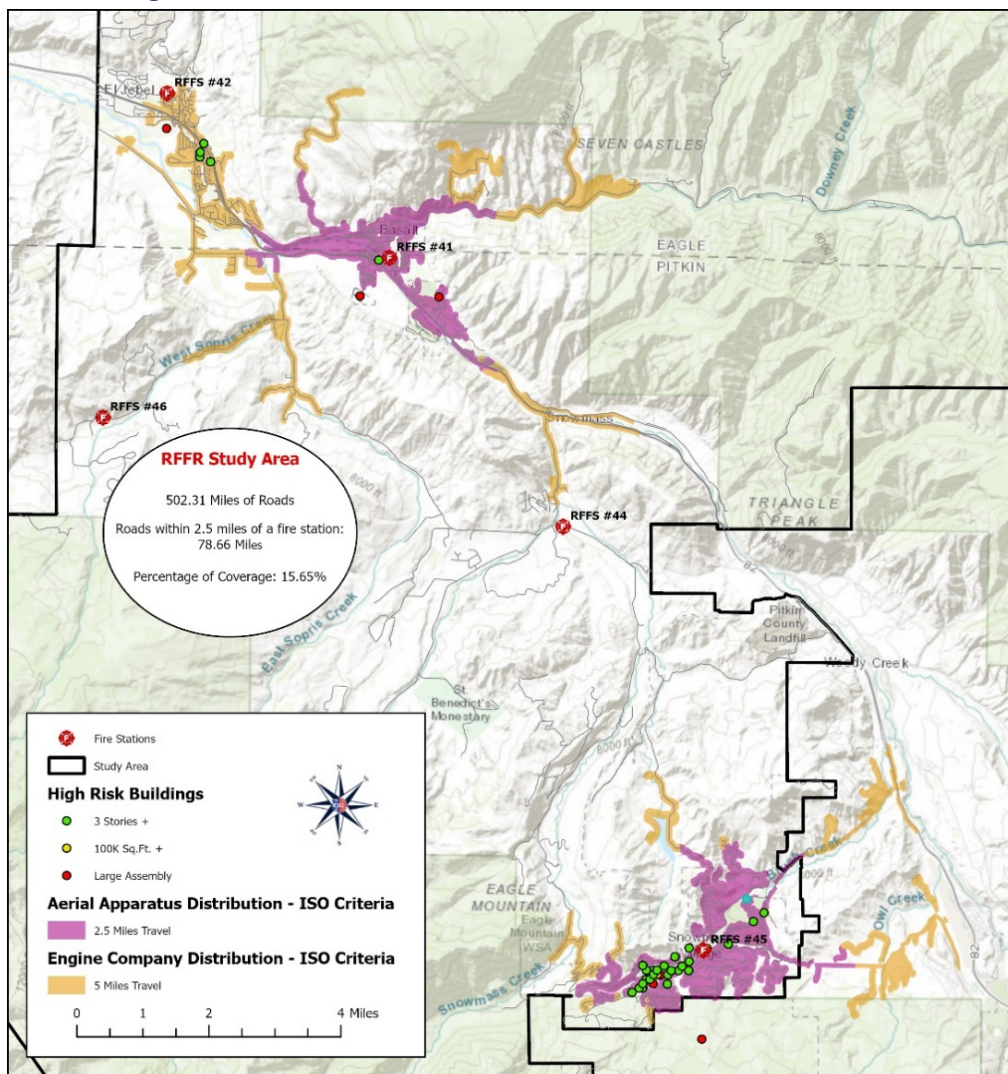
As ISO evaluates a community, a primary scoring component evaluates the number of structures that fall within a 1.5-mile travel distance of a fire station. This equates to the first responding unit arriving on an incident scene within a target goal of 4-minute travel time. As illustrated in the following figure, 17.56% of the RFFRA service area is within the 1.5-mile travel distance. The low percentage is expected due to the rural nature of the service area. Those areas with greater population density and incident density coincide with the areas within the 1.5-mile travel distance.

Figure 67: RFFRA 1.5-mile Engine Distribution, ISO Criteria



Another travel distance component included in the PPC@ score by ISO evaluates the number of structures that fall within a 2.5-mile travel distance from a station with an aerial apparatus. This travel distance equates to the arrival of a full assignment of resources within an 8-minute travel time. According to ISO criteria, aerial apparatus is specifically needed in areas of the community where there are five or more buildings of three stories (or 32-feet) or more in height or five or more buildings requiring a needed fire flow of greater than 3,500 gallons per minute, or five or more buildings meetings any combination of these requirements. Figure 68 shows that 15.65% of the RFFRA service area falls within a 2.5-mile travel distance from a station with an aerial apparatus.

Figure 68: RFFRA 2.5-Mile Aerial Distribution, ISO Criteria

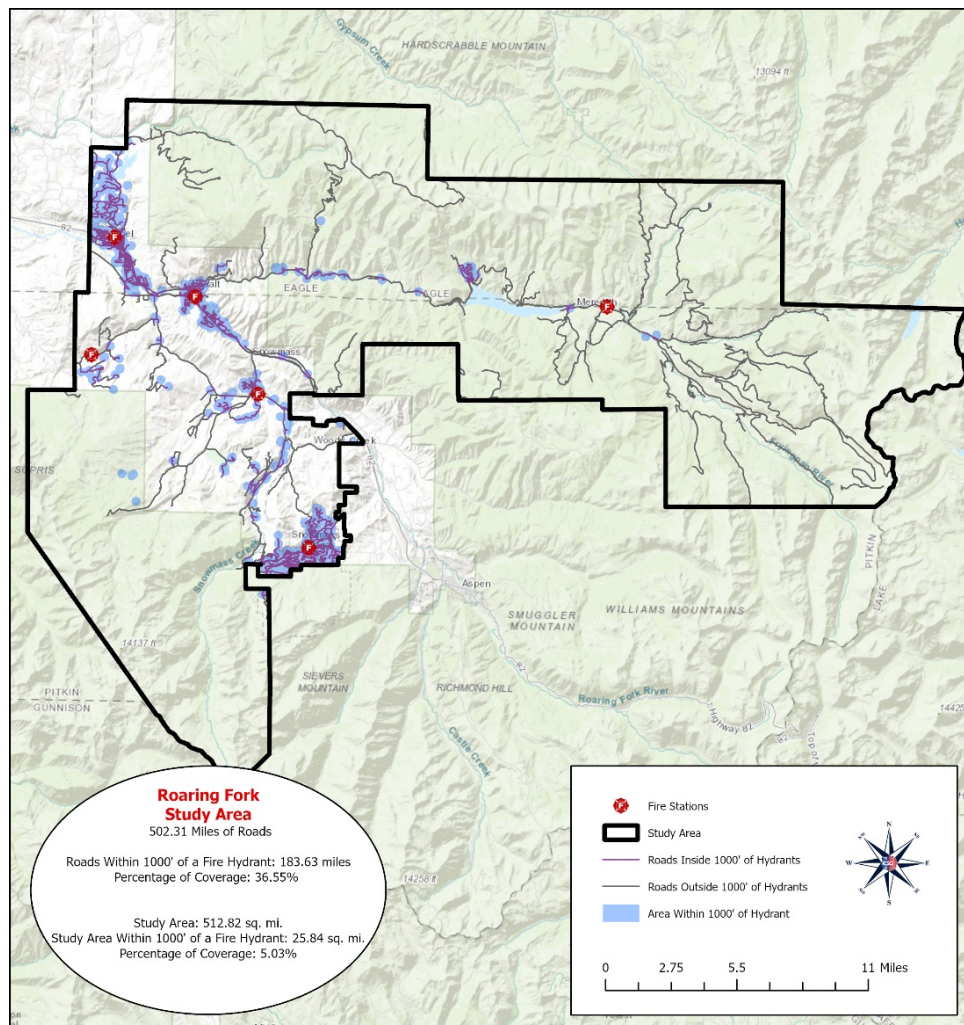


Water Supply Distribution

ISO evaluates a community's availability of a sufficient water supply, which is critical for the extinguishment of fires. This evaluation includes the geographic location and distribution of fire hydrants. Structures outside a 1,000-foot radius of a fire hydrant are subject to a lower Public Protection Classification® rating than areas with adequate hydrant coverage, thus signifying limited fire protection. Exceptions are made when a fire department can show that either a dry hydrant or a water tender operation can provide the needed volume of water for fire suppression activities for a specific period.

As illustrated in Figure 69, 5.03% of the service area is within 1,000 feet of a fire hydrant. The low percentage includes many portions of the service area where most of the structures are located. Much of the remaining service area is rural with fewer buildings.

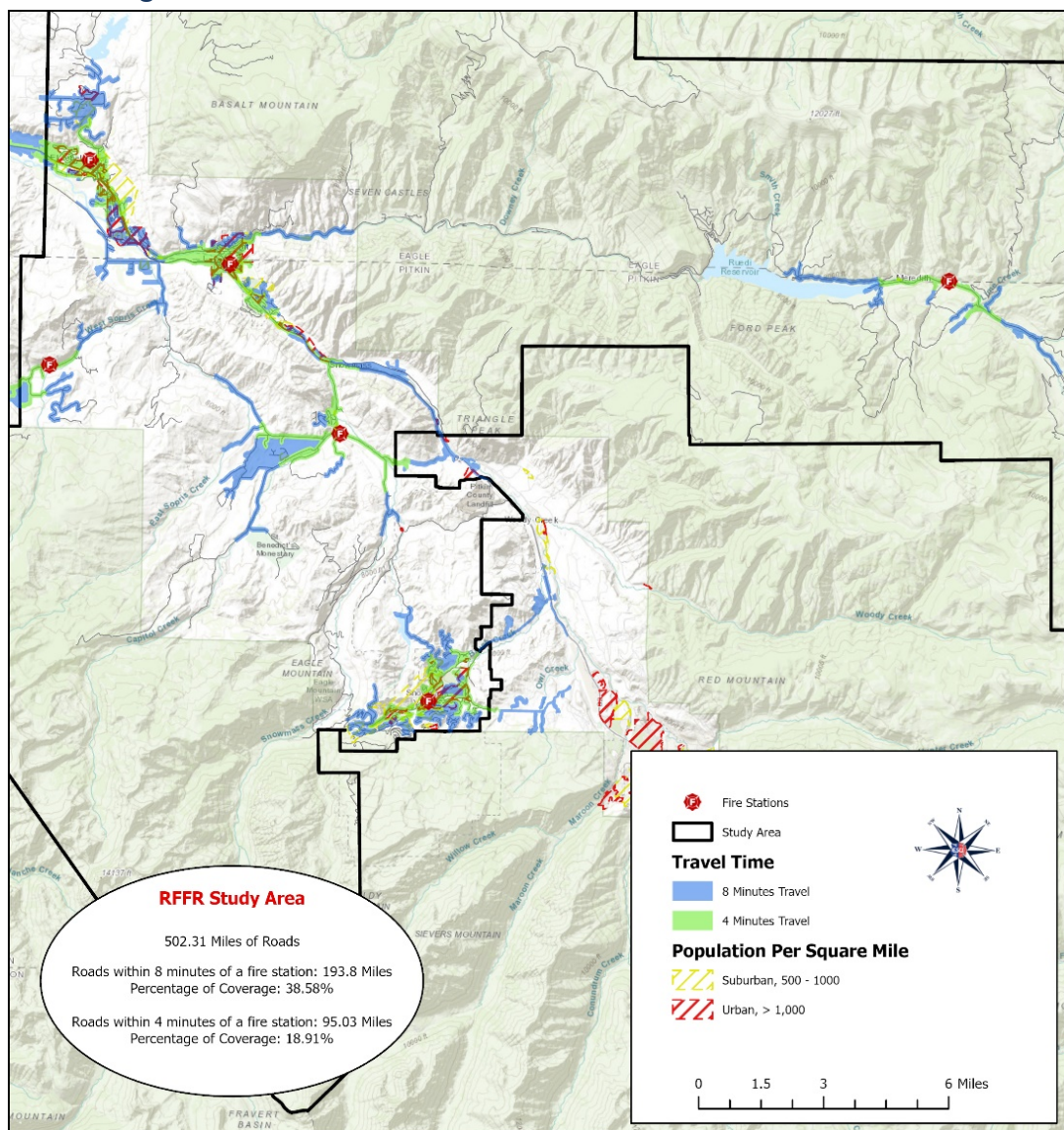
Figure 69: RFFRA Hydrant Distribution per ISO Criteria



NFPA Distribution

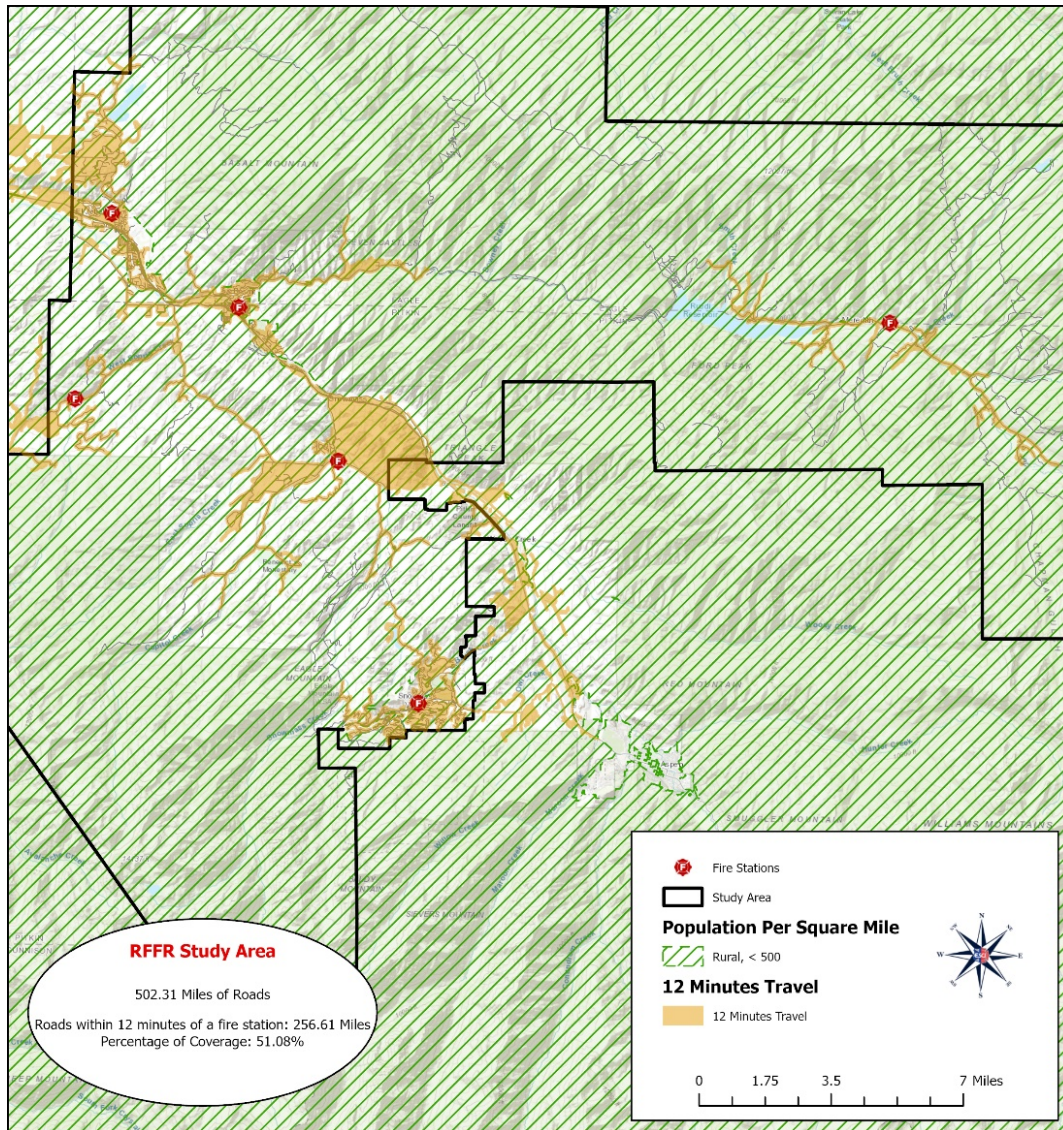
National Fire Protection Association (NFPA) standards and the Center for Public Safety Excellence (CPSE) accreditation of fire departments use travel time criteria to analyze resource distribution. For low/medium hazard incidents, the first unit should arrive within 4 minutes, and the full assignment should arrive within 8 minutes. Travel time is calculated using the posted speed limit and adjusted for negotiating turns, intersections, and one-way streets. Figure 70 indicates that 18.91% of the RFFRA service area falls within a 4-minute travel time and 38.58% within an 8-minute travel time. The areas covered emphasize the judicious placement of stations in the high call areas

Figure 70: RFFRA 4-Minute/8-Minute Travel Time, NFPA Criteria



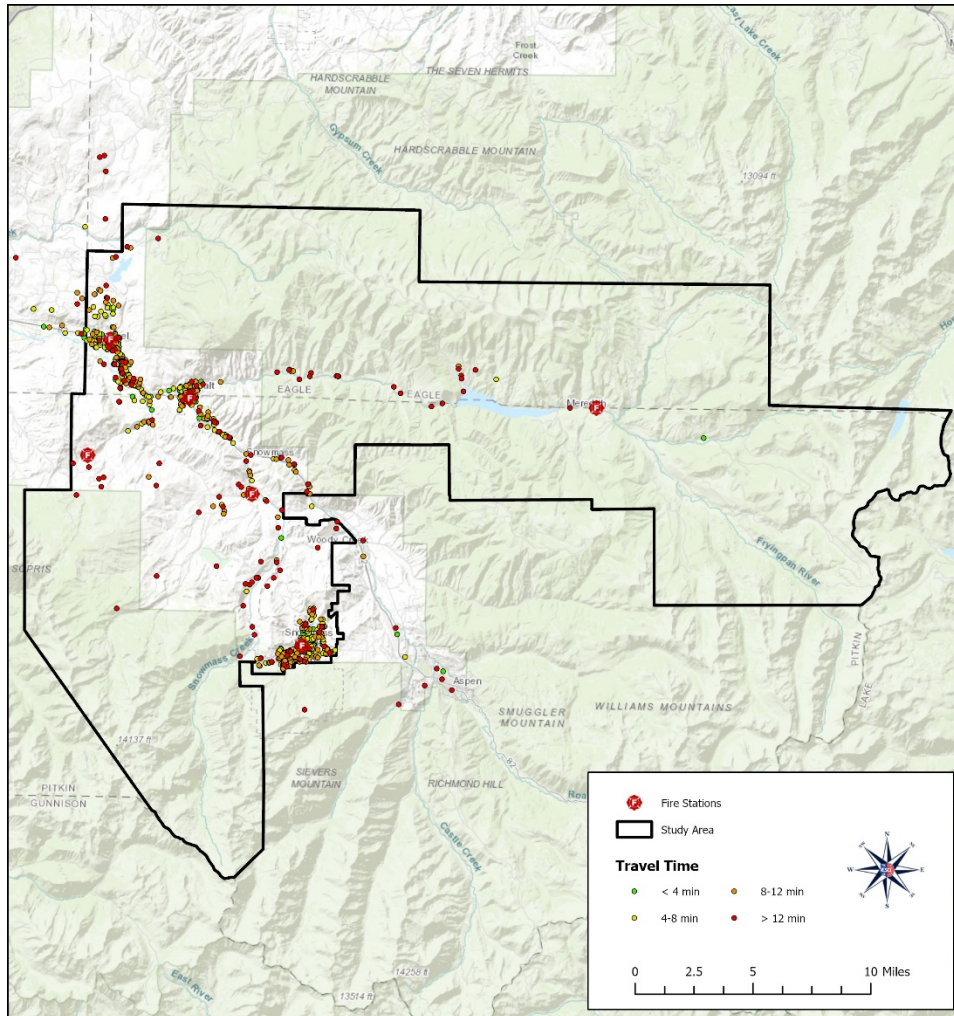
Due to the rural nature of much of the RFFRA service area, it is also appropriate to consider the 12-minute travel time coverage. As illustrated in the following figure, 51.08% of the service area falls within a 12-minute travel time.

Figure 71: RFFRA 12-Minute Travel Time



While the preceding figures illustrate theoretical travel time, it is limited to the assumption that all units are in-service and responding from their assigned stations. The primary unit is not always available or may be responding from a different location. As illustrated in the next figure, travel time to actual 2021 incidents within the RFBRA service area was less than 4 minutes to 29.04% of incidents, 4–8 minutes to 42.98% of incidents, 8–12 minutes to 17.34% of incidents, and greater than 12 minutes to 10.63% of incidents.

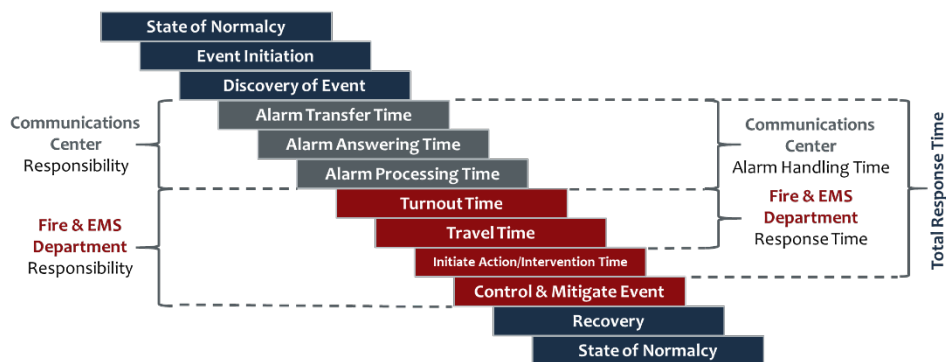
Figure 72: RFBRA Actual Travel Time, 2021



Response Performance

One of the most visible components of service delivery for elected officials, residents, and visitors of the RFFRA service area is how quickly units arrive when a call for service is made. That measure is from activation of 9-1-1 until the arrival of the first unit. This is called the response time continuum. The continuum consists of multiple measures (listed below) that departments should track to identify any improvement areas.

- *Call Processing Time*—The time between a dispatcher getting the call and the resources being dispatched.
- *Turnout Time*—The time between unit notification of the incident and when it responds.
- *Travel Time*—The time the responding unit spends on the road to the incident.
- *Response Time*—A combination of turnout time and travel time, the most commonly used fire department response performance measure.
- *Total Response Time*—The time from when the 911 call is answered until the dispatched unit arrives on the scene.



In analyzing response performance, ESCI generates percentile (sometimes known as fractile) measurements of response time performance. The use of percentile measurement using the components of response time follows the recommendations of industry best practices. The Center for Public Safety Excellence (CPSE), Standard of Cover document, and the National Fire Protection Association (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* promulgate the best practices.

The “average” measure is a commonly used descriptive statistic also called the mean of a data set. The most important reason for not using the average for performance standards is that it may not accurately reflect the performance for the entire data set

and may be skewed by outliers, especially in small data sets. One extremely good or bad value can skew the average for the whole data set.

The “median” measure is another acceptable method of analyzing performance. This method identifies the value in the middle of a data set and thus tends not to be as strongly influenced by data outliers.

Percentile measurements are a better measure of performance because they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 10% of the values are greater than the value stated, and all other data are at or below this level. This measure can be compared to the desired performance objective to determine the degree of success in achieving the goal.

In response performance analysis, measures are not cumulative. Each component is calculated separately, and the fractile percentile is its own set of data.

For each of the following analyses of time performance, ESCI used the data provided from RFFRA from their Zoll® Fire Records Management System. Typically, only those incidents with an emergency response priority (lights and sirens) are utilized for the analysis. However, the Zoll® software automatically populated this field in each incident, and there was no accurate method to determine which were emergency responses.

Call Processing Time Performance

Call processing time is the interval of time between a dispatcher receiving the call and the resources dispatched. For most incidents, the timestamps for receiving the 9-1-1 call and sending resources were the same value. Thus, ESCI was unable to determine the performance for this measure accurately.

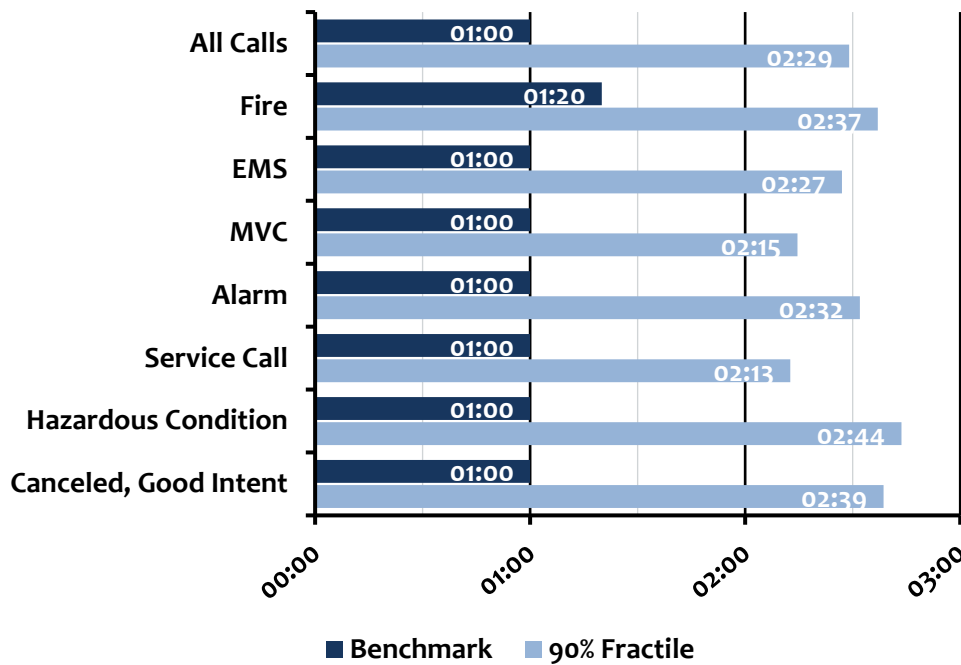
Turnout Time Performance

Turnout time is the time between unit notification of the incident and when they are responding. Turnout time is the first time-performance measure over which the fire department has direct control. For this measure, there is one applicable standard, as illustrated below.

Standard	Performance Target
NFPA 1710 <i>Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments</i> recommends	<u>Fire and Special Operations Incidents</u> 80 seconds at the 90 th percentile <u>All Other Incidents</u> 60 seconds at the 90 th percentile

As illustrated in the following figure, the overall turnout time performance for RFFRA is 2 minutes, 29 seconds. When evaluated by incident type, performance ranges from 2 minutes, 13 seconds for service call incidents, to 2 minutes, 44 seconds for hazardous condition incidents.

Figure 73: RFFRA Turnout Time Performance, 2017 to 2021



As this is the first measure under the direct control of the fire department, leadership should consider the various actions within this measure and determine if there are areas where process changes could improve performance. These factors may include:

- Systems that are used to notify personnel of an incident.
- Station design related to the movement of personnel from living quarters to the apparatus bay.
- Personnel adherence to department policies and moving with appropriate speed towards the apparatus.
- Time required to don protective equipment before responding.
- Moving equipment between apparatus when units are cross-staffed.
- Time from starting apparatus until radio system is capable of transmitting.

Travel Time Performance

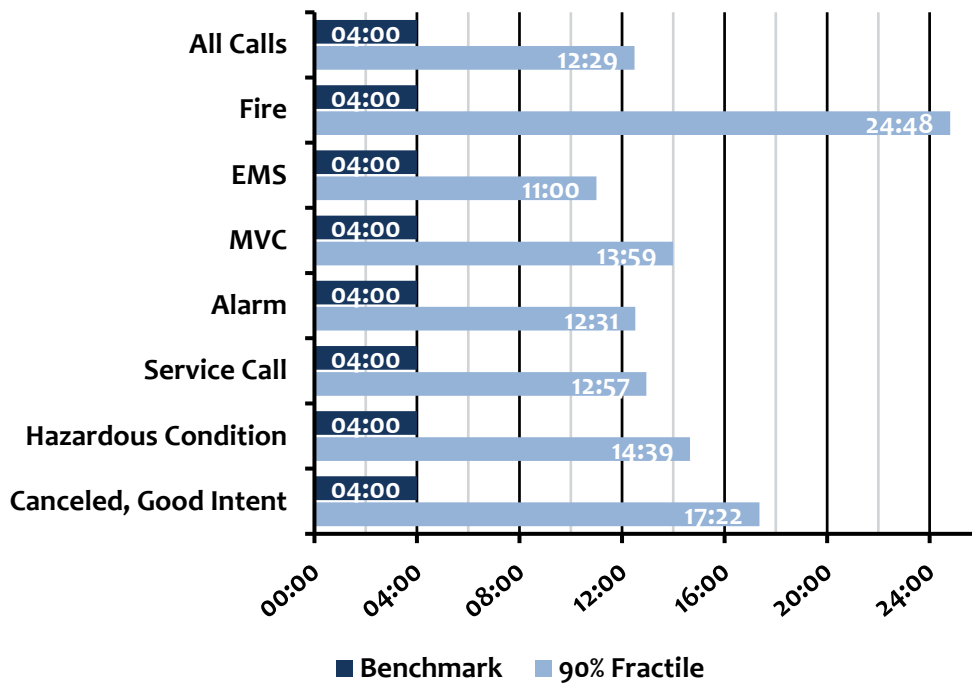
Travel time is the amount of time the responding unit spends on the road to the incident. The location of the incident compared to the location of the apparatus when dispatched impacts this time as well as, weather conditions, traffic conditions, etc.

There is one applicable standard for this measure, as illustrated below.

Standard	Performance Target
NFPA 1710 <i>Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments</i> recommends	<u>First Unit</u> 4 minutes at the 90 th percentile <u>Full Compliment</u> 8 minutes at the 90 th percentile

As illustrated in Figure 74, overall travel time performance for RFFRA is 12 minutes, 29 seconds. When evaluated by incident type, performance ranges from 11 minutes for emergency medical service incidents to 24 minutes, 48 seconds for fire incidents.

Figure 74: RFFRA Travel Time Performance, 2017 to 2021



Response Time Performance

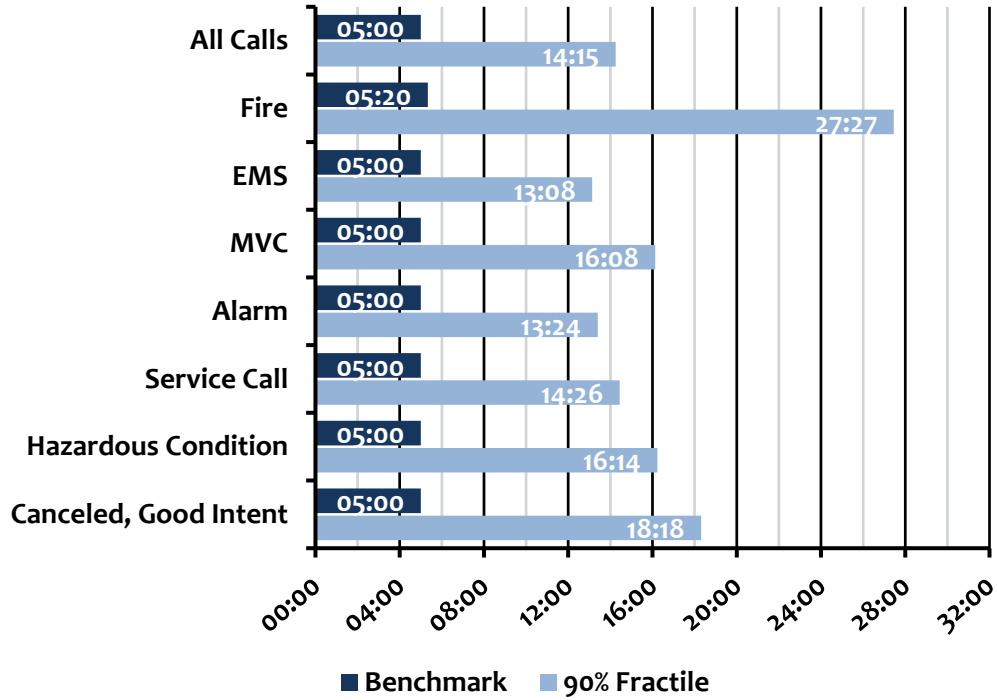
Response time is the most commonly used fire department response performance measure and is a combination of turnout time and travel time. While there are no specific standards for this measure, an expected performance may be achieved by combining the two individual component measures.

Component	Performance Target
Turnout Time	<u>Fire and Special Operations Incidents</u> 80 seconds at the 90 th percentile
	<u>All Other Incidents</u> 60 seconds at the 90 th percentile
Travel Time	4 minutes at the 90 th percentile
Combined	<u>Fire and Special Operations Incidents</u> 5 minutes, 20 seconds at the 90 th percentile
	<u>All Other Incidents</u> 5 Minutes at the 90 th percentile

As illustrated in the following figure, the overall response time performance for RFFRA is 14 minutes, 15 seconds. When analyzed by incident type, performance ranges from 13

minutes, 8 seconds for emergency medical service incidents to 27 minutes, 27 seconds for fire incidents.

Figure 75: RFFRA Response Time Performance, 2017 to 2021



Total Response Time Performance

Total response time is the amount of time from when the 911 call is answered until the dispatched unit arrives on the scene. As identified previously, the timestamps for 9-1-1 calls received and units dispatched were the same value. Thus, ESCI was unable to measure the performance for this measure accurately.

Resource Reliability

Another key factor that may impact RFFRA's ability to provide service within a timely manner is resource reliability. Resource reliability refers to the availability of resources within the community and involves the workload of units and incident concurrency.

Incident Concurrency

As incidents occur within the community, the number and the proximity of resources may significantly impact travel time and response time performance. When incidents occur simultaneously (incident concurrency), there may be insufficient resources available to respond, or units are responding from a more distant location.

As illustrated in the figure below, incident concurrency for RFFRA is not at a concerning level.

Figure 76: Incident Concurrency, 2017 to 2021

Concurrent Incidents	2017	2018	2019	2020	2021
Single Incident	32.10%	49.20%	72.90%	69.64%	66.51%
Two Incidents	47.02%	35.88%	22.15%	23.67%	25.96%
Three Incidents	16.35%	12.21%	4.61%	5.81%	5.73%
Four Incidents	3.70%	2.34%	0.35%	0.81%	1.43%
Five Incidents	0.50%	0.37%	0.00%	0.06%	0.26%
More than Five Incidents	0.33%	0.00%	0.00%	0.00%	0.10%

Workload (Unit Hour Utilization)

A simplistic measurement of workload would be the number of incidents per unit per year. However, this does not provide a quality analysis as the time assigned to incidents can vary greatly, from minutes to hours. A more accurate measure of workload is a sum of the amount of time spent on incidents within a given year compared to the total time the unit was in-service that year. This measure is referred to as unit hour utilization (UHU).

While there are limited formal performance measures to use as a target measure, in May 2016, Henrico County (VA) Division of Fire published an article after studying their department's EMS workload.¹⁵ As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for their department. The following figure is a summary of the findings as it relates to commitment factors.

Figure 77: Commitment Factors as Developed by Henrico County (VA), 2016

Factor	Indication	Description
16%-24%	Ideal Commitment Range	Personnel can maintain training requirements and physical fitness and can consistently achieve response time benchmarks. Units are available to the community more than 75% of the day.
25%	System Stress	Community availability and unit sustainability are not questioned. First-due units respond to their assigned community 75% of the time, and response benchmarks are rarely missed.
26%-29%	Evaluation Range	The community served will experience delayed incident responses. Just under 30% of the day, first-due ambulances are unavailable; thus, neighboring responders will likely exceed goals.
30%	"Line in the Sand"	Not Sustainable: Commitment Threshold—the community has less than a 70% chance of timely emergency service, and immediate relief is vital. Personnel assigned to units at or exceeding 30% 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.

¹⁵ How Busy Is Busy?; Retrieved from <https://www.fireengineering.com/articles/print/volume-169/issue-5/departments/fireems/how-busy-is-busy.html>

Before 2019, units were recorded with a different numbering system. For this reason, the following figure that illustrates the unit hour utilization for RFFRA only shows three years. As described, none of the units have a concerning workload.

Figure 78: RFFRA Unit Hour Utilization, 2019 to 2021, Ambulances

Unit	2019	2020	2021	Change Over Study Period
A241	1.45%	0.48%	0.47%	-0.98%
A242	0.08%	0.17%	0.31%	0.23%
A245	1.36%	1.41%	1.67%	0.31%
A345	0.38%	0.05%	0.15%	-0.23%
A41	6.92%	5.46%	5.85%	-1.06%
A42	2.67%	4.90%	6.60%	3.93%
A45	4.91%	4.18%	5.30%	0.38%

Figure 79: RFFRA Unit Hour Utilization, 2019 to 2021, Brush Units

Unit	2019	2020	2021	Change Over Study Period
B41	0.18%	0.14%	0.64%	0.46%
B42	0.16%	0.14%	1.80%	1.64%
B43	0.00%	0.01%	0.01%	0.01%
B44	0.02%	0.02%	0.00%	-0.02%
B45	0.01%	0.01%	0.23%	0.22%

Figure 80: RFFRA Unit Hour Utilization, 2019 to 2021, Officers

Unit	2019	2020	2021	Change Over Study Period
BAT4	0.00%	2.23%	7.87%	7.87%
C40	0.39%	0.28%	0.60%	0.21%
C41	1.69%	2.78%	2.54%	0.85%
C42	3.19%	2.44%	1.24%	-1.95%
C45	5.01%	2.28%	0.65%	-4.37%

Figure 81: RFFRA Unit Hour Utilization, 2019 to 2021, Engines

Unit	2019	2020	2021	Change Over Study Period
E242	0.04%	0.53%	0.52%	0.48%
E245	0.07%	0.38%	0.20%	0.12%
E41	1.25%	1.79%	2.18%	0.93%
E42	1.47%	1.96%	1.66%	0.18%
E43	0.05%	0.00%	0.01%	-0.04%
E44	0.00%	0.01%	0.06%	0.06%
E45	2.44%	3.71%	5.79%	3.36%

Figure 82: RFFRA Unit Hour Utilization, 2019 to 2021, Ladders

Unit	2019	2020	2021	Change Over Study Period
L41	0.10%	0.05%	0.22%	0.12%
L45	1.31%	1.40%	0.85%	-0.45%

Figure 83: RFFRA Unit Hour Utilization, 2019 to 2021, Miscellaneous

Unit	2019	2020	2021	Change Over Study Period
POV	1.38%	0.96%	1.55%	0.17%
R41	0.40%	0.38%	0.00%	-0.40%
T41	0.20%	0.51%	0.17%	-0.03%
T42	0.16%	0.12%	0.15%	0.00%
U45	0.48%	0.01%	0.05%	-0.43%
POV	1.38%	0.96%	1.55%	0.17%

Resource Concentration Analysis

Each of the prior response time measures provided a view specifically associated with the arrival of the first unit to the incident scene. Arriving at an incident quickly and safely is essential. Nevertheless, safe mitigation of the incident requires the arrival of sufficient resources within a timeframe. The necessary resources are called the ERF (Effective Response Force). The ERF specifies the adequate personnel and resources to arrive on the scene early enough to safely control a fire or mitigate other emergencies before substantial damage, injury, or loss of life. The following figure illustrates the ERF recommended through standards such as NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* and the Commission on Fire Accreditation (CFAI) *Standards of Cover*, 6th Edition.

Figure 84: ERF Recommendations

Functions/Task	Single-Family Residence (2,000 SF)	Open Air Strip Shopping Center (13,000–196,000 SF)	3-Story Garden Apartment (1,200 SF)
Command	1	2	2
Apparatus Operator	1	2	2
Handlines (2 members each)	4	6	6
Support Members	2	3	3
Victim Search and Rescue team	2	4	4
Ground Ladders/Ventilation	2	4	4
Aerial Device Operator (if ladder used)	(1)	(1)	(1)
Initial Rapid Intervention Team	4	4	4
Initial Medical Care Component	N/A	2	2
Total	16 (17)	27 (28)	27 (28)

As illustrated in the figures below, due to the spread-out nature of the service area, it is challenging for RFFRA to assemble an effective response force within an 8-minute travel time.

Figure 85: RFFRA Effective Response Force, 8-Minute Travel

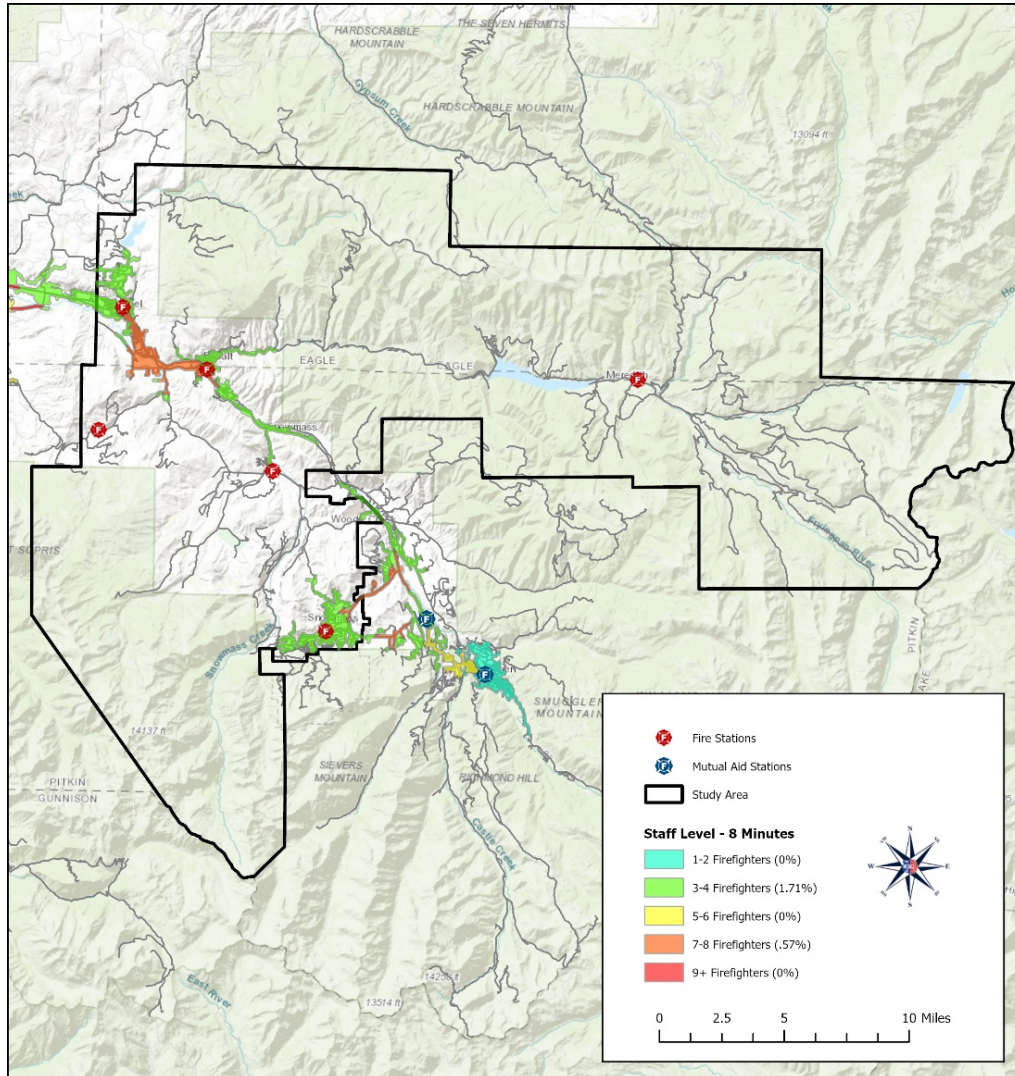
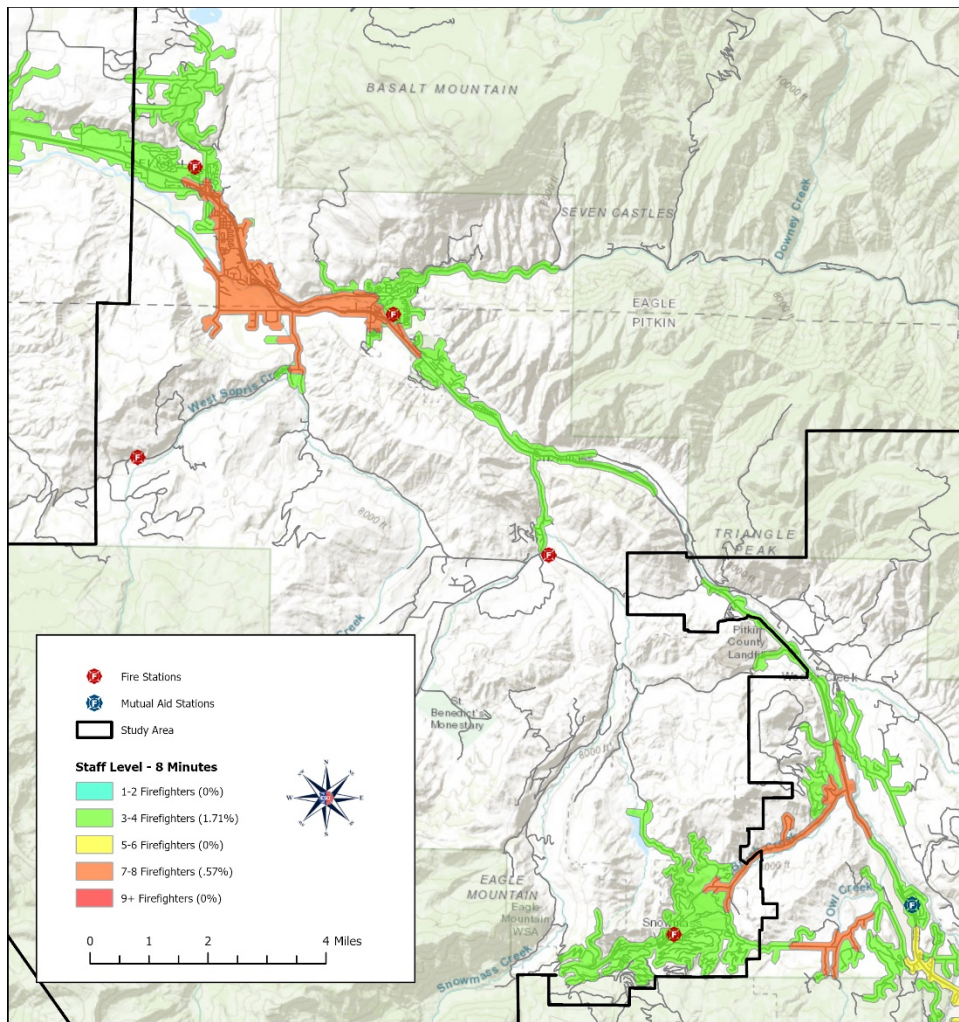


Figure 86: RFFRA Effective Response Force, 8-Minute Travel (Focus on Core Area)



Mutual and Automatic Aid Systems

Agencies often enter into agreements that benefit their community and the surrounding communities. These provide circumstances where units and personnel from other agencies respond to the jurisdiction to assist in providing needed resources to mitigate a given incident. The two types of agreements are mutual aid and automatic aid, and both are an integral part of emergency operations. Mutual aid agreements generally include the provision of units and resources only when requested by the incident commander from the agency receiving mutual aid. In contrast, automatic aid agreements provide units and resources through a predefined matrix, which includes aid agency units and personnel in the initial dispatch to the incident concurrently with the requesting agency units and personnel. The following figure illustrates the agreements currently in place with RFFRA.

Figure 87: RFFRA Aid Agreements

Agency	Agreement Type
Carbondale & Rural Fire Protection District Station 81	Automatic Mutual
Aspen Fire Protection District Station 61 and Station 62	Automatic Mutual

The following figure illustrates the use of the aid agreements over the study period.

Figure 88: Mutual and Automatic Aid Utilization

Description	2017	2018	2019	2020	2021
Mutual Aid Given	91	116	45	40	43
Mutual Aid Received	14	20	6	7	7
Automatic Aid Given	31	32	13	5	12
Automatic Aid Received	8	11	6	1	6

EMS SUPPORT AND SYSTEM OVERSIGHT

The Emergency Medical Services and System Oversight component summarizes the agency's services relating to pre-hospital medical care. ESCI used focused interviews with internal and external stakeholders and the EMS survey to develop a comprehensive perspective of current and future EMS needs throughout the RFFRA.

As with most fire departments, medical emergencies account for a majority of the calls to which RFFRA responds. One of the goals of a fire department is to provide the best possible care to its citizens in a timely and effective manner. One element that makes up an effective and efficient EMS program is integrating the EMS system with the community's overall health care system. NFPA 450: *Guide for Emergency Medical Services & Systems* provides a technical reference to addressing the multiple elements of emergency medical systems and will be used where applicable in this section of the report.

Current State

RFFRA functions as a fire-based advanced life support (ALS) emergency medical services (EMS) response system licensed through Pitkin County. The Authority staffs three ALS ambulances daily. RFFRA strives to maintain ALS providers on all ambulances. In very rare circumstances, like multiple concurrent incidents, does an RFFRA ambulance not have at least one ALS provider. Since two of the three fire stations are cross staffed and Station 45 has two crews, with at least two ALS providers, fire suppression units typically are ALS. RFFRA has established a minimum number of ALS providers for each station daily as part of their staffing plan. This staffing plan is not uncommon in the region. The fire-based system is a common system utilized across the United States and is growing in usage. The advantage of the fire-based system is that RFFRA does not have to rely on other agencies for initial first response and/or subsequent transport.

Emergency medical calls accounted for 48.6% of the calls for service to which RFFRA responded during the calendar years 2107 to 2020. This rate is low compared to other agencies across the United States which is normally 70%.¹⁶

Medical Control and Oversight

The Deputy Chief of Operations manages EMS oversight for RFFRA. RFFRA relies on local, regional, and state regulations for guidance. The RFFRA system is compliant with

¹⁶ "Fire Trends Report: Number of EMS calls vs. Fire Calls." <https://www.eso.com/blog/ems-calls-vs-fire-calls/>

Colorado Code of Regulations 6 CCR 1015-3 Chapters 1 through 4. The Deputy Chief of Operations is responsible for administration and providing operational duties. Doing this can cause disruptions in timelines for the completion of required and necessary tasks.

RFFRA utilizes a licensed physician, Dr. Joseph C Livengood, to serve as the Medical Director for the agency. The Medical Director serves as the authority for RFFRA to provide emergency medical response. Medical protocols are used for guidance. The Medical Director participates in quality assurance reviews and conducts regular interactions with RFFRA crews.

Regional partners provide further oversight. RFFRA is part of the Central Mountains Regional Emergency Medical Trauma Advisory Council (CMRETAC), which has a Regional Medical Director. There is also an Intergovernmental Agreement (IGA) among the six counties in the CMRETAC. It was last updated on October 15, 2021. The RFFRA Deputy Chief of Operations currently serves on the CMRETAC Executive Board as Treasurer and the CMRETAC Board of Directors as a voting member for Pitkin County.

Colorado State oversight is provided by requiring EMS providers to have either a certificate, certification, or license from the Colorado Department of Public Health and Environment (CDPHE) Emergency Medical and Trauma Services (EMTS) branch. The RFFRA Deputy Chief of Operations is appointed to the State Emergency Medical Trauma Advisory Council (SEMTAC).

Quality Management/Quality Improvement

RFFRA has a robust formal quality management (QM) program that requires the continued review of its medical responses. This management program identifies improvement areas, has established criteria for system performance, and identified objectives for measurement. RFFRA utilizes a QM steering committee and two tiers of report reviews. A QM steering committee can help maintain an objective assessment of system performance. The first tier of review includes the following types of reports:

- Death
- Non-Compliance with Guideline/Protocol
- Documentation Deficiency
- Full Trauma Team Activations Criteria Met
- Trauma Under-Activation
- EKG Transmission

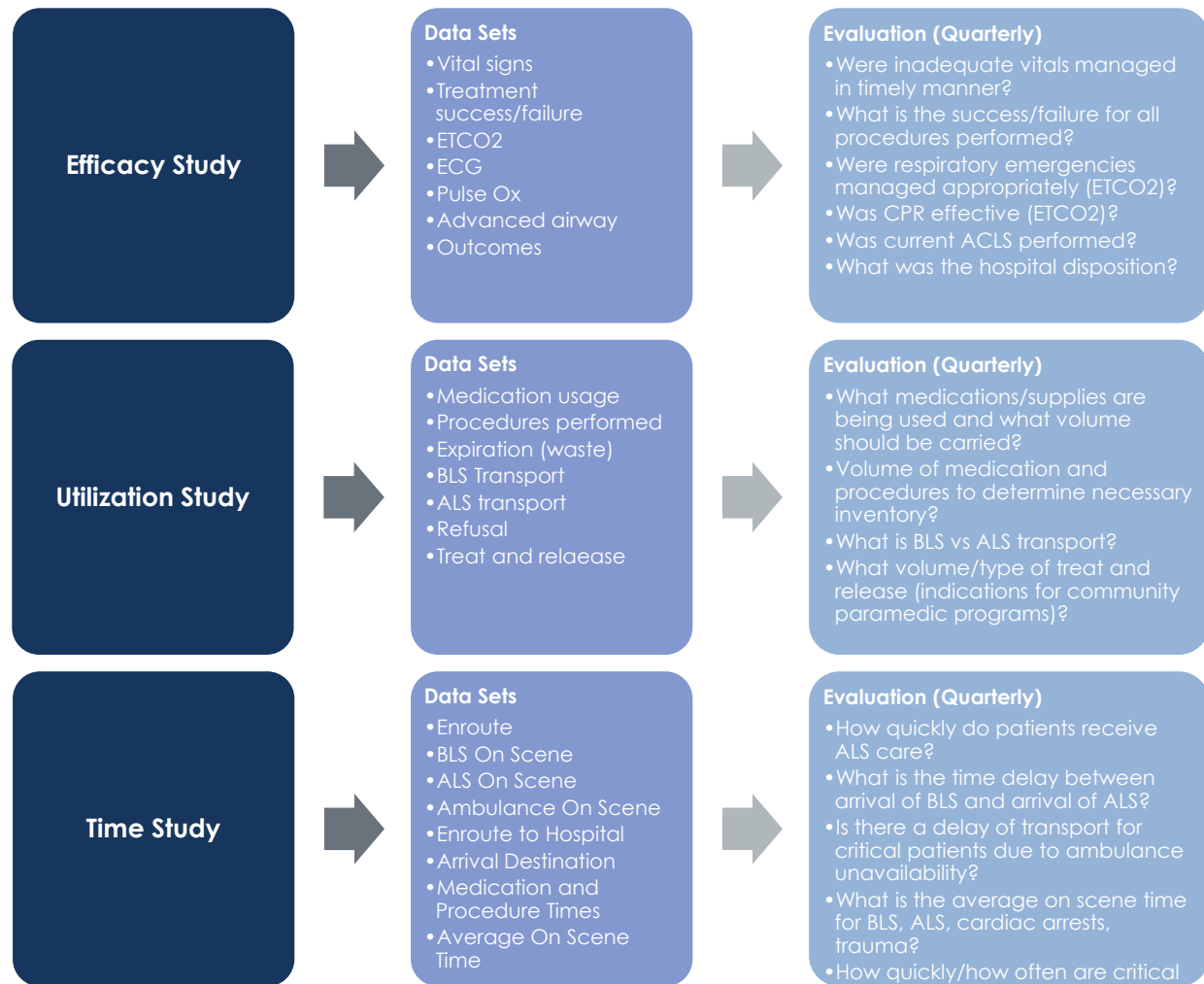
- Stroke Symptoms
- Waivered Items

The second tier of review involves reports that are forwarded to the committee after the first-tier review, a request from a hospital or agency, trending issues with a provider, or a provider or authority request. An algorithm is provided as part of Administrative Guideline (AG) 18.1 to help delineate the flow of reviews. A review of administrative guidelines relating to the QM process reveals that the guidelines have not been updated since the recent changes in program administration have taken place. RFFRA should update the administrative guidelines to reflect the current practices and titles of those involved.

RFFRA could benefit from an integrated quality management/quality improvement program. ESCI recommends that RFFRA establish a thorough internal retrospective data review and a corresponding quality improvement (QI) program. One individual should manage this program for consistency and expand as the organization grows. The program should be divided into three sections. The first is a time study looking at areas to improve initial response. The second is an efficacy study evaluating patient care related to national standards and best practices. The third area of evaluation is a utilization study. This study looks at opportunities for improved efficiency, inventory control, and corresponding fiscal responsibility.

Examples of a structured QM/QI program are outlined in the following figure.

Figure 89: Data Set and Quality Management/Improvement Criteria



Record Management and Data Collection

RFFRA utilizes the Zoll® software for electronic patient care reporting (ePCR) and documentation. This software allows for easy reporting and data collection. Furthermore, it is compliant with local, state, and national required reporting requirements. The RFFRA reporting software is not integrated with the Pitkin County Regional Emergency Dispatch Center (PCREDC) Computer Aided Dispatch (CAD). RFFRA has a robust and detailed patient care reporting and documenting system based on the fact they transport as part of their daily operations. RFFRA has an ePCR and FireRMS integration and workflow established. After the ePCR is reviewed for accuracy and completeness within the established workflow, it writes to the FireRMS database.

Another component related to the data is the ability to integrate with local hospitals through a health information exchange (HIE). This type of interface provides the hospital with the patient care report directly into their electronic health record and includes the actual electronic data. The benefit to the EMS agency is receiving back from the hospital various information points such as admitting diagnosis, lab values, discharge diagnosis, etc. RFFRA could see increased efficiency through Health Information Exchange systems by the ability to collect and share patient and billing information. This has been explored with the Quality Health Network (QHN) Health Information Exchange (HIE), but a contract has not been signed. RFFRA should seek to establish this process.

EMS Training and Skills Evaluation

The Authority is recognized by the Colorado Department of Public Health and Environment (CDPHE) Emergency Medical and Trauma Services (EMTS) branch as an Education Group at the Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), EMT-Intermediate, and Paramedic levels. The Authority is recognized as an Education Center at the EMR level. RFFRA documents clinical skills for their paramedics and EMTs and maintains them electronically. Because RFFRA is responsible for transport services, they tend to monitor and document more specific measurable outcomes and skills for their members. This includes advanced skills and success rates, e.g., intubation, intravenous access attempts, and medication administration.

The Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) determined it was necessary to define airway competency for paramedic programs throughout the country. This document is not a standard; instead, it is a recommendation to help programs define and obtain airway competency for their students.

CoAEMSP has established that paramedic students should demonstrate competency by mastering the following: "The paramedic student should have no fewer than fifty (50) attempts at airway management across all age levels (neonate, infant, pediatric, and adult). And, to demonstrate airway competency, the student should be 100% successful in their last twenty (20) attempts at airway management."

The recommendations applied to intubations can also be used for intravenous vascular access. ESCI suggests that RFFRA consider the competency definition established by CoAEMSP and establish performance measures for system paramedics that account for

the fact that paramedics are performing these procedures in the field as opposed to the controlled conditions in which paramedic students perform.

RFFRA provides monthly continuing medical education (CME). Members also have access to on-demand CME, that is, Commission on Accreditation for Prehospital Continuing Education (CAPCE) accredited. RFFRA should ensure a balanced EMS education program is offered to its members. One portion of the program should reflect statistical data to illustrate areas of needed improvement. This looks for areas of improvement or opportunities (focused CE) for additional levels of patient care and tailoring the continuing education process to local needs. The second portion should be to fulfill the continuing education requirements for EMS certifications. ESCI recommends that RFFRA establish a training calendar that assigns specific monthly training to a particular purpose and concentration on a combined system.

The following figure is an abbreviated example of a balanced EMS CE training program:

Figure 90: Example of Balanced EMS Training Schedule

January	February	March	April	May	June
Recert (OB/Peds)	Recert (Cardiac)	Recert (Trauma)	Focused CE	Recert (Medical)	Multi-agency MCI
July	August	September	October	November	December
Recert (Environmental)	Focused CE	Recert (BLS, ACLS, PALS as needed)	Recert (Respiratory)	Recert (Behavioral)	Focused CE

A balanced training schedule reflects the actual responses by RFFRA, provides a structure for recertification, and assists staff with a yearly view to manage vacation or other leave.

Management should monitor training requirements for compliance. Members who recertify utilizing NREMT at the ALS provider level are reviewed at the training officer and medical director levels and must meet with the medical director during the recertification cycle. Members who recertify at the BLS provider level are reviewed at the medical director level and must meet with the training officer during the recertification cycle. Members who recertify directly with the CDPHE EMTs are reviewed at the training officer level and must meet with the training officer during the recertification cycle. All training is tracked through Vector Solutions®. Training outside the Authority can also be entered and utilized for both NREMT and CDPHE EMT recertification.

RFFRA has a Field Training Evaluation Program (FTEP) in place. There are many advantages to having an FTEP program in place, which include:

- Training and clearance of new employees and new paramedics.
- Delivery of skills training and evaluations to existing paramedics.
- Direct observation of clinical decision-making and patient care provided.
- Retraining of paramedics when there are areas identified where improvement is needed.

Logistical Support Services

A critical component of providing emergency medical services is the ability to provide crews with the appropriate equipment, supplies, and medications. Each of these requires a strong level of inventory control to ensure proper distribution and use. Crews inspect their apparatus at the beginning of every shift to ensure all required supplies and equipment are at appropriate inventory levels and functional.

While there is a variety of supplies and equipment, a greater portion of funding is directed towards those items that are capital purchases. The figure below provides a listing of the various capital equipment that is used for providing emergency medical care.

Figure 91: EMS Capital Logistics Supplies

Description	Quantity
Lifepack Cardiac Monitor (with 12-lead, SpO ₂ , etCO ₂ , and blood pressure monitoring)	7
Stryker Power Pro Stretcher	6
Stryker Performance Load Stretcher	3
Automated External Defibrillator (AED)	30
Lucas Compression Device	3

RFFRA maintains service agreements with an authorized representative of each type of equipment manufacturer. Medical supplies, essentially those non-capital items that are either reusable (i.e., long spine boards, splints, etc.) or single-patient use (i.e., bandages, medications, etc.), are provided throughout the service area in supply rooms at the stations.

One category of medication requires a much higher focus on inventory control and documentation of use, waste, etc. This category is controlled substances—those medications regulated explicitly by the Drug Enforcement Agency, including morphine, fentanyl, valium, versed, and others. RFFRA has a process to ensure inventory control of these types of medications. All controlled substances are stored in a MedVault®. All controlled substance inventory is tracked in Vector Solutions® Controlled Substances. All controlled substances administered or wasted are also tracked in Vector Solutions® Controlled Substances. Audits are conducted regularly.

Each unit that is advanced life support (ALS) carries a limited quantity of controlled substances for providing care to the patients. Personnel complete a daily inventory at all locations where there are controlled substances at the beginning of each shift. If the controlled substance is used, the administering paramedic documents this in the patient care report and then has additional forms to complete to document the replacement number and the waste of any unused medication (waste must have a witness signature).

TRAINING PROGRAMS

A comprehensive training program is one of the most critical factors for helping to ensure the safe and effective provision of emergency services. This is especially true of organizations such as RFFRA, which provide a broad range of services. To ensure maximum effectiveness and safety in complex environments, firefighters and officers must acquire and maintain sufficient initial training, ongoing training, and continuing medical education (CME). Failure to provide necessary training endangers firefighters and citizens and exposes the fire department to liability. In addition, a well-trained workforce substantially contributes to better emergency incident outcomes and community services.

In the following section, ESCI has reviewed the various training practices and resources of RFFRA.

General Training Competencies

Newly hired firefighters must participate in probationary firefighting recruit training. The National Fire Protection Association (NFPA)—in its standard NFPA 1001 (Firefighter I and II)—identifies the minimum training requirements that can serve as the basis for entry-level firefighters. The NFPA recommends other standards that address initial and ongoing training for firefighters and officers in a variety of specific topics.

Following initial training, firefighters (i.e., all emergency services personnel) should actively participate in ongoing training that includes testing to ensure that practical skills and knowledge are maintained. In its Fire & Emergency Service Self-Assessment Manual (8th edition), the Commission on Fire Accreditation International (CFAI) addresses “Training and Competency” and lists a number of performance indicators under the headings of training and education program requirements, performance, and resources. Some of these competencies include the following:

- The organization has a process in place to identify training needs. The process identifies the tasks, activities, knowledge, skills, and abilities required to deal with anticipated emergency conditions.
- The agency's training program is consistent with the mission statement, goals, and objectives and meets its needs.
- The training program is consistent with legal requirements for performing mandatory training.

- The agency identifies minimum levels of training required for all positions in the organization.
- A command and staff development program encourages the pursuit of professional credentialing.
- A process is in place to ensure that personnel are appropriately trained.
- The agency provides a training schedule that meets the organization's needs.
- The agency evaluates individual and crew performance through validated and documented performance-based measurements.
- The agency analyzes student evaluations to determine the reliability of training conducted.
- The agency maintains a training records management system that meets recognized standards.
- Facilities and apparatus are provided to support the agency's all-hazards training needs. The agency has plans addressing any facilities and apparatus not available internally to complete training activities.
- The agency has instructional personnel with teaching qualifications and expertise to meet its needs.
- Instructional materials are current, support the training program, and are easily accessible.
- The agency has a process for purchasing, developing, or modifying the existing curriculum to meet its needs.
- Equipment utilized for training is maintained correctly following the agency's operational procedures. The agency makes training equipment readily accessible to instructional personnel.
- The agency maintains a current inventory of all training equipment and resources.
- A selection process is in place for training and educational resource materials.
- Training materials are evaluated at least annually to reflect current practices and meet the needs of the agency.

Furthermore, the Insurance Service Organization (ISO) requires detailed hours of specific training as part of their fire department ranking. The following is a summary of the annual ISO-required training hours for each firefighter.

- Facilities Training: 18 Hours
- Company Training: 192 Hours
- Officer Development Training: 12 Hours

- New Driver Training: 60 Hours
- Driver Continuing Education: 12 Hours
- Hazardous Materials Training: 6 Hours
- New Recruit Training: 240 Hours
- Pre-fire Planning: Annual Review

Even though the Insurance Service Organization (ISO) requires specific detailed required training for department personnel, training programs must go beyond simply fulfilling mandatory hours. Emergency services training administrators and instructors must ensure that firefighters, EMS personnel, and officers are not only competent but also self-confident in the variety of skills necessary to perform effectively in high-stress situations.

Incident Command System Training

RFFRA uses the Incident Command System and requires all employees to be trained in the National Incident Management System (NIMS). RFFRA firefighters are required to complete NIMS 100, 200, 700, and 800. Officers are required to complete NIMS 300 within the first year. The Authority uses an accountability system for tracking members during emergency operations and should make sure they are compatible with the ultimate goal of one unified system-wide method of accountability.

Special Operations Training

RFFRA provides operations-level training in hazardous materials to all of its members. Additional training opportunities are offered for high-angle, ice, and swift water rescue. These topics are appropriate based on the hazards readily present in their jurisdiction and encountered frequently. Many of the RFFRA members are trained to the technician level in these rescue disciplines.

Wildland Firefighting Training

The RFFRA has significant risk when dealing with wildland fires. This has been evidenced through actual historical incidents and identified potential risks throughout the jurisdiction. The RFFRA training division makes a dedicated effort to provide training classes for wildland firefighting. The offered training includes Type I and II Firefighter, Engine Boss, Task Force Leader, line medics, and the S-212 Wildland Fire Chainsaw Operator course.

Each year RFFRA members are required to complete the arduous wildland pack test. The pack test is a job-related test of the capacity for demanding work. It consists of a 3-

mile hike with a 45-pound pack over level terrain. At 45 minutes on the test, the passing score approximates an aerobic fitness score of 45, the established standard for wildland firefighters. One opportunity the RFFRA could take advantage of is the frequent ability to deploy members as part of wildland operations through the Colorado Division of Fire Prevention and Protection. The experience gained through these deployments can be invaluable.

Training Administration and Delivery

An effectively functioning training program must be managed. An additional element of effective administration is the development of program guidance in the form of training planning, goals, and defined objectives. RFFRA has established goals and objectives. Management for the agency supports training, and it shows by the amount of training being conducted and coordinated throughout the year. This busy calendar of events can create challenges due to the geographical area, arranging for training evolutions outside first-due territories. Interviews with staff expressed concerns for additional support to ensure operational units get required and needed training. The 2020 ISO review showed that RFFRA earned only 15.63 of the 25 available credits for company training.

Vector Solutions® provides EMS training requirements. The EMS training is spread throughout the year to accomplish the required continuing education requirements for recertification of Advanced Cardiac Life Support, Pediatric Advanced Life Support, and Cardiopulmonary Resuscitation. Additional training includes advanced airway procedures and annual state waived training for rapid sequence intubation. Intubation training is a vital skill requiring refresher training. RFFRA should seek out opportunities through local hospitals to provide intubation training on live subjects. Additional requirements of the EMS Region, National Registry, Code of Colorado Regulations 6 CCR 1015-3, and local medical director and hospital are maintained.

Currently, RFFRA manages its training program with a Division Chief of Training. A budgeted training Lieutenant position assists; however, at the time of the site visit, the Lieutenant position was vacant. Based on the span of control in the training division and the sheer number of required training hours, RFFRA should consider operational shift officers designated as training liaisons to assist with consistent training delivery across the shifts. This approach is used across the country to accomplish training division goals and objectives. However, operational members tasked with additional administrative support functions must prioritize their daily, weekly, monthly, and yearly assignments.

Operational emergency functions and daily responses can interrupt or delay the accomplishment of these scheduled tasks.

RFFRA currently attends meetings for the Down Valley Training Consortium to try to regionalize training needs and delivery. The Down Valley Training Consortium consists of agencies from De Beque to Glenwood Springs on the I-70 corridor. These include De Beque Fire Department, Colorado River Fire Rescue, Glenwood Springs Fire Department, and Carbondale Fire Protection District. The consortium meets monthly to discuss training needs between the agencies, classes available, recent and upcoming changes from the Colorado Division of Fire Prevention and Control, and reservations for training facility use. The current cost is \$50 annually per operational member from each agency affiliated with the Consortium. The funds go towards hosting classes, facilitating training needs, purchasing training equipment, and sending members to classes. The Consortium's goal is to eventually hire a full-time Training Chief, who will liaison between all affiliated agencies and determine the training needs, schedule training classes, and assist with records management. Currently, Roaring Fork Fire Rescue Authority is not a part of the Consortium and should consider the benefits of membership in this regional training group.

RFFRA uses Vector Solutions® to manage the agency's training documentation and delivery of electronic needs. This allows for ease of tracking and scheduling of required ISO training hours. It is not a substitute, however, for the physical delivery of hands-on training. RFFRA employs the use of certified fire service instructors as needed.

Training Schedules

As with many fire departments, one of the challenges at RFFRA with conducting training sessions with on-duty firefighters is the necessity to maintain sufficient personnel and apparatus to ensure adequate response-emergency response capability during drills and classes. Furthermore, providing training for department volunteers is challenging based on their schedules and staff availability. Competency-based training sessions frequently occur at the agency despite these challenges. Not only do training programs ensure personnel have the quality knowledge, skills, and abilities necessary to deliver effective and efficient emergency services, but they have the added effect of improving employee morale. RFFRA utilizes both on-duty and off-duty training schedules to accomplish the required training hours set by ISO. RFFRA also schedules various night and weekend training for the volunteer members to attend and achieve their training requirements.

ESCI recommends that the RFFRA training be balanced in three areas: statistically based training reflecting current call volume, special team training, and re-certification course requirements. The use of heat maps and service demand listed in the *Service Delivery and Performance Section* of the report can aid in training program development for the types and frequency of incidents. Furthermore, the required ISO training requirements can be broken down and scheduled across the entire year to ensure compliance.

Training Facilities

The ability to train in a realistic environment is critical to developing and maintaining skills. The RFFRA has dedicated classrooms for fire and EMS training classes. These classrooms are of adequate size and have audio-visual capabilities. Outside of the lesson delivery and didactic lessons, hands-on practical training of skills is required.

Many of the skills necessary to be truly effective must be taught and practiced in a controlled environment allowing for skill development and ensuring firefighters are as safe as possible. Additionally, ISO requires the regular use of dedicated training locations to gain maximum credit for Public Protection Classification scoring. In the 2020 ISO review, RFFRA only received 19.60 credits of the available 35. RFFRA currently does not have designated drill grounds or buildings for fireground evolutions. The RFFRA has a training tower built into one of their fire stations, but it only provides limited ability and function for training evolutions. Furthermore, it is not designated as an appropriate facility to garner the required ISO credits for facility training and use. RFFRA should dedicate and build a training facility.

Currently, RFFRA must rely upon space at their fire stations and other publicly available locations. The use of these spaces is limited based upon availability at the time of need. Because the RFFRA is a resort community, the jurisdiction is packed with visitors many times of the year, and local areas used for training are filled with parked cars. The use of non-fire department locations (i.e., business parking lots) can negatively impact the operations of the respective businesses. The use of available public spaces does not allow consistency in conducting training evolutions as the availability may change daily or hourly.

Access to live fire training facilities comes from the use of neighboring departments' facilities. The use of the Carbondale facility only provides for Class B combustible burns. There is not a Class A level burn facility available. COVID 19 restrictions have made

training difficult. During site visit interviews and through the documentation provided, it is apparent that current training facilities for hands-on skill training are inadequate.

Training Record Keeping

Training records are maintained utilizing the Vector Solutions® records management system. The system is working well and should make the training division's ability to track and achieve ISO required documentation easy to achieve. One method RFFRA uses in addition to Vector Solutions® for training recordkeeping and guidance is task books for each rank. These task books allow for consistent and scripted training of individuals as they prepare for new roles and responsibilities. In 2020, RFFRA conducted 4,823 hours of training and had 80 members attend these hours. Of these hours, 40% were fire-related topics, 50% were EMS-related, and the remaining 10% were wildland and special operations topics.

Training Program Goals and Objectives

Each facet of the Authority requires established goals and objectives to ensure success. The RFFRA training program is no different. Without a dedicated functioning facility to provide daily, monthly, and annually training drills in simulated and live-fire training, they will struggle to ensure firefighters remain proficient in operating inside an Immediate Dangerous to Life and Health (IDLH) environment. Fire departments must ensure their organizations are prepared for these challenges. NFPA 1403, *Standard on Live Fire Training Evolutions*, and NFPA 14, *Standard on Facilities for Fire Training and Associated Props* provide guidance and direction for establishing ways to meet these needs.

Goals and objectives provide the foundation for an effective training program. Creating a training committee of dedicated employees passionate about department training may be a good source of goals and objectives. An analysis of the RFFRA ability to complete tasks and evolutions outlined in NFPA 1410, *Standard on Training for Emergency Scene Operations*, will provide the basic evaluation of where to begin. Furthermore, Post Incident Analysis (PIA) review can also provide much-needed information on weaknesses and gaps in service ability. Outlining the high-risk, low-frequency events that may occur or have occurred in the jurisdiction can often identify gaps. RFFRA can construct the training program to address the deficiencies once it identifies these gaps.

RFFRA will continue to have challenges providing adequate training as long as the staff is limited. The jurisdiction must determine the size of the team needed to accomplish this mission. This will require evaluating the established goal and objectives and the required

ISO training. It is important to consider joining with other fire agencies to share some of the responsibilities. The training lieutenant position was vacant during the ESCI site visit, but the testing process was underway. It seemed that a candidate would be selected and the position filled as soon as possible.

FIRE AND LIFE SAFETY PROGRAMS

Fire prevention should be the cornerstone for all activities performed by a fire department. The prevention of fire and loss of life, human suffering (injuries to civilians and firefighters), environmental harm, and property damage is the optimum return on investment for fire agencies. Proactive involvement in construction, code enforcement, educating the public to prevent destructive fires, and training the public to survive them is the best accomplishment of fire prevention.

Seven fundamental components together work to create an effective fire prevention program:

- Code enforcement activities
- New construction inspection and involvement
- General inspection program
- Fire and Life-Safety public education programs
- Fire investigation programs
- Pre-incident planning
- Statistical collection and analysis

Life Safety Code Enforcement & General Inspection Program

The most effective way to combat fires is to prevent them from occurring in the first place. A strong fire prevention program, based on locally identified risks and relevant codes and ordinances, reduces the loss of property, life, and the personal and community-wide disruption that accompanies a catastrophic fire. One part of an effective prevention program begins with reviewing new construction plans and inspections during the initial construction phase. This program continues through the building process and into regular inspections throughout the jurisdiction's area. This process may continue beyond structures and into the urban-wildland interface in some organizations.

The figure below outlines some of the fire prevention activities and the increase over the past two years.

Figure 92: Fire Prevention Activities, 2020-2021

Type of Activity	2020	2021	Increase
Inspections- General Fire & Life Safety	272	336	23.53%
Pre-Construction Reviews & Referrals	137	206	50.36%
Knox Installs	19	27	42.11%
School Inspections	10	10	0%
Home Wildfire Risk Assessment	11	18	63.64%
Child Passenger Safety Seat Installs	15	18	20%
Fire Extinguisher Classes (online)	4	8	100%
Fire Investigations Observations	4	9	125%

Fire Code Adoption

RFFRA has adopted the 2015 International Fire Codes (IFC). Furthermore, they have established municipal codes for Snowmass Village and the Town of Basalt. Snowmass Village has adopted the 2015 International Residential Code (IRC). The RFFRA jurisdiction covers areas in Eagle County, Pitkin County, the Town of Basalt, and the Town of Snowmass Village. The Fire Marshal is authorized to issue operational permits under an established fee schedule in these areas of the jurisdiction.

Fire code enforcement and administration are the responsibility of the Deputy Chief of Prevention/Fire Marshal. He is assisted by a Deputy Fire Marshal and three other staff. All RFFRA prevention staff are trained to meet or exceed NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*. This standard identifies the minimum job performance requirements (JPRs) for fire inspectors and plans examiners. A summary of the staffing assigned to fire prevention is provided in the following figure.

Figure 93: RFFRA Fire Prevention Staffing

Title	Number
Deputy Chief Prevention/Fire Marshal	1
Deputy Fire Marshal	1
Assistant Fire Marshal Inspectors	2
Fire Inspector	1
Total	5

Fire Inspectors primarily focus their inspections on new growth and occupancies as well as the required annual inspections per NFPA and the IFC. Routine annual inspections are completed based on staff availability or a request basis due to reported violations. The inspection program addresses the following categories.

- Liquor License
- Certificate of Occupancy
- Certificate of Completion (rough-ins & finals)
- Assembly/Business Occupancy Life Safety
- Tent, Food Truck
- Kitchen Hoods
- Hot Work Sites
- Temporary Heat
- Home Ignition Wildfire Assessment

Currently, there are many existing occupancies in the RFFRA jurisdiction that require inspections in a timely fashion, according to the Insurance Service Office (ISO).

New Construction Inspection and Plans Review Involvement

In the past ten years, over 547,846 square feet of mixed-use development have been completed. Plan reviews and permitting for new development or building are the responsibility of the RFFRA prevention program. Once constructed, the Authority will have the responsibility to protect the structure and building. As a result, the RFFRA has an interest and fiduciary duty to ensure that development and building construction meet adopted fire and life safety codes.

RFFRA plan review is completed on new construction, proposed occupancy changes, and proposed tenant improvements only if permitted. Additionally, a plan review is performed on all permitted fire and life safety plans.

A fire inspector completes the final approval of new construction, which is required to issue Certificates of Occupancy (COs). RFFRA charges for annual/license inspections and plan reviews per a fee schedule. Inspectors perform existing occupancy inspections for all classifications. The complete fire-rescue fee schedule, including fire prevention fees, can be found in *Appendix C*.

RFFRA has seen a significant rise in population, coinciding with the increase in residential communities built within the last ten years. The base of Snowmass Village currently has 442,285 square feet of projects approved for construction. Of this newly approved construction, 20 residential properties average 5,000 square feet each. All new single-family homes in Snowmass Village require automatic fire suppression systems. The surrounding area also has 200,000 square feet of site-specific construction approved. This project, known as the Brush Creek Road Snowmass Center Project, contains 74 home sites, with 64 being multi-family residences.

Consequently, with the increase in residential building permits being issued, and the need for commercial occupancies to follow, RFFRA has seen an upturn in requested fire plans review. As commercial properties get approved and development begins, RFFRA has increased requests for new commercial fire inspections.

A cursory view of the approved construction plans reveals a significant life safety hazard and fire load challenge for the on-duty staff of eleven firefighters. That staffing is sometimes as low as six firefighters, a response force that likely will be overwhelmed for even minor fires in these buildings.

A small sample of the newly approved construction for Snowmass Village is listed in the following figure.

Figure 94: Snowmass Village New Construction Sample



The Town of Basalt and Pitkin County are also experiencing significant growth and construction. These types of occupancies continue to evolve and grow, causing challenges for the small response force used daily by RFFRA. Projects totaling over one million square feet are already planned and underway.

A small sample of the newly approved construction for Basalt and Pitkin County is listed in the figure below.

Figure 95: Basalt and Pitkin County New Construction Sample



Based on growth and the number of plans reviews and inspections, RFFRA should consider the addition of another fire inspector.

Fire and Life-Safety Public Education Programs

The purpose of public fire and life safety education is to minimize the number of emergencies and train the community in the appropriate actions to take should an emergency occur. Fire and life safety education provides the best chance for minimizing the effects of fire, injury, and illness on the community. Additionally, public education can correlate to firefighter safety. For example, arriving at the scene of a house fire, the first arriving Fire Officer finds that the residents have all evacuated safely and are accounted for in a meeting location. Their actions have accomplished the fire

department's first priority, life safety, and the firefighters can concentrate on fire suppression.

Public fire and life safety can be simple or an in-depth program covering various topics. Example topics include fire extinguisher training, smoke detector education and installation, CPR, first aid courses, fall prevention, home fire safety, fire prevention materials in several languages, fire brigade training for businesses, etc. Even the largest departments cannot cover all fire and life safety topics, so a fire department needs to decide where to direct resources based on local needs.

Fire Safety and Public Education in the RFFRA is conducted by an inspector tasked to provide public education and information services. The public education services that RFFRA offers are as follows:

- Exit drills in the home (EDITH) Information
- Smoke detector program
- Fire Safety (electrical and cooking)
- Injury prevention (burns)
- Fire extinguisher use
- Elderly care and safety on an as-needed basis
- Curriculum used in schools—Handouts for age-appropriate groups
- CPR courses and blood pressure (BP) checks—are community-based, and citizens are welcome to stop by any RFFRA station for a BP check
- Fire safety publications are available, including bilingual information is available

According to the 2020 ISO report for the jurisdiction, only 5 of the available 10 credits for Public Fire Safety Educators Qualification and Training were received by RFFRA.

Establishing a Fire and Life Safety Educator designation following NFPA 1035, *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter Program Manager Professional Qualifications* would provide additional creditability to fire safety prevention and public education efforts and garner additional ISO points. This standard identifies the minimum job performance requirements (JPRs) for public fire and life safety educators, public information officers, youth firesetter intervention specialists, and youth firesetter program managers. One member of the fire and life safety staff holds the Colorado Public Fire and Life Safety Educator certification, but it is unclear if ISO recognized that certification.

Fire Investigation Programs

According to NFPA 921, *Guide for Fire and Explosion Investigations* there are four determinations when investigating the cause of a fire.

- Accidental fire cause
- Natural fire cause
- Incendiary fire cause
- Undetermined fire cause

Accurately determining the cause of fires often provides clues to preventing future incidents. Identifying fires that are set intentionally (incendiary) and identifying and prosecuting the responsible parties can prevent additional fires. If the cause of a fire is natural or accidental, it is also of great value to know and understand its origin. It is valuable to identify where to direct fire prevention and public education efforts to reduce or prevent re-occurrences.

RFFRA has four people responsible for fire investigations. These four provide fire origin and cause determination and provide the investigation only. Although they are not certified investigators, they have access to certified investigators if needed. During the RFFRA 2020 ISO review, no credits were earned for Fire Investigator Certification and Training. There are six credits available for this category. RFFRA should invest in certifying investigators in accordance with NFPA 1730, *Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*, and NFPA 921, *Guide for Fire and Explosion Investigations*. NFPA 921 sets the bar for scientific-based investigation and analysis of fire and explosion incidents. Referenced in the field, in training, and in court, it is the foremost guide for rendering accurate opinions as to the incident origin, cause, responsibility, and prevention. It is intended for use by both public sector employees who are responsible for fire investigation and private sector professionals who conduct investigations for insurance companies or litigation purposes. The local law enforcement departments provide support for enforcement and prosecution. The Colorado Bureau of Investigation is also available if needed.

RFFRA has a process for handling juvenile suspects in conjunction with local law enforcement. RFFRA investigators have a positive working relationship with the different law enforcement agencies of the jurisdiction. Fire scene control has been established in RFFRA's guidelines, and the Fire Investigator uses a camera to document all fire scenes

in conjunction with law enforcement. All investigators have the appropriate equipment to use on the scene and with more budget for the fiscal year 2022.

Pre-incident Planning

Pre-incident plans give firefighters information on specific structures and processes and are a tool for firefighters to engage in strategy and tactical discussions before an emergency occurs. Pre-incident planning involves evaluating protection systems, building construction, contents, and operating procedures that may influence emergency operations.

A firefighter typically works in an alien environment of heat, darkness, confusion, and extreme danger. Often, a firefighter's first visit to a building is when they are summoned to an emergency at the facility, the very time that the internal environment of the structure may be at its worst. Visibility is likely to be zero due to smoke, contrary to Hollywood's portrayal of the inside of a building on fire. A lack of familiarity with the layout of a structure can easily cause a firefighter to become disoriented and subsequently suffer injury.

It is essential that firefighters and command staff have accurate information readily at hand to identify hazards, direct tactical operations, and understand the proper use of built-in fire-resistive features of structures. This is accomplished by routinely touring structures, developing pre-incident plans, and conducting tactical exercises—either on-site or tabletop. The standard outlined in NFPA 1620: *Standard for Pre-Incident Planning* guides the development of pre-incident programs. Pre-incident plans need to be current to have value. Pre-plans should be distributed to all mutual/automatic aid partners.

RFFRA utilizes a key-box entry program by Knox®. This provides an external lockbox for commercial and public buildings. It contains the master key or keys to the structure and can only be accessed by the fire department.

An ideal pre-incident planning system uses standardized forms and protocols. Data is collected in a consistent format and presented in a manner that permits commanders and emergency workers to retrieve data quickly and easily. All require consistent methods for collection, verification, storage, presentation, and update of emergency plans.

RFFRA operations personnel perform pre-incident plans for occupancies within their response zones. RFFRA utilizes First Due®. First Due® is a mobile platform that quickly

collects critical occupancy and geospatial data in the field with a data collection and mapping platform. It is intuitive and available on any device for pre-planning in minutes. It allows for NFPA and custom map markers, building systems and structural Information, critical systems such as alarm panels, shutoffs and fire systems, location of hazardous materials, and with attachments such as policies and plans.

Statistical Collection and Analysis

The U.S. Fire Administration states that "A compelling reason for documenting fire and EMS incidents is a legal requirement." Insurance companies, victims, regulatory agencies, and others may require documentation of an incident's facts.

Incident reports of fire responses can yield a bevy of insight. Proffering elementary data in fire department annual reports is common. However, the details can yield information on the origin of fires, how people are injured, and the geographic locations where events are occurring in a jurisdiction, among other evidence.

RFFRA utilizes Zoll® as its Emergency Reporting System for recording fire incident data in compliance with NFIRS. Analysis of response data is not conducted or used for planning. An in-depth review of data collected can yield valuable information regarding prevention practices and procedures and the success of current initiatives. This should occur annually at a minimum but is better reviewed quarterly to identify trends. Reports can be made depending on the request and distributed as requested.

Planning and Risk Reduction

A Community Risk Reduction (CRR) plan begins with an overall five-step process that is the foundation of the comprehensive fire and life safety strategy. According to the U.S. Fire Administration, fire departments are uniquely positioned to know their communities better than most organizations. Firefighters and emergency medical services responders see firsthand how people live and their needs.¹⁷

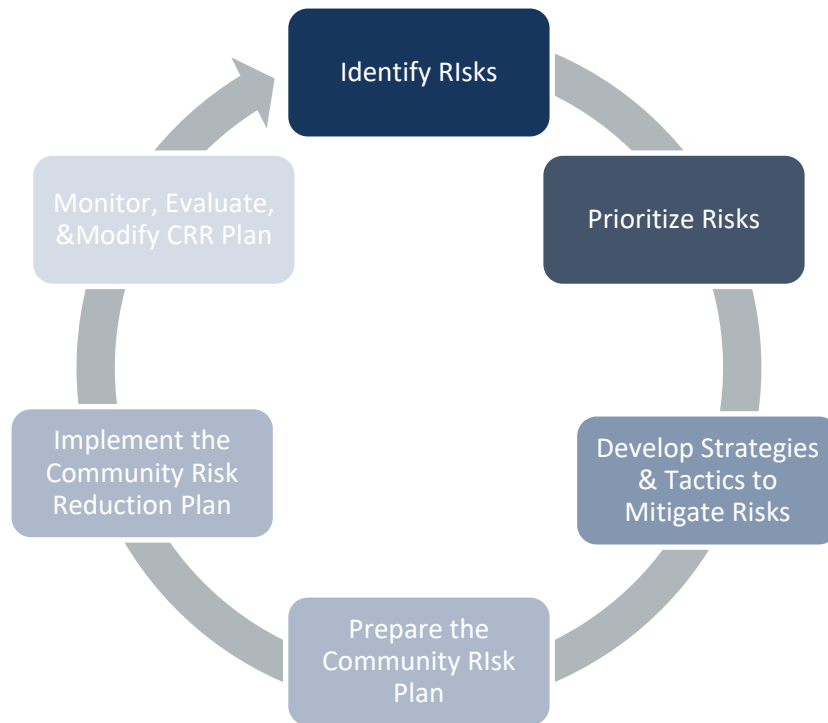
A CRR program can help the Authority take what it already knows and lower the risks within the area of operation. CRR uses various tools to form a strategic and integrated program focused on reducing the occurrence and impact of local hazards.

A Community Risk Assessment (CRA) is one of the first steps in developing a CRR plan. Each community is distinctive, and an assessment process helps identify specific or

¹⁷ US Fire Administration, Prevention. <https://www.usfa.fema.gov/prevention/crr.html>

unique risks. The process should evaluate residential, commercial, and industrial properties. The following graphic shows a systematic approach for completing a CRR plan.

Figure 96: Community Risk Reduction Strategy



RFFRA did not have a comprehensive CRR plan for their respective jurisdiction when this study was conducted. RFFRA should begin developing a CRR plan that focuses on all the risks throughout the area. This process will build a solid foundation for the fire and life safety programs.

FUTURE SYSTEM DEMAND PROJECTIONS

RFFRA lies in two counties, Eagle and Pitkin. Both counties are seeing development occur, especially within municipal areas. Two such sites are notable within the fire districts, Snowmass Village and Basalt.

To determine the future demands of the Authority, ESCI interviewed external stakeholders, did analysis with Environmental Systems Research Institute (ESRI) software, and reviewed the comprehensive plans of the cities and counties. Eagle County's plan is nearing ten years in age and is due to be redone shortly. Pitkin County's comprehensive plan is divided into multiple areas, and ages range from 1987 in the Down Valley Planning area to 2018 in the Upper Snowmass Creek area. The Town of Snowmass Village has published a 2018 comprehensive plan. The Town of Basalt published a current master plan completed in 2020.

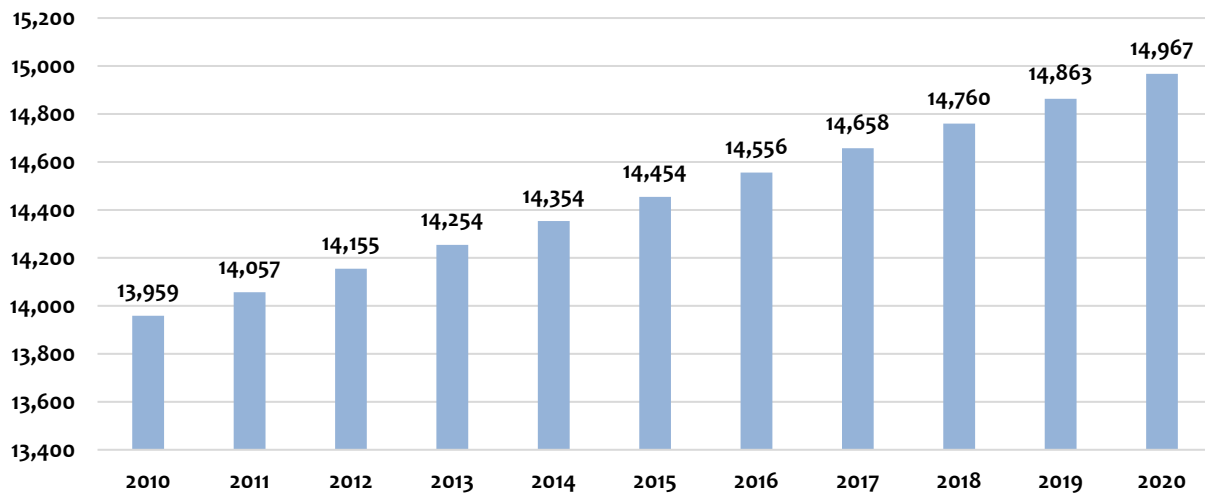
The target for this study is to determine the growth 10-15 years into the future. Three methodologies are used to project future growth within RFFRA. One is to review the historical growth rate, the use of ESRI to predict future growth, and finally, consideration of the projections of the comprehensive plans.

Historical Population Growth in Roaring Fork Fire Rescue Authority

The population of RFFRA has shown a steady increase. The compound annual growth rate (CAGR) for 2010 through 2021 is 1.05, or approximately 1,750 people. The average growth rate between 2010 and 2021 was 11%. ESRI defines the CAGR as an annualized measure that describes a variable's direction (positive or negative) and magnitude of change between two distinct points in time. The compound component of the expression simply means that the annualized growth rate is repeated or compounded each year. The CAGR tends to be more accurate as outliers do not skew the growth rate, as outliers can affect the average rate.

The following figure illustrates population growth within RFFRA from 2010 through 2021.

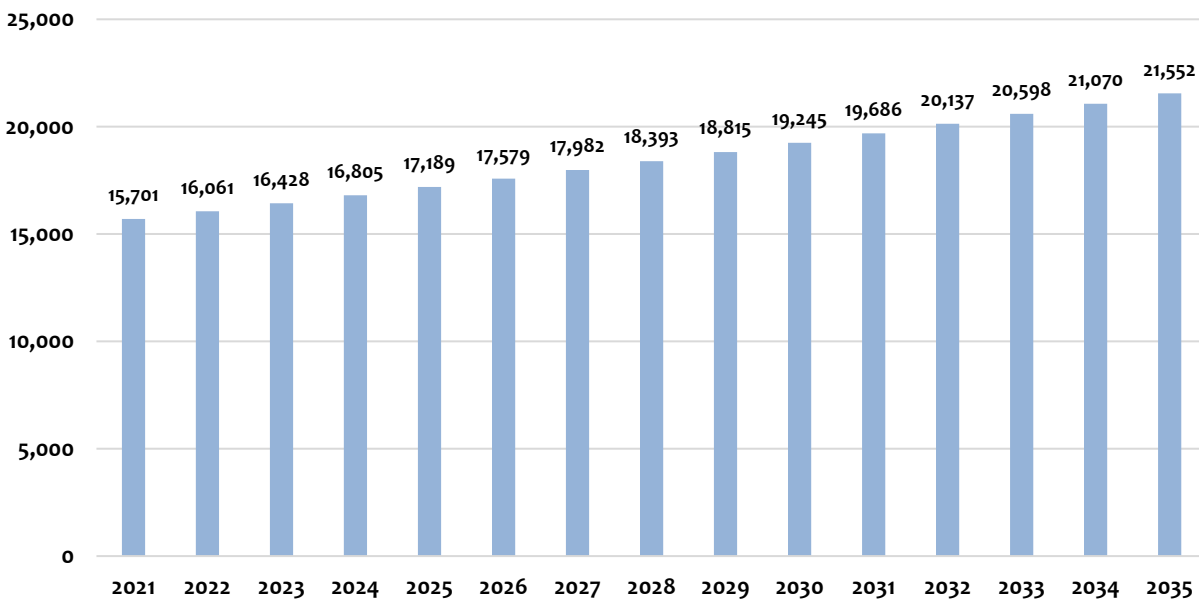
Figure 97: Historical Growth from 2010 to 2021



This growth rate will continue to climb gradually as the Authority moves into the future. RFFRA needs to anticipate the impact population growth will have on the future service demand. Since 2010, the growth rate has continued with a bubble of growth over the past five years. The assumption is that growth from 2017 to 2021 might represent a more realistic growth rate due to the ordinarily secondary homes quickly becoming primary year-round housing. The municipalities' growing interest in containing growth will counteract this trend, but growth will continue over the next ten years.

ESCI bases this projection on observing the historical growth and projecting a reasonable rate of change into the future. The rates of growth are shown in the following figure.

Figure 98: Projected Growth 2021 to 2035



ESCI assumes that the growth rate will remain very similar as the municipalities annex agricultural or other very low-density lands in the counties. Most of RFFRA's growth will occur in the area that is known as "Down Valley." As growth management is part of Snowmass Village and Basalt's comprehensive plans, the municipal population will slow.

Growth in the Town of Snowmass Village

The Town of Snowmass Village has a current population of approximately 2,600. The future population for Snowmass Village will continue to increase, albeit at a slow pace. According to The Town of Snowmass Village comprehensive plan, Snowmass ranges from fully developed (47% of land area) to completely protected open space areas (10%). Change is unlikely to occur in both cases unless there is redevelopment within the fully developed areas. Less than 5% of the remaining land in town is undeveloped, and even less land is available for potential redevelopment.

With most of the town fully developed, 94% according to the comprehensive plan, the district can expect to see more remodels and replacement units instead of vacant land development.

Figure 99: Town of Snowmass Potential Growth Units

Build Out Summary				
Type	Platted Lots	Built Units	Possible additional Units	% Built Out
Single-Family	1005	952	53	94%
Multi-Family	2861	2708	153	95%
Lodging	1050	982	68	94%
Total Build Out %				94.33%

Growth in the Town of Basalt

The Town of Basalt has a current population of approximately 4,172. However, the future population for Basalt will continue to increase. According to The Town of Basalt's Master Plan, Basalt will have a population between 5,400 to 5,600.

With the Town of Basalt having room to grow, the Fire District will see the population in the town grow up to 26%. This percentage is a relatively low number of people equaling 1,430 total. The service demand projections account for this growth.

Figure 100: Town of Basalt Growth Potential Units

Area	Master Plan Units	
In Town	Low	High
Existing Units	1,745	1,745
Planned infill and Approved Development	209	209
Future Land use	55	146
Other	165	165
Total	2,174	2,265
In Urban Growth Boundary		
Existing Units	258	258
Planned infill and Approved Development	80	80
Future Land use	127	282
Other	668	668
Total	1,133	1,288
Total in Master Plan-Growth Area	3,307	3,553

This District's population may see an increase of up to 27% over the next 15 years. This population will marginally affect the service demand, as discussed in the next section.

Determining if these projections are correct is difficult. These growth rates are based on the most recent observation of historical growth and census data. The assumptions may be conservative based on the desirability of the area. Regularly working with municipalities and county planners is recommended to ensure that the Authority is aware of the other entities' current plans for growth.

Service-Demand Projections

It is crucial to consider projected population growth when determining future service demand and planning for the potential need to add staff, facilities, apparatus, and other resources. Increases in population growth, particularly in EMS service demand, can directly affect fire department workload and the organization's effectiveness. Changes in service demand may require variations and adjustments in the deployment of staff and resources to maintain acceptable performance levels.

ESCI determined the current service demand by taking the average of the previous five years' calls for service and the average of the last five years' population. A ratio is established by dividing the number of calls for service by the population. For example, with a current population of 15,701, the rate of total service demand is just over 12%. By taking the last five years of data, the average population is 14,864, and the average calls for service is 2,132 yielding a ratio of 14%. The projected 2030 and 2035 populations are 19,245 and 21,552, respectively. The future service demand is projected by applying the same historical ratio of calls per population. Figure 101 displays the predicted demand for each type of call.

Figure 101: Projected Service Demand—2020 and 2021 compared to 2030 and 2035

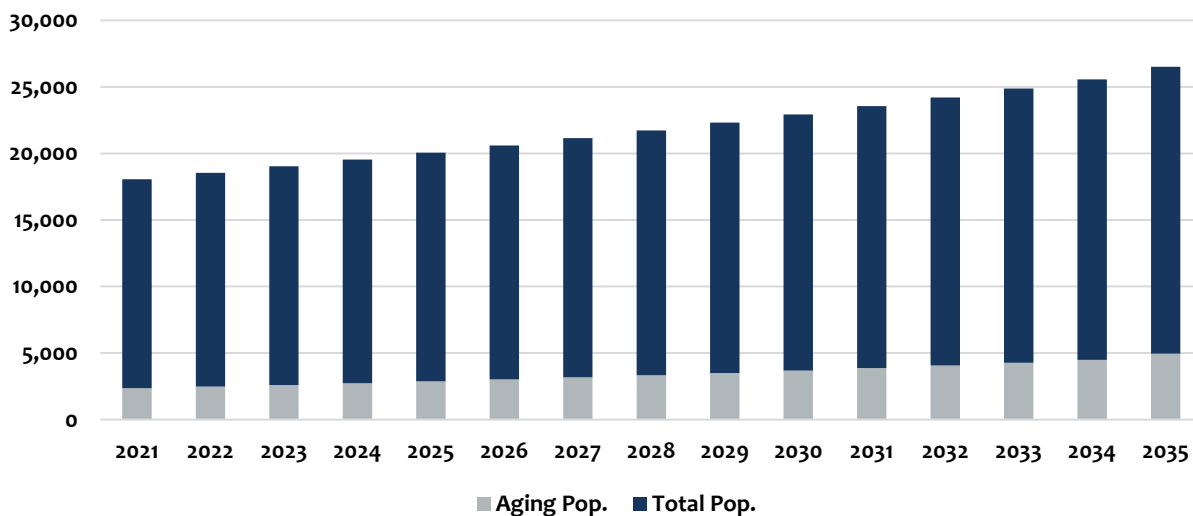
Incident Type	NIFRS #	2020	2021	2030	2035
Fire	Fire (100)	66	62	71	80
Hazardous Condition	Hazardous Condition (200, 400)	90	76	99	111
EMS	EMS (300 except 322-324)	830	979	1,211	1,357
MVC	MVC (322-324)	77	99	131	147
Service Call	Service Call (500)	74	82	106	119
Canceled, Good Intent	Canceled, Good Intent (600)	288	337	378	423
Alarm	Alarm (700)	531	616	757	847
Other	Other (800, 900)	6	3	7	8
Total		1,962	2,254	2,761	3,092

This method produces the potential number of calls in the future; however, it does not consider demographic changes or growth control established by planning authorities. The existing population will likely continue to age in place. The increasing number of

elderly individuals will increase the demand for emergency medical services as the elderly population disproportionately uses these services.

National medical industry studies suggest that patients over 65 are three times more likely to access local emergency services than other age groups. Assuming the Generation X age group that currently lives in the Authority remains in the area in 2035, The following figure shows the size of that age group living in the community in 2035. The percentage of the aging population will increase from its current 15% to 23% in 2035. This increase in use is not reflected in the projected EMS numbers in the previous figure.

Figure 102: Aging Population Trends



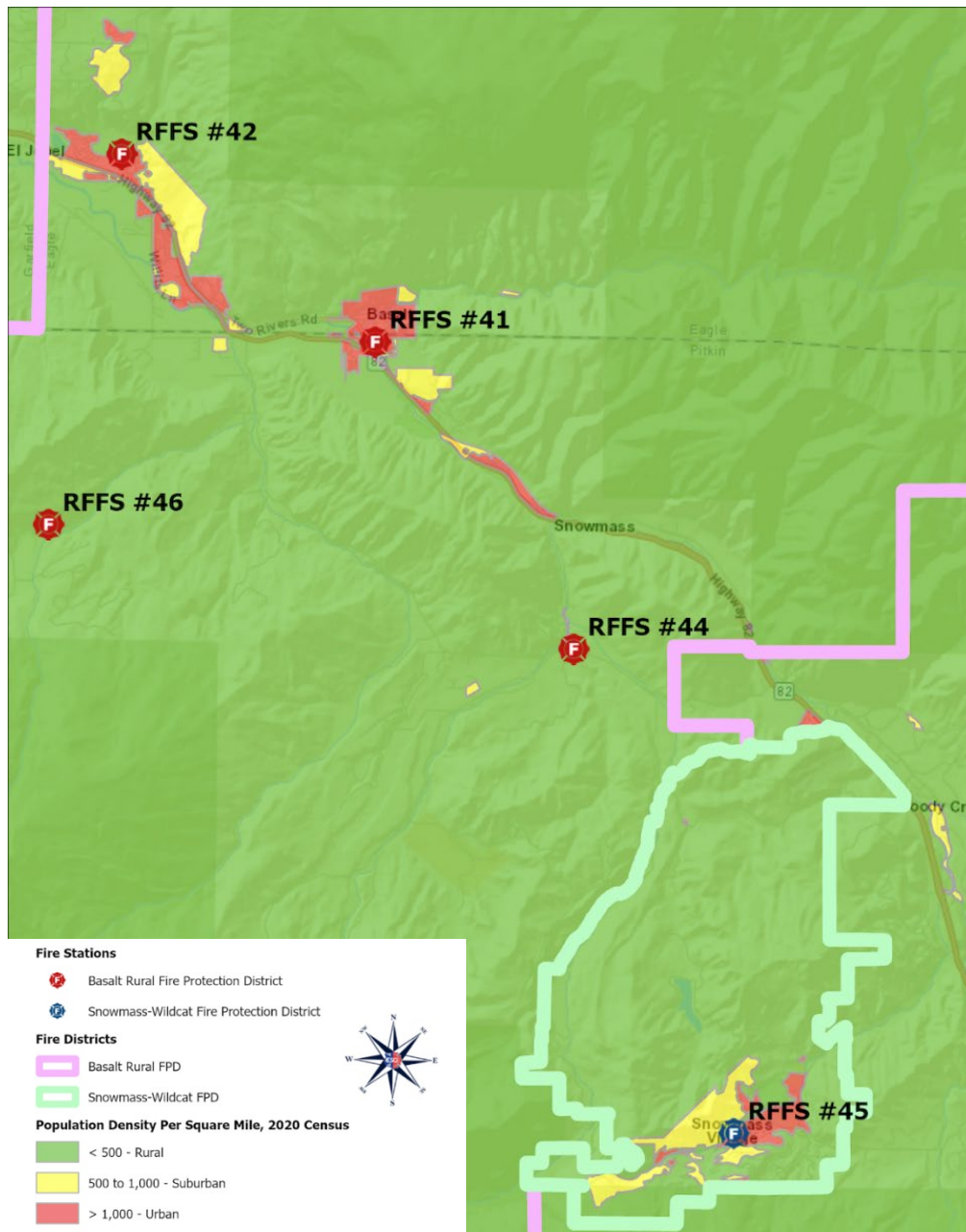
Service Demands Discussion

It is not the intent of this study to be an absolute predictor of future service demand in the Authority's service area but instead to produce a projection upon which the Authority can plan for future fire protection and EMS needs. Since human activity is a primary driver of emergency service demand, it is essential to have a population-based projection of the future size of the community. Based on this projection, RFFRA can plan its unit utilization for the future and the possibility of the need for additional resources to maintain service delivery. Therefore, it is ESCI's opinion that the future demand in the next 15 years will not significantly impact the current operations of RFFRA. ESCI found the number of incidents per resident population higher than in many communities. This is a reflection of the tourist population's demand for services.

Community Risk Assessment

The following section is an overview of several factors that affect community risk: the service area population and population density, the population's demographics, and zoning and land-use regulations. First, ESCI examines a population density map to display population density in the RFFRA service area in the following figure.

Figure 103: Population Density Map



Current Land-Use Risk Categorization

High-Risk Areas:

- Unincorporated County: Forest lands, reservoir infrastructure
- Town of Basalt: Residential, commercial, mixed-use residential commercial
- Town of Snowmass Village: High-density residential, business, and resort

Moderate-Risk Areas:

- Unincorporated County: Commercial, highway services
- Town of Basalt: General commercial, mixed commercial, planned community (under construction)
- Town of Snowmass Village: Planned mixed commercial/residential

Low-Risk Areas

- Unincorporated County: Agriculture, residential
- Town of Basalt: Planned community mixed-use, parks, residential
- Town of Snowmass Village: Golf resort, parks

As shown, much of the unincorporated county land is zoned as low risk, while the Towns of Basalt and Snowmass Villages and the El Jebel area contain all of the high and moderate risk areas.

Determining potential risks in the RFFRA's future helps see if there are other impacts on the service demand for the Authority. This section discusses other potential natural and manufactured hazards that could affect service delivery. As the Authority continues to grow and add homes, the impact of some risks could increase dramatically.

While RFFRA cannot prevent all risks from happening, as the first responder, RFFRA will face the mitigation of the incident and minimize the loss of lives and property. RFFRA has transportation routes that increase the potential for accidents and hazardous material spills. Hwy 82 is the primary route for travelers and transportation of products. Travel on this route is not likely to change in the future except for the increase in the number of vehicles per day. This route carries hazards in terms of flammable and combustible liquids and toxic chemicals in large quantities. The Authority can respond to an ordinary hazardous material incident. Accidents involving dangerous materials are rare but may occur on this route and have the potential for severe damage. In

addition, vehicle accidents are common, and the ability to respond with the needed equipment for the extrication of victims is essential for RFFRA to maintain.

The jurisdiction is susceptible to building collapses from several causes: winds, snow load, or building failure. RFFRA maintains basic technical rescue skills and relies on other resources such as mutual aid or state teams.

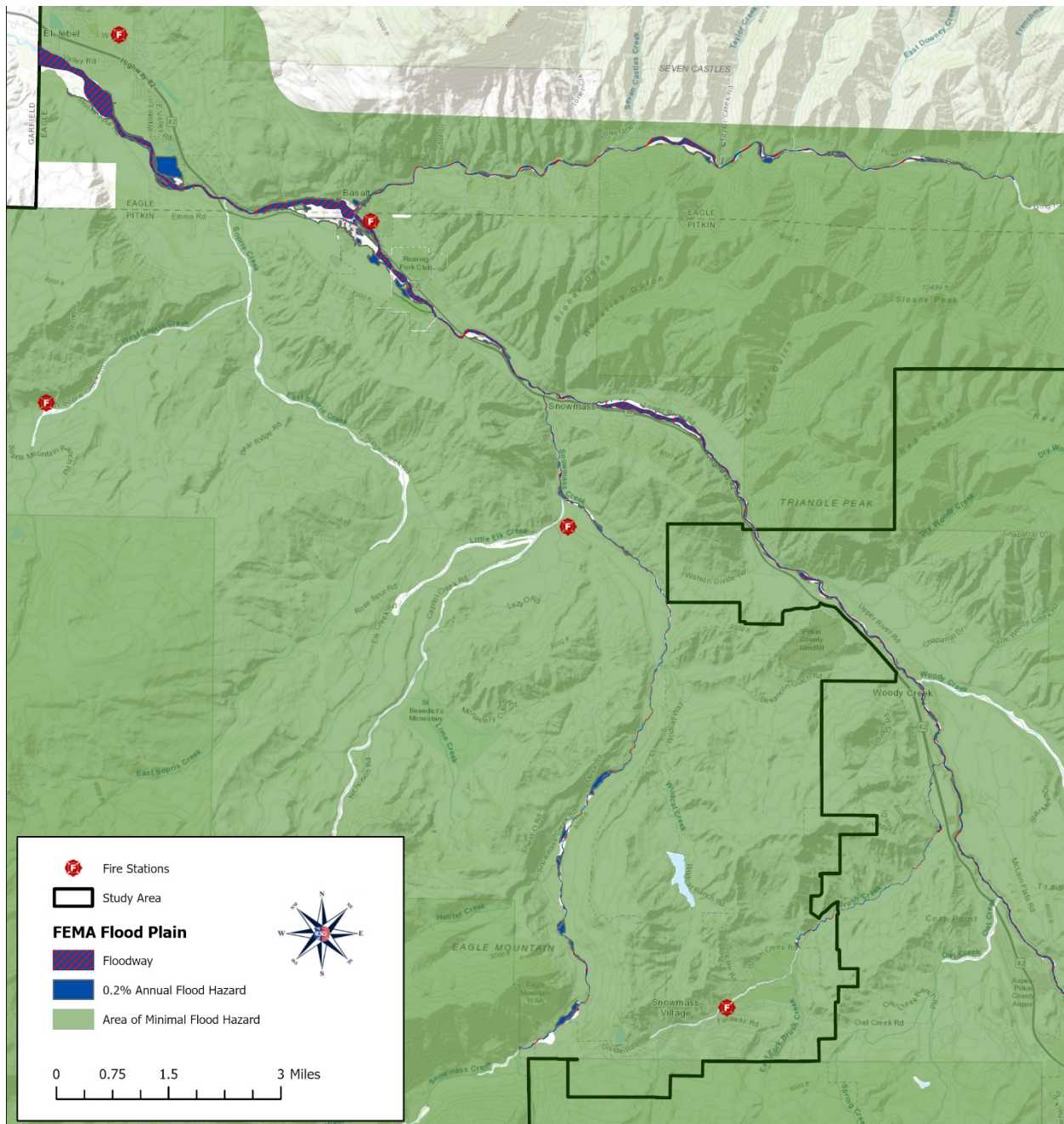
As the Authority grows residentially, the agricultural aspect may decrease over time. However, agriculture accidents trapping persons in equipment will continue to be a service demand. The ability to extricate individuals from farming implements will need both equipment and specialized training.

RFFRA has several lakes and ponds within its boundaries. These will continue to provide demand for water rescue. In addition, rivers and streams require swift-water rescues. Flooding is a potential response.

The Roaring Fork River divides the Authority, and there are fire stations and resources on both sides of the waterway. However, a failure of the Ruedi Reservoir Dam, ice dams, or heavy rains and the resulting flash flooding may prevent emergency apparatus from crossing. Catastrophic failure of the reservoir's dam is rare but should be planned for as a worst-case scenario.

The following figure shows areas where RFFRA may be impacted by flooding. The map illustrates that the down valley areas of the Authority are more vulnerable to flooding near population centers. It is important to plan for this flooding potential in partnership with other local emergency services.

Figure 104: Flood Map



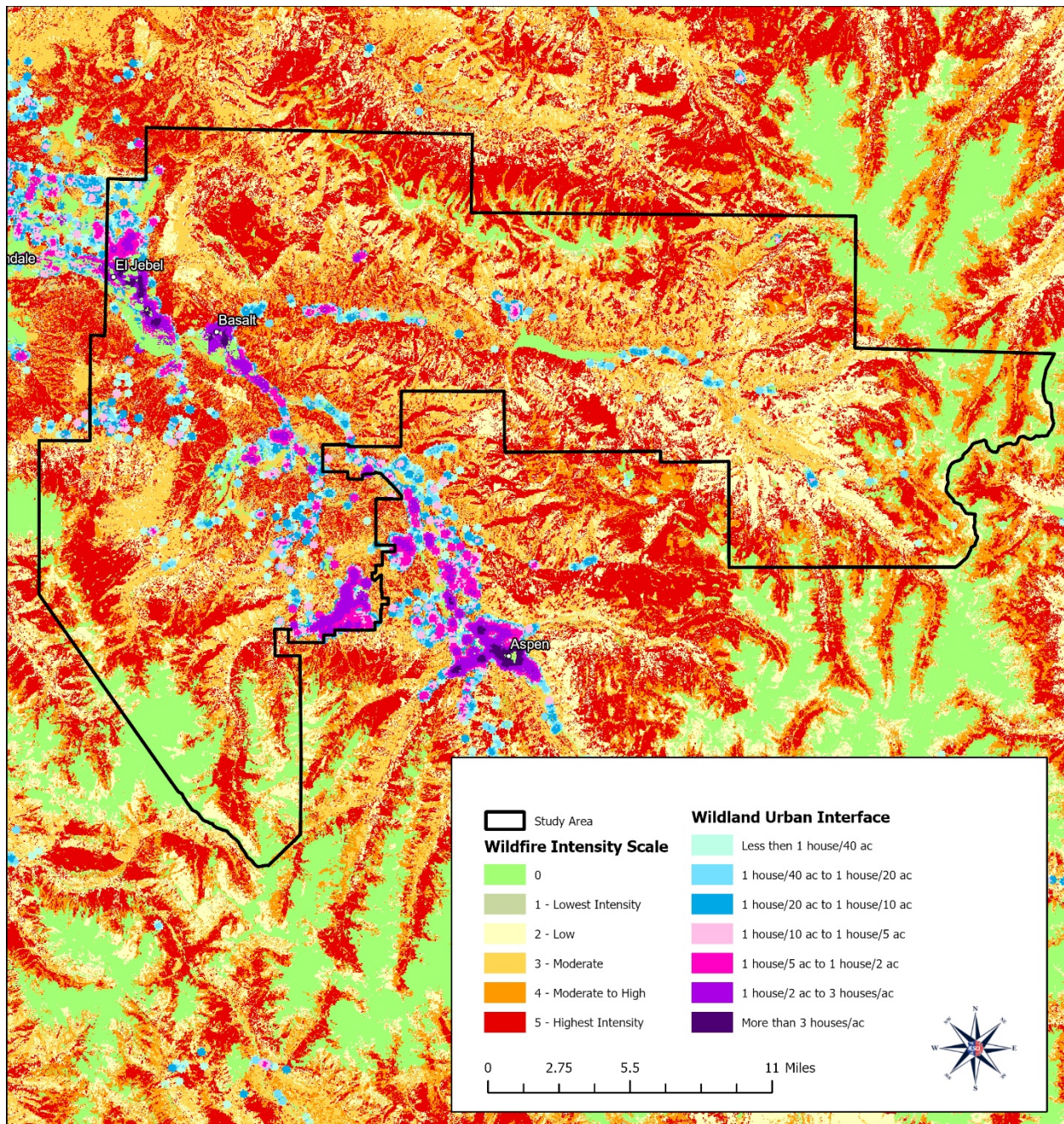
It is appropriate to plan for an extended flood event and for resources to operate independently and be self-sustaining for a period, typically for 72 hours. In addition, it is good to plan for this and similar instances in cases of other significant disruptions to food delivery or storage.

Other weather-related events may impact service demand and the ability of the Authority to perform adequately. Although relatively infrequent, these events should be planned for, i.e., winter storms, drought, and ice storms.

A specific risk that is becoming more predominant in Colorado and worse with the high heat and winds of summers is wildland fires. Although the typical response is shared with Federal and County resources, planning for the response, notification, and evacuation is essential to maintain regularly, revise, and test.

As Figure 105 illustrates, RFFRA has significant exposure to wildfire throughout the Authority. Despite RFFRA having a large area with the potential for extreme fire intensity, the low density of housing in most areas minimizes RFFRA's risk. RFFRA should focus on wildfire planning in the areas where housing density is the highest. After completing wildfire planning in these areas, RFFRA should move to plan the less-density areas. Intense planning with RFFRA's wildfire partners will benefit when a more significant incident occurs. The influx of multiple units and air support will tax the system unless planned in advance.

Figure 105: Wildfire Intensity and Interface Map



FUTURE DELIVERY SYSTEM

Roaring Fork Fire Rescue Authority is early in its development as a combined Authority. The Authority's management is committed to having an effective emergency services department. During this study, ESCI has identified some recommendations for consideration as RFFRA moves into the future. Some of these will become even more important as the Authority grows larger. The recommendations are extracted from the report and reiterated in this section. Some suggestions are discussed in detail in the other sections and will not be fully repeated here. Some are considered short or mid-term in nature. RFFRA can implement these recommendations within one year to three years. Some of the recommendations will take longer to implement or have a significant impact on the agency's operation. These are discussed more in length in this section.

RFFRA faces some unique issues that are not common to other departments. Some are unique to resort areas others are unique to this location. First, the service demand is higher than anticipated based on the resident population. The higher service demands during months that are peak visitor seasons reflect the transitory nature of the non-permanent population. This higher demand places stress on providing adequate staffing. Staff salaries and benefits are typically the highest cost to a fire department, and the mitigation of fires and some other emergencies are particularly labor-intensive. Staffing at the levels necessary for the major incidents is not usually possible by any individual agency.

Meeting the required effective response force (ERF) is accomplished by mutual aid. This emphasizes the second unique situation for RFFRA. Other than what Carbondale and Aspen Fire Districts can supply, mutual aid is quite a distance away. Arrival time by the next closest units is dependent on the limited transportation routes to the jurisdiction. This limitation can cause delays for RFFRA units to arrive on the scene from stations further away.

The third unique feature of the Authority is the need to provide affordable housing for personnel. High demand in a resort area where housing costs are high makes housing beyond the employees' capability to afford. This is a source of additional cost to the Authority in providing housing compared to a fire department of similar size in a different area.

These unique features are foundational to understanding the further discussion in this report.

Short and Mid-Term Strategies

Throughout the report, ESCI made recommendations that will improve the current operations and prepare the agency for the growth that will occur in the future. As noted earlier, these typically have a shorter implementation timeframe than others. ESCI recognizes that management staff may be implementing or may soon implement some of the short-term recommendations. Also, as the Authority personnel read and analyze the report, there may be a need to emphasize other items as well. This list and any additions noted by staff can create the objectives or action items for a strategic plan assigning responsibility and establishing a timeline for completion. It is also important to reemphasize that this study will offer several recommendations, some that the administration and the governing board will choose to implement and others that they do not. The items to be implemented are for the management and governing board to determine.

Management

- Publish the vision statement to the general public as well as staff.
- Centralize and standardize dispatch practices for run cards and apparatus dispatch criteria.
- Continue to monitor the payers of ambulance billings for changes that might affect income.
- Continue to monitor the ambulance revenue, both billed and total amounts, to manage the revenue stream effectively.

Planning

- Create target hazards planning, including operational preplans for the response personnel, and incorporate them into dispatch procedures.
- Actively engage in emergency planning efforts with the counties and the Local Emergency Planning Committee (LEPC).
- Confirm that all Extremely Hazardous Substances (EHS) facilities within the service area are identified and develop a local plan that coordinates fire department operations.
- Confirm that mandated Tier II reporting forms are received, reviewed, properly filed, and available for training and use during emergency responses.

- Continue to take an active role in the development of emergency management planning internally as well as with the counties.
- Establish an internal planning group with a position delegated to the planning function: update the planning efforts annually.
- Work with municipalities and county planners to ensure that the Authority is aware of the other entities' current plans for growth.
- Add to Strategic Plan to implement the recommendations, with goals related to service levels and performance with responsibilities and deadlines established.

Capital Assets

- Add generator at Station 41.
- Remodel living quarters and offices at Station 42 to be more functional.
- Add exhaust removal system at Station 43.
- Assure the meeting room at Station 44 conforms to ADA regulations if used by the public.
- Change door locks at Station 44 to be consistent with other stations.
- Analyze maintenance and remodel costs versus rent revenue. Rent should at least cover the cost of maintaining residential housing.
- Examine fleet size for a possible reduction of units to control the cost of maintenance and replacement.
- Establish clearly defined vehicle replacement, equipment replacement, and facility improvement schedules. Create a funding strategy.

Staffing

- Adopt ERF incident staffing based on occupancy risk rather than defining unit staffing.
- Implement the role of driver/engineer or fire apparatus operator. Necessary for improved safe delivery, proper operation, and accomplishment of fire ground activities.
- Adopt 12 responders per day as the minimum staffing.
- Adopt a relief factor to hire adequate staff to achieve minimum staffing levels.
- Develop trigger for changes to guidelines due to a new method or a technology change.

- Provide periodic reviews of current compensation structures, market competitiveness, and district compensation philosophies.
- Implement NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments* medical exam and a psychological evaluation.
- Ensure all safety committee activities align with Chapter 4 of NFPA 1500.
- Ensure that the safety committee is diverse in their representation from across the Authority, ensuring representation by shift, rank, function, and interest, including representation from non-uniformed and staff members.
- The safety committee should meet monthly and should work to implement member safety education programs and encourage members' safety self-awareness.

EMS

- Update administrative guidelines to reflect current practices and the titles of those involved.
- Establish a quality improvement (QI) program with a review of internal retrospective data.
- Consider implementing the ability to collect and share patient information and billing information through Health Information Exchange systems.
- Consider the competency definition established by CoAEMSP and develop performance measures for system paramedics.
- Establish an annual training calendar assigning specific monthly training to a particular purpose.

Training

- Officers should complete NIMS ICS 400 training.
- Consider deploying members as part of wildland operations through the Colorado Division of Fire Prevention and Protection.
- Provide support to ensure operations units get required training.
- Designate shift officers as training liaisons to assist with consistent training delivery across the shifts.
- Consider building a training facility with consideration of other regional training assets so as not to duplicate efforts.

- Balance training program in three areas 1) training reflecting the volume of current call types, 2) special team training, and 3) re-certification requirements.
- Identify gaps in high-risk low frequency events. Design the training program to address any deficiencies.
- Schedule the required ISO training requirements across the entire year to ensure compliance.
- Create a training committee of individuals who are passionate about department training.
- Implement an analysis of the ability to complete tasks and evolutions as outlined in NFPA 1410, *Standard on Training for Emergency Scene Operations*.

Prevention

- Continue to provide certification and training opportunities for fire prevention staff to achieve full ISO credit for Fire Prevention Certification and Training.
- Consider the addition of another fire inspector based on workload.
- Establish a Fire and Life Safety Educator designation per NFPA 1035, *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter Program Manager Professional Qualifications* to provide additional creditability to fire safety prevention and public education efforts and garner extra ISO points.
- Certify investigators in accordance with NFPA 1730, *Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations* and NFPA 921, *Guide for Fire and Explosion Investigations*.
- Develop a Community Risk Reduction (CRR) plan that focuses on all the risks throughout the area.

Staffing and Deployment

ESCI recommends that Station 41 should have a minimum of three firefighters and one Battalion Chief on duty daily. Stations 42 and 45 should have a minimum of four firefighters on duty daily. This crew size can function and start effective operations upon arrival. There will be some interventions that they will not be able to take until there are four on the scene, but three firefighters can be more effective than a crew of two. One three-person staffed unit and the battalion chief can implement an interior attack. In the financial models, ESCI has used the number needed to expand the minimum staffing to twelve and additionally for a relief factor to cover the time off duty. This

analysis shows the cost of meeting an effective staffing model. ESCI understands that it may be possible to schedule volunteer personnel into the staffing mix and eliminate some of the relief factor needed. If so, this process of using the volunteers effectively will have identifiable cost savings.

RFFRA has already taken some steps to mitigate the staffing issues. The requirement for automatic fire sprinklers in residential structures over 5,000 square feet should help to reduce the number of firefighters needed on the scene of a fire. However, since not all residences are protected, increased staffing is still needed. RFFRA has also taken another important step for increased incident staffing by implementing a callback of off-duty personnel and volunteers.

Financial Forecasts

Planning for long-term sustainability is essential for RFFRA. This section will focus on RFFRA's ability to sustain itself into the future. In the report, ESCI identified recommendations that could significantly impact the budget. These additional recommendations are 1) capital replacement funding for vehicles, equipment, and facilities; 2) additional staffing for minimum staffing and relief factor; 3) the debt service required for the purchase of land and building of a training facility. ESCI modeled the budgets with and without the additional expenditures and the additional revenue requirement. It may be that RFFRA will not choose to implement all these initially, but ESCI is providing three forecasts to show the impact on the budget. These are Forecasts 1, 2, and 3. The differences between the three are described below.

Forecast 1 assumes the growth of the assessed value continues per historical trend and operational expenditures continue as status quo. This forecast contemplates that there are no changes to the budget other than the normal increases that were noted in the earlier Fiscal Analysis section.

Forecast 2 and 3 assumes the following changes: 1) the ESCI proposed capital replacement and remodel schedule with contributions to a Capital Projects Fund in an amount necessary to fund it; 2) the issuance of bonds to purchase land and construction of a new Training and Administration building; 3) the addition of 11 FF-EMTs and 5 FF/Paramedics and 1 Inspector per the staffing recommendation. Forecasts 2 and 3 reflect all of these items in the expenditures. Forecasts 2 and 3 are breakeven scenarios increasing revenues to meet spending.

The differences between Forecasts 2 and 3 are the way the revenues are determined to equal the expenditures. In Forecast 2, the mill levies were increased to balance the budget. This method was chosen to predict the magnitude of taxation increase required to achieve the operations at that level. In Forecast 3, ESCI used a combination of growth in assessed values and mill levy increase to balance the budget. The intent was to reflect the anticipated growth in the Authority's property values due to both new construction and redevelopment of existing properties. The goal was to have the ending fund balance in 2027 equal to, at a minimum, the 25% recommended cash balance at year-end. This recommendation is the ability to fund four months of expenditures before tax revenues are received. Further, the goal was to have the Capital Projects Fund funded at the level recommended by the capital remodel and replacement schedule.

Forecast 1

Forecast 1 assesses the financial sustainability of projecting revenues and expenditures based on the historical trend analysis and informed assumptions about how those revenues and expenditures will change in the future. This is considered a status quo service level forecast with no new positions added and the capital schedule prepared by RFFRA staff. The following two tables show model assumptions followed by the forecast analysis and resultant graphs.

Revenue/Resource and Expenditure Assumptions and Definitions

Figure 106 describes the key revenue assumptions used in the forecast.

Figure 106: Financial Resource Assumptions Forecast 1

Financial Resources By Type	Assumptions
Assessed Value (AV)	Trend Analysis of Actual Value 2017 to 2022 Times AV Ratio per state law.
Mill Levy Rate	The amount charged by the district to needed to provide fire and rescue. The mill is set by a vote of the electorate
Beginning Fund Balance	Prior Year Ending Fund Balance
Property Taxes	The AV divided by 1000 times the mill rate
Specific Ownership Tax	Constant \$140,000 for BRFPD and Constant \$155,000 for SWFPD
Impact Fees	Constant \$75,000
Interest	Calculated as 1/2% times Average Annual Balance for each year
Grant	Currently a Matching Grant from State to Build Station 46
Station 46 Donation	Donation to build station 46 for grant from State

Charge for Service BRFPD	General Fund Mill Levy times AV divided by 1000 from BRFPD
Charge for Service SWFPD	General Fund Mill Levy times AV divided by 1000 from SWFPD
Charge for Service Impact Fees	Impact Fees collected by BRFPD
Charge for Service Capital BRFPD	Capital Fund Mill Levy times the AV divided by 1000 for BRFPD
Charge for Service Capital SWFPD	Capital Fund Mill Levy times the AV divided by 1000 for SWFPD
Charge for Service Ambulance	Charges for Ambulance Services Constant \$900,000
EMS Supplemental	Nothing Budgeted Not Known
Property Tax Net of Transfer of RFFRA from BRFPD and SWFPD	Property Tax to RFFRA Net of Operating Transfer and Capital Transfer from BRFPD and SWFPD
Sale of Assets	Constant \$35,000
Rental Income	Constant \$110,000
Donations	Constant \$10,000
Fire Prevention	Constant \$75,000
Special Event Income	Constant \$20,000
Miscellaneous	Constant \$25,000
Catch Up Contributions	The spreading of the funds needed at the end of 2022 in a Capital Projects Fund to fund expenditures as needed for remodels or replacements over 4 years
Annual Contribution to Capital	Annual amount needed to fund Capital Projects Fund to pay expenditures as needed for remodel or replacement schedule net of Capital Transfers from BRFPD and SWFPD
Revenues	Total of all revenues for model

Figure 107 lists the expenditure assumptions made in the model.

Figure 107: Financial Expenditure Assumptions Forecast 1

Financial Expenditures by Type	Assumptions
Treasurer's Fees	3% of Property Tax Levied for Eagle County and 5% for Pitkin County
Operating Transfer RFFRA	General Fund Mill Levy of BRFPD or SWFPD times AV divided by 1000
Capital Transfer to RFFRA	Capital Fund Mill Levy of SWFPD times AV divided by 1000
Impact Fee Transfer to RFFRA	Impact Fees collected by BRFPD
Total Debt Service	Principal and Interest on General Obligation Bonds for BRFPD and SWFPD

Pension Transfer Out	\$50,000 transfer for in house Volunteer Fire Plan for SWFPD or Transfer of 0.15 Mill Levy to FPPA Plan for BRFPD
Excess Transfer to RFFRA	Transfer of Fund Balance in excess of 25% of Expenditures less Transfers to RFFRA, Treasurer's Fees and .15 Pension Mill Levy
Wages	Increased Wages by 5% per year
Benefits	Benefits are increased 10% per Year
Administration Expense	Increased by 2% a year
Building Maintenance	Increased by 3% per year
Communications	Increased by 2% per year
Fire Prevention	Increased by 2% per year
Fire Operations	Increased by 2% a year
Training/Education	Increased by 2% per year
Medical Operations	Increased by 2% per year
Vehicles	Increased by 4% a year
Fire Station 46 Capital	The costs to build station 46 with a donation and matching grant from the State
Capital Outlay	From Capital Replacement Schedule per RFFRA Schedule
Grand Total Expenditures	Sum of all Expenditures
Revenues	Total of all revenues from the revenue section
Ending Fund Balance	Beginning Fund balance plus revenues less expenditures

Forecast 1 Analysis

Forecast 1 results are shown for each district and the Authority. For the two districts, it is assumed that the fund balance of the two districts is maintained at 25% of the district's expenditures less the Treasurer's Fees and the transfers to RFFRA and the Pension Fund (only for BRFPD, the transfer is .15 mills). These subtracted expenses are excluded as they will be transferred as the taxes are received and will not require the maintenance of the 25% for cash flow. Revenues above the 25% limit are transferred to the Authority to maintain that level. The following table shows the results of key calculations.

Figure 108 shows the BRFPD calculations.

Figure 108: BRFPD Analysis - Forecast 1 Resources

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Beginning Fund Balance	581,392	552,328	66,964	67,412	67,426	67,400
AV BRFPD Pitkin	168,834,670	174,792,250	183,113,734	191,435,217	199,756,701	208,078,184
AV BRFPD Eagle	271,560,910	273,528,912	286,337,450	299,145,988	311,954,525	324,763,063
Mill Levy						
General Fund	7.850	7.850	7.850	7.850	7.850	7.850
Pension	0.150	0.150	0.150	0.150	0.150	0.150
2016 Bond	0.620	0.575	0.553	0.529	0.507	0.493
Abatements	.004P/.008E	0.10	0.10	0.10	0.10	0.10
Gallagher Adjustment	.198P/.172E	.220P/.190E	.223P/.191E	.224P/.191E	.225P/.192E	.226P/.192E
Mill Levy BRFPD Pitkin	8.822	8.895	8.876	8.853	8.832	8.819
Mill Levy BRFPD Eagle	8.800	8.865	8.844	8.820	8.799	8.785
Property Tax BRFPD Pitkin	1,489,459	1,554,803	1,625,334	1,694,847	1,764,315	1,835,006
Property Tax BRFPD Eagle	2,389,736	2,424,874	2,532,395	2,638,579	2,744,987	2,852,988
Property Taxes *	3,813,136	3,979,676	4,157,729	4,333,426	4,509,301	4,687,994
Specific Ownership Tax	133,000	140,000	140,000	140,000	140,000	140,000
Impact fees	68,500	75,000	75,000	75,000	75,000	75,000
Interest	450	1,548	336	327	337	339
Station 46 Donation	950,000					
Grants	950,000	-	-	-	-	-
Revenues	5,915,086	4,196,224	4,373,065	4,548,753	4,724,638	4,903,333

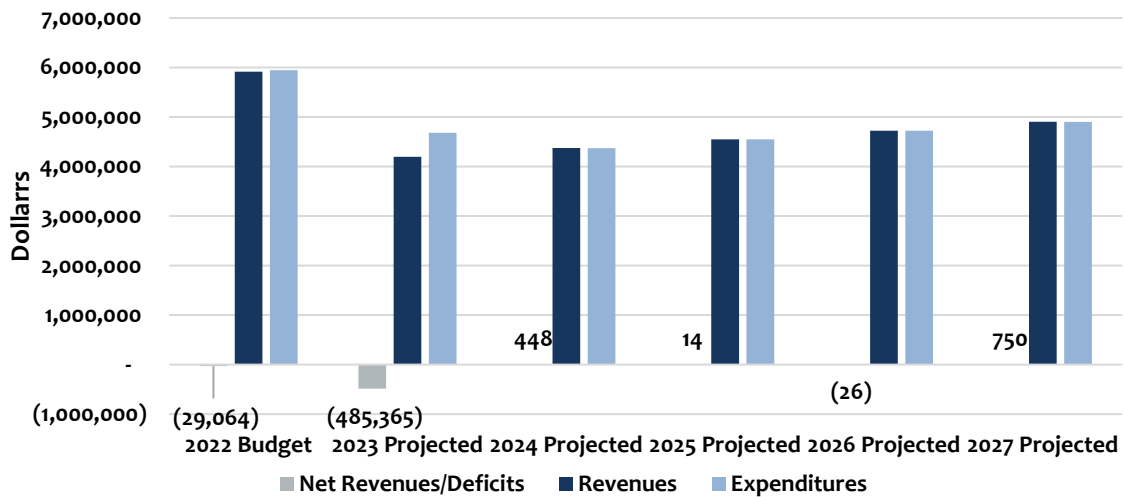
* Includes 0.15 Pension Property Tax

Figure 109: BRFPD Analysis - Forecast 1 Expenditures

Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Treasurer's Fees	163,000	150,486	157,239	163,900	170,565	177,340
Administrative Expense	50,100	10,000	10,000	10,000	10,000	10,000
Operating Transfer RFFRA	3,500,000	3,519,321	3,685,192	3,851,062	4,016,933	4,182,804
Impact Fee Transfer RFFRA	70,000	75,000	75,000	75,000	75,000	75,000
Total Debt Service	261,050	257,850	259,650	259,700	259,600	262,600
Station 46 Capital	1,900,000					
Pension Transfer Out		64,706	67,756	70,805	73,855	76,904
Excess Revenue Transfer to RFFRA		604,225	117,781	118,272	118,711	117,935
Grand Total Expenditures	5,944,150	4,681,588	4,372,617	4,548,739	4,724,664	4,902,583
Revenues	5,915,086	4,196,224	4,373,065	4,548,753	4,724,638	4,903,333
Ending Fund Balance	552,328	66,964	67,412	67,426	67,400	68,150

The relationship between the revenues and expenditures and the resultant net revenue or deficit is shown in Figure 110.

Figure 110: BRFPD Net Revenues/Deficits, Revenues, and Expenditures - Forecast 1



Based on the Forecast 1 assumptions, BRFPD revenues decrease from \$5,915,086 in FY 2022 to \$4,903,333 in FY 2027. Expenditures decrease from \$5,944,150 in FY 2022 to \$4,902,583 in FY 2027. However, if the effect of building Station 46 (\$1,900,000) is removed from 2022 revenues and expenditures, there is a different trend. Revenues increase over the 2022 to 2027 period by \$888,247, with an annual average increase of 4.42%. Expenditures also increase by \$858,433 over that period for an average annual increase of 4.25%. Figure 111 shows the General Fund Ending Balances held at 25% of expenditures as described previously. Any additional funds are transferred to the Authority to maintain this level in the districts. Twenty-five percent is considered an ideal percentage when developing a reserve policy. The Governmental Finance Officers Association (GFOA) considers 16% the minimum baseline level that a government should maintain.¹⁸ Additionally, BRFPD can easily meet the TABOR requirement for a three percent emergency reserve.

¹⁸ See GFOA Best Practice, “Appropriate Level of Unrestricted Fund Balance in the General Fund,” (2009), www.gfoa.org. The Best Practice states that reserves be equal to about 16 percent of revenues or expenditures is the minimum a government should consider for its policy and that the actual target that a government adopts should be based on an analysis of the salient risks that a government faces (which in many cases may call for a higher reserve level than 16 percent).

Figure 111: BRFPD Ending Fund Balance - Forecast 1

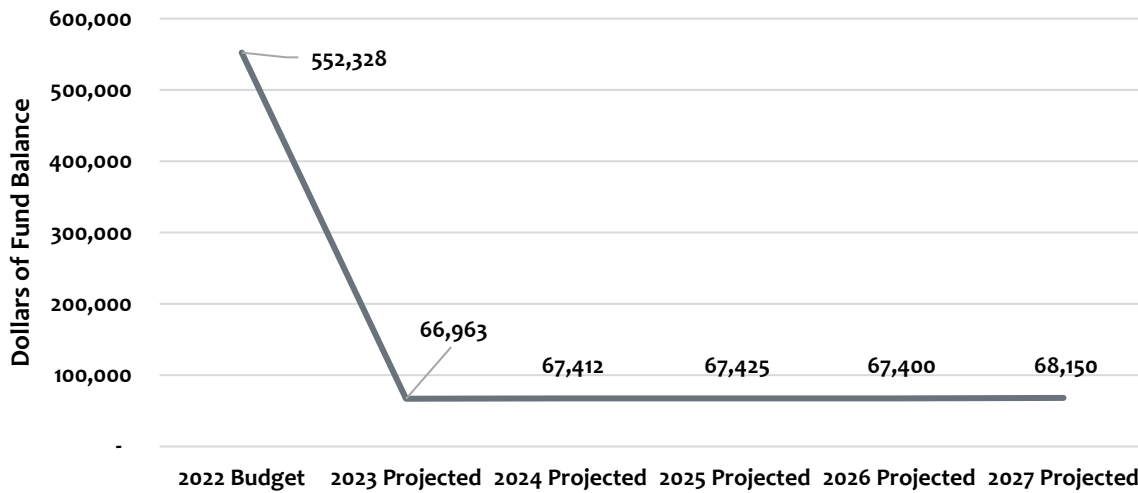


Figure 112 and Figure 113 describe the Forecast 1 analysis for SWFPD.

Figure 112: SWFPD Analysis - Forecast 1 Resources

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Beginning Fund Balance	805,909	608,967	305,977	305,225	305,612	305,175
AV SWFPD	519,926,260	510,445,647	519,095,079	527,744,511	536,393,944	545,043,376
Mill Levy						
General Fund	6.601	6.601	6.601	6.601	6.601	6.601
Debt Service	2.000	2.281	2.236	2.203	2.164	2.133
Capital Fund*	0.750	0.750	0.750	0.750	0.750	0.750
Abatements	0.074	0.050	0.050	0.050	0.050	0.050
Gallagher Adjustment	0.177	0.263	0.264	0.263	0.263	0.263
Mill Levy SWFPD	9.602	9.945	9.901	9.867	9.828	9.797
SWFPD Property Taxes	4,992,332	5,076,382	5,139,560	5,207,255	5,271,680	5,339,790
Specific Ownership Tax	145,000	155,000	155,000	155,000	155,000	155,000
Interest	2,225	2,287	1,528	1,527	1,527	1,527
Revenues	5,139,557	5,233,669	5,296,088	5,363,782	5,428,207	5,496,317

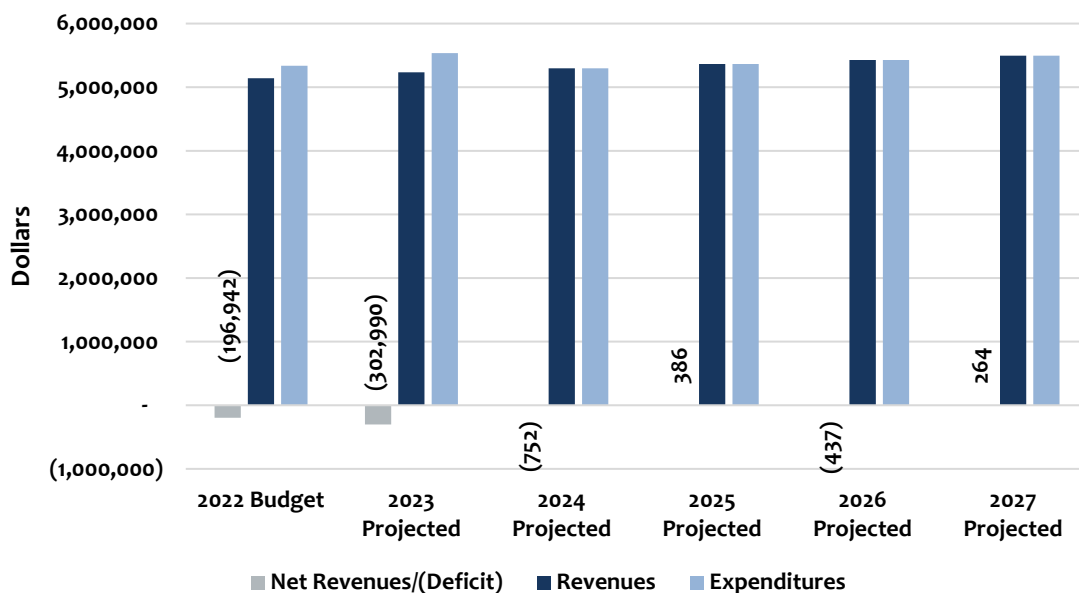
* Current Capital Fund Mill Sunsets in 2027

Figure 113: SWFPD Analysis - Forecast 1 Expenditures

Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Treasurer's Fees	275,000	253,819	256,978	260,363	263,584	266,989
Administrative Expense	75,200	10,000	10,000	10,000	10,000	10,000
Operating Transfer RFFRA	3,400,000	3,369,452	3,426,547	3,483,642	3,540,736	3,597,831
Capital Transfer to RFFRA	375,000	382,834	389,321	395,808	402,295	408,783
Total Debt Service	1,161,300	1,163,900	1,160,900	1,162,450	1,160,700	1,162,450
Pension Transfer Out	50,000	50,000	50,000	50,000	50,000	50,000
Excess Transfer to RFFRA		306,654	3,094	1,133	1,328	-
Grand Total Expenditures	5,336,500	5,536,659	5,296,840	5,363,396	5,428,644	5,496,053
Revenues	5,139,557	5,233,669	5,296,088	5,363,782	5,428,207	5,496,317
Ending Fund Balance	608,966	305,977	305,225	305,612	305,175	305,438

The relationship between revenues and expenditures and the resultant net revenue or deficit is shown in Figure 114.

Figure 114: SWFPD Net Revenues/(Deficits), Revenues, Expenditures - Forecast 1



SWFPD revenues increase gradually over the 2022 to 2027 period from \$5,139,558 to \$5,496,317. The expenditures rise from \$5,336,500 to \$5,496,053 over the same period.

Figure 115 demonstrates the ending fund balances being held at the 25% level of expenditures as described earlier.

Figure 115: SWFPD Ending Fund Balance - Forecast 1

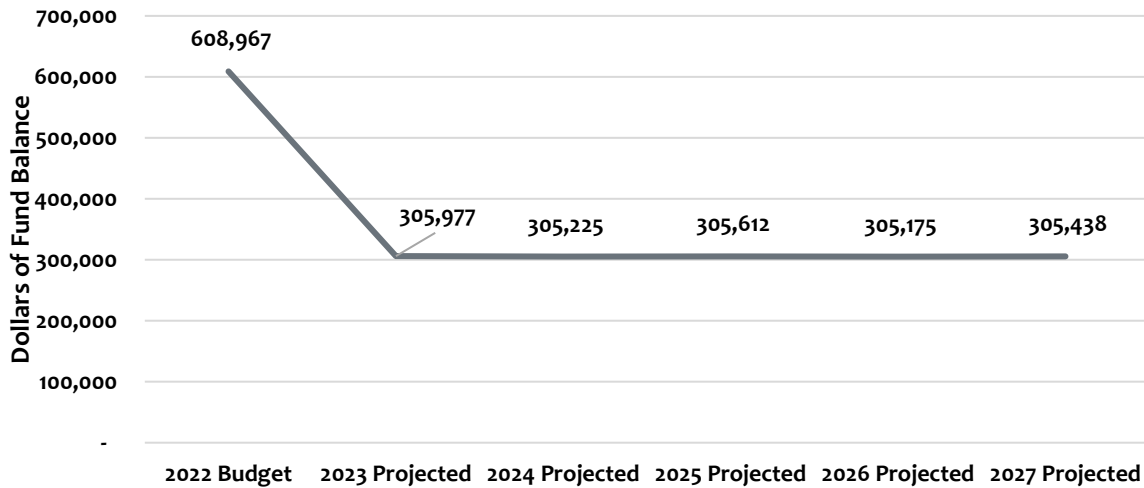


Figure 116 and Figure 117 show the revenues and expenditures for RFFRA using Forecast 1 model as described previously.

Figure 116: RFFRA Analysis - Forecast 1 Resources

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Beginning Fund Balance	8,577,253	7,379,431	7,283,922	5,871,745	4,614,258	3,306,790
Charge for Service BRFPD	3,500,000	3,519,321	3,685,192	3,851,062	4,016,933	4,182,804
Charge for Service SWFPD	3,400,000	3,369,452	3,426,547	3,483,642	3,540,736	3,597,831
Charge for Service Impact Fees	70,000	75,000	75,000	75,000	75,000	75,000
Charge for Service Capital SWFPD	375,000	382,834	389,321	395,808	402,295	408,783
Excess Transfer from BRFPD		604,225	117,781	118,272	118,711	117,935
Excess Transfer from SWFPD		306,654	3,094	1,133	1,328	-
Charge for Service Ambulance	600,000	900,000	900,000	900,000	900,000	900,000
EMS Supplemental	-	-	-	-	-	-
Sale of Assets	50,000	35,000	35,000	35,000	35,000	35,000
Rental Income	112,380	110,000	110,000	110,000	110,000	110,000
Interest Income	25,000	36,658	32,889	26,215	19,803	9,173
Donations	10,000	10,000	10,000	10,000	10,000	10,000
Fire Prevention	75,000	50,000	50,000	50,000	50,000	50,000
Special Event Income	20,000	20,000	20,000	20,000	20,000	20,000
Miscellaneous	130,000	25,000	25,000	25,000	25,000	25,000
Revenues	8,367,380	9,444,144	8,879,824	9,101,132	9,324,807	9,541,526

Figure 117: RFFRA Analysis - Forecast 1 Expenditures

Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Wages	4,559,787	4,787,776	5,027,165	5,278,523	5,542,450	5,819,572
Benefits	1,953,015	2,148,317	2,363,148	2,599,463	2,859,409	3,145,350
Administrative Expense	307,700	313,854	320,131	326,534	333,064	339,726
Building Maintenance	517,500	527,850	538,407	549,175	560,159	571,362
Communications	249,000	253,980	259,060	264,241	269,526	274,916
Fire Prevention	74,100	75,582	77,094	78,636	80,208	81,812
Fire Operations	162,000	165,240	168,545	171,916	175,354	178,861
Training/Education	225,000	229,500	234,090	238,772	243,547	248,418
Medical Operations	60,700	61,914	63,152	64,415	65,704	67,018
Vehicles	178,500	185,640	191,209	196,945	202,854	208,939
Capital Outlay	1,277,900	790,000	1,050,000	590,000	300,000	1,550,000
Grand Total Expenditures	9,565,202	9,539,653	10,292,001	10,358,620	10,632,274	12,485,975
Revenues	8,367,380	9,444,144	8,879,824	9,101,132	9,324,807	9,541,526
Ending Fund Balance	7,379,431	7,283,922	5,871,745	4,614,258	3,306,790	362,341

Figure 118 displays the relationship between the revenues and expenditures and the resultant decreases in the ending fund balance. Each of the five years reflects a loss of varying proportions.

Figure 118: RFFRA Net Revenues/(Deficits), Revenues, Expenditures - Forecast 1

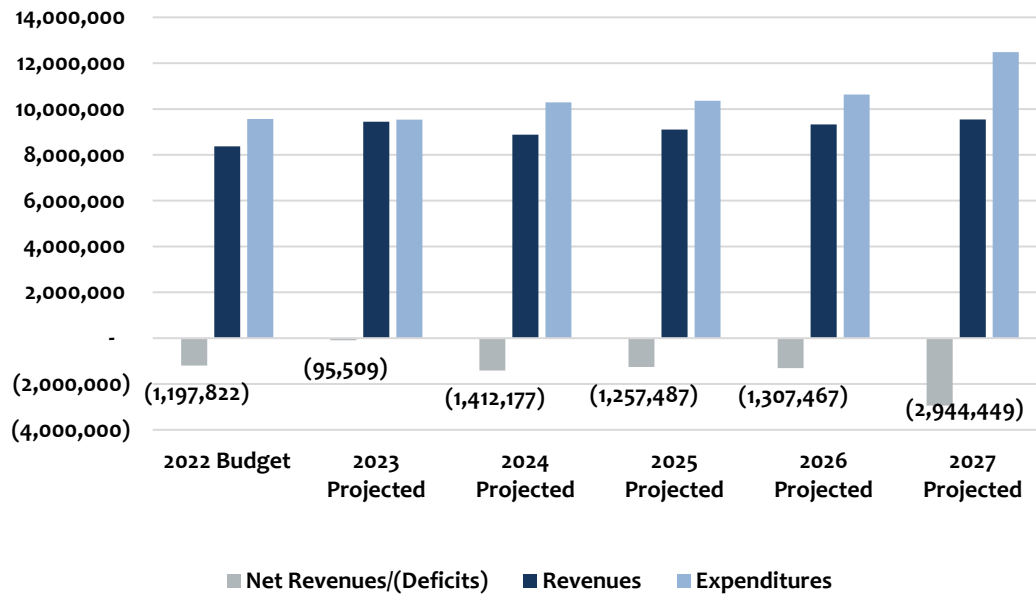


Figure 119 displays the decrease in ending fund balance over the 2022 to 2027 period.

Figure 119: RFFRA Ending Fund Balance - Forecast 1

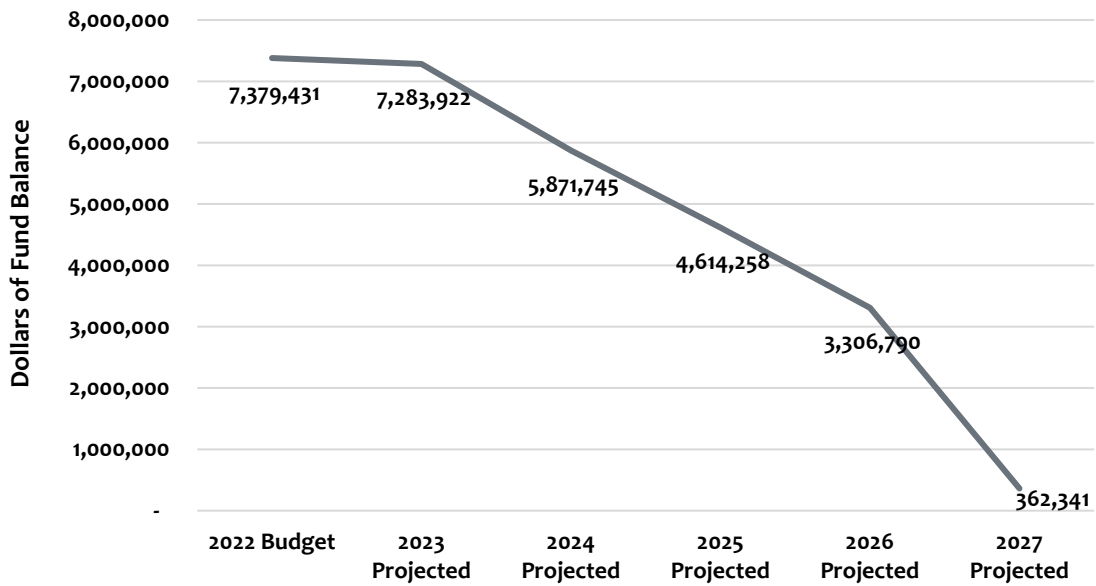
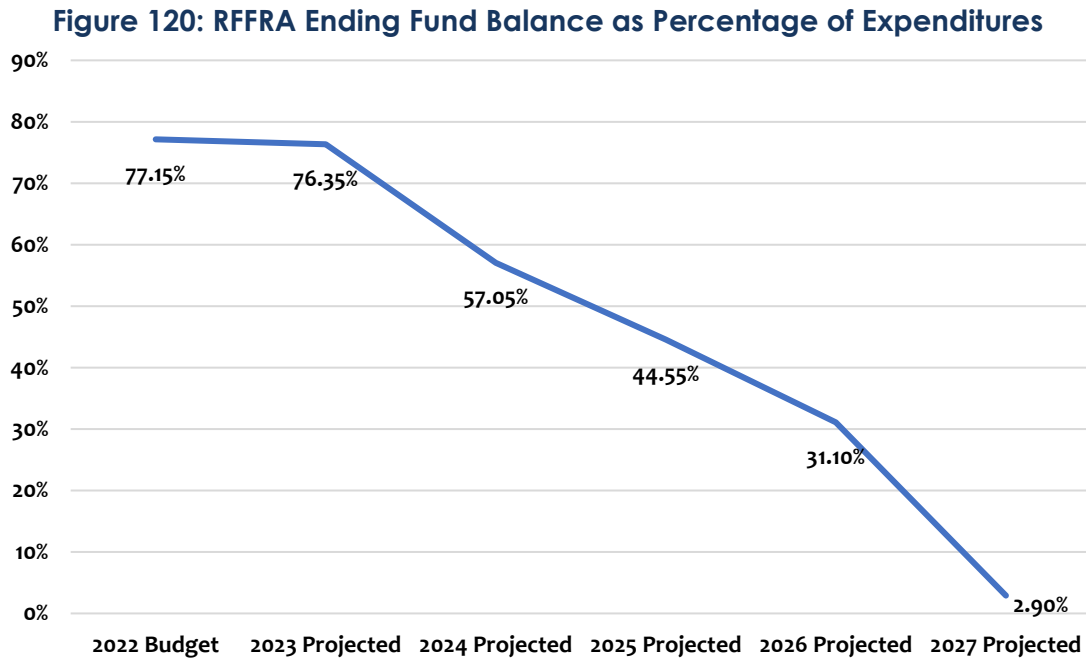


Figure 120 shows the ending balance as a percentage of the expenditures.



Based on the assumptions made for this status quo operation with historical revenue trends, the Authority will decrease to only 2.9 percent of expenditures by 2027. This is below the level necessary for the proficient performance of the Authority.

Forecast 2

This scenario includes the increased expenditures suggested by ESCI, and the Authority proposed improvements. Specifically, this consists of the revised replacement and remodel schedule, personnel increases, purchasing property, and construction of new training and an administration building. This forecast examines a mill levy increase to fund the additional expenditures. It does not assume more than the historical trend for Assessed Valuation. The training and administration building construction and property purchase are funded with a General Obligation bond issue in February of 2023 for \$13,030,000 at a 5% interest rate for 20 years issued by Basalt and Rural Fire Protection District. All mill levy increases and the bond issue authorization are assumed to be on the November 2022 ballot. Since most of the assumptions for Forecasts 2 and 3 are common, they are shown in the one table, Figure 121.

Figure 121: Financial Resource Assumptions for Forecasts 2 and 3

Financial Resources by Type	Assumptions Scenario 2 and 3
Beginning Fund Balance	Ending Fund Balance for Previous Year.
Assessed Value (AV)	Forecast 2 - Trend Analysis of Actual Value 2017 to 2022 Times AV Ratio as per state statutes. Forecast 3 - Trend Analysis Actual Values increased as follows: 2023 - 4 percent, 2024 - 20 percent, 2025 - 5 percent, 2026 - 15 percent, 2027 - 5 percent
Mill Levy	The amount charged by the district needed to provide fire and Rescue Services. Forecast 2 - Increases in Mill Levy are calculated as needed to maintain Authority Financial Stability. Forecast 3 - A combination of increases in property values and mill levies calculated as needed to maintain financial stability. The mill authorization is set by a vote of the electorate. The General Fund Mill Levy for both districts is assumed to be the same.
Property Tax	The AV divided by 1000 times the Mill Levy
Total Property Tax Revenues	Sum of Property Taxes for each district and county
Charge for Service BRFPD to RFFRA	General fund Mill Levy times AV divided by 1000 from BRFPD Transferred to Authority
Charge for Service SWFPD to RFFRA	General fund Mill Levy times AV divided by 1000 from SWFPD Transferred to Authority
Charge for Service Impact Fees BRFPD to RFFRA	Impact Fees Collected by BRFPD Transferred to RFFRA
Charge for Service Ambulance	Constant \$900,000
EMS Supplemental	Nothing as amount unknown
Sale of Assets	Constant \$35,000
Rental Income	Constant \$110,000
Property Taxes BRFPD & SWFPD Net of transfers to RFFRA	Property Taxes collected by Districts less Charge for Services above and the amount transferred to Capital Projects Fund from each District
Specific Ownership Tax BRFPD & SWFPD	Specific Ownership Taxes collected by BRFPD and SWFPD
Interest Income	Calculated as 1/2 percent times the Average Annual Balance for each Year
Donations	Constant \$10,000
Grants	Currently State Matching Grant for Station 46
Station 46 Donation	Donations for Station 46
Fire Prevention	Constant \$75,000
Special Event Income	Constant \$20,000
Miscellaneous	Constant \$25,000
Total Revenue	Total of all Revenues

Figure 122: Financial Expenditures Assumptions Forecasts 2 and 3

Financial Expenditures by Type	Assumptions
Treasurer's Fees	3 % of Property Taxes Levied by Eagle County and 5% by Pitkin County
Wages	Increased 5% per year
Addition of 16 FF	The hiring of 11 FF-EMTs and 5 FF/Paramedics per ESCI Recommendation. Used RFFRA position wage schedule
Addition of 1 Inspector	The hiring of 1 Inspector for Fire Prevention per ESCI Recommendation Used RFFRA position wage schedule
Benefits	Increased at 10% per year
Addition of 16 FF	Based on an average of 43% of wages.
Addition of 1 Inspector	Based on an average of 43% of wages.
Administration Expense	Increased 2% per year
Building Maintenance	Increased 3% per year
Communications	Increased 2% per year
Fire Prevention	Increased 2% per year
Fire Operations	Increased 2% per year
Medical Operations	Increased 2% per year
Training/Education	Increased 2% per year
Vehicles	Increased 4% per year
Total Debt Service	Interest and Principal for 2016 and 2017 bond Issues
2023 Debt Service	Interest and Principal on New Bonds 20 Years and 5%
Pension Transfer Out	.15 Mill Levy from BRFPD transferred to FPPA Pension Plan and \$50,000 for a Volunteer Plan for SWFPD
Fire Station 46 Capital	Costs to Build Station 46 with a donation and matching Grant BEFPD
Annual Contribution to Capital	Transfer required annually per the Replacement and Remodel schedule
Net of Transfer of Capital Mills from BRFPD and SWFPD	Schedules per ESCI Less the Capital Mill from BRFPD and SWFPD
Catch Up Capital Fund Contributions	The amount needed as per the Replacement and Remodel Schedule as of 2022 spread over four years.
Grand Total Expenditures	Total of all above expenditures
Revenues	Revenues per the Resources by Type
Ending Fund Balance	Beginning Fund Balance plus Revenues less Expenditures
Ending Balance Capital Projects Fund	Ending Capital Projects Fund Balance per Capital Projects Fund

There is a recommendation by the staffing study for the hiring of 11 FF-EMT and 5 FF/Paramedics, plus one Inspector. The wages and benefits were calculated as follows: the firefighters attended a 3-month academy and were paid training wages starting in July of 2023 and then paid entry-level FF/EMT wages and benefits for the rest of 2023. Beginning in January of 2024, the wages and benefits were changed to 11 FF-EMT and 5 FF/Paramedics at the beginning level.

The inspector is hired as an inspector in training in July of 2023 and then promoted to a beginning Inspector as of January 2024.

The following two tables are assumptions for the Capital Projects Fund, and the numbers are basically the same for both Forecasts 2 and 3.

Figure 123: Financial Resources Assumptions for Capital Projects Fund

Financial Resources by Type	Assumptions Scenarios 2 and 3
Beginning Fund Balance	Transfer of \$2,600,000 from General Fund to Fund 2022 capital expenditures. All other years were the Ending Balance from the Previous Year.
Charge for Service Capital Fund BRFPD	Capital 1 Mill Levy for BRFPD. AV divided by 1,000 times 1mill. Authorization in 2022 election. The AV is different for Forecasts 2 and 3, so this number will be different for the two forecasts.
Charge for Service Capital Fund SWFPD	Increase SWFPD Capital mill Levy to 1 Mill. AV divided by 1,000 times 1mill. Authorization in 2022 Election. The AV is different for Forecasts 2 and 3, so this number will be different for the two forecasts.
Catch-up Contributions for Capital Projects Funding	Transfer to Capital Projects Fund from General Fund to bring Funding to the amount needed as of 2022 for Capital Replacement and Remodel Schedules. Spread over four years.
Transfer of Bond Proceeds from BRFPD to RFFRA for Capital Projects	Bond Issue voted on in November 2022 for the building of Training and Administration Building for Training Center
Annual Contribution to Capital Fund Net of Capital Transfers from BRFPD and SWFPD	Annual Contribution as it is calculated from the Capital Replacement and Remodel Schedule. This number will be different between Forecast 2 and 3 as the AV is different.
Interest Income	.5% of Average Annual Balance for Capital Projects Fund
Total Revenues	Total of all the above Revenues

Figure 124: Financial Expenditures Assumptions for Capital Projects Fund

Financial Expenditures by Type	Assumptions Scenarios 2 and 3
Capital Expenditures	Capital Expenditures from the Capital Replacement and Remodel Schedule
Build Training Building	Training Building to be built in 2023 using Bond Proceeds
Property for Training Building	Property purchase for Training Building using 2023 Bond Proceeds
Build Administration Building	Administration Building to be built in 2023 using Bond Proceeds
Total Expenditures	Total of all Expenditures above
Ending Fund Balance	Beginning Balance plus revenues less expenditures

Figure 125 and Figure 126 describe the revenues and expenditures for 2022 to 2027 within the capital projects fund as proposed in Forecasts 2 and 3.

Figure 125: Capital Projects Fund Revenues for Both Forecast 2 and Forecast 3

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Beginning Fund Balance	2,600,000	1,707,870	65,355	5,039,826	8,281,848	13,429,645
Charge for Service Capital Fund BRFPD		448,321	469,451	490,581	511,711	532,841
Charge for Service Capital Fund SWFPD	375,000	510,446	519,095	527,745	536,394	545,043
Catch-up Contributions for Capital Projects Funding			3,745,830	3,745,830	3,745,830	3,745,830
Transfer of Bond Proceeds from BRFPD to RFFRA for Capital Projects Funding		13,030,000				
Annual Contribution to Capital Fund Net of Capital Transfers from BRFPD & SWFPD		1,176,680	1,097,683	997,434	755,708	725,928
Interest Income	10,770	32,288	46,464	32,995	53,969	80,196
Total Revenues	385,770	15,197,735	5,878,523	5,794,585	5,603,612	5,629,839

Figure 126: Capital Fund Expenditures for Both Forecast 2 and Forecast 3

Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Expenditures	1,277,900	3,810,250	904,052	2,552,563	455,815	287,163
Training Building		5,900,000				
Property		3,000,000				
Build Administration Building		4,130,000				
Total Expenditures	1,277,900	16,840,250	904,052	2,552,563	455,815	287,163
Ending Fund Balance	1,707,870	65,355	5,039,826	8,281,848	13,429,645	18,772,321

ESCI for modeling assumed that the election for the bond issue would be held in November 2022 and the bonds issued in February 2023. Further, BRFPD will add a one-mill levy for capital projects to fund a portion of the Capital remodel and replacement schedule for the future. Also, it is assumed that \$2,600,000 of the fund balance at the end of 2022 will be transferred to the Capital Projects Fund for a beginning balance. It is assumed that SWFPD will increase its capital mill levy to 1.0 mill.

The only change in the above table for the Capital Projects Fund is that in Forecast 3, the amount raised by the capital mill levy is higher than in Forecast 2 due to the increased assessed values. However, the annual contribution to the Capital Projects Fund is reduced by the additional amounts, so all the totals remain the same.

The following tables are BRFPD, SWFPD, and RFFRA. For Forecasts 2 and 3, ESCI equalized the general fund mill levy for BRFPD and SWFPD.

Figure 127: RFFRA Analysis - Forecast 2 Resources

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Beginning Fund Balance	9,964,554	6,843,626	10,212,094	8,888,805	7,493,807	6,082,087
AV - Pitkin - BRFPD	168,834,670	174,792,250	183,113,734	191,435,217	199,756,701	208,078,184
AV - Eagle - BRFPD	271,560,910	273,528,912	286,337,450	299,145,988	311,954,525	324,763,063
AV - Pitkin-SWFPD	519,926,260	510,445,647	519,095,079	527,744,511	536,393,944	545,043,376
Mill Levy - Pitkin - BRFPD	8.822	16.570	17.441	17.545	17.437	17.342
Mill Levy - Eagle - BRFPD	8.800	16.517	17.599	17.479	17.370	17.274
Mill Levy - Pitkin-SWFPD	9.602	16.796	16.941	16.908	16.869	16.838

Basalt & Rural Fire Protection District Mill Levies

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
General Fund	7.850	13.200	13.200	13.200	13.200	13.200
Abatements	.004P/.008E	0.100	0.100	0.100	0.100	0.100
Capital Mill Levy		1.000	1.000	1.000	1.000	1.000
Pension Fund	0.150	0.150	0.150	0.150	0.150	0.150
2023 Bond Issue		1.158	2.211	2.116	2.029	1.948
2016 Bond Issue	0.620	0.575	0.553	0.529	0.507	0.493
Gallagher Stabilization Authorization	.198P/.172E	.387P/.334E	.227P/.385E	.450P/.384E	.451P/.384E	.451P/.383E
Snowmass - Wildcat Fire Protection District Mill Levies						
General Fund	6.601	13.200	13.200	13.200	13.200	13.200
Abatements	0.074	0.050	0.050	0.050	0.050	0.050
Capital Fund	0.750	1.000	1.000	1.000	1.000	1.000
2017 Bond Issue	2.000	2.281	2.236	2.203	2.164	2.133
Gallagher Stabilization Authorization	0.177	0.265	0.455	0.455	0.455	0.455
New Property Taxes with Adjusted Mill Levies						
Property Tax - Pitkin BRFPD	1,489,459	2,896,333	3,193,704	3,358,802	3,483,221	3,608,456
Property Tax - Eagle BRFPD	2,389,736	4,517,917	5,039,279	5,228,884	5,418,749	5,609,902
Property Tax - Pitkin SWFPD	4,992,332	8,573,445	8,793,990	8,923,104	9,048,429	9,177,440
Total Property Tax Revenues	8,805,469	15,987,695	17,026,973	17,510,790	17,950,400	18,395,799
Charge for Service BRFPD to RFFRA	3,500,000	5,917,839	6,196,756	6,475,672	6,754,588	7,033,504
Charge for Service SWFPD to RFFRA	3,400,000	6,737,883	6,852,055	6,966,228	7,080,400	7,194,573
Charge for Service Impact Fees BRFPD to RFFRA	70,000	75,000	75,000	75,000	75,000	75,000
Charge for Service Ambulance	600,000	900,000	900,000	900,000	900,000	900,000
Sale of Assets	50,000	35,000	35,000	35,000	35,000	35,000
Rental Income	112,380	110,000	110,000	110,000	110,000	110,000
Property Taxes BRFPD & SWFPD Net of Transfers to RFFRA	1,530,469	2,373,206	2,989,616	3,050,565	3,067,306	3,089,837
Specific Ownership Tax BRFPD & SWFPD	278,000	295,000	295,000	295,000	295,000	295,000
Interest Income	27,675	42,639	47,752	40,957	33,940	26,195
Donations	10,000	10,000	10,000	10,000	10,000	10,000

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Grants	950,000					
Station 46 Donation	950,000					
Fire Prevention	75,000	50,000	50,000	50,000	50,000	50,000
Special Event Income	20,000	20,000	20,000	20,000	20,000	20,000
Miscellaneous	130,000	25,000	25,000	25,000	25,000	25,000
Total Revenue *	11,703,524	16,591,567	17,605,977	18,052,788	18,455,125	18,862,500

* Note: Charge for Service Capital Fund SWFPD of \$375,000 in 2022 has moved to the Capital Projects Fund

Figure 128: RFFRA Analysis - Forecast 2 Expenditures

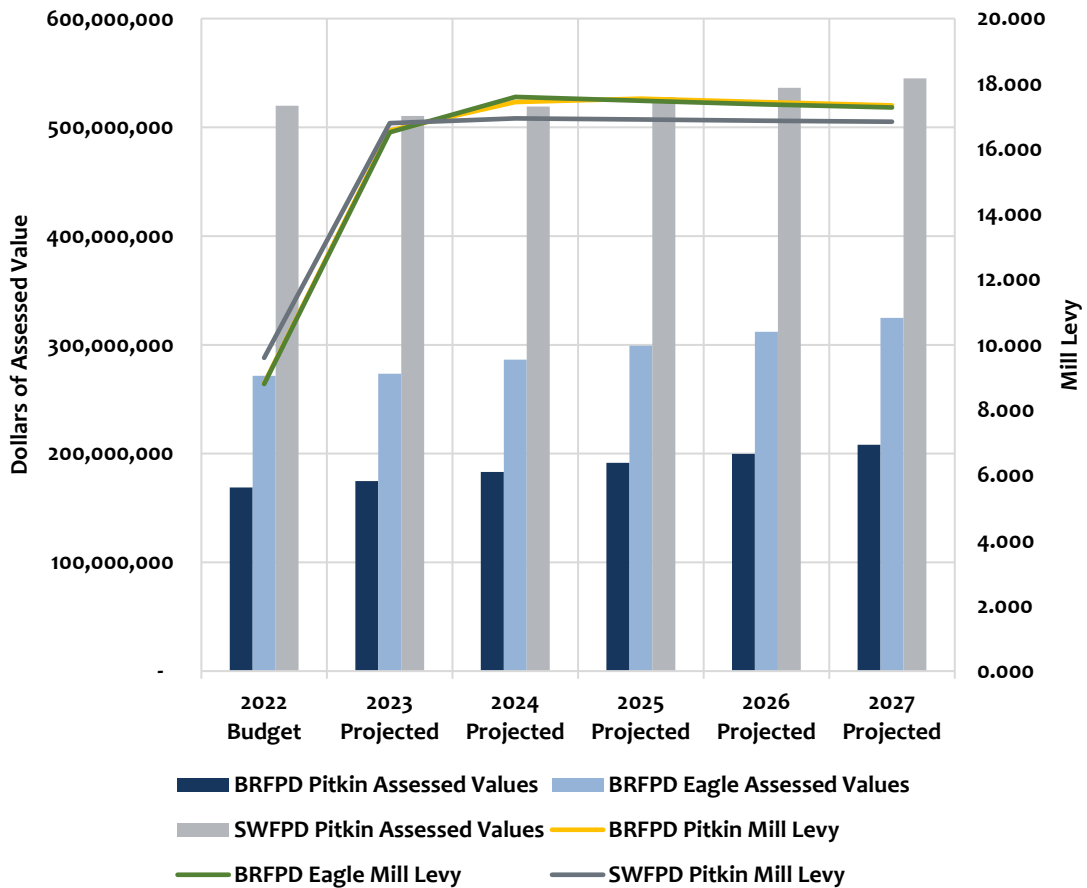
Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Treasurer's Fees	438,000	709,026	750,563	770,962	789,145	807,592
Wages	4,559,787	4,787,776	5,027,165	5,278,523	5,542,450	5,819,572
Addition of 16 FF wages	-	333,358	1,039,704	1,091,689	1,146,274	1,203,587
Addition of 1 Inspector wage	-	24,836	63,336	66,503	69,828	73,319
Benefits	1,953,015	2,148,317	2,363,148	2,599,463	2,859,409	3,145,350
Addition of 16 FF benefits	-	143,344	447,073	469,426	492,898	517,543
Addition of 1 Inspector benefits	-	10,680	27,235	28,596	30,026	31,527
Administration	433,000	333,854	340,131	346,534	353,064	359,726
Building Maintenance	517,500	527,850	538,407	549,175	560,159	571,362
Communications	249,000	253,980	259,060	264,241	269,526	274,916
Fire Prevention	74,100	75,582	77,094	78,636	80,208	81,812
Fire Operations	162,000	165,240	168,545	171,916	175,354	178,861
Medical Operations	60,700	61,914	63,152	64,415	65,704	67,018
Training/Education	225,000	229,500	234,090	238,772	243,547	248,418
Vehicles	178,500	185,640	191,209	196,945	202,854	208,939
Annual Contribution to Capital Fund Net of BRFPD & SWFPD Capital Transfers	-	1,176,680	1,097,683	997,434	755,708	725,928
Catch up Capital Fund Contributions			3,745,830	3,745,830	3,745,830	3,745,830
Transfer to Pension BRFPD and SWFPD	50,000	114,706	117,756	120,805	123,855	126,904
Transfer Impact Fees BRFPD to RFFRA	1,500					
Station 46 Capital Costs	1,900,000					
Debt Service 2023 Bond Issue		519,066	1,038,132	1,038,132	1,038,132	1,038,132
Debt Service	1,422,350	1,421,750	1,420,550	1,422,150	1,420,300	1,425,050
Total Expenditures	12,224,452	13,223,100	19,009,862	19,540,148	19,964,270	20,651,388
Revenues	11,703,524	16,591,567	17,605,977	18,052,788	18,455,125	18,862,500
Ending Fund Balance *	9,443,626	10,212,094	8,808,209	7,320,848	5,811,704	4,022,816
Ending Balance Capital Projects Fund	1,707,870	65,355	5,039,826	8,281,848	13,429,645	18,772,321

* Note: The \$1,277,900 of Capital expenditures moved to the Capital Projects Fund in 2022.

The previous tables show the mill levies necessary to provide funding for the recommended replacement and remodel schedules, the costs to purchase the property, build a training building and an administration building, and hire the 11 FF-EMTs, 5 FF/Paramedics, and one inspector. The increases are assumed to start in 2024 and are as follows: BRFPD and SWFPD would increase their general fund mill levies to 13.20. In addition, BRFPD would add a 1.0 mill capital levy and the 2023 bond issue, which varies based on the assessed valuation for that year: 1.158 Mill in 2023, 2.211 in 2024, 2.116 in 2025, 2.029 in 2026, and 1.948 in 2027. SWFPD would increase its capital fund levy to 1.0 mill for Capital.

The following graph shows the assessed values for the two districts by county and the mill levy for each district by county.

Figure 129: BRFPD and SWFPD Assessed Value and Mill Levy by District and County



Forecast 3

This forecast uses a combination of increases to assessed values and increases in mill levies to generate the necessary revenue for the additional expenditures over the Forecast 1 scenario. The general fund mill levy is increased to 10.50 for BRFPD and SWFPD. The capital mill levy of 1 mill increases the revenue due to the increased assessed valuation. This reduces the amount of annual contribution required for the capital projects fund. The net effect on the Capital Projects Fund is zero.

Figure 130: Analysis - Forecast 3 Resources

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Beginning Fund Balance	9,964,554	6,843,626	7,616,941	5,193,761	3,690,819	3,907,470
AV - Pitkin - BRFPD	168,834,670	175,588,057	210,705,668	221,240,952	254,427,094	267,148,449
AV - Eagle - BRFPD	271,560,910	282,423,346	338,908,016	355,853,416	409,231,429	429,693,000
AV - Pitkin-SWFPD	519,926,260	540,723,310	648,867,972	681,311,371	783,508,077	822,683,481
Mill Levy - Pitkin - BRFPD	8.822	12.630	12.921	14.367	14.067	13.979
Mill Levy - Eagle- BRFPD	8.800	12.587	12.979	14.313	14.014	13.925
Mill Levy - Pitkin-SWFPD	9.602	13.966	13.706	13.621	13.391	13.322
Basalt & Rural Fire Protection District						
General Fund	7.850	10.500	10.500	10.500	10.500	10.500
Abatements	.004P/.008E	0.100	0.100	0.100	0.100	0.100
Capital Mill Levy	-	1.000	1.000	1.000	1.000	1.000
Pension Fund	0.150	0.150	0.150	0.150	0.150	0.150
2023 Bond Issue Mill Levy	-	0.001	0.944	1.799	1.564	1.490
Debt Service Fund	0.680	0.563	0.001	0.450	0.391	0.377
Gallagher Stabilization Authorization	.08P/.068E	.316P/.273E	.225P/.283E	.368P/.314E	.362P/.309E	.362P/.308E
Snowmass - Wildcat Fire Protection District						
General Fund	6.601	10.500	10.500	10.500	10.500	10.500

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Abatements	0.074	0.050	0.050	0.050	0.050	0.050
Capital Fund	0.750	1.000	1.000	1.000	1.000	1.000
Debt Service Fund	2.000	2.152	1.789	1.706	1.481	1.413
Gallagher Stabilization Authorization	0.177	0.264	0.367	0.365	0.360	0.359
New property Taxes with Adjusted Mill Levies						
Property Tax - Pitkin BRFPD	1,489,459	2,217,673	2,722,454	3,178,548	3,579,133	3,734,364
Property Tax - Eagle BRFPD	2,389,736	3,554,856	4,398,569	5,093,297	5,735,142	5,983,308
Property Tax - Pitkin SWFPD	4,992,332	7,552,005	8,893,460	9,280,275	10,492,281	10,959,788
Total Property Tax Revenues	8,805,469	13,324,535	16,014,482	17,552,121	19,806,556	20,677,460
Charge for Service BRFPD to RFFRA	3,500,000	3,687,349	4,424,819	4,646,060	5,342,969	5,610,117
Charge for Service SWFPD to RFFRA	3,400,000	5,677,595	6,813,114	7,153,769	8,226,835	8,638,177
Charge for Service Impact Fees BRFPD to RFFRA	70,000	75,000	75,000	75,000	75,000	75,000
Charge for Service Ambulance	600,000	900,000	900,000	900,000	900,000	900,000
Rental Income	112,380	110,000	110,000	110,000	110,000	110,000
Property Taxes BRFPD & SWFPD Net of Transfers to RFFRA	1,530,469	2,960,856	3,578,068	4,493,886	4,789,586	4,909,641
Specific Ownership Tax BRFPD & SWFPD	278,000	295,000	295,000	295,000	295,000	295,000
Interest Income	27,675	36,158	32,297	22,641	19,588	21,163

Financial Resources by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Donations	10,000	10,000	10,000	10,000	10,000	10,000
Grants	950,000					
Station 46 Donations	950,000					
Fire Prevention	75,000	50,000	50,000	50,000	50,000	50,000
Special Event Income	20,000	20,000	20,000	20,000	20,000	20,000
Miscellaneous	130,000	25,000	25,000	25,000	25,000	25,000
Total Revenue *	11,703,524	13,881,958	16,368,298	17,836,356	19,898,978	20,699,098

* Note: Charge for Service Capital Fund SWFPD of \$375,000 in 2022 has moved to the Capital Projects Fund

Figure 131: Analysis - Forecast 3 Expenditures

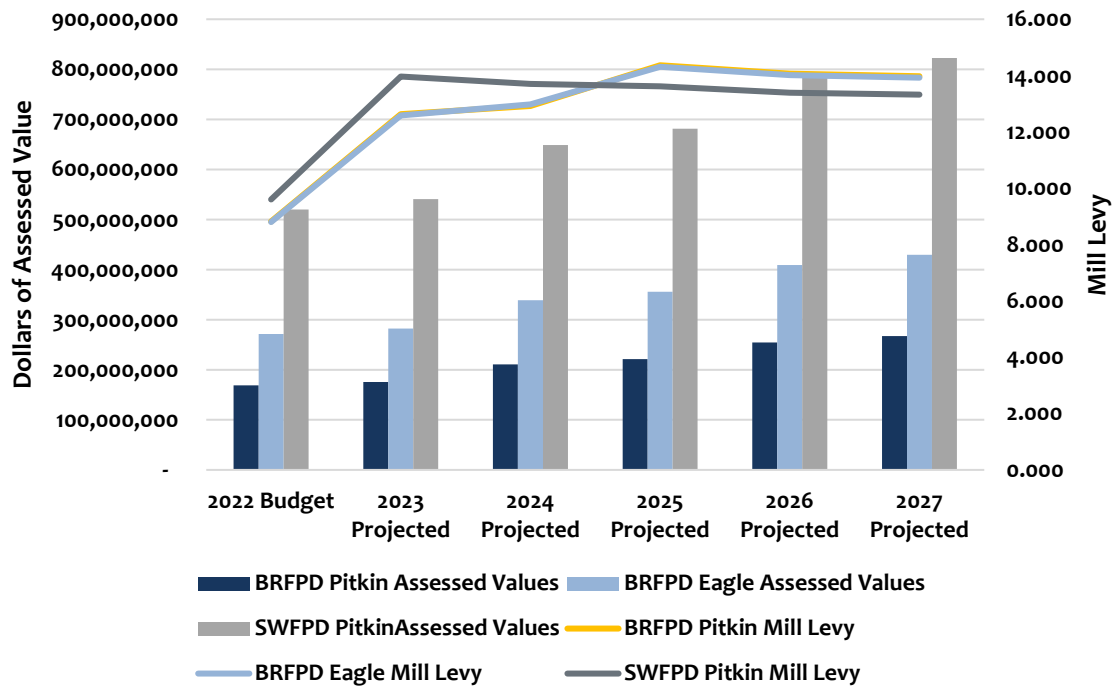
Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Treasurer's Fees	438,000	595,130	712,753	775,740	875,625	914,207
Wages	4,559,787	4,787,776	5,027,165	5,278,523	5,542,450	5,819,572
Addition of 16 FF wages	-	333,358	1,039,704	1,091,689	1,146,274	1,203,587
Addition of 1 Inspector wage	-	24,836	63,336	66,503	69,828	73,319
Benefits	1,953,015	2,148,317	2,363,148	2,599,463	2,859,409	3,145,350
Addition of 16 FF benefits	-	143,344	447,073	469,426	492,898	517,543
Addition of 1 Inspector benefits	-	10,680	27,235	28,596	30,026	31,527
Administration	433,000	333,854	340,131	346,534	353,064	359,726
Building Maintenance	517,500	527,850	538,407	549,175	560,159	571,362
Communications	249,000	253,980	259,060	264,241	269,526	274,916
Fire Prevention	74,100	75,582	77,094	78,636	80,208	81,812
Fire Operations	162,000	165,240	168,545	171,916	175,354	178,861
Medical Operations	60,700	61,914	63,152	64,415	65,704	67,018
Training/ Education	225,000	229,500	234,090	238,772	243,547	248,418
Vehicles	178,500	185,640	191,209	196,945	202,854	208,939
Annual Contribution to Capital Fund Net of BRFPD & SWFPD Capital Transfers	-	1,136,712	887,747	757,354	356,646	284,288
Catch-Up Contribution to Capital Fund			3,745,830	3,745,830	3,745,830	3,745,830
Transfer to Pension BRFPD and SWFPD	50,000	114,706	117,756	120,805	123,855	126,904
Transfer Impact Fees BRFPD to RFFRA	1,500					

Financial Expenditures by Type	2022 Budget	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Station 46 Capital Costs	1,900,000					
Debt Service 2023 Bond Issue		519,066	1,038,132	1,038,132	1,038,132	1,038,132
Debt Service	1,422,350	1,421,750	1,420,550	1,422,150	1,420,300	1,425,050
Total Expenditures	12,224,452	13,069,235	18,762,116	19,304,846	19,651,688	20,316,363
Revenues	11,703,524	13,881,958	16,368,298	17,836,356	19,898,978	20,699,098
Ending Fund Balance *	9,443,626	7,656,349	5,262,530	3,794,040	4,041,329	4,424,065
Ending Balance Capital Projects Fund	1,707,870	65,355	5,039,826	8,281,848	13,429,645	18,772,321

* Note: The \$1,277,900 of Capital expenditures moved to the Capital Projects Fund in 2022.

Figure 132 summarizes the proposed assessed values used and the total mill levy required to achieve the desired revenues. It shows the assessed values and mill levies for each district and the two counties.

Figure 132: BRFPD and SWFPD Assessed Value by District and County and Mill Levy by District and County



Forecast 3 uses a combination of growth in assessed values and smaller increases in mill levies to provide for funding of the Authority, as seen in

Figure 130. The increases in the assessed values used in the model are as follows: 4% in 2023, 20% in 2024, 5% in 2025, 15% in 2026, and 5% in 2027. Compared to the historical increase percentage and trend projections, these increase percentages are large. The actual increases/(decreases) and the projected increases/(decreases) used in Forecasts 1 and 2 are shown in the following table.

Figure 133: Growth in Assessed Values by District and County Both Actual and Projected Based on Historical Trends

Years Actual	BRFPD - Pitkin County		BRFPD - Eagle County		BRFPD Total		SWFPD - Pitkin County	
	Percent Change	5-Year Annual Average	Percent Change	5-Year Annual Average	Percent Change	5-Year Annual Average	Percent Change	5-Year Annual Average
2017 - 2018	-2.08%	4.86%	7.57%	5.58%	3.69%	4.98%	-1.56%	0.71%
2018 - 2019	3.10%		1.53%		0.82%		-0.64%	
2019 - 2020	18.60%		6.07%		10.77%		-0.09%	
2020 - 2021	0.02%		0.60%		0.37%		0.83%	
2021 - 2022	4.64%		12.13%		9.23%		5.03%	
Years Projected								
2022 - 2023	3.53%	4.27%	0.72%	3.65%	1.80%	3.89%	-1.82%	0.96%
2023 - 2024	4.76%		4.68%		4.71%		1.69%	
2024 - 2025	4.54%		4.47%		4.50%		1.67%	
2025 - 2026	4.35%		4.28%		4.31%		1.64%	
2026 - 2027	4.17%		4.11%		4.13%		1.61%	

The above table uses the trend analysis for the projected assessed value growth percentages for Forecasts 1 and 2. In comparison, the growth numbers used in Forecast 3 are very aggressive, with an annual average of 11.65%.

Future System Funding

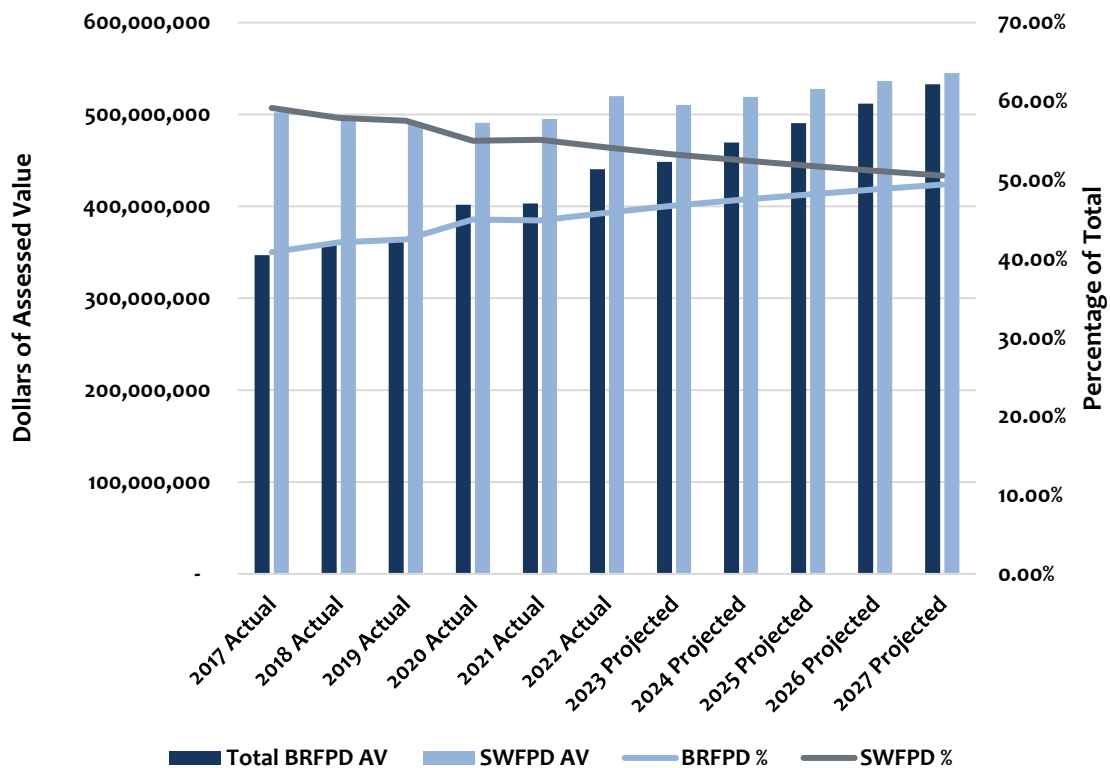
Authority funding manner is the one function that will dramatically affect long-term sustainability. ESCI offers some thoughts for consideration.

Funding Mechanism for Authority

Analyzing the RFFRA's current fiscal situation, ESCI believes it is important to address the funding mechanism and sources of revenue. When ESCI is conducting a feasibility study for a fire departments' consolidation, it recommends that a funding allocation be

adopted. It is particularly essential if the organizations continue with an Authority model for an extended time. Allocation formulas (comparison of each partner district as a percentage to the whole Authority) are usually based on one or more of the following factors: size of service areas; assessed valuation; service demand; deployment of resources (facilities, apparatus, and personnel located in each district); or population. The Authority should evaluate what is appropriate before additional tax requests. Based on ESCI discussions, there has been some informal consideration of this, and both districts seem to be getting equitable service for the portion of revenue provided. It will serve the Authority well to document this philosophy in writing. It is interesting that based on the historic assessed valuation trend, the difference between the two districts' contributions will narrow over time. Figure 134 displays this effect.

Figure 134: BRFPD and SWFPD Assessed Value Comparison and the Percentage of the Total Assessed Value for Each District



Alternative Revenue Methods

Consider funding options different from the fire protection district's regular source of property taxes. RFFRA, as noted earlier in the report, is not typical in most areas serviced by fire districts in Colorado. Being a tourist destination greatly influences the service

demand. Raising property taxes on the residents of the districts to service the emergency needs of the tourist population may not be the best solution. It may be beneficial for the municipalities or counties to participate in the provision of services. Dedicating a small percentage of sales tax to the Authority would shift the need for all funding to come from the permanent residents. Tourists and visitors to the area would then participate in funding the fire services. RFFRA's relationship with the municipalities and counties seems to be exceptionally good. This relationship demonstrates strong teamwork existing between the agencies. ESCI would recommend the designation of sales tax revenues to cover specific items within the Authority budget that have nexus to the transient service demand.

Development of Response Standards and Targets

ESCI emphasizes the importance of establishing response time performance metrics by RFFRA. Developing response standards is to have an objective measure of how the department is performing. This process meets both National Fire Protection Association (NFPA) and Center for Public Safety Excellence (CPSE) best practices. Management and the governing body should participate in this process. The staff suggests what is rational and achievable, and the governing body adopts the final standards. Sometimes the jurisdiction will establish the desired target standard, or benchmark, realizing that it may not be able to achieve the standard initially. Achieving the response standard will be determined by the resource distribution (typically station locations) and resource concentration, i.e., the ability to get the effective response force on the scene within desired parameters.

The Service Delivery and Performance section of this report used the NFPA recommended standards in place of any locally established standards. However, these may not reflect the desire of RFFRA and the communities that it serves.

Response standards are unique to every department based on the expectations of its citizens and business community, elected officials, and department management. Usually, there will be some tension between the financial aspect of what a community is able and willing to pay for the service and the desired capability. For this reason, ESCI cannot establish these standards for RFFRA but rather will provide guidance and examples of what we consider to be good metrics. In the following figure, ESCI offers sample statements that may represent the community expectations for various

common types of emergency services the Authority provides. The response criteria may differ for various types of responses, as will staffing and response times.

Figure 135: Community Expectations - Response Objectives¹⁹

Service	Example Community Outcome Expectations
Fire Suppression	For all fire incidents, responders shall arrive in a timely manner with sufficient resources to stop the escalation of the fire and keep the fire to the area of involvement. An effective concentration of resources shall arrive within time to contain the fire, rescue at-risk victims, and perform salvage operations while providing for the safety of the responders and general public.
Wildland Fire Suppression	For all wildfire incidents, the Authority shall arrive in a timely manner with sufficient resources to first protect homes and other buildings, then begin controlling the rate of fire spread.
Emergency Medical Services	For emergency medical incidents, the Authority shall arrive in a timely manner with sufficient trained and equipped personnel to provide medical services that will stabilize the situation, provide care and support to the victim, and reduce, reverse, or eliminate the conditions that have caused the emergency while providing for the safety of the responders. When warranted, timely transportation of victim(s) to appropriate medical facilities shall be accomplished in an effective and efficient manner.
Hazardous Materials Response	For all hazardous materials incidents, responders shall arrive in a timely manner with sufficient resources to stabilize the situation and establish an action plan for the successful conclusion of the incident. For incidents requiring more extensive technician-level functions, personnel will call for and support additional specially trained and organized regional resources to perform the necessary containment, stabilization, and/or clean-up functions while providing for the safety and security of the responders, public, and the environment.
Vehicle Extrication	For vehicle accidents where rescue of victims is required, responders shall arrive in a timely manner with sufficient resources to stabilize the situation and extricate the victim(s) from the emergency without causing further harm to the victim, responders, public, and the environment.
High-Angle Rescue	For all high-angle rescue incidents, the Authority shall arrive in a timely manner with sufficient resources to stabilize the situation and establish an action plan for the successful conclusion of the incident. The department will perform the necessary rescue functions, working in conjunction with additional specially trained and organized regional resources while providing for the safety and security of the responders, the public, and the environment.
Swift-Water Rescue	For all swift-water rescue incidents, responders shall arrive in a timely manner with sufficient resources to stabilize the situation and establish an action plan for the successful conclusion of the incident. The department will perform the necessary rescue functions, working in conjunction with additional specially trained and organized regional resources, while providing for the safety and security of the responders, the public, and the environment.

Note that the response objectives presented in Figure 135 do not address specific staffing or response time performance. The fire jurisdiction should define the critical tasks, the staffing, and the response time necessary to meet the response goals. Examples of critical task analysis are in the *Staffing and Personnel Management* section. The *Service Delivery and Performance* section of this report contains examples of recommended standards for response times.

Once established, these standards create measurable goals for service delivery. These measurements form the basis for the deployment of resources. The measures will indicate when and where additional resources are needed. Using criteria is especially necessary for rapidly growing areas. Not all new developments may be within the existing stations' reach.

Geographic Response Zones

Departments typically establish response benchmarks by considering geography, population density, and risk. Communities contain varying levels of population density and risk that allow fire jurisdictions to specify response performance objectives based on those considerations. NFPA categorizes population density as:

- Metropolitan – A geographic area having a population of over 200,000 people in total and/or a population density of over 3,000 people per square mile. These areas contain mid-rise and high-rise buildings, often interspersed with smaller structures.
- Urban – A geographic area with over 30,000 people and/or a population density of over 2,000 people per square mile.
- Suburban – A geographic area having a population of 10,000 to 29,999 and/or a population density of between 1,000 and 2,000 people per square mile.
- Rural – A geographic area with fewer than 10,000 people or a population density of fewer than 1,000 people per square mile.
- Wilderness/Frontier – A geographic area that is both rural and not readily accessible by a publicly or privately maintained road.

¹⁹ Based on examples provided in the publication Commission on Fire Accreditation International, Inc. (now Center for Public Safety Excellence), *Creating and Evaluating Standards of Response Coverage for Fire Departments*, 5th edition.

In the RFFRA service area, there are at least three distinct risks level based on the above criteria. Figure 103 shows the differing levels of risk in the service area. The majority of the jurisdiction is rural; however, most responses occur where the population density is higher. ESCI recommends that the urban and suburban population densities are one response standard. Measuring performance in rural areas can use separate, less critical response time criteria. Often the response zone is defined by the closest station to respond, but other considerations may be used e.g., the route used for access or topography features,

RFFRA may choose to divide rural areas into wilderness areas. Some areas are not easily accessible due to roads, topography, or other geographic issues. RFFRA may extend the response time in wilderness areas as the time is based on factors out of the fire department's control.

Each response zone should be measured at least annually, although ESCI would recommend quarterly reporting. The analysis compares the actual performance to the Board approved benchmark. Over time the measures in a particular zone will indicate the action needed to improve performance. Management should use the analysis process to determine station location and timing. The quarterly or annual performance measurement needs to be published to the Authority Board and the community.

Response Time Data Improvement

Available and accurate response data is required to report the performance. ESCI discussed data gathering in the *Management Components* and the *Service Delivery and Performance* sections of this report. Determining a solution requires the Authority and the communications center to review the issues. This will include: 1) review of the Zoll® records management system (RMS) settings; 2) revising the time stamp procedures in dispatch; 3) implementing an interface between the computer-aided dispatch (CAD) system and the RMS. Accurate data collection is vital to the Authority, and a solution must be determined and implemented promptly.

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APPENDIX B: FINANCIAL BEST PRACTICES

Best Practices in Finance

Budgeting

Procedures are in place to monitor, adopt and amend budgets.

The budget process includes performance measures, goals, objectives, etc.

The government body is recognized by the GFOA for its budget (GFOA Distinguished Presentation Award).

A five year financial plan is in place.

Written policies and procedures have been developed and updated.

Finance department monitors actuals versus budgeted expenditures

A fund reserve policy is in place.

New hires, reclassifications, and position changes are signed off (budget sign off).

Financial reports are provided to key stakeholders such as the Fire Chief and the Board of Directors.

Purchasing and Risk

Written policy is in place for purchasing goods, services, etc.

Reasonable purchase limits and levels are in place.

Policies exist for excessive equipment and vehicles.

Training is provided regarding purchasing.

Accounting

Finance functions are cross trained.

Accounting policies are in place and enforced.

Accounts payable disbursements include proper documentation.

Invoices are approved/reviewed prior to payment.

AP is processed in a timely manner.

Monthly reconciliation, financial reports, and audits are handled in a timely manner.

Payroll is distributed in a timely manner.

Debt management policy is in place.

APPENDIX C: PREVENTION FEE SCHEDULE

Roaring Fork Fire Rescue Authority
 1089 J W Dr. Carbondale, Co 81623
www.roaringforkfire.org

fireprevention@roaringforkfire.org

District Fee Schedule (Adopted January 2022)

The Fire Marshal is authorized to issue operational permits for the uses and operations set forth in this schedule.

Eagle County & Pitkin County & Town Of Basalt – Impact Fees

Impact Fee	Structure	Description
Impact Fee Invoice for Residential	Residential: \$979	Impact fees are based on new development to cover the costs of providing emergency services necessary to accommodate growth. The impact fee charged is intended for new construction. Impact fees are not assessed for remodels unless new dwelling units are added or commercial space is expanded.
Impact Fee Invoice for Commercial	Commercial: Square footage of commercial building divided by 2,000 multiplied by \$979 equals the Impact Fee due	Impact fees are based on new development to cover the costs of providing emergency services necessary to accommodate growth. The impact fee charged is intended for new construction. Impact fees are not assessed for remodels unless new dwelling units are added or commercial space is expanded. Example: retail store of 6,000 sq ft ÷ 2,000 = 3 x \$979 = \$2937 Impact Fee Due

Town Of Snowmass Village – Plan Review

Type Of Permit	Permit/Plan Review Fee	Description
Tenant Finish or Improvement	Residential \$.30 Sq Ft	This fee is required to obtain a construction permit to modify, change, or alter the interior of any building
	Commercial \$.65 Sq Ft	
New Building Core and Shell or Building Addition	Residential \$.30 Sq Ft	This fee is required to obtain a construction permit to construct or add to the total area of any building
	Commercial \$.65 Sq Ft	
Demolition	\$200	This fee is required to obtain a construction permit to conduct demolition operations

Eagle County & Pitkin County & Town Of Basalt – Plan Review

Type Of Permit	Fee	Description
Tenant Finish or Improvement	Residential \$.10 Sq Ft	This fee is required to obtain a construction permit to modify, change, or alter the interior of any building
	Commercial \$.15 Sq Ft	
New Building Core and Shell or Building Addition	Residential \$.10 Sq Ft	This fee is required to obtain a construction permit to construct or add to the total area of any building
	Commercial \$.15 Sq Ft	
New Parking Structure	\$.20 Sq Ft	New parking structure built as part of new building complex or new parking structure built separately
Demolition	\$200	This fee is required to obtain a construction permit to conduct demolition operations
Automatic Sprinkler System 13, 13R (NEW)	\$400 + \$4/head	This fee is required to obtain a construction permit to install new automatic sprinkler systems in a multi-family residential, hotel, business or commercial facilities
Automatic Sprinkler System 13D (NEW)D	\$400 + \$4/head	This fee is required to obtain a construction permit to install a new automatic sprinkler in one- and two-story single-family dwellings and manufactured homes
Automatic Sprinkler System Modification	\$400 + \$4/head	This fee is required to obtain a construction permit to extend, modify, or alter an existing automatic sprinkler system
Fire Pump	\$400 (includes jockey pump)	This fee is required to obtain a construction permit to install a fire pump
Standpipe	\$300 + \$25/hose	This fee is required to obtain a construction permit to install a standpipe system
Fire Alarm System (NEW)	\$400 +\$4/initiating and notification device	This fee is required to obtain a construction permit to install a new fire alarm system or to replace a fire alarm system
Fire Alarm System Modification	\$400 + \$4/initiating and notification device	This fee is required to obtain a construction permit for extensions, modifications, or alterations of fire alarm systems
Hood & Duct Fire Protection System	\$200 for 1st system + \$100 for each addl system installed + \$3/initiating and notification device	This fee is required to obtain a construction permit to install hood and duct fire protection systems
Water Tanks for Fire Protection	\$200/tank or cistern	This fee is required to obtain a construction permit to install, inspect, and test water tank(s) that are required by NFPA 1142 to hold the water supply storage for manual firefighting

Town Of Snowmass Village

Type Of Permit	Fee	Description
Fire Protection Underground	\$200	This fee is required to obtain a construction permit to extend, modify, or alter underground fire service mains (underground fire lines)
Automatic Sprinkler System 13, 13R (NEW)	\$400 + \$4/head	This fee is required to obtain a construction permit to install new automatic sprinkler systems in a multi-family residential, hotel, business or commercial facilities
Automatic Sprinkler System 13D (NEW)	\$400 + \$4/head	This fee is required to obtain a construction permit to install a new automatic sprinkler in one- and two-story single-family dwellings and manufactured homes
Automatic Sprinkler System Modification	\$400 + \$4/head	This fee is required to obtain a construction permit to extend, modify, or alter an existing automatic sprinkler system
Fire Pump	\$400 (includes jockey pump)	This fee is required to obtain a construction permit to install a fire pump
Standpipe	\$300 + \$25/hose	This fee is required to obtain a construction permit to install a standpipe system
Fire Alarm System (NEW)	\$400 +\$4/initiating and notification device	This fee is required to obtain a construction permit to install a new fire alarm system or to replace a fire alarm system
Fire Alarm System Modification	\$400 + \$4/initiating and notification device	This fee is required to obtain a construction permit for extensions, modifications, or alterations of fire alarm systems
Hood & Duct Fire Protection System	\$200 for 1st system + \$100 for each additional system installed + \$3/initiating and notification device	This fee is required to obtain a construction permit to install hood and duct fire protection systems
Water Tanks for Fire Protection	\$200/tank or cistern	This fee is required to obtain a construction permit to install, inspect, and test water tank(s) that are required by NFPA 1142 to hold the water supply storage for manual firefighting

Eagle County & Pitkin County & Town Of Basalt & Town Of Snowmass Village - Hazardous Materials & Construction

Type	Fee	Description
Above Storage Tank (AST) or Underground Storage Tank (UST) Installation or Removal	\$300 for 1st tank + \$150 for each additional tank	This fee is required to obtain a construction permit to install, remove, abandon, place temporarily out-of-service, or otherwise dispose of a flammable or combustible liquid tank
Fuel Dispensers	\$300 for 1st tank + \$25 for each additional dispenser	This fee is required to obtain a construction permit to install or modify fuel dispensers (See exceptions in the code)
Battery, Photovoltaic/Solar Systems (UPS)	\$200	This fee is required to obtain a construction permit to install a stationary lead-acid battery or solar photovoltaic system(s) [Liquid capacity of more than 100 gallons including gel cells]
LP or NG Installation (temporary or permanent) and Temporary Heat	\$200 for 1st tank + \$50 for each additional tank	This fee is required to obtain a permit to install permanent LP systems or containers for a period of less than six months (includes temporary heat)

Special Use/Miscellaneous Permit Fee Schedule

Type	Fee	Description
Blasting, Temporary	\$225/project (max length permitted = 7 days)	This fee is required to obtain an operations permit to store, handle, or use any quantity of explosives or explosive materials
Use of fire hydrants and water control valves	\$100	This fee is required to obtain an operations permit to use a fire hydrant or operate a water control valve intended for fire suppression purposes
Fireworks Outdoor Display	\$200 + cost of required standby firefighting personnel and apparatus	This fee is required to obtain an operations permit to conduct an outdoor fireworks display
Fireworks Sales inside temporary structure	\$1,000	This fee is required to obtain an operations permit to store, handle, or sell fireworks within a temporary structure
Pyrotechnical Special Effects Material	\$200 for Review + cost of required standby personnel (portion of fee may be waived if multiple events are within the same day)	This fee is required to obtain an operations permit for pyrotechnical special effects material(s)
Temporary Membrane Structures, Tents, Canopy Tents, Canopies	\$75 for 1st tent/canopy + \$25 for each additional tent/canopy (maximum length of permit = 30 days)	This fee is required to obtain a permit to erect or operate a tent/canopy having an area of 400 Sq Ft or more, except for structures used exclusively for recreational camping. Additionally, special event fees may apply if tents are used as part of a special event.
After Hours Inspection	\$100/hr. (minimum 2 hours)	This fee is assessed whenever, at the request of a building owner, RFFR conducts an inspection after or before normal business hours (0800 - 1600 Monday - Friday and weekends). Fee is doubled when the inspection is requested on a holiday or holiday weekend.
Work Without a Permit or Pre-approval	Double stated fees (Inspection Fee and Plan Review Fee x 2)	This fee is assessed whenever any work for which a permit is required by RFFR has begun without first obtaining a permit
Technical Assistance Fee	Actual cost to be reimbursed back to RFFR	This cost is assessed when external technical assistance is required pursuant to IFC Section 113.2
Additional Plan Reviews	\$75	This fee shall be paid for the review of plans when changes are made to the previously approved plans
Miscellaneous Inspection/Review Fee	\$75	This fee is assessed when there is no other applicable fee indicated and the inspection/review occurs during normal business hours

The Fire Marshal/Building Official are authorized to make interpretations and clarification changes to the fee schedule. The Fire Marshal/Building Official are authorized to collect inspection fees for construction permits and for other items set forth in this schedule. The Fire Marshal/Building Official may waive or reduce fees for non-profit organizations or other governmental agencies. The business or facility must apply in writing to the Fire Marshal/Building Official to waive such fees.

The "Plan Review Fee" will be collected from the contractor even if the contractor cancels the permit or when plans are reviewed without a permit. The "Plan Review Fee" may be required to be collected at the time of submittal at the discretion of the Fire Marshal or Building Official. The "Plan Review Fee" is required to be collected before permit issuance.

All fees will be rounded to the nearest whole dollar.