Benton County Fire District 4

West Richland, Washington

March 2026

LONG-RANGE MASTER PLAN

Community Risk Assessment & Standards of Cover

AP TRITON
VISION • INNOVATION • SOLUTIONS

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Acknowledgments

AP Triton wishes to extend its sincere appreciation to each of those individuals and organizations whose contributions and assistance made this project possible.

Our sincere appreciation is extended to each of you, as well as to the firefighters, officers, and support staff who faithfully serve the residents and visitors of the District every day.

BENTON COUNTY FIRE DISTRICT 4

Board of Fire Commissioners

Garrett Goodwin
Chair

Fred Brink
Commissioner

Michael Van Beek
Commissioner

Benton County Fire District 4 Leadership

Paul Carlyle
Fire Chief

Dan Drayton
Deputy Fire Chief

Introduction

Purpose & Approach

A master plan is designed to assess where the District stands relative to the risks the community faces today, anticipate future growth and the corresponding increase in risk, and recommend proactive steps to ensure the District is properly positioned with the necessary resources and infrastructure. In short, a master plan prevents the fire district from falling behind community growth, development, and evolving risk profiles, helping to maintain or enhance service levels as the community expands.

It also serves as a critical policymaking and budgeting tool. By identifying where and how the community is expected to grow—and what policy, staffing, capital, and financial support will be required to meet that growth—the master plan provides elected officials with the data and strategic framework needed to make informed, forward-looking decisions.

The AP Triton team conducted a comprehensive analysis of data provided by Benton County Fire District 4 (BCFD4), along with supplemental regional and operational information, to evaluate current response performance and system effectiveness. Through this assessment, we identified key factors influencing community risk, response reliability, and deployment outcomes, as well as opportunities to strengthen the delivery system.

This document establishes response time objectives, defines measurable performance standards, and evaluates the alignment and deployment of resources against identified risks. It concludes with prioritized findings and recommendations organized into short-, medium-, and long-term implementation horizons to support strategic, data-driven decision-making.

AP Triton recognizes that not all recommendations can or should be implemented immediately. Certain initiatives may appropriately be phased in as economic conditions, revenue stability, and organizational capacity allow. However, each recommendation is designed to advance the District's operational capability, system reliability, and long-term service sustainability. Collectively, they provide a clear and actionable roadmap for strengthening performance and aligning resources with community risk over time.

Executive Summary

Benton County Fire District 4 (BCFD4) retained AP Triton, LLC to develop a comprehensive Long-Range Master Plan incorporating a Community Risk Assessment (CRA) and Standards of Cover (SOC). The purpose of this effort is to evaluate the District's current organizational capacity, service delivery system, and financial condition; assess existing and projected community risk; measure emergency response performance; and provide a phased, data-driven roadmap to guide policy, staffing, capital, and financial decisions over the next decade.

This Master Plan serves as both a strategic planning document and a Standards of Cover study. It establishes measurable performance objectives, evaluates deployment effectiveness, and aligns future resource planning with community growth and risk. The report is designed to support the Board of Fire Commissioners and District leadership in making defensible, forward-looking decisions that balance service expectations with fiscal sustainability.

Community and Service Environment

BCFD4 serves approximately 52 square miles, including the City of West Richland and surrounding unincorporated areas, with a population of roughly 22,000 residents. The community has experienced consistent growth and is projected to continue expanding, including significant residential development such as the Lewis and Clark Ranch project. Continued growth will increase call volume, travel demand, and community risk exposure.

The District operates a combination fire and EMS system from three fire stations. Services include fire suppression, advanced life support (ALS) ambulance transport, technical rescue, and limited fire prevention and life safety activities. Emergency Medical Services represent approximately two-thirds of total call volume and are the primary driver of operational demand. While concurrent incident frequency remains manageable, total call volume and service complexity continue to trend upward.

BCFD4 operates within a regional automatic aid system that enhances coverage reliability and effective response force (ERF) capability. The District benefits from strong interagency coordination and a modern regional communications center; however, internal performance benchmarks and formal service standards have not yet been fully adopted.

Organizational and Financial Condition

BCFD4 demonstrates strong foundational stability. The District benefits from committed leadership, positive labor-management relations, and a workforce aligned with its mission and community values. The recent completion of a strategic plan reflects organizational momentum and a desire to formalize long-term planning.

Financially, the District is currently in a sound position. Recurring revenues exceed recurring operating expenditures, and General Fund reserves exceed minimum recommended thresholds. Year-end liquidity provides flexibility for capital investment and operational continuity.

However, long-term revenue growth remains constrained by Washington's 1% statutory levy limitation. While assessed valuation growth supports short-term stability, it compresses levy rates and does not independently generate proportional revenue increases. EMS transport revenue and investment earnings provide important supplemental funding but remain variable and sensitive to external factors. Sustained growth in personnel, facilities, or capital assets will require disciplined forecasting and deliberate financial planning.

Key Findings

The Master Plan identified several overarching system-level conditions that influence the District's current performance, organizational maturity, and long-term sustainability. These findings reflect both organizational strengths and strategic areas requiring deliberate attention.

Strong Organizational Foundation with Evolving System Needs

Benton County Fire District 4 demonstrates organizational stability supported by committed leadership, positive labor–management relations, and a workforce aligned with the District's mission and values. Recent initiatives—including reopening Station 410 and adopting a strategic plan—demonstrate forward momentum and internal support for system improvement.

As the District continues transitioning from a smaller operational model to a more structured, performance-driven organization, further formalization of governance systems, policy management, data analytics, and long-range planning will be required to sustain operational reliability and organizational resilience.

Emergency Medical Services Drive System Demand and Operational Complexity

Emergency Medical Services represent approximately two-thirds of total call volume and are the primary driver of operational demand within the District. The fire-based ALS transport model provides advanced clinical capability and regional integration; however, EMS volume growth increases unit-hour utilization, impacts apparatus availability, and influences staffing stability.

While EMS transport revenue provides meaningful financial support, it remains variable and sensitive to payer mix, reimbursement cycles, and regulatory factors. Sustained EMS growth will require ongoing evaluation of deployment configuration, ambulance availability, clinical oversight capacity, and revenue forecasting to ensure both operational reliability and fiscal stability.

As EMS demand continues to increase, the District's long-term planning efforts must prioritize EMS system sustainability alongside fire suppression capability.

Sound Near-Term Financial Position with Long-Term Structural Constraints

The District is currently fiscally stable, with recurring revenues exceeding recurring operating expenditures and reserve levels exceeding recommended minimum thresholds. However, long-term revenue growth is constrained by Washington's statutory levy limitations.

Personnel, capital, and EMS-related service costs are expected to increase over time. Long-range fiscal sustainability will require disciplined forecasting, integration of capital and staffing planning, and proactive evaluation of revenue capacity, including EMS transport revenue variability.

Staffing Redistribution Impacts Operational Reliability

The reopening of Station 410 improved geographic coverage and effective response force capability; however, the practice of using Station 410 personnel to backfill vacancies at other stations results in intermittent coverage gaps and reduced deployment reliability.

As EMS and overall call volume increase, maintaining consistent minimum daily staffing and stabilizing shift reliability will be essential to preserving travel time performance, effective response force capability, and ambulance availability.

Performance Measurement Framework Not Fully Established

While response performance is generally reasonable, the District has not formally adopted response service standards or effective response force benchmarks measured at the 90th percentile.

Without adopted standards, it is difficult to clearly communicate service expectations, evaluate performance trends, or align staffing, EMS deployment, and capital investments with measurable outcomes. Establishing formal performance objectives will strengthen accountability and long-range planning.

Facilities and Capital Planning Require Long-Range Integration

Facilities and apparatus are generally well maintained; however, certain facilities are located on leased property, which may limit long-term flexibility. Capital investments are occurring but are not yet fully integrated into a coordinated long-range Capital Improvement Plan aligned with staffing, EMS demand, and financial projections.

Fire Prevention and Community Risk Reduction Capacity Is Limited

The District conducts selected inspections and public education activities; however, it does not maintain a comprehensive inspection inventory, structured inspection schedule, or formal Community Risk Reduction program. A complete inventory of commercial occupancies is necessary to conduct pre-incident surveys.

As development accelerates, proactive prevention planning will be essential to managing community risk and balancing emergency response demand.

Management Systems and Internal Controls Require Further Formalization

Core management systems are in place; however, several administrative processes remain informal or inconsistently applied. Significant progress has been made to strengthen internal financial controls, documentation practices, and supervisory oversight following a recent audit, with all findings currently addressed.

As the organization grows in EMS complexity and overall demand, continued system formalization will improve legal defensibility, financial integrity, and operational stability.

Recommendations Overview

The recommendations presented in this Master Plan are designed to be practical, scalable, and fiscally sustainable, reflecting the District's current organizational maturity, financial capacity, and projected community growth. Collectively, they provide a structured roadmap to strengthen governance, improve operational reliability, enhance community risk reduction, and align long-range staffing, capital, and financial planning with service demand.

Implementation is organized across phased time horizons to allow deliberate, manageable progress while maintaining operational stability. While not all recommendations require immediate action, each contributes to improving system performance, reducing organizational risk, and ensuring long-term service sustainability.

Short-Term Priorities (1–2 Years)

Short-term recommendations focus on strengthening the District's foundational systems, improving operational consistency, and addressing immediate organizational risk. These actions emphasize governance, fiscal discipline, staffing stability, safety, and performance measurement.

Key priorities include formalizing financial governance through adoption of a comprehensive reserve policy, strengthening internal financial controls, improving financial reporting transparency, and reinforcing documentation and audit practices. These actions are intended to enhance fiscal defensibility, reduce internal control risk, and support long-term financial planning. Notably, BCFD4 has moved fast on these issues. The Board adopted reserve policies in Board Resolution 2025-06, and all audit findings identified by the Washington State Audit Office have been fully addressed per BCFD4's recent exit conference.

Operationally, short-term actions prioritize maintaining consistent minimum daily staffing and stabilizing deployment reliability. This includes improving position control tracking, monitoring staffing relief factor trends, refining vacancy backfill practices, and evaluating the operational impacts of staffing redistribution. These measures are intended to reduce intermittent coverage gaps and improve response reliability.

Workforce safety and risk management are also emphasized. Conducting a Washington State Labor & Industries safety consultation and strengthening internal safety systems will help reduce liability exposure and improve compliance with best practices.

Short-term actions further establish the foundation for performance-based management. This includes formalizing response performance objectives, initiating routine measurement using 90th-percentile standards, and improving data collection and analytics to support evidence-based decision-making.

Administrative and management system maturity is also addressed through strengthening policy management, documentation practices, internal communication consistency, and organizational structure alignment.

Collectively, these short-term actions stabilize core systems, improve operational consistency, and establish the structural framework necessary to support future organizational growth.

Mid-Term Strategies (3–5 Years)

Mid-term recommendations focus on strengthening organizational capacity, formalizing service expectations, and improving community risk management. These actions transition the District from a stable small-system operational model toward a more structured, performance-driven organization capable of supporting sustained growth.

A primary mid-term priority is strengthening command and supervision capacity through the addition of Battalion Chief positions. This will improve incident command depth, operational coordination, shift-level decision-making, and organizational accountability.

Formal adoption and public reporting of response service standards is a critical step in defining service expectations and improving transparency. Establishing measurable performance benchmarks aligned with community risk allows leadership to evaluate system effectiveness and prioritize future investments.

Mid-term actions also emphasize strengthening fire prevention and risk reduction capabilities. Establishing a comprehensive inventory of inspectable occupancies and implementing a structured inspection schedule will improve regulatory compliance, reduce community risk exposure, and support proactive prevention strategies. Development of a formal Community Risk Reduction (CRR) program will align prevention, education, and risk analysis with local hazards and growth patterns.

Organizational maturity is further advanced through strengthening internal communication systems, improving training program structure, formalizing succession planning, and enhancing workforce development pathways. These steps improve operational consistency and long-term organizational resilience.

Mid-term recommendations also integrate planning systems across disciplines. Improving the use of incident data, GIS analysis, and operational analytics in planning and decision-making supports performance-based management and system optimization.

Additionally, integrating capital planning, staffing projections, and financial forecasting into a coordinated multi-year planning framework improves strategic alignment and long-term fiscal sustainability.

Together, these mid-term strategies build the organizational capacity necessary to sustain reliable service delivery as community complexity and demand continue to increase.

Long-Term Initiatives (5+ Years)

Long-term recommendations focus on sustaining service delivery, maintaining fiscal balance, and ensuring alignment between community growth, infrastructure, and deployment. These initiatives position the District to remain operationally effective and financially sustainable as service demand evolves.

A central long-term priority is development and maintenance of a fully integrated Capital Improvement Plan aligned with staffing, facilities, apparatus replacement, and long-range financial projections. This ensures that capital investments remain affordable, strategically timed, and operationally aligned.

As the community grows, periodic evaluation of station location, deployment configuration, and response reliability will be necessary to maintain effective coverage and meet established service objectives. These evaluations should be data-driven and aligned with growth patterns and risk distribution.

Long-term financial sustainability is also emphasized. Continued advancement of multi-year financial forecasting, combined with periodic assessment of revenue capacity under statutory levy constraints, will help ensure that service expectations remain aligned with available funding.

Long-term recommendations also institutionalize continuous improvement through ongoing strategic planning, performance monitoring, and system evaluation. Establishing a structured cycle of performance review ensures that organizational decisions remain data-driven and responsive to changing conditions.

Finally, strengthening long-term organizational resilience through leadership development, succession planning, and continued system formalization ensures continuity, stability, and sustained organizational capability.

Conclusion

Benton County Fire District 4 is a stable and professionally managed organization serving a growing and evolving community. The District's leadership, workforce commitment, financial position, and regional partnerships provide a strong platform for future success.

However, continued growth will require a more formalized alignment of performance standards, staffing models, capital investment, and long-term financial strategy. The absence of adopted service standards and comprehensive risk-reduction planning presents both operational and governance risk if left unaddressed.

This Master Plan provides a defensible, data-driven roadmap to guide those decisions. When implemented in a phased and deliberate manner, the recommendations will:

- Enhance response reliability and effective response force capability
- Strengthen fiscal transparency and financial resilience
- Reduce organizational and legal risk
- Improve community risk reduction efforts
- Position the District to sustain high-quality service delivery as growth continues

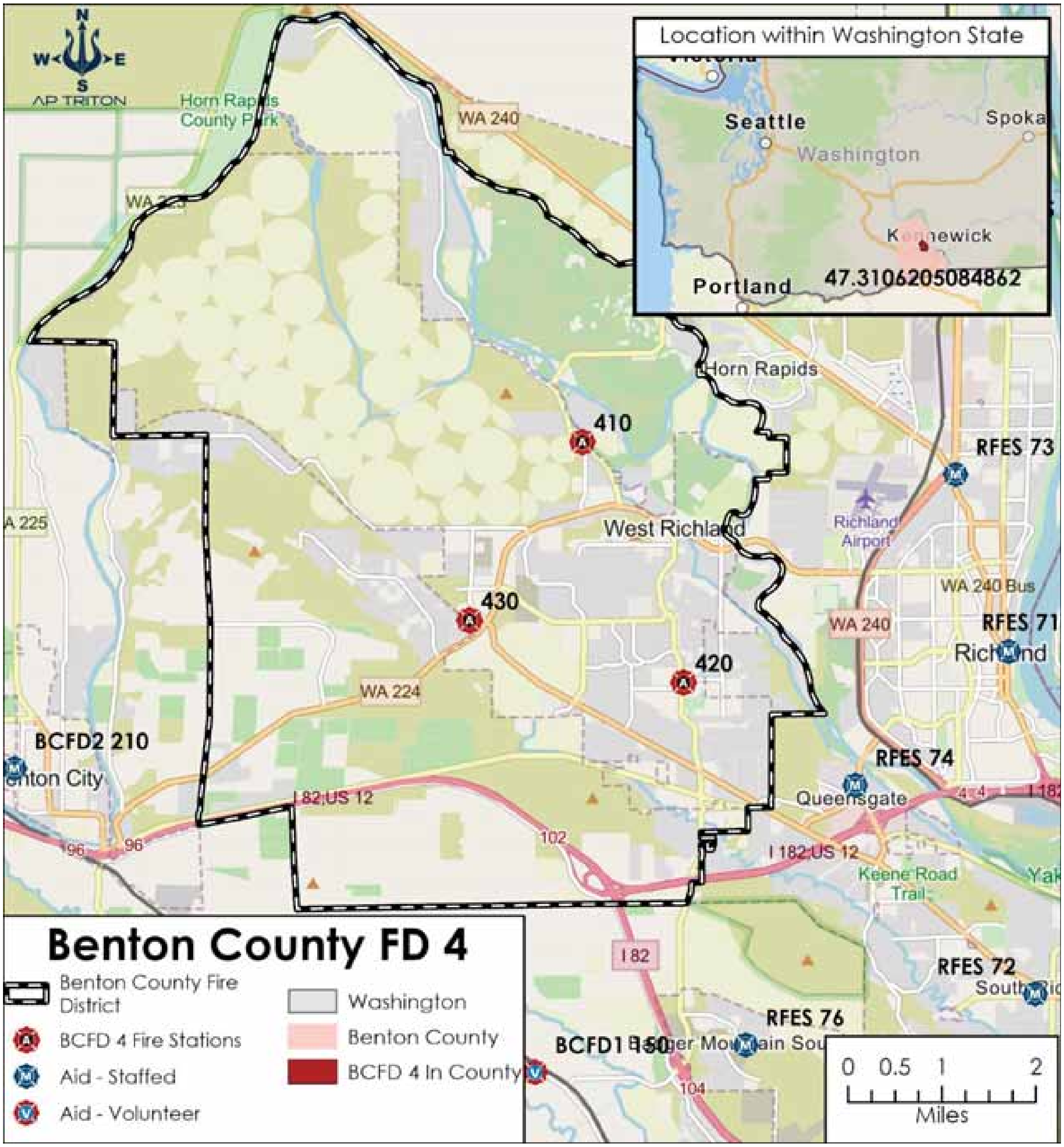
BCFD4 is well positioned today. With deliberate implementation of the strategies outlined in this report, the District can ensure that it remains capable, accountable, and aligned with community expectations well into the future.

Section I:
EVALUATION OF CURRENT CONDITIONS

Organization Overview

Benton County Fire District 4 is a fire protection district located in Benton County, Washington. The District serves West Richland and the surrounding unincorporated areas. The jurisdiction covers approximately 52 square miles, serving a population of roughly 22,000 as of 2025.

Figure 1:Benton County Fire District 4



Governance and Lines of Authority

The District is structured as an independent local government agency with an elected Board of Fire Commissioners responsible for policy and oversight. The Board consists of three members; the presiding officer is Garrett Goodwin. The Board's authority is defined by state law and district policies.

The District's chief administrative officer is the Fire Chief, currently Paul Carlyle, who serves under a five-year employment contract that extends through 2030. The Fire Chief is responsible for daily operations, personnel management, and service delivery. He also has hiring and firing authority for District personnel. The Chief's performance is formally evaluated, and he exercises a span of control with the highest ratio of 2 direct reports.

Policies and administrative roles are defined and while the District is not subject to civil service rules, it maintains processes to involve line staff in policy revisions. Notably, many policies are due for a major rewrite, though some have been updated in recent years or added within the past three years.

Organizational Structure

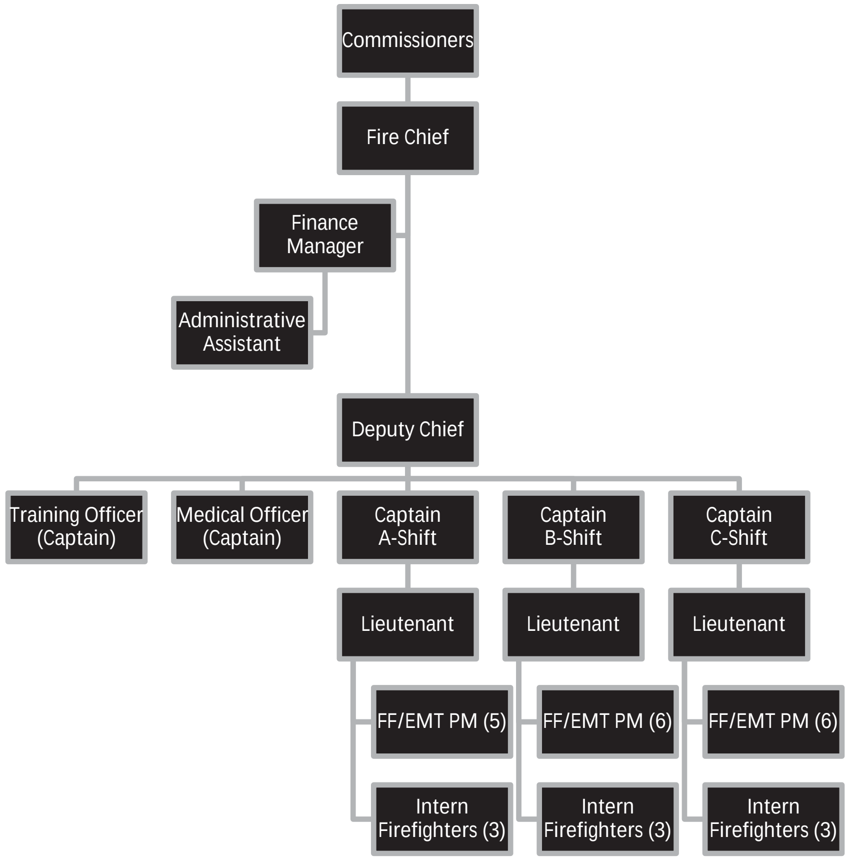
BCFD4 is a fire district with an organizational history dating back to 1954. Initially an all-volunteer agency, it has evolved into a combination agency that relies on paid and volunteer personnel to respond to emergencies.

The District operates three stations in total:

- Two stations are staffed full-time
- One station is staffed part-time

The agency utilizes standardized response protocols that deploy resources based on incident or alarm type, with predetermined response assignments rather than protocols organized by apparatus type.

Figure 2: Benton County Fire District 4 Organizational Chart



Services Provided

BCFD4 is an all-hazards agency delivering a range of emergency and non-emergency services:

- **Fire Suppression**: Structural and wildland firefighting operations.
- **Emergency Medical Services**: First response and ambulance transport at both Advanced Life Support (ALS) and Basic Life Support (BLS) levels.
- **Specialized/Technical Rescue**: Rope and water rescue capabilities.
- **Hazardous Materials Response**: Operations-level hazmat response.
- **Fire Inspection and Code Enforcement**: Conducts annual inspections of businesses located in public buildings in coordination with West Richland; code enforcement is the responsibility of West Richland.
- **Plan Reviews**: Provides comments to City of West Richland on proposed new construction for service impact considerations.
- **Public Education and Prevention**: Community risk reduction initiatives.

BCFD4 maintains a current Washington Surveying and Rating Bureau (WSRB) Class 4 rating, which was last updated in 2023. The District is not accredited through CFAI or CAAS.

Operations and Facilities

The District's primary service area is 52 square miles, and the EMS transport area is the same. Its three fire stations ensure strategic coverage throughout the district. While there is no formal civil service system in place, the District employs standardized response protocols and maintains some pre-incident plans (though not all target hazards are fully documented or pre-planned).

Mapping resources include Mobile Data Computers (MDCs) and hard-copy map books in vehicles. Some pre-incident plans are electronically available on frontline apparatus.

Risk Management and Planning

BCFD4 has informally identified target hazards within its jurisdiction, though not all have been fully documented or pre-planned. Disaster planning is limited—no comprehensive disaster plan currently exists.

The District uses external legal counsel. The Fire Chief has access to legal consultation and labor counsel for complex issues and policy development.

District Summary

Benton County Fire District 4 is a professionally staffed and managed fire protection district serving a growing suburban/rural population in Benton County, Washington. Governed by an elected Board of Fire Commissioners and led by the Fire Chief, the District offers essential fire suppression, EMS, technical rescue, and limited prevention services to its community. While some policies are in need of revision and formal planning processes could be enhanced, the District maintains a solid foundation for delivering effective emergency services now and into the future.

Financial Overview

AP Triton has reviewed historical revenues, expenditures, and other fiscal issues of BCFD4. This analysis, conducted with available data and reports, includes:

- Historical revenues and expenditures
- Financial Projections
- Financial Management

Historical Revenues and Expenditures

Benton County Fire Protection District 4 operates on a calendar fiscal year (January–December). As a Washington special-purpose local government, District financial reporting aligns with the State of Washington Budgeting, Accounting, and Reporting System (BARS) manual for local governments in preparing its annual reports for the State Auditor's Office (SAO). The District uses cash-basis accounting (versus accrual), where income and expenses are only recognized when cash is actually received or disbursed.

The BARS framework presents activity by fund (all funds shown; no GAAP government-wide statements), and the BARS manual provides a standardized chart of accounts and reporting instructions to ensure consistency.

The District utilizes several funds to record its transactions, with the General Fund being BCFD4's main operating fund and is utilized to record revenues not identified or allocated to specific functions. For 2024, the primary funds analyzed based on data provided are the General Fund (operations), the 201 Debt Service (Bond) Fund, and the 301 Construction (Capital Projects) Fund. Our analysis focuses on the General Fund as the District's chief operating fund and comments on how the Debt Service and Construction funds affect overall financial condition.

General Fund

The District's operating picture is tax-centric, with the regular and EMS levies comprising the majority of recurring revenues. Charges for services—particularly ambulance transports—along with intergovernmental receipts (GEMT, PILT, grants), provide additional but comparatively smaller shares. In 2024, operating revenues exceeded operating expenditures before capital/debt, and the District devoted notable cash resources to capital acquisitions and scheduled debt service, consistent with a maturing asset base and prior voter-approved capital financing. The following figure provides a summary of historical general fund cash-on-hand, along with revenues and expenditures.

Figure 3: General Fund Resources and Uses – 2020-2024[A]

Category	2020	2021	2022	2023	2024
Beginning Cash & Investments	**$4,510,267**	**$5,286,217**	**$6,409,368**	**$7,676,637**	**$8,160,537**
Taxes (Property/EMS)	$3,595,428	$4,192,130	$4,570,342	$4,986,986	$6,059,282
Intergovernmental (PILT, GEMT, State, Local)	$339,017	$401,951	$405,752	$621,545	$303,569
Charges for Services (Ambulance; Fire/EMS charges)	$437,101	$449,225	$569,300	$562,461	$647,469
Miscellaneous Revenue	$100,579	$134,776	$136,545	$245,926	$264,055
TOTAL REVENUES	**$4,472,125**	**$5,178,082**	**$5,681,939**	**$6,416,918**	**$7,274,375**
TOTAL EXPENDITURES	**$3,562,200**	**$4,045,028**	**$4,412,145**	**$5,055,208**	**$5,724,382**
Excess Revenues over Expenditures	***$909,925***	***$1,133,054***	***$1,269,794***	***$1,361,710***	***$1,549,993***
Total Other Increases in Fund Resources	**$23,800**	**$0**	**$35,357**	**$0**	**$248,503**
Capital Expenditures	$171,069	$10,714	$25,413	$829,074	$738,257
Debt Service	$0	$0	$0	$47,443	$177,240
Other Uses	$211	($810)	$127	$1,298	-$19,355
Total Other Decreases in Fund Resources	**$171,280**	**$9,904**	**$25,540**	**$877,815**	**$896,142**
Increase in Cash & Investments	***$762,445***	***$1,123,150***	***$1,279,611***	***$483,895***	***$902,354***
ENDING CASH & INVESTMENTS	**$5,286,217**	**$6,409,368**	**$7,680,722**	**$8,160,537**	**$9,062,885**

[A] SAO reporting abbreviated for brevity and presentation

Revenues

Property tax revenues (the Regular fire levy and the EMS levy) provide the most significant portion of the District's recurring General Fund (GF) revenue stream. In 2024 the District levied a regular rate of $1.2234 and an EMS rate of $0.4965 per $1,000 assessed value (AV), generating $4,402,919 (regular) and $1,682,683 (EMS) on an assessed value base of ~$3.389 billion; the voted bond levy was $0.1425 and yielded $481,215 in the Debt Service Fund. Other recurring revenues consist of ambulance/EMS service charges ($545,720), intergovernmental receipts (e.g., GEMT $154,570, PILT $28,691), and a small Department of Health trauma award, investment earnings, and miscellaneous charges and rents.

The District's historical levy file documents year-by-year rates and collections for both the Fire and EMS levies (2016–2025), which we will use to present the multi-year revenue trend.

Expenditures

On the SAO cash-basis BARS statement, 2024 General Fund expenditures totaled $5,724,382 under the Public Safety function. Consistent with fire agencies generally, recurring costs are driven by salaries and benefits, with services/supplies, professional and intergovernmental services, and minor capital comprising the remaining operating categories. In addition to recurring operating expenditures, the District recorded non-recurring uses in 2024 of $738,257 for capital outlay and $663,340 for debt service (of which $486,100 occurred in the voted Bond Fund and $177,240 in non-bond/lease payments).

The District's year-end cash and investments across all funds totaled $9,254,390, with the General Fund at $9,062,885 and the Bond Fund at $191,476 (capital/construction fund near zero), reflecting an operating surplus before capital/debt and planned pay-as-you-go capital and scheduled debt service.

Capital Funds

The District maintains a Debt Service (Bond) Fund for its 2018 voted general obligation bonds (maturing 12/1/2038), funded by a dedicated voted levy. In 2024, the Bond Fund received $478,518 in property tax and $9,897 in interest; it paid $225,000 in principal and $261,100 in interest/other costs, with an ending restricted cash/investments balance of $191,476.

A Construction (Capital Projects) Fund exists for capital project accounting; 2024 activity was minimal (beginning balance $28, interest $1, year-end $29). General Fund capital purchases are also visible on the cash-basis statement (2024 capital outlay $738,257) pending future project transfers or larger capital programing.

Financial Projections

General Fund — Revenues

Property tax revenues (regular levy and EMS levy) remain the District's dominant recurring source. In Washington, regular levy growth is limited to 1% year-over-year plus additions for new construction and similar add-ons; increases in assessed value (AV) from revaluation reduce the levy rate but do not increase revenue absent new construction or voter action. Projections therefore anchor levy revenues to 1% + new construction and use AV growth only to compute implied levy rates.

We present three scenarios in the following figures:

- **Conservative**: AV growth 3%, new construction 0.5% of prior AV (levy revenue +1.5%/yr).
- **Base**: AV growth 7%, new construction 1.0% (levy revenue +2.0%/yr).
- **Elevated**: AV growth 13%, new construction 2.0% (levy revenue +3.0%/yr).

Other recurring revenues (intergovernmental, investment, charges for services) are held proportional to the combined levy trend initially. With District transport volumes, payer mix, and collections by payer, it is possible for us to model EMS net revenues explicitly and update the forecast.

General Fund — Expenditures

In these forecasts, recurring operating expenditures are projected to change at the same rate as recurring revenues in each scenario. Non-recurring outlays reflect assumption of (1) a pay-as-you-go capital program escalating 3% a year from 2024's $0.738M, and (2) GF lease debt service held flat pending schedules.

Debt Service & Capital Funds

Debt service (repayment of voted authorized General Obligation bonds) is captured in a separate fund and financed by the voted bond levy. The capital/construction fund reflects uses and transfers from the General Fund projected based on the most recent year's expenditures (adjusted). A detailed capital improvements plan and forecast would increase the accuracy of the forecast.

Forecasting 2026-2030

Forecasts of revenues and expenditures based on the conservative, base, and elevated scenarios are reported on the following figures:

Figure 4: Forecast of Conservative Scenario (3% AV Growth)

Year	2026	2027	2028	2029	2030
Scenario	**Conservative**	**Conservative**	**Conservative**	**Conservative**	**Conservative**
Growth Rate	3%	3%	3%	3%	3%
Assessed Value (000s)	$3,708,000	$3,819,240	$3,933,817	$4,051,832	$4,173,387
Combined Property Tax Revenue	$6,683,463	$6,783,715	$6,885,471	$6,988,753	$7,093,584
Implied Combined Levy Rate ($/1,000)	1.8024	1.7762	1.7503	1.7248	1.6997
Beginning GF Fund Balance	**$9,062,885**	**$10,281,204**	**$11,508,709**	**$12,745,183**	**$13,990,400**
Revenues & Expenditures					
GF Recurring Revenues	$7,989,024	$8,108,859	$8,230,492	$8,353,949	$8,479,259
GF Recurring Expenditures	$5,810,248	$5,897,401	$5,985,862	$6,075,650	$6,166,785
Operating Margin	$2,178,776	$2,211,458	$2,244,630	$2,278,299	$2,312,473
Capital & Debt					
Capital Outlay (GF or Transfer)	$783,217	$806,713	$830,915	$855,842	$881,517
GF Lease Debt Service	$177,240	$177,240	$177,240	$177,240	$177,240
Ending GF Fund Balance	**$10,281,204**	**$11,508,709**	**$12,745,183**	**$13,990,400**	**$15,244,116**
Reserve Coverage					
Reserve Minimum (2 month)	$968,375	$982,900	$997,644	$1,012,608	$1,027,798
Reserve Target (3 month)	$1,452,562	$1,474,350	$1,496,466	$1,518,913	$1,541,696
Months of GF Expenditure Coverage	21.2	23.4	25.6	27.6	29.7

Under the conservative scenario, revenue growth is limited by the 1% statutory levy cap and assumes modest new construction. This path maintains service stability but allows little room for expansion or inflationary cost increases, emphasizing the need for disciplined cost control and reserve preservation.

Figure 5: Forecast of Base Scenario (7% AV Growth)

Year	2026	2027	2028	2029	2030
Scenario	**Base**	**Base**	**Base**	**Base**	**Base**
Growth Rate	7%	7%	7%	7%	7%
Assessed Value	$3,852,000	$4,121,640	$4,410,155	$4,718,866	$5,049,186
Combined Property Tax Revenue	$6,716,387	$6,850,715	$6,987,729	$7,127,483	$7,270,033
Implied Combined Levy Rate ($/1,000)	1.7436	1.6621	1.5845	1.5104	1.4398
Beginning GF Fund Balance	**$9,062,885**	**$10,291,937**	**$11,541,283**	**$12,811,093**	**$14,101,535**
Revenues & Expenditures					
GF Recurring Revenues	$8,028,379	$8,188,946	$8,352,725	$8,519,780	$8,690,175
GF Recurring Expenditures	$5,838,870	$5,955,647	$6,074,760	$6,196,255	$6,320,180
Operating Margin	$2,189,509	$2,233,299	$2,277,965	$2,323,524	$2,369,995
Capital & Debt					
Capital Outlay (GF or Transfer)	$783,217	$806,713	$830,915	$855,842	$881,517
GF Lease Debt Service	$177,240	$177,240	$177,240	$177,240	$177,240
Ending GF Fund Balance	**$10,291,937**	**$11,541,283**	**$12,811,093**	**$14,101,535**	**$15,412,773**
Reserve Coverage					
Reserve Minimum (2 months)	$973,145	$992,608	$1,012,460	$1,032,709	$1,053,363
Reserve Target (3 months)	$1,459,717	$1,488,912	$1,518,690	$1,549,064	$1,580,045
Months of GF Expenditure Coverage	21.2	23.3	25.3	27.3	29.3

The base scenario reflects Benton County Fire District 4's recent average AV growth, balancing the 1% levy limit with moderate new construction and valuation gains. Revenues rise in line with historic expenditure trends, sustaining current operations, routine capital transfers, and healthy fund balances with minimal structural risk.

Figure 6: Forecast of Elevated Scenario (13% AV Growth)

Year	2026	2027	2028	2029	2030
Scenario	**Elevated**	**Elevated**	**Elevated**	**Elevated**	**Elevated**
Growth Rate	13%	13%	13%	13%	13%
Assessed Value (000's)	$4,068,000	$4,596,840	$5,194,429	$5,869,705	$6,632,767
Combined Property Tax Revenue	$6,782,234	$6,985,701	$7,195,272	$7,411,130	$7,633,464
Implied Combined Levy Rate ($/1,000)	1.6672	1.5197	1.3852	1.2626	1.1509
Beginning GF Fund Balance	**$9,062,885**	**$10,313,403**	**$11,606,753**	**$12,944,222**	**$14,327,131**
Revenues & Expenditures					
GF Recurring Revenues	$8,107,088	$8,350,301	$8,600,810	$8,858,834	$9,124,599
GF Recurring Expenditures	$5,896,113	$6,072,997	$6,255,187	$6,442,842	$6,636,128
Operating Margin	$2,210,975	$2,277,304	$2,345,623	$2,415,992	$2,488,472
Capital & Debt					
Capital Outlay (GF or Transfer)	$783,217	$806,713	$830,915	$855,842	$881,517
GF Lease Debt Service	$177,240	$177,240	$177,240	$177,240	$177,240
Ending GF Fund Balance	**$10,313,403**	**$11,606,753**	**$12,944,222**	**$14,327,131**	**$15,756,845**
Reserve Coverage					
Reserve Min (2 mo)	$982,686	$1,012,166	$1,042,531	$1,073,807	$1,106,021
Reserve Target (3 mo)	$1,474,028	$1,518,249	$1,563,797	$1,610,711	$1,659,032
Months of GF Expenditure Coverage	21	22.9	24.8	26.7	28.5

The elevated scenario mirrors peak historic AV expansion periods, assuming strong local development and valuation gains that expand levy capacity despite the 1% cap. This growth supports accelerated capital reinvestment and debt capacity but also carries exposure to future AV slowdowns and inflationary expenditure pressures.

Fund Balances & Reserve Targets

Maintaining adequate reserves is essential to absorb economic volatility, timing differences in EMS receipts, and emergency costs. For each scenario, we present a fund-by-fund roll-forward beginning with 2024 ending cash and investments, adding recurring operating surplus/(deficit), and subtracting non-recurring outflows (capital and GF lease debt).

We compare projected ending General Fund balances to a minimum reserve of two months (~16.7% of recurring GF expenditures) and a target of three months (~25%). Where projected balances fall below target, potential corrective levers include pacing capital transfers, updating the fee schedule, pursuing grants, or—if necessary—considering a levy lid-lift or EMS adjustments consistent with voter appetite and service needs.

<u>Note: BCFD4 Commissioners adopted resolution 2025-06 specifying a minimum reserve fund balance equal to six months of the General Fund's average monthly expenditures.</u>

Financial Management

Recent audit work identified material internal control weaknesses in payroll and disbursements, including risks from inadequate segregation of duties and insufficient independent review. Actions taken to date have addressed all audit findings, outlined in the recent State Auditor's Office Exit Conference.

Additional next steps we recommend documenting and implementing include:

- A monthly close checklist with independent bank/credit card reconciliations and documented sign-offs;
- A standing Board financial packet (budget-to-actuals, disbursement register, credit card summary, investment report); and
- Fully leveraging Operative IQ for asset tracking, periodic counts, and tie-outs to additions/disposals.

Description & Review of Services Provided

Current Service Delivery Infrastructure

Benton County Fire District 4 operates a fire-based emergency services system, providing both fire suppression and EMS transport services. The District is supported by three fire stations strategically placed across the service area to address coverage needs. Apparatus and personnel deployment reflect the District's risk and demand zoning, which considers travel time, hydrant availability, and population density. Though GIS plotting incident distribution is not performed regularly, effective first-due boundaries and unique geographical gaps have been identified and addressed.

Deployment Considerations

Deployment operations are shaped by strategic run card planning and defined risk zones. Though no formal Effective Response Force (ERF) benchmarks exist, BCFD4 ensures six to ten personnel are on duty daily. Three ALS ambulances and three BLS engines are cross staffed, with a minimum of one paramedic on shift and usually two to three. Mutual and automatic aid agreements supplement response capability. However, concurrent call tracking, unit-hour utilization, and failure rates by unit or station are not currently measured.

Apparatus, Unit Types, and Staffing

BCFD4 apparatus are staffed primarily by full-time personnel who are dual trained as firefighters and EMTs or paramedics. Staffing adheres to a 48/96 AABBCC shift schedule. Minimum staffing on ambulances is two, generally with a paramedic. Engine companies typically deploy with at least one EMT or paramedic.

The following figure depicts apparatus and staffing assigned to each of the three fire stations.

Figure 7: BCFD Apparatus & Staffing by Fire Station

Unit	Type	Staffing
Fire Station 410		
E1411	Type 1	2-3
E1451	Type 5 Wildland	Cross staffed
W1421	Water Tender	Cross staffed
M1421	Ambulance	Cross staffed
Fire Station 420 / District Headquarters		
E1412	Type 1	3-4
E1452	Type 5 Wildland	Cross staffed
M1422	Ambulance	Cross staffed
E1414	Reserve Engine	-
Fire Station 430		
E1413	Type 1	3-4
E1453	Type 5 Wildland	Cross staffed
M1423	Ambulance	Cross staffed
T1413	Tactical Tender	Cross staffed
RB141	Rehab Truck	-
BS143	Truck/Trailer Air Unit	-
L1413[A]	Ladder Truck	Cross staffed

[A] Ladder Truck L1413 arrived in October 2025

Firefighter/EMT and Firefighter/Paramedic Distribution

Of 27 sworn personnel, 15 are certified ALS providers and 12 are BLS providers. All full-time line staff are at least EMT certified. There is no use of civilian EMS personnel. EMS coverage accounts for 65% to 67% of all service calls in recent years.

Computer-Aided Dispatch (CAD) System

BCFD4 uses a CAD system that records key time stamps including time received, dispatch, en route, on scene, and back in service. While dispatch does not record patient contact time or transport response mode, crews document this within ImageTrend Elite, the District's NEMSIS- and HIPAA-compliant records management system. Dispatch also provides pre-arrival instructions using EMD protocols.

Review of Emergency Response Services by Type

EMS

BCFD4 provides primary 9-1-1 ambulance transport. Calls are dispatched via criteria-based protocols. EMS operations are overseen by a captain-level EMS officer, supported by an EMS Medical Director. Clinical performance is monitored via continuous quality improvement (CQI) processes with individualized feedback. ALS transport is the standard, with support from neighboring agencies through mutual aid.

Life Flight Network provides aeromedical transport to the District.

With EMS representing the majority of calls, ALS coverage and documentation quality are emphasized. EMS education, public outreach (e.g., Narcan leave-behinds, FDCARES program), and resource navigation are key community engagement tools.

Fire Suppression

Fire calls comprise about 5-6% of total incidents. Suppression apparatus are cross-staffed and equipped with vehicle rescue and basic hazmat gear.

Incidents have ranged from 99 to 135 per year since 2018, with structure fire losses ranging from $464,000 to over $1.2 million. The lack of an adopted ERF or benchmark metrics limits robust task analysis. Fireground accountability uses a passport system.

Hazardous Materials

The District is equipped to provide basic hazmat operations, with 26 operations-level trained personnel but no technician-level staff or dedicated hazmat units.

Technical Rescue

Capabilities include rope and swift water rescue, and vehicle extrication. Confined space, trench, and structural collapse rescues are supported by regional partners.

Life Safety & Prevention Program

BCFD4 supports community safety through existing occupancy inspections, public education, and targeted risk-reduction programs. Fire code enforcement authority rests with the City of West Richland, which has adopted the 2021 International Fire Code (IFC) with State of Washington amendments. While BCFD4 does not conduct fire and life-safety plan reviews, sign off on new construction, or perform formal new construction or tenant improvement inspections, the District is provided the opportunity to comment on proposed new construction for service impact considerations. Annual inspections of businesses located in public buildings are conducted by the District; however, enforcement actions, citations, and follow-up authority are handled by the City's Fire Marshal. Special risk inspections include schools. The District also maintains a key-box entry program (Supra/Knox), while hydrant flow records are maintained by the City.

BCFD4 does not maintain dedicated prevention or inspection personnel positions, and no internal citation or fee-based inspection process is in place. Inspection records are computerized, but broader statistical analysis for planning and reporting is limited. Fire origin and cause investigations are not performed by the District and fall under the jurisdiction of the City of West Richland or Benton County.

Public education is an active component of the District's life safety efforts, led by an assigned Public Information Officer. Programs include 9-1-1 awareness, EDITH (Exit Drills in the Home) instruction for K–4 students, smoke alarm outreach, carbon monoxide education, CPR, injury and fall prevention, elderly safety initiatives, blood pressure checks, and fire extinguisher demonstrations during community events such as open houses. The District does not currently offer programs such as fire safety curriculum on cooking/electrical hazards, bilingual outreach materials, babysitting classes, or wildland–urban interface education. No annual fire prevention report is distributed.

BCFD4 participates in pre-fire planning and specific hazard planning activities; however, the District does not have a comprehensive Community Risk Reduction (CRR) plan in place. Statistical data analysis for risk-reduction planning is minimal, and no formal prevention division structure exists. These areas represent opportunities for future program development as the District advances its life safety and risk-reduction capabilities.

Mutual & Automatic Aid Overview

BCFD4 operates within an interconnected response system built on established automatic aid (AA) partnerships with neighboring fire agencies. These agreements support rapid, closest-unit response and help balance service demand across jurisdictional boundaries, particularly along shared borders with the Richland and Benton City areas. The District receives and provides automatic aid, reinforcing regional coverage depth for structure fires, wildland responses, and other all-risk incidents.

Primary Automatic Aid Partners

Benton County Fire District 1 (Station 170 – Badger Road area)
Career-staffed resource with a ladder truck, aide unit, and Type 5 engine supporting rural and interface responses.

Richland Fire & Emergency Services (Stations 73, 74, 75, 76 – Richland)
Career-staffed department providing multiple Type 1 and 5 engines, ALS medics, and specialized apparatus, delivering consistent automatic aid into BCFD4's service area. The proximity of these stations enhances depth for initial attacks, multi-company incidents, and simultaneous event coverage.

Benton County Fire District 2 (Stations 210 & 220 – Benton City)
Combination staffing with Engine, ladder, medic, and Type 5 apparatus and additional units supporting wildland-urban interface, rural coverage, and surge capacity during extended incidents.

System Function

The automatic aid structure effectively expands BCFD4's first-alarm footprint, improves travel-time reliability in border areas, and reduces the likelihood of single-unit responses to higher-risk incidents. The mix of career and volunteer partner agencies adds operational resilience, particularly during periods of concurrent calls, large-scale wildland activity, or complex structure fires.

Because the agreements are structured as automatic aid, resources are dispatched based on proximity rather than jurisdiction, supporting faster intervention and improved outcomes. This model also supports interoperability, shared training standards, and consistent operational expectations across agencies.

9-1-1 Communications Center Services

Benton County Fire District 4 receives primary 9-1-1 call answering and dispatch services through the Southeast Communications Center (SECOMM), the regional Public Safety Answering Point (PSAP) owned and operated by the City of Richland. SECOMM provides integrated fire, EMS, and law enforcement dispatch services for 27 agencies and serves a population exceeding 200,000 residents across the region. There are no other 9-1-1 PSAPs within BCFD4's service area.

Staffing and Operations

SECOMM is staffed by 42 full-time and 2 part-time combined call-taker/dispatchers, supported by three Communications Center Managers and two records specialists. Personnel work rotating 12-hour shifts with a minimum daily staffing level of eight personnel between 0800–0000 hours and seven personnel overnight. Dispatchers meet state training and certification requirements. Standard operating procedures, a formal quality assurance program, and both internal and external training systems controlled by the center support consistent service delivery. Operational performance is reviewed monthly and analyzed by call priority.

Dispatch Systems & Technology

SECOMM operates using a modern communications platform that includes:

- **Computer-Aided Dispatch (CAD):** Hexagon CAD v9.4 (implemented 2023)
- **Telephone System:** Intrado
- **Radio Systems:** 800 MHz and VHF systems with some encrypted channels
- **Recording System:** NICE logging recorders
- **Workstations:** 18 dispatch positions
- **Power Resilience:** UPS and generator backup

The center utilizes criteria-based dispatching and provides emergency medical dispatch (EMD) with pre-arrival medical instructions under protocols associated with the Mid-Columbia & Trauma Care Council. A formal EMD quality assurance program is in place. Text-to-911 capability is also available.

Call Processing & Workload

SECOMM manages substantial call volume, including more than 158,000 emergency 9-1-1 calls in 2023 and over 185,000 seven-digit administrative calls. Fire and EMS dispatch activity exceeded 41,000 incidents in 2023, while law enforcement dispatches exceeded 157,000. These volumes reflect a mature, high-throughput regional communications system with the staffing depth and infrastructure to support simultaneous incidents.

Data Integration & Records

Dispatch data is captured electronically and exported to fire/EMS agency records systems. Time stamps collected include call receipt, dispatch, unit en route, arrival on scene, cancellation, hospital arrival, and unit availability. Incident location, unit identification, and incident type are also recorded. CAD data can be exported in Excel format to support analysis, performance measurement, and Standards of Cover planning.

Field Communications Capabilities

While dispatch technology is robust, BCFD4 apparatus do not currently use Automatic Vehicle Location (AVL) systems. Mobile Data Terminals (MDTs/MDCs) are on the District's Type 1s, Type 5s, ambulances and command vehicles. Mobile units receive unit status, mapping, call details, and safety warnings through available systems, but the absence of AVL and full mobile data capability represents a potential future enhancement for situational awareness and response efficiency.

Local Hospitals & Tertiary Care Facilities

BCFD4 primarily transports patients to five regional medical facilities. Each of these hospitals plays a vital role in supporting the District's fire-based EMS system, providing varying levels of care, including trauma, stroke, and cardiac services. All listed facilities offer online medical control, ensuring direct communication and support during patient transport.

The primary receiving hospital is Kadlec Medical Center, a Level II trauma facility located in Richland. Kadlec is equipped with both stroke and Percutaneous Coronary Intervention (PCI)/cardiac catheterization capabilities, making it a preferred destination for critical emergencies requiring advanced intervention.

Additional frequently used facilities include:

- **Trios Medical Center** (Level III trauma, stroke, PCI) in Kennewick, WA
- **Lourdes Medical Center (**Level III trauma, stroke, no PCI) in Pasco, WA
- **Kadlec Freestanding Emergency Department** (Level IV trauma, stroke, no PCI) in Kennewick, WA
- **Prosser Medical Center** (Level III trauma, stroke, no PCI) in Prosser, WA

These hospitals support a range of prehospital care needs, with trauma capabilities ranging from Level II to Level IV. All facilities are designated stroke centers, ensuring rapid treatment for time-sensitive neurologic emergencies. Three of the five hospitals also offer PCI services for patients experiencing acute cardiac events.

The consistent availability of online medical control across all destination facilities reflects a strong regional medical oversight system and enhances the quality and coordination of patient care during transport.

The following figure lists the facilities and hospitals, along with the care level they provide.

Figure 8: Clinical Facilities & Hospitals for BCFD4 Transports

Facility	Location	Trauma Level	Stroke Center	PCI/Cath Lab	Online Medical Control
Kadlec Medical Center	888 Swift Blvd., Richland WA 99352	2	Yes	Yes	Yes
Trios Medical Center	3810 Plaza Way, Kennewick WA 99338	3	Yes	Yes	Yes
Lourdes Medical Center	520 N 4th Ave., Pasco WA 99301	3	Yes	No	Yes
Kadlec Freestanding ED	3290 W 19th Ave., Kennewick WA 99337	4	Yes	No	Yes
Prosser Medical Center	200 Prosser Health Dr., Prosser WA 99350	3	Yes	No	Yes

Patients needing the specialized care of a Level I Trauma Center are typically transported to Harborview Medical Center in Seattle, which is the only Level 1 Trauma Center in Washington state. Air transport services, such as Life Flight Network, serve the region and provide ICU-level care during transport.

Kadlec Regional Medical Center in Richland includes a Level III Neonatal Intensive Care Unit (NICU), offering advanced care for premature and critically ill newborns.

Sacred Heart Children's Hospital in Spokane is the nearest Pediatric Intensive Care Unit (PICU) providing 24/7 care for critically ill children, including Level II trauma, medical intensive care, neurological conditions, and surgical intensive care.

Management Components

AP Triton has reviewed the core management systems, policies, and communication practices currently in place at BCFD4. The following summarizes the District's strengths and areas of opportunity in its administrative infrastructure.

Current Management Overview

BCFD4 operates with foundational management structures in place, including established leadership, identified chain of command, and routine internal meetings. The agency demonstrates commitment to governance through an adopted Strategic Plan and established mission, vision, values, goals, and objectives.

The District maintains basic operational oversight through bi-weekly management and operational reporting and semi-monthly financial reporting to elected officials. While these elements provide a management framework, several core administrative systems remain informal or inconsistently applied, limiting the organization's ability to operate as a data-driven, policy-anchored agency.

Mission, Vision, Strategic Planning, Goals, and Objectives

BCFD4 has adopted mission and vision statements and developed organizational values. In 2024, the District completed its first strategic plan, which was adopted by elected officials. While these guiding documents represent meaningful progress, BCFD4 had not previously developed a comprehensive Master Plan or Standards of Cover, and performance objectives had not been systematically benchmarked across divisions. The current report fulfills both functions, serving as the District's Master Plan and Standards of Cover, and establishes measurable performance objectives aligned with nationally recognized standards, including NFPA 1710/1720, to guide future operations and resource deployment.

Mission Statement:

Community Focused Service.

Vision Statement:

Provide a committed and educated workforce to meet the evolving needs of the community.

Values Statement:

Integrity, Commitment, Professionalism

Internal Assessment of Critical Issues & Future Challenges

Leadership has identified several critical internal challenges. From the Fire Chief's perspective, the most pressing issues include the absence of a comprehensive policy manual, the need for structured succession planning, and proactive long-term planning to keep pace with the rapid growth of the City of West Richland. The Deputy Chief has identified gaps in data collection and analysis, the lack of a coordinated annual training program, and outdated operational guidelines as key concerns.

These issues collectively indicate that the District is transitioning from a small-agency operational model toward a more structured organization that requires formalized systems to support growth, accountability, and consistency.

Internal & External Communications

Internal communication is conducted through staff meetings and direct email. An open-door policy is practiced, and the chain of command is well-defined. However, there is no intranet, formal newsletter, or scheduled all-hands meetings, which limits broader engagement across ranks. External communications are more robust: BCFD4 maintains a public-facing website, issues a community newsletter, and utilizes social media platforms, with over 5,200 Facebook and 3,100 X followers. The District has also used community surveys and advisory committees as needed for specific projects.

The District demonstrates good community engagement but could strengthen structured internal information flow and policy dissemination.

Finance

BCFD4 has a solid foundation for financial stewardship, demonstrated by regular monthly financial reporting to elected officials and a stable, largely levy-supported revenue base that supports core operations. The District also shows strong liquidity and near-term capacity, with FY 2024 ending cash and investments totaling approximately $9.25 million across funds, providing flexibility to manage planned investments and short-term variability. Finally, recent audit findings have been fully addressed by BCFD4 demonstrating a commitment to financial stewardship and process improvement.

Reporting & Recordkeeping

The District produces regular financial (monthly) and management/operational (bi-weekly) reports. While an annual report is not currently published, required records such as incident reports, patient care reports, and exposure documentation are electronically maintained and archived using ImageTrend for both EMS and non-EMS documentation. Testing and maintenance records for SCBA, hoses, ladders, and pumps are managed through a mix of internal staff and external contractors. Vehicle maintenance records and gas monitor calibrations are handled internally.

Hard copy files are secured and computer systems are backed up.

Incident data analysis does not appear routinely incorporated into management or planning documents and there is no clearly defined document control lifecycle (versioning, revision tracking, archival process).

Information Technology & Records Management

BCFD4 uses ImageTrend for both EMS and non-EMS incident reporting, with software access available at fire stations. Computer systems are password-protected with timeouts, and data backups are conducted regularly. Public records requests are managed through a defined process, with sensitive files stored securely in locked administrative areas.

Opportunities exist to advance IT use from record storage to decision-support, particularly in operational analytics, performance tracking, and policy control systems.

Overall Management System Maturity

BCFD4 possesses the foundational components of a functional management system and is showing positive momentum in strategic planning and community engagement. However, several core administrative processes remain informal, decentralized, or inconsistently applied.

As the District continues to grow, these conditions increase organizational risk in the areas of:

- Operational consistency
- Legal defensibility
- Finance Internal Controls
- Personnel development
- Strategic decision-making
- Organizational resilience

Sustained progress will depend on formalizing (1) governance and policy systems, (2) training and succession planning aligned to the Standards of Cover, (3) financial management maturity through strengthened controls and transparent board-ready forecasting, and (4) data-driven performance management that routinely uses incident and operational analytics.

Staffing & Personnel

In the following sections, AP Triton explores the District's current staffing levels and administrative functions, evaluates them against best business practices and national standards, and provides recommendations at the end of this report.

Administrative and Support Staffing

Typical responsibilities of fire district administration and support staff include planning, organizing, directing, coordinating, and evaluating the district programs. This list of functions is not exhaustive, and other functions may be applicable. It is also important to understand that these functions may occur concurrently, requiring administrative officers and support staff to balance work in different areas simultaneously.

The following figure summarizes the administrative and support organizational structure of BCFD4 at the time of the study.

Figure 9: BCFD4 Administrative and Support Staffing (2025)

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Admin/Support Staff	*Individuals primarily assigned to manage, plan, or support the activities of the agency and its programs.*		
Fire Chief	1	40	5/ 8-Hour Weekdays
Deputy Chief	1	40	5/8-Hour Weekdays
Captain (Medical Officer)	1	45	5/9-Hour Weekdays
Captain (Training Officer)	1	45	5/9-Hour Weekdays
Finance Manager	1	40	5/8-Hour Weekdays
Administrative Assistant	1	40	5/8-Hour Weekdays
Logistics Volunteer	3	Varies	Varies
Facilities and Logistics Manager	1	40	5/8-Hour Weekdays
Total Fire Administrative Positions	**10**		

The current level of administrative and support staffing represents just under 20% of total staffing, of which 4% is allocated to the overall District direction and governing. It is AP Triton's experience that typical effective administrative leadership and support personnel for a fire district operation are often higher than municipal fire agencies that rely on other internal departments to provide support services. BCFD4 manages its own personnel functions and other support services, including payroll, accounts payable and receivables, finance, and capital facility maintenance services. Furthermore, the calculation includes three volunteer positions allocated to support various logistical needs.

Operations Staffing

The following figure summarizes the budgeted BCFD4 operations staff positions.

Figure 10: BCFD4 Total Operations Response Staffing (2025)

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Fire Operations Staff (FTE Employees & Volunteers/Paid on-call)	*Individuals primarily assigned to provide emergency services at the operational level.*		
Operations Captain (FTE)	3	50.61	48/96
Operations Lieutenant (FTE)	3	50.61	48/96
Firefighter/Paramedic (FTE)	9	50.61	48/96
Firefighter/EMT (FTE)	8	50.61	48/96
Firefighter (Volunteer)	5	n/a	n/a
Resident/Intern Firefighter	8	n/a	n/a
EMT (Single role)	4	n/a	n/a
Paramedic (Single role)	1	n/a	n/a
Total Fire Operations Staff	**41**		

Fire Operations Scheduling

BCFD4 utilizes a three-platoon system cycling between two 24-hour consecutive work shifts and four consecutive 24-hour shifts off per position. Operations full-time equivalent (FTE) personnel work an average of 50.61 hours per week or 2,632 hours annually. For Fair Labor Standards Act purposes, each operations employee is assigned to a 28-day consecutive work period, and the shifts start at 0800 hours.

Interns also work 48-hour shifts schedule and are assigned to a specific shift. However, their off-duty time varies depending on outside work and training obligations.

This work schedule and the Collective Bargaining Agreement (CBA) require that operations assigned employees receive 13 additional shifts off annually. These shifts, commonly called “Kelly Days,” reduce the annual average workweek, excluding other leave usage, such as vacation and sick leave. The Kelly Days are scheduled during each 28-day FLSA work period with the greatest potential amount of FLSA overtime.

The operations employees’ annual vacation time is scheduled by seniority in three successive rounds.

Operations Staff Scheduling Discussion

The number of FTE employees, Interns, and Volunteer positions supported by the District is ultimately determined by the Fire Chief and Fire Commissioners. With that said, maintaining a minimum staffing level 24 hours a day, seven days a week, requires personnel to be available to backfill for scheduled and unscheduled leaves. Providing this backfill in full-time career fire departments is typically done by hiring off-duty personnel back on overtime or hiring and scheduling additional personnel on a shift to provide the necessary relief coverage. Determining the theoretical number of employees to provide adequate relief coverage is often described as a “staffing relief factor.”

The operations staffing schedule used by BCFD4 is becoming increasingly common across the United States for firefighters working 24-hour shifts and is often effective for agencies with moderate workloads. Some large agencies with heavy workloads use a different staffing model to avoid employee fatigue, including split shifts (10- and 14-hour shifts, for example). However, the 24-hour work period reduces the number of crew changes in each period, the total number of operations staff required, and reduces the overall cost of benefits associated with the additional FTE staff needed for a split shift schedule.

BCFD4 reopened Station 410 in June 2025 with an assigned three-person crew. However, this crew is also used to backfill for vacancies at Stations 420 and 430, resulting in times and shifts where Station 410 is unstaffed.

Operations personnel are allowed to trade shifts, consistent with District policy and the CBA. Shift trades and overtime cannot exceed 72 hours consecutively, unless it is an emergency staffing situation.

Fire Operations Staff Relief Analysis

In evaluating the level and availability of BCFD4 staff, AP Triton analyzed and compared the minimum number of employees required to be on-shift, the current total number of operations FTE employees assigned to the 48-hour shift schedule, and the historical (2022-2024)average amount of leave used by these employees to determine how many FTE employees the District *theoretically* needs to maintain the minimum number of operations positions daily. This is commonly referred to as a "Staffing Relief Factor" (SRF). The following schedule components and leave usage history were used to determine the theoretical total number of operations assigned personnel needed to fill the minimum five daily staffing positions.

Figure 11: Elements Used to Calculate BCFD4 Staffing Relief Factor (2022–2024)

Shift Schedule	Annual Hours	Average Workweek	Average Sick Leave Used per Employee	Average Vacation Leave Used per Employee	Average Other Leaves Used per Employee[A]
24 hours on, 24 hours on, 96 hours off	2,608	50.12	190	149	71

[A] Includes FMLA, Funeral leave, Holiday leave, Disability leave, and Military leave

This calculation used the scheduled weekly work hours per employee, subtracted the average historical leave usage, and calculated the SRF.

BCFD4's Calculated Fire Operations Staffing Relief Factor = 1.24

AP Triton then multiplied the number of personnel needed to cover a single position at 24 hours per day by the SRF to determine the total number of employees *theoretically* needed to meet daily minimum staffing.

The following figure compares the theoretical number of positions needed to meet minimum daily FTE staffing (5 positions) with the current number of employees assigned to the Operations work schedule. Note: The District uses hires-back personnel to cover leave vacancies when the total daily staffing drops below five personnel and requires mandatory holdover overtime if staffing falls below three personnel.

Figure 12: Calculated Fire Operations Staff Shortage/Overage

Shift Coverage Required	Calculated Total Personnel Required	Current No. Employees	Staff Shortage/Overage
Vacation, Sick, Holiday, FMLA, Military, Etc.	21	23	**+2**

AP Triton understands the District is planning to add an Operations Battalion Chief position on each shift in 2026 and convert the day shift EMS Captain position to an administrative Battalion Chief position. Using the same historical leave usage as previously noted and increasing the daily staffing by one position, the total theoretical staff needed is 25.

Fire Operations Staffing Level Discussion

Using the staffing relief factor as calculated above, BCFD4 theoretically has two more 24-hour shift employees than needed to staff the six fire operations positions 24/7. The Operations Division currently has 23 Operations FTEs. This SRF calculation does not consider the physical operations aspect of assigning staff where most needed, specialty staffing requirements (paramedic- and officer-qualified assignments), use of interns to backfill vacancies, unequal distribution of personnel across shifts, or imbalanced leave usage between the shifts.

The cost of adding employees to ensure adequate staffing versus simply paying current employees overtime to provide relief coverage must be carefully balanced due to the additional cost of employee benefits, which for BCFD4 averaged approximately 27% or more of total Operations-assigned employee base salaries and benefits. Most of this additional cost is not factored into overtime expenses, potentially making overtime expenditure more cost-effective. However, AP Triton cautions that while it may seem prudent and cost-efficient to hire off-duty personnel on overtime or expand the use of overtime to maintain minimum daily staffing, at some point it can have diminishing returns and adverse impacts. It can significantly impact employee morale, particularly when personnel are required to hold over to cover vacancies. This practice increases fatigue, disrupts off-duty time, and places additional strain on work-life balance—contributing to higher attrition rates, increased sick leave usage, and elevated risks to employee health and safety.

AP Triton noted that the District recently changed the staffing policy to allow tenured interns to backfill for vacancies if they have achieved certain qualifications, such as apparatus operator and EMT certification. Additionally, the previously closed Station 410 was reopened in mid-2025 with FTE employees on a day-to-day basis, with personnel being moved to backfill vacancies at the other stations as required.

During the site visit, AP Triton learned of the District's plan to add a Battalion Chief position on each shift. Currently, captains are responsible for managing certain programs, such as safety, special operations, fleet and equipment maintenance. This responsibility will shift to the Battalion Chief position, allowing captains to focus on day-to-day management and training of their assigned crews.

The practice of using Station 410 personnel to backfill vacancies daily at the other stations should be carefully evaluated over the next year, especially with the planned increase in minimum daily staffing. The improved response times in the Station 410 response area and the increased overall ERF must be carefully balanced when factoring in overtime usage and cost savings. The use of qualified Interns to backfill vacancies and increase staffing helps reduce overtime expenses and should be continued.

Salaries and Benefits

The following figure summarizes the average salary costs for the District's uniformed employees at the time of this study. The salaries were averaged by rank and include incentive pay (not to exceed 6% of salary), acting pay (5% of salary), paramedic certification pay (10% of salary), education pay, and longevity pay.

Figure 13: BCFD4 Employee Average Salary Structure (2025)

Position Title	Average Annual Salary
Fire Chief	$170, 153
Deputy Chief	$152,404
Administrative Assistant	$ 95,984
Finance Director	$138,549
Administrative Captain	$137,988
Battalion Chief	$126,658 [A]
Operations Captain	$123,067
Operations Lieutenant	$113,015
Firefighter/Paramedic	$ 95,812
Firefighter/EMT	$ 86,162

[A] 2026 First Year Pay

The District pays a percentage of salary for each of the following training certifications and specialty assignments.

Figure 14: Salary Percentage for Certifications and Specialty Assignments

Certification/Specialty Assignment	Percentage of Salary
Hazardous Materials Technician	1%
Confined Space Rescue	1%
Vehicle Extrication	1%
Rope Rescue Technician	1%
Trench Rescue	1%
Water Rescue	1%
Safety Officer	1%
Day Shift Administrative Assignment	10%
EMS/Training Officer Administrative Assignment	3%
Facilities/Vehicle Maintenance	1%

The District also provides the following benefits package to full-time employees.

Figure 15: BCFD4 FTE Employee Benefits

Benefits			
Medical Insurance	Dental Insurance	Vacation Leave	Sick Leave
Bereavement Leave	Retirement Pension (LEOFF/PERS)	Employee Assistance Program	Medical Expenses Reimbursement Program (MERP)
Long-Term Disability/Life Insurance	Workers Compensation	Deferred Compensation (2% of top step salary)	Military Leave

The percentage cost of benefits compared to salary paid by the District varies depending on the salary of each position. In general, the District's benefits costs compared to the average annual salary are approximately 27%.

Intern & Volunteer Firefighter Scheduling and Compensation

The District maintains an Intern Firefighter program, where Interns schedule and work 48-hour shifts to augment shift staffing and provide backfill coverage. A typical Intern shift starts and ends at 0800 hours. Interns are responsible for finding shift coverage (with approval from the Shift Officer) if they cannot fill their shift. Interns are granted 192 hours of shift leave annually and are not allowed to work more than 96 consecutive hours.

Volunteers receive a stipend based on the number of points earned for participating in District responses, training, standby, travel mileage, and public education activities, as shown in the following figure.

Figure 16: Volunteer Hourly Stipend Points System

Number of Hours	Points earned
0-4	1
4-8	2
8-12	3
12-16	4
16-20	5
20-24	6

A volunteer's stipend amount is then calculated by multiplying the points earned by a factor based on their certifications/experience, as shown in the following figure.

Figure 17: Volunteer Qualification Point Values

Dollar Value per Point	Certification/Qualification
$20	On Probation
$21	Firefighter 1, NWCG[A] Firefighter 2, EMT-B, Logistics Member
$22	Firefighter 2, NWCG[A] Firefighter 1, EMT-Advanced, Fleet Driver
$23	Fire Officer 1, NWCG[A] Single Resource Boss, Team Lead
$25	Fire Officer 2, NWCG[A] Strike Team Leader, EMT-Paramedic, Administrative Officer

[A] National Wildfire Coordinating Group

The monthly stipend amount is based on a points system. The total monthly stipend pay to a volunteer cannot exceed 20% of the current first year Firefighter's monthly salary. Volunteers with at least 12 months of continuous service are eligible to apply for educational scholarships for coursework and undergraduate degree programs related to public service. Scholarships are awarded through a review process conducted by a committee comprised of an officer and two volunteers. Reimbursement of tuition and fees depends on successful completion of the course(s) with a grade point average (GPA) of at least 2.0.

Personnel Management

As part of this study, AP Triton examined the policies and processes in place to hire, retain, promote, and hold employees accountable.

Policies, Rules, Regulations & Guidelines

BCFD4 has a detailed set of written personnel policies and procedures that are reviewed and occasionally updated. These policies outline procedures and intended outcomes related to employee conduct, discipline, record confidentiality, grievance procedures, general safety, fireground and apparatus operations, leave usage, hiring requirements, fireground safety, etc. The District also has an employee handbook, which was most recently updated in 2024.

Collective Bargaining

District Operations FTE employees are represented by the International Association of Firefighters (IAFF) Local 1052. A BCFD4 Captain serves on the Local's Executive Board and is the Union's main point of contact with the District administration. A new collective bargaining agreement is in effect from January 1, 2026, to December 31, 2028. Washington State public employee labor law mandates mediation and binding arbitration in the event of an impasse.

New-Hire Application & Testing Process

Entry-level full-time equivalent employee candidates apply for employment through National Testing Network (NTN), a third-party contractor specializing in the screening and testing of public safety applicants. The District may recruit new hire and/or lateral hire (experienced Firefighter, Firefighter/Paramedic) candidates. Advertising for job openings is via social media, fire service websites, the District's web page, and the NTN web portal.

Applicants for full-time employment positions must be at least 18, possess a high school diploma or equivalent, have a valid Washington State driver's license and good driving record, possess a current Candidate Physical Ability Test (CPAT) card, pass NTN's FireTEAM assessment process, and have a current EMT or Paramedic certification. Desirable qualifications include a college education (bachelor's or associate degrees), preferably in the fields of fire science or emergency services.

The top-scoring candidate names from the NTN testing process are then forwarded to the District, where they are interviewed by a panel of District members. The top-scoring candidate(s) are then interviewed by the Fire Chief, after which a conditional hiring offer is made. The candidate(s) must pass a background check, physical examination, and psychological assessment. Once hired, probationary employees must complete Firefighter I and II, Hazardous Materials Operations, and Wildland Firefighter II certifications during their first year of employment.

The screening and testing process for Intern Firefighter positions is currently under revision.

Hiring Process Discussion

During the site visit, AP Triton learned that intern candidates do not receive any additional points or formal consideration during the testing process. During crew interviews, several employees feared that qualified interns who have completed assigned training tasks and certifications and have a strong history of excellent work performance and teamwork may be excluded after the testing process.

AP Triton also learned that after an employee is selected for hire, they are interviewed by one of the District's Fire Commissioners, who is a retired FBI agent. During the Commissioner's interview, he stated that he queries the candidate on work history and gauges their overall fitness for the job and ability to work in a team environment.

AP Triton suggests that the District consider altering the testing criteria to give formal credit to interns during the testing/hiring process. Intern credit could be given during the written test, oral interview panel, or include the top intern candidates (who passed the written, physical agility, and interview panel process) in the Chief's interview for final hiring.

AP Triton has concerns regarding the involvement of a District Fire Commissioner in conducting background investigation interviews following a conditional offer of employment. This concern is not a reflection of the Commissioner's qualifications or integrity. Rather, it relates to governance best practices and the potential perception of bias or undue influence in a personnel decision. Even the appearance of partiality can create avoidable liability exposure for both the individual Commissioner and the District.

To mitigate risk and strengthen procedural defensibility, the District should consider utilizing an independent third-party firm that specializes in public safety background investigations and psychological evaluations. This approach promotes objectivity, protects elected officials from involvement in personnel matters, and reinforces the integrity of the hiring process.

Staff Evaluations & Medical Examinations

Medical & Fitness Assessments

Ensuring employees can effectively and safely perform in often strenuous and stressful situations is required in today's fire service. BCFD4 requires annual fitness and medical evaluations, consistent with NFPA Standard 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments* (now being consolidated with other standards into NFPA 1580: Standard for Emergency Responder Occupational Health and Wellness). This new standard consolidates other standards related to fire service health and wellness standards and administration of related health and fitness programs.

The District has a progressive fitness assessment program that includes annual fitness assessments conducted by a contracted certified health and fitness company. The assessment components include the following:

- Aerobic capacity
- Body composition
- Flexibility
- Muscular endurance index
- Muscular strength

Each testing component is graded on a points system. Employees must reach and maintain a minimum health score of 40 points. Personnel who cannot maintain the minimum score will be required to meet with the Health Fitness Coordinator to develop a plan for score/fitness improvement. Personnel who respond to wildfires must meet National Wildfire Coordinating Group (NWCG) work capacity test requirements as well.

The District requires and provides annual medical examinations for uniformed employees, consistent with the NFPA 1582 standard.

Promotional Processes

An assessment center approach is used to evaluate candidates' knowledge, skills, and abilities when applying for officer promotional positions (Lieutenant, Captain, and Battalion Chief). The assessment center components typically involve managing emergency incident scenarios using the Incident Management System (IMS), an oral presentation to a panel, and an interview panel.

Performance Assessments

With the exception of probationary employees, the District does not have a structured performance assessment program, nor does it routinely assess and critique field skill performance. Contemporary fire departments formally assess job performance in several key areas, including but not limited to:

- Fireground/EMS skill performance
- Participation in public activities/interactions
- Adherence to District policies, including safety procedures and practices
- Equipment/station maintenance
- Teamwork and personal interactions
- Reliability in completing tasks, assignments, and training

- Written and verbal skills
- Emergency Vehicle operations and safety

A formal program of periodic assessment and documentation of employee and volunteer performance should be implemented in the District to ensure everyone is operating at a safe and high level and receives timely feedback. Additionally, the evaluations should provide an opportunity for an employee to share information related to their own perceived performance and the performance of their supervising officers.

Member Support

First responders occasionally respond to significant emergency incidents with resulting emotional traumatic impact. District personnel who have experienced traumatic events have access to the Benton/Franklin County's Chaplain Services Network and two trained District peer debriefers. These resources offer various interventions, including peer support, group interventions, and individual counseling, to help individuals process these events and mitigate the negative impacts of job-related and personal stressors.

District personnel also have access to the Washington State Employee Assistance Program (EAP), which provides a wide range of counseling, expert guidance, and other types of assistance to those with various personal and work-related problems that impact job performance or quality of life. Examples of this assistance include dealing with stress, anxiety, depression, anger management, relationship and financial issues, grief and loss, addiction, etc. The program also provides consultation resources and tools to public agencies to help effectively manage public employees.

Planning for Fire Protection & EMS

Benton County Fire District 4 serves urban, suburban, and rural areas, including the City of West Richland. Specific to West Richland, census information shows that the City's population has been growing at a 3.6% annual rate and has grown approximately 20% since the 2020 U.S. Census.[1]

This growth is likely to accelerate in the future, particularly when the anticipated Lewis & Clark Ranch mixed-use light industrial, residential, and retail development project comes to fruition. This project would convert approximately 7,600 acres of agricultural land for planned residential use, with potentially up to 100,000 additional residents over the next 20-100 years.[2]

Given this growth, coupled with overall Benton County's approximately 1.5% annual growth rate, the District attempts to influence various County and City growth management planning efforts to ensure public safety issues are adequately considered and addressed. The various planning efforts include:

- Benton County Comprehensive Plan
- West Richland Comprehensive Plan
- Lewis & Clark Ranch Development Planning Process
- West Richland Economic Development Planning Process
- External emergency response plans that impact BCFD4 operations include:
- Benton County Community Wildfire Protection Plan (CWPP)3
- Benton County Comprehensive Emergency Management Plan (CEMP)
- Benton County Hazard Mitigation Plan (HMP)
- South Central Region EMS & Trauma Care Council System Plan
- Southeast Communications Center (SECOMM) communications system upgrade planning effort
- Hanford and Columbia Generating Station (CGS) Radiological Emergency Preparedness Plan

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[1] https://worldpopulationreview.com/us-cities/washington/west-richland

[2] https://www.tri-cityherald.com/news/business/article309938325.html

[3] https://www.bces.wa.gov/public-records/em-documents/-folder-257#docfold_828_3512_2846_257

District internal administrative planning efforts include a 2024 Strategic Plan, which defines the District's mission, values, and vision, and identifies specific goals, strategies, desired outcomes, and personnel responsible for accomplishing them. The process was facilitated by a third-party contractor and involved only a small group of internal stakeholders.

AP Triton understands that the District does not view the current strategic planning process—or the resulting guidance document—as fully meeting its expectations. As a result, the District is considering either a comprehensive revision or a complete redevelopment of the strategic plan to better align with its operational priorities and long-term objectives.

Planning Discussion

Effective and motivating management of a fire department needs to be grounded in collaborative and supported adoption of a strong mission, vision, and values statement. Unfortunately, BCFD4's 2024 strategic planning process and plan do not appear to have met this goal.

It is important that a strategic planning process results in a clear understanding of why the organization exists, what is important to the organization and community, and motivates key stakeholders to support the plan and work towards achieving the adopted goals within set timeframes.

Effective strategic plans should be considered "living" documents that consciously evolve as the District changes. Revising or creating a new strategic plan in 2026 should be a high priority for the organization, and the planning process should emphasize empowering and motivating District personnel to move together in a positive direction and enable efficient change within the District and community. Additionally, a strong collaborative planning process and plan may be a useful resource in future District levy campaign efforts.

AP Triton also noted that the District has been involved in planning efforts for the Lewis and Clark Ranch development as it relates to street design, additional fire station facilities and apparatus, station site locations, population density projections, and residential and commercial building characteristics. At the time of this study, most of these planning details were unknown. However, the Fire Chief is actively engaged with City and County planners to ensure the District's interests are represented and considered.

Capital Facility, Apparatus, & Equipment

Evaluating the status and maintenance of a fire district's valuable capital assets is critical in determining its response readiness and stewardship. The essential capital assets for emergency operations are facilities, apparatus, and other emergency response vehicles. This section of the study evaluates the three BCFD4 fire stations, frontline and reserve fire and EMS apparatus, and specialized, emergency response equipment.

Inventory of Apparatus & Medic Units

Fire apparatus, ambulances, and other emergency response vehicles must be sufficiently configured and maintained to safely and effectively respond to and mitigate emergency incidents. As a part of this study, AP Triton requested the District provide a complete inventory of its fleet (suppression apparatus, command and support vehicles, specialty units, etc.). For each vehicle listed, BCFD4 was asked to rate its condition utilizing criteria described in the next figure, which will be shown in the apparatus inventory figures.

Figure 18: Criteria Used to Determine Apparatus & Vehicle Condition

Components	Points Assignment Criteria
Age:	One point for every year of chronological age, based on the date the unit was originally placed into service.
Miles/Hours:	One point for every 10,000 miles or 1,000 hours
Service:	1, 3, or 5 points are assigned based on service type received (e.g., a pumper would be given a 5 since it is classified as severe duty).
Condition:	This category considers body condition, rust, interior condition, accident history, anticipated repairs, etc. The better the condition, the lower the assignment of points.
Reliability:	Points are assigned as 1, 3, or 5, depending on the frequency a vehicle is in for repair (e.g., a 5 would be assigned to a vehicle in the shop 2 or more times per month on average; while a 1 would be assigned if in the shop on average once every 3 months or less.

The next figure lists the point ranges and condition ratings based on the criteria described in the preceding figure.

Figure 19: Condition Rating Based on Vehicle Condition Criteria

Point Ranges	Condition Rating	Condition Description
Under 18 points	Condition I	Excellent
18–22 points	Condition II	Good
23–27 points	Condition III	Fair (consider replacement)
28 points or higher	Condition IV	Poor (immediate replacement)

The next figure lists the inventory of BCFD4's fire apparatus, ambulances, staff vehicles, and specialized response units.

Figure 20: BCFD4 Frontline Apparatus & Medic Unit Inventory (2025)

Unit	Type	Manufacturer	Year	Condition	Features
Engines/Brush Trucks/Aerials					
E1414 (Reserve)	Type 1 Engine	KME	2001	Fair	1,250 gpm/1,000 gal.
E1411	Type 1 Engine	KME	2001	Fair	1,250 gpm/1,000 gal.
E1412	Type 1 Engine	Pierce Enforcer	2020	Excellent	1,500 gpm/750 gal.
E1413	Type 1 Engine	Pierce Enforcer	2020	Excellent	1,500 gpm/750 gal.
T1413	Tactical Tender	Pierce Hawk Extreme – with CAFS	2013	Good	500 gpm/2,500 gal.
W1421	Tender	Pierce/ Freightliner	2015	Good	500 gpm/3000 gal.
E1451	Type 5 Engine	Pierce/Ford	2023	Excellent	375 gpm/400 gal.
E1452	Type 5 Engine	Ford/Skeeter	2018	Good	375 gpm/400 gal.
E1453	Type 5 Engine	Ford	2011	Good	150 gpm/400 gal.
L1413[A]	75' Quint	Pierce Enforcer	2024	New	2000 gpm/500 gal.
Ambulances					
M1421	Type I	Ford F450	2019	Good	-
M1422	Type I	Ford F450	2024	Excellent	-
M1423	Type I	Ford F450	2026	Excellent	-
Staff Vehicles					
CH141	SUV	Chevy Tahoe	2017	Good	Command Vehicle
CH142	Pickup	Ford F150	2023	Excellent	Command Vehicle
DC141	Pickup	Ford F150	2021	Excellent	Command Vehicle
UT141	Pickup	Chevy 2500 HD	2017	Good	
UT142	SUV	Chevy Tahoe	2020	Excellent	Command Vehicle
UT143	Pickup	Ford Ranger	2013	Fair	Command Vehicle
Specialty Vehicles					
BS143	SCBA Trailer	Cargo Craft	2023	Excellent	Mobile Compressor
BS153	Tow Vehicle	Ford F350	2023	Excellent	Utility Tow Vehicle
RB141	Rehab	Ford F250	2006	Fair	Rehab Vehicle

[A] Placed in service Fall 2025

Apparatus Maintenance & Replacement Planning

Fire response vehicles and apparatus are subject to severe use and must reliably perform in these environments. Given this, as apparatus and vehicles age, repairs tend to become more frequent, very expensive to repair, and specialized parts may no longer be available.

New fire and EMS apparatus are very expensive, and progressive fire agencies develop and maintain capital apparatus replacement plans, and equally as important, set aside and protect funds for future replacement.

The District appears to prudently replace apparatus and vehicles on an as-needed basis, based on the age of the apparatus, NFPA apparatus life-span criteria, and available funding. This approach allowed the district to add a new 75' aerial quint apparatus in late 2025.

Impacts on apparatus builders related to the COVID-19 Pandemic, along with other current economic factors have resulted in prolonged manufacturing time and costs. This evolving environment underscores the importance of establishing and sustaining a comprehensive long-range apparatus and vehicle replacement plan. Such a plan should incorporate a thorough evaluation of current fleet condition, maintenance history and lifecycle costs, as well as consideration of evolving national safety requirements, emissions regulations, and performance standards. Proactive fleet planning reduces operational risk, supports firefighter safety, and stabilizes capital budgeting over time.

Economic Theory of Apparatus Replacement

A conceptual model utilized by some fire departments is the *Economic Theory of Vehicle Replacement*. As a vehicle ages, the theory states that the cost of capital diminishes, and its operating costs increase. The combination of these two costs produces a total cost curve. The model suggests that the optimal time to replace any apparatus is when the operating costs begin to exceed the capital costs. This optimal time may not be a fixed point but rather a range of time.

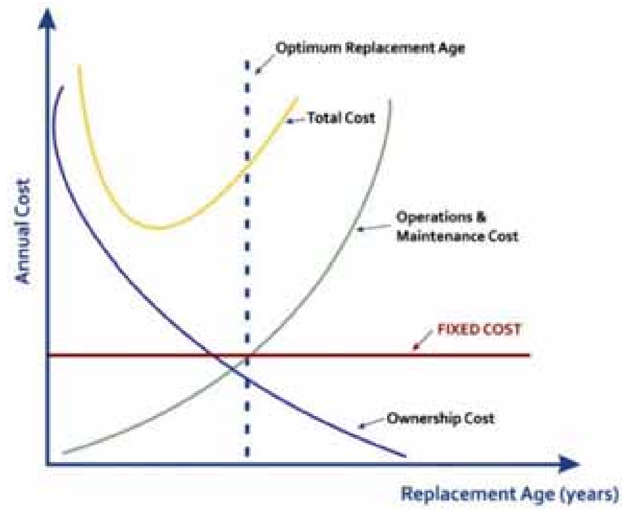
Shortening the replacement cycle due to an onerous repair history and cost can be the most cost-effective approach that allows an apparatus to be replaced at optimal savings to the fire district. Additionally, the design, construction, acceptance, and outfitting of custom fire apparatus can take a year or more. This reality emphasizes the need for developing a long-range apparatus replacement plan.

It is important to note that in times of public austerity and budget constraints, it may be tempting to reallocate funds set aside for apparatus replacement and defer planned purchases to help balance the current budget. However, as previously noted, this tactic may result in the following negative future impacts:

- Increased operating and repair costs
- Increased downtime for repairs
- Decreased reliability and breakdown at emergency scenes
- Compromised safety for response personnel and citizens

The next figure is a representation of the *Economic Theory of Vehicle Replacement*.

Figure 21: Economic Theory of Vehicle Replacement



As shown in the preceding figure, the deferral of replacement purchases unquestionably increases future replacement spending needs.

Future Apparatus Serviceability

An important consideration for fire districts is the cost associated with the future replacement of major equipment. Apparatus service life can readily be predicted based on factors including vehicle type, call volume, age, and maintenance considerations.

NFPA 1901: Standard for Automotive Fire Apparatus recommends that fire apparatus 15 years of age or older be placed into reserve status, and that apparatus 25 years or older be replaced. This is a general guideline, and the standard recommends using the following objective criteria in evaluating fire apparatus lifespan:

- Vehicle road mileage
- Engine operating hours
- The quality of the preventative maintenance program
- The quality of the driver training program
- Whether the fire apparatus was used within its design parameters
- Whether the fire apparatus was manufactured on a custom or commercial chassis
- The quality of workmanship by the original manufacturer
- The quality of the components used in the manufacturing process

- The availability of replacement parts

It is important to note that age is not the only factor for evaluating serviceability and replacement. Vehicle mileage and pump hours on engines must also be considered. A two-year-old engine with 250,000 miles may need replacement sooner than a 10-year-old one with 2,500 miles.

As previously noted, building specialized fire and EMS apparatus can take years, depending on the apparatus specifications. Future replacement planning must consider this. Lastly, the apparatus may have to be replaced due to accidental damage or other catastrophic loss. Funds should be set aside for significant emergency repairs or replacement.

AP Triton used a calculation tool to determine replacement costs of apparatus where the original purchase price was provided by the District. Utilizing the original costs of the vehicles, the following figure applies a 15-year front line life expectancy for each of the Type 1 apparatus listed, 20 years for Type 5 apparatus, and 5-7 years front line for ambulances.

Figure 22: BCFD4 Estimated Costs & Years to Replace Frontline Apparatus (2025)

Apparatus	Replacement Cost [A,B]	Current Replacement Cost	Annual Cash Requirements	Replacement Year [B]
E1412	$1,480,357	$1,040,079	$164,484	2035
E1413	$1,480,357	$1,040,079	$164,484	2035
E1451	$357,581	$241,569	$35,758	2036
E1452	$356,940	$271,245	$50,991	2033
L1413	$2,606,244	$1,237,034	$137,171	2045
M1423	$328,568	$259,672	$54,761	2031
Totals:	**$6,610,047**	**$3,423,191**	**$607,649**	

[A] Estimated using a 4% annual compounded inflation rate.
[B] Based on District's estimated life expectancy in front-line service.

It must be emphasized that the dollar amounts in the preceding figure are intended as estimates for only the specialized apparatus where the original purchase price was provided for analysis and discussion purposes. As previously noted, apparatus costs have significantly increased over the past few years, so the exact costs to replace vehicles and apparatus will depend on the type and configuration of each.

Capital Fire Equipment

The District has a breathing apparatus fill compressor installed at Station 420, and another is being installed at Station 430. Both are in excellent condition. The District has 24 MSA model G-1 self-contained breathing apparatus and 50 SCBA bottles, which are approximately 12 years old. It is important to note that the bottles have a 15-year life span, after which they must be replaced. Given the full replacement cost, the District should set aside funds for this equipment.

Capital Medical Equipment

Capital medical equipment is a major cost for fire agencies providing Advanced Life Support and patient transport. Often, the most expensive piece of equipment is the advanced-level cardiac monitor/defibrillator.

BCFD4 leases four Zoll X-Series monitor/defibrillators purchased in 2023, which include 12-lead capability, oxygen saturation (SpO2), end-tidal carbon dioxide (etCO2), carbon monoxide (CO), and blood pressure monitoring. In addition, the District has 20 Zoll Automated External Defibrillators (AED).

Each of the District's ambulances is equipped with a Stryker Power-PRO 2 ambulance cot and a Stryker stair chair.

Another expensive but valuable piece of equipment is the Zoll Auto-Pulse Chest Compression System. BCFD4 owns three of these devices, which automatically deliver high-performance continuous chest compressions. The District also owns three Zoll Z-Vent mechanical ventilators.

BCFD maintains three sets of extrication systems manufactured by TNT Rescue Systems®. Two tools are battery powered and one is gas powered.

Fire Station Features

Fire stations play an integral role in the delivery of emergency services for several reasons. To a large degree, a station's location will dictate response times to emergencies. A poorly sited fire station can be the critical difference between containing a fire to the room of origin and experiencing total structural loss—or between survival and death in a sudden cardiac arrest. In emergency response, geography is not neutral; seconds translate directly into outcomes. Fire stations also need to be designed to adequately house equipment and apparatus and meet the needs of the organization and its personnel.

Fire station activities should be closely examined to ensure the structure is adequate in both size and function. Examples of these functions can include the following:

- Kitchen facilities, appliances, and storage
- Residential living space and sleeping quarters for on-duty personnel (all genders)
- Bathrooms and showers (all genders)
- Training, classroom, and library areas
- Firefighter fitness area
- The housing and cleaning of apparatus and equipment, including decontamination and disposal of biohazards
- Administrative and management offices, computer stations, and office facilities
- Public meeting space

In gathering information from BCFD4, AP Triton asked the District to rate the condition of its fire station using the criteria from the next figure. The results will be seen in the following section.

Figure 23: Criteria Utilized to Determine Fire Station Condition

Excellent	Like new condition. No visible structural defects. The facility is clean and well maintained. Interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. No significant defect history. Building design and construction match the building's purposes. Age is typically less than ten years.
Good	The exterior has a good appearance with minor or no defects. Clean lines, good workflow design, and only minor wear of the building interior. 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. Building design and construction match the building's purposes. Age is typically less than 20 years.
Fair	The building appears to be 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 the building's purposes well. Showing increasing age-related maintenance, but with no critical defects. Age is typically 30 years or more.
Poor	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 crumbling of concrete on the apron may exist. The roof has evidence of leaking and multiple repairs. The interior is poorly maintained or showing signs of advanced deterioration with moderate to significant non-structural defects. Problematic age-related maintenance and major defects are evident. It may not be well-suited to its intended purpose. Age is typically greater than 40 years.

BCFD4 Fire Stations

The following figures describe the features of the BCFD4 fire stations.

Figure 24: BCFD Fire Station 410

Address/Physical Location:	1400 North Harrington Road, West Richland, WA					
	General Description: One-story steel frame/clad building. Houses a three-person engine/medic crew, a tender, and a Type 5 wildland engine. Station reopened in Summer 2025. Staff are used to backfill other stations as needed on a daily basis.					
Structure						
Date of Original Construction	1977					
Seismic Protection	None					
Auxiliary Power	Yes					
General Condition	Fair					
Number of Apparatus Bays	Drive-through Bays	0	Back-in Bays	4		
ADA Compliant	No					
Total Square Footage	6,200 square feet					
Facilities Available						
Sleeping Quarters	3	Dorms	3	Beds	0	Dorm Beds
Maximum Staffing Capability	3					
Exercise/Workout Facilities	No					
Kitchen Facilities	Yes					
Individual Lockers Assigned	No					
Bathroom/Shower Facilities	Yes - 2					
Training/Meeting Rooms	No					
Washer/Dryer	Yes/Yes					
Safety & Security						
Station Sprinklered	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security System	No					
Apparatus Exhaust System	Yes, but not in service					

Figure 25: BCFD4 Fire Station 420

Address/Physical Location:	2604 Bombing Range Road, West Richland, WA

General Description: Two-story station, with administrative headquarters. Houses one engine company, reserve engine, and medic unit. Apparatus bays were built in 1992, and offices and station living quarters were built in 1997. Portions of the living quarters were remodeled in 2023. Site includes a very large unpaved drill ground with fireground and rescue props, a large meeting/training room, and storage building.

Structure						
Date of Original Construction	1997 / Interior remodel 2023					
Seismic Protection	None					
Auxiliary Power	Yes					
General Condition	Good					
Number of Apparatus Bays	Drive-through Bays	1	Back-in Bays	2		
ADA Compliant	No					
Total Square Footage	22,200 square feet					
Facilities Available						
Sleeping Quarters	6	Dorms	6	Beds	0	Dorm Beds
Maximum Staffing Capability	6 – on station side					
Exercise/Workout Facilities	No					
Kitchen Facilities	Yes					
Individual Lockers Assigned	Yes					
Bathroom/Shower Facilities	Yes – 5/2					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes/Yes					
Safety & Security						
Station Sprinklered	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security System	No					
Apparatus Exhaust System	Yes, but not in service					

Figure 26: BCFD4 Fire Station 430

Address/Physical Location:	8031 Keene Road, West Richland, WA
	The District's newest facility is a two-story five-bay station housing a three-person engine crew. The facility includes administrative spaces for the District training officer, and two conference/training rooms. The large apparatus bays house an engine, a quint ladder truck, a medic unit, a water tender, and a breathing support and rehab unit.

Structure						
Date of Original Construction	2020					
Seismic Protection	Yes					
Auxiliary Power	Yes					
General Condition	Excellent					
Number of Apparatus Bays	Drive-through Bays	5	Back-in Bays	0		
ADA Compliant	Yes					
Total Square Footage	22,200 square feet					
Facilities Available						
Sleeping Quarters	6	Dorms	6	Beds	0	Dorm Beds
Maximum Staffing Capability	6 – on station side					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers Assigned	Yes					
Bathroom/Shower Facilities	Yes – Gender divided					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes/Yes (with extractor)					
Safety & Security						
Station Sprinklered	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security System	No					
Apparatus Exhaust System	Yes					

Capital Facilities and Equipment Discussion

During the site visit, AP Triton noted that all three fire stations are situated on large parcels with limited adjacent residential or commercial development. The Station 420 site is especially large, with an approximately 100,000 square foot unpaved lot behind the station that serves as their drill ground for driver rodeos, search and rescue, roof ventilation, and vehicle extrication. There are no fire hydrants located on the site, but a water main is immediately adjacent to the site. There is also a heated four-bay storage building on this site that is currently used to store miscellaneous tools, equipment, and training supplies.

The stations and equipment appear to be well-kept and clean and reflect District pride and professionalism. AP Triton noted several potential facility safety issues that should be reviewed and addressed. A few examples include:

- Surge protector cords “daisy-chained” together
- Exit signs posted on doorways that do not exit out of the building
- Medical Oxygen transfilling room door not labeled with an NFPA 704 placard, and combustible materials stored alongside the filling station. Hose whips not in place.
- Flammable liquids are not stored in approved flammable liquid cabinets
- Inoperable point capture vehicle exhaust systems
- Turnout gear stored in apparatus bays

In discussion with the Fire Captain assigned as the District Safety Officer, it was revealed that the District last had a Washington State Labor and Industries (L&I) safety audit of District facilities approximately 15 years ago. AP Triton recommends that another safety audit be conducted, as a new station has been built and other alterations have been made at the other stations.

L&I provides safety audits free of charge through its Consultation Program, using workplace safety/code enforcement professionals to identify safety issues and potential violations that need to be corrected. Through this program, needed corrections can be identified and corrected without penalty if they are promptly completed to the State’s satisfaction.

AP Triton noted that the District recently hired a Facilities and Logistics Manager who oversees the maintenance of District properties, facilities, and equipment. Duties include coordination and management of facility maintenance and repairs, and contractor management. Key 2026 planned facility projects include:

- Replacing the point capture vehicle exhaust systems
- Replacing the windows in Stations 410 and 420
- Repaint the exterior of Station 420
- Repave Station 420’s parking lot

Support Programs

Emergency Medical Services Overview

Benton County Fire District 4 is an all-hazard fire and rescue agency that serves an area of approximately 52 square miles, including West Richland and surrounding unincorporated areas, with a population of approximately 22,000 people, supported by two full-time staffed fire stations and one part-time staffed fire station. EMS calls account for about 65% of responses.

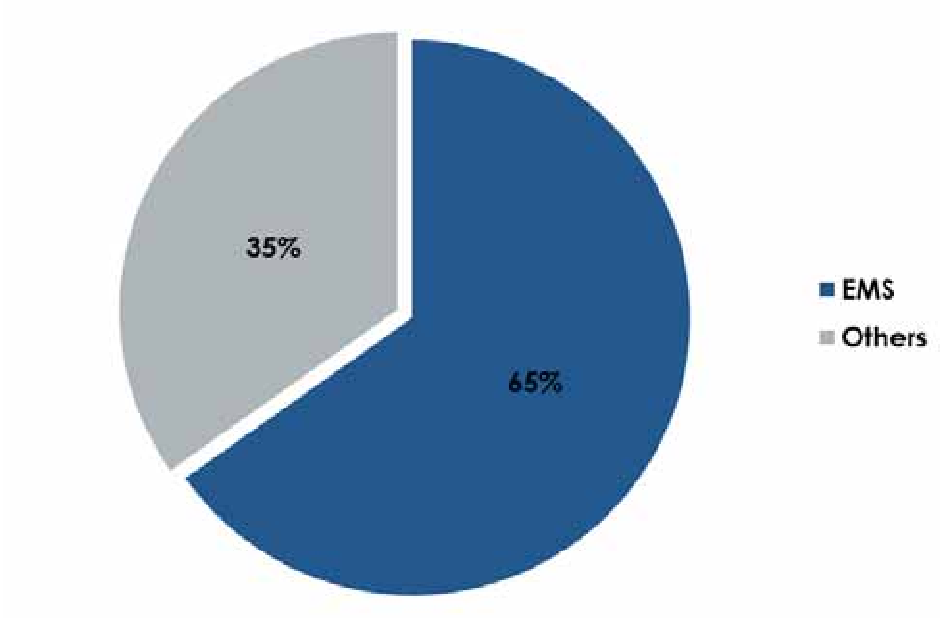
The District staffs two fire stations using a combination of Firefighter/Emergency Medical Technicians (EMTs) and Firefighter/Paramedics. BCFD4 provides its community with Basic Life Support (BLS) and Advanced Life Support (ALS). BCFD4 primarily employs state-licensed, locally accredited Paramedics. BCFD4's daily EMS staffing varies, with team members ranging from First Responders to Paramedics. Staffing is accomplished through a combination of full-time employees and volunteers.

In total, BCFD4 employs 17 licensed paramedics, 18 certified EMTs, and one certified Advanced Emergency Medical Technician (AEMT)provider. BCFD4 provides ground emergency medical transport Mutual aid EMS ground emergency medical transport is provided by Benton County FD 1, Benton County FD 2, Richland Fire Department, Kennewick Fire Department, and Pasco Fire Department. BCFD4 provides mutual aid ground emergency medical transportation to Benton County FD 1, Benton County FD 2, Richland Fire Department, Kennewick Fire Department, Pasco Fire Department, Benton County FD 5, and Benton County FD 6.

Life Flight Network provides air ambulance service. Patients are primarily referred to one of the following hospitals: Kadlec Medical Center, Trios Medical Center, Lourdes Medical Center, Kadlec Freestanding ED, or Prosser Medical Center.

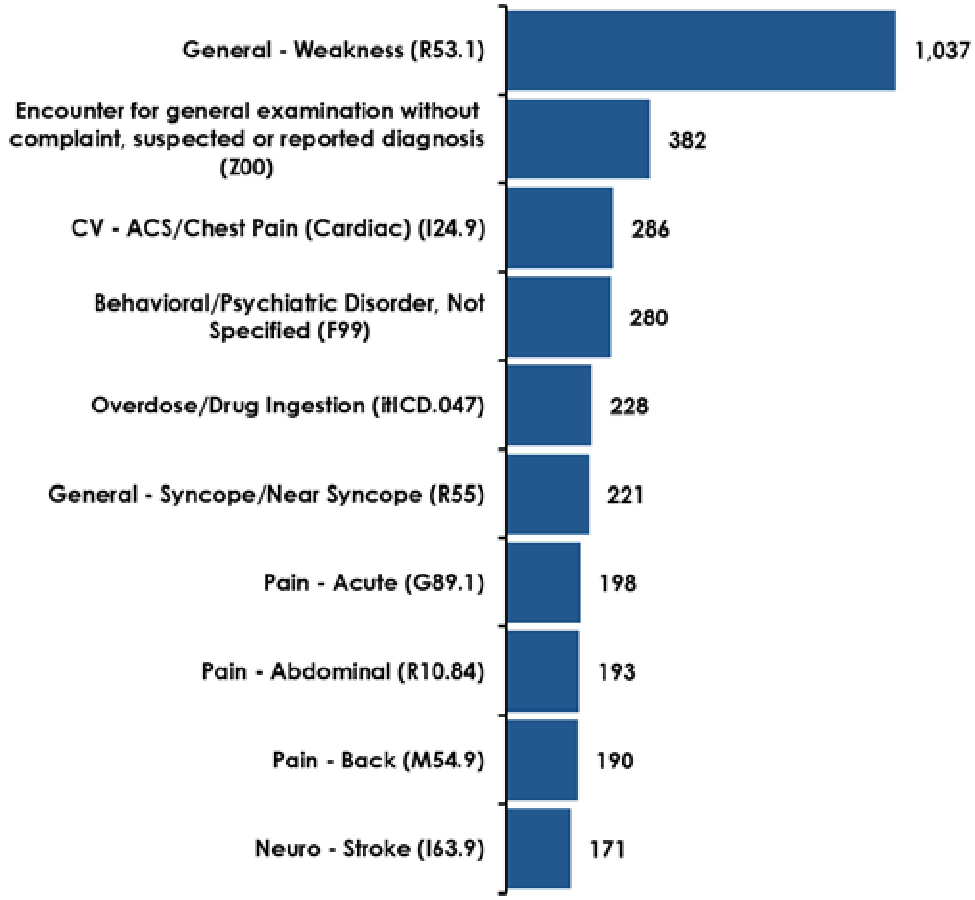
The following figure illustrates the breakdown of EMS calls by category, including those in the "Other" category (e.g., fires, good intent, investigations, etc.). EMS calls account for approximately 65% of the call volume, where "Other" calls account for 35%.

Figure 27: EMS & Other Call Percentages (2019 – 2024)



The following figure shows a granular breakdown of EMS calls in BCFD4. General weakness calls are the most common call type, followed by general examination encounters.

Figure 28: Breakdown of Call Types in BCFD4 (2019-2024)



Medical Control & Oversight

Local EMS Control & Oversight

An EMS Captain is assigned and oversees all functions of the BCFD4 EMS Section. The EMS Captain is responsible for the administration and oversight of the District's EMS program. Core duties include attending and participating in regional meetings, conferences, workshops, and training sessions; managing EMS supply ordering and inventory control; and overseeing the procurement of emergency medical equipment, including medications, consumable supplies, medical delivery devices, and cardiac monitoring equipment (e.g., electrocardiogram monitors).

The position also ensures compliance with applicable national, state, and local regulations and statutory requirements. In addition, the EMS Captain collaborates with allied agencies and system partners to promote standardized clinical practices, operational consistency, and system-wide coordination.

Oversight and Governance

Regional EMS & Trauma Care Council: BCFD4 participates in the Mid-Columbia (Benton/Franklin) County EMS & Trauma Care Council, which coordinates local EMS policy, triage, and system-level oversight for agencies in the region.

Medical Program Director: Regional clinical oversight is provided by a Medical Program Director (MPD) who authors and reviews prehospital care guidelines and county protocols used by agencies in the council area.

Local department leadership, including BCFD4's chief officers, EMS Captain, and operations staff, implements and enforces EMS practices within the District**,** consistent with regional protocols and district policies.

Protocols and Medical Control

Adopted county protocols: BCFD4 operates under the ABFY (Adams, Benton, Franklin, Yakima) County prehospital patient care guidelines. These written protocols cover a full range of topics, from cardiac arrest algorithms to transport criteria and infectious disease precautions.

Types of medical control: Clinical care is governed by written protocols (offline/standing orders) and by direct medical direction when needed (online medical control), as defined in regional guidelines and MPD directives.

Scope of practice and delegation: County protocols specify permitted procedures, medication administration, and ALS/BLS triage and transport destination procedures, establishing the clinical scope for EMTs, AEMTs, and paramedics operating in BCFD4's response area.

Training, Credentialing, and Personnel

Provider qualifications: BCFD4 recruits EMTs and higher-level providers for EMS roles and ensures that volunteers assigned as EMS providers meet state certification and District requirements before acting in that capacity.

Continuing education and protocol updates: Protocol authorship and review occur through the MPD and regional council processes, with periodic reviews and updates to keep clinical guidance current for participating agencies

Quality Assurance, Documentation, and Reporting

Documentation requirements: The regional patient care guidelines include explicit documentation standards and guidance on refusal of care, interfacility transport, and other reporting elements that underpin Quality Assurance (QA) and legal compliance.

Quality improvement: Clinical oversight through the MPD and council structure supports case review, protocol revisions, and systemwide QA activities to maintain consistent medical control across agencies in the Mid-Columbia region.

Regulatory Context and Local Considerations

Regional coordination: BCFD4's EMS practice is embedded in the Mid-Columbia regional system of protocols and council governance, rather than an isolated departmental set of orders.

Local funding and operational impact: Funding and local operational decisions (staffing, unit placement, capital projects) affect EMS capability; local budget and levy actions have previously influenced BCFD4's EMS staffing and equipment timelines

Kadlec Medical Center, Trios Medical Center, Lourdes Medical Center, Kadlec Freestanding ED, and Prosser Medical Center are the base-station hospitals that provide online medical control for providers, per county protocol and as needed. Each of the previously listed hospitals is designated as a trauma center, ranging from level 2 to 4.

System Integrity Regarding Required Credentialing

In Washington State, EMT certification requires completing approved training, passing national exams, and affiliating with a licensed EMS agency (BCFD4). Recertification involves continuing education and renewal through the Department of Health. As a minimum job requirement, BCFD4 requires that a candidate possess a current, valid Washington State Driver's License, a high school diploma, an Emergency Medical Technician (EMT) certification, and a CPR certification. Regardless of rank, all operational personnel possess at least an EMT license issued by the Department of Health. Of the 27 sworn personnel, 15 are certified ALS providers and 12 are BLS providers.

EMTs in Washington State must be recertified every three years at the state level and every two years with the National Registry of Emergency Medical Technicians (NREMT). They typically complete 20 hours of continuing education for NREMT renewal, plus additional training for state certification.

BCFD4 achieves this by offering in-house training and assigning regional EMS training that is scheduled, facilitated, or delivered by subject-matter experts. Additionally, the BCFD4 strategy is to provide at least four hours of Continuing Education (CE) each quarter, totaling 20 hours annually. Combining regional and internal training, it offers approximately 36 hours of Continuing Medical Education (CME) annually.

To become a certified paramedic in Washington State, individuals must complete an accredited training program, hold EMT certification for at least one year, and pass both state and national exams. State regulations require paramedics to earn 150 hours of CME during their three-year licensure cycle. Again, this is achieved parallel to the EMT's CME hours. Training includes all on-duty personnel and is a value-added service for EMT members, as the subject matter is often taught at the ALS level, thereby raising the standard and competency of BLS care throughout the organization.

BCFD4 uses a Captain/EMS Officer to assist in managing and tracking its required training hours.

First Responder ALS System

BCFD4 operates an Advanced Life Support (ALS) system that is integral to its mission to protect life, property, and the environment. This system is staffed by highly trained paramedics who provide critical care in emergencies. The ALS service includes life-saving procedures such as cardiac monitoring, intubation, intravenous therapy, and medication administration, ensuring that patients receive the best possible pre-hospital care. The District's commitment to excellence is reflected in its core values: Integrity, Professionalism, and Commitment.

The ALS system is part of a broader emergency medical services plan that encompasses training, communications, and coordination with other agencies to provide a cohesive, effective response to emergencies.

Life Safety Services & Public Education

A primary component of any risk reduction program is providing a comprehensive fire and life safety inspection and permitting process. The goal is to prevent or mitigate a fire or an injury before it occurs. Benton County and West Richland enforce the 2021 International Fire Code, along with its amendments, for plan reviews and fire and life safety inspections.

Building Plan Review

The review process provides insight into how the construction might impact BCFD4's access to the building during an incident, assesses the type of construction, determines the need for fire protection systems, and considers any changes in building use.

Plan reviews should start once the initial concept has been submitted for permitting. The initial review allows the fire district to provide suggestions and enforce existing requirements before approval. For example, the site plan must include fire apparatus access, the location of the fire department connection (if a sprinkler system exists), the building's size and height, hydrants, and other features important to emergency responders.

Proper permit applications and procedures are crucial for helping contractors submit plans for review and approval. Reviewing construction plans allows fire service representatives to confirm compliance with regulations regarding fire sprinkler and alarm systems, emergency lighting, and other safety features. Additionally, a permitting system enables the organization to require modifications to plans that do not meet code requirements before construction begins.

The West Richland Fire Marshal, who is also the building inspector, conducts plan reviews from the time a new development or building is planned for the City. They complete reviews for life safety, fire alarm, sprinkler and suppression systems, and underground fire mains.

Fire & Life Safety Inspections

Fire and life safety inspections play a vital role in protecting the community by inspecting commercial buildings and properties. These inspections are not only about spotting violations, but they also act as proactive tools for risk prevention by educating business owners and the public about how and why certain conditions can pose serious safety hazards. Fire and life safety inspections include three of the Five Es of fire prevention: education, engineering, and enforcement. Each of these components helps lower risk by either stopping hazardous conditions from forming or reducing their impact before they turn into emergencies.

When buildings are not regularly inspected, life safety violations can go unnoticed. This lack of oversight leaves both code enforcement officials and emergency responders unaware of potential dangers, significantly increasing the risk to occupants and the public. A tragic example of this occurred in 2016 with the Ghost Ship fire in Oakland, California. The fire killed 36 people in a converted warehouse that had not been inspected for thirty years and lacked proper permits. The building wasn't even listed in the fire department's record management system, highlighting the devastating consequences of missing or inadequate inspection protocols.

NFPA 1730, Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations, provides a recommended inspection frequency, as shown in the following figure.

Figure 29: NFPA 1730 Inspection Frequency

Occupancy Risk Classification	Frequency
High	Annually
Moderate	Biennially
Low	Triennially
Critical Infrastructure	Per AHJ[A]

[A] Authority Having Jurisdiction

The following figure illustrates how to determine inspection frequency based on risk and occupancy type, using NFPA 1730 recommendations.

Figure 30: Occupancy Risk Classifications Example

Risk	Washington Building Code Group	Examples
High	A-1, A-2	Nightclubs, restaurants, theaters, airport/cruise ship terminals
	A-3, A-4, A-5	Arenas, museums, religious
	H-1, H-2, H-3, H-4, H-5	Hazardous materials sites (Tier II)
	B	All government & public buildings, other office buildings over two stories
	E	Schools, daycare centers
	I-1, I-2, I-3, I-4	Hospitals, assisted living centers, correctional
	M	Strip malls, closed-air shopping malls, big box stores
	R-1, R-2, R-3	Hotels, motels, dormitories, apartments, board & care facilities
	Special Risk	Railroads, interstate highways, airports
	(Target hazard)	Any building with life safety risk beyond the reach of preconnected hose lines > 200 feet
Moderate	B	Outpatient clinics, general business, offices <3 stories
	F-1	Fabrication or manufacturing of combustible materials
	M	Mercantile, free-standing
	I-2, R-4	Foster group homes, assisted living homes
	S-1	Storage of combustible materials, car repair facilities, hangars
Low	F-2	Fabrication or manufacturing of non-combustibles
	R	1- and 2-family dwellings, foster homes
	S-2	Storage of combustible materials
	U	Barns, silos, and other unclassified buildings

Other states have established inspection schedules; for example, North Carolina requires that all occupancies be inspected at least every three years. It also uses a similar method to determine inspection frequency, as outlined in Section 106 of the North Carolina Fire Prevention Code. This requirement was introduced after the 1991 fire in Hamlet, NC, which killed 25 Imperial Food Products employees. The victims were unable to escape the building because their doors were locked. The North Carolina Department of Labor had not inspected the facility during its 11-year operation.

BCFD4 conducts fire inspections in West Richland because the City does not complete the annual inspections. BCFD4 lacks enforcement authority. The City requires business licenses and provides a list of occupancies that require inspection. All violations are reported to the West Richland Fire Marshal through an online form, who then conducts follow-up inspections of the violations. The West Richland Fire Marshal has provided basic fire code training to BCFD4 operations staff. This training is minimal and provides a fundamental understanding of the fire code. The Benton County Fire Marshal's Office performs inspections in the unincorporated areas of the fire district.

Permits and Fees

A permit system allows West Richland and Benton County to review plans or conduct inspections to ensure compliance with code requirements. Permit and inspection fees are intended to cover the costs of plan reviews and inspections. There is no specific fee schedule for fire code-related operational permits in West Richland or Benton County, but there are fees for fire alarm and sprinkler systems installations and alterations. BCFD4 does not have a fee schedule.

Fire Investigations

The National Fire Incident Reporting System (NFIRS) has required recording fire ignition types, an essential part of thorough fire investigations, until its sunset at the end of 2025, when it was replaced by the new National Emergency Response Information System. Possible causes of fires include intentional acts, unintentional actions, equipment failures, natural events, incidents under investigation, or undetermined causes.

Identifying the origin and cause of a fire enables BCFD4 to develop targeted prevention programs to reduce future incidents. These programs should be data-driven, using fire cause analysis to identify trends and potential issues in the community. Data such as name, age, and gender can help identify specific individuals or groups, enabling targeted prevention efforts, such as the Juvenile Firesetter Program. West Richland or Benton County conduct fire origin and cause determination.

Public Education

The fire safety and public education program in BCFD4 includes a designated public education/information officer and offers several targeted initiatives. These include education on calling 9-1-1 through booths at open houses and schools, EDITH (Exit Drills in the Home) for grades K–4, CPR training, blood pressure checks, bilingual information, and programs on smoke alarms and carbon monoxide awareness. Injury prevention is addressed through a partnership with Greater Health Now, which also supports elderly care and safety efforts. Fire extinguisher use is demonstrated during open house events. There is no curriculum described for schools, and no annual fire prevention report is distributed.

Despite some ongoing efforts, the public education program has several gaps. It lacks offerings on fire safety topics such as chimney, electrical, or cooking hazards, and there is no program for wildland interface education. Publications are not publicly available, and fire incident data is neither tracked nor analyzed. The absence of bilingual materials and formal reports limits outreach and impact. Overall, while BCFD4 provides basic fire safety education, the program does not fully address or support broader community needs.

Community Risk Reduction Program

Each of the following is part of an overall Community Risk Reduction (CRR) program, defined as "The identification and prioritization of risks followed by the integrated application of resources to improve public safety and reduce increasing call volumes."[4] CRR's primary objective is to examine problems and develop prevention or mitigation strategies to reduce hazards. The goal is to incorporate emergency operations with prevention efforts at the fire station level. The station-level approach is preferred because risks vary between stations or within a station's response area.

The data collected for this master plan—and maintained through ongoing analysis—will provide the foundation for evaluating trends over time, allowing the District to determine whether specific hazards are increasing, decreasing, or shifting based on incident response patterns. Additionally, risk profiles are likely to evolve as new development occurs and demographic patterns shift within BCFD4 and the broader service area, directly influencing service demand, deployment needs, and operational planning for the District.

BCFD4 provides minimal risk reduction for the community. When developing strategies, they should use the "Five E's" to create risk reduction programs, as outlined below.

- Education—Will education help the public: who, where, when?
- Engineering—What engineering or technology is available to help?
- Enforcement—Is additional or more substantial enforcement needed?

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[4] Vision 20/20, Community Risk Assessment guide.

- Economic Incentives—Could incentives increase compliance?
- Emergency Response—Would changes in response make a difference?

When developing a CRR plan, BCFD4 must determine what strategies have already been implemented in the community to prevent duplication. In addition, external resources may be available through partnerships with community organizations, including law enforcement, nonprofits, health departments, EMS, religious organizations, and local businesses. These groups may provide staff with a different perspective and offer additional funding and resources to mitigate limitations within the District.

Preparing a CRR plan should align with the District's mission and strategic plan. Creating a plan at the station level allows personnel to engage the community they serve. It empowers staff to interact, learn more about their community, and take ownership of the program. Station personnel will begin to understand the importance of collecting accurate data to support their plan, developing strategies through partnerships, gaining stakeholder input, soliciting community feedback, and prioritizing which risks to address.

The following figure illustrates the basic methodology Vision 20/20 offers for identifying and analyzing risks within a community. In addition, Vision 20/20 includes a coalition of national organizations and experts that exemplify how collaboration, communication, and commitment to data-based solutions can save lives and properties.

Figure 31: The Community Risk Assessment Process

Communications and Dispatch

Services Provided

Southeast Communications Center (SECOMM) is the primary 9-1-1 public safety answering point (PSAP) serving Benton County (and parts of Franklin County) and the dispatch center for Benton County Fire District 4 (BCFD4). SECOMM operates 24/7 from the Benton County Emergency Services facility in Richland and has been modernizing customer-facing services (e.g., introducing a non-emergency phone tree to manage non-urgent calls better). Given its role as a regional PSAP, SECOMM must balance law enforcement and fire/EMS dispatching, maintain resilience across radio/telephony/data systems, and scale staffing and technologies with regional growth. In addition to Benton and Franklin Counties, SECOMM is the 911 center for all law enforcement, fire/EMS, and emergency response for Walla Walla Fire District #5 (27 total agencies). SECOMM averages about 28,000 calls per month.

Staffing and Work Schedule

SECOMM operates as a staffed 24/7 center: the City posts job listings for Emergency Communications Dispatchers, confirming continuous operations and hiring/training activity. SECOMM has been authorized for the following staffing positions:

- 3 Communications Center Managers
- 2 Records Specialists
- 42 combined Call-Taker/Dispatchers
- 2 part-time Call-Taker/Dispatchers

Call-takers/Dispatchers at SECOMM work 12-hour shifts, totaling 48 hours per week on a four-on, four-off schedule. The minimum daily staffing policy is eight staff members between 0800 and midnight, and seven staff members from midnight to 0800. The staff, including dispatchers and supervisors, is represented by the Teamsters Union, Local No. 8369.

Training

Dispatchers should maintain NENA/NENA-adjacent training, CPR/medical dispatch Q&A, PSAP continuum skills, active-shooter, and major-incident protocols. SECOMM uses internal and external training sources aligned with National Emergency Number Association (NENA) standards and industry best practices.

The NENA standards are a comprehensive set of guidelines designed to ensure efficient, uniform emergency call processing across jurisdictions. These standards are intended to assist Public Safety Answering Points (PSAPs) in handling 9-1-1 calls effectively and to provide a foundation for creating Standard Operating Procedures (SOPs). Adopting these standards standardizes call handling, promoting consistency and reliability in emergency services. Technical committees develop NENA's standards, and once approved by the NENA Executive Board, they become recommended practices that benefit telecommunication companies, vendors, and users by fostering widespread adoption. Additionally, NENA's work includes advancing the Next Generation 9-1-1 (NG9-1-1) infrastructure, which is set to enhance the speed, intelligence, and resilience of emergency response systems.

Operational Policies

SECOMM's operational policies, including Standard Operating Guidelines and Standard Operating Procedures, are comprehensive and focused on fire and EMS response. Since SECOMM provides dispatch services to several agencies, policies are tailored to each agency's specific deployment model and configuration. On the other hand, each agency collaborates with the others to streamline administrative and operational policies and procedures. SECOMM’s leadership routinely engages quality assurance measures to ensure that critical systems, including call taking/processing, are in place and aligned with regulations and best practices.

Infrastructure, Capabilities, and Technologies

SECOMM operates an infrastructure designed to support reliable PSAP functions for its partner agencies. Its communications backbone typically includes a redundant fiber-optic network, diverse routing, and failover capabilities that should ensure uninterrupted 9-1-1 call handling and radio communications. SECOMM leverages a regional trunked radio system—often P25 or equivalent—providing interoperable voice communications across fire, law enforcement, EMS, and regional partners. The center also integrates next-generation 911 (NG911) technology, enabling enhanced call routing, text-to-911, rapid location services, and seamless integration with geographic information system (GIS) mapping platforms. The center utilizes the NICE 911 audio recording system, which ensures reliable, high-quality capture and secure storage of all emergency communications. This technology supports comprehensive incident documentation, quality assurance, and compliance with state and federal standards, enhancing SECOMM’s overall accuracy, accountability, and operational effectiveness.

SECOMM is using Intrado VIPER. Intrado VIPER is a next-generation 9-1-1 call-handling system designed for PSAPs to manage emergency communications with speed, reliability, and precision. It provides an IP-based, highly redundant platform that supports voice, text-to-911, location data, call routing, and seamless interoperability with CAD and radio systems. VIPER enhances situational awareness by delivering incoming 9-1-1 calls with accurate caller information and robust failover capabilities, ensuring PSAPs maintain uninterrupted service even during high-volume events or system outages. Overall, Intrado VIPER serves as a mission-critical backbone for modern emergency call-taking operations. SECOMM accepts and handles text messages to 9-1-1. To reduce the load on the 9-1-1 system, SECOMM manages a non-emergency phone tree and a dedicated non-emergency number, including implementing Aurelian AI to screen non-emergency calls.

SECOMM utilizes Hexagon Computer-Aided Dispatch. Hexagon's On Call Dispatch (CAD) provides modern, flexible incident management for PSAPs, enabling call-taking and dispatch across police, fire, EMS, and control rooms. It features an intuitive, configurable user interface, supports on premises or cloud deployment, integrates with mapping and third-party systems, and includes AI-powered insights via its Smart Advisor to surface critical patterns and help decision-makers respond faster.

Supporting this infrastructure is an aging facility equipped with an uninterruptible power supply (UPS), emergency generators, secure server environments, and climate-controlled equipment rooms that safeguard mission-critical systems. SECOMM's technology typically includes computer-aided dispatch (CAD) systems, automatic vehicle location (AVL), alarm-monitoring interfaces, and real-time data-sharing tools that enhance situational awareness and resource deployment. Together, these elements build a resilient, future-ready communications system that ensures efficient call handling and coordinated emergency responses across the region.

The following are typical/expected capabilities for modern PSAP operations:

Computer-Aided Dispatch (CAD): integrated CAD for incident entry, unit status, and resource tracking.

Automatic Location Identification (ALI) / Automatic Number Identification (ANI) integration with customer premises equipment (Intrada VIPER) to populate the caller location and callback number.

GIS-based mapping and routing to support the fastest unit assignment and structure address validation.

Call-recording and logging systems for QA, investigations, and liability protection.

Mutual aid & multi-agency coordination workflows and protocols to dispatch resources across jurisdictional boundaries.

Surge handling & contingency policies (mass-call events, multi-agency incidents) — likely present but should be validated with internal SOPs.

Medical Priority Dispatch System

SECOMM dispatchers are trained and certified in emergency medical dispatching (EMD) by the International Academies of Emergency Dispatch (IAED).

EMD and the Medical Priority Dispatch System (MPDS) play crucial roles in patient prehospital care. They involve coordinating resources and appropriately allocating emergency medical services to patients in need. EMD is the initial point of contact between patients needing emergency medical assistance and the EMS system.

Rather than using EMD software, SECOMM dispatchers enter medical information into CAD after selecting the call type, and dispatch units based on each agency's run cards. The EMD process, while receiving emergency calls, assessing nature and severity, and dispatching the appropriate resources to the scene, provides pre-arrival instructions to the caller to begin treating the patient while emergency units are en route. The speed and accuracy of EMD can significantly affect outcomes in medical emergencies, making it a critical component of the EMS system.

A criteria-based dispatch (CBD) system is a method used by emergency services, such as 9-1-1, to triage and prioritize calls based on medical and incident criteria, rather than the traditional approach of gathering as much information as possible. By using specific, "here and now" questions, the system determines the necessary level of care and the urgency of the need, enabling the dispatch of appropriate resources.

MPDS, a specific type of CBD, elevates the assessment of the caller’s complaint and disposition. MPDS is a standardized protocol used by emergency dispatchers to prioritize and respond to medical calls. It uses a software-based system and training to guide dispatchers in questioning callers, assessing the situation's urgency, and providing pre-arrival instructions, such as CPR, childbirth assistance, or tourniquet application. The goal is to ensure the most critical emergencies receive the fastest response, while less urgent calls are handled safely as resources become available.

Figure 32: Response Determinant Levels

Response Level	Capability	Clinically Indicated Response Resource(s) and Priorities		Rationale
		First Responder	Ambulance	
ECHO	ALS	Red Lights & Siren	Red Lights & Siren	• Information exists that death is eminent • Closest any First Response and ALS Ambulance • Immediate lights and siren response needed • Multiple resources necessary • Rapid ALS transport almost certain
DELTA	ALS	Red Lights & Siren	Red Lights & Siren	• Closest First Response and ALS Ambulance • Immediate lights and siren response needed • Multiple resources necessary • ALS transport likely
CHARLIE Urban	ALS	Optional Response- No Red Lights & Siren	Red Lights and Siren	• ALS Ambulance / First response for extended ETA • Multiple resources not necessary • ALS or BLS transport likely
CHARLIE Rural	ALS	Red Lights and Siren	Red Lights and Siren	
BRAVO Urban	BLS or ALS	Optional Response- No Red Lights & Siren	Red Lights and Siren	• BLS or ALS Ambulance / First Response for extended ETA • Rapid BLS evaluation indicated
BRAVO Rural	BLS or ALS	Red Lights & Siren	No Red Lights & Siren	
ALPHA	Closest BLS or ALS	Optional Response- No Red Lights & Siren	No Red Lights & Siren	• BLS or ALS Ambulance / First Response not needed • Multiple resources not necessary • Transport less likely
OMEGA	Referral or BLS	Not indicated	No Red Lights & Siren	• Ambulance transport not indicated and referral to specialty service appropriate

SECOMM does not currently utilize MPDS. In this case, dispatchers question a caller to determine what type of medical aid it is, which will lead them to reference a medical card that they put into the call notes. Based on the questioning, a response is determined (code

2 – no lights and sirens, or code 3 – with lights and sirens). Relative to BCFD4, they do not use a tiered system, but it is built into the system should they choose to implement.

Specialized Technical Rescue Services Support & Response

BCFD4 provides some special operations/rescue services, including: high and low-angle rescue, surface/swift water rescue, vehicle and machine extrication, and hazardous materials first response. Confined space, trench, and structural collapse rescue services are provided by the Pasco, Richland, and Kennewick Fire Departments upon mutual aid request.

The District trains personnel to the hazardous materials operations level only, which means District personnel are trained to identify the type and severity of a materials release, isolate a hazard area, and request specialized resources to control a release and mitigate the released product. In addition, nine personnel are trained as Hazardous Materials Incident Commanders. Mitigation of significant hazardous materials releases is handled by the Washington State Department of Ecology.

BCFD4 provides a limited range of special operations services, as shown in the following figure.

Figure 33: Special Operation Services Provided

Competencies	BCFD4
Technical Rescue Confined Space Rescue	No
High-/Low-Angle Rope Rescue	Yes
Trench/Structural Collapse Rescue	No
Swift Water/Surface Water Rescue	Yes
Vehicle & Machinery Extrication	Yes
Hazardous Materials First Response	Yes

Critical Staffing for Special Operations Incidents

Critical staffing for a technical rescue situation requires an all-hands response with specially trained personnel and/or mutual aid resources from surrounding jurisdictions. For example, a Technical Rescue/Confined Space incident requires—at a minimum—a designated Incident Commander, Safety Officer, two specially trained firefighters assigned to enter the confined space, two for backup/safety, and at least two for patient care. Specific to BCFD4, a confined space rescue requires special equipment and training to safely rescue or recover a trapped person. In those specific situations, the District relies on mutual aid resources from the Pasco and Kennewick Fire Departments.

Hazardous Materials (Haz Mat) Response

BCFD4 operations personnel are trained to the Hazardous Materials Operations level, and apparatus carry a limited supply of diking and plugging materials to contain small uncontrolled releases of hazardous liquids, such as fuel and antifreeze. Front-line fire apparatus carries four-gas handheld detectors that measure oxygen, carbon monoxide, hydrogen sulfide, and lower explosive limit levels.

Haz Mat Incidents involving larger or more complex releases result in the request for Pasco and Kennewick Haz Mat technician teams and apparatus. Large incidents may require Washington State Department of Ecology and U.S. Environmental Protection Agency participation as well. Hazardous materials response can be a costly and labor-intensive operation, taking days or weeks to mitigate.

Technical Rescue Program Discussion

In May 2025, BCFD4 and Benton County Fire District 2 personnel responded to a rescue situation at the Horn Rapids low-head dam on the Yakima River. During the rescue attempt, a BCFD2 rescue boat, crewed by BCFD2 and BCFD4 personnel, were swamped trying to rescue two victims. The boat eventually sank but, fortunately, the boat crew and victims were rescued unharmed. This incident graphically illustrates the inherent and unique hazards of this type of low-frequency technical rescue situation. Confined space rescue is another low-frequency, high-risk situation that fire agencies may respond to.

AP Triton noted that the District is not equipped or trained to perform confined space or trench rescues. Both types of incidents present unique and extremely dangerous hazards to emergency responders and can be extremely resource-intensive to mitigate safely. A 2014 NFPA research paper documented the circumstances behind on-duty firefighter fatalities involving confined spaces between 2003 and 2012, and highlights the potential dangers faced by responders in these types of situations.[5]

[5] On-Duty Firefighter Fatalities Involving Confined Spaces, 2003-2012, Rita Fahy, NFPA, March 2014.

To further illustrate, in January 2017, three workers in Key Largo, Florida, were overcome by toxic fumes and low oxygen content when they entered an underground utility vault without following proper procedures for atmospheric testing before entering a permit-required confined space.[6] A firefighter on the first arriving unit attempted to enter the vault to perform a rescue and collapsed within seconds of entering. He was in cardiac arrest when rescued but was revived on scene and transported in critical condition. He survived. A fire service investigation into the firefighter's near death revealed several deficiencies within the fire department, including lack of adequate training on the hazards of confined spaces and hazardous materials, lack of proper procedures on how to assess hazards in confined spaces, including proper atmospheric monitoring, and lack of data on the number of confined space target hazards in the department's service area.[7]

Without proper training, equipment, and resources to quickly assess, enter, and perform a confined space rescue, there may be a strong and compelling desire to initiate a rescue without properly assessing the hazards, and personnel may attempt an improvised rescue attempt.

A few examples of permit-required confined spaces in the District include product silos, underground utility vaults, septic tanks, fuel tanks, and wine fermentation tanks. Businesses and individuals who routinely enter confined spaces often assume their local fire departments are equipped, trained, and available to quickly perform confined space rescues, and list them as their designated confined space rescue team, even though the fire agency does not provide this service. AP Triton understands that the District is occasionally notified by private companies that they are conducting confined space entries, and assumes that this is done because the companies mistakenly believe BCFD4 will provide confined space rescue if needed Washington State Administrative Code (WAC) specifically addresses these requirements in the following direction to entities performing confined space entries and those designated to provide confined space rescue services:

> **WAC 296-809-50014:** Make sure you have adequate rescue and emergency services available.
>
> (1) You must make sure you have adequate rescue and emergency services available during your permit-required confined space entry operations.
>
> (a) Evaluate and select rescue teams or services that can:

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[6] https://www.firefighternation.com/rescue/florida-firefighter-in-critical-condition-in-fatal-manhole-rescue/

[7] https://www.flkeysnews.com/news/local/article163672803.html

(i) Respond to a rescue call in a timely manner. Timeliness is based on the identified hazards. Rescuers must have the capability to reach potential victims within an appropriate time frame based on the identified permit space hazards.

(ii) Proficiently rescue employees from a permit-required confined space in your workplace. Rescuers must have the appropriate equipment for the type of rescue.

(iii) Agree to notify you immediately in the event that the rescue service becomes unavailable.

(b) Make sure that at least one member of the rescue team or service holds a current certification in first aid and cardiopulmonary resuscitation (CPR).

(c) Inform each rescue team or service about the hazards they may confront when called to perform a rescue.

(d) Provide the rescue team or service with access to all permit spaces from which rescue may be necessary. This will allow them to develop appropriate rescue plans and to practice rescue operations.

The key points for rescue agencies in the preceding WAC are that rescue services must be familiar with the hazards and spaces being entered before the commencement of entry operations, and demonstrate proficiency in the type of rescue operations needed for the type and configuration of the confined spaces entered

The District ensures all operations personnel are trained to recognize permit-required confined spaces and understand the hazards of entering these spaces without proper equipment and training. All front line engine companies are equipped with multi-gas atmospheric monitors to safely perform initial atmospheric monitoring for low oxygen (< 19.5%), carbon monoxide, hydrocarbon lower explosive limits (LEL), and hydrogen sulfide as part of a confined space rescue risk assessment.

In addition, District personnel should drill with mutual aid technical rescue teams to ensure seamless response and scene management during an emergency confined space rescue incident.

Training & Continuing Medical Education

Training and Continuing Medical Education programs are fundamental to the success of the fire and rescue profession. Annually, approximately 100 firefighters suffer line-of-duty deaths (LODD). According to the U.S. Fire Administration, there were 72 firefighter fatalities in 2024 and 93 in 2023. The causes of firefighter LODDs are varied and include sudden cardiac death, cancer, trauma, and a notable increase in suicides (tracked separately) linked to job demands. While some LODDs are unforeseeable, many could be mitigated through a comprehensive training and education program.

The National Institute for Occupational Safety and Health (NIOSH) investigates each LODD. It has identified five recurrent themes in these fatalities: 1) improper risk assessment, 2) lack of incident command, 3) inadequate accountability, 4) insufficient communications, and 5) failure to adhere to standard operating procedures/guidelines.

A practical, organized training plan can address these themes and potentially reduce the incidence of predictable deaths in fireground operations. This underscores the critical importance of ongoing training and education in safeguarding firefighters' lives.

General Training Competencies

General training competencies are crucial for reducing, and ideally eliminating, firefighter LODDs. Firefighters are often described as a "Jack of all trades, master of none," reflecting the diverse skill set. Over the years, firefighter training competencies have expanded, adding new professional skills to the firefighter repertoire each decade. For instance, Paramedics were integrated into the field in the 1970s, Wildland Fire Response & Hazardous Materials in the 1980s, Urban Search & Rescue/Technical Rescue (US&R) in the 1990s, Weapons of Mass Destruction (WMD) response in the 2000s, and responses to hostile events like active shooter incidents in the 2010s. The fire service has evolved into an all-risk/all-hazard response profession.

The COVID-19 pandemic is a prime example of this evolution, with fire departments nationwide playing a pivotal role in emergency management, including vaccine administration and response.

BCFD4 is a full-service fire and rescue agency that provides fire, emergency medical services (EMS), limited hazardous materials (HazMat) response, wildland-urban interface (WUI) firefighting, and technical rescue services. Training requirements for personnel vary by certification level, and the training needed to maintain service proficiency is diverse. It can be categorized into five primary areas: development, policy, safety, fire-based, and EMS.

The National Fire Protection Association (NFPA) has established several standards for training and certifying fire personnel. These standards provide minimum recommendations for Firefighters, Fire Officers, Prevention Staff, Fire Investigators, Public Education staff, and other specific positions.

BCFD4 adheres to these NFPA standards and meets requirements set by Washington Administrative Code (WAC), the Washington Industrial Safety and Health Act (WISHA), the Washington State Department of Licensing, and standards within the National Wildfire Coordinating Group (NWCG) curriculum. Taken together, these entities, standards, regulations, and codes provide a robust safety foundation for BCFD4 firefighters.

BCFD4 operates under policies and procedures adopted by the District that establish baseline training requirements and minimum operational standards. However, these standards were last updated in 2006—nearly two decades ago—highlighting the need for review and modernization to reflect current best practices and regulatory expectations.

Figure 34: General Training Competencies by BCFD4

Training Competencies	BCFD4
Incident Command System	ICS 100, 200, & 700 within 90 days. ICS 800 within the 1st year. Officers are required to take ICS 300 & 400.
Accountability Procedures	NIMS
Training SOPs	Internal – last updated 2006
Recruit Academy	Regional academy
Special Rescue Training	External
HazMat Certifications	HazMat Awareness/FRO within 1st year
Vehicle Extrication Training	Internal – two hours annually
Driving Program	Emergency Vehicle Incident Prevention Program with annual refresher training
Wildland Certifications	FF1, FF2, Red Cards (all ops), annual RT130, several members with higher IMT certifications
Small Tools/power tools	Internal and ongoing
Communications & Dispatch	SECOMM – Initial and ongoing
EMS Operations	Internal and MPD

Training Administration, Schedules, & Facilities

BCFD4 has a dedicated training officer (Captain) with a dedicated office. The training officer is responsible for all administrative training duties. BCFD4 has an extensive training area where they conduct vehicle extrication and defensive driving training. The District provides limited training and EMS equipment and supplies; much of the equipment is fabricated by BCFD4 firefighters.

Figure 35: Training Facilities & Resources

Facilities & Resources	BCFD4
Adequate training ground space	Yes, but limited resources
Adequate office space	Yes
Training building/tower	No
Burn room at the training building	No burn room – regional access
Live fire props	Compact training box (forcible entry, roof ventilation, ladder techniques, and fire attack principles)
SCBA obstacle course	No
Computers & simulations	Yes
EMS equipment assigned to training	Yes – Limited items

BCFD4 has one large classroom and one conference room with a large open area that has potential to be a robust training center, which could include training props and/or training tower. Within the region, BCFD4 has access to regional training facilities in Kennewick, Pasco, and Burbank that include smoke rooms and Class A burn facilities.

The training curriculum is varied, encompassing manipulative, didactic, and computer-based elements. Formal lesson plans are either produced in-house or sourced from commercial vendors.

The figure below details the types and frequencies of training drills conducted by BCFD4.

Figure 36: General Training Competencies

Training Competencies	BCFD4
Incident Command System	FEMA: ICS 100, 200, 700 – within 90 days ICS 300 & 400 for Company Officers
Accountability System	NIMS ICS
Training SOPs	Internal & aligned with NFPA Standards
Training Safety	NFPA, WAC, OSHA, and WISHA
Recruit Academy	Internal, with future recruits to attend regional fire academy
Special Rescue Training	External certification
HazMat Certifications	External – career & interns must obtain within one year. Officers required to be HazMat Incident Commander.
Vehicle Extrication Training	Internal – two hours annually
Driving Program	External – EVIP. Annual refresher training with NFPA road course and rodeo
Wildland Certifications	NWCG – aligned with national requirements for strike team deployments and IMT members
Radio & Dispatch protocols	Internal

Training Program Goals & Objectives

Traditionally, the training captain develops and maintains a training plan under the direction of the Fire Chief. His or her responsibilities would include maintaining, reviewing, and updating the training plan annually to ensure compliance with all mandated training requirements. BCFD4 maintains an annual training calendar that outlines and schedules training topics.

During their 48-hour shift, BCFD4 routinely schedules manipulative and classroom-based training, including Continuing Medical Education (CME). Most fire and rescue agencies complete two hours of training per shift, accumulating approximately 240 hours annually. This approach ensures consistent and comprehensive skill development and knowledge retention among firefighters.

In 2024, BCFD4 trained 39 members, totaling approximately 4,735 fire-related training hours that were recorded in its records management system. Additional recorded training hours include new-hire academy training and 81 administrative training hours. In addition to routine company-level training, where a company officer oversees the training, it is common for a chief officer or a company officer managing the training division to conduct skill performance evaluations. To that end, BCFD4 conducts skills performance evaluations for Self-Contained Breathing Apparatus (SCBA) and personal protective equipment (PPE), securing a hydrant, and defensive driving. District training is robust and encompasses a wide range of topics beyond those addressed by BCFD4.

Post Incident Analysis

A Post-Incident Analysis (PIA) is a structured, reflective process used by fire agencies to evaluate operational performance following an incident. Whether the incident is a routine medical call, a complex multi-alarm fire, or a high-risk technical rescue, the PIA provides a forum to assess what occurred, how resources were utilized, and how effectively objectives were met. The goal is to improve safety, decision-making, and organizational readiness.

Importance of Conducting a Post-Incident Analysis

- **Enhances Operational Safety**
  PIAs help identify hazards, near misses, and unsafe practices by reviewing what happened—and why—thereby enabling organizations to prevent recurrence and strengthen risk-management strategies.
- **Improves Tactical and Strategic Decision-Making**
  Reviewing command decisions, resource deployment, and incident action plans allow leaders to understand what worked well and where adjustments are needed. This continuous evaluation sharpens both tactical proficiency and strategic foresight.
- **Strengthens Communication and Coordination**
  PIAs encourage open dialogue between command staff and field personnel. These discussions uncover communication gaps, clarify expectations, and reinforce the importance of clear, concise messaging during operations.
- **Promotes Accountability and Professional Development**
  When conducted in a constructive, blame-free environment, PIAs support a culture of learning and self-improvement. Members gain insight into their own and their team's performance, fostering personal growth and organizational excellence.

- **Supports Future Training and Policy Development**
  Findings from PIAs can directly lead to updates to Standard Operating Guidelines / Standard Operating Procedures, training curricula, and equipment needs. This ensures that lessons learned translate into actionable improvements.

Training Administrative Support & Maintenance of Training Records

A fire captain manages the BCFD4 training division. Each member can track their own training hours, while company officers and instructors can enter training hours for each member. Training hours are tracked through Fire Engineering. BCFD4 previously used Vector Solutions (formerly Target Solutions) as its online learning management system (LMS) but has since transitioned to Fire Engineering. Due to the transition, training hours require auditing to ensure accuracy.

Continuing Medical Education

As with the training division, an EMS Captain/Coordinator oversees Continuing Medical Education (CME) at BCFD4.

All sworn members of BCFD4 are either emergency medical technicians (EMTs) or licensed Paramedics in the State of Washington. Washington mandates that EMTs complete 40 hours of continuing education across three components: national, local/state, and individual, and that Paramedics complete 60 hours in the same three components biannually. The following figure provides additional details on hours and components.

Figure 37: EMT & Paramedic CME Hours and Components

Component	Subject	Hours
EMERGENCY MEDICAL TECHNICIAN (EMT)		
National	Medical	6 hours
	Cardiovascular	6 hours
	Operations	5 hours
	Airway/Respiration/Ventilation	1.5 hours
	Trauma	1.5 hours
State	Must be directly related to EMS patient care and is intended to include any agency-required and/or state EMS office-specific education.	10 hours
Individual	Flexible but directly related to EMS patient care.	10 hours
PARAMEDIC		
National	Medical	8.5 hours
	Cardiovascular	8.5 hours
	Operations	6.5 hours
	Airway/Respiration/Ventilation	3.5 hours
	Trauma	3 hours
State	Must be directly related to EMS patient care and is intended to include any agency-required and/or state EMS office-specific education.	15 hours
Individual	Flexible but directly related to EMS patient care.	15 hours

Section II:
COMMUNITY RISK ASSESSMENT

Description of the Communities Served

Benton County Fire District 4 was created in 1954. It maintains robust cooperative agreements, including a mutual aid pact with all fire departments and districts across Benton, Franklin, and Walla Walla Counties. A dispatch matrix enables rapid deployment of resources to incidents, effectively containing large fires and minimizing the need for state mobilization. Additional partnerships exist with the Washington State Department of Natural Resources, the Bureau of Land Management, the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Washington State Fire Marshal's Office. There is also participation in a county strike team for initial attacks in neighboring areas and the statewide fire mobilization plan.

Key District needs include bolstering defensible space in the wildland-urban interface through expanded Community Wildfire Protection Program and Firewise education, though current budget constraints limit dedicated fuel-reduction efforts—grant funding could target high-hazard areas identified in the County wildfire plan. The District advocates for revisions to the Conservation Reserve Program that allow cost-neutral firebreaks extending to bare mineral soil, continued investment in rural water supply infrastructure to strengthen fire suppression capabilities, and strict compliance with residential and agricultural burning regulations. These burn activities are governed by local air quality requirements and the Washington State Department of Ecology, with guidance and current restrictions available at bentoncleanair.org. Overall, these priorities underscore the District's focus on proactive risk reduction amid resource limitations.

West Richland

West Richland, Washington, traces its roots to the indigenous Chemnapum people, who inhabited the area along the Yakima River for centuries before European exploration. The Lewis and Clark Expedition passed through in 1805, and early settlement began in earnest during the late 1870s, as small irrigation systems were established for farming in the arid Columbia Basin. The first schoolhouse opened in 1896, Benton County was formed in 1905, and neighboring Richland incorporated the following year, dubbing the West Richland vicinity "Lower Yakima." An irrigation canal arrived in 1908, and the Yellowstone Trail highway crossed the region in 1917–1918, spurring further connectivity.

The 1940s Manhattan Project transformed nearby Richland into a secretive government town, prompting some residents to relocate across the Yakima River for private land ownership; in 1948, developer Carl Heminger purchased 80 acres to establish Heminger City, which merged with the nearby community of Enterprise in 1949 before the unified

West Richland officially incorporated on June 17, 1955, to capitalize on its proximity to the growing atomic hub. The city annexed the expansive 7,600-acre Lewis and Clark Ranch along the river in 1981, fueling suburban expansion and plans for a major planned community announced in 2025, while viniculture emerged as a key economic driver alongside its agrarian roots, boosting the population to over 16,000 by 2020.[8]

Geographically, West Richland occupies 22.12 square miles in Benton County, primarily land with a sliver of water, at an elevation of about 449 feet, nestled in the semi-arid Columbia Basin with a climate marked by hot summers reaching 86°F and cold winters dipping to 26°F, alongside just 9 inches of annual precipitation concentrated in cooler months. Its topography features rolling hills, sagebrush-covered plateaus, and riverine lowlands shaped by the Yakima River, which bisects the landscape and supports irrigated agriculture amid the broader desert expanse.

The City employs a mayor-council form of government, with operations centered at City Hall on Belmont Boulevard, preserving a small-town ethos amid steady growth.

West Richland anchors the western edge of the Tri-Cities metropolitan area, bordered eastward by Richland across the Yakima River, and enveloped within Benton County; to the north and west lie unincorporated rural expanses, while Kennewick and Pasco form the bustling core of the metro cluster to the east and north, collectively driving regional commerce.

Description of the Community

Risk factors influence the types of services a community provides. Identification of hazards is the process of recognizing the natural and human-caused events that threaten a community. Every community must prepare for and respond to various events, including natural disasters such as earthquakes, pandemics, and wildfires. Additionally, the extent to which a community exhibits certain social conditions, such as poverty levels, access to vehicles, or household size, may affect its ability to prevent suffering and financial losses in the event of a disaster. These factors describe community risk.

A community's risk assessment is based on numerous factors, including socioeconomic status, household composition, minority status and language, population density, housing types, local land use and development, and the geography and natural hazards present throughout the community. These factors influence the number and type of resources—

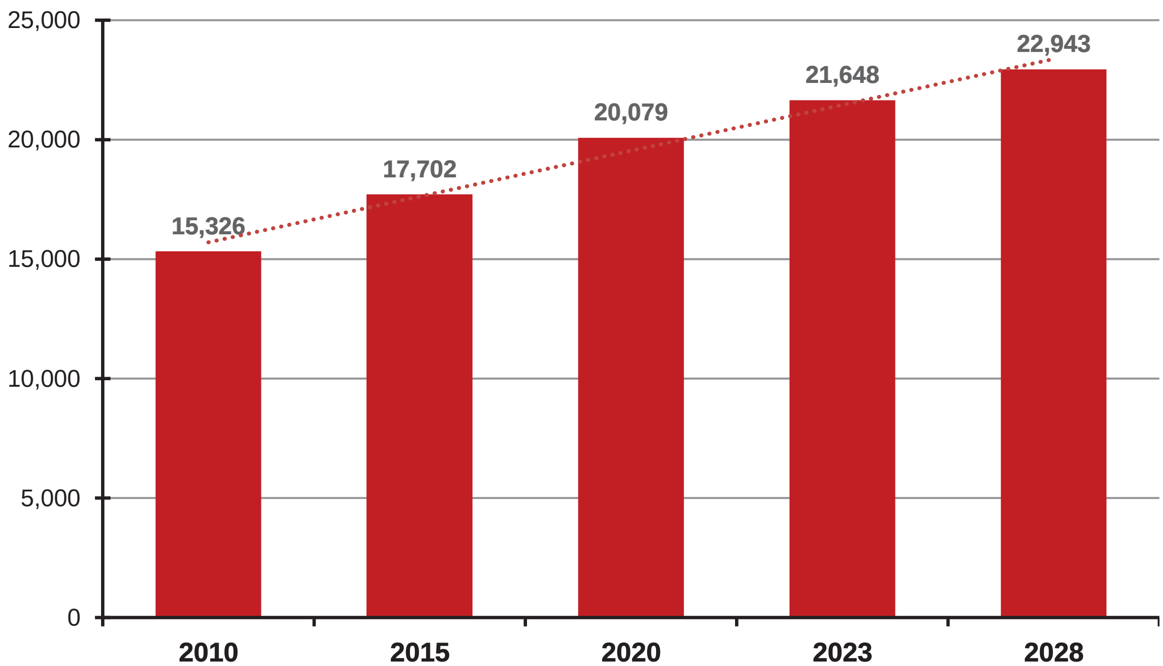
[8] https://westrichland.org/223/City-History.

personnel and equipment—required to control or mitigate an emergency. The community's risk assessment provides relevant information to help public officials and agencies better prepare their communities to respond to emergency events and facilitate faster recovery.

Population & Demographics

According to Esri population estimates, the BCFD4's service area has experienced modest population growth. The population within BCFD4's response jurisdiction increased from 15,326 residents in 2010 to 21,648 in 2023, reflecting a 41% growth rate. It is estimated that the population will grow to 22,943 by 2028. The following figures illustrate this population trend in BCFD4's service area from 2010 to 2028.

Figure 38: Population Growth & Estimate (2020–2028)



At-Risk Populations and Their Impact on Emergency Services

Specific demographic groups within communities require special consideration in emergency planning due to their heightened vulnerability. According to the United States Fire Administration's National Fire Data Center, certain populations face significantly elevated risks of fire-related injuries and fatalities. These at-risk populations not only experience higher rates of emergency incidents but also often require more resource-intensive responses, placing additional demands on emergency organizations.

Identified High-Risk Demographic Groups

The National Fire Data Center's comprehensive "Fire Risk in 2019" study identified several demographic categories at substantially higher risk:

- **Young Children (Under 5 Years)**: Limited mobility, inability to respond appropriately to emergency situations, and dependence on caregivers place this group at elevated risk. Young children may be unable to self-evacuate during fires and often require specialized rescue techniques.
- **Older Adults (Over 55 Years)**: Age-related factors, including reduced mobility, slower reaction times, and a higher prevalence of medical conditions, contribute to increased vulnerability. This demographic often requires more complex EMS interventions and evacuation assistance.
- **Elderly Adults (Over 85 Years)**: This subset faces the highest fire mortality risk of any age group, with fatality rates approximately 4 times the national average. Factors include living alone, the effects of medication, cognitive impairments, and physical limitations.
- **Gender-Based Disparities**: Statistical analysis reveals gender-specific risk patterns, with males and females showing different vulnerability profiles across age groups and incident types.

Local Demographic Analysis

The following data is from Esri's 2023 U.S. Census American Community Survey[9] five-year estimates, which provide critical insights into the prevalence of these high-risk groups within our service area.[10] This demographic data enables more precise resource allocation and targeted prevention strategies to address the specific needs of vulnerable populations who require emergency medical services and fire protection.

Age

Age significantly affects fire safety risk, with both the very young and the elderly facing elevated risks. Understanding these demographic vulnerabilities helps inform targeted prevention strategies and resource allocation.

Elderly Population Risks

Adults over 65 face substantially higher fire-related mortality rates—2.6 times greater than the national average. This elevated risk stems from multiple factors. Decreased mobility

[9] Esri Community Analyst.

[10] https://data.census.gov/.

often limits their escape capabilities during emergencies, while a higher prevalence of cognitive impairments can affect their emergency response. Elderly individuals are also more likely to live alone, increasing their vulnerability when fires occur. Their greater susceptibility to smoke inhalation injuries due to respiratory vulnerabilities compounds the danger, as does their higher rates of medication usage that may affect alertness or decision-making. These age-related vulnerabilities directly translate into increased service demands on emergency responders, particularly for medical interventions that require specialized geriatric care protocols.

Child Safety Considerations

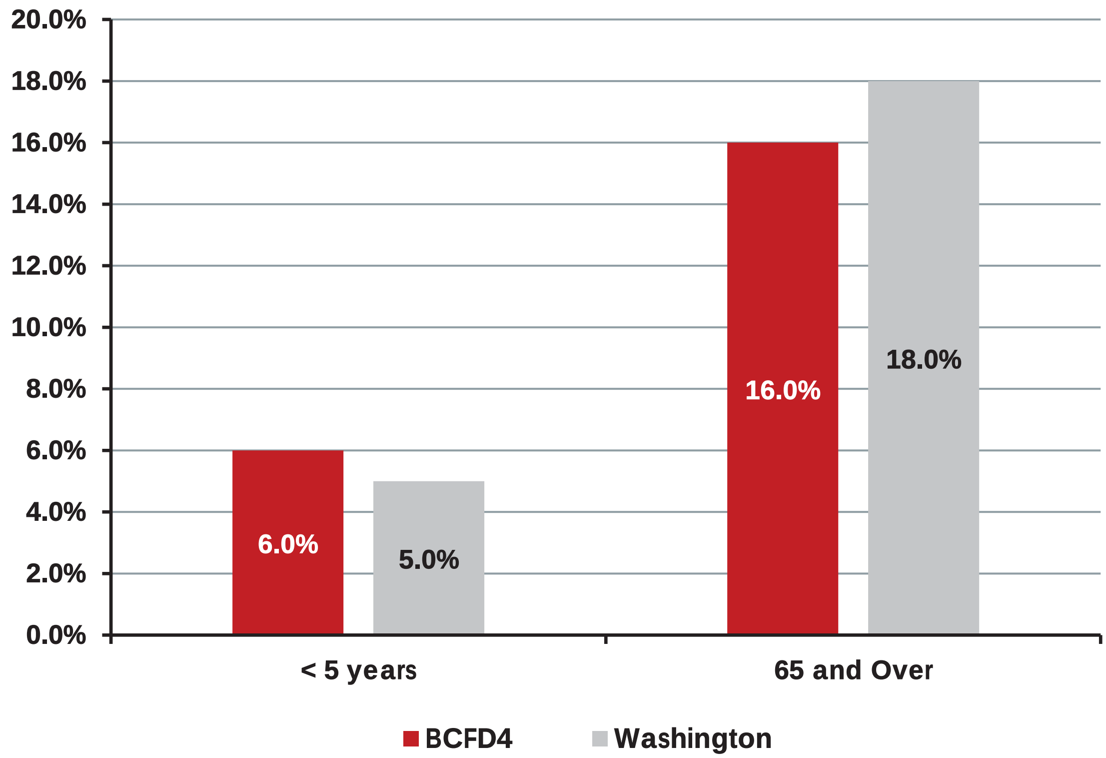
Children under five represent another vulnerable demographic for several interconnected reasons. Their developmental limitations in recognizing danger put them at significant risk, as does their inability to self-evacuate without assistance. Young children typically have limited understanding of emergency procedures and often hide during frightening situations rather than attempting to escape. Their greater vulnerability to smoke inhalation due to developing respiratory systems further increases the dangers they face during fire incidents.

Recent Progress in Child Safety

Encouragingly, the U.S. Fire Administration's 2018 data indicate a 30% reduction in the risk of fire-related mortality for children under five over the preceding decade. This improvement is attributed to several successful initiatives. Enhanced fire prevention education programs targeting families with young children have been particularly effective, alongside increased smoke alarm installation in homes with children. Implementing school-based fire safety curricula has helped educate children about proper emergency responses. Improved building codes and materials in residential structures have created safer living environments, while more effective public awareness campaigns about household fire hazards have increased preventative behaviors among caregivers. These targeted approaches demonstrate that evidence-based prevention strategies can significantly mitigate age-related fire risks despite inherent vulnerabilities.

The percentage of children under five in BCFD4 is 6%, compared to the state's 5%. Adults aged 65 and older make up 16% of the population, which is lower than the state average of 18%. The following figure illustrates the percentages of vulnerable populations, including children under five and residents aged 65 and older.

Figure 39: Vulnerable Populations (<5 and 65 and older)



Gender Disparities

Demographic data reveal significant gender differences in fire-related casualties despite the relatively balanced U.S. population distribution. According to the U.S. Census Bureau, females constitute approximately 51% of the population. Yet fire incident statistics from 2015-2019 demonstrate a disproportionate impact on males, who account for 57% of fire deaths and 55% of fire injuries. This translates to males being 1.3 times more likely than females to suffer fire-related casualties. Fire agency reporting indicates alcohol impairment was present in 12% of male fire victims compared to only 6% of female victims—double the rate. This suggests that alcohol consumption may significantly contribute to the higher male casualty rates by impairing judgment, reaction time, and evacuation capabilities during fire emergencies.

Age-Specific Risk Patterns

Age intersects with gender to create specific risk profiles:

- Middle-aged males demonstrate higher mortality rates in intentionally set fires, which may reflect behavioral patterns, occupational exposures, or other social factors.

- Elderly females (75 and older) are more susceptible to cooking-related fire injuries than their male counterparts. This likely reflects gender-based differences in household activity patterns and age-related physical limitations.

Comprehensive age data illustrate that the gender distribution of fire casualties varies significantly across different age groups. These patterns highlight the importance of developing targeted prevention strategies that address specific risk factors relevant to various demographic groups.

This analysis highlights the importance of fire safety education and prevention programs that are tailored to address gender-specific risk factors throughout the lifespan. The following figure shows gender percentages by age.

Figure 40: Gender by Age

Age Groups	Male	Female
Under 5 years	3.1%	2.9%
5 to 9 years	3.5%	3.3%
10 to 14 years	3.8%	3.8%
15 to 19 years	3.8%	3.3%
20 to 24 years	3.0%	3.0%
25 to 29 years	2.8%	2.6%
30 to 34 years	2.5%	2.8%
35 to 39 years	3.4%	3.5%
40 to 44 years	4.1%	3.8%
45 to 49 years	3.2%	3.2%
50 to 54 years	3.1%	3.1%
55 to 59 years	3.0%	3.1%
60 to 64 years	3.2%	2.9%
65 to 69 years	2.6%	2.8%
70 to 74 years	2.5%	2.4%
75 to 79 years	1.6%	1.5%
80 to 84 years	0.8%	1.0%
85 years and over	0.5%	0.5%

Additional Demographics

Disabilities

The higher-than-average disability rate in BCFD4 may reflect several demographic factors, including an aging population (as disability rates typically increase with age), the community's role as a retirement destination, or local industries that could contribute to higher rates of work-related disabilities. Individuals with disabilities face unique vulnerabilities during emergencies that require specialized response approaches. Physical disabilities may prevent or significantly slow self-evacuation from buildings during fires, natural disasters, or other emergencies. Mobility impairments, visual or hearing impairments, and cognitive disabilities each present distinct evacuation challenges that require different assistance methods. Some residents may rely on elevators for mobility, creating particular risks during fires when elevator use becomes dangerous. The percentage of households in BCFD4 with at least one person with a disability is 24%, which is higher than the state at 13.6%.

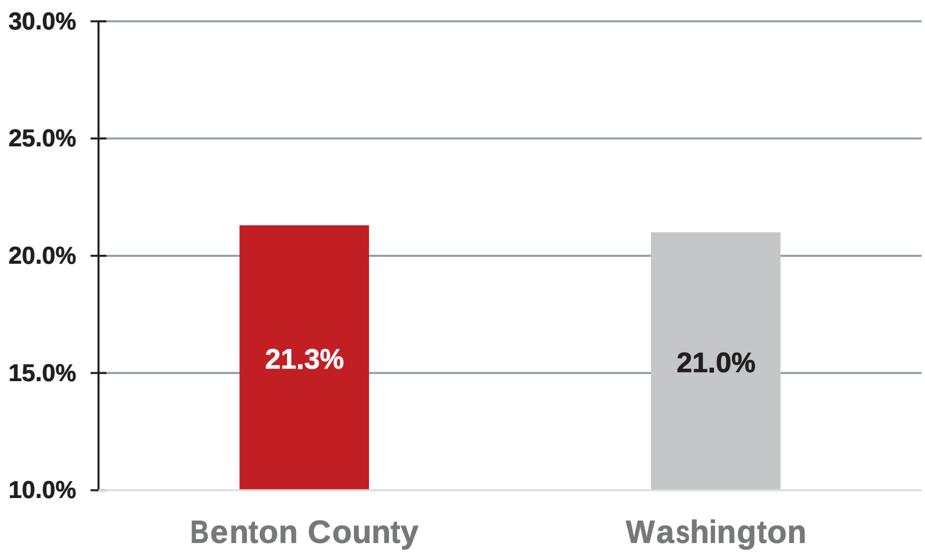
Language Barriers

During active fire incidents, first responders often struggle to quickly gather critical information about trapped occupants, medical conditions, or hazardous materials. Clear communication regarding evacuation routes, medical treatment procedures, or safety instructions becomes significantly more difficult when language barriers are present. Limited English proficiency (LEP) often correlates with a lack of familiarity with standard American fire safety technologies and practices. Many LEP residents may come from countries with different housing construction standards, fire safety technologies, or emergency response systems. While smoke alarm technology may seem straightforward, it encompasses several concepts that may be unfamiliar, including the importance of regular battery replacement, proper placement throughout the home, testing procedures, and appropriate responses when alarms activate. LEP residents may not fully understand these life-saving systems without clear communication in their primary language. Many LEP residents may also be unfamiliar with American emergency services systems, including when and how to call 9-1-1, what information to provide, or what to expect from responding personnel.

Approximately 21.3% of Benton County’s residents age 5 and older speak a language other than English at home, which is slightly lower than Washington's statewide average of 21%. While the community is less than the state overall, it still means that approximately one in five residents may encounter language barriers during emergencies. This substantial population segment creates important considerations for emergency response and fire prevention efforts, as effective communication can be the difference between life and death during critical incidents.

The following figure shows the percentage of people aged 5 and older who speak a language other than English at home.

Figure 41: Percentage of Population 5 and Older Speaking Another Language at Home



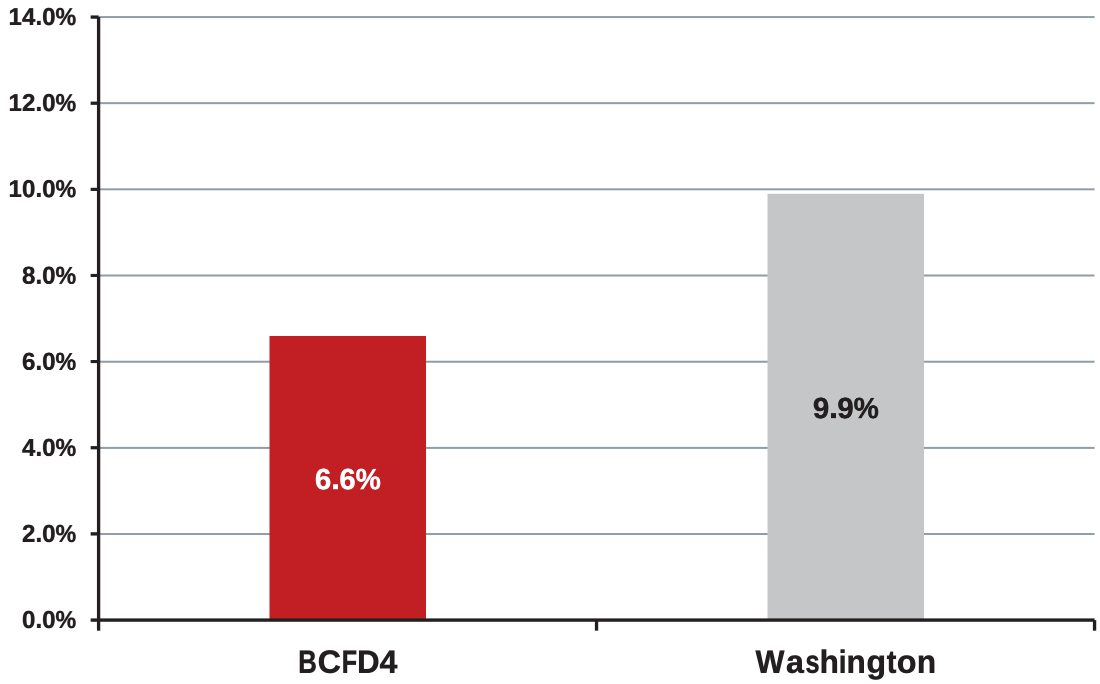
Poverty & Income

Low wages and inadequate income create cascading challenges throughout communities, significantly elevating the risks of fires and medical emergencies. When individuals and families struggle to meet basic necessities like housing, food, and healthcare, they often face impossible choices that compromise safety and health outcomes. People living below the poverty level are considered at the highest risk, especially when combined with other factors such as education levels, disabilities, or the inability to work. Low incomes affect families with children, lead to lower educational scores, and contribute to mental health issues. Low income can lead to more significant mental health challenges in the community. A report from the World Economic Forum states that depression and anxiety are nearly three times as likely in people with low incomes.

These economic disparities directly lead to increased demand for emergency services, as residents in poverty more often encounter preventable emergencies due to deferred maintenance, unsafe living conditions, untreated medical issues, and the inability to afford preventive care. Recognizing these economic vulnerabilities enables more targeted community risk-reduction efforts and helps emergency services anticipate higher call volumes in economically disadvantaged neighborhoods.

In BCFD4, 6.6% of the population lives in poverty, which is lower than the state rate of 9.9%. Lower poverty levels are linked to higher incomes, and the District's median household income of $119,371 surpasses the state's median of $94,952.

Figure 42: Poverty Levels

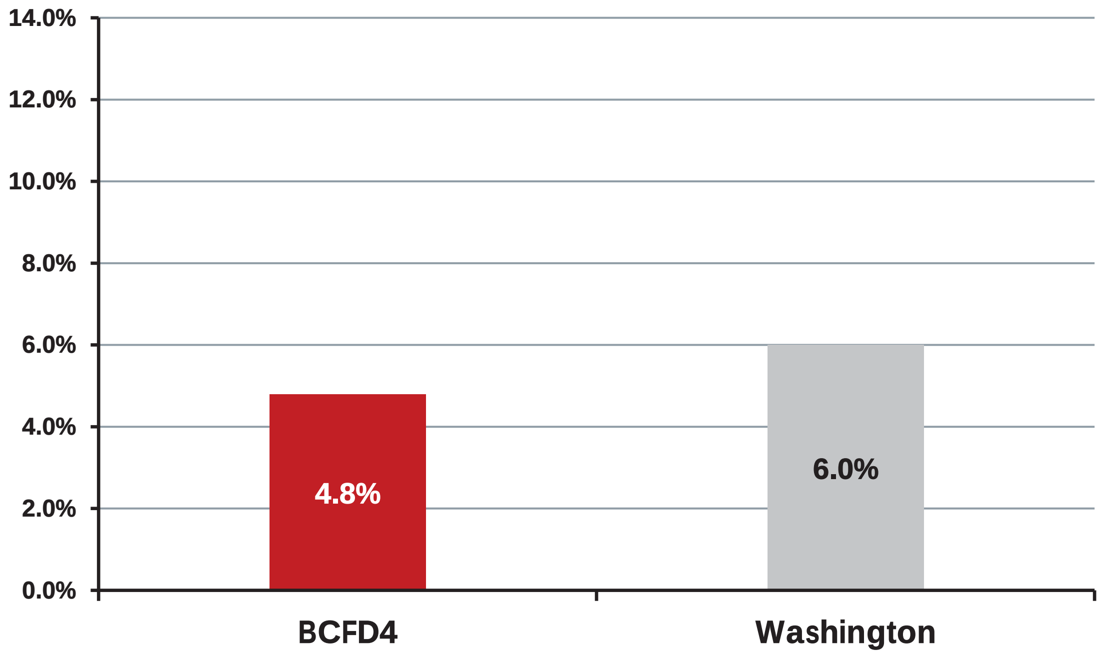


Population without Health Insurance

Populations without adequate healthcare access create significant strain on emergency medical services while experiencing elevated rates of preventable medical incidents. The lack of health insurance disproportionately affects lower-income residents who cannot afford routine medical visits, prescription medications, or preventive care services. When treatable conditions go unaddressed due to cost barriers, they often escalate into acute medical emergencies requiring expensive emergency interventions.

The uninsured rate within BCFD4 is 4.8%, compared to Washington's statewide average of 6%. While the 1.2 percentage-point difference may appear modest, it reflects comparatively broader health coverage among District residents and a reduced likelihood that individuals will delay or forgo needed medical care due to lack of insurance. When residents are uninsured, preventable or manageable conditions are more likely to escalate, resulting in increased reliance on emergency departments for non-emergent care. This shift places additional strain on emergency response resources and may limit system capacity to address higher-acuity incidents. The following figure illustrates the percentage of individuals without health insurance coverage.

Figure 43: Percentage of People without Health Insurance

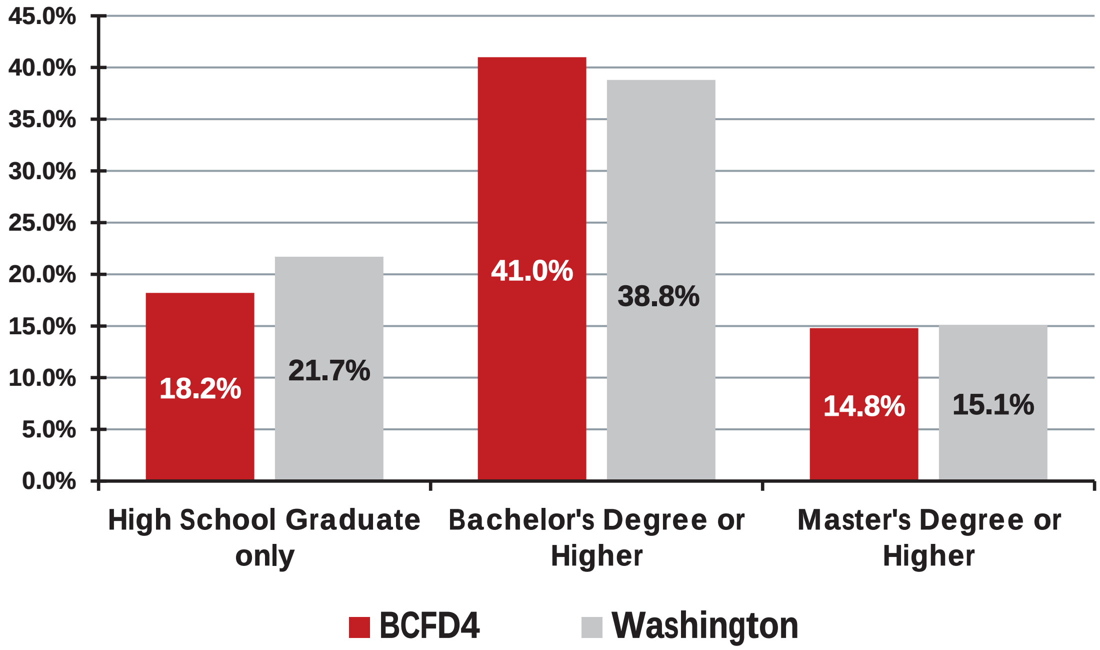


Education Levels

While educational attainment may not be considered a primary at-risk population, it remains an essential factor in developing comprehensive fire and life safety education programs. Educational levels directly correlate with economic outcomes, as U.S. Bureau of Labor Statistics data indicates that individuals with only a high school diploma earned a median weekly income of $899 in 2023, 40% less than those with bachelor's degrees, who earned $1,493. This income disparity impacts residents' ability to invest in safety measures, maintain safe housing conditions, and access resources that mitigate emergency risks.

BCFD4 has mixed educational achievement patterns, with 7.5% having completed only high school (well above the state average). The percentage of residents with a high school diploma or higher is 83.9%, slightly lower than the state average. However, only 24.3% of residents hold bachelor's degrees or higher, compared to 36.5% statewide. This educational profile suggests that a significant portion of the community may benefit from tailored safety education approaches that consider varying literacy levels and learning preferences. The lower rate of higher education completion may correlate with the economic challenges previously identified in the community's poverty and income statistics. The following figure shows the levels of education in BCFD4.

Figure 44: Education Levels



Housing Characteristics

Vacant housing units in a community, such as those in BCFD4, can pose several challenges related to safety and infrastructure. If not adequately secured, these structures may become entry points for unauthorized individuals, increasing risks for both residents and emergency responders. Insufficient maintenance can lead to structural deterioration, making buildings more susceptible to fires or other emergencies. Vandalism and neglect can further complicate situations for law enforcement and fire departments, creating hazardous conditions that require additional resources.

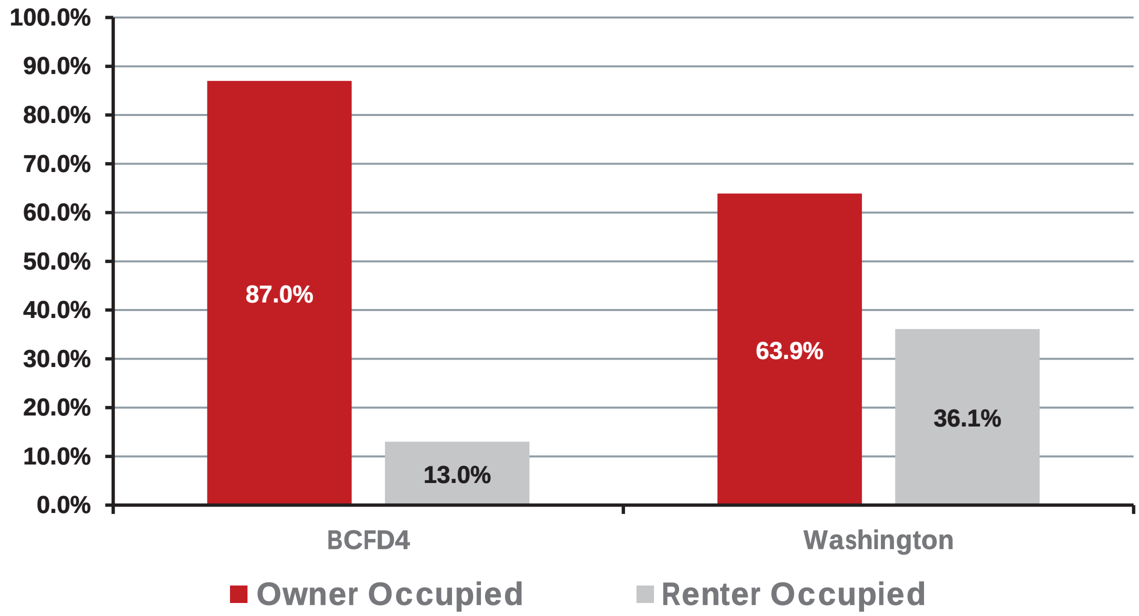
Fire safety is a critical concern. Data from the NFPA shows that most (79%) fire-related fatalities occur in one- or two-family dwellings or apartments (multifamily dwellings), but these account for only 24% of the fires.[11] This highlights the importance of maintaining housing structures in a safe, secure, and well-maintained condition to minimize risks to the community.

[11] NFPA Research, Fire Loss in the United States During 2023.

Housing Ownership

Homeownership in BCFD4 stands at 87.0%, exceeding the statewide average of 63.9%. This indicates a larger share of BCFD4 residents own their homes compared to the rest of Washington. The housing market in BCFD4 remains competitive, with homes receiving multiple offers and selling relatively quickly. In October 2025, the median home sale price in West Richland was $440,000.[12] The following figure shows the percentage of owner- and renter-occupied housing.

Figure 45: Percentage of Owner- and Renter-Occupied Housing



Age of Housing

As buildings age, maintenance costs tend to increase due to wear and tear on structural components. Homes built before 1980, which account for 58% of the housing stock, were constructed before modern smoke alarm installation requirements were widely enforced. Before 1989, single-station, battery-powered smoke alarms were generally required in homes, but interconnected, hardwired alarms became mandatory in newly constructed residences starting that year.[13]

Introducing these regulations has significantly enhanced fire safety, as smoke alarms provide early warnings that decrease fire-related fatalities. Current building codes require smoke alarms in every bedroom, hallway, and on every floor of new residential properties

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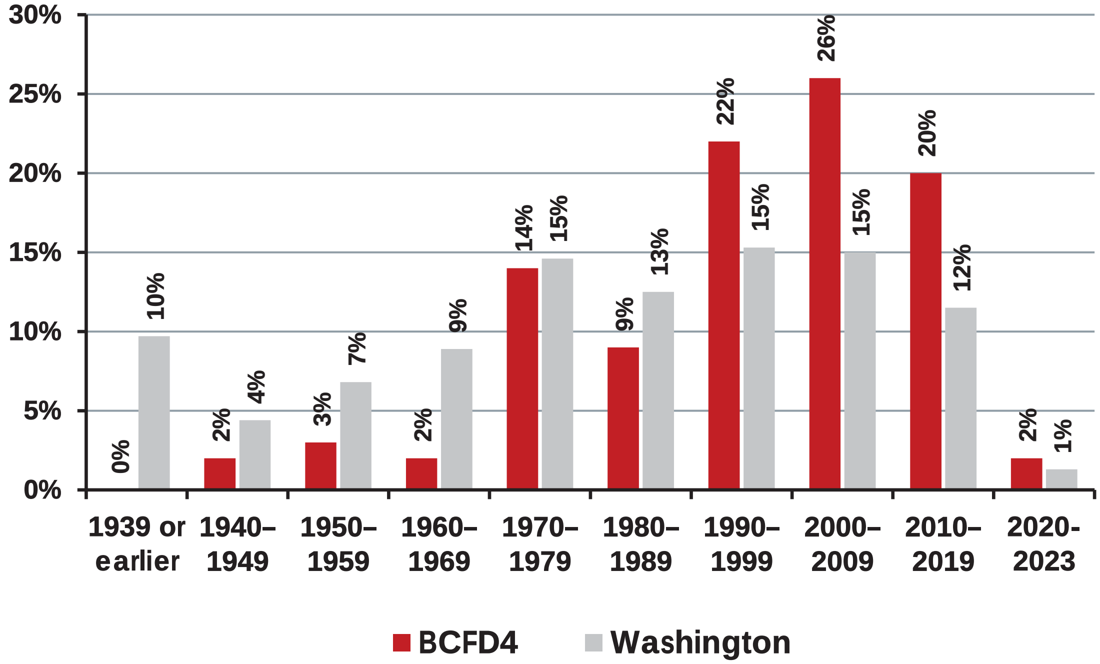
[12] https://www.redfin.com/city/9599/WA/West-Richland/housing-market.

[13] Smoke Alarm History, https://forum.nachi.org/t/smoke-alarm-history/24930.

to enhance protection. Retrofitting older homes with modern smoke alarms is crucial for maintaining safety standards and reducing fire risks. The following figure shows the age of housing.

Figure 46: Age of Housing



Housing Units

BCFD4 has a notably high percentage of residents living in one- or two-family dwellings, with 78% of the population residing in such housing, compared to the statewide average of 69%. Future growth will have more multi-unit buildings when new apartment complexes are built. Many of these will be three stories tall. Understanding these housing trends can provide insight into the District's residential patterns and the availability of various housing options.

All Hazards Community Risk Assessment

The Center for Public Safety Excellence (CPSE) describes an all hazards Community Risk Assessment (CRA) as a comprehensive, data-driven process for identifying, categorizing, and prioritizing risks across a community. This helps public safety agencies allocate resources effectively and develop focused response strategies. Ultimately, the CRA supports a community's Standards of Cover (SOC), which set clear benchmarks for service quality and performance.

To conduct a CRA, agencies evaluate both fire-related and non-fire risks, creating a detailed community profile using demographic trends, incident histories, and other key data. Stakeholder collaboration is crucial for determining acceptable and sustainable risk levels. CPSE emphasizes that the assessment must cover all threat types—natural disasters, technological failures, and human-induced events—and establish mechanisms for ongoing evaluation and improvement.

The CRA identifies gaps between agency strengths and community needs and shares information to guide future service delivery decisions. This results in a strong, evidence-based plan for long-term planning and building community resilience against growing threats.

Occupancy Vulnerability Profile

An Occupancy Vulnerability Profile (OVP), also known as the Occupancy Vulnerability Assessment Profile (OVAP) in fire service standards, is a data-driven tool that assesses fire, life-safety, and operational risks for specific buildings or facilities. It assigns a score from 0 to 100 to guide resource allocation and pre-incident planning. Based on the CRA frameworks from the Center for Public Safety Excellence (CPSE), it evaluates target hazards across categories such as general information (e.g., occupancy load, building size, exposures), life safety (e.g., exits, mobility needs, suppression systems), and operational risks (e.g., fire loads, water supply, secondary hazards such as earthquakes). It then classifies these hazards as low (0-39), moderate (40-59), or high (60-100) to support all-hazards strategies, including fire, hazmat, and EMS.

For BCFD4, which serves nearly 22,000 residents across 52 square miles, including urban, rural, and commercial areas, OVAP development focuses on key sites such as schools, medical facilities, industrial plants, and critical infrastructure. It uses local data on incidents, demographics, and vulnerabilities, including wildfires and seismic activity. The process begins with a GIS-based inventory selection in accordance with *NFPA 1620, Standard for*

Pre-Incident Planning guidelines, followed by on-site data collection using checklists and software, including an OVAP-integrated Records Management System. Scores are calculated and validated through peer review, documented in reports that include floor plans and recommendations, and incorporated into Standards of Cover for response benchmarks, such as the 8-minute Effective Response Force deployment. Appendix A provides an example of an OVAP scoring system.

Incident Duration

The speed, onset, and duration of an incident for BCFD4 are vital because they influence operational effectiveness, risk levels, and community results. Response speed is essential for life safety and property protection, especially in urgent medical emergencies and fast-moving fires. Often, conditions worsen within minutes, and rapid arrival and intervention can determine whether outcomes are survivable and whether damage remains minor or becomes severe. Response speed is a key metric that informs station placement, staffing strategies, and the District's overall service reliability for the community.

Incident onset is crucial because it shows how quickly conditions worsen after an event starts. Fires can quickly escalate from initial stages to full involvement, depending on factors like fuel load, building design, and occupancy. Medical emergencies such as cardiac arrest, stroke, or severe trauma have limited windows for effective treatment. The rate at which an incident begins influences initial assessments, tactical focus, and the risk level crews face upon arrival. Fast-developing incidents require quick decisions and immediate, decisive actions, while slower ones offer more time for careful planning and resource deployment.

Incident duration affects the District's ability to sustain service levels across its response area. Longer incidents tie up multiple units for extended periods, reducing their availability for other calls and increasing system vulnerability. Understanding typical incident durations by call type helps the District manage operational pace, predict peak demand, and ensure sufficient resources to maintain coverage. Overall, speed, onset, and duration form a framework for assessing risk, allocating resources effectively, and supporting standards-of-cover planning. By examining these elements, BCFD4 can make strategic and tactical decisions to improve readiness, achieve better outcomes, and balance service needs with operational capacity.

Visualization of Data & Information

Environmental Hazards

All communities face ongoing threats from various physical hazards that can strike at any time during the year. These hazards include a broad spectrum of natural disasters and environmental challenges, such as devastating wildfires that can quickly consume large areas of vegetation and structures, powerful earthquakes that can cause severe structural damage and ground instability, severe flooding resulting from heavy rainfall or storm systems that can overwhelm drainage systems and flood residential and commercial areas, and prolonged droughts that can lead to water shortages and increase fire danger due to dried vegetation. To manage these complex threats, comprehensive mitigation plans are essential, offering public safety officials and emergency responders the vital information needed to understand the specific risks in their communities and develop effective strategies to prepare for, respond to, and recover from these potentially catastrophic events.

Severe Weather

Severe weather presents a significant risk across Benton County, including West Richland. The area experiences diverse severe weather events such as high winds, thunderstorms, tornadoes, heavy snow, lightning, hail, and winter storms. High winds are defined as sustained speeds of 40 miles per hour (mph) or more for at least an hour, or gusts of 58 mph or higher. The County has experienced numerous high-wind events, with some storms reaching gusts up to 150 mph, notably in January 1972 on Rattlesnake Mountain. Severe thunderstorms are frequent from late April through September, often accompanied by lightning, hail, and strong winds. While tornadoes are rare, they have been documented, the latest occurring in 2015. Heavy snow and winter storms happen periodically, sometimes causing major disruptions.

Benton County has a history of severe storms causing damage to property, infrastructure, and transportation. Key incidents include a January 1990 windstorm with millions in damages, a significant winter storm in 1996-1997 that prompted a federal disaster declaration, and a 2017 storm bringing heavy snow and flooding. These storms often lead to power outages, roof and tree damage, blocked roads, and hazardous travel. Winter storms also increase risks like icy roads resulting in accidents, frozen pipes, and challenges for emergency responders.

The likelihood of severe weather in Benton County is very high, with at least one severe storm expected each year and often multiple storms. Although tornadoes and ice storms are less common, the overall risk from severe weather remains moderate because of the potential for damage and disruption. The impacts of severe weather often manifest as secondary hazards such as flooding, landslides, and wildfires sparked by lightning.

Mitigation efforts focus on strengthening infrastructure resilience, sustaining emergency response capabilities, and educating the public on severe weather preparedness. The County and its cities, including West Richland, have mutual aid agreements and emergency management plans to coordinate responses. Communication challenges persist because of terrain and infrastructure limitations, and efforts continue to improve warning systems and public information dissemination.

As population and development grow, the risks from severe weather may increase. However, adherence to building codes, land-use planning, and community preparedness can help mitigate these risks. The County urges residents to keep emergency supplies and stay informed during severe weather to protect lives and property.

Weather Conditions

BCFD4 has a semi-arid climate characterized by hot, dry summers and cold winters. During the winter months from December to February, temperatures typically range from highs in the upper 30s to upper 40s Fahrenheit, with lows around the upper 20s to low 30s. Snowfall is modest, averaging about 4 inches annually. Spring brings milder weather, with highs climbing from the mid-50s in March to the mid-70s by May, and lows ranging from the upper 30s to low 50s. Rainfall remains light throughout spring.

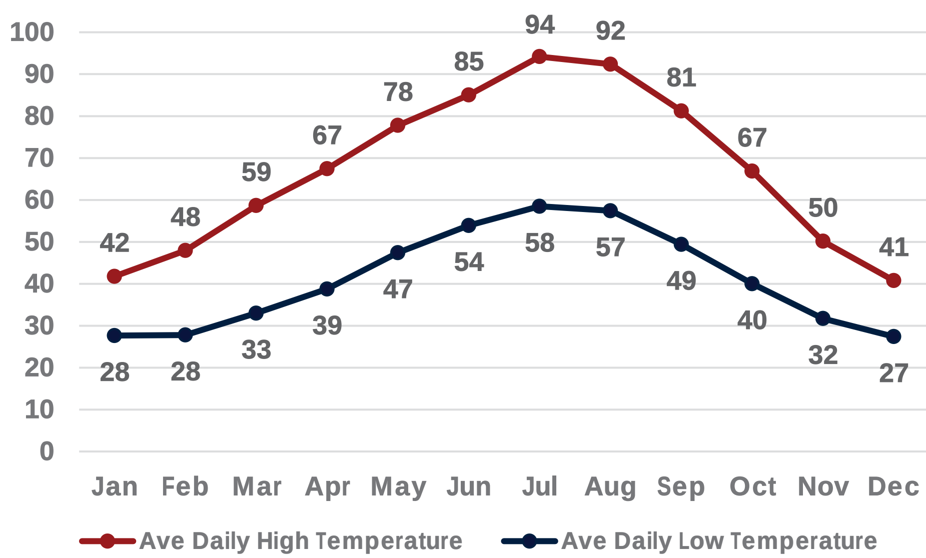
Summers are hot and dry, with average highs between the low 80s and mid-90s from June through August, and nighttime lows in the mid-50s to mid-60s. Rain is scarce during these months, and the area enjoys abundant sunshine—about 196 sunny days per year. Fall sees a gradual cooling, with highs dropping from the low 80s in September to the low 50s by November, and lows ranging from the upper 40s to the low 30s. Precipitation begins to increase slightly as winter approaches. The area receives around 9 inches of rain annually, significantly less than the national average, and experiences about 80 days of measurable precipitation each year.

Temperature

Temperature fluctuations in Benton County can create serious operational challenges for fire district personnel and the community all year. During periods of extreme heat, firefighters experience increased physical stress during long operations, as prolonged exposure to hot weather while wearing protective gear and performing strenuous activities can cause dangerous conditions such as heat exhaustion, dehydration, and heat stroke.

These heat-related issues necessitate the implementation of structured recovery procedures that include regular rest breaks, hydration stations, and medical checks to maintain firefighter safety and ensure effective operations. The region experiences a wide temperature range throughout the year, with average highs varying from a cool 41°F in December to a much warmer 94°F in July. The average low temperatures are 27°F in December and 58°F in July. This degree difference necessitates flexible planning and resource management to meet the diverse seasonal needs of emergency services. The following figure shows the monthly average high and low temperatures from the National Weather Service office at the Pasco/Tri-Cities Airport.[14]

Figure 47: Monthly Average High and Low Temperatures



Heat Index

High temperatures can significantly impact fireground operations, especially when combined with high humidity. The combination of heat and humidity raises the heat index, making it feel much hotter than the actual air temperature. This increases the physical strain on firefighters, who are already burdened by heavy protective gear and demanding physical activity. As a result, the risk of heat-related illnesses, such as heat exhaustion or heat stroke, rises sharply. To reduce these risks, structured rehab protocols are essential.

[14] https://mesonet.agron.iastate.edu/sites/site.php?station=PSC&network=WA_ASOS.

These include rotating crews more often, ensuring proper hydration, providing shaded or cooled rest areas, and monitoring vital signs. Without proper rehab, firefighter performance, safety, and decision-making can be severely affected.

The following figure shows the National Weather Service's Heat Index chart.

Figure 48: National Weather Service Heat Index Chart

NWS Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution Extreme Caution Danger Extreme Danger

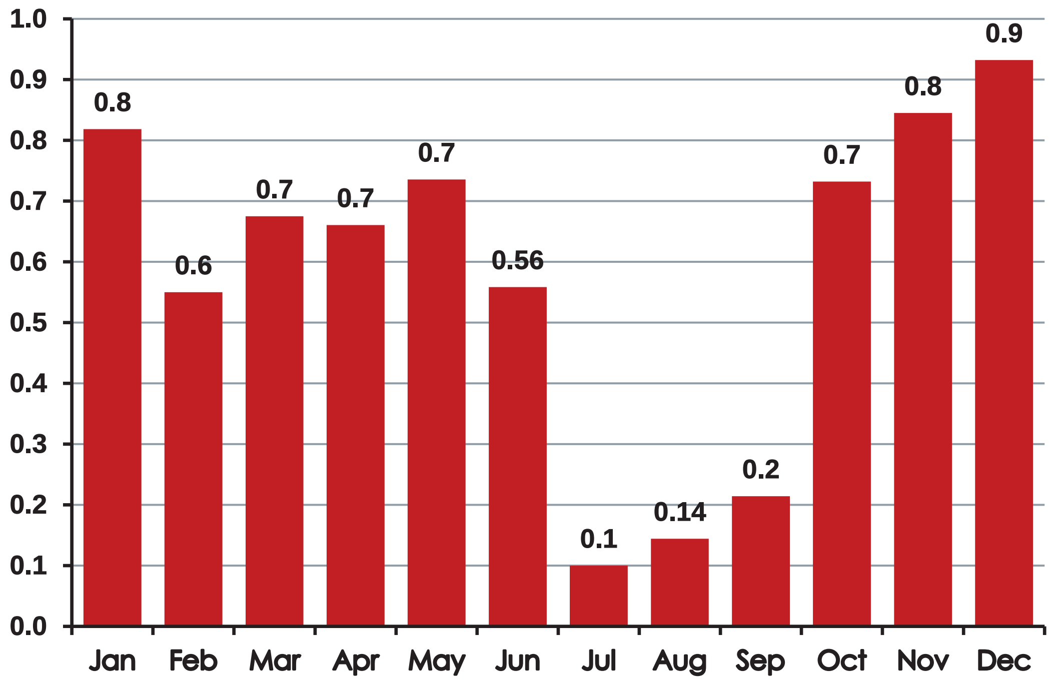
Precipitation

Drought can have widespread effects on a community, especially regarding water supply and fire risk. When rainfall is limited over a long period, groundwater levels can drop significantly, reducing the natural recharge of aquifers and affecting the efficiency of aquifer filters. This is especially concerning in areas where wells are the main source of drinking water, as prolonged drought can lead to water shortages, lower water quality, and increased demand for water conservation.

Beyond water supply issues, droughts can lead to serious secondary effects, especially during wildfire season. As vegetation dries out from a lack of moisture, it becomes highly combustible, increasing the likelihood and severity of wildfires. These dry conditions can turn even small sparks into fast-moving, destructive fires that threaten homes, infrastructure, and natural habitats. The longer droughts last, the greater these risks become, making it harder for communities to recover and prepare for future fires. In this way, droughts not only drain essential resources but also raise a region's overall vulnerability to environmental hazards.

The following figure illustrates the average monthly precipitation from 2011 to 2024.

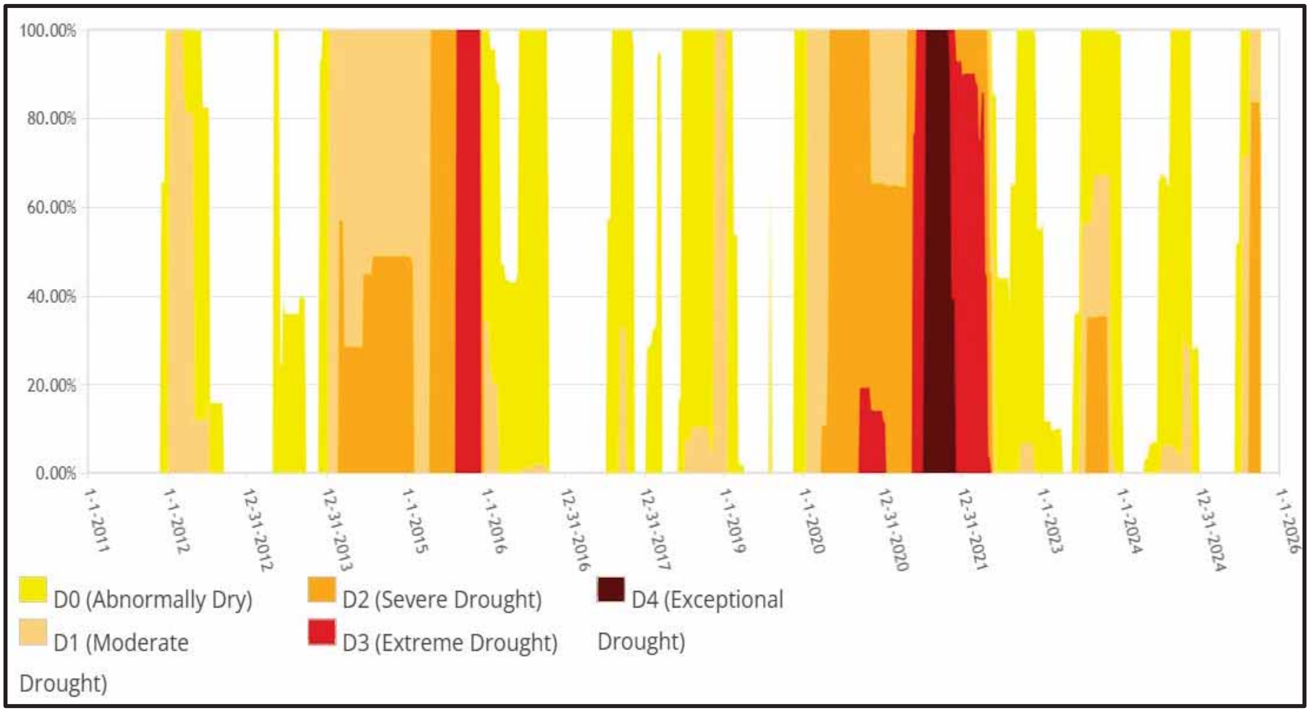
Figure 49: Average Monthly Precipitation (2011–2024)



A drought time series chart is crucial because it visually tracks changes in drought conditions over time, helping communities, emergency managers, and policymakers understand long-term trends and patterns. By analyzing this data, decision-makers can identify the start, duration, and severity of droughts, which is essential for managing water supplies, planning for agricultural impacts, and preparing for increased wildfire risks. For fire agencies in drought-prone areas like Benton County, this information allows for proactive planning and resource allocation during periods of higher fire danger.

The following figure shows the drought conditions in the County from January 2011 to July 2025.[15]

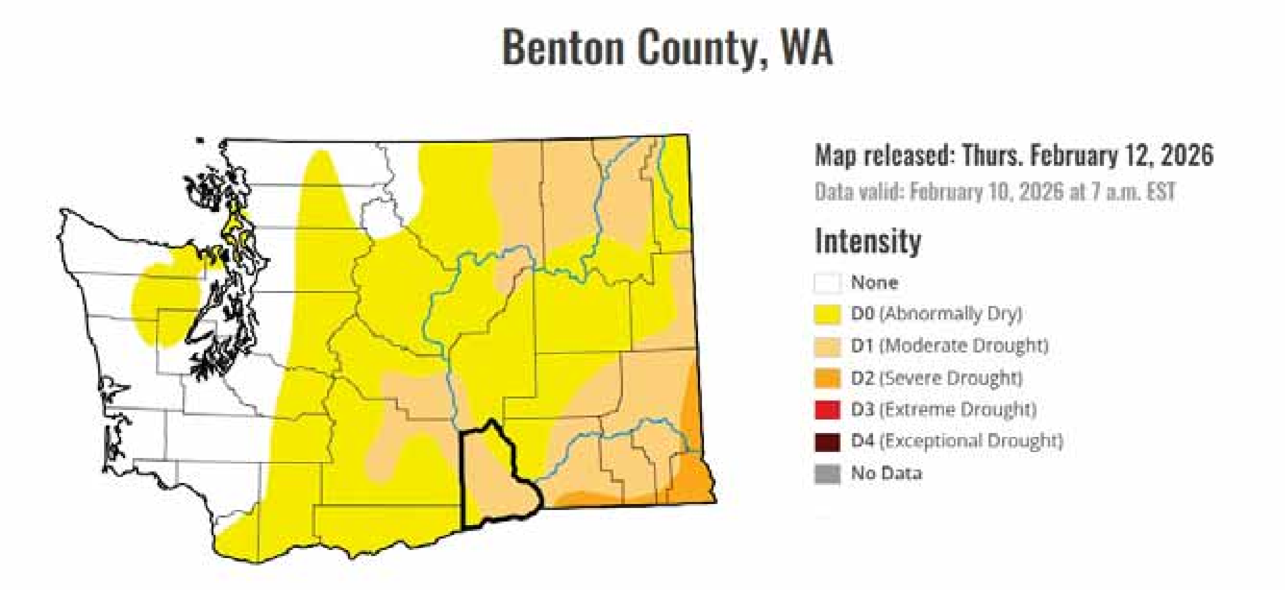
Figure 50: Benton County Drought Conditions (2011 to 2025)



[15] U.S. Drought Monitor. https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx

The following figure shows the current drought conditions in Benton County.

Figure 51: Drought Conditions[16]



Wind speed and direction influence how BCFD manages events such as wildfires or hazardous materials incidents. The highest average winds occur between March and June of each year.[17]

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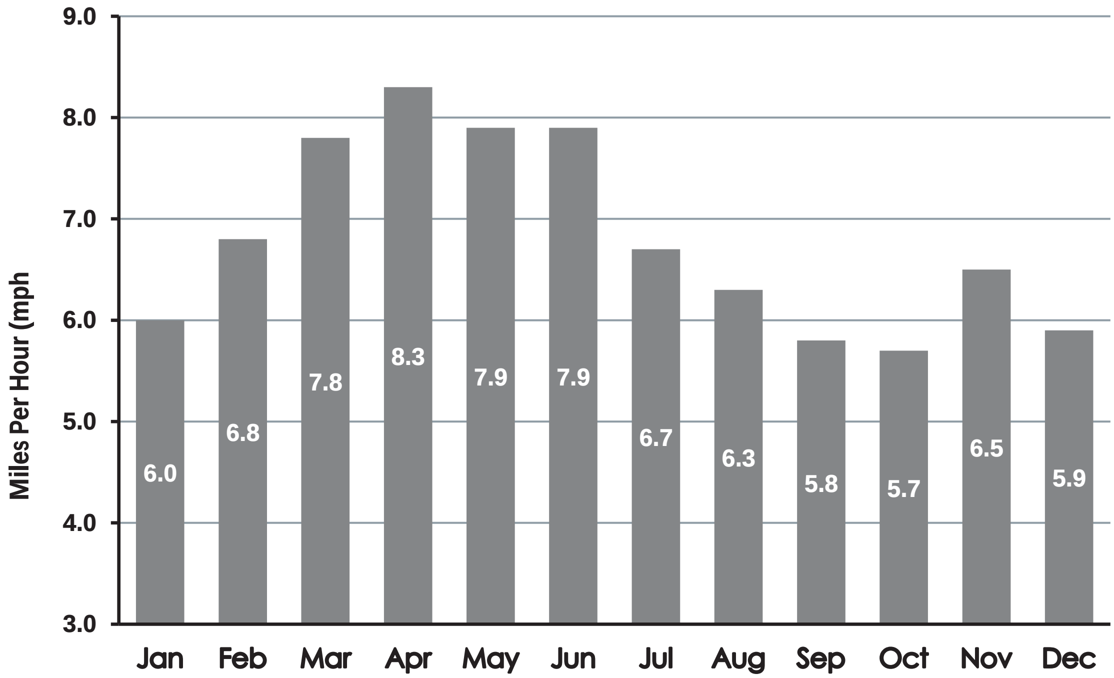
[16] Ibid.
[17] Ibid.

The following figure shows the average monthly wind speeds.

Figure 52: Average Monthly Wind Speeds



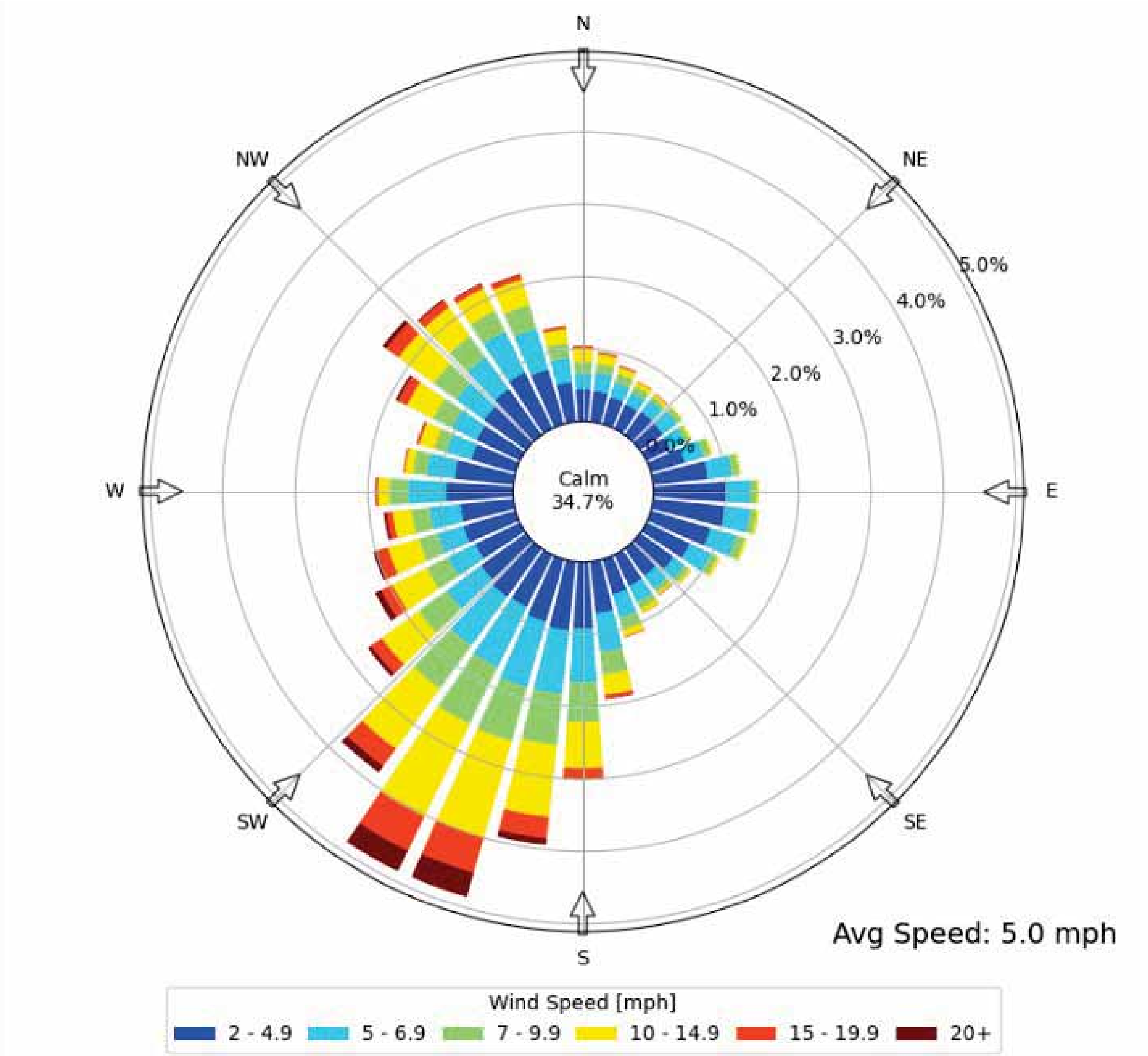
Prevailing Winds

Prevailing winds are the typical wind patterns that dominate a region over time, shaped by global atmospheric circulation, the Earth's rotation, and local geography. In the United States, for instance, the prevailing winds generally blow from west to east due to the westerlies. For a fire agency, understanding prevailing winds is essential, as wind significantly influences how fires behave and spread. In wildfires, wind can push flames and embers over long distances, sometimes igniting new fires ahead of the main blaze. This knowledge enables firefighters to anticipate the direction and speed of fire movement, which is crucial for planning effective containment strategies and evacuations.

Wind also affects smoke dispersion, which can impact visibility, air quality, and public health. Fire agencies use wind data to issue warnings and guide decisions about where to deploy resources. In urban settings, wind can influence how a structure's fire spreads, especially in densely built areas. Additionally, aerial firefighting operations rely on wind information to ensure accurate water or retardant drops and to maintain safe flight conditions. Overall, prevailing winds are a key factor in both emergency response and long-term fire management planning.

The following figure shows the prevailing winds at the Richland Airport.

Figure 53: Prevailing Winds



Physical Hazards

Physical hazards, also known as natural hazards, are typically defined as natural disasters or weather events that affect a community. The event can last a few hours or extend for a prolonged period, such as a heatwave or drought. The National Weather Service (NWS) issues advisories, watches, or warnings for these hazards when conditions exist or are predicted to occur in the near future. The 2019 Benton County Natural Hazard Mitigation Plan (BCNHMP) provides detailed information on the following.

Wildfires

The 2018 Benton County, Washington Community Wildfire Protection Plan (CWPP) outlines wildfire risks and mitigation strategies across the County, with particular attention to West Richland and BCFD4. West Richland is designated as part of the Wildland Urban Interface (WUI), where development meets wildland vegetation, increasing wildfire risk. The District faces growing challenges from rapid residential expansion in WUI zones and increasing wildfire exposure. Large portions of land enrolled in the Conservation Reserve Program and undeveloped areas create continuous fuel beds, making fires more intense and difficult to control.

The area has experienced several significant fires, including the Candy Mountain fire, which burned 450 acres and threatened dozens of homes. The fire, caused by a mechanical failure on Interstate 82, highlighted the vulnerability of homes located near undeveloped wildland areas. The growth of vineyards in the Red Mountain American Viticultural Area has altered the landscape, but large undeveloped tracts remain, increasing the fire hazard.

To address these challenges, the CWPP recommends several mitigation strategies. These include implementing Firewise landscaping and defensible space around homes, conducting home site risk assessments, and developing area-specific response plans. Public education through workshops and outreach is emphasized, along with improving radio communications and emergency response infrastructure. Fuel reduction projects are proposed in high-risk zones such as Candy Mountain and Red Mountain, and coordination with landowners and agencies is considered essential for successful implementation. The plan also highlights the need to develop rural water supplies and to improve access and egress routes in vulnerable areas. Overall, the CWPP provides a comprehensive framework for reducing wildfire risk and enhancing community resilience in West Richland and the

BCFD4 service area. Communication issues in remote areas also hinder effective wildfire response.[18]

While irrigated agricultural land has helped limit fire spread, undeveloped lands and transportation corridors still pose high risks. The possibility of future ignitions remains high. Although most fires are quickly contained, there is a risk of rapid spread into dry agricultural areas, which could threaten property and crops. Both the City and BCFD4 emphasize the importance of proactive mitigation measures, such as homeowner education, vegetation management, and infrastructure improvements, to reduce wildfire risk as the population continues to grow.

Earthquakes

BCFD4 faces significant earthquake risks due to its proximity to active fault zones and the region's growing development. A fault associated with the Wallula Fault Zone runs along the northwest edge of West Richland, and its movement could cause significant damage to infrastructure and pose a serious threat to residents. This fault is part of the geological system that created prominent ridges such as Thompson Hill, Badger Mountain, Red Mountain, and Rattlesnake Mountain, suggesting potential seismic activity. Studies suggest that earthquakes originating from this fault could produce strong to very strong ground shaking in the area, with peak ground acceleration severe enough to damage critical infrastructure. Additionally, West Richland's location near the Yakima, Columbia, and Snake Rivers introduces secondary risks, as an upstream dam failure triggered by an earthquake could lead to flooding.

The Washington Earthquake Risk Assessment estimates that earthquakes in or near Benton County could result in damages ranging from approximately $7 million to $127 million for West Richland alone, depending on the scenario. In the most severe case modeled—the Rattlesnake Wallula Fault scenario—up to 388 structures could be lost, totaling more than $127 million in damages. As population growth and development continue in West Richland and the surrounding areas served by BCFD4, vulnerability to earthquake hazards will increase. While land-use planning and earthquake-resistant construction can help mitigate these risks, the combination of active fault lines, critical infrastructure, and expanding WUI development underscores the importance of preparedness and resilience planning for both jurisdictions.[19]

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[18] Benton County, Washington, Community Wildfire Protection Plan 2018.
[19] Benton County Natural Hazard Mitigation Plan, 2019.

Liquefaction risk in BCFD4 is closely linked to seismic activity in the region. The area's geology includes saturated soils that can lose strength and stiffness during an earthquake, causing them to behave like a liquid. This can lead to severe structural failures, such as the collapse of building foundations and the displacement of underground infrastructure like fuel tanks and pilings. West Richland is particularly vulnerable due to its proximity to fault systems identified in studies, which suggest that local seismic events could trigger liquefaction and other hazards such as landslides, flooding, and ground cracking. Although the chances of a major earthquake are low, the impact of liquefaction during such an event would be significant, potentially causing widespread damage to homes, roads, and utilities. The growing population and ongoing development in these areas increase exposure to this hazard, despite no recent changes that have reduced vulnerability.[20]

Flood Risks

BCFD4 is at risk of flooding primarily due to its proximity to the Yakima River, which borders the City and flows through the District. While dam construction along the Columbia River has greatly reduced flood risk, the Yakima River lacks comparable control infrastructure, leaving these areas vulnerable during heavy rain, rapid snowmelt, or high runoff. The likelihood of flooding in West Richland is considered moderate to high, and the overall risk remains moderate due to the presence of valuable resources and infrastructure within the City. The BCNHMP Flood maps indicate that all structures prone to flooding are within FEMA-designated flood zones A and AE, which have a 1% annual chance of flooding and a 26% chance over the life of a 30-year mortgage. However, no detailed analysis has been conducted for Zone A; therefore, the potential depth of flooding in that zone remains unknown.

The West Richland Levee is located along the inside of a meander curve on the river. This levee is operated and maintained by Benton County Diking District No. 1 and provides some flood protection, primarily against small, frequent floods that occur every one to ten years. However, small levees like this usually fail during larger flood events. While they help lessen minor flooding, they do not provide full protection against major floods.

Historically, significant flood damage has occurred in low-lying areas between Benton City and West Richland, and flash floods in the Horse Heaven Hills have caused widespread road damage. Recent flooding in December 2025 from the Yakima River affected Ranch

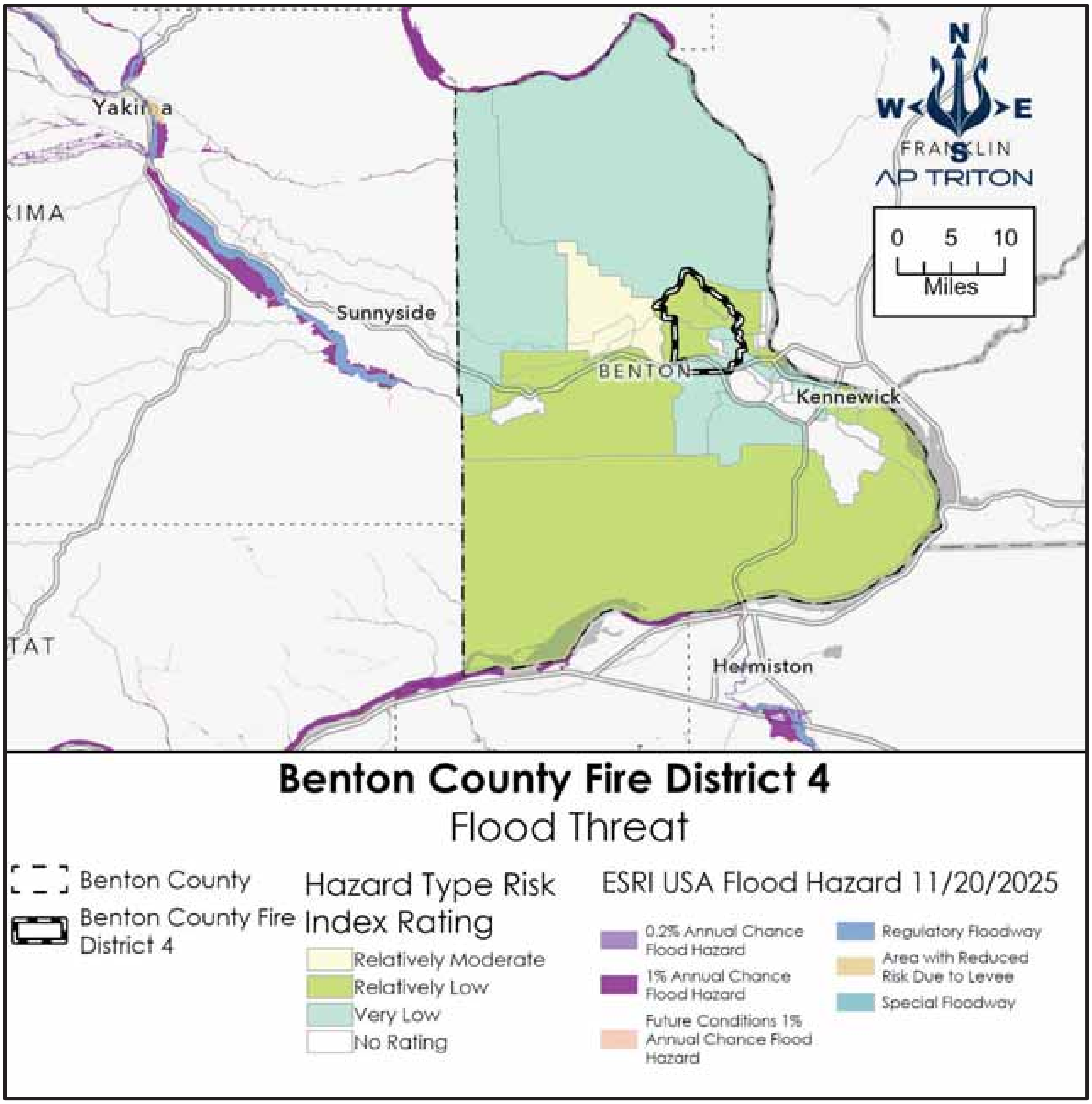
[20] Ibid.

Road, Riverview Road, the West Richland Golf Course, and Van Giesen Street (WA 224). The flooding covered roads and property with substantial debris that needed to be removed.

The effects of flooding could include damage to homes, roads, and utilities, as well as an increased risk of landslides. As population growth and development continues in West Richland and the surrounding areas served by BCFD4, more infrastructure will be at greater risk from flooding. This highlights the importance of land-use planning and strict adherence to building codes to help reduce future vulnerability.

The following figure shows the flood threat in Benton County.

Figure 54: Benton County Flood Threat



Volcanos

Volcano risks for BCFD4 stem from their location within the broader influence of the Cascade Range, which includes several active composite volcanoes such as Mount St. Helens, Mount Rainier, Mount Adams, and Glacier Peak. These volcanoes are capable of explosive eruptions that can produce ash clouds, pyroclastic flows, and lahars, all of which can affect communities hundreds of miles away. While BCFD4 is not in immediate proximity to these volcanoes, it remains vulnerable to secondary hazards, particularly ash fall. During the 1980 eruption of Mount St. Helens, Benton County experienced significant ash fallout that disrupted transportation, damaged crops, and caused economic losses estimated at $100 million in Eastern Washington. Ash accumulation can impair air quality, damage mechanical systems, and create hazardous driving conditions, while fine particles pose health risks to residents.

The risk of future volcanic activity in the Cascade Range is moderate because eruptions happen about twice a century, and the region's volcanoes have a history of long dormant periods followed by very explosive events. While lava flows and pyroclastic surges are unlikely to reach Benton County, ash fall from a major eruption could cover the area, impacting agriculture, infrastructure, and public health. Additionally, volcanic gases like sulfur dioxide and fluorine can contaminate water supplies and harm livestock if carried by ash particles. The growing population and expanding infrastructure in West Richland and nearby areas increase the potential impact of these hazards, making preparedness measures such as emergency planning, public education, and air filtration systems vital for reducing vulnerability.

Severe Weather

Although this report discusses specific weather information, the following section offers additional details from the BCNHMP. It highlights that severe weather is a major hazard for the County and its communities, including West Richland and BCFD4. Severe storms happen regularly in the Pacific Northwest and vary in strength because of the region's complex landscape and proximity to the Pacific Ocean. While Washington experiences fewer damaging storms compared to other parts of the country, severe weather still presents a significant threat locally.

In Benton County, severe windstorms are common during spring and fall, with gusts often reaching 60 mph and sometimes much higher. Notable historic events include a five-day windstorm in January 1972 with gusts up to 150 mph on Rattlesnake Mountain, causing extensive damage, and a storm in January 1990 with gusts up to 81 mph that resulted in millions of dollars in damages. Winter storms in 1996–1997 brought heavy snow, high winds, and rain, leading to a Federal Emergency Management Agency disaster declaration, with similar events occurring in 1995, 2001, and 2006. The most recent severe storm in February 2017 caused flooding and was declared a major disaster.

The likelihood of severe storms in the area is high, meaning West Richland can expect at least one severe storm each year, often more. Although catastrophic events are less common, predicting their timing and severity is not possible. Severe storms pose a moderate overall risk, but their impacts can be significant and often lead to secondary hazards such as flooding, landslides, and lightning-caused wildfires. Windstorms can damage roofs, topple trees, and interrupt power supplies, while heavy snowstorms can strain infrastructure and require outside help. These events can leave communities facing widespread power outages, blocked roads, and costly structural damage, sometimes requiring weeks to recover. Despite population growth and development trends, Benton County's vulnerability to severe storms remains unchanged, underscoring the importance of adhering to building codes and community preparedness to mitigate impacts.

Critical Infrastructure

Critical infrastructure and key resources (CIKR) are the elements that are crucial to a community's functioning in a modern economy. Critical infrastructure is defined as a sector "whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof." There are 16 defined Critical Infrastructure Sectors (CIS):[21]

- Chemical Sector
- Commercial Facilities Sector
- Communications Sector
- Critical Manufacturing Sector
- Dams Sector
- Defense Industrial Base Sector
- Emergency Services Sector
- Energy Sector
- Financial Services Sector
- Food and Agriculture Sector
- Government Facilities Sector
- Healthcare and Public Health Sector
- Information Technology Sector
- Nuclear Reactors, Materials, and Waste Sector
- Transportation Systems Sector
- Water and Wastewater Systems Sector

Not all these sectors may be included; each community must determine critical infrastructure locations and develop pre-incident plans for responding personnel.

Target Hazards

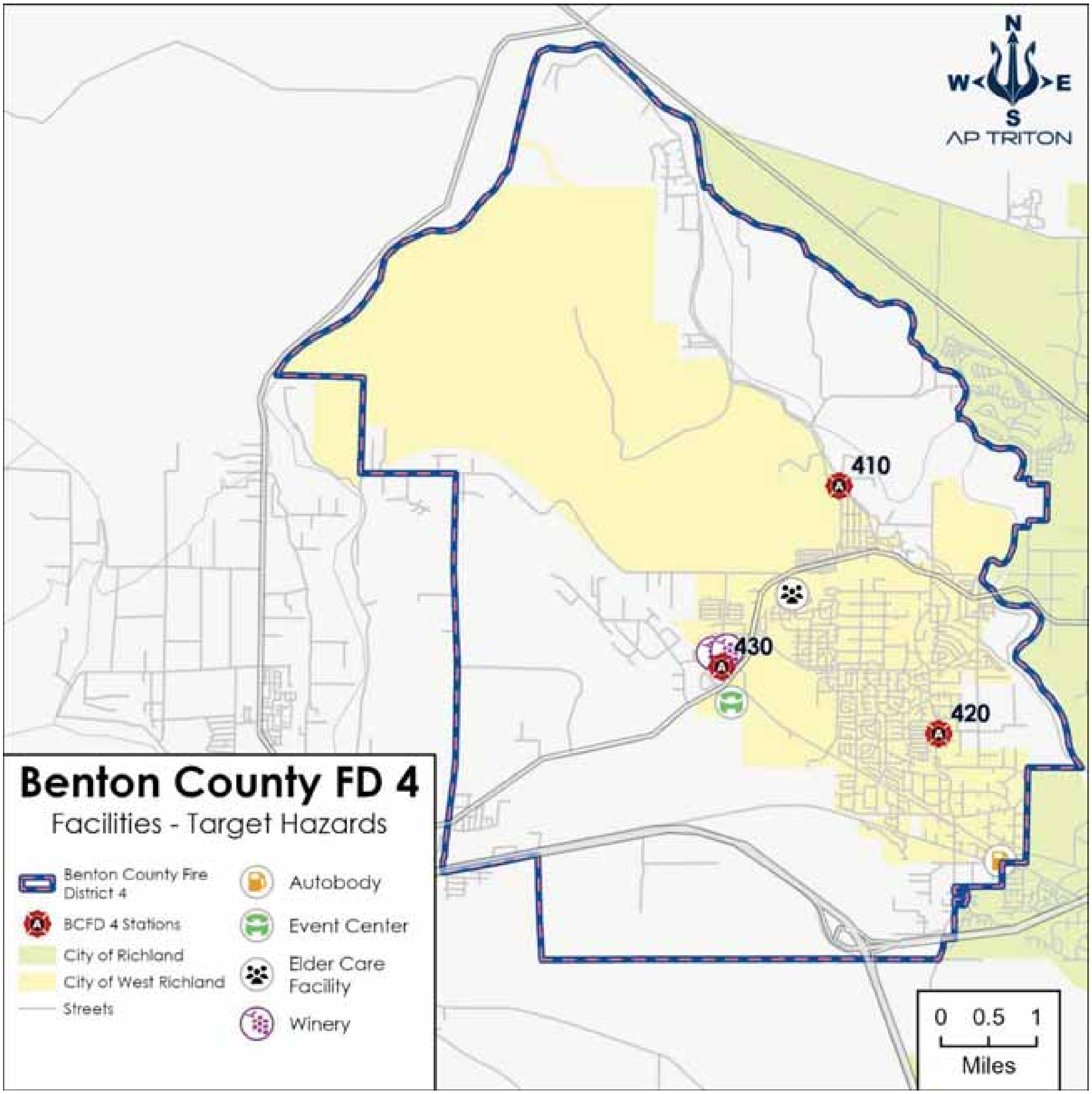
A target hazard is a location or facility that poses a risk to the community. The CIKR provides a list of critical sectors for a community. Identifying these locations enables a fire agency to prepare for potential emergencies and ensures it has the appropriate resources and strategies to prevent, respond to, and mitigate risks.

Buildings to consider as potential target hazards include occupancies with a high risk of significant loss of life, such as places of public assembly, schools, childcare centers, medical and residential care facilities, and multi-family dwellings. Other considerations include buildings of substantial value to the community, like those with economic loss, replacement cost, or historical importance, which would be greatly impacted if damaged or destroyed.

[21] Infrastructure Security, Department of Homeland Security.

The following figure provides the locations of target hazards.

Figure 55: Target Hazards



Hazardous Materials

Events that occur without warning and emerge suddenly are typically classified as technological hazards. Examples include industrial accidents or the release of hazardous chemicals. Each community should develop contingency plans tailored to the specific risks within its jurisdiction. This may include permits, periodic fire and life safety inspections, and pre-incident planning. These activities aim to reduce risks and provide on-site visits for fire department personnel.

If a building or facility storing or producing hazardous materials is identified, it may require specialized personal protective equipment to control or mitigate the incident. Locations with hazardous materials on-site for any period during the year that exceeds the limits established by the Environmental Protection Agency (EPA) are required to file Tier II reports. These reports are provided to local jurisdictions, local emergency planning committees, and the State's Emergency Response Commission as required by the Emergency Planning and Community Right-to-Know Act of 1986, also known as SARA Title III. These thresholds require submission:

- 10,000 pounds for hazardous chemicals
- Less than 500 pounds or the threshold planning quantity for extremely hazardous chemicals

Figure 56: Hazardous Materials Sites

The picture can't be displayed.

Highways & Roads

Emergency personnel require a reliable transportation network to respond efficiently to incidents. A delayed response can occur without a system of interconnected roads and streets. Interconnectivity provides multiple access points to a location, allowing for alternative approaches if one is unavailable. The roads in the urbanized area around West Richland are on a grid system or winding streets with cul-de-sacs. The rural portion of the District has other small subdivisions, along with many farm access roads.

Important highways and roads in BCFD4 include Interstate 82, which links the Tri-Cities region to major transcontinental routes like I-84, I-90, and I-5. This interstate serves as a vital transportation corridor for regional and interstate travel. State Route 224 passes through West Richland, connecting it to Richland and other parts of Benton County, while State Route 240 offers access to the Hanford Site and connects to major highways serving the Tri-Cities. Additionally, State Route 14 runs along the southern edge of Benton County near the Columbia River, functioning as an important east-west route. These highways, along with local roads such as Bombing Range Road and Harrington Road within West Richland, are crucial for emergency response, commerce, and daily travel. Their proximity to flood-prone areas and wildfire risk zones makes them essential infrastructure for hazard mitigation planning. The following figure provides the average annual daily traffic counts.

Figure 57: BCFD4 Traffic Counts[22]

Location	Average Annual Daily Traffic - Vehicles
W Van Giesen St at 38th Street	18,000
S SR224 NE at E Red Mountain Road	4,200
I-182 east of I-82	30,000

[22] WSDOT, https://gisdata-wsdot.opendata.arcgis.com/search?q=Annual%20Average%20 Daily%20Traffic.

The following figure shows the road network for BCFD4.

Figure 58: Road Network

Energy

The ability to provide energy is a necessary component of a thriving community. The community relies on various energy sources, including electricity generation and transmission systems, fuel distribution and storage tanks, natural gas pipelines, and regulator stations.

Electricity

In West Richland and BCFD4, electrical power is provided by Benton Rural Electric Association (Benton REA), a not-for-profit, consumer-owned electric cooperative founded in 1937. Benton REA serves over 10,000 members across Benton, Yakima, and Lewis Counties. The cooperative is divided into eight districts, each represented by an elected member on the Board of Trustees.[23]

High-voltage electrical transmission lines operated by Bonneville Power Administration pass through or terminate in BCFD4. A 115-kilovolt (kV) line travels through the District to a substation west of Red Mountain Road. The lines travel to the north, south, east, and west from the substation.

An electrical substation reduces the voltage in the distribution system for residential and commercial users. Emergency responders must exercise extreme caution in the event of an incident at one of these locations. Entry by BCFD4 personnel into a substation should not occur until representatives of Benton REA arrive on the scene and provide clearance. Benton REA could implement Public Safety Power Shutoffs to prevent wildfires under certain conditions, such as high winds and dry weather. They have also developed a Wildfire Mitigation Plan to reduce risks.[24]

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23 https://bentonrea.org/)[2](https://www.bentonrea.org/.
24 https://www.bentonrea.org/wildfire-mitigation.

The following figure shows the location of the electrical infrastructure in BCFD4.

Figure 59: Electrical Infrastructure

Natural Gas

Cascade Natural Gas is a regional utility company that provides natural gas service to communities across Washington and Oregon, including West Richland and the surrounding areas served by BCFD4. The company focuses on delivering safe, reliable, and affordable energy to residential, commercial, and industrial customers. Its operations include maintaining an extensive pipeline network, ensuring compliance with state and federal safety regulations, and implementing energy-efficiency and conservation programs. The utility emphasizes safety through regular inspections, leak-detection systems, and public education campaigns on natural gas hazards and emergency procedures.

Water and Wastewater Utilities

Water

Controlling a fire becomes challenging without an adequate water supply and distribution system, which includes water storage, mains, and a fire hydrant system. A system of well-distributed hydrants and appropriately sized water mains is necessary to provide the required water for fireground use.

Water and sanitary sewer services in West Richland and the area covered by Benton County Fire District 4 are provided by the City of West Richland Public Works Department. The City operates a comprehensive water system that includes seven groundwater wells, an intertie connection with the City of Richland, five reservoirs with a combined capacity of 3.8 million gallons, and approximately 100 miles of water piping. Four new wells are coming online, along with a new 2-million storage tank. There are seven pressure zones in the system. A new connection is planned on the north side of the City to increase redundancy if the other connection fails. Backup generators are being installed at all new well sites and are scheduled for existing well locations. This system delivers nearly 750 million gallons of drinking water annually to residents and businesses.[25]

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[25] https://westrichland.org/191/Water-System.

The following figure shows the location of fire hydrants in BCFD4.

Figure 60: Fire Hydrants

The picture can't be displayed.

Wastewater

West Richland manages a 1.5-million-gallon-per-day Wastewater Treatment Plant supported by 65 miles of sanitary sewer piping and three lift stations. Plans are to increase capacity to 3 million gallons per day. The system employs advanced treatment processes, including the Biolac system, to ensure efficient, environmentally responsible wastewater management.[26]

Both water and sewer services are maintained by the City's Operations and Maintenance Division, which oversees daily operations, infrastructure repairs, and emergency response for issues such as water leaks or sewer backups. Residents in these areas rely on these municipal services for essential water supply and wastewater treatment, and the City provides 24-hour contact numbers for emergency service needs.

Communications

When an incident occurs, essential facilities that receive and transmit alarm information need a communication center to effectively coordinate with emergency responders. Other forms of communication are also vital to the community, such as cellular phones, Voice over Internet Protocol (VoIP) telephone systems, and transmission lines provided by local telecommunication companies. These systems allow the public to report incidents to emergency services. Internet services are crucial for the public, businesses, and emergency responders to carry out daily activities. Whether internet services are accessed through cellular networks or an internet service provider, the failure of these communication systems can greatly affect both emergency responders and the community.

Dispatch services for BCFD4 are provided by Southeast Communications (SECOMM), which operates under Benton County Emergency Services. SECOMM is the centralized 9-1-1 center for Benton and Franklin Counties, handling emergency and non-emergency telecommunications for law enforcement, fire, and EMS agencies, including West Richland and BCFD4. Dispatchers at SECOMM answer all 9-1-1 calls and coordinate emergency responses across multiple jurisdictions, ensuring timely communication and resource deployment during incidents such as fires, medical emergencies, and natural disasters. The center operates 24/7 and also supports mutual aid coordination when additional resources are needed.

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[26] https://westrichland.org/273/Sewer-System.

Governmental Facilities

Government buildings are considered critical infrastructure because they provide essential services and functions that support public safety, emergency response, and community stability. These facilities include city halls, police and fire stations, emergency operations centers, and public works buildings. Their role in maintaining law and order, coordinating disaster response, and delivering vital services makes them indispensable during both everyday operations and emergencies.

For public safety agencies like fire departments, government buildings often function as command centers, dispatch hubs, and staging areas for personnel and equipment. They are designed to remain operational during disasters, ensuring continuous services such as emergency medical response, firefighting, and law enforcement. Their structural integrity, communication systems, and access to utilities are prioritized to withstand hazards like earthquakes, floods, and severe weather. Protecting these buildings is a top priority because any disruption to their function can delay emergency response, compromise public safety, and hinder recovery efforts.

The following figure provides the location of government facilities in the District.

Figure 61: Government Facilities

Land Use

The concept of land use regulation aims to achieve attractive social and environmental outcomes, thereby facilitating efficient management of development. Land use for a community is designed to assign a classification for properties within a geographical area generally under governmental control. Zoning areas may vary from one portion of the service area, which may include a mixture of low-, moderate-, and high-risk properties.

- Low Risk: Areas zoned for agricultural purposes, open spaces, low-density residential, and other low-intensity use.
- Moderate Risk: Areas zoned for medium-density single-family properties, small commercial and office uses, low-intensity retail sales, and similarly sized business activities.
- High Risk: High-intensity business districts, mixed-use areas, high-density residential, industrial, storage facilities, and large mercantile centers.

The City of West Richland Comprehensive Plan (2017–2037) outlines the City's 20-year vision and strategic framework for managing growth, land use, infrastructure, housing, economic development, and public services, in line with Washington State's Growth Management Act. The plan envisions West Richland in 2037 as a thriving, family-friendly community with a diverse economy, a variety of housing options, and a well-connected transportation system. This plan outlines the City's vision through 2037, covering a wide range of topics, including:

- Land Use Planning
- Economic Development
- Housing
- Transportation
- Utilities
- Parks and Recreation
- Environmental Protection
- Capital Facilities

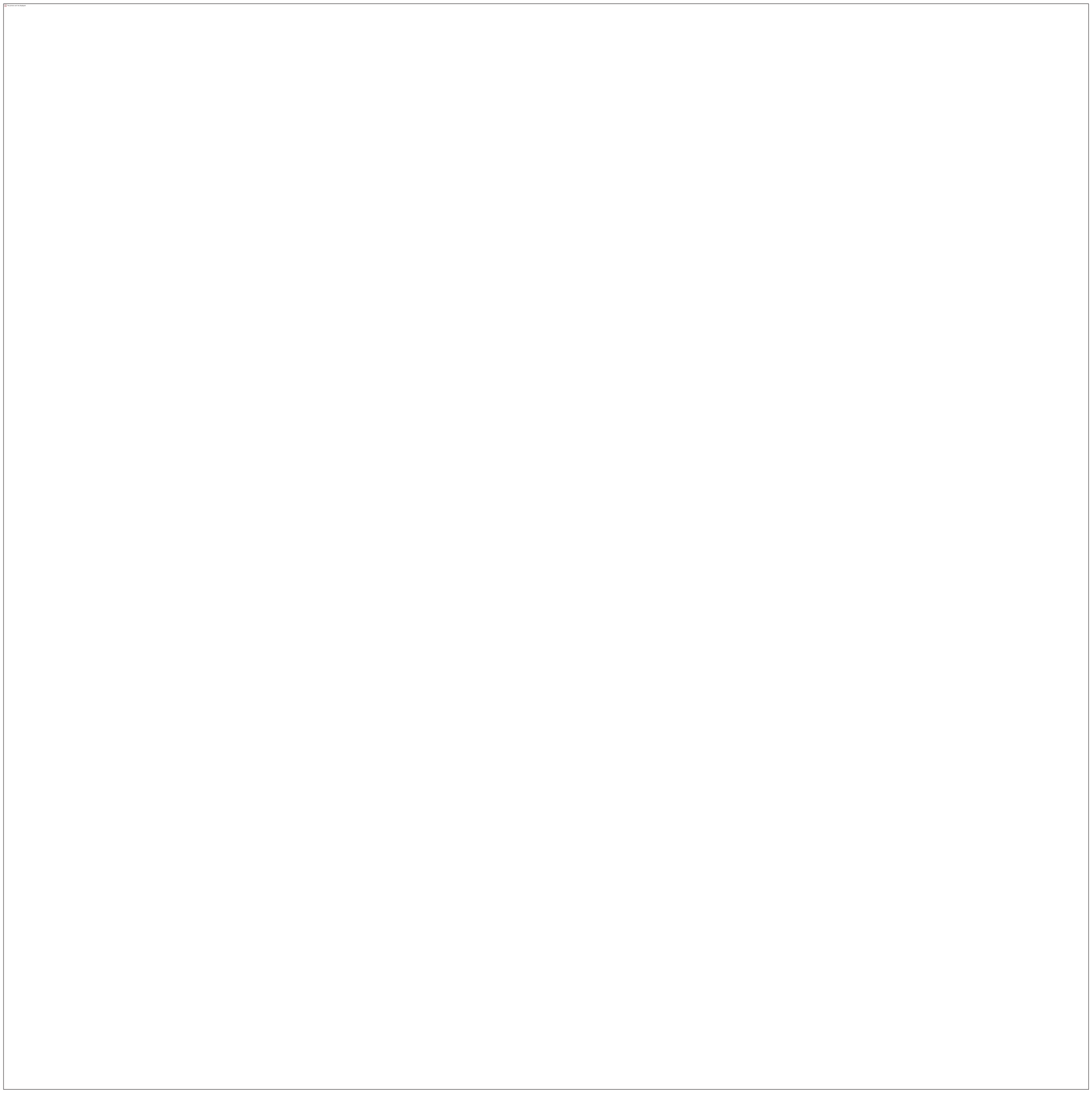
The City aims to preserve its small-town charm while supporting projected population growth from 14,660 in 2017 to over 22,400 by 2037. This growth will require the development of approximately 2,831 new housing units and the expansion of public infrastructure and services. Growth is expected mainly through infill development and the conversion of agricultural lands within the current city limits, especially in areas such as the Lewis & Clark Ranch and the Alexander Family Farm. The City does not plan to expand its Urban Growth Area (UGA) during the planning period, as enough land is available within existing boundaries.

Commercial and light industrial growth is focused on six key districts: Van Giesen Corridor, Paradise District, Belmont District, Kennedy District, Yakima River Gateway District, and Red Mountain Center. These districts are meant to serve as economic hubs, supporting retail, office, and light industrial uses. The City's economic development plan emphasizes job creation, business retention, and economic diversification. It focuses on promoting the region's wine industry and improving infrastructure to attract investment.[27]

[27] City of West Richland Comprehensive 2017 Update.

The following figure displays the City's Land Use Zones.

Figure 62: West Richland Land Use



Lewis and Clark Ranch

Lewis and Clark Ranch is a large property spanning approximately 7,000-7,600 acres, located between the Yakima River and Ruppert Road. Originally used for agriculture, it is now designated for extensive urban development under a comprehensive vision approved by the City of West Richland. The City has authorized a Subarea Plan and a

Planned Action Environmental Impact Statement to guide this transition, thereby simplifying environmental reviews and coordinating planning before individual projects begin.

The development is expected to unfold over decades, with a complete build-out taking 20 to 100 years and potentially adding up to 100,000 residents to the area. The first phase will focus on roughly 750 acres in the southeast corner of the ranch. The environmental impact statement was expected to be completed by May 2025. Infrastructure, such as roads and utilities, is not expected to begin until 2027, after all permitting has been approved by state and local officials.

Over the next 20 years, the plan anticipates about 3,800 homes and more than 2,600 jobs. Significant infrastructure improvements will be necessary, including new roads, water and sewer systems, and public facilities like parks and schools. The vision emphasizes the creation of mixed-use areas and walkable neighborhoods. It even includes a park larger than New York City's Central Park, designed to connect the community along a canal corridor.

Three development options are currently under consideration: maintaining the existing setup, fully expanding zoning, and implementing a community-driven plan that emphasizes walkability and mixed-use centers. These choices will shape how the ranch becomes a vibrant, connected community in the years ahead.

The development of Lewis and Clark Ranch will significantly affect BCFD4, as the project will substantially increase population density and urban infrastructure within the District's service area, which is projected to grow by 25% over the next five to ten years. Currently, the ranch is agricultural land with minimal demand for emergency services. Once fully developed, the area will add many new residents over the next 20 to 100 years, along with thousands of homes, businesses, and public facilities. This growth will require expanded fire protection and emergency response capabilities, including additional fire stations, personnel, and equipment to maintain adequate service levels.

The City's planning documents acknowledge that infrastructure improvements will be necessary—such as roads, water, sewer, parks, and schools—but also imply that public safety services—including fire and emergency medical services—must be scaled up to match projected growth. The phased development approach, starting with 750 acres in the southeast corner, necessitates planning for incremental increases in service demand, which will likely require coordination with the City and developers to secure funding for facilities and staffing.[28]

[28] https://westrichland.org/299/Lewis-Clark-Ranch---2025.

Physical Assets Protected

Commercial occupancy properties are considered target hazards in every community because of the unique risks they pose to emergency responders and occupants during an incident. Each of these properties should have current pre-incident surveys conducted annually. These surveys help responders become familiar with the building, the property, and specific hazards.

During an incident, these occupancies and facilities should have current pre-incident plans for BCFD4 operations personnel. The plan informs emergency responders about potential hazards and helps them develop effective strategies and tactics during an incident. All target hazards and, ultimately, all commercial buildings should have up-to-date pre-incident plans.

Community Fire Protection and Detection Systems

Fire protection and detection systems are crucial for safeguarding lives, property, and a community's overall resilience. These systems act as the first line of defense against fires by providing early warnings and controlling or extinguishing flames before they cause extensive damage. Early detection devices like smoke alarms, heat sensors, and alarm systems quickly alert occupants and emergency responders, giving people time to evacuate and enabling firefighters to intervene before a fire becomes uncontrollable. This early action greatly reduces injuries, deaths, and property damage.

Fire protection systems, such as sprinklers and suppression technologies, further improve safety by automatically containing or extinguishing fires. Their presence can mean the difference between a small, localized incident and a catastrophic event. In addition to protecting lives, these systems help preserve essential infrastructure, reduce business disruptions, and support community stability. A fire that destroys a key building or utility can disrupt local economies, displace residents, and strain municipal resources. Reliable fire protection also lowers insurance costs, ensures compliance with building codes, and boosts public confidence in local safety measures.

At a broader level, having comprehensive detection and suppression systems demonstrates a community's commitment to prevention and preparedness. It ensures emergency response resources are used more efficiently, allowing fire departments to focus on mitigation and education rather than just reacting to large-scale emergencies. Ultimately, fire protection and detection systems help create a safer, more sustainable community by protecting human life, supporting economic vitality, and ensuring continuous access to essential services.

Structural Risks

The risks posed by residential or commercial occupancies to building occupants and emergency responders increase with the type.

Educational and Childcare Facilities

Public and private schools and childcare facilities pose risks to any community and require substantial assistance during significant events, such as mass-casualty or fire responses. In BCFD4, numerous schools and childcare facilities need inspections and pre-incident plans to ensure the properties are safe and that emergency responders are familiar with the locations and site-specific hazards.

The Richland School District serves the cities of Richland and West Richland in Benton County. This district provides education for students from preschool through high school, including Desert Sky Elementary, Tapteal Elementary, Wiley Elementary, Enterprise Middle School, and Leona Libby Middle School. The district operates 21 schools across the region, including traditional, alternative, and online programs.

Figure 63: School and Child Care Facilities

The picture can't be displayed.

Assembly

Gathering large groups of people in one location or building increases risks in settings such as places of worship, entertainment venues, or restaurants. According to the Washington State Fire Code, outdoor special events such as street fairs or mass gatherings may require a public safety plan. This plan should include emergency vehicle access and exit points; fire protection; emergency medical services; public assembly areas; traffic control for vehicles and attendees; vendor and food concessions; and the need for law enforcement, fire, or EMS personnel, as well as weather monitoring.

The following figure shows the locations of assembly occupancies.

Figure 64: Assembly Occupancies

The picture can't be displayed.

Medical Facilities

These types of buildings may prevent occupants from leaving without staff assistance. These locations may contain medical gases that pose additional risks to emergency responders during a fire; therefore, completing up-to-date pre-incident plans is essential.

As people age, they may require additional care, necessitating the search for a facility that meets their needs. Depending on their mobility or cognitive conditions, they may need more assistance evacuating the building. Staff should have developed plans for removing occupants or patients during an emergency. These locations require additional fire protection systems to safeguard the occupants, similar to those in hospitals. Special locking arrangements for areas where patients with dementia or Alzheimer's live are permitted to prevent them from leaving the facility. Although there are no hospitals in West Richland, medical offices, including assisted living facilities, provide medical care.

The following figure shows the locations of the medical facilities in the District.

Figure 65: Medical Facilities

Multi-family Occupancies

Although multi-family housing has fewer fires caused by electrical or heating malfunctions, the risk of cooking fires is twice the rate of other types of building fires.[29] Updated building and fire codes now require these buildings to have a residential fire sprinkler system installed and interconnected smoke alarms in all bedrooms, hallways, and floors. These fire protection systems are designed to provide enough time for the occupants to evacuate the building.

[29] Topical Fire Report Series, Multifamily Residential Building Fires (2013–2015), June 2017.

The following figure shows the location of multi-family housing units in the BCFD4 response area.

Figure 66: Multi-family Occupancies

The picture can't be displayed.

Buildings Three or More Stories in Height

Buildings that are three or more stories high pose significant challenges for fire services because their height complicates access, movement, and fire suppression. Firefighters need to transport people, gear, and hoses vertically, which increases time and fatigue. Long hose lays to the upper floors require correct pump pressures to ensure an adequate water supply. Additionally, fires in multi-story structures can rapidly spread upward through stairwells, elevators, and utility shafts, risking occupants far above the flames and forcing crews to work across multiple levels simultaneously.

Life- and firefighter-safety concerns also increase in taller buildings. Searching for occupants becomes more time-consuming as crews work floor by floor, while rescues from upper floors may rely on stairways or aerial apparatus that can be limited by building height, distance from the street, or obstructions. Evacuating injured firefighters is more difficult, and escape routes are longer if conditions deteriorate. These factors make command, accountability, and coordination more complex than in single-story or low-rise structures.

Washington Surveying and Rating Bureau (WSRB) evaluates communities with three or more stories when evaluating a fire department's overall capability, though it doesn't rate individual buildings. In communities with multi-story buildings, WSRB examines whether the department has appropriate staffing, training, pre-incident plans, water supply, and equipment, particularly aerial apparatus and pump capacity, to operate safely and effectively. When taller buildings exist, but resources are insufficient for proper protection, this mismatch can increase the community's WSRB Public Protection Classification.

The following figure displays these buildings.

Figure 67: Buildings Three or More Stories in Height

The picture can't be displayed.

Large Square Footage Buildings

Large buildings with extensive square footage present significant challenges for fire departments, mainly because their size complicates access, containment, and control of fires. The considerable distance from entrances to the fire location can hinder timely hose deployment, search efforts, and ventilation, giving the fire more time to spread. Firefighters often need to extend hundreds of feet of hose to reach the fire's core, which increases friction loss, delays water delivery, and diminishes effectiveness when they arrive.

These structures enable fires to spread horizontally across extensive areas, often exceeding what a single company or alarm can handle. Fire walls, if present, can be weakened by openings, and once a fire covers a large area, multiple attack points and crews are usually needed. Managing operations over such a large zone complicates command and raises the risk of losing situational awareness.

Applying water in large buildings is more challenging because handlines have limited reach, and high ceilings or storage setups can hinder stream penetration. Ventilation tends to be slow or ineffective because of roof design and distance, trapping heat and smoke and worsening interior conditions. Search and rescue are also more complex since occupants might be far from exits, and finding them in a large, smoke-filled space requires considerable time and personnel.

Large buildings with extensive square footage need more time, water, personnel, and robust incident management. This can quickly overwhelm a fire department’s resources and elevate risks for both firefighters and occupants.

Large buildings, such as warehouses, strip malls, and large “box” stores, require greater volumes of water for firefighting and necessitate the deployment of more firefighters to advance hose lines over long distances into the building. Although the number of large square-footage buildings is low, the fire flow may be greater for smaller buildings due to construction type, distance to exposures, and the lack of built-in fire protection systems, such as fire sprinklers.

High Fire-Flow Occupancies

High fire-flow buildings pose significant challenges for fire departments because they require large volumes of water to control or extinguish fires, often exceeding the capacity of routine firefighting operations to deliver quickly and sustainably. Examples include large warehouses, factories, big-box stores, or high-rack storage facilities, which contain substantial fuel loads and large open spaces, enabling fires to spread rapidly and produce high heat output. Once a fire is well established in these structures, it requires multiple large-diameter hoselines or master streams operating simultaneously, placing heavy demands on staffing, equipment, and water resources.

Water supply remains a major challenge. Even with nearby hydrants in municipal systems, the distribution network may not maintain the necessary flow for long durations without pressure drops. This often forces fire services to find additional hydrants, set up lengthy supply lines, or relay pump water over long distances, all of which demand time and additional equipment. In suburban and rural areas, limited infrastructure can hinder the required fire flow, resulting in slow, resource-intensive tanker operations.

High fire-flow demands also put pressure on personnel and equipment. Using large handlines or master streams requires additional firefighters on scene and can quickly lead to fatigue. Pump operators need to carefully control pressures and flows to prevent equipment failure or water hammer. Engine companies might be occupied with supplying water instead of carrying out fire attack, search, or ventilation, which delays vital life-saving actions. Consequently, alarms are often upgraded early, requiring resources from a broad area and limiting coverage for other emergencies.

These buildings frequently pose access and fire behavior challenges that amplify the fire-flow problem. Their large footprints can restrict hose reach, while modern materials and contents may speed up fire spread or lead to early structural failure. Even with sufficient water, applying it safely and effectively remains challenging, increasing the risk to firefighters and the likelihood of significant property damage. Overall, these factors make high fire-flow buildings among the most complex and resource-intensive incidents for fire departments.

Washington State Surveying and Rating Bureau and Insurance Services Office

The Washington State Surveying and Rating Bureau (WSRB) and the Insurance Services Office (ISO) both assess fire protection, but they differ in scope, governance, and application of their ratings. WSRB is a state-specific organization evaluating fire department operations, water supply, communications, and emergency response within Washington State. In contrast, ISO operates nationwide, providing similar evaluations on a broader scale.

ISO is a nationwide organization that assesses fire protection services across most U.S. states through its Fire Suppression Rating Schedule (FSRS). This assessment produces an ISO Public Protection Classification (PPC) ranging from Class 1 to Class 10, which insurers often rely on to determine property insurance rates. ISO uses uniform criteria nationwide, ensuring consistency and comparability among different jurisdictions despite local differences. Its approach focuses on relative scoring, ranking communities against each other using a common framework, regardless of state-specific insurance policies or fire service setups.

WSRB was created specifically for Washington State and functions under the authority of licensed insurers in that state, rather than as a nationwide advisory body. Although its evaluation approach closely resembles ISO's, covering areas like fire department resources, water supply, and emergency communications, it is customized to fit Washington's regulatory framework, geography, and fire service delivery models. WSRB also uses a protection class scale similar to ISO's, but these ratings are limited to Washington and designed to meet the needs of insurers writing policies there, especially in areas with a mix of urban, wildland-urban interface, and rural fire protection.

Another significant difference lies in their operational approaches and relationships with fire departments. Since WSRB concentrates on Washington state, it develops a deeper understanding of local fire agencies and collaborates more closely with them to explain scoring, suggest improvements, and manage re-surveys. This allows WSRB to update changes in staffing, equipment, water systems, or communications more rapidly. In contrast, ISO's nationwide framework can seem more rigid and slower to adapt. Ultimately, both ratings impact insurance premiums, but WSRB's focus on Washington enables it to operate with greater flexibility and relevance to the state's fire protection needs, whereas ISO offers consistent national standards and comparability. Although WSRB states that they offer greater flexibility, there are some concerns that it needs to improve its transparency.

A review of the most recent WSRB evaluation, effective February 2023, assigned 6.18 out of 10 credits and classified the community as 4. The areas for improvement include the Fire Department, which received only 59% of the available credit, and Fire Safety Control, which received 34%. The following figure shows the WSRB credit percentage for each evaluation area for BCFD4 as of its most recent inspection in 2023.[30]

Figure 68: WSRB Percent of Credit for Each Evaluation Area

[30] WSRB Protection Classification Report for Benton County Fire District 4, February 1, 2023.

Comparison of Fire Risks in Other Communities

Fire Loss

Fire loss can vary significantly from year to year due to a mix of natural, human, and economic factors. Weather and climate play a key role with droughts, heatwaves, or strong winds tend to have more severe and widespread fires. Human actions also contribute, whether through accidental or intentionally set fires, or increased development in fire-prone areas, which raises the risk of damage. The success of fire prevention and response efforts can fluctuate over time, depending on factors such as funding, policy updates, or technological advancements. Economic factors, such as rising property values or inflation, can magnify the financial impact of fires, even if the physical damage remains the same. Finally, natural variation means that some years' experience more fire activity due to random environmental conditions.

In 2023, fire departments responded to nearly 1.4 million incidents in the United States, which resulted in 3,670 civilian fire fatalities and over 13,350 civilian fire injuries. The property damage was estimated at $23 billion. The following figure shows the loss of property and contents between 2020 and 2024.

Figure 69: BCFD4 Property & Contents Loss per 1,000 People (2020–2024)

Year	BCFD4 Property Loss	U.S. Property Loss[31]
2020	$83.29	$67.06
2021	$68.84	$48.22
2022	$52.13	$54.36
2023	$50.46	$69.20
2024	$25.95	Not Available

[31] Fire Loss in the United States, NFPA, 2021, 2022, 2023.

Number of Fire Incidents

The number of fires per 1,000 population in BCFD4 response area is lower than the national average, as shown in the following figure.

Figure 70: Fires per 1,000 Population

Year	BCFD4 Fires per 1,000 Population	U.S. Fires per 1,000 Population[32]
2020	2.5	4.3
2021	2.6	4.1
2022	2.6	4.5
2023	3.1	4.2
2024	2.8	Not Available

Intentionally Set Fires

Intentionally set fires, in many cases considered arson, is defined as "any willful or malicious burning or attempt to burn, with or without intent to defraud, a dwelling house, public building, motor vehicle or aircraft, personal property of another.[33] The following figure lists the number of intentionally set fires in BCFD4 from 2020 to 2024.

Figure 71: Intentionally Set Fires (2021–2024)

Year	Intentionally Set Fires
2020	5
2021	2
2022	2
2023	0
2024	0

[32] Ibid.

[33] Crime Data Explorer, Federal Bureau of Investigation.

Risk Classification

Risk Assessment Methodology

Developing a risk score to identify community risks is essential for providing an organization with a framework for incident response protocols. The Three-Axis Heron model assigns a score to each of the probability, consequence, and impact factors, ranging from 2 to 10.

The Three-Axis Heron Formula is defined by the following equation:

The risk is graphically illustrated through a three-axis model as follows:

- **P** = Probability (Y-Axis)
- **C** = Consequences (X-Axis)
- **I** = Impact (Z-Axis)

The following figure summarizes the three-axis risk classification process and how a score is developed.

Figure 72: Three-Axis Risk Classification Process

When developing the score, each of the three scoring components is based on BCFD4's incident data.

A risk score that combines probability, consequence to the community, and impact on the fire department offers a comprehensive way to evaluate the significance of various emergency incident types, including fire, EMS, technical rescue, hazardous materials, and wildland-urban interface (WUI). This scoring typically falls into four categories: low, moderate, high, and maximum risk.

A low-risk incident is likely to occur; if it does, it would have minimal impact on the community and impose little demand on fire department resources.

A moderate risk typically indicates a lower chance of occurrence than a low risk, with limited but noticeable consequences for the community, such as minor injuries or property damage, and a manageable impact on the department's operations.

A high-risk event is unlikely but could result in serious outcomes, including significant injuries, disruption of essential services, or considerable property damage, while placing heavy strain on department personnel and equipment.

A maximum-risk scenario is low but extremely dangerous. It could cause widespread harm to the community, including mass casualties, evacuations, or infrastructure failures, and would severely strain or exceed the department’s operational capacity. This scoring method enables agencies to prioritize preparedness, allocate resources effectively, and customize response plans to address their communities' specific hazards.

An example of low-risk fire response scoring is based on the likelihood of such an incident occurring. Most low-risk incident types are frequent (occurring multiple times each day), but their consequences for the community and their impact on the city are minimal. The likelihood of a low-risk fire incident in the District is rated 10 (high), the consequence is 2 (low), and the impact is 2. These numbers are input into the formula above to generate a score of 20.2. The score will increase significantly for a maximum risk, even though the likelihood is low (2), because the consequence to the community is rated as 8, and the impact on BCFD4 is the highest at 10, resulting in a score of 59.4.

These scores are designed to inform BCFD4 about the level of service needed for the community. The likelihood of an incident can affect response times when multiple events occur simultaneously. Even if the risk is low, it will take an apparatus out of service for the response. The higher the score, the greater the risk in the community. Although the maximum risk score is 122.5, the likelihood of such an event is low.

The following presents a scoring system based on probability, consequence, and impact.

Figure 73: Risk Scoring System

Probability

Probability is the likelihood that an event will occur in a community over time. This axis represents the probability of a particular incident type occurring (contributing to the risk level). Many factors are considered, including the time of day, location, present, season, building construction and maintenance, demographic factors, and more. It can range from a rare event to a frequent one. The following figure defines probability categories.

Figure 74: Probability or Likelihood of Occurrence

Score	Category	Probability or Likelihood
2	Minor	Unlikely: < 0.02% of total call volume. Expected to occur very rarely.
4	Low	Possible: 0.02%–0.07% of total call volume. Expected to occur rarely.
6	Moderate	Probable: 0.07%–0.3% of total call volume. Expected to occur monthly.
8	High	Likely: 0.3%–2% of total call volume. Expected to occur multiple times per week.
10	Extreme	Frequent: > 2% of total call volume. Expected to occur one or more times per day.

Consequence

The consequences of an incident can vary from minor casualties to severe impacts that may destroy historical or major facilities in the community and create a large loss of employment or life. The following figure defines consequence categories.

Figure 75: Consequence to the Community

Score	Category	Consequence to the Community
2	Minor	1–2 people affected (injuries/deaths) < $10,000 loss.
4	Low	< 5 people affected (injuries/deaths) < $500,000 loss.
6	Moderate	5–50 people affected (injuries/deaths) $500,000–$1,000,000 loss.
8	High	51–100 people affected (injuries/deaths) $1,000,000–$5,000,000 loss
10	Extreme	> 100 people affected (injuries/deaths) > $5,000,000 loss.

Impact

The third factor in determining the risk is the fire department's impact and the critical tasks needed to control or mitigate an incident. This includes the number of emergency responders and apparatus available, whether sourced internally or from external agencies. It assesses the department's ability to respond to a given risk or incident while delivering services to the other parts of the District. The following figure defines impact categories.

Figure 76: Impact on Operational Forces

Score	Category	Impact on Operational Forces
2	Minor	≥ 90% Remaining Apparatus/Crews
4	Low	≥ 75% Remaining Apparatus/Crews
6	Moderate	≥ 50% Remaining Apparatus/Crews
8	High	≥ 25% Remaining Apparatus/Crews
10	Extreme	< 25% Remaining Apparatus/Crews

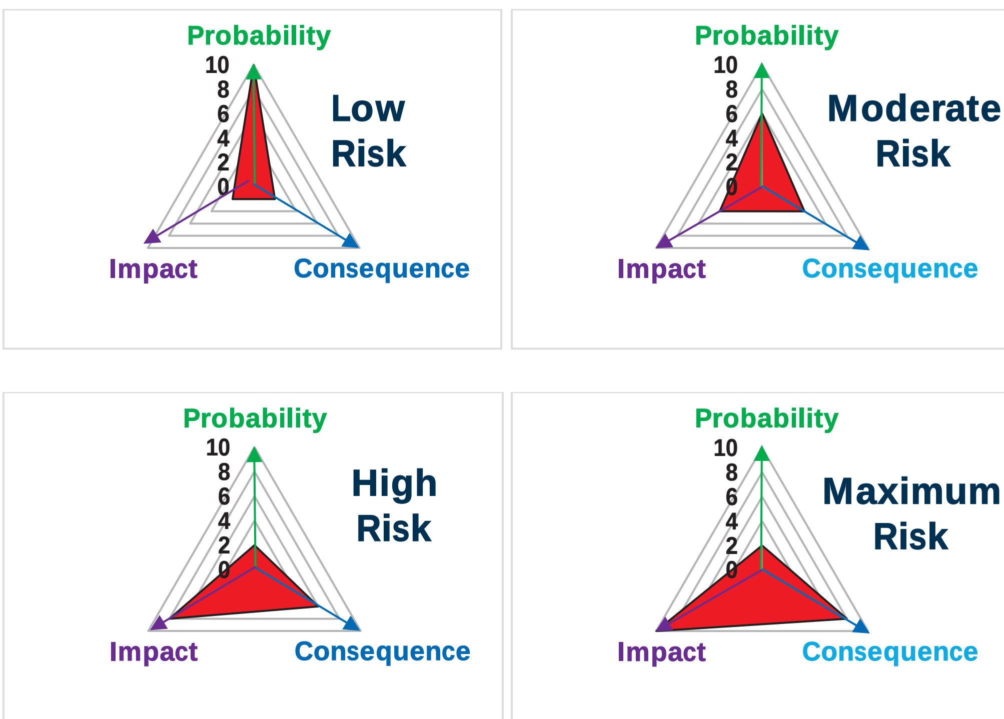
Fire Response

BCFD4 is the leading agency responsible for managing fire-related incidents. These range from low-risk situations, such as a vehicle fire, to high-risk incidents, such as a school fire. Vehicle fire risks are considered lower than the maximum risk posed by a school that houses students. This scoring system is applied to four different categories of fire incidents within BCFD4's response area to determine staffing requirements for critical tasks on the fire ground. The following figures show the fire response risk assessment score and three-axis risk classifications.

Figure 77: Fire Response Risk Assessment

Description	Low			Moderate			High			Maximum		
Risk Score	P	C	I	P	C	I	P	C	I	P	C	I
	10	2	2	6	4	4	2	6	8	2	8	10
Score Assigned	20.2			26.5			36.8			59.4		

Figure 78: Fire Three-Axis Risk Classifications



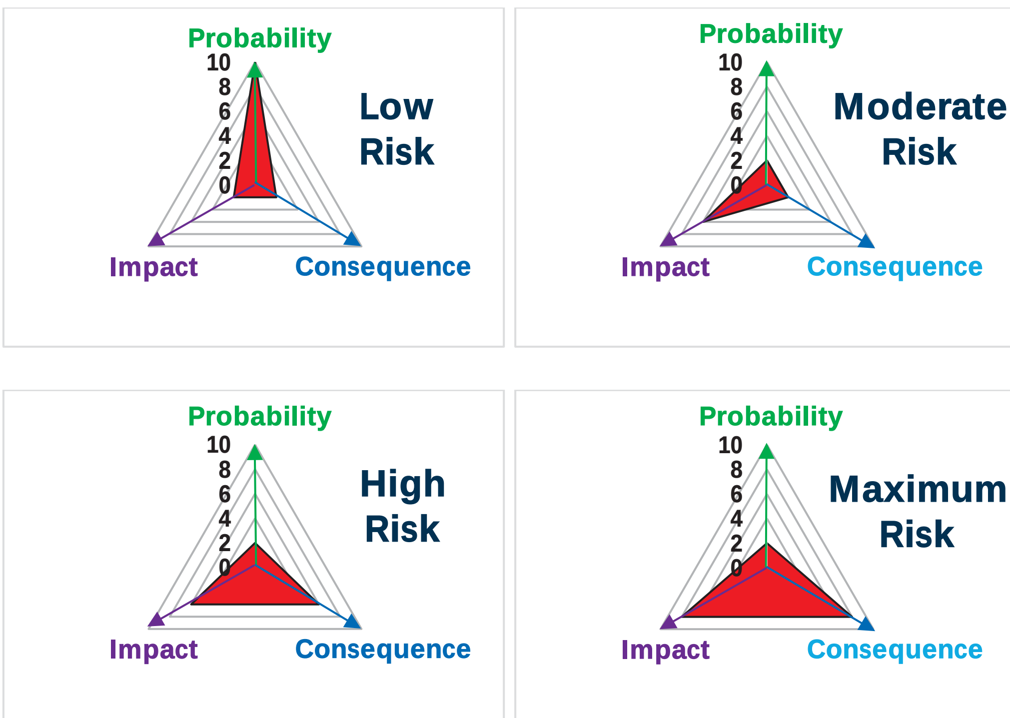
Emergency Medical Services Response

BCFD4 provides advanced life support and emergency medical care in the city. Low-risk incidents range from a medical assist to a maximum-risk incident for a multi-victim event. The following figures illustrate the EMS response risk assessment scores and their associated three-axis risk classifications by EMS risk type.

Figure 79: EMS Response Risk Assessment

Description	Low			Moderate			High			Maximum		
Risk Score	P	C	I	P	C	I	P	C	I	P	C	I
	10	2	2	2	2	4	2	6	6	2	8	8
Score Assigned	20.2			8.5			28.1			48.0		

Figure 80: EMS Three-Axis Risk Classifications



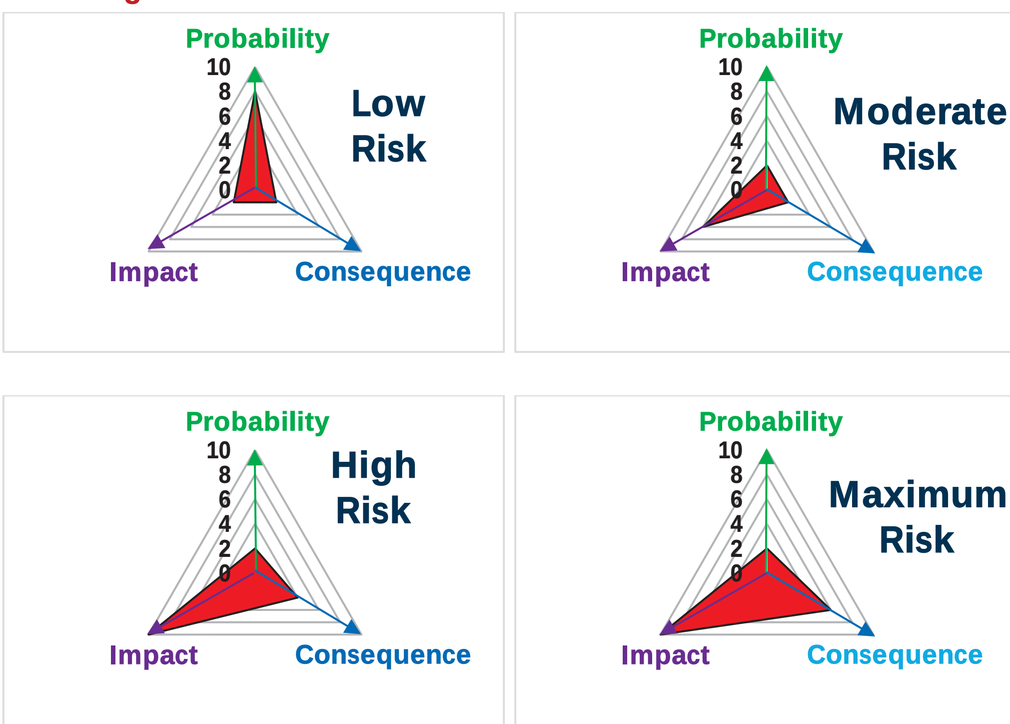
Technical Rescue Response

Rescue services can range from low-risk incidents, such as accessing a locked vehicle with a child inside, to confined space incidents (maximum risk) that may require multiple personnel to mitigate the situation. The following figures illustrate the technical rescue risk assessment scores and associated three-axis classifications by risk type within BCFD4's response area.

Figure 81: Technical Rescue Response Risk Assessment

Description	Low			Moderate			High			Maximum		
Risk Score	P	C	I	P	C	I	P	C	I	P	C	I
	8	2	2	2	2	6	2	4	10	2	6	10
Score Assigned	16.2			12.3			32.1			45.5		

Figure 82: Technical Rescue Three-Axis Risk Classifications



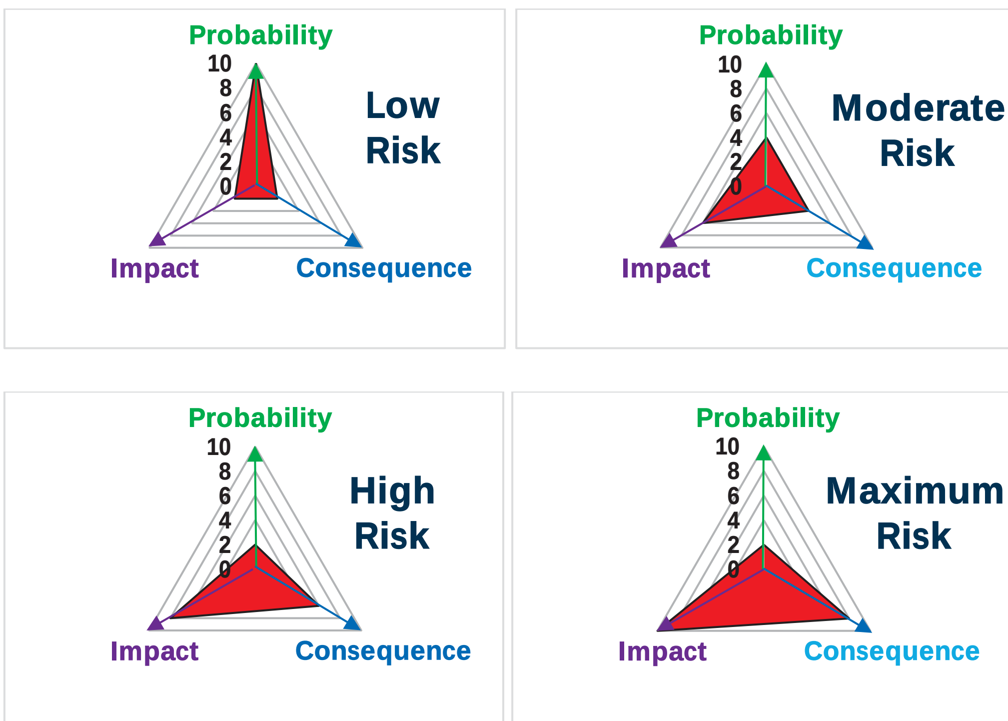
Hazardous Materials Response

Hazardous materials responses can range from low-risk odor investigations to the highest risk of a fuel tanker fire in highly populated areas. Most of these incidents can be managed by BCFD, but higher-risk incidents may require assistance from external resources. The following figures present the hazardous materials response risk assessment scores and corresponding three-axis risk classifications for each hazardous materials risk type.

Figure 83: Hazardous Materials Response Risk Assessment

Description	Low			Moderate			High			Maximum		
Risk Score	P	C	I	P	C	I	P	C	I	P	C	I
	8	2	2	4	4	6	2	6	8	2	8	10
Score Assigned	16.2			26.5			36.8			59.4		

Figure 84: Hazardous Materials Three-Axis Risk Classifications



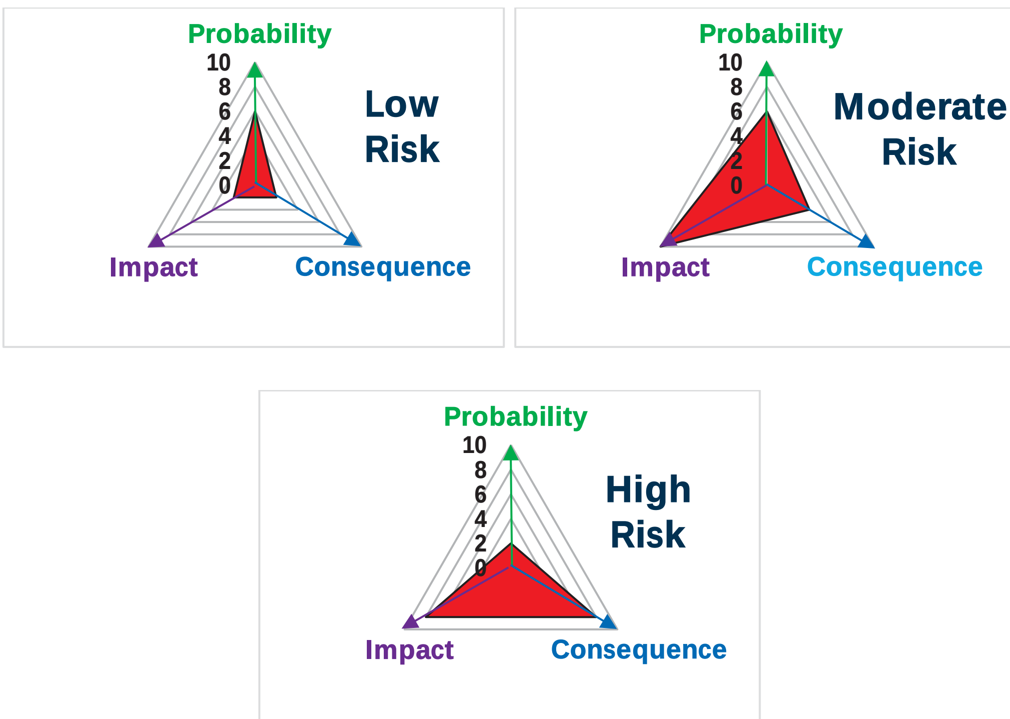
Wildland Fire Response

Wildland fire risk within BCFD4's response area ranges from small grass fires to large-scale sagebrush fires requiring significant internal resources and mutual aid from state and federal agencies. Risk levels are classified as low, moderate, or high based on three-axis assessment scoring. High-risk incidents have the potential to strain both community infrastructure and emergency response capacity. The following figures present the wildland fire risk assessment scores and corresponding three-axis classifications by risk type.

Figure 85: Wildland Fires Response Risk Assessment

Description	Low			Moderate			High		
Risk Score	P	C	I	P	C	I	P	C	I
	8	2	2	8	6	6	2	8	8
Score Assigned	16.2			54.3			48.0		

Figure 86: Wildland Fires 3-Axis Risk Classifications



Section III:
STANDARDS OF COVER AND DEPLOYMENT ANALYSIS

Service Delivery & Performance

This section will give BCFD4 a general understanding of relevant response information. It is designed to assist the District in identifying its recent performance and establishing a baseline performance expectation. BCFD4 staff and political leaders can then use this information to understand how their decisions, policies, and outside pressures affect performance.

Research Information

The information within this section was developed from various sources provided by BCFD4. Detailed information was provided between January 1, 2019, and December 31, 2024. In addition, less comprehensive total incident volume was provided for 2018 and added into the calculations to identify long-term trends.

Statistics Discussion

Using mathematical and technological methodologies to evaluate something as complex as an emergency incident response must be used judiciously. There are historical instances of incorrect evaluations leading to severe consequences in deployment and operational decisions. This analysis is intended to quantify and analyze available information and serve as a starting point for the agency as it seeks to improve performance. However, leaders need to understand the limitations of basing decisions solely on statistical studies. Decisions should be based on available data and proven analytics, in conjunction with sound judgment.

Statistical Tools

Various statistical analytical tools were employed to create this section. The fundamental tools were categorization, percentile, and regression analysis. This helps paint a picture of historical performance, with some inferences that may help leaders identify positive and negative performance trends.

90th percentile

The time performance measures in this report are based on the 90th percentile. While discussing the mathematics behind this measure is outside this report's scope, it is helpful to understand why it is utilized.

The most common reason to use this measure is that the industry has adopted it. If a fire agency wishes to judge its performance against standards or other agencies, it must use the 90th percentile. For example, the National Fire Protection Association (NFPA) utilizes the

90th percentile measure in most of its standards. In addition, the Commission on Fire Accreditation International (CFAI) requires reporting performance measures at the 90th percentile.

The statistical reason for using the measure is that it better captures performance and identifies trends more quickly. Like most incident analytics, the time performance data used in this study has a skew, making other statistical measures less sensitive and representative. The following figure is a general example of data skew.

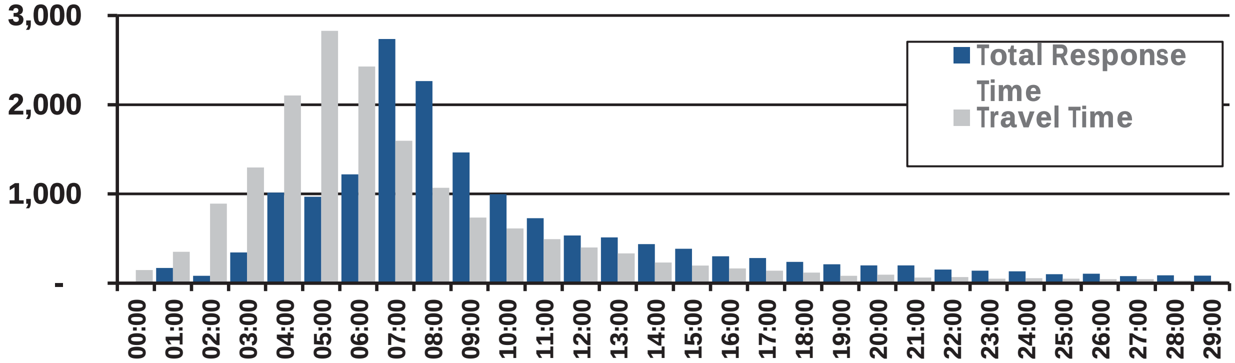
Figure 87: Data Skew[34]

In a symmetric distribution, the mean (average), median (middle of the data), and mode (the most frequent) are all equal. When the distribution is skewed, these three measures of the middle shift. Using the average, or mean, in data that was skewed left would underrepresent the bulk of the performance. While the opposite is true when skewed right. In BCFD4's case, as with most agencies, the performance data is skewed to the right most of the time. In this case, using the average would over-represent the performance.

[34] This Photo by Unknown Author is licensed under CC BY-SA-NC, creativecommons.org/licenses/by-nc-sa/3.0/

The following figure shows the BCFD4's skew of travel and total response times.

Figure 88: Data Skew of BCFD4's Times



Data Discussion

Detailed data was provided from BCFD4's primary incident reporting software (RMS), its electronic patient contact report (ePCR) software, and the computer-aided dispatch (CAD) system. These different database tables were combined using proven data engineering techniques into a single analytical dataset.

Data Engineering Findings

While the RMS information was complete for the entire 6-year data set, CAD data was available only from March 25, 2022, to December 31, 2024. The difference was due to a change in the CAD system, which reduced the number of years of information available for download. In addition, the CAD data was of limited value. However, the CAD data matched very well, with a minimal data drop of less than 1%. Fortunately, the RMS system was complete and appeared to have time data fed directly from a CAD system, making the time information more reliable. Mutual aid unit time performance is available only for 2023 and 2024, as this data is not captured in the agency's RMS.

After combining and merging the incident and unit information from the RMS, there were 11,999 unique incidents and 20,213 unit records. After the CAD information was included for the 6,327 incidents in the available records, the total number of unit records rose to 20,455. This is due entirely to the addition of mutual and automatic aid unit data being captured in CAD.

The ePCR records were attached to the RMS unit records and included 8,174 unique patients. Only one ePCR record did not match the unit for an RMS incident. This is an excellent correlation coefficient.

Data Error Handling

Collecting data across datasets can lead to significant errors. Although there can be many reasons for incorrect information, these errors are typically a combination of human input and collection errors. There are various methods to manage these errors, including statistical exclusion, real-time exclusion, formula manipulation, and logic testing.

For BCFD4, the information in the data fields had minimal error-prone data. Therefore, most of the data did not require statistical intervention. However, some data was excluded by formula or logic tests. All time-segment math used a logic tree to eliminate negative and null sets. The turnaround time was limited to 20 minutes, as it was a natural break between meaningful data and the extremes beyond the maximum limit. In addition, BCFD4 unit travel time was limited to 45 minutes for all in-district responses, as this is approximately twice the computer-calculated estimated travel time from 113520 N. Harrington NE PR to 23509 N. Dallas Road.

Service Demand

The first dimension of the analysis is the overall system call load. Because this is a simple count of the incidents by type and location, no data was excluded after engineering. Therefore, the detailed data from the three previously discussed systems will be used for most aspects of this analysis, except for the volume projection, which adds 2018 information.

Volume Analysis

A simple volume analysis can indicate how often the District is called upon to respond to an incident. The first look is at overall call counts grouped by the primary categories listed in the National Fire Incident Reporting System (NFIRS). Establishing the incident jurisdiction required a match between the geocoded information and the provided geographic boundaries.

The following figure shows the total number of responses recorded by the agency across the entire data set and the percentage of categorized responses.

Figure 89: Total Incident Count

Incident (NIFRS Group)	Count	Percentage of Total Responses
District Responses		
Fire (100)	698	5.82%
Overpressure (200)	3	0.03%
Rescue-Medical (300)	7,785	64.88%
Hazardous condition (400)	116	0.97%
Service (500)	847	7.06%
Good Intent (600)	2,165	18.04%
False Alarm (700)	370	3.08%
Disaster (800)	8	0.07%
Special (900)	7	0.05%
Total BCFD4	**11,999**	**100%**
Mutual Aid		
Auto and Mutual Aid Received[A]	1,012	8.43%
Auto and Mutual Aid Given[B]	2,382	19.85%

[A] Aid received relies on correct crew input from 2/1/2019 – 3/25/2022, then CAD data is used.
[B] Based on geographic location, not RMS data.

While it appears that BCFD4 provides more aid than it receives, it should be noted that most of the aid received/aid given data in the RMS was problematic. Therefore, in the engineering and analysis phase, an aid given incident was based on its physical location on the map and was hence more accurate. Assistance received was based on whether an outside agency apparatus arrived on scene in those years for which CAD data was available. Before that, the analysis relies on the crew to appropriately document the aid portion of the incident.

Geographic Analysis

A call density analysis is helpful when reviewing the best location for apparatus placement. It is also useful for evaluating where prevention programs may have the most significant impact.

BCFD4 experiences its highest call volume in the downtown and older portions of the City of West Richland. The area directly around Station 420 is the busiest. Still, the entire incident distribution is then most dense in the area bounded by all three stations. The following figure shows the geographic distribution of incident density during the study period.

Figure 90: Incident Heat Map (2019 - 2024)

As indicated in the previous figure, incident density is concentrated in the area bounded by the stations. This area is primarily single-family residences. Call volume is mainly driven by the City's volume of emergency medical system (EMS) incidents.

The following figure is similar to the overall density but shows the EMS incident concentration for the same period.

Figure 91: EMS Incident Density (2019 - 2024)

This indicates a strong correlation between the EMS incidents and the total call volume. While this may give a general idea of where to focus medical prevention efforts, it does not address the more hazardous incident types.

The following figure is the incident density for fire incidents within the study period.

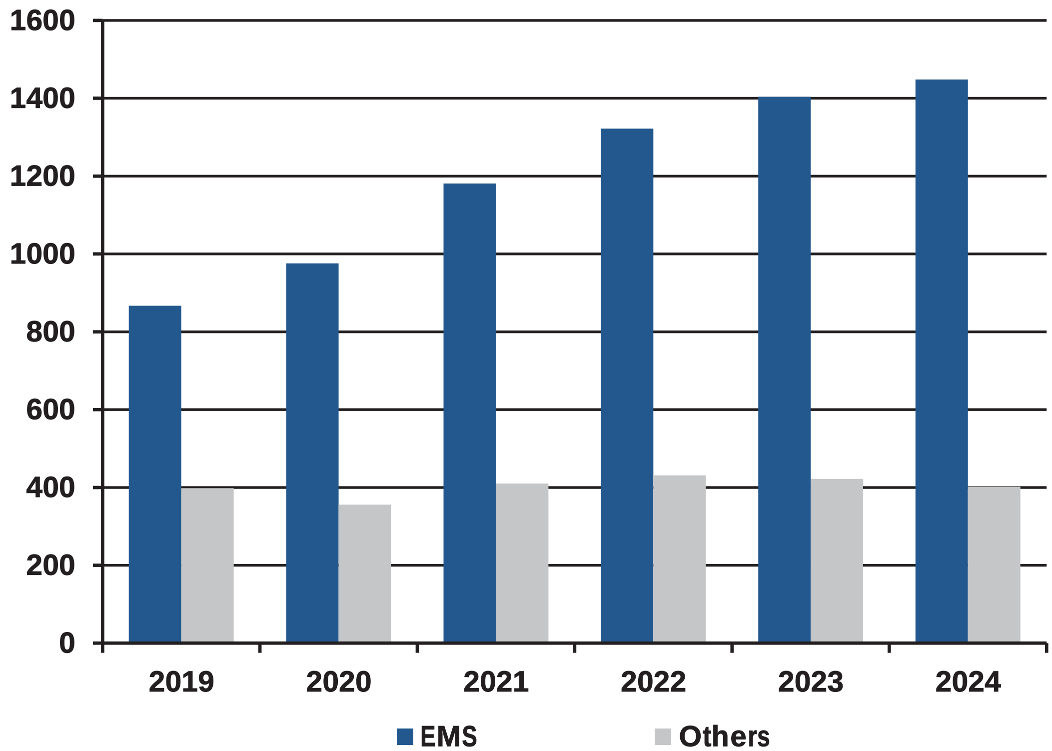
Figure 92: Fire Incident Locations (2019 - 2024)

Most fire incidents occur in more populated areas. Structure and vegetation fire responses readily happen within and outside the District boundaries. Because the area relies heavily on mutual support for incidents requiring more resources, the BCFD4 units respond to almost as many fire incidents within the District as outside.

Temporal Analysis

The annual incident count for BCFD4 has increased by an average of 8% annually. This is primarily driven by increased demand for medical care. The following figure shows the annual incident volume by EMS incidents and other types, within the District, for the entire study period.

Figure 93: Annual District Incident Volume (2019 - 2024)

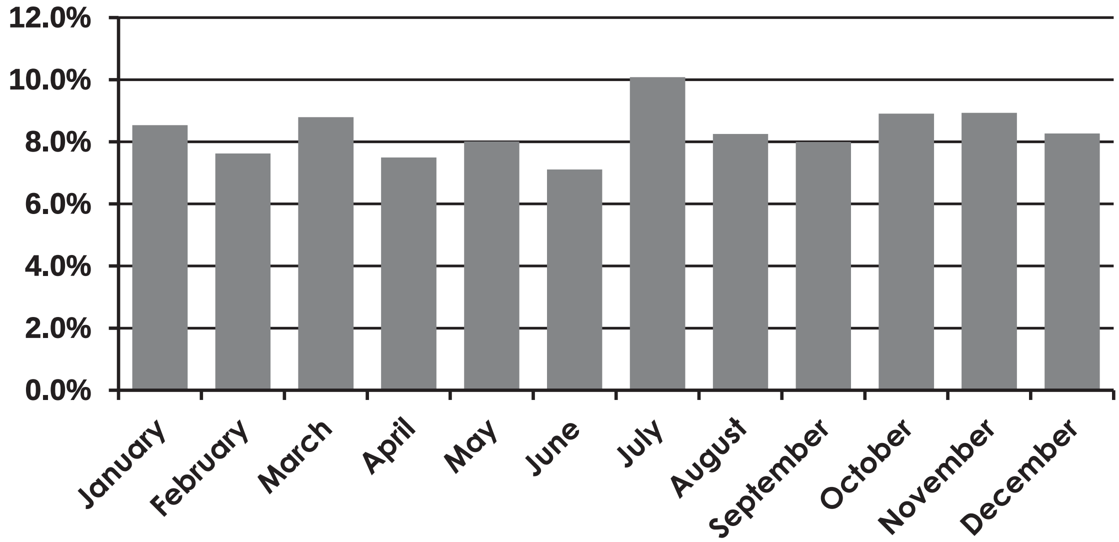


Interestingly, for BCFD4, the incident volume did not appear to be seriously affected by the COVID-19 pandemic. While there was a slight dip in 2020, it was less evident here than at other agencies.

Analyzing incident volume by month, day of the week, and hour is valuable when scheduling events or adding staffing. Additionally, months may reveal seasonality for the service needs. At the same time, days and hours may indicate the population movement and activities throughout the day.

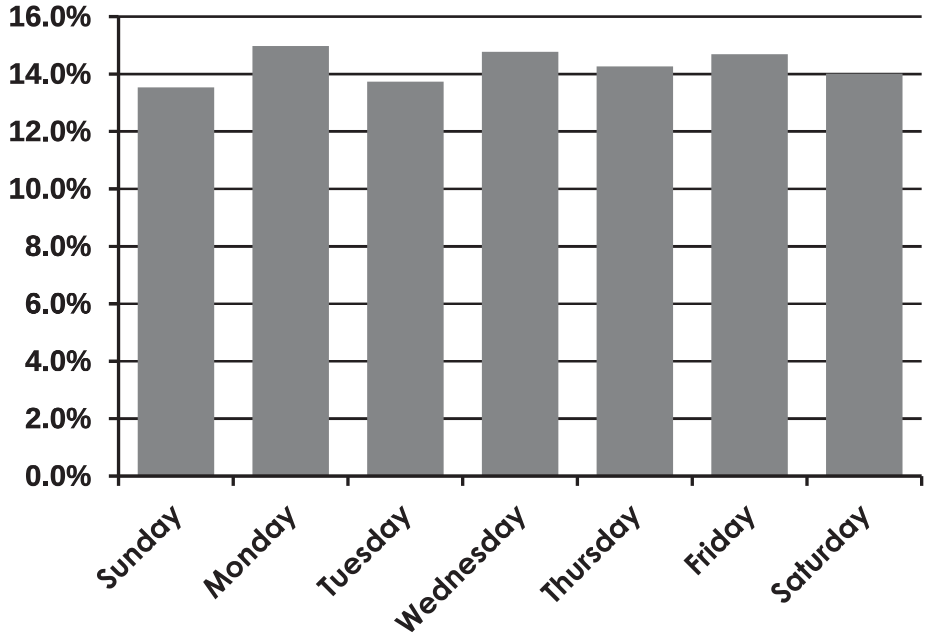
In an equal distribution by month, the percentage of incidents should range from 7.8% in February to 8.5% in those months with 31 days. While there is no significant seasonality in the BCFD4 incident volume, there is an evident swing in June and July. June has the lowest percentage expected, while July has the highest. The following figure analyzes incident percentages by month for 2019 through 2024.

Figure 94: Incident Volume by Month (2019 - 2024)



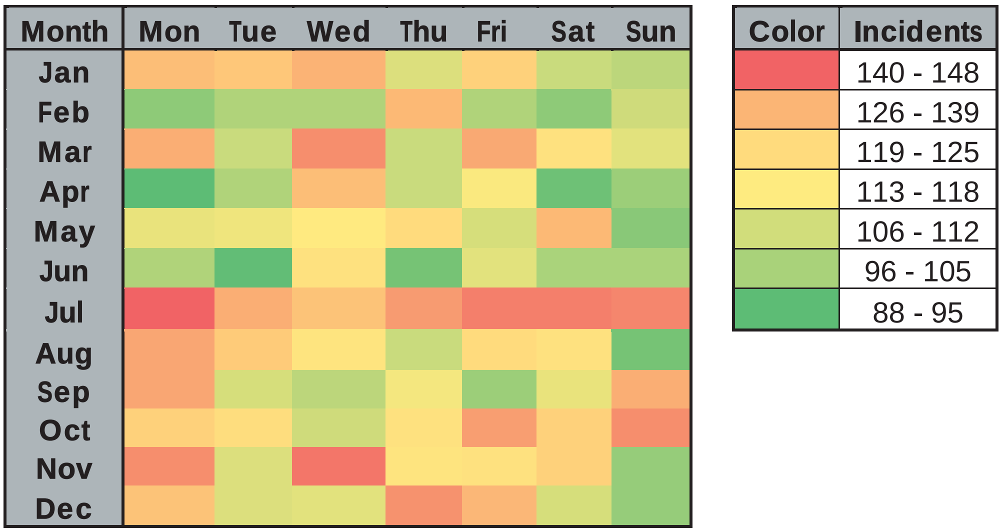
Another dimension of evaluation is the percentage of incidents that occur on each day of the week. For BCFD4, there is no significant difference between the days of the week. However, Sunday is the slowest overall. The following figure shows the percentage of incidents by weekday and includes all detailed incident data.

Figure 95: Incidents by Day of the Week (2019 - 2024)



It can be helpful to combine the month and day dimensions to identify potentially significant combinations of the month and weekday. In BCFD4, it becomes evident that Saturday and Sunday are consistently the lightest from January through June; July is high across the board; and only Sunday is slower from August through December. The following figure shows the monthly and weekday call volume from 2019 through 2024.

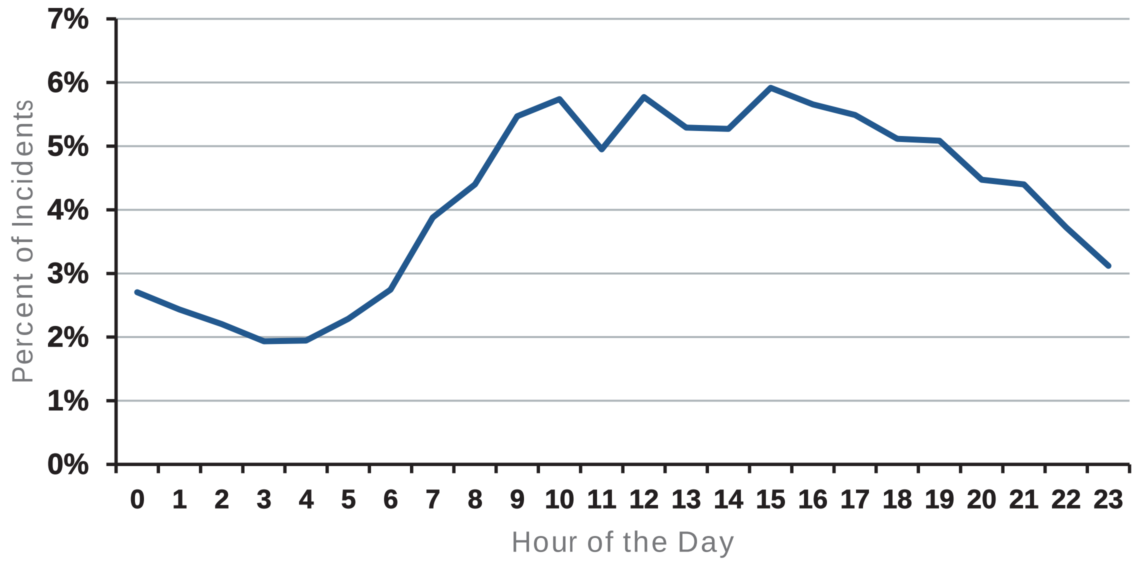
Figure 96: Month and Weekday Volume (2019 - 2024)



While there are some color variations in the chart, the overall difference between the colors is only 70 incidents. This difference is too limited to infer any significant variation in call volume.

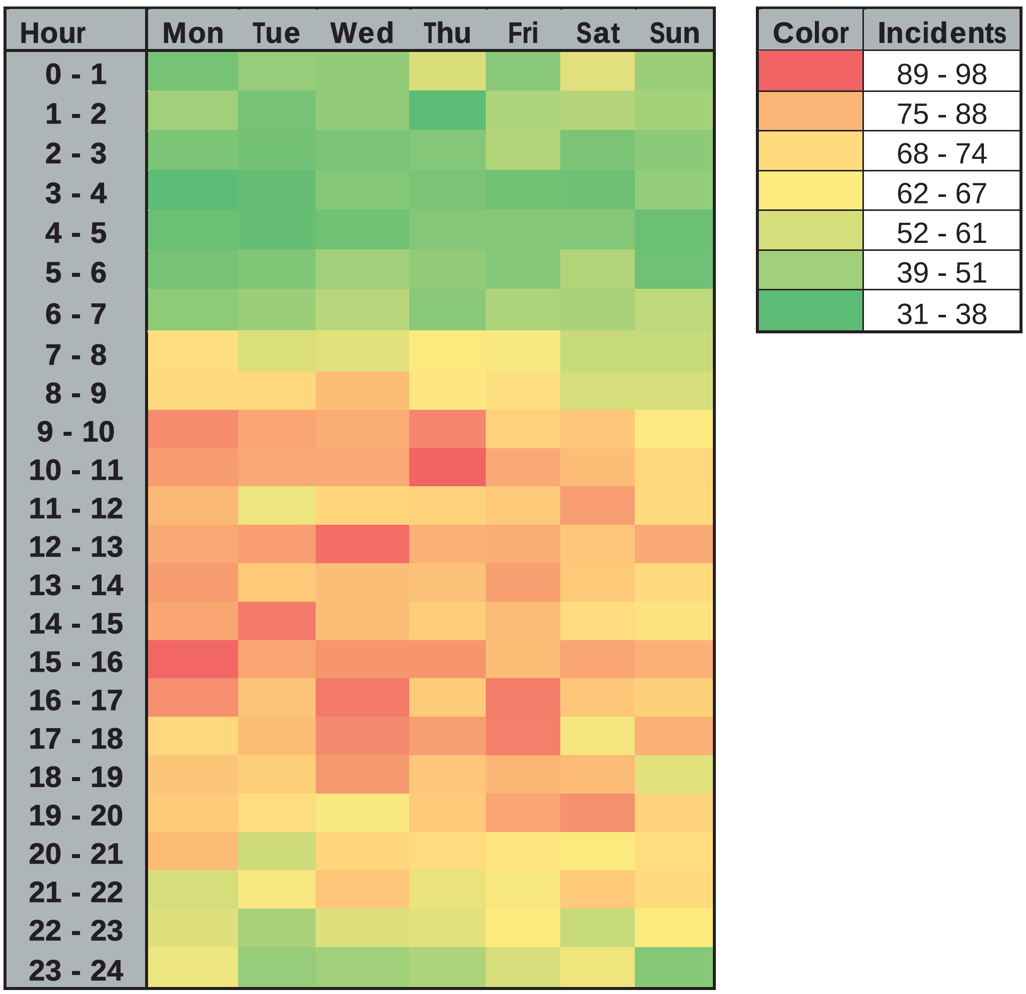
In most systems, fire and EMS incidents are distributed unequally throughout the day. The daytime is typically more active than the evening, night, and early morning. The driving force behind this phenomenon is likely that people are awake and moving. The following figure shows that BCFD4 closely follows this daytime pattern, with approximately 70% of incidents occurring between 8 am and 8 pm.

Figure 97: Incidents by Hour (2019 - 2024)



It is essential to understand the combination of the hour of the day and the day of the week. By evaluating the density, some hot-spot times can be identified. In BCFD4's case, the evaluation shows a consistent, statistically significant pattern of daytime calls across days of the week. It is challenging to infer whether the higher volumes during the overnight hours are substantial or just a function of the limited number of incidents when broken down into many layers. The following figure shows incident density by hour of day and day of week for all incidents between January 1, 2019, and December 31, 2024.

Figure 98: Incident Volume by Hour and Weekday (2019 - 2024)



Resource Distribution

Several key performance metrics help identify the effectiveness of resource distribution. A broad allocation of resources enables a more rapid first response in any given area. However, the first unit is only a portion of the deployment question. It is critical to have enough units to respond to the volume, type, and severity of incidents. It is also essential to attempt to equalize the unit responses.

Geographic Distribution Analysis

Units and stations should be distributed to increase the likelihood of reaching an incident at its earliest stages. There are two primary sources for performance standards that address this geographic distribution. Washington Survey and Rating Bureau (WSRB) primarily rates using distance, while the National Fire Protection Association (NFPA) utilizes time as a criterion. A full review of the current WSRB criteria was unavailable for this analysis. However, the agency did provide its 2023 WSRB report, which provided some guidance.

The WSRB uses 5 miles from a fire station as its standard maximum distance, although it allows a rating of "W" if it is between 5 and 7 miles.[35] Using all the BCFD4 stations, it is apparent that all accessible areas within the District fall within the 5-mile travel distance. This primarily holds true even if Station 410 is not staffed. However, some areas in the extreme north lack coverage if Station 410 is out of service.

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[35] www1.wsrb.com/blog/w-cllassifications

The following figure shows the 5-mile travel distance from a fire station.

Figure 99: WSRB 5-Mile Travel Distance (BCFD4 Stations)

For full credit in an WSRB Protection Classification , any building within the jurisdiction should be within 1.5 miles of an engine company and 2.5 miles of a truck company.[36] BCFD4 has an engine company out of each of its three stations. However, Station 410 may not be staffed during times of limited crew availability. BCFD4 also relies heavily on automatic aid from the surrounding stations. Therefore, to get a complete picture of the 1.5-mile engine

[36] WSRB Protection Classification Report for Benton County Fire District 4 (February 1, 2023).

company's performance, it is essential to evaluate the agency and its surroundings. The following figure shows the 1.5-mile travel distance from each station, which houses an engine company for the entire area.

Figure 100: 1.5 Mile Engine Travel, All Area Stations

The picture can't be displayed.

As is evident, there are areas within the center of the populated and the high-incident-volume regions that are not well covered. This is primarily due to areas of limited access from the north and west.

BCFD4 can only directly control the placement and use of its own resources. Therefore, to get a better picture of what is within its control, the same evaluation is used only for agency stations. This is completed for scenarios when both fully staffed and during Station 410 closures. The following figure shows both maps side by side.

Figure 101: Agency 1.5 Mile Travel Distances (with and without Station 410)

The WSRB judges specialized equipment, such as a truck company, separately from an engine company. While engine companies are typically found at most fire stations, truck companies are located only at specific stations. WSRB requires these truck companies to be within 2.5 miles of a structure requiring a fire flow of 4,000 GPB or is greater than 35 feet tall. Since BCFD4 runs one truck company from Station 430 and relies heavily on automatic aid, both the agency and automatic stations are included in this evaluation. In addition to BCFD4 Station 430, Richland Fire Department Station 75, and Benton County Fire District 2 Station 210is also included. As is evident, the more densely populated and higher incident-density areas of West Richland are not well covered by these specialty apparatus.

The following figure shows the 2.5-mile road travel from the area truck companies.

Figure 102: 2.5 Mile Truck Travel, All Area Locations

A similar evaluation for travel times is presented later in the time performance portion of this report. This allows for a closer correlation between performance possibilities and historical performance.

Unit Workload Analysis

Unit workload should be balanced to maintain readiness, resiliency, and service availability. While it is common for one unit to be busier than others, no crew should carry a load that is too heavy, as this would make them less effective.

Incidents by Unit

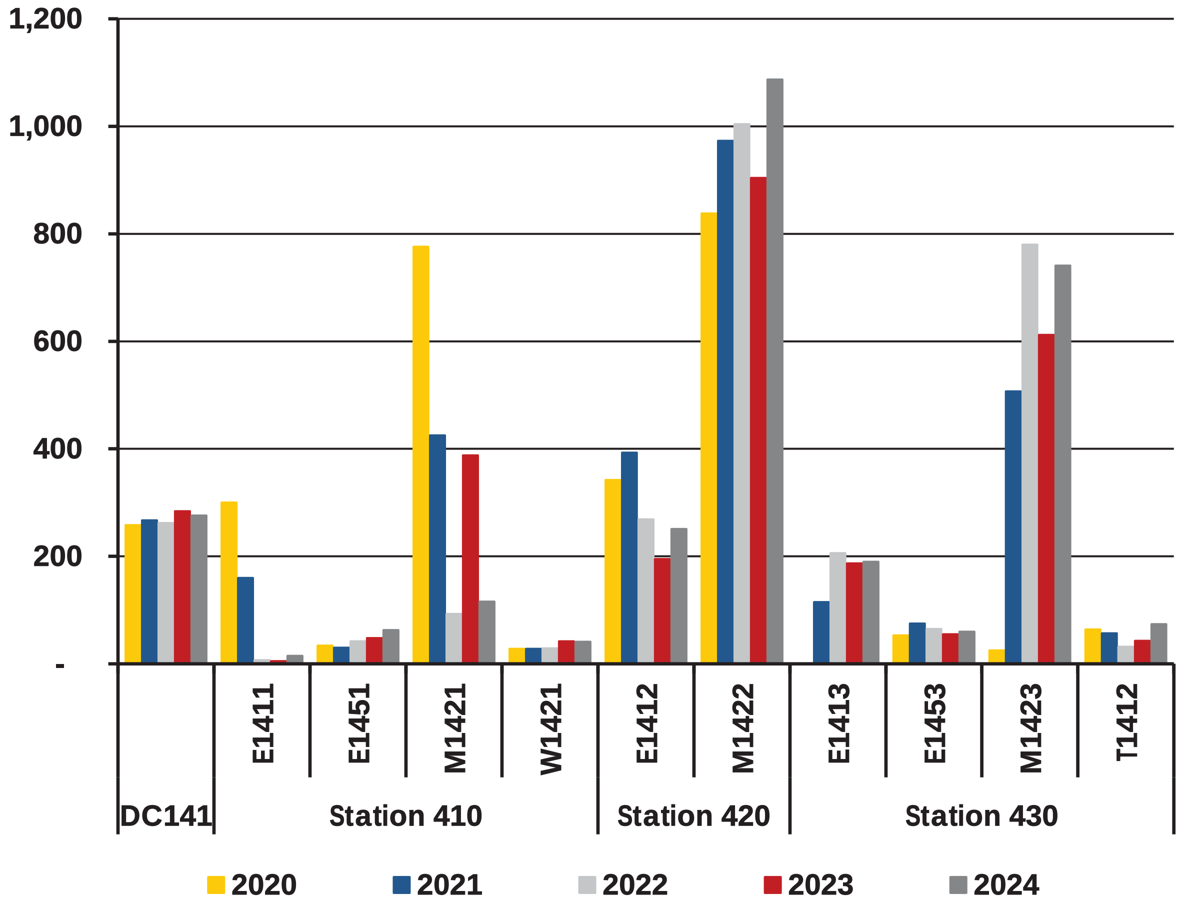
BCFD4 has three crews staffing several pieces of apparatus. The data showed that incidents were primarily covered by 11 unique units responding. The most common was the ambulances. The other typical units included the duty chief, different engine types, a tactical tender, and a tender. Other BCFD4 units had limited responses in the response data, including the department chief, utility vehicles, training, and medical officers. The ambulances account for over 65% of all responses, while different engines account for approximately 22%.

The following figure shows the top responding units within BCFD4 for 2019 through 2024.

Figure 103: Responses by Apparatus Type (2019 - 2024)

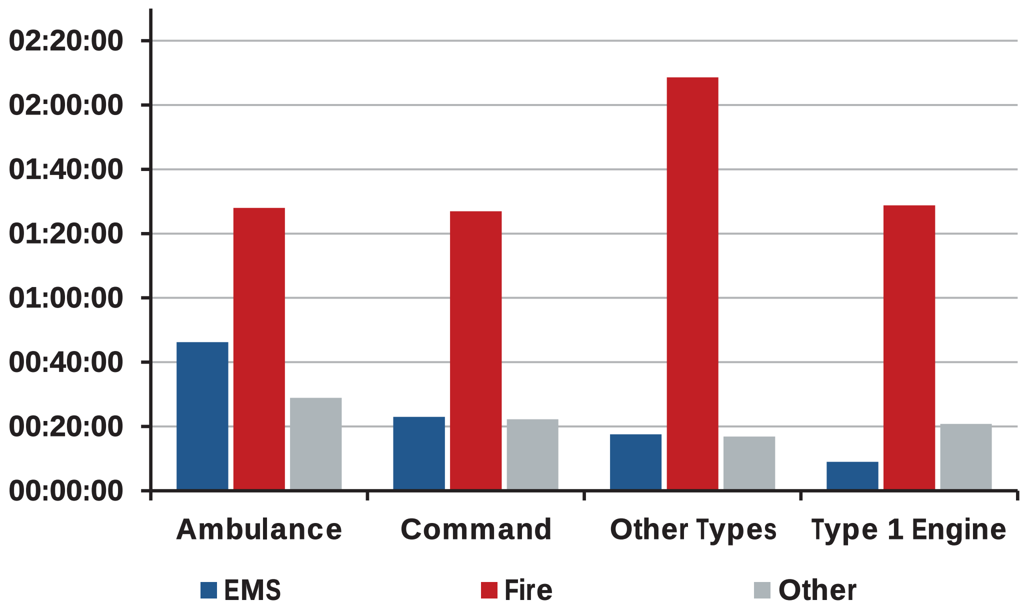
The workload is not evenly distributed across all the apparatus or crews. However, it is challenging to fully explore these differences annually, as staffing levels and deployments have changed over the years. It is easy to see that Station 420 receives the most responses, but each station is used at different times. Because the crew moves from apparatus to apparatus within the station, each unit in the following analysis is grouped by station rather than by type, as is typical for this type of study. The grouping is based on current deployment and may not accurately reflect the year of the aggregation. In addition, the years are limited to 2020 through 2024 due to apparent changes in deployment and to make the evaluation more straightforward. The following figure shows each apparatus response volume for each year in the study period.

Figure 104: Annual Responses by Unit (2020 - 2024)



Each incident requires a unit to remain on the scene to handle the situation. Therefore, a general idea of how long a specific crew will stay on the incident can assist operational planning. The units for BCFD4 were grouped by ambulance, type 1 engines, command officers, and then all others. Type 1 engines are evaluated separately from the other unit types, as they are the most flexible units in a fire service arsenal. The following figure shows the average time each apparatus type was committed to a given incident category for the entire study period.

Figure 105: Average Time of Apparatus Commitment



One final dimension of unit workload is the amount of time each unit is assigned to incidents throughout the year. The unit hour utilization (UHU) calculation measures the time a crew is committed to an incident relative to the total time on duty during a specific time frame. The formula for this calculation is the total time committed to an incident divided by the sum of all the time the unit is staffed.

$$UHU = \frac{\sum Time\ Commited\ to\ a\ Scene}{\sum Time\ Unit\ is\ Staffed\ and\ In\ Service}$$

Because the operational hours of each station were not available, BCFD4's primary units were evaluated under the assumption that each station was staffed 24 hours per day. The desire is for the station, typically assessed by the most flexible units such as an engine or quint company, to be under 10% UHU. Maintaining 10% UHU should indicate the area has 90% availability from unscheduled events. When evaluating BCFD4, each station was treated as the primary unit type because the station crew staffed all apparatus.

Another aspect of this analysis is to determine whether a crew is overworked. Due to the ancillary work crews must accomplish and given that the personnel should be able to rest and eat, a 24-hour shift unit should not have a UHU above 45%. Any 24-hour crew approaching 30% should be evaluated to determine whether they are receiving sufficient training, rest, and fitness time to prevent burnout.

Given the availability of responders, BCFD4 could be considered a busy system, with the incident workload unevenly distributed. While none of the crews are reaching or exceeding 30% UHU, the system's resiliency and reliability may be in question. Both Station 420 and 430 crews are busier than the expected 10%, leaving the area uncovered for more than the optimal 90% of the time. The following figure shows the UHU for each station, with specific information for each apparatus.

Figure 106: Station and Unit UHU (2023 & 2024)

Unit	Average	2024	2023
CH141	0.3%	0.2%	0.3%
DC141	1.9%	1.9%	1.9%
UT141[A]	4.3%	4.3%	0.0%
E1451 (Aid Given)[B]	6.7%	5.7%	1.0%
E1453 (Aid Given)[C]	1.1%	0.6%	0.5%
STATION 410 (OVERALL)	**3.9%**	**2.7%**	**5.1%**
M1421	2.4%	1.3%	3.5%
E1411	0.1%	0.1%	0.2%
W1421	1.0%	1.1%	1.0%
E1451	0.4%	0.3%	0.4%
STATION 420 (OVERALL)	**10.5%**	**11.6%**	**9.3%**
M1422	8.9%	9.9%	7.9%
E1412	1.6%	1.7%	1.5%
STATION 430 (OVERALL)	**10.3%**	**10.7%**	**9.9%**
M1423	6.7%	7.6%	5.9%
E1413	1.4%	1.4%	1.4%
E1453	0.5%	0.2%	0.7%
T1412	1.1%	1.1%	1.0%
RB141	0.4%	0.3%	0.6%

[A] UT141 had 3 Aid Given Incidents in 2024 for an average of 5 days each.
[B] E1451 Aid responses for 2023 averaged 5 hours, and 14 in 2024.
[C] E1453 Aid responses for 2023 averaged 2 hours, and 1 in 2024.

There was not enough information in the data to determine whether Engine 1451 or 1453 was on deployment or working as part of the crew. It was decided to move the aid-given responses out of the station percentages to identify this trend and avoid penalizing the crew if the on-duty personnel were not assigned to the apparatus. In addition, due to noticeable deployment changes over the years, the data was limited to 2023 and 2024.

Because the UHU is a correlation of crew burnout, it should be noted that it is only for the time in service during an incident. Not all crew work time is captured in the UHU measure. Crews may be out of service for maintenance, training, or other events that do not appear in this analysis. In general, approximately half of a crew's day is spent in administrative or recovery activities. For example, assuming the crews are allowed eight hours of rest and recovery a day, two hours for meals, and two hours for station, equipment, and vehicle maintenance, that totals twelve hours. Additional time is customarily devoted to physical fitness, training, and public events.

Concurrency Analysis

Simultaneous incidents can affect an agency's ability to respond. While BCFD4 makes good use of the automatic aid throughout the area, the District's limited resources can call into question the overall system's resiliency.

The first dimension of the concurrency evaluation is how often, within BCFD4's primary jurisdiction, there is more than one incident at any given time. In this evaluation, an incident is counted as concurrent if it starts before another incident ends. All in-district responses are counted. The following figure shows how frequently multiple incidents happen simultaneously in the district.

Figure 107: Jurisdictional Concurrency (2019 - 2024)

Incident(s) Operating	Occurrence Percentage
One	87.1%
Two Simultaneously	12.2%
Three or More	0.7%

As is evident, BCFD4 commonly runs at least two calls at a time, requiring at least two crews to intervene. However, the jurisdictional issue is not a holistic picture for BCFD4. The agency responds outside the district as part of the area's automatic aid system. The following figure shows how often BCFD4 is used across multiple incidents during the response system.

Figure 108: All Concurrency (2019 - 2024)

Incident(s) Operating	Occurrence Percentage
One	83.7%
Two Simultaneously	14.8%
Three Simultaneously	1.2%
Four or More	0.3%

Another factor in unit workload is the number of units assigned to a specific incident. The majority of BCFD4 incidents, over 82% percent, are accomplished by either one or two companies. The following figure shows the percentage of incidents for which the specified number of assigned response units.

Figure 109: Multiple Units on the Same Incident (2019 - 2024)

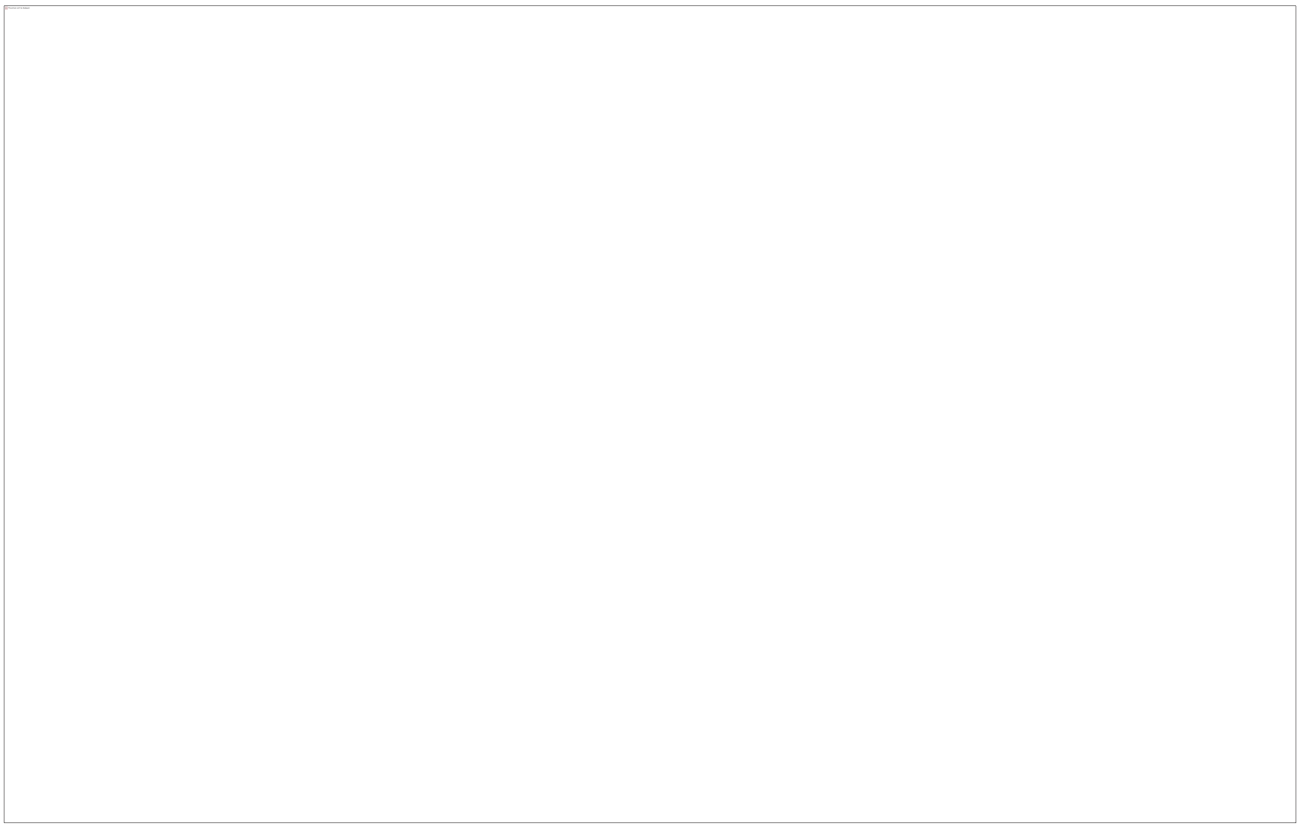
Incident Operating	Occurrence Percentage
One	43.5%
Two	39.0%
Three	7.0%
Four	5.7%
Five or More	4.8%

Performance Review

When evaluating a system, it is helpful to have a set of objectives or standards to judge performance against. BCFD4 has not adopted any standards to date, which may run contrary to the Revised Codes of Washington (RCW), depending on whether the agency considers itself substantially career or mostly volunteer. Therefore, to frame the discussion on performance, the National Fire Protection Association (NFPA) standards will be utilized as a reference where appropriate. This will include the NFPA 1710 *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Districts* (NFPA 1710). It will also include portions from NFPA 1225 *Standard for Emergency Services Communications* (NFPA 1225).

Evaluating overall performance requires an understanding of the lifecycle of an incident. It starts in a normal state and should end in a new normal state, but there are many measurable time intervals in between. Some elements, such as call processing time and turnout time, can be improved by tactical management techniques such as training and policy. However, other time-based performance metrics, such as travel time, are typically managed through strategic approaches, such as station location. The following figure identifies each time segment in the incident lifecycle.

Figure 110: Incident Lifecycle



The incident data provided did not allow for analysis of all time segments in the above list. However, the provided information enabled evaluation of call processing, turnout, travel, and total response time. The dispatch center adopted NFPA 1225. However, as identified, the agency has not formally adopted any performance standards. Because of this, NFPA 1710 standards are used as references here.

The following figure shows each time segment, the referenced standards, and the most influential organizational actions.

Figure 111: Incident Segment Key Performance Indicators

Incident Segment	Primary Agency Influence	Standard	Benchmark
Normalcy	Prevention	Local Codes & Ordinances	Community Risk Assessment
Discovery	Public Education		**TBD**
Notification	Public Education		**TBD**
Call Answer[A]	Dispatch Staffing, Systems, Policy, & Training	NFPA 1225	15 Sec 90th Percentile 20 Sec 95th Percentile
Call Transfer			30 Sec 90th Percentile
Call Processing			60 Sec 90th Percentile (priority)[B]
Turnout Time	Station Design, Policy & Training	NFPA 1710	60 Sec 90th Percentile (EMS) 80 Sec 90th Percentile (Other)
Travel Time (1st Due)	Station Location, Systems, & Training		4 Min 90th Percentile
Travel Time (2nd Due)			6 Min 90th Percentile
Travel Time (ERF)			8 Min 90th Percentile (Low or Moderate Risk) 10 Min 10 Sec 90th percentile (High Risk)
Action Initiation or Patient Contact	Station Location, Systems, Staffing, & Training		**TBD**
Control/Mitigation			**TBD**
Recovery	Prevention & Public Education	Updated Codes & Ordinances	Community Risk Assessment
New Normal	Prevention	Local Codes & Ordinances	Community Risk Assessment

[A] Applies to both PSAP and Secondary Answering (Agency) Dispatch Centers
[B] Non-Priority Incidents are exempt from NFPA 1225. The expectation is for agencies to set standards.

To allow BCFD4 to evaluate its performance against these standards, all performance will be measured using percentiles.

Call Processing Analysis

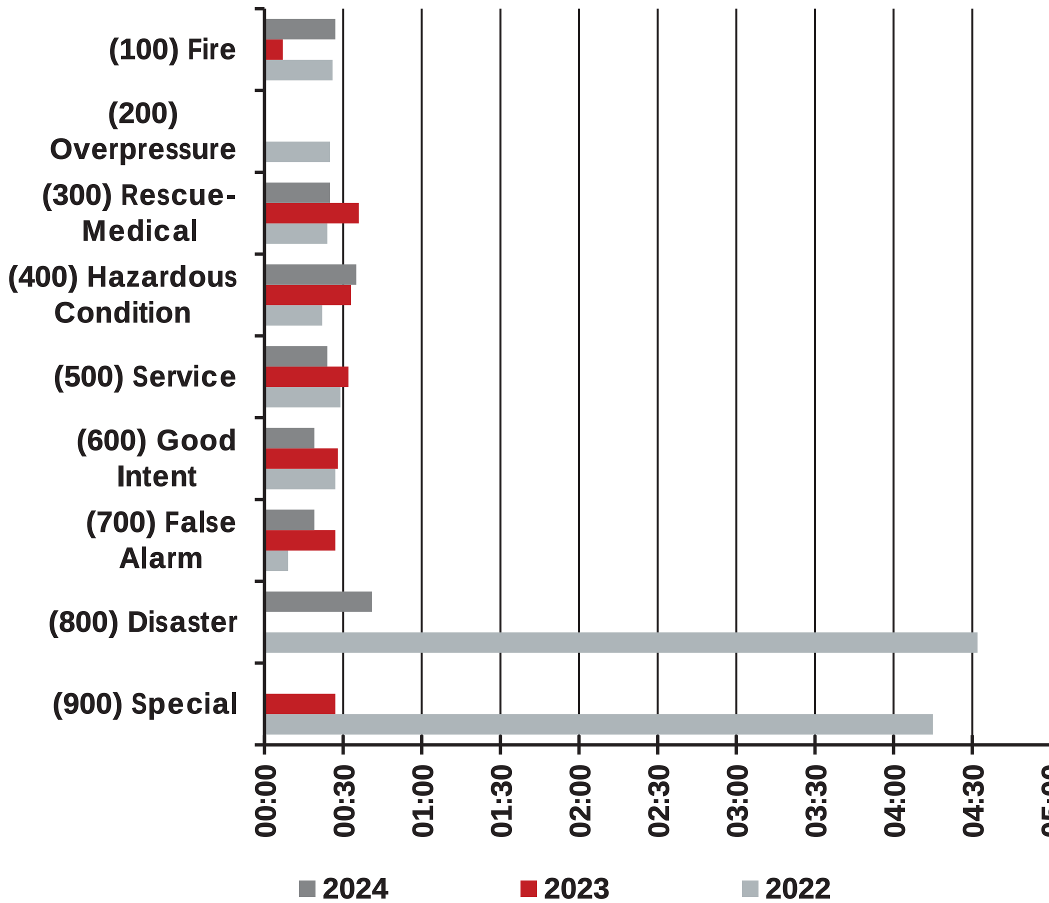
There are several time measures of a dispatch center. The metrics identified in NFPA 1221 and NFPA 1710 are ring time and call processing. Ring time measures the time from when the phone in dispatch begins to ring until someone answers. NFPA 1221 requires the ring time to be less than 15 seconds 90% of the time and less than 20 seconds 95% of the time. Call processing is the time from when a person answers a call for help until the first unit is notified of an incident. Unfortunately, ring time is typically captured in a separate system and was unavailable for this report. However, sufficient data were available to evaluate call processing.

Call processing should start from the time the phone is answered until the first, preferably correct, unit has been notified that an incident is in progress. However, there is typically a short period, usually seconds, from when the phone is answered, and the incident is started in the computer-aided dispatch system. The earliest timestamp in the CAD data provided was the "Address Confirmed" timestamp. While this is not necessarily the earliest contact with the caller, it is the earliest timestamp in the data and a good starting place for the incident. For this analysis, it is assumed that this short period, while not captured, is inconsequential. The NFPA 1225 standard indicates that a high-priority incident should be processed within 60 seconds 90% of the time. NFPA further defines specific call types where this standard does not apply. These incident types include those requiring emergency medical questioning, hazardous materials incidents, and technical rescue incidents. Additional time is also allowed for persons needing translation, calls from devices used by hard-of-hearing individuals, text messages, and calls requiring location determination.

The data provided was evaluated and, although it began in March 2022 rather than January 2019, appeared correct and complete. Of the over 6,300 incidents provided, 5,152 were assessable, yielding a data reliability of 81%. The data indicates that calls are processed in 24 seconds or faster 90% of the time. If true, this time span from address verification to the first unit notified performance is fantastic. The two NFIRS categories that appear to have extended times include the special and disaster categories. However, this is likely due to limited data in those groups and the difficulty in obtaining rapid information during these incidents.

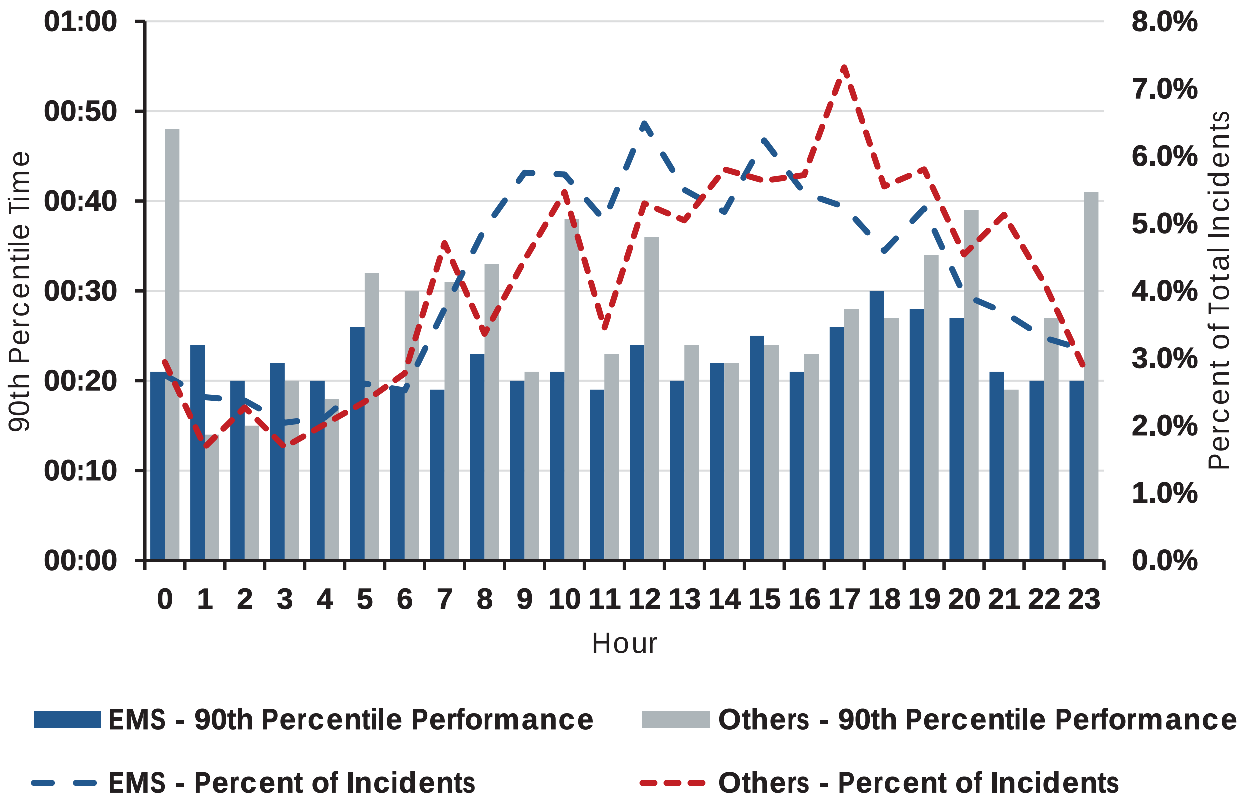
The following figure shows the call processing time at the 90th percentile, grouped by NFIRS incident type, for March 2022 through December 2024.

Figure 112: Call Processing by NFIRS Category (2022 - 2024)



Another dimension of the call processing time is how incident workload affects dispatch center performance. Again, the center appears to manage the workload well, and the call processing time is consistent by the hour. The following figure shows the call processing times for medical incidents and all other incidents by hour of day, with the call load shown as a reference.

Figure 113: Call Processing by Hour (2022 - 20024)



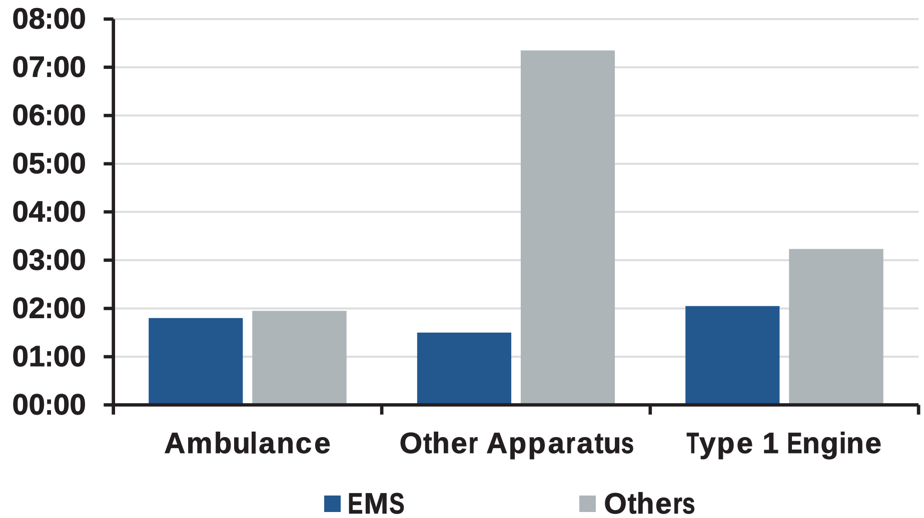
Turn Out Time Analysis

Turnout time is the time between when the unit is notified of an incident and when it begins responding. NFPA 1710 indicates the performance measure for this time segment is 60 seconds for medical incidents and 80 seconds for fire incidents. This generally means that, for this analysis, incidents will be grouped into EMS incidents and all others.

Data analyzed for statistical reliability returned over 16,000 unit records that could be measured. This represents over 79% of the recorded information, slightly better than the typical reliability for this data point. In addition, to ensure the responding crew faced an urgent situation, only non-cancelled incidents within the jurisdiction that the unit responded to emergently were evaluated. Overall, BCFD4 crews have a turnout time of 2 minutes and

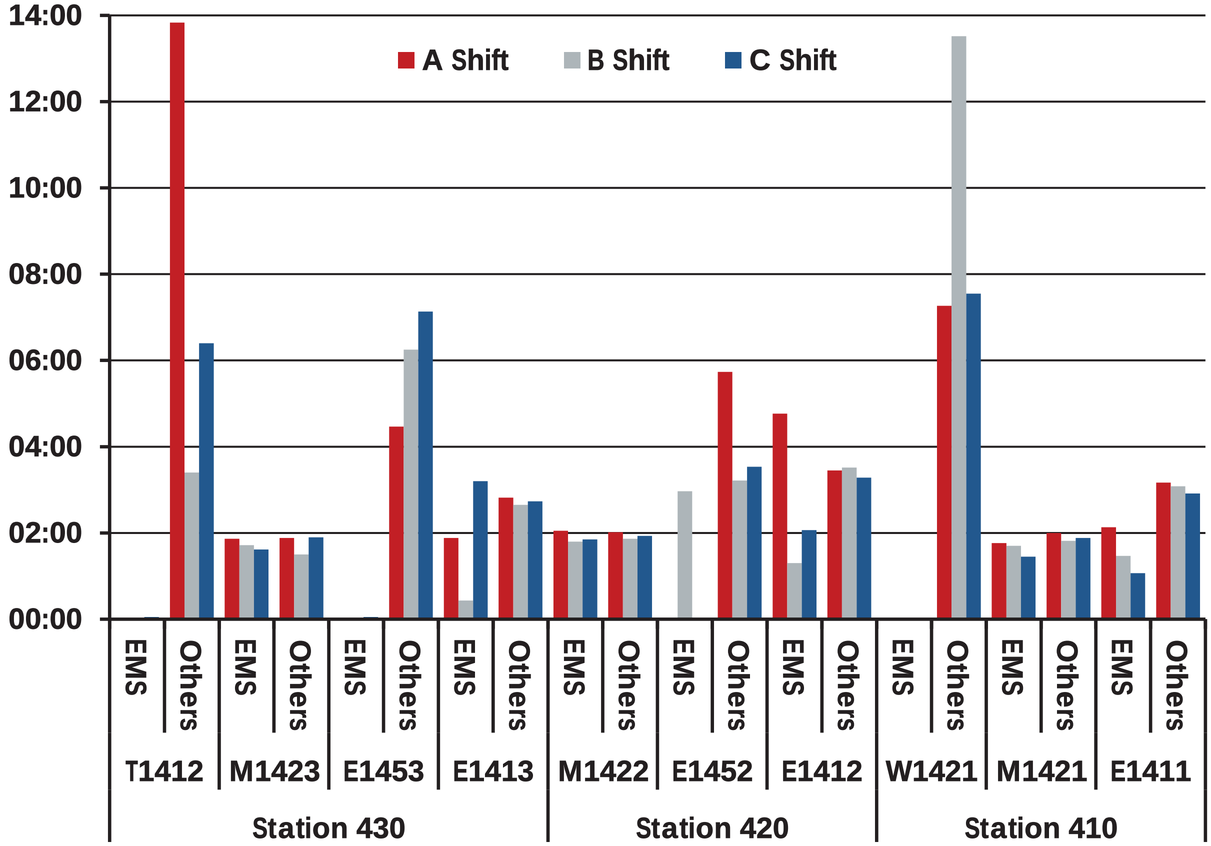
11 seconds or better 90% of the time. The following chart shows the turnout times by unit and general incident types.

Figure 114: Turnout Time by Apparatus and Incident Type (2019 - 2024)



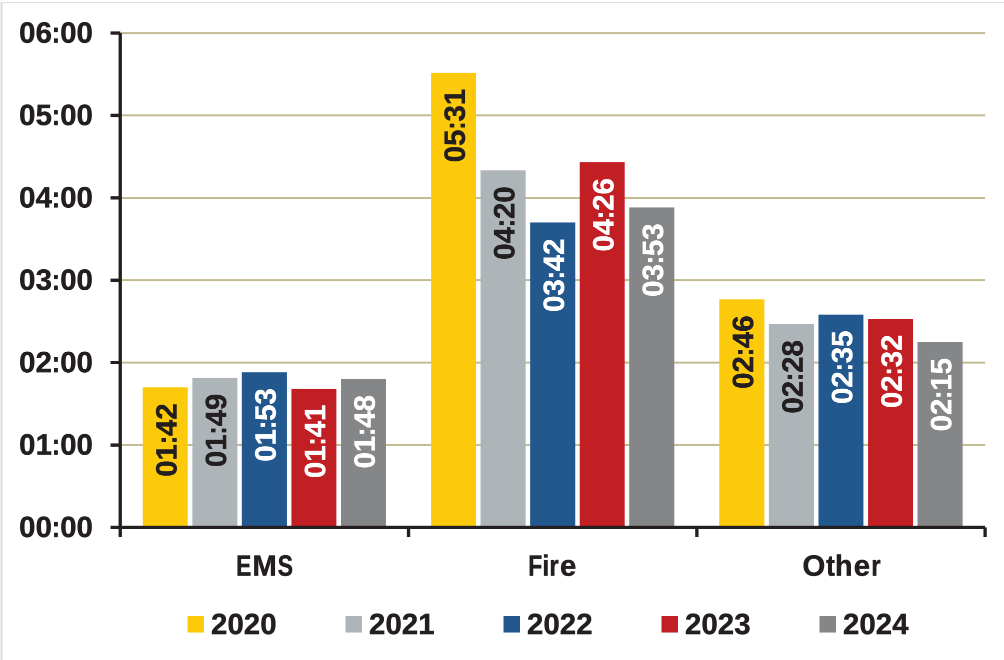
Each station is staffed with one of three shifts, each with its own better turnout methodologies. The following figure shows the 90th percentile turnout time for each staffed unit, grouped by shift and general incident type.

Figure 115: Turnout time by Apparatus, Shift, and Type (2019 - 2024)



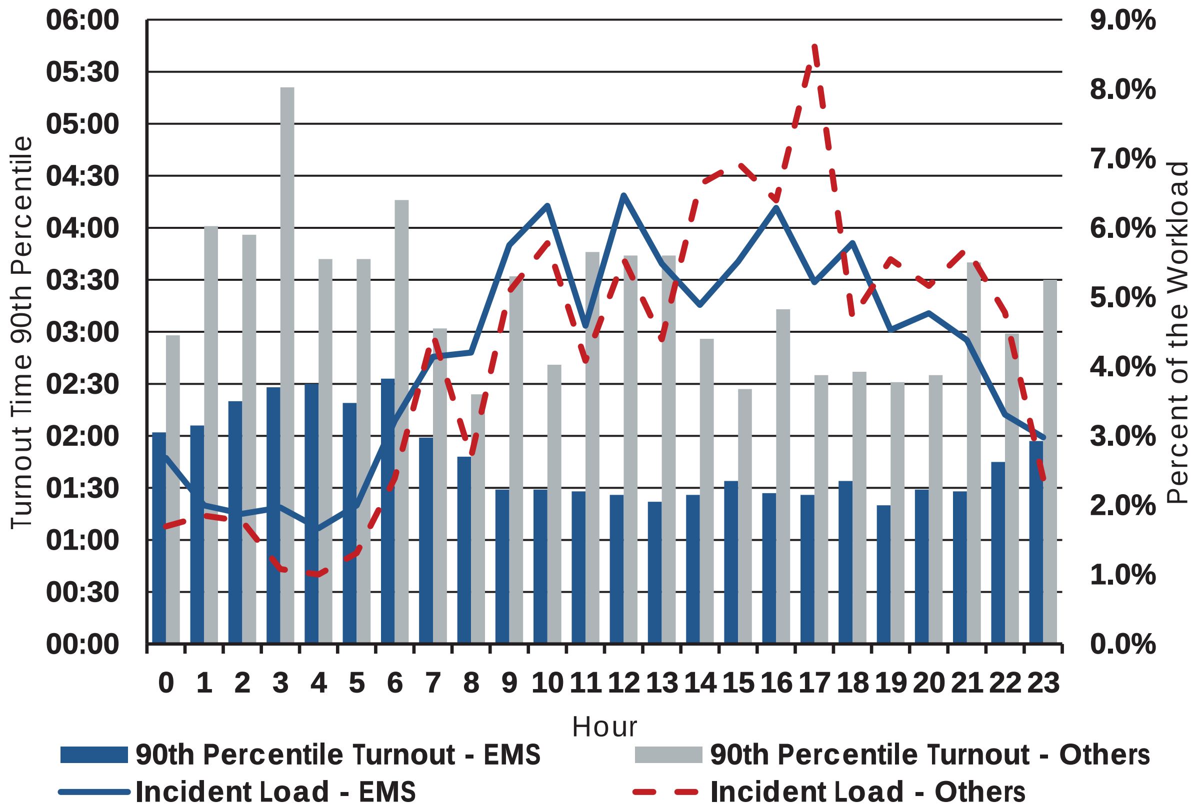
The overall turnout time by year has remained steady except for the fire category, which appears to have improved. For the annual turnout evaluation, 2019 was omitted to enhance the presentation of the data. The following figure shows the overall turnout time by general category and year.

Figure 116: Annual Turnout by Category (2020 - 2024)



One final dimension of the turnout time analysis is the changes in the percentile by the hour of the day. Since BCFD4 staffs their units 24 hours a day, it is expected that crews can try to sleep at night. However, sleep status can affect turnout time, as personnel may require additional time to reach apparatus and initiate response. The following figure shows the turnout percentile by the hour of the day, with the workload by general incident type added for reference.

Figure 117: Turnout Time by Hour (2019 - 2024)



It is interesting to note the inverse pattern of turnout times and workload. This phenomenon is common in agencies with lower call volume at night. This can be explained by crews resting and fewer incidents to analyze. A limited data set is typically much more susceptible to time extremes.

Travel Time Analysis

NFPA 1710 lists several travel time requirements for apparatus. The first defined travel time is the first unit, either an engine or a truck, that can operate as an engine for four minutes. The second-due engine should have a travel time of six minutes, and the first alarm to arrive within eight minutes for a moderate-risk structure fire.[37] NFPA historically defined ALS travel time as eight minutes. However, the new standard leaves that up to the authority having jurisdiction.

Travel time is the difference between when the apparatus checks enroute and when it arrives on scene. As BCFD4 aggressively utilizes automatic aid, the first analysis is the four-minute travel time for each of the closest area stations, including all BCFD4 stations.

[37] National Fire Protection Association. Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Districtss.2020) [Appendix D].

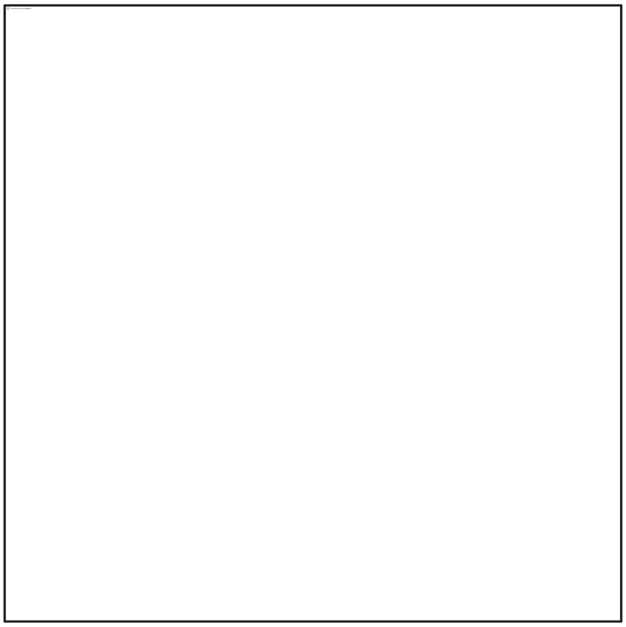
The following figure shows the predicted four-minute travel time from each location.

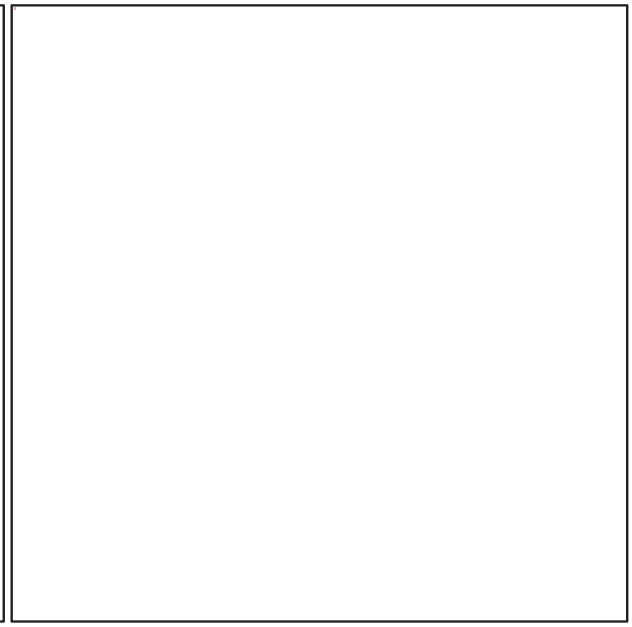
Figure 118: 4-Minute Travel, All Nearby Stations

The picture can't be displayed.

In theory, the distribution of resources is appropriate for the area. Some areas struggle, notably those towards the edges of the District and along the highway. As with travel distance, looking specifically at travel time for BCFD4 stations is essential. The following figure shows the four-minute travel time for District stations, one with and one without Station 410.

Figure 119: 4-Minute Travel, Agency Stations





While it may appear there is little difference with or without Station 410, this is primarily due to the lack of roads. As that area builds out, possibly with the Lewis and Clark development, this analysis will need to be repeated. Much of the District's northern half struggles to meet the NFPA 1710 recommendation for a 4-minute travel distance.

The second model assumes a travel time of eight minutes. The reason for this is twofold. It allows the agency to assess the potential performance of stations with extended travel, perhaps as backup stations, and to estimate a station's ability to support the total staffing needs. This is the beginning of evaluating the concentration of units. Distribution indicates how fast a single resource can arrive. In contrast, concentration is a function of the number of responders that can be assembled. The following figure shows the 8-minute travel time from all area stations.

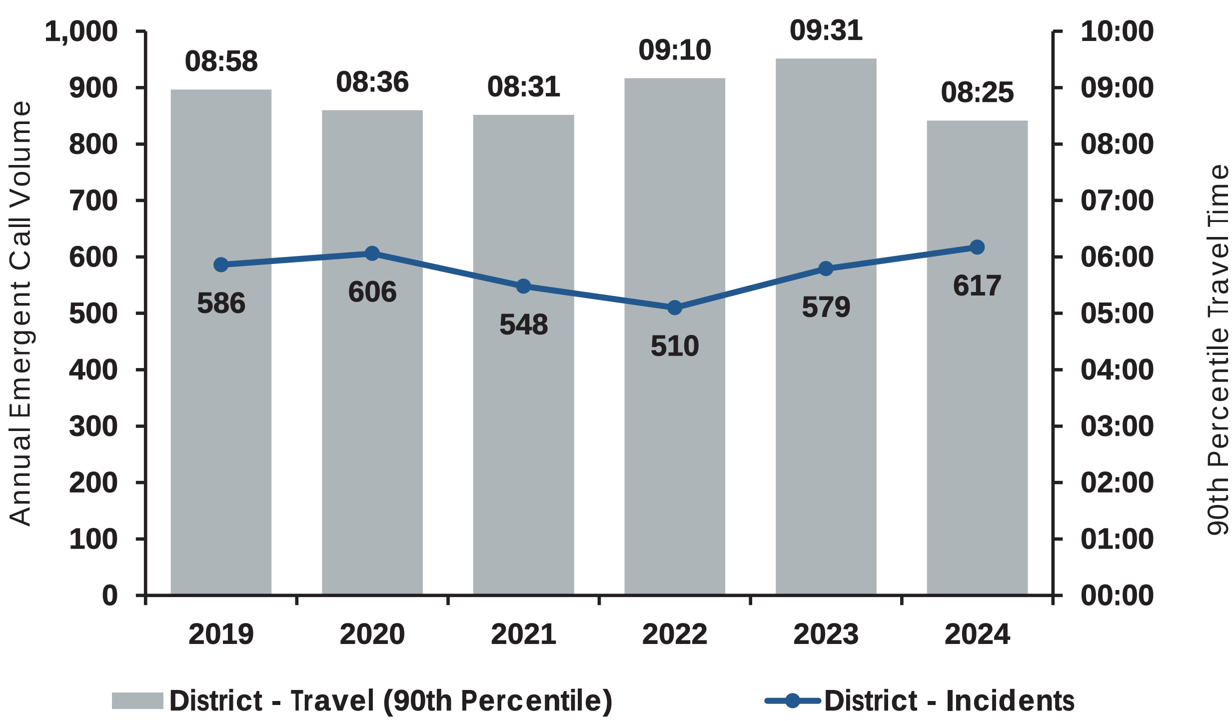
Figure 120: 8-Minute Coverage, All Area Stations

Unlike the 4-minute travel, looking at the District alone will provide little clarity. The coverage throughout the District is similar, and this analysis is primarily driving the complete staffing picture later in the document. Since BCFD4 would not be able to field enough career staffing to respond to a moderate-risk structure fire without neighboring agencies, analyzing all stations is required.

First Due Apparatus

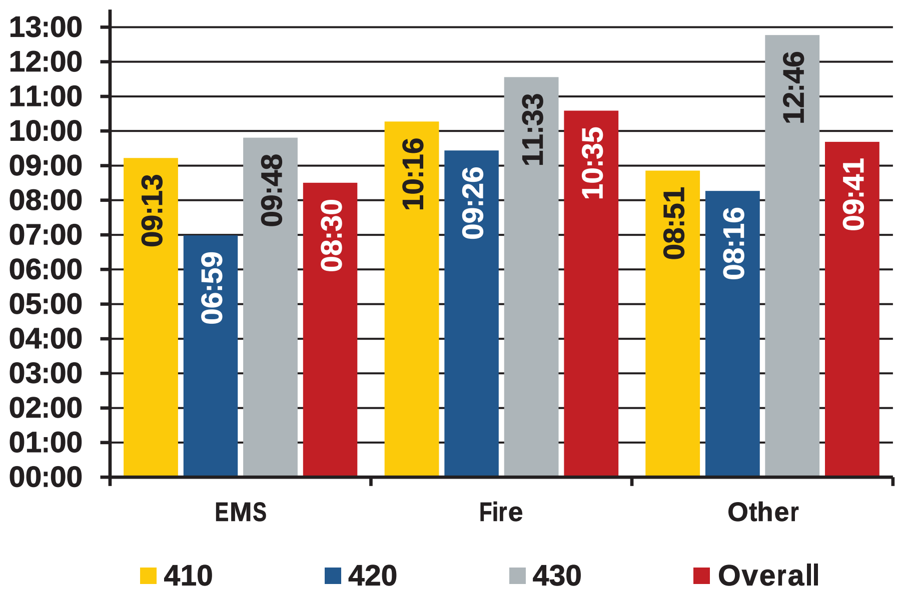
The data allowed for a total of 3,339 emergent responses within the District to be evaluated for first-due performance. Overall, the first due travel time performance for BCFD4 is 8 minutes and 53 seconds or faster 90% of the time. Evaluating this performance from multiple perspectives can help the agency better understand what drives this performance metric. The first is to see how the annual performance changes. In BCFD4's case, the time has remained relatively consistent. It ranges from 8 minutes 25 seconds to 9 minutes 31 seconds. This is an expected range given the fewer than 1,000 records to evaluate. The following figure shows the first-due, emergent, in-district travel time for each year in the data.

Figure 121: Annual First-Due Travel Performance (2019 - 2024)



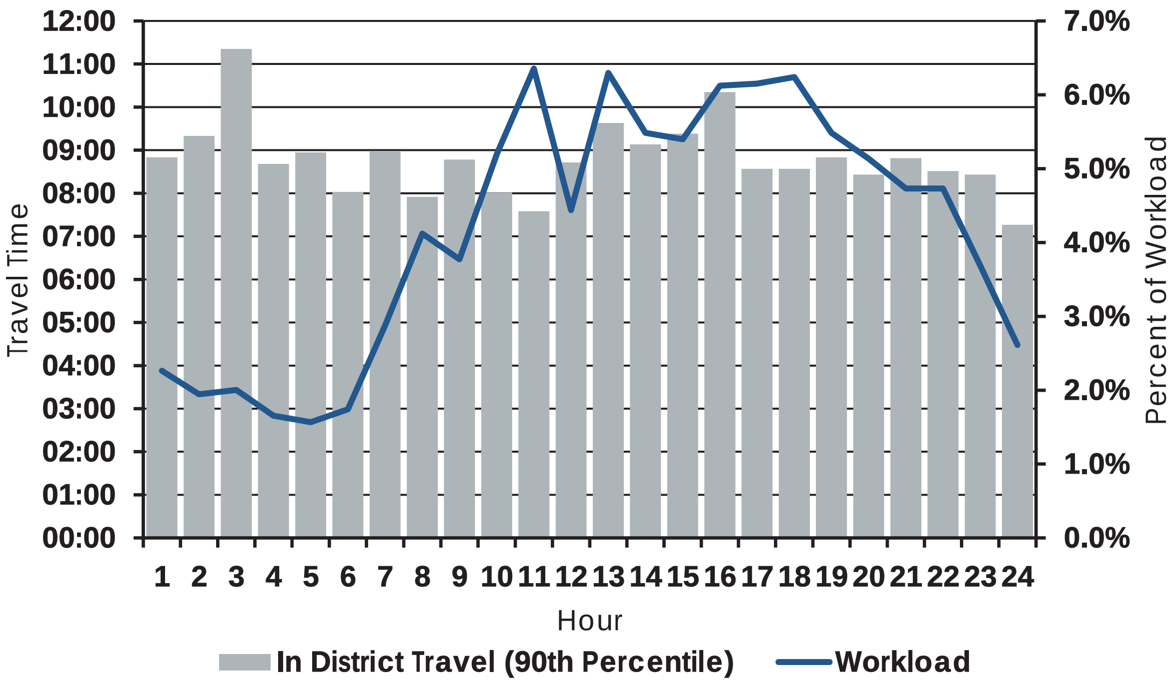
Each station has a specified response zone identified by the agency and dispatch. Each incident was geocoded to these response zones and evaluated independently. In this case, Station 420's zone had the best performance, while the other two zones were minutes worse, with Station 430's area slightly worse. The following figure shows the first due, emergent, 90th percentile performance by station zone and incident group.

Figure 122: First-Due Travel by Station Area (2019 - 2024)



Time of day can have an enormous impact on travel times. Travel time can vary depending on crew readiness, traffic patterns, apparatus positioning, and incident volume. Nevertheless, BCFD4's travel times throughout the day remain relatively consistent. The following figure shows the first-due travel times by the hour, with the workload for reference.

Figure 123: Travel Time by Hour (2019 - 2024)



Effective Response Force

The second dimension of the travel time analysis is how well the effective response force (ERF) required for a given incident type can be assembled. ERF varies with the complexity and resources needed for any given incident. It can range from a single unit to multiple apparatuses with specialty equipment. For BCFD4, the two most common moderate-risk ERFs measured are EMS and a structure fire. EMS requires five personnel to arrive to complete the ERF, while a structure fire requires fourteen. The following figure shows the predicted staffing assembly within eight minutes utilizing BCFD4 and neighboring stations.

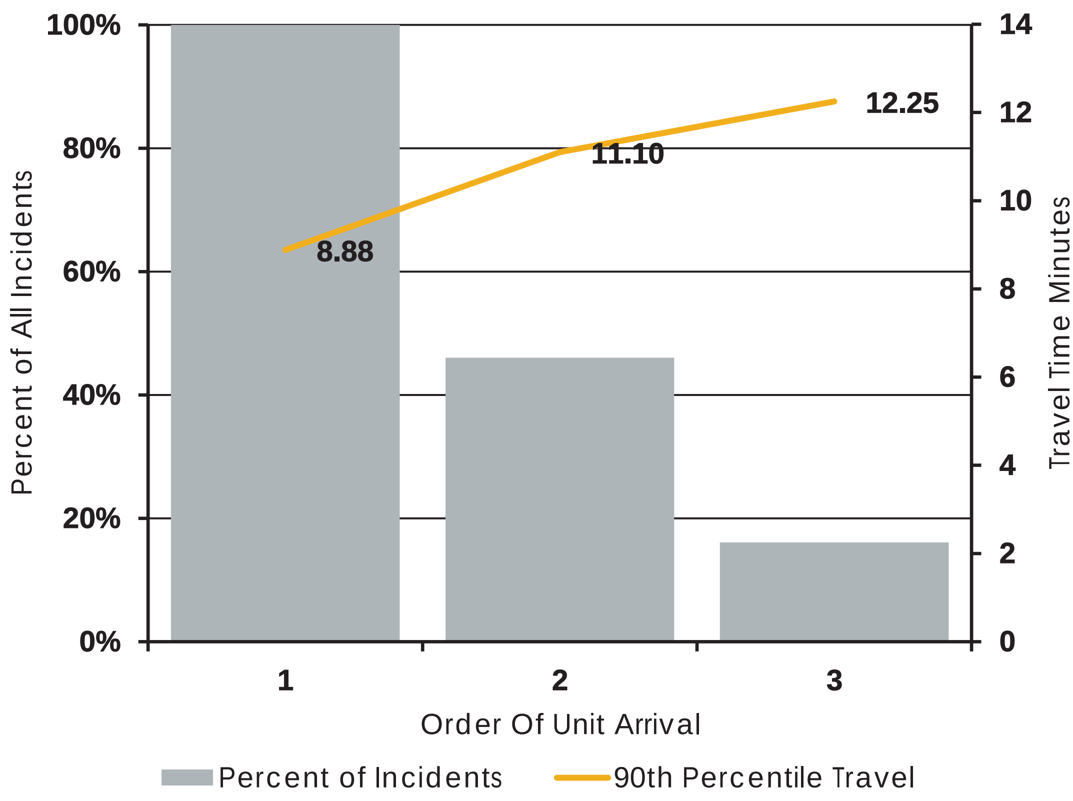
Figure 124: 8-Minute Predicted Staff Assembly

The picture can't be displayed.

While the eastern portion of the City of West Richland can see at least 14 responders within 8 minutes of travel, that is one of the very few areas within the District. This is indicative of an agency with limited concentration of forces. While the distribution, measured by first-due, appears reasonable, concentration is lacking.

Historically, there was not enough data to effectively evaluate the moderate risk structure fire incident ERF. However, by analyzing the historical responses of the first two, or in this case, three units, the agency will have an idea of expected travel performance. BCFD4 on-scene crews can expect the subsequent units to arrive approximately every two minutes. The following figure shows the historical travel times for the first three units to arrive on the scene, traveling emergently.

Figure 125: First Three Unit Travel Times (2019 - 2024)



Historically, the first three units have assembled in 12 minutes and 15 seconds or better 90% of the time. The 4-minute difference in travel time between the first and third units is primarily due to the concentration of personnel.

Total Response Time Analysis

In the final analysis, each time segment is analyzed to determine which can be adjusted to improve overall customer response time. The primary performance measurement for the public is the total response time. The person in need sees this as the agency's performance. The total response time includes all the previously mentioned time segments: answer time, call processing time, turnout time, and travel time. This analysis is typically done for both the first due and the ERF arrival of the response. However, as with the travel time segment, there isn't enough data to show historical ERF performance times. This analysis will focus on fully describing the agency's 10-minute and 44-second 90^{th} percentile performance for total response.

One of the most straightforward methods of displaying the segments and the total response time was developed by the Commission on Fire Accreditation International (CFAI). Annually, the CFAI requires an accredited agency to report its performance by response program in chart form. These charts show the incident time segments culminating in the total response time of the first unit and the entire ERF. The following figure shows the BCFD4 overall time segment baseline, its benchmark, and the standard being applied.

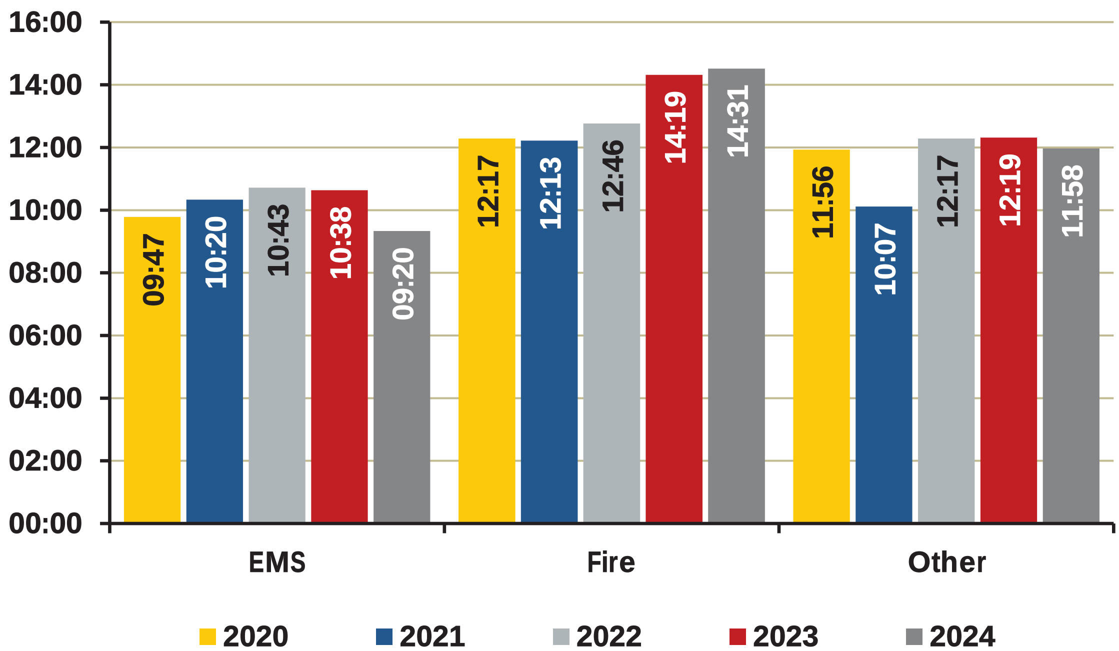
Figure 126: BCFD4 Overall Performance Matrix

Incident Segment	Baseline (90^{th} Percentile)	Standard	Benchmark
Call Answer	Unknown	NFPA 1225	15 Sec 90^{th} Percentile 20 Sec 95^{th} Percentile
Call Processing	0:24		60 Sec 90^{th} Percentile (priority)
Turnout Time	2:15	NFPA 1710	60 Sec 90^{th} Percentile (EMS) 80 Sec 90^{th} Percentile (Other)
Travel Time (1^{st} Due)	8:53		4 Min 90^{th} Percentile
Travel Time (2^{nd} Due)	11:06		6 Min 90^{th} Percentile
Travel Time (ERF)	Unknown		8 Min 90^{th} Percentile (Low or Moderate Risk) 10 Min 10 Sec 90^{th} percentile (High Risk)
Total Response Time (1^{st} Due)	10:44	**Agency Adoptions**	
Tota Response Time (ERF)	Insufficient Data		

Two concepts from this particular type of chart can be confusing. First, the concepts of Baseline and Benchmark. The CFAI defines the baseline as the current performance, which should not worsen. A benchmark is the goal toward which the agency is striving. These terms can easily be replaced with “performance” and “goal”. The second confusion is that it may seem that the 90th percentile call processing time plus the 90th percentile turnout and travel times would equal the 90th percentile total time. However, this is not usually the case. Each time segment is analyzed independently, including the total response time. The total response time does not sum the segments' percentiles because the time segments within each incident vary. These concepts will be further explored later in the report.

For BCFD4, the annual total time performance has remained relatively stable across categories. The following figure shows the 90th percentile yearly total response time performance for the three primary response categories.

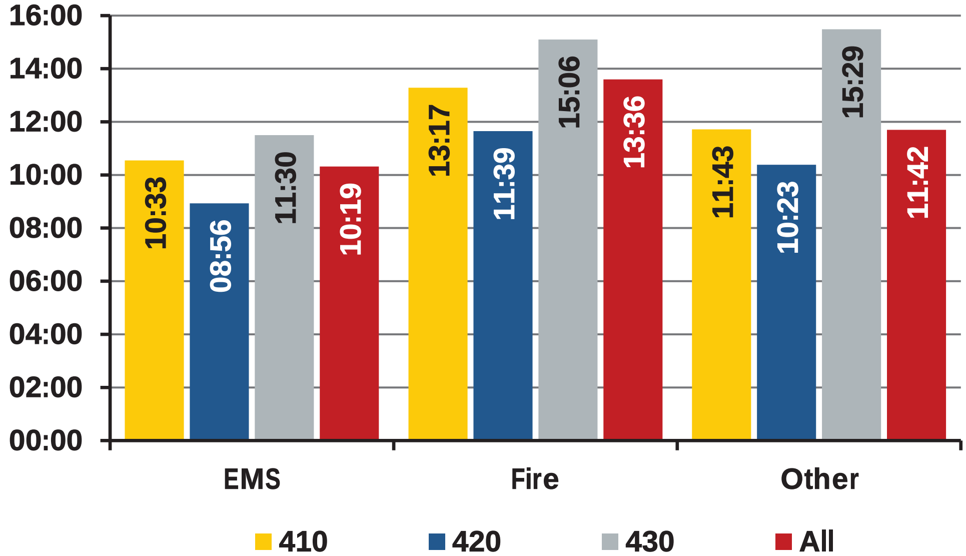
Figure 127: Annual Total Time by Category (2020 – 2024)



As with the above metric, each station area's total time performance closely follows the most significant time segment: travel time.

The following figure shows the 90th percentile total time performance for each station response zone.

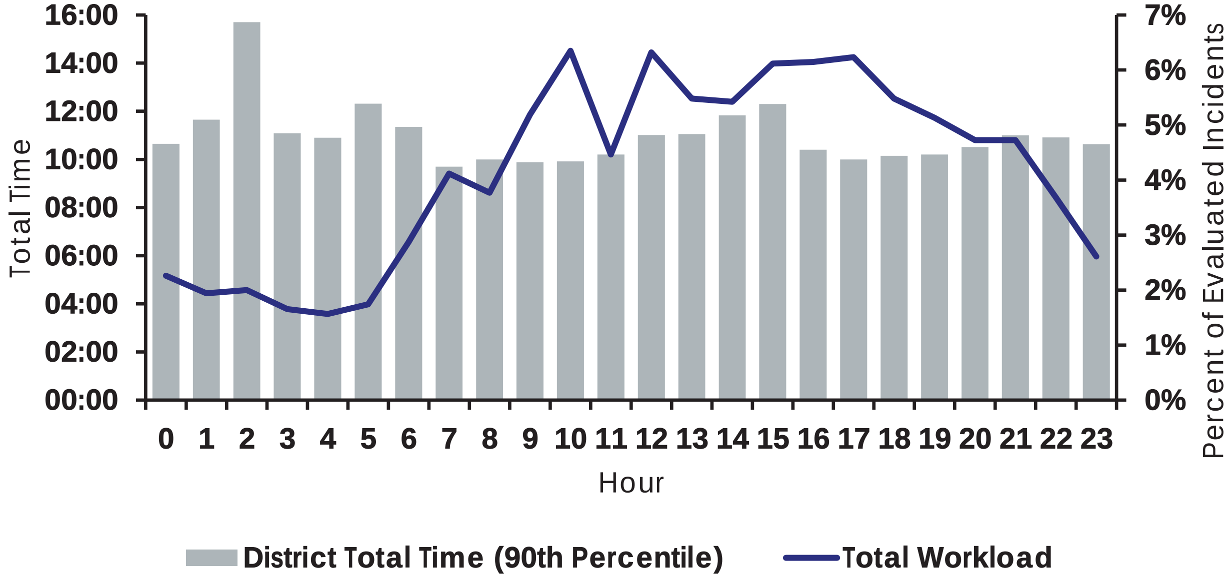
Figure 128: Total Response Time by Station Zone (2019 - 2024)



Finally, unlike variations in travel time by region, the primary driver of total response time by hour segment is the turnout time. As turnout time suffers at night, so too does the total response time. While there is some variation in travel time by hour, total response time more closely follows the curve presented by the turnout time.

The following figure shows the total response time by hour of the day with a reference line for call volume.

Figure 129: Total Response Time by Hour (2019 - 2024)



Establishment of Performance Objectives

BCFD4 provides fire protection, first responder EMS, and other emergency services to a response area of approximately 52 square miles. This is accomplished through a mix of staffed, cross-staffed, and apparatus staffed part-time. This occurs across varying population densities across urban, rural, and agricultural areas. When evaluating performance, a full response with adequate apparatus must be dispatched to complete the specific critical tasks for each incident type and corresponding risk.

During a fire, critical tasks can be broken down into two key components: life safety and fire flow. Life safety tasks are based on the number of building occupants, their locations, statuses, and abilities to take self-preservation actions. Life-safety-related tasks include search-and-rescue and evacuation of victims. The fire-flow component involves delivering sufficient water to extinguish the fire and create an environment within the building that allows firefighters to enter.

The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat various fires. Without adequate personnel to perform concurrent action, the commanding officer must prioritize the tasks and complete some in chronological order rather than concurrently. These tasks include the following:

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

Critical task analyses also apply to all agency program categories. Numerous simultaneous tasks must be completed to control an emergency effectively. BCFD4's ability to quickly muster the numbers of trained personnel needed to make a difference is critical to successful incident outcomes.

Throughout this document, risk levels for each response type have been identified. Generally, they are categorized into low, moderate, high, and maximum risk levels. These apply across the five District programs of fire response, EMS, wildland fire, technical rescue, and hazardous materials response.

BCFD4 completed a critical tasking overview as part of this study. Each hazard type was identified, and the expected number of personnel was determined based on critical tasking and operational procedures. The following summarizes the total personnel required by incident type and risk category.

Figure 130: Staffing Recommendation Based on Risk

Incident Type	Maximum Risk	High Risk	Moderate Riske	Low Risk
Fire	21	18	14	3
Emergency Medical	32	13	5	2
Wildland/WUI	N/A	30	20	3
Technical Rescue	22	9	6	3
Hazardous Materials	24	17	11	3

Establishing resource levels needed for various emergencies is a uniquely local decision. Factors influencing local decisions on incident staffing include the type of equipment operated, responder training levels, operating procedures, geography, traffic, and the nature of the buildings and other risks being protected.

Critical Tasking

BCFD4 has developed the following Critical Task Analysis using risk matrices for various incident types. Critical tasks are activities that firefighters must perform promptly at the outset of emergency incidents. This intervention is essential to control the situation, stop the bleeding, and perform the necessary tasks for a medical emergency. BCFD4 is responsible for ensuring that responding companies can perform all described tasks promptly, efficiently, and safely. The following figures are BCFD4's minimum number of personnel needed by incident type and risk severity by function.

Figure 131: Fire Response Critical Tasking

Function	Maximum Risk	High Risk	Moderate Risk	Low Risk
Command/Support	1	1	1	1
Safety	1	1	1	
Driver/Engine or Pump Operator	2	2	1	1
Fire Attack - 1st Hose Line	3	3		1
Fire Attack - Backup / Search	3	3	3	
Back-up / 2nd Attack Line	3	3	3	
Rapid Intervention Team (2 Teams)	6	3	3	
EMS Unit - ALS	2	2	2	
Total Effective Response Force	**21**	**18**	**14**	**3**

Figure 132: Emergency Medical Services Critical Tasking

Function	Maximum Risk	High Risk	Moderate Risk	Low Risk
Command	1	1	1	
Safety	1			
Medical Branch	1	1		
Triage Group	2	2		
Basic Life Support Treatment	8	4	2	1
Advanced Life Support Treatment	8	4	2	1
Evacuation Group	8			
Transport Group	2	1		
Staging	1			
Total Effective Response Force	**32**	**13**	**5**	**2**

Figure 133: Wildland/WUI Fire Critical Tasking

Function	High Risk	Moderate Risk	Low Risk
Command	1	1	1
Driver/Engine or Pump Operator	8	5	1
Division Supervisor	3	1	
Water Supply	3	1	
Fire Attack	8	5	1
Structure Protection	6	6	
Staging	1	1	
Total Effective Response Force	**30**	**20**	**3**

Figure 134: Technical Rescue Critical Tasking

Function	Maximum Risk	High Risk	Moderate Risk	Low Risk
Command/Support	1	1	1	
Safety	1	1		
Rescue. Extrication, Mitigation Team	4	4	3	3
Rescue Group Supervisor	1	1		
Basic Life Support Treatment	6	1	1	
Advanced Life Support Treatment	4	1	1	
Rescue Support Group	4			
Staging	1			
Total Effective Response Force	**22**	**9**	**6**	**3**

Figure 135: Hazmat Critical Tasking

Function	Maximum Risk	High Risk	Moderate Risk	Low Risk
Command/Support	2	2	1	1
Safety	1	1	1	
Operations	1	1		
Hazmat Support Group	1	1	1	
Entry Team Officer and Team	4	3		
Backup Entry Team	4	3		
Investigation / Hazard Mitigation			3	2
Pump Operator			2	
Decon Group	4	3	3	
Medical Group	6	3		
Staging	1			
Total Effective Response Force	**24**	**17**	**11**	**3**

Alarm Assignments

BCFD4 encounters certain complexities due to the limited staff size, variable daily staffing, area size and complexity, and resource distribution. In addition, some area auto- and mutual-aid agencies utilize a volunteer firefighting model, which adds to the unknown number of available resources. However, staffing levels and available regional resources are critical to assembling an effective response force for various incident types. The following figure shows the staffed apparatus and their unit levels.

Figure 136: Immediate Area Daily Responders Available

Agency/Station/Apparatus	Positions Staffed	Minimum Staffing
BENTON COUNTY FIRE DISTRICT 4		
Station 410 (Ambulance, Engine, or Tender)	3	0
Station 420 (Ambulance, Engine, Brush Truck)	4	2
Station 430 (Ambulance, Engine, Brush Truck, Truck)	4	3
Volunteers	5[B]	0
Total BCFD4 Resources	***11*** ***5 Volunteers***	***5*** ***No Volunteers***
BENTON COUNTY FIRE DISTRICT 1		
Station 150 (Volunteer)	0	0
BENTON COUNTY FIRE DISTRICT 2		
Station 210 (Engine, Truck, Brush Truck)	3	2
Station 220 (Engine, Tender, Brush Truck)	0	0
Volunteers	33[B]	0
RICHLAND FIRE &EMERGENCY SERVICES		
Station 73 (Engine, Brush Truck)	3	3
Station 74 (Engine, Brush Truck)	3	3
Station 75 (Engine, Truck)	3	3
Station 76 (Engine)	3	3
Total Immediate Aid Resources[A]	***16*** ***33 Volunteers***	***5*** ***No Volunteers***
Total Area Staffing Available	**26 Staffed** **38 Volunteers**	**19** **No Volunteers**

[A] Outside aid is available if jurisdiction incident volume allows.
[B] Volunteer staffing levels are approximated on currently published information.

The preceding identifies the difficulty in planning how to fill any alarm assignment. The BCFD4-staffed units may have as few as five responders or as many as eleven. The two closest districts may be able to assemble 43 volunteers and 3 on duty staff, or send only 2 on duty. During times of minimum staffing, these districts may be reluctant to send anyone if they cannot assure a response in their areas of responsibility. Only the Richland Fire and Emergency Services have consistent staffing, but they are also part of a busy system. There are more resources available throughout the counties, but they would require extended response times. However, for safety and effectiveness, it is essential to fill the expected response level as quickly as possible. The following figures show the dispatch plan for each response type and complexity.

Figure 137: Fire Alarm Assignments by Risk

Dispatched Apparatus	BCFD4 Units	BCFD4 Staff	Aid Units	Aid Staff	Staffing
Low Risk (ERF staffing = 3)					
Engine/Truck	1	3			3
Totals: Over/(Under) ERF	**1**	**3**	**0**	**0**	**0**
Moderate Risk (ERF staffing = 14)					
Engine	3	8			8
Truck/Rescue			1	3	3
Battalion Chief	1	1			1
EMS			1	2	2
Totals: Over/(Under) ERF	**4**	**9**[A]	**2**	**5**	**0**
High Risk (ERF staffing = 18)					
Engine	3	8			8
Truck/Rescue			2	6	6
Battalion Chief	1	1			1
EMS			1	2	2
Totals: Over/(Under) ERF	**4**	**9**[A]	**3**	**8**	**-1**
Maximum Risk (ERF staffing = 21)					
Engine	3	8			8
Truck			2	6	6
Battalion Chief	1	1			1
EMS			1	2	2
Totals: Over/(Under) ERF	**4**	**9**[A]	**3**	**8**	**-4**

[A] The expected staffing level is above the agency's minimum staffing levels.

Figure 138: Emergency Medical Assignments by Risk

Dispatched Apparatus	BCFD4 Units	BCFD4 Staff	Aid Units	Aid Staff	Staffing
Low Risk (ERF staffing = 2)					
EMS Unit	1	3			3
Totals: Over/(Under) ERF	**1**	**3**	**0**	**0**	**+1**
Moderate Risk (ERF staffing = 5)					
EMS Units	1	3			3
Fire Units	1	3			3
Totals: Over/(Under) ERF	**2**	**6[A]**	**0**	**0**	**+1**
High Risk (ERF staffing = 13)					
EMS Units	2	5	3	8	13
Fire Units	1	3			3
Totals: Over/(Under) ERF	**3**	**8[A]**	**3**	**8**	**+3**
Maximum Risk (ERF staffing = 32)					
EMS Units	3	8	5	10	18
Fire Units			3	9	9
Totals: Over/(Under) ERF	**3**	**8[A]**	**8**	**19**	**-5**

[A] The expected staffing level is above the agency's minimum staffing levels.

Figure 139: Wildland/WUI Assignments by Risk

Dispatched Apparatus	BCFD4 Units	BCFD4 Staff	Aid Units	Aid Staff	Staffing
Low Risk (ERF staffing = 3)					
Fire Units	2	3			3
Totals: Over/(Under) ERF	**2**	**3**	**0**	**0**	**0**
Moderate Risk (ERF staffing = 20)					
Fire Units	5	8	6	14	22
Totals: Over/(Under) ERF	**5**	**8[A]**	**6**	**14**	**+2**
High Risk (ERF staffing = 30)					
Fire Units	5	8	10	20	28
Totals: Over/(Under) ERF	**5**	**8[A]**	**10**	**20**	**-2**

[A] The expected staffing level is above the agency's minimum staffing levels.

Figure 140: Technical Rescue Assignments by Risk

Dispatched Apparatus	BCFD4 Units	BCFD4 Staff	Aid Units	Aid Staff	Staffing
Low Risk (ERF staffing = 3)					
Fire Units	1	3			3
Totals: Over/(Under) ERF	**1**	**3**	**0**	**0**	**0**
Moderate Risk (ERF staffing = 6)					
Fire Units	1	3			3
EMS Units	1	3			3
Totals: Over/(Under) ERF	**2**	**6[A]**	**0**	**0**	**0**
High Risk (ERF staffing = 9)					
Fire Units			1	3	3
EMS Units	3	8			8
Totals: Over/(Under) ERF	**3**	**8[A]**	**1**	**3**	**+2**
Maximum Risk (ERF staffing = 22)					
Fire Units	3	6	2	6	12
EMS Units			1	3	3
Rescue Units			1	3	3
Totals: Over/(Under) ERF	**3**	**6[A]**	**4**	**12**	**-4**

[A] The expected staffing level is above the agency's minimum staffing levels.

Figure 141: Hazardous Materials Assignments by Risk

Dispatched Apparatus	BCFD4 Units	BCFD4 Staff	Aid Units	Aid Staff	Staffing
Low Risk (ERF staffing = 3)					
Fire Units	1	3			3
Totals: Over/(Under) ERF	**1**	**3**	**0**	**0**	**0**
Moderate Risk (ERF staffing = 11)					
Fire Units	3	8	1	3	11
Totals: Over/(Under) ERF	**3**	**8**[A]	**1**	**3**	**0**
High Risk (ERF staffing = 17)					
Fire Units	3	6	2	6	12
EMS Units			2	6	6
Totals: Over/(Under) ERF	**3**	**6**[A]	**0**	**0**	**+1**
Maximum Risk (ERF staffing = 24)					
Fire Units	3	6	2	6	12
EMS Units			3	9	9
Totals: Over/(Under) ERF	**3**	**6**[A]	**5**	**15**	**-3**

[A] The expected staffing level is above the agency's minimum staffing levels

One consistency in the dispatch plans is the agency's expectation of staffing levels higher than those guaranteed by the BCFD4 staffing procedure. By counting on more resources in a plan than are minimally available through the process, the incident commander is already starting behind in tactical and strategic thinking. It would be better for BCFD4 to expect lower availability and increase the number of dispatched units than to expect higher availability and increase the number of dispatched units.

Response Time Performance Objectives

For an agency to ensure it is adequately equipped, staffed, and has appropriate capital facilities, it must have something to judge itself against and report the performance measures adopted. In Washington State, it is required by law. The Revised Code of Washington (RCW) Chapter 52 defines the rules and responsibilities a fire protection district must follow. Section 52.33 requires each substantially career fire district to adopt performance standards and report annually.[38]

[38] app.leg.wa.gov/RCW/default.aspx?cite=52.33.

Even though it is the law within the state, the code is quite vague about its applicability to combination organizations like BCFD4 and similarly ambiguous about compliance penalties or oversight. However, BCFD4 should clearly understand its legal obligations and make every reasonable effort to comply with both the letter and the intent of applicable regulations.

RCW 52.33 clearly states that it is not intended to limit or modify the authority of the fire districts. It is a valuable and informative regulation that clearly defines specific terms and basic service delivery obligations. To that end, it would be an excellent starting point for BCFD4 to create and develop an introductory service delivery performance statement. The initial policy objectives require clear direction for a minimum written statement or policy that defines the agency's existence, service delivery, organizational structure, and number of employees.

In addition, each agency should provide service delivery objectives, including specific response time objectives, for each program identified in earlier sections of this plan. Each time, performance is to be established at the 90th percentile and reported by program. The following figure shows the service delivery objectives as defined in RCW 52.33.030. It includes a possible adoption standard based on current performance. Still, it does not break it out by program, as BCFD4's performance data does not support a strong statistical recommendation.

Figure 142: RCW 52.33.030 Policy Statement Summary

Key Performance Metric (KPI)	Standard[A]	Goal[B]	Performance Measure
Turnout Time	2:11 90th Percentile	80 sec. Fire 60 sec. EMS (NFPA 1710)	Turnout time is measured for emergency incidents where the unit is not cancelled.
First Due Engine (Effective Unit)	10:44 90th Percentile	6:35 (NFPA 1710)	The first due effective unit will respond to an emergency incident with appropriate staffing and equipment. Time starts when dispatch answers the call.
ERF Arrival	Insufficient Data	10:30 (NFPA 1710)	The arrival of a full ERF for a moderate-risk structure fire from the time dispatch answers the call (14 responders).
First Due EMS Provider	10:16 90th Percentile	6:15 (NFPA 1710)	The agency will arrive at all EMS incidents with an ALS-equipped apparatus. This is measured from the time dispatch answers the call.
First Due ALS Provider	Same	Same	

[A] Potential adoption standard based on historic performance. This is what the District guarantees.
[B] Possible goal for adoption for continuous improvement. This is what the District would like to accomplish.

The intent of establishing response goals is to help the agency's political leadership guide managers in focusing their improvement efforts. For the previous figure, NFPA was used as the goal statement. However, this approach is unlikely to be beneficial for BCFD4. Instead, the District should assess its actual service capacity and establish performance goals aligned with what it can realistically deliver.

Population Growth & Service Demand Projections

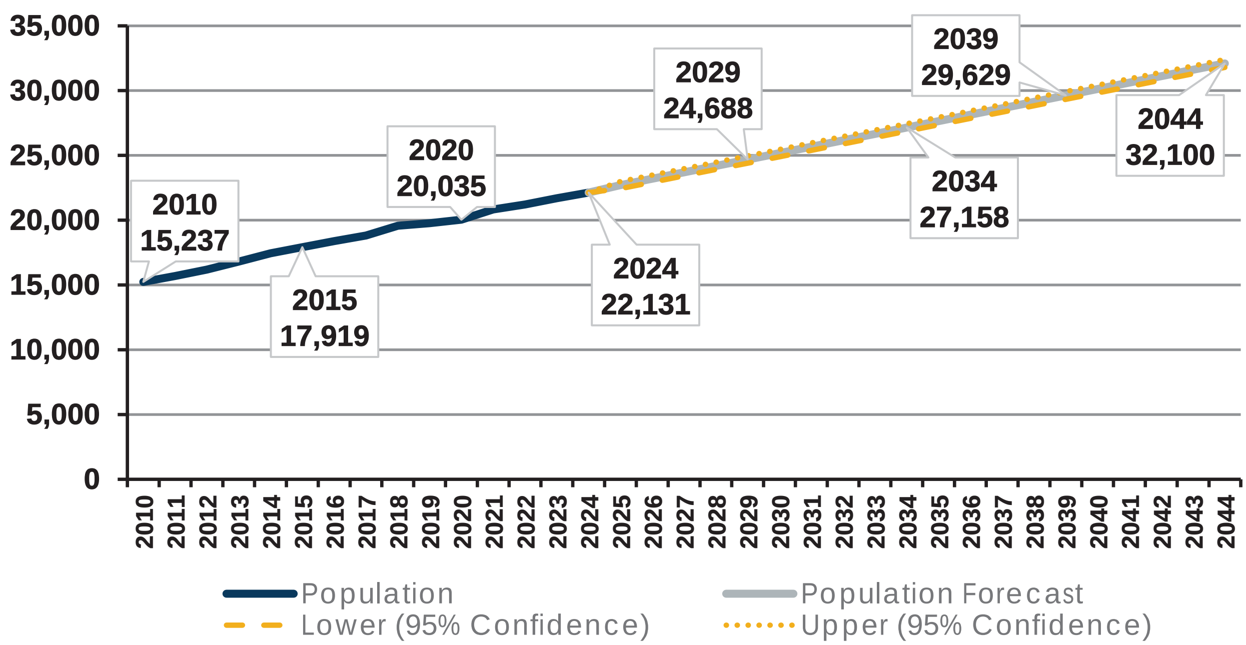
Service demand is generally driven by population. Without people, there is very little need for emergency services. However, the relationship between the general population, population density, population growth, and demographic distribution is poorly understood. Therefore, this analysis provides leadership with information to determine appropriate resources and their distribution.

Population Growth

The population in the BCFD4 response area includes the City of West Richland and some surrounding unincorporated areas of Benton County. The Washington State Office of Financial Management (OFM) maintains a census estimation for each incorporated city. The OFM also publishes annual estimates of a fire district's population outside of incorporated cities.[39] This analysis is based on those figures.

The population in BCFD4 has grown from 15,237 in 2010 to 20,035 in 2020. Based on this data, the annual average growth rate was 2.78%. Based on state projections and simple forecasting tools, the population in 2044 should range from 31,792 to 32,408. The following figure shows the 20-year forecast based on the previous 14 years of state data.

Figure 143: 20-Year Population Forecast with 95% Confidence Bands



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[39] ofm.wa.gov/data-research/population-demographics/estimates/small-area/.

Growth estimates from the OFM for Franklin and Benton Counties were also evaluated. This information in the state estimates follows closely the projection presented above. The 2017 update of the City of West Richland Comprehensive Plan states the City population will reach 22,409. This forecast closely follows the above BCFD4 model as well. The City of West Richland is proposing changes to the infrastructure and zoning of a 7,000-acre area currently used for agriculture. This sort of development will change the response deployment needs of BCFD4, but to what extent is not clear. While an exact prediction of future development and growth is impossible, a realistic expectation is that the service area population will be around 32,000 by 2044.

Population Distribution

The BCFD4 area is a mix of agricultural, rural, and urban development. Much of the housing is single-family residential with variable lot sizes, a few multifamily units, and a few manufactured home parks. Commercial areas are interspersed with residential buildings but typically face larger streets.

The following figure shows the current population distribution by census tract.

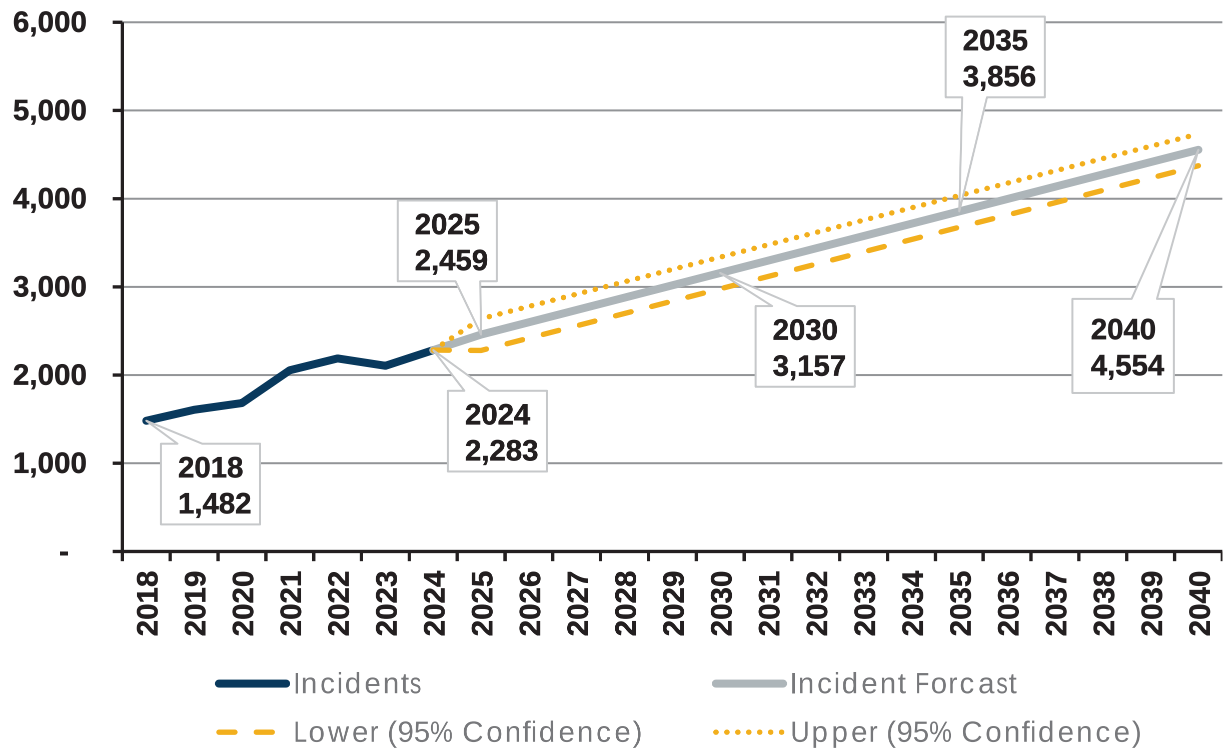
Figure 144: 2020 Population Distribution

Service Demand

Standard linear and polynomial projection models were applied to the seven years of data provided by BCFD4. Each model was evaluated using the R^2 metric to determine the best data fit. The best-fit model was a simple linear progression.

The R^2 value measures how well the model fits the historical data. The closer the value is to 1, the better the fit with the historical data. In this case, the linear regression model returned an R^2 value of 0.91. This model indicates that the incident volume may double over the next 16 years, reaching nearly 4,500 annual incidents. Historical incident responses rose from 1,482 in 2018 to 2,283 in 2024. The following figure shows that a 16-year projection can reasonably be expected to reach between 4,370 and 4.700 in 2040 with 95% confidence.

Figure 145: Service Demand Projection to 2032



Fire Station Location Analysis

One consideration in a long-range master plan is when and how to invest in building or relocating a fire station. Staffing is covered elsewhere in this document and will only be touched on here. While the current BCFD4 deployment is adequate, there are areas with suboptimal coverage. Given the District's geographic configuration, delivering optimal, evenly distributed coverage at a reasonable cost presents ongoing challenges—particularly with existing station locations already fixed. By evaluating current facilities, identifying stations requiring replacement or upgrades, and accounting for projected growth, the District can develop a strategic framework for station location optimization.

Growth

While it is outside the scope of this project to determine what would drive growth in the area, it is essential to consider new residents and businesses. However, the City of West Richland and area developers are confident there is a strong demand for new housing and associated works. One major development plan is currently under evaluation and could significantly change the dynamics of emergency services. The optimistic projections seem somewhat aggressive but could well be what is in store for BCFD4.

While the county, state, and estimates in this plan call for limited growth in the area, additional growth could be driven by its attractive location and community. The future is unknown, but current estimates indicate that population growth will start to slow. Some estimates indicate slow growth will be followed by contraction. The Congressional Budget Office (CBO) estimates that births will not replace deaths in the United States until approximately 2030. Growth will be driven by immigration until approximately 2050, when the replacement population and immigration reach zero, resulting in zero growth.[40]

This means that for an area to grow after 2050, it must attract people from other locations. It is challenging to identify what would drive a population shift from different regions to Benton County, but it remains a strong possibility. Overcrowding in metropolitan areas, a more attractive lifestyle, or other factors may induce people to move from their current locations into these new settlements.

This is important because one of the most significant considerations currently facing BCFD4 is the proposed Lewis and Clark Ranch (L&CR) development under consideration by the City of West Richland. As presented in public documents, this could increase the number of

[40] The Demographic Outlook, 2026 to 2056. Congressional Budget Office, January 2026.

housing units from the current 6,228[41] to 30,491.[42] This is significant growth, potentially increasing the population nearly five times its current size. While the Washington State Office of Financial Management does not expect this growth before 2044, the District is expected to see its growth almost double over the next twenty years. Therefore, a reasonable expectation for the completion date of the L&CR development may take 50 years or longer. However, if the development does not meet its economic targets for sales and growth due to limited population growth, the entire development may not proceed.

Regardless of how much growth occurs or how quickly, the District needs to consider station locations and staffing soon. It is apparent that staffing levels and locations do not fully meet current needs, and any further growth could strain the system to the limit.

Current Service Considerations

It is critical to simplify station-response modeling, especially when street locations, sizes, and speed limits are unknown. A simplistic exercise is to estimate a four-minute travel ring based on some current performance. This was most evident utilizing the Station 420 4-minute travel estimate.

[41] www.city-data.com/housing/houses-West-Richland-Washington.html.

[42] westrichland.org/DocumentCenter/View/2501/West-Richland-Lewis-and-Clark-Ranch-Draft-EIS-and-Appendices-2025_0702-PDF (pg. iv).

The following figure shows how a ring radius of approximately 1.5 miles is used to estimate travel time.

Figure 146: Estimated 4-Minute Travel Time Area Distance

This radius will be used for the remainder of the analysis, as many models have no streets for reference. It should be noted that this is a model based on another model, which may itself have flaws. When designing coverage for a new development, a detailed analysis must be conducted before making a capital investment. It is also important to note that this is a mapping exercise only. Lot size, soil suitability, environmental factors, and availability are not considered here.

The first evaluation focuses on the current deployment. This aligns with all the information in the Standards of Cover section and builds on some of those models. Because Station 410 is not consistently staffed, the first step is to assess how well incident densities and addresses are covered without that station. The following shows the estimated coverage of Stations 420 and 430, including incident densities and address points.

Figure 147: Current Minimum Staffing Coverage

The picture can't be displayed.

The analysis shows that the heart and the most densely populated areas of addresses and incidents are covered. In addition, the center, the densest incident area, has good double coverage. This is important as the likelihood of multiple incidents in the region is much greater than elsewhere. Much of the northern section and portions of the west district continue to experience longer incident response times. Adding Station 410 full-time is beneficial because the north section receives better coverage, and the current station location concentrates units in the more densely populated and incident-prone area.

Because Station 410 accounts for much of this analysis, and the recommendations are to staff the station fully, the remaining analysis will assume the District can adequately staff and keep this station open. Therefore, the base coverage model with Station 410 more closely resembles the figure below.

Figure 148: Current Coverage Including Station 410

It becomes apparent that this coverage is much more effective. It increases concentration in busier areas and provides coverage in northern West Richmond.

Identified Future Considerations

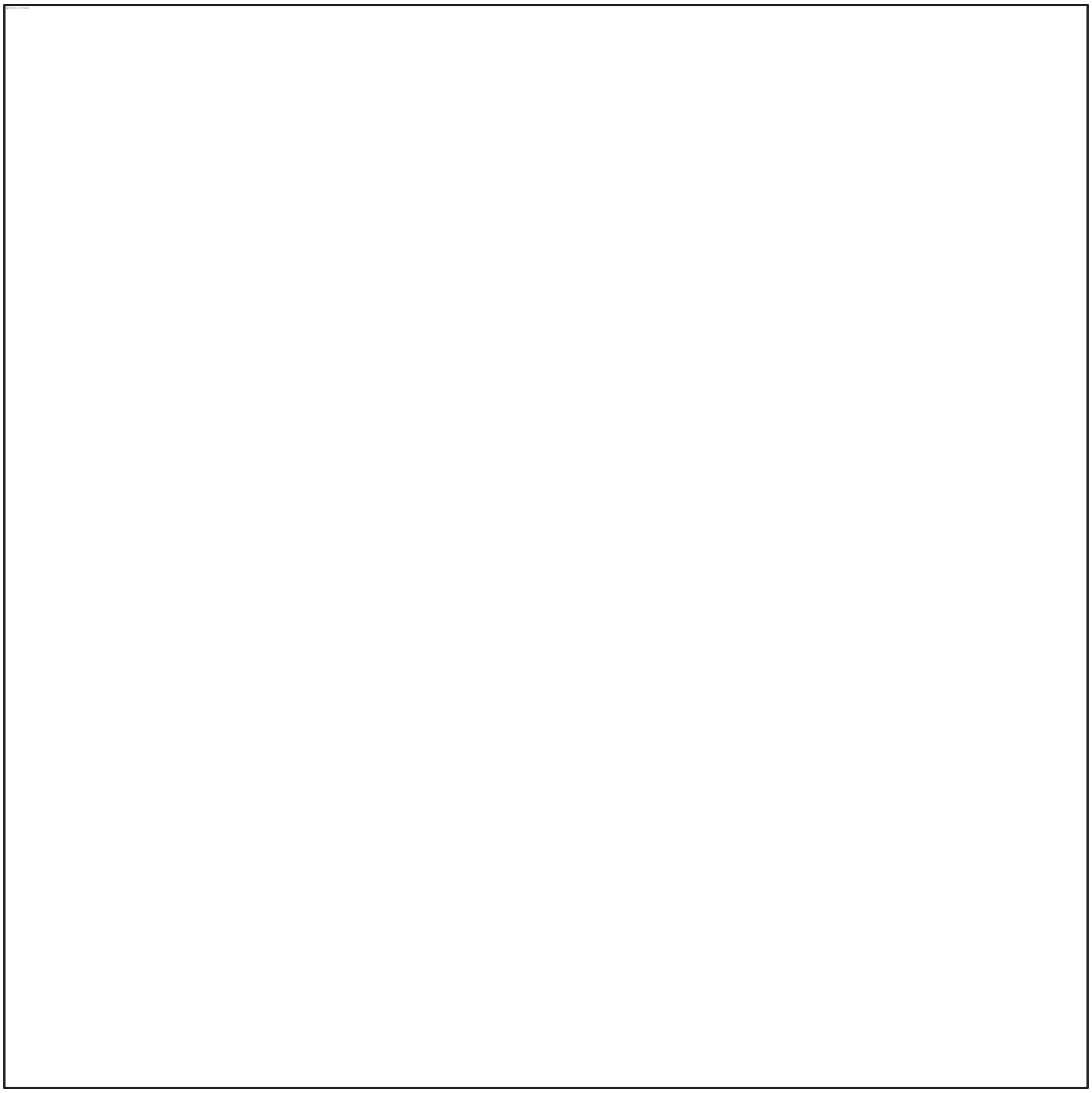
One future consideration brought to the AP Triton team's attention was relocating Station 410 to a site adjacent to its current location. The station is on a parcel owned by the state of Washington, and there have been ongoing discussions for some time to purchase a portion of the site for a new Station 410 just north of the existing station. If this comes to fruition, and given that Station 410 is the oldest and least suited for a full-time firefighter station, this is not necessarily a bad idea. This new parcel could be subdivided, and the old station sold. The first change evaluated was to move Station 410 slightly farther north along North Harrington Road, approximately 1 mile. This would slightly improve distribution without destroying any of the concentration advantages.

The following figure shows coverage if Station 410 is moved approximately one mile north.

Figure 149: Moving Station 410 One Mile North

While it improves the northern response, the eastern area loses some coverage. However, the added coverage offsets the reduction. An additional consideration is the proposed and likely creation of the L&CR development. This development is expected to occupy a significant area of agricultural land. The following figure shows the proposed development area based on the parcels listed for inclusion.

Figure 150: Lewis & Clark Ranch Development Area



This is still in the planning stages, and many changes to the development's size, complexity, and design are likely. Additionally, based on the information presented earlier regarding CBO population estimates, the entire development may not come to pass. However, it is essential to begin planning now for what the development may entail and how it may look, especially regarding fire station locations. The plans are still under development. However, based on current information, the frontrunner comprehensive plan is Alternative 3, as presented in the Draft Environmental Impact Statement prepared by the City of West Richland. The following is what the comprehensive zoning and road plan as presented by the City of West Richland.

Figure 151: Reasonable Alternative Proposal Three[43]

[43] westrichland.org/DocumentCenter/View/2501/West-Richland-Lewis-and-Clark-Ranch-Draft-EIS-and-Appendices-2025_0702-PDF.

The electronic version of the Phase 1 plan was provided to AP Triton. Based on the layout and composition of the plan shown in the blue area of the preceding map, it appears to align closely with the Alternative 3 comprehensive plan. While no roads are approved or guaranteed, an estimate of where they would be located, based on the comprehensive plan, may assist BCFD4 in planning fire station locations. The following figure shows the detailed plan for Phase 1, with continuation roads to the east drawn for reference.

Figure 152: L&CR Phase 1 Detail

The picture can't be displayed.

It is evident that, if the arterial network is as presented, Station 410 is well located to support response efforts for the development. It became apparent that Station 430 will be the closer station and provide good coverage for the plan as presented, even without the arterial extensions to the east. This relieves any urgency to move stations, but the need for adequate staffing still needs to be addressed. A fire station without personnel—volunteer, career, or a hybrid model—provides no service capacity; it is merely infrastructure, and often a costly one at that.

Station Location Potential Options

When presenting scenarios like this with no specific direction or exact physical locations, the concern is that too much weight is placed on estimated station positions. It bears repeating that the following analysis is not a detailed time-and-distance study. In addition, engineering, environmental, or suitability studies are not included for any options. This information is presented in the hope that it may introduce options, perhaps ideas not previously considered. Before making any investment, the District must conduct its due diligence.

Station 410

As previously discussed, the current location is adequate for District coverage. It has the best access to the north and east portions of the response area. Additionally, its location contributes to concentration in the heart of West Richland, the area with the highest incident density. Until plans are finalized, it may or may not be in the best position to support the expected L&CR project; much depends on the location of the access road. However, if it is to be continuously inhabited, it likely needs updating. Based on the scope of required updates, the best option may be a new building.

Since it may need to be rebuilt, we have options to consider. For example, moving it north along North Harrington Road extends its reach farther north while still providing decent coverage into the heart of the city. This is not needed, but it is an option if the City, District, or County needs to reassign the current property.

The following figure shows what a more northern location would look like with the L&CR development added.

Figure 153: Station 410 Moved North with L&CR

The change does not hinder access to one of the three planned arterials. Therefore, if the station is moved slightly north, it will not affect its usefulness to the L&CR development, allowing the roads to be extended as planned.

Another option would be to wait to replace Station 410 until the development is well underway. In this scenario, Station 410 would remain in place until the L&CR matures enough to include roads at the center of the development. The following figure shows a rough estimation of what that coverage would look like.

Figure 154: Station 410 Estimate of Coverage

This option would be to move Station 410 into the heart of the development. This would require access roads to be in place before the move. This vision would benefit from being a future expense and would provide overall coverage for the new development. However, it does nothing to improve the southwest or overall system coverage. It leaves the areas east of Harrington Road near Twin Bridges Road with less protection and does nothing to support the center of West Richland. In addition, construction could not begin until the final phases of the development were underway.

Fourth Station Future

As this is a long-range plan, it is within scope to take greater liberties to address potential increases in response needs. If the area is expected to grow by a factor of five, the required number of responses will likely increase accordingly. At some point, additional staffing will be necessary. There are two ways to deploy additional resources. The new assets can be concentrated at a single station or distributed to improve first-due efficiency. More distribution requires a fourth fire station.

In the event the L&CR is as successful as the developer and the City hope, it can be assumed that other open district land will be developed. This makes a fourth station even more likely.

The following figure shows coverage for a fourth station in the L&CR area, with Station 410 moved slightly north of its current location.

Figure 155: Station 440 Addition

Of course, adding a fourth station is not an immediate recommendation, but planning for this eventuality is. This plan would support eastern Station 410 at or near its current location and add a station when demand and development allow. Looking at this far into the future is especially helpful when assessing current needs for a 50- to 100-year building.

Regionality

When planning for the future, BCFD4 should keep the region's current conditions in mind. Understanding growth, where neighboring stations are being built or upgraded, and how they are staffed and equipped, is essential to regional success. It is rarely a good idea to place a station near a boundary where another station can provide coverage. In such studies, opportunities to co-locate interdepartmental stations can be identified. This is because agencies did not evaluate their neighbors, and two stations ended up in proximity. In the BCFD4 region, there is minimal overlap, and, given the limited staffing, there were no apparent areas of interjurisdictional cooperation. The following figure shows the assumed response circles for the current BCFD4 stations and neighboring firehouses.

Figure 156: Regional Response Coverage Estimate

There is minimal unnecessary regional overlap. Most dual-coverage areas are in densely populated areas, which are likely to have more incidents. However, by keeping regional characteristics in mind, duplication can be avoided. Another reason to keep these stations in mind is the potential for mergers and resource regionalization. While the study did not identify any clearly beneficial mergers or service combinations, placing stations regionally can create future opportunities for service improvements with minimal waste.

Co-location

Building new fire stations is very expensive and a long-term investment of citizen funds. One way for BCFD4 to keep capital costs down is to look for colocation of capital assets with other agencies. While there are no obvious opportunities to co-locate a station with another fire agency, BCFD4 can explore other land-use colocation options. The evaluation did not identify any clear ideas. But BCFD4 can always be on the lookout for another public agency's needs.

For example, BCFD4 could consider sharing space with satellite facilities operated by City or County law enforcement. Other city or county departments that need more space include parks, streets, and general government. If an opportunity arises, BCFD4 would be remiss not to consider it. Colocation allows the District to share infrastructure and maintenance costs with other organizations.

While this can be beneficial, there is always a downside to interagency cooperation. If the agencies work well together, share costs responsibly, and clearly delineate needs and uses, this can be very cost-effective. However, negative attitudes, irresponsible use, or inadequate support may hinder the facility's use and maintenance. Additionally, misusing a cooperative facility can destroy interagency goodwill.

Section IV:
COMPLIANCE METHODOLOGY

Compliance Methodology Overview

This Community Risk Assessment/Standards of Cover presents a detailed picture of BCFD4's current performance. However, this is just a starting point for the agency to pursue improved performance. BCFD4 will benefit from an ongoing data analysis system to make the most of the information presented. The approach should be able to demonstrate performance in a meaningful and actionable way to leadership. In addition, it should create transparency into performance for elected officials and citizens. Following this example will keep BCFD4 in complete compliance with the Revised Code of Washington 52.33.

Designing an analysis system is time-intensive and requires capital and talent. Leaders need to understand and engage in data analytics. It will also require BCFD4 to identify and assign someone with a penchant for data analytics, statistics, databases, and mathematics, regardless of the technology used. The plan-do-check-act (PDCA) framework provides a conceptual framework for the design and implementation of an analytical system. This is called the Deming cycle of continuous improvement and is pictured in the following figure.

Figure 157: Deming Cycle[44]

Plan – Research & Codify

Creating a durable analytical system requires defining and understanding what the data should present, the impacts of the information, and what constitutes the data stream.

[44] www.getvetter.com/posts/129-define-continuous-improvement-8-experts-definitions.

Once the descriptions are understood, they must be adopted as policies and acceptable practices. The following areas are presented for BCFD4 to consider as they plan for performance improvement.

Adopt Overall Performance Objectives

The first step for BCFD4 is to decide what key performance metrics they will monitor and manage. BCFD4 does not currently report performance data, but at a minimum, the agency can adopt the State's required standards.

The BCFD4 Board and executive leadership must agree on what performance metrics they will manage. This should be adopted in consultation with Benton County and the City of West Richland leaders. The time components being managed should correlate to an overall service objective or area and meet the State's requirements.

Establish Management Segments

As discussed earlier in the performance section, an emergency incident has several identifiable segments. By adopting time objectives based on these segments, an agency can begin to understand how its actions affect an incident’s total response time. While much of the analytics available for the fire service is based on time, this is not the only performance metric that can be measured. Each segment can help identify areas where the performance objective may be other than time, such as quality or prevention. However, the most widely used metrics center on time. Once the time analysis is mastered, the agency should expand into the less traditional performance evaluation methods.

The following figure identifies the emergency incident segment, potential metrics, applicable NFPA standards, and other comments.

Figure 158: Incident Segments

<table>
<tr><th>Segment</th><th colspan="2">Key Performance Metric</th><th>Standard</th><th>Comments</th></tr>
<tr><td>Normal State</td><td colspan="2">Community demographics</td><td rowspan="3">N/A</td><td rowspan="3">This base state needs to be defined. Prevention mainly affects this.</td></tr>
<tr><td>Incident Initiation</td><td colspan="2" rowspan="2">Incident Counts</td></tr>
<tr><td>Incident Detection</td></tr>
<tr><td>Notification Action</td><td colspan="2" rowspan="2">PSAP Answer</td><td rowspan="2">NFPA 1225</td><td rowspan="2">Prevention and Education</td></tr>
<tr><td>PSAP Notification</td></tr>
<tr><td>PSAP Interrogation</td><td colspan="2" rowspan="2">PSAP Transfer & Agency Answer</td><td rowspan="2">NFPA 1221</td><td rowspan="2">CAD to CAD agreements</td></tr>
<tr><td>Agency Notification</td></tr>
<tr><td>Agency Interrogation</td><td rowspan="2">Call Processing</td><td rowspan="5">Total Response Time</td><td rowspan="2">NFPA 1225</td><td rowspan="7">These segments should be evaluated at a minimum. Each segment should have an adopted performance standard.</td></tr>
<tr><td>FD Notified</td></tr>
<tr><td>FD Unit Dispatched</td><td rowspan="3">>Turn Out Time
>Travel Time</td><td rowspan="3">NFPA 1710</td></tr>
<tr><td>FD Unit Responding</td></tr>
<tr><td>FD 1st Unit Arrives</td></tr>
<tr><td>FD ERF Dispatched</td><td colspan="2" rowspan="2">ERF Travel & Total Time</td><td rowspan="2">NFPA 1710</td></tr>
<tr><td>FD ERF Arrives</td></tr>
<tr><td>EMS To Destination</td><td colspan="2" rowspan="3">>Destination Travel
>Wall Time</td><td rowspan="3">N/A</td><td rowspan="3">Applicable to EMS transport agencies.</td></tr>
<tr><td>EMS At Destination</td></tr>
<tr><td>EMS Clear Destination</td></tr>
<tr><td>FD Units Clear Incident</td><td colspan="2">From dispatch to clear, total time, this translates into unit utilization</td><td>N/A</td><td>Used to evaluate unit workload and availability.</td></tr>
<tr><td>Normal State</td><td colspan="4">The outcome of the incident response is the gold standard for service delivery analytics. However, this advanced study is outside the scope of this report and requires unconventional research and analytic methods.</td></tr>
</table>

Performance Specifics

The next step is defining what meets the analysis's performance requirements. For example, do chief officers get to stop the response clock, or is it an apparatus designed and equipped to address the incident specifics? Can an ambulance stop the clock on a structure fire, or is it an apparatus that can begin addressing the fire hazard, such as fire attack and water supply? There is no single answer to these questions, and leadership must define them to meet the communities' expectations for performance.

The apparatus variable may be defined by type or a description of capabilities. If an engine company's capabilities are well known, then stating a first due apparatus as the engine company will suffice. However, the definition might be more descriptive if the engine companies differ. For example, a complete description might state, "the first arriving company, capable of providing a minimum of three firefighters, officers, or engineers, and equipped with an AED and EMT-B firefighters." It will be up to the agency to clarify this component. However, CFAI expectations are to clearly define the capabilities of the first arriving and effective response forces. For BCFD4 medical incidents, leadership could designate the first frontline engine or ambulance. It should also identify whether all first-responding units will be ALS-equipped and, if so, whether different levels are allowed, to monitor and report both the first medical responder and the first ALS responder as the state requires.

Another variable that should be defined is geographic limitations. For example, an agency may state that travel time to a building within one road mile of the station is four minutes. In contrast, travel time to a building more than two road miles from the station might be ten minutes. A more common methodology is to evaluate population density.

BCFD4 can add or limit the number of qualifying statements for any incident type. However, the result is the same: a performance chart based on incident type (perhaps severity) that includes goals, standards, differences, and references. The final figure in the establishment of performance objectives section would be a good starting point and meet state requirements. However, BCFD4 may want to further break down the performance objectives into more manageable, targeted sections. This allows the establishment of improvement and performance management objectives.

The following figure shows BCFD4's first due EMS performance, presented in a complete performance statement in chart form.

Figure 159: Performance Chart Example

Key Metric	Standard	Goal	Strategic Improvement	Reference
BCFD4 will respond to all priority, moderate-risk, and emergency medical incidents with at least five responders. The first arriving unit will have at least two responders capable of providing advanced medical interventions. The complete response will include at least one unit capable of providing advanced medical transportation.				
Call Processing	0:30	0:30	Regional dispatch center	Dispatch agreement
Turnout Time	1:50	1:00	Management initiatives	Meets NFPA 1710
Travel Time	8:55[A]	4:00	Routing and training	Meets NFPA 1710
Total Time	10:20[A]	7:00	Turnout time focus	Meets NFPA 1710

[A] Travel times should be broken into specific geographic zones, such as evaluation zones identified in the dispatch data, distance from a station, or population density.

The preceding figure is an example and does not necessarily meet, or even follow, the overall performance review standards of BCFD4. However, it does illustrate the process. This process would be repeated for each program and all the service areas BCFD4 wishes to manage with data.

One concept to remember is that total response times are not an aggregate of call processing, turnout, and travel times. Because the evaluation uses the 90th percentile, the baseline incident time segments do not stack vertically, and the total time is analyzed separately. In other words, adding call processing, turnout time, and travel time for all incidents does not necessarily equal the 90th percentile total response time.

Develop Evaluation Methodology

Now that the performance charts are defined for each incident segment and type, a methodology should be developed to analyze performance. During this step, the agency should evaluate who can perform the analysis and what tools they need to complete their tasks. The reporting periods and management expectations for the reports should also be defined. The state requires at least an annual report.

It is common for leaders to see a technical report, such as a statistical evaluation of performance, and take little action. The entire purpose of these statistical evaluations is to help leaders decide what to change, add, or leave alone to provide the best service to the community. Unfortunately, technical reports that are not understood or report irrelevant information are typically useless.

Statistics is not a magic solution. Statistics were developed to provide a reference for complex issues and make them easier to comprehend. However, inaccurate or misleading evaluations can cause damage and other problems. For an excellent example of mathematical systems being inappropriately applied and corrupted by leaders, see the book "The Fires" by Joe Flood. Statistical measures need to be valid, representative, and consistently applied.

At its heart, statistics in emergency services should be designed to add understanding of historical performance, reported in a way that is consistent and comparable to other similar agencies. However, to make this work for BCFD4, the leaders must discuss the statistical measures they will use. For example, they may use the mean or median measures for good reasons. However, the NFPA and CFAI have moved to a percentile-based measure for District performance analysis, typically the 90th percentile. Washington State also requires this level of time performance measure. While BCFD4 can adopt any standard, it will likely evaluate itself against industry standards or other agencies; it should consider continuing with the 90th percentile measures presented in this document.

When building an evaluation methodology, a final concept is which data will be included in the analysis. There is significant debate within the fire service regarding what constitutes flawed data or an outlier. Again, the decision on what to include and potentially exclude is up to the BCFD4 leadership. For credibility, these decisions should be well-documented.

People typically create the errors encountered in the records system. For example, information in a record may be added incorrectly or left blank. These errors apply to time fields, code application, narration, and incident specifics that analysts use to slice the data. Since these errors are usually introduced when the incident record is built, implementing a robust quality assurance and training program is the most effective solution.

A quality assurance program looks at each incident for errors and unacceptable performance. Once the incident report is complete, it is placed in a quality check queue. Someone who has knowledge of the call but is not necessarily at the incident will then pull up the report and evaluate it for accuracy. The following list is an example of a minimum quality assurance review.

- Well-written narratives that are legally defendable,
- All dispatched units added the correct information,
- Incident type matches the incident findings in the narrative or what the quality evaluator knows to be true about the incident.
- Incorrect date and time-stamped information is corrected through a verification process.
- Unexpected date and time-stamped information is captured and explained.

Once the records are accurate, there may still be data that skews the results due to abnormalities. In this case, an agency may want to disregard these anomalies in its performance analytics. This outlier policy should be well-documented and not designed to undermine the agency's credibility.

Caution should be taken when removing any record that accurately shows performance. For example, it seems unlikely that any unit could turn out in zero seconds, so often that zero data is removed. However, if a crew is contacted directly and initiates the response, the turnout time would be zero. Therefore, in this case, a zero response indicates the deployment of units for this incident was very effective. Another example is a long drive along a road in poor condition. While the time may be extensive, it is actual performance. Therefore, it should be evaluated for what it is, a problematic response. Considering all potential anomalies and defining them before any analytics are completed helps make the analysis more transparent and builds trust.

A secondary method to remove incorrect data is to look for statistical outliers. The methodology for these changes is based on the data shape and variability. For example, taking 1.5 multiples of the standard deviation may identify statistical outliers when data points are evenly distributed along a typical distribution curve. On the other hand, data points with a strong left- or right-tendency have a different shape. For left or right tendency data, it may be more appropriate to evaluate those data points that are 1.5 multiples of the inner quartile range as a statistical outlier. Either statistical methodology can incorrectly remove accurate anomalous information. However, these methods have a good chance of finding and eliminating incorrect data.

Research and Adopt Technology for Analysis

One or a few employees typically conduct initial analysis and goal development, identify capabilities and standards, and develop a general understanding of services. These people evaluate large datasets, determine rules, and answer other questions. This can be an enjoyable experience for the right temperament and can lead to hours of discovery. However, after this initial research, the ongoing reporting and analysis are dull and repetitive. Therefore, it will be in the agency's interest to begin researching technological solutions early in the planning stage.

In the age of Microsoft Excel, it is easy to believe that the spreadsheet program is the ultimate tool for analysis. It is a powerful tool, but the agency should research and adopt other methods. Typically, this is a homegrown analytics solution using standard business analytics software or records management analytical systems. Other options are to look for a third-party fire-service-specific service or to hire external consultants to complete the analysis. Consulting reports can be reliable and are often conducted by professionals. However, these reports are lengthy and do not always help agencies manage their ongoing operations in a timely way.

BCFD4 should investigate the other technological solutions available to them. Whatever system BCFD4 chooses, it should have three primary attributes. First, the system should be easy to master. Next, any analytical system should provide consistent results from datasets directly attached to the source. Finally, the system should be highly customizable for the current service, BCFD4, and for what it might provide in the future.

One possibility is to utilize a third-party analytic vendor. This report will not name vendors for third service analytics, as the field is highly competitive and changes consistently. Many vendors offer similar services but specialize in producing reports and analyses based on their expertise. Some of their products are truly exceptional and create complex calculations. The data they use is typically directly tied to CAD data and may miss some subtleties of the NFIRS system. However, suppose BCFD4 knows how to adopt performance objectives from CAD data. In that case, the agency may be able to write and manage its performance objectives appropriately. One warning is that if these vendors go out of business or close their operations, the codes and mathematical assumptions are also gone. In addition, what they produce is not customarily owned by the fire agency. Another typical concern is the high initial and ongoing costs of these systems.

Another possibility is to use off-the-shelf analytical systems to create an automated, researchable, verifiable, and valuable reporting environment for management. Many vendors offer analytical software solutions, each with its own pros and cons. The current Gartner Magic Quadrant[45] for business analytics software indicates that Microsoft's Power BI and Salesforce's Tableau are the continuing frontrunners in this field. However, many

[45] www.gartner.com/en/research/magic-quadrant.

options exist depending on the agency's operating system environment, budget requirements, and other available systems. In addition, ArcGIS software, an industry leader in geospatial analysis, is generally available to districts within Benton County. If the City of West Richland owns a license, it usually provides a seat license to all departments, and this might be afforded to BCFD4. One concern for the homegrown approach is the need for technologically skilled personnel to create, maintain, and present these reports.

One final option would be to use the analytics built into or available within the agency records management system (RMS). BCFD4 uses the ImageTrend RMS system for incident reporting. This company recently added an analytics package to the Elite level of service, which appears promising. The system allows specific rule adoption at a detail not readily available in other RMS systems. The concerns would be cost, the agency's understanding of mathematics and models, and ImageTrend's ability to deliver on its intended promises.

Adopt Policies, Procedures, and Systems for Analytics (Standardize)

Once all the above processes, definitions, and systems are evaluated and recommended, they must be officially adopted. This means capturing policies and procedures in writing. All analyses will be conducted in accordance with the written rules to ensure consistency throughout the analysis period. These documents can be changed as the improvement process continues. However, the change process needs to be defined as well. In addition, changes should only be made if they can be reconciled with the previous analytics.

Do – Implement the Plan

Initial implementation of new plans can create dramatic organizational changes with minimal effort. This is typical because the changes are more of policy and procedure, not in actual operations. However, as the continuous improvement cycle continues, implementing and evaluating change requires more effort and has a less pronounced impact. However, the most profound changes are usually encountered during these more difficult cycles.

Implementing the planned analysis systems requires communication and training throughout the organization. Most fire service organizations have a training system in place that can be tasked to meet this requirement. However, without adoption by those who create the reports and those who supervise and quality check the information, the system will not produce accurate results. Engaging these people early and communicating the expectations and outcomes will create the best results.

It is critical to communicate expectations to those affected. Not only what is required of them, but what the efforts are likely to produce. Explain the methodologies to be used and create an open environment to help. People who do not understand the overall strategy of statistical analysis for improvement may not feel comfortable admitting this. In addition, those whose actions are being evaluated may feel insecure and attack the process. This emotional reaction should be anticipated, and steps should be taken to alleviate it, including an open feedback forum.

Personnel may also need ongoing education and training to complete accurate and representative reports. In addition, training on new business processes, systems, and technical infrastructure may be required. Efforts should be made to coach people through the changes and to identify those who currently need training, as well as positions or individuals who may move into this process.

Check – Perform the Analytics

Now that the agency has defined the metrics and the collection system and adopted the analytic methodology, it should begin work on reporting. Several levels and types of reports should be completed. In addition, there are different audiences for every kind of report. Some may go to the District leadership, some to all District personnel, and others to the City of West Richland leadership and council. The following list is just an example of the reports to be produced. It will be up to BCFD4 to approve the content, distribution, and timing. The State requires an annual report to be submitted, but it does not specify to whom it should be sent.[46]

- Quality assurance information and exceptions
- Overall time segments analysis by incident type and severity
- Unit time segment reports by shift, station, and apparatus
- First due and ERF Travel time by geographic area
- Trend analysis by geographic location, unit, and overall

The content and timing of the reports will be determined by the information's intent. For example, a daily report would be designed to identify data that may be incorrect and to evaluate and potentially correct it. A monthly statement to crews and leadership may indicate unit performance with trends to improve crew activity. A quarterly report may be designed and used to identify progress towards improvement goals and initiatives. Finally,

[46] app.leg.wa.gov/RCW/default.aspx?cite=52.33 (RCW 52.33.040 Annual evaluations-Annual report).

annual reports would inform the public and the City of West Richland's leadership about the District's overall performance, improvements, service delivery gaps, and potential needs.

Act – Improve Operations Based on the Analysis

The agency should undergo this evaluation to understand service delivery and evaluate ways to enhance performance. The first step is identifying areas that could be improved, whether at a geographic level or within a specific unit at a particular station. Next, leaders and staff should evaluate which initiatives can be pursued and the expected outcomes. Finally, after the proposal is implemented and a reasonable amount of time has passed, the analysis is reviewed against expectations. This comparative analysis enables management to assess whether the initiative has achieved the expected improvements.

These improvements may require a simple policy change. Conversely, the enhancements may be as financially prohibitive as new staffing or new stations and take years to implement. Regardless of the improvement initiative, having solid analytical evidence and clear performance enhancement goals will improve BCFD4's overall positioning and service.

Continuous Improvement

This process must be frequently repeated, keeping it and the analytics relevant. The intervals will be determined based on findings, initiatives, and systems. Initially, the method may need to be evaluated monthly or quarterly to ensure the information is pertinent and valid. However, after the initial build, the entire process will need to undergo formal evaluation at a less frequent but more defined interval. Utilizing some of the performance indicators described in the Commission on Fire Accreditation International's (CFAI) 10th edition of their self-assessment manual may help create a formal review process. The following list shows a review process based on the CFAI documents.

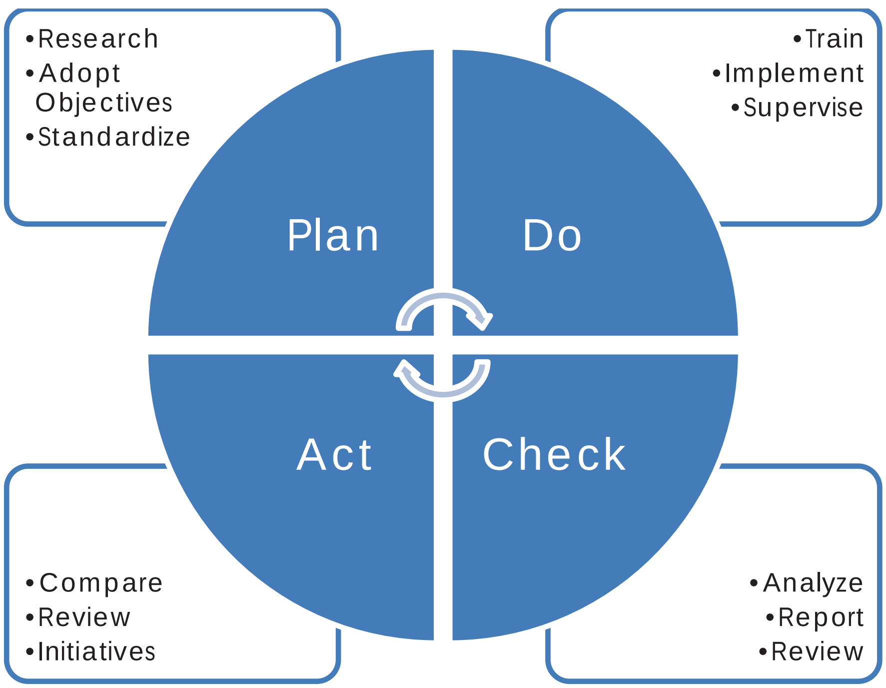
- Policies and procedures must be reviewed annually. Therefore, this is an excellent time to ensure the analytic policies and practices are up to date with the minor changes made within the year.
- Strategic plans should be produced every three years. The strategic plan should incorporate performance improvement initiatives. At this time, the types and levels of analysis may need to be redefined and adjusted.

- This Community Risk Assessment/Standards of Cover must be reviewed and updated every five years. The build-up to publishing this document is an excellent opportunity to determine if the analytics still meet the agency's needs.

Because this process is heavy on policy and documentation, there is a built-in standardization step each time the cycle starts again. There is a reason the Deming cycle is usually pictured going up a ramp. Without constant effort, the process will fall backward, and the organization will be back at the beginning. Standardization, including the implementation and training of organization members, acts as a wheel chock. It may not be able to stop backward motion. Still, attention to organization and standardization will help keep the ball rolling.

It does not matter which approach the organization chooses to continually evaluate its operations and data. However, the critical concept is that they adopt a formal method that enables deep understanding of improvement and provides guidance. The following figure is a review of the plan overview presented above.

Figure 160: Methodology Overview



Section V:
FINDINGS AND RECOMMENDATIONS

Summary of Findings

The following observations summarize key conditions identified during the evaluation of Benton County Fire District 4's governance, finances, operations, facilities, prevention services, communications systems, and emergency response performance. These observations provide context for the findings and recommendations that follow and are intended to reflect system-level themes rather than isolated issues.

Organizational Stability and Leadership

BCFD4 benefits from stable executive leadership, a clearly defined governance structure, and positive labor–management relations. The organization has demonstrated a willingness to modernize policies, strengthen planning efforts, and improve internal systems. The recent completion of a Strategic Plan and the development of this Master Plan / Standards of Cover represent important progress toward a more structured, performance-based management model.

However, several administrative systems remain informal or inconsistently applied. Policy management, document control, performance benchmarking, and succession planning require further formalization to reduce organizational risk and support long-term resilience as the District continues to grow in complexity and service demand.

Financial Condition and Fiscal Controls

The District is currently in a strong financial position. Recurring revenues exceed recurring operating expenditures, and General Fund reserves significantly exceed recommended minimum levels. Property tax levies remain the primary revenue source, supplemented by EMS transport revenue, intergovernmental receipts, and investment earnings.

While near-term fiscal stability is solid, long-term revenue growth remains constrained by Washington's statutory 1% levy limitation. Assessed valuation growth reduces levy rates but does not substantially expand revenue capacity absent voter action or significant new construction. Additionally, recent audit findings underscore the importance of strengthening internal financial controls, segregation of duties, and documentation practices to maintain public trust and fiscal defensibility.

Long-term financial sustainability will require continued reserve discipline, formalized capital forecasting, and careful evaluation of staffing and service expansions within statutory revenue constraints.

Staffing, Deployment, and Operational Continuity

BCFD4 maintains a dedicated and well-trained workforce operating under a 48/96 schedule with a combination of full-time personnel, interns, and volunteers. The calculated staffing relief factor indicates that current staffing levels are near theoretical minimum requirements to maintain daily operational coverage.

The practice of using Station 410 personnel to backfill vacancies at other stations has resulted in intermittent service reductions within portions of the District. While the Intern Firefighter Program provides valuable support and reduces overtime expenditures, long-term system reliability depends on stabilizing daily staffing, improving supervisory structure, and aligning deployment practices with workload trends.

The planned addition of Battalion Chief positions reflects a recognition that increasing organizational complexity requires strengthened shift-level command, operational oversight, and program management.

Emergency Medical Services (EMS)

Emergency Medical Services represent the dominant service driver for BCFD4, accounting for approximately two-thirds of total incident volume. The District operates a fire-based ALS transport system supported by paramedic personnel, medical direction, and a structured quality improvement process. Clinical care delivery and hospital coordination are strong, and EMS documentation systems are well established.

However, increasing EMS demand is placing greater pressure on staffing availability, cross-staffed units, and system reliability during concurrent incidents. Ambulances and engines are cross-staffed, which can create competing service demands and reduce fire suppression capacity during peak periods.

The District does not routinely monitor key EMS system performance indicators such as unit-hour utilization, system saturation, response reliability by call type, or transport-time impact on overall coverage. As EMS continues to grow as the primary workload driver, enhanced data-driven system monitoring will be necessary to ensure that staffing, deployment, and financial planning remain aligned with demand.

EMS transport revenue provides important supplemental funding; however, it is variable and subject to payer mix, reimbursement changes, and regulatory influences. Long-term planning should avoid over-reliance on EMS revenue as a stable funding source.

Facilities and Capital Infrastructure

District facilities and apparatus are generally well maintained and capable of supporting current operations. However, certain stations are located on leased land, potentially limiting long-term flexibility. Capital expenditures have increased in recent years and are appropriate for maintaining operational readiness; however, capital planning should be more closely integrated with long-range financial forecasting, staffing projections, and growth modeling to ensure sustainable infrastructure alignment.

The recent acquisition of a ladder truck reflects expanding operational capability but also increases long-term maintenance, training, and staffing considerations.

Fire Prevention, Life Safety, and Community Risk Management

Fire prevention and code enforcement responsibilities are shared with the City of West Richland. The District conducts annual inspections of businesses in public buildings with an agreement with the City of West Richland, but does not maintain a comprehensive inventory of inspectable occupancies or a structured inspection schedule based on risk classification. The ultimate responsibility for fire inspections in West Richland lies with the city.

As development accelerates, the absence of a comprehensive Community Risk Reduction (CRR) plan and formal prevention structure presents increasing exposure to community risk. Statistical analysis of fire and EMS incident trends is not routinely incorporated into prevention planning.

Strengthening prevention capacity, improving data analysis, and aligning inspection practices with growth will be critical to maintaining risk balance over time.

Communications Systems and Data Integration

BCFD4 benefits from a robust regional 9-1-1 communications center with modern CAD technology and strong staffing depth. Time-stamp data collection supports Standards of Cover analysis.

However, the District does not currently utilize Automatic Vehicle Location (AVL) limiting opportunities for enhanced situational awareness and deployment optimization. Additionally, incident data is not routinely leveraged for performance benchmarking, workload modeling, or predictive planning.

Advancing data utilization from recordkeeping to performance management represents a significant opportunity for system improvement.

Emergency Response Performance and Standards of Cover

BCFD4 demonstrates generally reasonable response performance and benefits from strong automatic aid partnerships that enhance coverage depth and operational resilience. However, the District has not formally adopted response performance objectives measured at the 90th percentile or defined Effective Response Force (ERF) benchmarks for fire incidents.

Without formally adopted service standards, it is difficult to clearly communicate service expectations, measure reliability trends, or align future investments with community risk. The adoption of measurable, publicly reported performance objectives will strengthen transparency, accountability, and strategic decision-making.

Findings

Financial & Cost Considerations

Levy & Revenues

- Regular levy revenue growth remains legally constrained to 1% annually plus new construction. Recent revenue increases above this threshold are primarily attributable to the 2024 EMS lid lift and incremental new construction rather than organic levy growth.
- Assessed valuation growth has consistently outpaced levy revenue growth, resulting in ongoing rate compression. This condition is expected to persist under most projected valuation scenarios and limits the District's long-term revenue elasticity.
- Operating surpluses in 2023 and 2024 indicate that the District's recurring revenue base currently exceeds recurring operating expenditures, providing short-term flexibility to fund pay-as-you-go capital projects and scheduled debt service.
- Investment earnings materially increased revenues in 2024 due to strong cash balances and elevated interest rates. These revenues are cyclical and should be considered non-recurring for long-range financial planning purposes.
- EMS transport revenue represents a significant but variable funding source. Analysis of the District's payer mix indicates that annual collections are highly sensitive to payer type, reimbursement rates, and call volume, contributing to year-to-year revenue variability.
- Financial transparency would be improved through enhanced reporting that clearly distinguishes adopted budgets, adjusted budgets, actual expenditures, and variances, allowing for clearer interpretation of financial performance trends.
- BCFD4 faces potential fire and EMS capital impacts associated with the planned Lewis & Clark Ranch development; however, the District does not appear to have a formal strategy with the City of West Richland for recovering or sharing those growth-driven costs. Because Washington's impact fee and growth-mitigation authorities are administered through cities, counties, or towns, the District must coordinate early with the City to establish a legally supported framework. Without such coordination, BCFD4 may face increased risk of absorbing growth-related capital needs through existing tax revenues or deferred infrastructure investment.

Expenditures & Cost Structure

- Personnel costs, including salaries and benefits, represent the dominant share of total District expenditures, consistent with fire-based emergency service delivery models.
- Current financial and human resources systems do not provide consistent visibility into vacancies, relief staffing, or overtime drivers, limiting the District's ability to reconcile personnel cost variances or evaluate leave backfill impacts.
- Capital expenditures remain significant and should be coordinated with the District's long-term apparatus and facility replacement planning to ensure alignment between financial projections and lifecycle needs.
- Variances between budgeted and actual capital expenditures appear largely timing-related, reflecting procurement scheduling and carryover rather than unplanned spending.
- Non-recurring expenditures, including debt service and interfund transfers, are generally predictable and consistent, supporting overall fiscal stability.

Fund Balance & Reserves

- General Fund reserves are currently healthy, with year-end balances exceeding Government Finance Officers Association (GFOA) minimum reserve guidelines of two to three months of operating expenditures.
- While there had been an absence of a formal Board-adopted reserve policy, the Board adopted resolution 2025-06 implementing a formal reserve policy providing six months of expenditures in reserve.
- If staffing investments are implemented or capital spending accelerates, ending fund balances may decline unless annual operating surpluses are intentionally preserved or capital transfers are formally paced.

Controls, Transparency, & Reporting

- Recent audit findings identified weaknesses related to segregation of duties and transaction review within payroll and accounts payable processes. Actions were taken and the State Auditor's Office has noted that issues have been fully corrected.
- Financial management would benefit from increased procedural structure, including standardized monthly close processes and routine variance analysis comparing adopted budget, amended budget, and actual results.

Organizational & Governance

- District staff and Fire Commissioners expressed strong confidence in the current Fire Chief and Deputy Chief, indicating organizational stability and effective leadership.
- Labor–management relations are positive, with recent collective bargaining successfully completed in a limited number of negotiation sessions.
- District leadership is actively advancing internal initiatives, including policy updates, operational staffing adjustments, and facility improvements, demonstrating readiness for continued organizational development.

Operations & Staffing

- The Intern Firefighter Program is a notable operational strength, effectively augmenting daily staffing levels and providing coverage during employee leave periods.
  - However, Interns are not given any hiring preference when testing for full-time positions, resulting in attrition of highly qualified interns to other agencies.
- The practice of using Station 410 personnel to backfill vacancies at other stations has resulted in intermittent station closures and reduced unit availability, negatively affecting response reliability and effective response force in portions of the District.
- Data tracking related to the frequency and duration of Station 410 staffing impacts was not consistently available, limiting the District's ability to fully quantify service

EMS

- Medical Priority Dispatch has not been implemented to screen calls for medical responses.
- Emergency Medical Dispatch software is not being used; SECOMM relies on dispatcher interaction with the caller.
- BCFD4 has an area for training, but lacks buildings, training props & equipment to provide a robust internal training program.
- BCFD4 reports they need to do a better job at tracking and planning their hands-on training.
- Since the COVID-19 pandemic, BCFD4 reopened Station 410 to improve response times. BCFD4 continues to experience community growth and rising call volume.
- BCFD4 does not have an online or digitally tracked medical equipment inventory system.
- BCFD4 does not have a formal post-incident analysis program.

Facilities

- Two District fire stations are located on leased land managed by the U.S. Bureau of Land Management and the Washington State Department of Natural Resources, which may affect long-term facility planning flexibility.
- District facilities and apparatus are generally well maintained and in good condition. Minor safety issues were observed, suggesting the benefit of a formal safety and industrial hygiene review to proactively identify and mitigate hazards.

Fire Prevention & Life Safety

- Fire code enforcement responsibilities are divided between the City of West Richland and Benton County, with the District providing inspection support but not enforcement authority.
- The District does not maintain a comprehensive inventory of commercial occupancies subject to inspection, nor a defined inspection schedule covering all applicable properties.
- Ongoing and planned development within the District—including the Lewis and Clark Ranch project—will significantly increase population, service demand, and fire risk, requiring proactive planning and additional public safety infrastructure over time.

Communications Systems

- BCFD4 benefits from service through a mature regional public safety answering point that provides consolidated dispatch services, standardized procedures, and regional interoperability.
- Dispatch technology, quality assurance processes, and CAD data capture are robust and capable of supporting performance analysis and Standards of Cover evaluation.
- Field integration with the communications system is limited by the absence of Automatic Vehicle Location (AVL) and locally defined call-processing performance benchmarks.
- Opportunities exist to better leverage existing CAD data to support response performance measurement and demand management strategies.

Performance & Deployment

- CAD data limitations prior to March 25, 2022, constrained historical analysis; however, RMS data was complete and sufficient for trend evaluation.

- EMS incidents account for approximately 65 percent of total system demand and are the primary driver of call volume growth.
- Incident demand has increased at an average annual rate of approximately 8 percent, largely driven by medical responses.
- Concurrent call volume remains relatively low, with approximately 87 percent of incidents occurring without overlap.
- Current response performance demonstrates 90^{th}-percentile turnout, travel, and total response times that are reasonable for the District's service area; however, few areas consistently achieve a structure fire effective response force of 13 or more responders within eight minutes of travel time.
- The District has not formally adopted response service standards, limiting its ability to clearly communicate service expectations, evaluate system performance, or align future investments with community priorities.

Recommendations

Based on the analyses and considering community expectations, recommendations are offered to assist the department with strategic planning and improving fire and emergency services to the community. AP Triton does not expect the department to implement all recommendations in the short term. Some may wait until economic conditions allow their implementation. All of the recommendations offered chart a course to improve capability and service.

Short-Term Recommendations

The short-term strategies listed in this report are a compilation of the recommendations aimed at improving the current conditions and levels of protection over the next one to two years.

Recommendation A-1: Stand up a position control report.

Description: Build and maintain a position control report that tracks all authorized positions, filled positions, pay steps, and overtime trends, aligned to the adopted budget and staffing plan.
Outcomes: Gives clear visibility into staffing, payroll pressure points, and overtime use, supporting better labor planning and negotiations.
Estimated Cost: Low to moderate, due to required staff time and possible minor enhancements to spreadsheet or HR/payroll systems.

Recommendation A-2: Conduct a Washington State Labor and Industries Health and Safety Consultation.

Description: The Washington State Labor and Industries Consultation Program provides safety or Industrial Hygiene consultants to assist with creating safety programs, safety training, and identifying and controlling hazards. No fines or penalties will result from issues uncovered during a consultation. This service is free of charge.

The consultant should review District’s safety policies, workplace injury documentation and Experience Modification Rate (EMR), conduct inspections of each district facility, identify hazards and necessary corrections, and document findings for District follow-up and correction.

Outcomes: Improved employee safety and health, and reduced workplace injuries.

Estimated Cost: No inspection fee. Costs for remediation of identified hazards will be determined based on scope and required corrective actions.

Recommendation A-3: Maintain three-person staffing at Station 410.

Description: The current practice of moving personnel from Station 410 to backfill vacancies at other stations should be discontinued, as it negatively impacts district response times and effective response force (ERF).

Outcomes: Improved response times in the Station 410 response area and increased effective response force. Increased reliance on overtime usage and Intern usage to cover vacancies.

Estimated Cost: To be determined. Overtime expenditures may increase based on future leave usage and staffing needs.

Recommendation A-4: Continue the plan to add three Operations Battalion Chiefs and reclassify the EMS Captain as an EMS Battalion Chief.

Description: The District is planning on adding an Operations Battalion Chief on each shift, and plans to hire up to four personnel to backfill for the vacancies created by the promotion of internal candidates.

Outcomes: These new positions should result in shifting the management of certain programs from District Administrators and Captains to Operations Battalion Chiefs, and increase direct management of shift operations, along with increased incident management and effective response force (ERF)

Estimated Cost: The following figure summarizes the estimates for adding these positions as calculated by the District. Note: One-time hiring costs of hiring replacement firefighters are included in these estimates.

Figure 161: New Battalion Chief Position Cost Estimate (3 Positions)[A]

Cost Center	Cost Per Position	Total Cost
Annual wage cost	$134,710	$404,130
Annual benefits Cost	$36,372	$109,116
One-time hiring/training cost	$13,575	$40,725
Total Cost:	**$184,657**	**$553,9715**

[A] Rounded to the nearest integer.

Recommendation A-5: Stabilize EMS Staffing to Address Sustained Service Demand

Description: BCFD4 is experiencing sustained population growth and increasing EMS demand, resulting in rising call volume, greater incident concurrency, and expanding service expectations. . These factors place increasing strain on the EMS delivery system and, if unaddressed, may affect long-term service sustainability and response performance.

Outcomes: Implementation of a phased staffing strategy will stabilize minimum daily staffing levels, improve response reliability during peak demand periods, and strengthen overall system resilience. Enhancing volunteer recruitment and retention, combined with targeted deployment adjustments, will reduce operational strain and better align resources with projected community growth and service demand. Proactive investment in staffing capacity will help ensure service performance does not degrade as demand increases.

Estimated Cost: Part-time EMS staffing: $35,000–$70,000 per position annually
Volunteer recruitment/retention programs: $10,000–$30,000 annually
Peak-hour staffed unit (if implemented): $150,000–$300,000 annually
Long-range system/station needs assessment: $20,000–$40,000

Estimated Program Range: $175,000–$500,000+ annually depending on selected staffing model.

Recommendation A-6: Establish Defined, Performance-Based Hands-On Training

Description: Although BCFD4 provides both classroom and hands-on training, the absence of standardized performance measures results in variability in training outcomes. Establishing defined performance standards, structured evaluations, and updated training policies will improve consistency and accountability across the organization.

Outcomes: Defined performance-based training standards will improve firefighter competency, operational readiness, and safety. Consistent training expectations and measurable evaluation criteria will enhance overall training effectiveness and support continuous improvement in personnel performance and service delivery.

Estimated Cost: Primarily staff time for program development and implementation.

Recommendation A-7: Implement an Automated EMS Inventory Management System

Description: Medical supply tracking is currently managed through manual processes, limiting inventory visibility and increasing the potential for loss, expiration, and inefficiencies. Implementing an automated inventory management system using barcode, QR, or RFID technology will improve accountability.

Outcomes: An automated inventory system will improve supply tracking, reduce expiration-related waste, and strengthen fiscal stewardship. Increased visibility into supply usage and availability will support improved budgeting, reduce unnecessary expenditures, and ensure consistent readiness of medical equipment and supplies.

Estimated Cost: Typical implementation ranges from $5,000–$25,000 initial setup with minimal ongoing costs.

Recommendation A-8: Create a collaborative Strategic Planning process.

Description: The District was not happy with the 2024 strategic planning process and resulting plan and wants to undertake another planning process. Effective strategic plans should be considered "living" documents that consciously evolve as the department changes, and that is certainly the case with BCFD4. Equally as important is how the planning process is conducted. Broad representation and participation from all levels within the organization, along with participation from external stakeholders, including strong supporters and detractors, is essential in creating and sustaining a strategic plan.

Outcomes: The planning process should empower and motivate internal and external stakeholders in supporting realistic strategic initiatives, goals, and objectives contained in the plan. Furthermore, a strong collaborative planning process and plan may be a useful tool in garnering community support in future funding efforts.

Estimated Cost: Minimal cost if performed internally. $18,000 estimated cost if a trained facilitator is used.

Recommendation A-9: Adopt and periodically report response service standards and goals.

Description: Response standards are an agreement between the fire district, the community leadership, and the citizens that clarify expectations. These standards are the minimum an agency must meet to provide an effective service. Currently, except for the dispatch center, BCFD4 has no adopted response-time standards to provide management with guidance on resource deployment. Knowing what the agency can accomplish will enable it to publish standards and performance metrics for transparency and accountability. This also allows management and elected leaders to judge where scarce assets and capital resources should be focused to meet community expectations. For BCFD4, the recommendation is to adopt first due apparatus type and arrival time standards, and to show the incident time segment parts. This should be based on current performance and should be measured at the 90th percentile. Breaking incidents into specific segments, such as type and location, enables goal-based management. Periodic public reporting, annually at a minimum, will help assure transparency and improve agency credibility.

Setting goals helps management and authority leadership determine where capital and assets can be utilized to improve service to the community. Using a time-based goal helps citizens understand what is hoped to be gained from additional investment in time and resources. A proven approach is to establish achievable goals utilizing the SMART methodology (specific, measurable, attainable, relevant, and time-bound). Setting initial goals based on standards, such as NFPA 1710, is defensible but perhaps not feasible. Therefore, the agency should adopt attainable goals. The following indicates realistic response standards based on the 2024 performance, and suggested goals based on what appears achievable.

Figure 162: Example Performance Statements

BCFD4 Incident Response Performance Statements	
Fire, HazMat, Technical Rescue	For **EMERGENCY Fire, HazMat,** and **Technical Rescue** incidents, BCFD4 will respond within **9 minutes** and **49 seconds** or faster, **90%** of the time. The first due response will have a minimum of three responders, capable and equipped to enter a hazardous environment with positive-pressure airway protection and a minimum of level C protective garments. For incidents involving fire or hazardous materials, the apparatus will carry a minimum of 300 gallons of water and be capable of pumping 1,000 gallons per minute at a minimum of 150 PSI. Responders will maintain two-way radio communications at all times.
Wildland	For **EMERGENCY Wildland Interface** and **Vegetation** incidents, BCFD4 will respond within **14 minutes** and **54 seconds** or faster, **90%** of the time. The first due response will have at least three responders, capable and equipped to safely start, at a minimum, an indirect attack. The apparatus will carry a minimum of 400 gallons of water and be capable of pumping 50 gallons per minute at 100 PSI. Responders will be able to set up a command structure and maintain two-way radio communications at all times.
Medical	For **EMERGENCY Medical** incidents, BCFD4 will respond within **9 minutes** and **24 seconds** or faster, **90%** of the time. The first due response will include at least three responders, capable and equipped to provide advanced life support. Responders will maintain two-way radio communications at all times.
For all **NON-EMERGENCY** incidents, BCFD4 will respond within **11 minutes** and **30 seconds** or faster **90%** of the time. The first arriving unit will have at least one responder able to maintain two-way radio communications.	

BCFD4 Performance Reporting			
Frequency:	Annual	**Due By:**	End of 1st Quarter
Deliver To:	Public Report through the Fire District Board		
Minimum Components			
Incident Volume	In District	Out of District	Type
Time Components	**Standard**	**Goal**	**Notes**
Dispatch Answer & Call Processing	NFPA 1225, 2022	NFPA 1225, 2022	By contract.
Turnout Time (*Emergency, in District*)	1:48 (EMS) 3:00 (Other) 90th Percentile	1:30 (EMS) 2:00 (Other)	Improvement through crew awareness, policy, and supervision
Travel Time (*Emergency in District, First Due*)	West Richland: 7 Mins & 35 Secs Outlying Communities: 11 Mins & 40 Secs 90th Percentile		Improvements are strategic, including where stations are located and staffed.

Outcomes: By adopting and reporting on performance, will establish clear, measurable, and publicly reported response service standards that improve operational accountability, guide strategic investment, and align community expectations with achievable system performance—resulting in a more transparent, data-driven, and continuously improving emergency response system.

Estimated Cost: Primarily staff time and training expenses to build internal analytics and reporting capacity, with potential additional costs for software enhancements or expanded functionality within the ImageTrend records management system.

Recommendation A-10: Implement a Formal Post-Incident Analysis (PIA) Program

Description: BCFD4 currently lacks a standardized Post-Incident Analysis framework. Without a structured process, valuable operational lessons may not be consistently captured, shared, or incorporated into training and policy improvements. A formal PIA program with defined documentation and review procedures will strengthen organizational learning and system improvement.

Outcomes: A structured PIA program will improve organizational learning, reduce repeated operational deficiencies, and strengthen risk management practices. Consistent documentation and evaluation will enhance training value, support performance improvement, and improve coordination during complex or multi-agency incidents.

Estimated Cost: Primarily staff time for development and implementation

Recommendation A-11: Identify all properties that need a fire inspection.

Description: Although the City of West Richland is responsible for fire inspections within the city limits, identifying all properties that need a fire inspection is crucial because it outlines the entire scope of the District's inspection duties and clarifies the types of occupancies and hazards within the community. Without a thorough listing of properties subject to fire code enforcement, it's impossible to accurately assess inspection coverage, coordinate activities with adopted fire codes and local regulations, or ensure consistent fire prevention measures across all relevant occupancies. This approach bases the fire inspection process on actual building use and risk factors rather than assumptions or incomplete data.

Outcomes: Identifying all properties eligible for fire inspections is essential for an effective fire prevention plan. Without a comprehensive and accurate property list, the District may miss critical areas, leading to unaddressed hazards and increased fire risks. Properly identifying properties ensures that all buildings—residential, commercial, or industrial—are checked for compliance with fire regulations, helping to avoid violations and fines. It also allows the District to focus inspections on risk factors such as occupancy type, building age, and prior compliance, ensuring resources are used most effectively.

This process boosts operational efficiency. Inspectors can plan routes more effectively, avoid unnecessary visits, and keep accurate records for data analysis and transparency. During emergencies, a comprehensive property database provides first responders with critical information on building layouts, hazardous materials, utilities, and access points. Additionally, thorough property identification demonstrates the department's dedication to public safety and regulatory compliance, builds community trust, and minimizes liability. Identifying all inspectable properties is a vital proactive step that safeguards lives and property, protects the District's reputation, and strengthens community resilience.

Estimated Cost: Staff time will be the primary cost of gathering occupancy information from City and County resources or manually collecting the data.

Recommendation A-12: Develop and adopt a schedule to inspect all properties.

Description: Currently, neither BCFD4 nor the City of West Richland has a formal schedule in place for inspecting all commercial occupancies, which presents a gap in fire prevention efforts. Without a structured inspection program, some properties may go unchecked for extended periods, increasing the likelihood that fire code violations—such as blocked exits, faulty electrical systems, or inadequate fire suppression equipment—could go unnoticed. These violations pose serious risks to the safety of building occupants, employees, and first responders.

The established procedure has BCFD4 conducting inspections and uploading the information to the West Richland fire marshal, who has enforcement responsibilities in the city.

With available personnel primarily focused on mandated inspections—such as those required for schools, healthcare facilities, and high-risk occupancies—there are insufficient resources to conduct regular inspections of lower-priority or non-mandated commercial properties. As a result, many businesses may not receive the oversight needed to ensure compliance with fire safety standards.

Establishing a consistent inspection schedule, supported by adequate staffing and resources, would help identify and correct hazards before they lead to emergencies. It would also promote a culture of fire safety within the business community, improve code compliance, and enhance the overall safety and resilience of the District's commercial infrastructure.

Outcomes: Establishing a risk-based inspection schedule, as recommended in NFPA 1730, for commercial properties in BCFD4 would significantly improve fire and life safety for building occupants and BCFD4 personnel. The use of a fire-based records management system already implemented by BCFD4 (ImageTrend) allows integration of property and inspection information with the software.

By focusing inspections on factors such as building occupancy type, past code violations, fire protection systems, and potential hazards, the District can use its limited resources more efficiently and target properties that pose the most significant risk to public safety. This focused approach not only helps identify and remediate fire code violations before emergencies occur but also ensures that high-risk buildings receive the attention they need to remain compliant and safe. It enhances situational awareness for responding crews, who gain current knowledge of building layouts, hazards, and fire protection features—ultimately lowering the risk of injury during emergency operations.

A structured, risk-based schedule promotes consistency and transparency in the inspection process, thereby establishing trust with business owners and the wider community. It encourages proactive compliance, decreases the chances of fire-related incidents, and supports the District's broader mission of safeguarding lives, property, and the environment. Over time, this approach helps create a safer, more resilient community while efficiently using available staffing and resources.

Estimated cost: The initial cost is unknown until a complete list of properties is identified. With a defined list of properties, BCFD4 can determine the number of inspectors needed to conduct inspections, plan reviews, and other daily duties.

Recommendation A-13: Update the existing agreement to provide fire prevention and investigation services.

Description: The agreement between West Richland and BCFD4 is an interlocal contract as allowed by RCW 39.34, defining fire prevention, inspection, and investigation services within the City. It states that the City is responsible for administering the fire code and appointing a Fire Code Official. In contrast, the fire district, through its Fire Chief or designee, is authorized to enforce fire prevention under state law and the International Fire Code.

BCFD4 conducts annual fire and life-safety inspections of commercial properties in West Richland on the City's behalf and participates in development review and pre-construction processes to ensure fire code compliance. The agreement also promotes coordination among the City, District, and law enforcement in fire investigations, emphasizing cooperation and reducing service overlaps. West Richland collects all fees from building permits and plan reviews.

The most recent WSRB evaluation provided BCFD4 with only 34% of the available credits for Fire Safety Control, which addresses fire code enforcement.

The following figure shows the credit received for the components of Fire Safety Control.

Figure 163: WSRB Credit for Fire Safety Control

Categories	Credit Received
Fire Code Enforcement	
Fire Marshal	40%
Fire Plan Review	60%
Fire Code Inspections	60%
Fire Code Inspections of Existing Occupancies	19%
Confidence Testing of Fire Protection Systems	24%
Public Fire Education	
Children's Programs	40%
Adult Programs	48%
Investigations	
Fire Investigations	50%

Outcomes: An updated agreement designating BCFD4 as the authority to enforce the International Fire Code, including Washington State amendments, would provide the District with a coordinated process to ensure all buildings are inspected in accordance with NFPA 1730. It would also allow BCFD4 to improve the available credits from WSRB for the Fire Safety Control. The West Richland building inspectors' workload would be reduced, allowing additional time to complete plan reviews and inspections as Lewis and Clark Ranch begins its expansion. The workload for BCFD4 would increase because the district would manage the fire inspection program.

BCFD4 will need to adopt a fee schedule for plan reviews, operational permits required by the fire code, and the construction and alteration of fire protection systems. These fees will offset the costs of a new fire marshal.

Estimated Cost: Fire Marshal – $125,000

Recommendation A-14: Improve Defensible Space Initiative

Description: BCFD4 can bolster its defensible space by boosting homeowner engagement, applying targeted fuel reduction, and improving access and water supply. According to the CWPP, BCFD4 is located in a rapidly expanding WUI, where homes are adjacent to flammable grass and shrub fuels, making defensible space a critical strategy to prevent structural damage.

A more comprehensive and defensible space program involves expanding home assessments, boosting Firewise outreach, and enhancing education on topics like vegetation thinning, ignition-resistant landscaping, and fire-resistant building materials. Due to low participation, additional staff time and funding are necessary to engage more residents and ensure a regular assessment schedule.

Outcomes: BCFD4 also helps reduce risk by coordinating fuel-mitigation projects in high-hazard areas where vegetation has accumulated over decades, particularly in regions with limited access and environmental challenges. These initiatives decrease flame lengths, slow down fire spread, and create safer, more defensible zones for firefighters.

Roadside fuel management, such as maintaining 30-foot buffers, trimming shrubs, and keeping access routes unobstructed, helps reduce response times and creates community barriers that slow fast-moving grass fires. Increasing rural water sources, such as drafting sites and irrigation fill points, further boosts firefighting effectiveness. Overall, strengthening defensible space in BCFD4 increases home survivability, improves firefighter safety, reduces community-level fire spread, and contributes to a more fire-adapted and resilient West Richland.

Estimated Cost: This may initially be covered by existing staff, but as the District grows, a part-time or full-time employee may be required. This could be in conjunction with the District taking over fire inspections and hiring a full-time inspector and a fire marshal.

Recommendation A-15: Formalize performance expectations with SECOMM.

Description: Establish or update a formal service-level agreement or Memorandum of Understanding that clearly defines:

- Call processing time benchmarks by priority
- Dispatch time performance expectations
- Data reporting frequency and format

- Annual performance review process

Outcomes: This protects the District long-term and aligns communications performance with Standards of Cover expectations.

Estimated Cost: Minimal, primarily associated with internal staff time for negotiation, documentation, and periodic review.

Recommendation A-16: Enhance data analytics integration.

Description: Assign internal analytics responsibility or invest in reporting automation tools to leverage SECOMM's robust CAD data exports to:

- Develop automated monthly response-time dashboards
- Monitor turnout, travel, and total response intervals
- Conduct trend analysis by incident type and geography
- Support annual risk and deployment reviews

Outcomes: Improved performance transparency, data-driven deployment decisions, and strengthened Standards of Cover monitoring.

Estimated Cost: Implementation of enhanced data analytics integration can be accomplished through either internal assignment of responsibilities or investment in reporting automation tools. Estimated costs vary based on the approach selected:

Option 1 – Internal Assignment (Low-Cost Approach)
Assigning analytics responsibility to an existing command or administrative position, with use of current Excel-based CAD exports and dashboard tools, would require minimal direct capital investment. Estimated costs would primarily reflect staff time and potential training, approximately **$5,000 to $15,000 annually** in allocated labor and professional development expenses. No significant recurring software costs would be anticipated.

Option 2 – Reporting Automation Tools (Moderate Investment)
Implementation of a structured reporting platform (e.g., Power BI, Tableau, or similar public-safety analytics software), including dashboard configuration and automation of SECOMM CAD data exports, is estimated to require an initial investment of approximately **$15,000 to $40,000**, inclusive of setup, configuration, and training. Ongoing annual licensing and maintenance costs are estimated at **$5,000 to $12,000 per year**, depending on user count and hosting model.

Recommendation A-17: Implement Full Automatic Vehicle Location (AVL).

Description: Equip BCFD4 apparatus with AVL to:

- Improve closest-unit dispatch accuracy
- Enhance situational awareness
- Support dynamic deployment decisions
- Improve post-incident performance analysis

Outcomes: Increased operational efficiency through more accurate closest-unit dispatching and improved deployment decision-making.

Estimated Cost: Implementation of a CAD-integrated Automatic Vehicle Location (AVL) system for Benton County Fire District 4's 16 frontline and specialty units is estimated to require a one-time capital investment of approximately $125,000 to $200,000, inclusive of vehicle hardware, installation, CAD integration, configuration, testing, and training. Ongoing annual costs for software licensing, cellular connectivity, maintenance, and CAD support are estimated at $25,000 to $35,000 per year.

To reduce initial capital impact and allow operational testing, a phased implementation approach is included here (and would be more appropriate in Mid-Term Recommendations):

Phase 1 – ALS Transport Units (Year 1)

- Equip three primary ambulances (M1421, M1422, M1423)
- Estimated capital: **$45,000–$70,000**
- Annual operating impact: **$8,000–$12,000**
  Focus: EMS reliability, closest-unit dispatch validation, and response-time analytics.

Phase 2 – First-Due Engines (Year 2)

- Equip three Type 1 engines (E1411, E1412, E1413)
- Estimated capital: **$40,000–$65,000**
- Annual operating impact increases proportionally
  Focus: Structure fire response modeling and ERF tracking.

Phase 3 – Remaining Apparatus & Specialty Units (Year 3)

- Equip wildland units, tenders, ladder, and command vehicle
- Estimated capital: **$35,000–$65,000**
  Focus: Full-system deployment visibility and surge capacity tracking.

This phased strategy spreads capital over multiple budget cycles, allows refinement of CAD integration processes, and aligns investment with measurable performance objectives.

Recommendation A-18: Conduct periodic joint communications exercises.

Description: Coordinate regular training or tabletop exercises with SECOMM to:

- Test multi-agency incident coordination
- Validate radio interoperability
- Evaluate high-volume or disaster surge capacity
- Strengthen operational relationships

Outcomes: Increased operational preparedness and system reliability through validated communications performance during multi-agency and high-demand scenarios.

Estimated Cost: Minimal to low, largely staff time, with potential minor costs for exercise facilitation or materials.

Recommendation A-19: Monitor call processing and staffing trends.

Description: Given the high regional call volume:

- Annually review SECOMM staffing adequacy relative to call growth
- Monitor call answer times and queue delays
- Participate in governance discussions regarding future capacity

Outcomes: Enhanced communications system resilience through early identification of capacity constraints and data-informed governance engagement.

Estimated Cost: Minimal, limited to staff time for data review and participation in governance discussions.

Recommendation A-20: Maintain redundancy and continuity planning oversight.

Description: Ensure BCFD4 leadership:

- Reviews SECOMM's business continuity plan
- Confirms generator and backup system testing
- Understands alternate dispatch contingencies

Outcomes: Increased communications reliability and reduced service disruption risk through proactive continuity and redundancy oversight.

Estimated Cost: Minimal, limited to leadership and staff time for review, coordination, and periodic verification.

Recommendation A-21: Revise the hiring process to include preference components for qualified District interns.

Description: The District should consider altering the hiring criteria to give formal credit to interns during the testing/hiring process. Intern credit could be given during the written test, oral interview panel, or include the top intern candidates (who passed the written, physical agility, and interview panel process) in the Chief's interview for final hiring.

Outcomes: The retaining of highly qualified personnel who are already integrated into District operations, and do not require additional training and orientation, therefore reducing administrative and operational workload.

Estimated Cost: While there is no estimated cost increase included in this recommendation, AP Triton believes there would be some cost savings resulting from a reduced need for equipment and clothing outfitting, required training and certifications, and episodic increased overtime expense exposure resulting from delayed onboarding of personnel hired from outside agencies or the public.

Mid-Term Recommendations

The mid-term strategies are progressive enhancements of the current conditions. Many will likely require two to five years to accomplish.

Recommendation B-1: Coordinate growth-mitigation and capital cost-recovery planning for the Lewis & Clark Ranch development.

Description: BCFD4 should proactively engage with the City of West Richland to evaluate lawful growth-mitigation and capital cost-recovery strategies associated with the Lewis & Clark Ranch development. Given the scale of planned growth, the District should work with the City and legal counsel to determine whether fire and EMS capital impacts can be addressed through mechanisms such as development approval conditions, planned-action implementing ordinances, developer agreements, interlocal cost-sharing arrangements, or other Washington-law-compliant approaches.

Any strategy should be supported by a documented capital facilities plan, nexus analysis, service-area planning assumptions, and a clear distinction between existing system deficiencies and growth-driven capital needs.

Outcomes: Establishing a coordinated growth-mitigation framework will better align fire and EMS infrastructure planning with anticipated development, improve the District's ability to pursue lawful cost recovery or cost sharing, and reduce the risk of unfunded capital pressure on the existing tax base.

This approach may also improve BCFD4's ability to plan for future ambulance capacity, station infrastructure, apparatus, and related system investments in a more timely and financially sustainable manner

Estimated Cost: Initial planning and analysis costs are expected to be low to moderate, estimated at approximately $150,000 to $400,000 for staff coordination, legal support, planning analysis, and collaboration with the City.

However, long-term capital needs associated with growth could be significant. Planning-level estimates range from approximately $400,000 to $800,000 for an additional ambulance and related start-up equipment to $13 million to $24 million or more if future development ultimately requires land acquisition, fire station construction, apparatus, and supporting infrastructure.

Successful implementation of this recommendation could allow a meaningful portion of those future capital costs to be offset through lawful growth-mitigation or cost-sharing mechanisms.

Recommendation B-2: Build a bottom-up payroll model.

***Description**:* Develop a detailed payroll model that projects costs by position, step, COLA, overtime, and benefits, including a relief factor for 24/7 operations.

***Outcomes**:* Improves the accuracy of budget forecasts, supports staffing decisions, and clarifies the long-term impact of labor agreements.

***Estimated Cost**:* Moderate ($50K - $250K). This effort will require dedicated staff time and may necessitate consulting assistance or system enhancements.

Recommendation B-3: Map segregation of duties and formalize change controls.

***Description**:* Document current financial processes for payroll, accounts payable, and general ledger; identify and correct conflicts in segregation of duties; and implement formal change-control procedures for financial systems and master data.

***Outcomes**:* Reduces fraud and error risk, responds to audit findings, and builds a stronger internal control environment.

***Estimated Cost**:* Low to high. Implementation will require dedicated staff time and may necessitate consultant support, system enhancements, and targeted external review or training.

Recommendation B-4: Strengthen EMS management and administrative capacity.

Description: As EMS demand continues to grow, administrative capacity must be scaled to maintain effective program oversight and system performance. Currently, BCFD4's EMS system is managed by a single Administrative Captain supported by a contract Medical Director, despite EMS representing the majority of total call volume. This imbalance limits program development, quality improvement, and long-range planning.

Outcomes: Strengthening EMS administrative capacity will improve program oversight, regulatory compliance, and quality assurance while allowing leadership to focus on system performance and strategic planning. Targeted contract support can enhance program sustainability without requiring permanent staffing increases.

Estimated Cost: Approximately $30,000–$40,000 annually for part-time contract EMS support.

Recommendation B-5: Implement a performance evaluation program.

Description: A performance evaluation program that provides timely, structured feedback to District staff should be implemented. Supervisors should be trained in how to assess, document, and review job performance with assigned subordinates, to ensure employees understand their strengths and weaknesses while also providing a safe environment for frank conversations with their supervisors.

Outcomes: Improved communications and job performance throughout the organization.

Estimated Cost: Cost could range from $0 to $15,000 annually, depending on whether the District chooses to implement a web-based solution.

Recommendation B-6: The District should educate businesses of their lack of confined space entry operations capability .

***Description*:** The District should formally notify businesses that it does not provide confined space rescue standby services when they report confined space operations. Businesses conducting confined space entry should be advised of their responsibility to comply with applicable OSHA regulations, including the requirement to provide trained and equipped rescue capability when confined space work is performed.

Outcomes: Improved operational safety for District personnel and private-sector confined space entrants through clearer understanding of regulatory responsibilities and rescue standby requirements..

Estimated Cost: No cost.

Long-Term Recommendations

The short- and mid-term strategies discussed will move the District forward substantially. A longer-term, high-level view of future needs is also important to provide a “big picture” view of how the organization may continue with future initiatives. Primarily, long-term strategies are centered around community growth and related workload, and how both impact the future deployment of personnel

Recommendation C-1: Plan for future lid-lift and voter-approved measures.

Description*:* Evaluate timing, amount, and purpose of future lid lifts or other voter-approved revenue measures, using service goals, capital needs, and staffing plans to shape the proposals.

Outcomes*:* Aligns revenue strategy with service expectations, improves voter communication, and supports long-term financial sustainability.

Estimated Cost: Low to high ($500K to $500K) for staff or external resources to provide financial analysis followed by public relations and community engagement efforts.

Recommendation C-2: Implement performance management dashboards.

Description*:* Design and deploy dashboards that combine key financial and operational measures (e.g., response times, unit utilization, overtime, EMS collections) for leaders and the Board.

Outcomes*:* Supports data-driven decisions, continuous improvement, and clearer communication of performance to stakeholders.

Estimated Cost*:* Moderate ($25K to $200K), due to anticipated investments in software or reporting tools and related staff or consultant support.

Recommendation C-3: Establish a regular fee and cost-recovery review cycle.

Description: Create a schedule and method to review fee schedules (e.g., EMS transport fees, cost-recovery charges) every two to three years against costs, benchmarks, and payer trends.

Outcomes*:* Keeps fees aligned with actual costs and market conditions, protects the tax base, and supports sustainable service delivery.

Estimated Cost*:* Low to moderate ($0 to $50K), depending on internal staff capacity and the potential need for consultant assistance with complex cost-of-service analyses.

Recommendation C-4: Implement long-term financial planning (LTFP).

Description*:* Implement an integrated long-term financial plan that links operations and capital, includes multi-year forecasts, tests different scenarios (growth, recession, grant loss,

etc.), and allows for systematic performance tracking against plan on a regular basis.
***Outcomes**: Improves long-range decision-making, highlights structural gaps early, and supports communication with the community and rating agencies.*

***Estimated Cost**: Moderate to high ($100K to $500K), due to required staff and Board engagement and the potential need for software enhancements or consultant assistance.*

Recommendation C-5: Explore priority- or program-based budgeting.

***Description**:* Pilot a priority-based or program-based budgeting approach that links funding to outcomes and performance and documents the case for maintaining or increasing resources.

***Outcomes**:* Clarifies what programs deliver, supports grant applications and ballot measures, and helps leaders realign resources when needed.

***Estimated Cost**:* Low to moderate ($10K to $150K), due to required training and facilitation efforts and the possible need for consultant services or system enhancements.

Recommendation C-6: Develop an open data/transparency portal.

***Description**:* Create an online transparency portal for budgets, financial reports, audits, and key performance indicators that is easy for the public to access and understand.

***Outcomes**:* Builds public trust, improves accountability, and can reduce routine information requests.

***Estimated Cost**:* Low to Moderate ($5K to $50K), reflecting web development and ongoing maintenance requirements.

Recommendation C-7: Digitize procure-to-pay with built-in controls.

***Description**:* Implement an electronic procure-to-pay system with role-based approvals, workflow, and audit logs for purchasing, receiving, and invoice payment.

***Outcomes**:* Reduces errors and fraud risk, speeds up processing, and improves documentation for audits.

Estimated Cost: Moderate to high ($75K to $750K), due to anticipated software licensing costs, system implementation efforts, and associated training.

Recommendation C-8: Deploy continuous monitoring analytics.

***Description**:* Set up routine data analytics to scan financial transactions for red flags (e.g., duplicate payments, unusual vendors, split purchases, and overtime anomalies).

***Outcomes**:* Detects issues earlier, supports stronger internal controls, and reinforces a culture of accountability.

Estimated Cost*:* Moderate ($25K to $100K), due to anticipated analytics platform costs and required staff training or consultant assistance.

Recommendation C-9: Pilot AI-assisted process documentation and improvement tools.
Description*:* Test AI-based tools (such as Rvrwrk's Coco or similar products) to help staff quickly document workflows, map controls, and identify process improvements in finance and administrative functions.
Outcomes*:* Speeds process documentation, helps close control gaps, and supports continuous improvement with limited staff capacity.
Estimated Cost*:* Low to moderate ($2.5K to $30K), reflecting a modest software subscription or pilot license fee and associated staff time.

Recommendation C-10: Develop a dedicated hands-on Training facility.

Description: Hands-on training is essential to maintaining firefighter competency and operational readiness. Without dedicated training infrastructure, training realism and effectiveness are limited. BCFD4 should develop the previously identified training area and associated infrastructure to support comprehensive operational training.
Outcomes: A dedicated training facility will improve training realism, accessibility, and effectiveness while strengthening firefighter preparedness and safety. Improved training capacity will enhance operational readiness and reduce injury risk over time.
Estimated Cost: Basic development typically ranges from $150,000–$600,000 depending on scope.

Recommendation C-11: Upgrade the Training Center through a structured capital improvement project.

Description: BCFD4 should pursue a structured capital improvement effort to upgrade the training center, including modern classroom space, technology infrastructure, administrative workspace, and expanded training grounds. A regional-capable facility may also support partner agencies.
Outcomes: Modernizing the training center will improve firefighter safety, expand training capability, and support multi-discipline operational preparedness. A modern facility may also create opportunities for regional collaboration and cost recovery while improving long-term system readiness and reducing operational risk.
Estimated Cost: Prefabricated training tower: $1.8M–$2.8M. Total project cost dependent on scope and infrastructure.

Section VI:
APPENDICES

Appendix A: Occupancy Vulnerability Assessment Profile Example

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Appendix B: Stakeholder Interviews

Introduction to the Stakeholder Interviews

As part of this assessment, AP Triton conducted interviews with a broad range of internal and external stakeholders associated with Benton County Fire District 4. The purpose of these interviews was to better understand current challenges, concerns, and expectations related to the District's emergency service delivery system. Discussions also explored opportunities for improved collaboration, shared services, and alignment with community needs.

The insights collected during this process represent the perspectives of individuals and groups interviewed—referred to as "people inputs." These inputs often reflect perceptions and personal experiences rather than independently verified facts. All information was taken at face value and reviewed collectively for consistency, recurring themes, and frequency of mention. The project team used this information to identify trends, confirm observations across multiple sources, and determine which findings were substantial enough to include in this report.

Stakeholders were drawn from the following categories:

- Elected Officials
- City Management
- Department Heads
- Fire Department Chief Officers
- Labor Representatives
- Rank-and-File Personnel
- Administrative Staff

The observations and recommendations presented in this section are based on patterns that emerged during the stakeholder engagement process and were deemed relevant and significant to the District's current and future service planning.

Elected Officials, City Management, Department Heads

What strengths contribute to the success of the fire district?

- The training that they receive for firefighting
- Connected with the community
- Communication, work well with each other, looking to meet the end goal, good training
- Public outreach
- Leadership – deputy and fire chiefs, handling the finances of the district, managing the people
- Community support

What does the District do well?

- Their approach to the public has been very good, and they are involved in the community
- Respond quickly
- Stay within the budget, they were able to grant all requests, money doesn't seem to be a problem, one of the top ambulances for submitting billing
- Good response times, good job with deploying resources for the 4^{th} of July
- Provide a good service to the community, and money is not a problem

What are some areas in which you think the District could make improvements?

- Training for fire inspections and the fire code
- Planning to address future growth
- Station locations – are they in the best locations
- Coordination of fire inspections, TRC for new developments
- Completing the master plan

What opportunities, in your view, are available to improve the service and capabilities of the fire district?

- Better staffing for the future growth, and that they are qualified to do the job
- Rebuild Station 410 and plan for new fire stations at the Lewis and Clark Ranch
- Staffing, working for dedicated medics and FFs, better fire inspection,
- Funding for the District with the City of West Richland, a voice at the table

What do you see as critical issues faced by the fire district today?

- Inspection training
- Fire code knowledge
- Dedicated fire inspection program
- Financing/budget
- Staffing – the right number of personnel at Station 410 can drop to 2-0, but this depends on the rank of the staff
- Site design and the fire district's access
- Taxing of personal property valuations
- Growth
- Revenue
- Growth and planning for the future, mentorship, and the growth of personnel
- Adding three BC positions – prepare existing staff for promotion
- Volunteer base – has shrunk and will continue to shrink

If you could change one thing in the fire district, what would it be?

- Add a fire marshal who would do plan reviews and inspections in the city
- Relocate the fire training facility
- Influx of experience – more experience and institutional knowledge

How would you describe the level of services provided by the fire district?

- Exceptional
- Above average – great response time, and they need to maintain services with future growth
- Top notch
- Excellent

What, in your opinion, are some opportunities to improve service and/or coordination within the county?

- Communication and being on the same page for development
- Replace Station 410

- Actively looking for opportunities to improve services to the community and to have a better relationship with the city
- Input for the water system – needs to be updated every 10 years. They need BCFD4's input
- Being cognizant of being at the table with them, going to meetings, and being a part of the decision-making process

Chief Officers, Labor Leaders, Rank & File, Administrative Staff

What strengths and successes best define BCFD4 today?

- Very healthy culture, strong desire to serve, always trying to move forward, not stuck in a reactive mode, the board is forward-thinking
- Leadership at the top, talking about the budget, and prioritization of people
- Good family vibe, good culture, get along pretty well, a lot of new people
- The training program has a lot of promise
- Accomplish a lot with limited resources, good culture, and are very involved in the community

What are the key areas that need attention or improvement within the District?

- Allowing the administrative assistant and the finance manager to assist the administration more
- Need a little better communication
- Trust the admin staff to do other things to relieve some of the workload
- The organization needs more administrative personnel to provide services. Shift from ops to administrative positions
- The volunteer program may need to adapt, including training, EMS, and fire inspections, and let the captain know
- Very young department, needs more help in the training division, managing training data, new software for the LMS, needs more administrative help, hiring the FFs
- Need to fill the other roles from the on-shift FFs
- More buy-in from the officers to do the training because they are busy with other projects, and there is no formal officer development program
- Intern firefighter program

- Providing more preference to the interns who already meet the District's standards during the hiring process

What opportunities do you believe exist to improve District effectiveness or community service?

- Spread thin and need to add more personnel
- Staffing at Station 410
- They do a good job with the community now
- Need additional assistance in the department, someone to operate the training academy
- Training academy – joint with Pasco and Kennewick – but still need one for the volunteers and residents
- Invest in the volunteers with recruitment – integrate them with the career staff

What challenges do you see in making improvements?

- Renewing the levy
- FFs not wanting to change but embrace it. Gives the opportunity to hear about the change. Anxiety about who will be the BCs.
- Funding, staffing, time, and better relationships with the city (people understanding who does what)

What do you see as critical issues faced by the fire district today?

- Apparatus replacement
- Lack of administrative offices
- Training facility
- Succession planning for the finance position
- Battalion Chiefs and the ripple effects of all the promotions
- Staffing Station 410
- Keeping up with the growth, maintaining the current status, and not letting it get below where it is now
- Not losing the family atmosphere
- Learning how to manage new types of target hazards that are coming to the hazards

- Solid training plan – not getting laterals, does not have a dedicated training facility.
- Where to put the new stations
- Meeting the demand of the community – changing demographics

Please share your thoughts/ideas regarding alternative staffing models and dynamic deployment.

- Another day staff position to relieve some of the jobs of the company officers
- Maybe for lift assists, community paramedicine
- Have the volunteers work shifts, temporary wildfire crews, and utilize temporary agencies to reduce some of the workload

If you could change one thing in the District, what would it be?

- Having adequate offices for admin staff
- Letting the company officers be company officers
- Be recognized by other agencies as professional
- Training division

How would you describe the level of service provided by the fire district?

- Excellent
- Very good. Provide a lot of public relations and education. Provide tailored programs for education.
- Great, getting a lot better with the additional staffing
- A young department and some older employees within the next 5 years
- EMS is phenomenal – be kind
- Very good

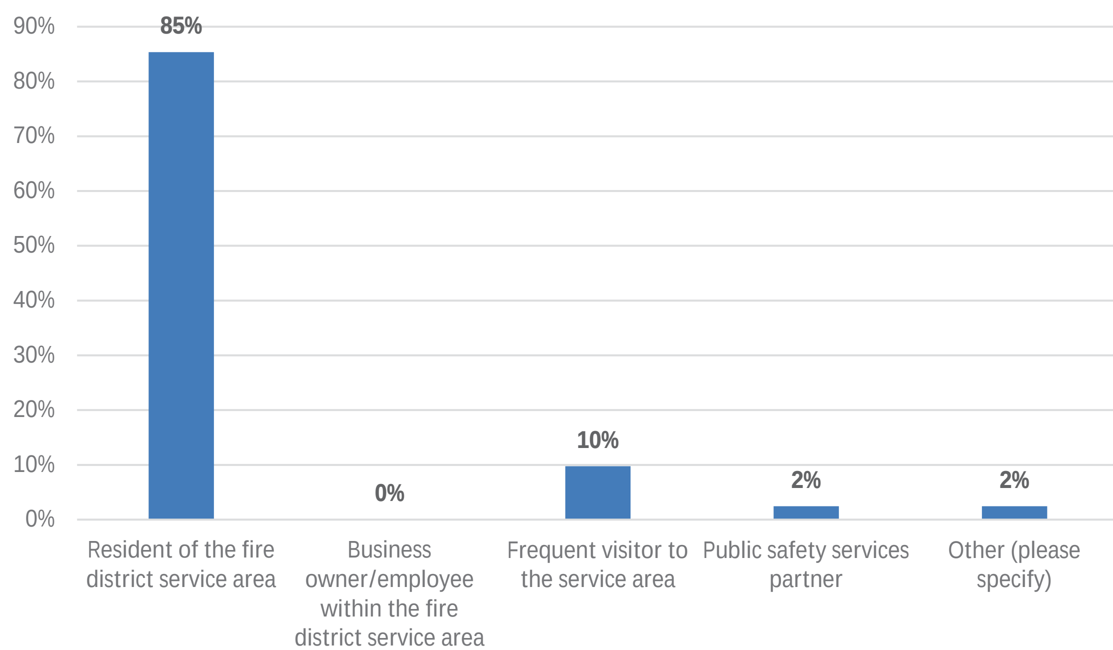
How would you describe morale and communication within the District?

- The morale is excellent
- Communication is much better
- Good morale and communication
- Morale is good
- Communication could always improve – the Chief is spread thin and may forget to communicate with others in the organization. May not understand its importance.

Appendix C: Community Survey Overview & Executive Summary

Benton County Fire District 4 and AP Triton conducted a community survey to gather resident and stakeholder input on emergency services, communications, engagement, and future priorities. The survey received 41 total responses, with participation primarily from residents within the District's service area, most notably from the City of West Richland. Overall, the results reflect strong community satisfaction, clear expectations for core services, and constructive feedback to support continued improvement as the District plans for the future.

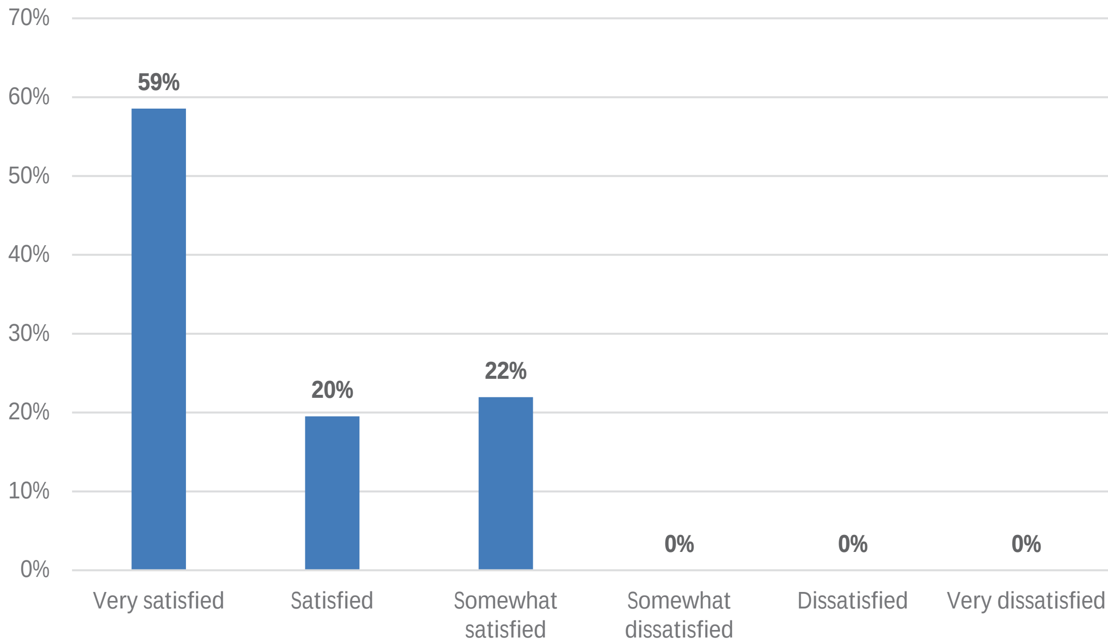
Figure 164: Respondent Relation to the Fire District



Overall Satisfaction and Service Perception

Community satisfaction with fire and emergency medical services is consistently high. Nearly all respondents reported being either very satisfied or satisfied with the services provided by BCFD4, and no respondents indicated dissatisfaction. Among those who have directly received emergency or non-emergency services, satisfaction levels were especially strong, underscoring positive community experiences with District personnel.

Figure 165: Respondent Service Level Satisfaction



Respondents frequently cited timely emergency response, professionalism, technical competence, and kind, compassionate service as key strengths. Many respondents also expressed appreciation for the District's willingness to seek feedback and pursue continuous improvement.

Service Expectations and Priorities

Survey results indicate that community expectations are firmly centered on core emergency services rather than service expansion. The highest priorities identified by respondents include:

- Ensuring the technical competence and training of personnel
- Improving and maintaining emergency response times
- Fiscal responsibility and long-term sustainability
- Reliable, well-maintained equipment and facilities

Survey respondents clearly prioritized core emergency response services. Emergency medical services, fire suppression, and wildland firefighting were most frequently rated as critical priorities, while prevention, education, inspections, and outreach services were more commonly rated as important priorities. These results indicate strong community support for focusing resources on frontline response capabilities while maintaining essential prevention and education programs.

Most respondents expect emergency resources to arrive within five to six minutes, while also recognizing that response times may reasonably vary based on location, time of day, and incident conditions. A clear majority indicated that expectations differ depending on where they are located within the district.

Communications and Community Engagement

Respondents identified Facebook as the most effective communication platform, followed by newsletters/mailers, community events, and the District website. While current communication efforts are generally viewed as effective, respondents expressed interest in:

- More frequent and timely updates, especially during critical incidents
- Direct notification options, such as email or text alerts
- Shorter, more visual content
- Expanded outreach to younger families

Community engagement feedback emphasized the value of in-person visibility, public education, school-based programs, and participation in local events. Many respondents indicated that BCFD4 is already engaging well, while offering ideas to further strengthen connections.

Looking Ahead

When asked about the next three to five years, respondents emphasized the importance of aligning staffing, training, and equipment with community growth. Additional staffing, continued professional development, and proactive communication were the most frequently cited areas for future focus. Importantly, many respondents expressed trust in the District’s direction and a desire to see current strengths sustained as service demands increase.

The following sections detail the full results of the community survey.

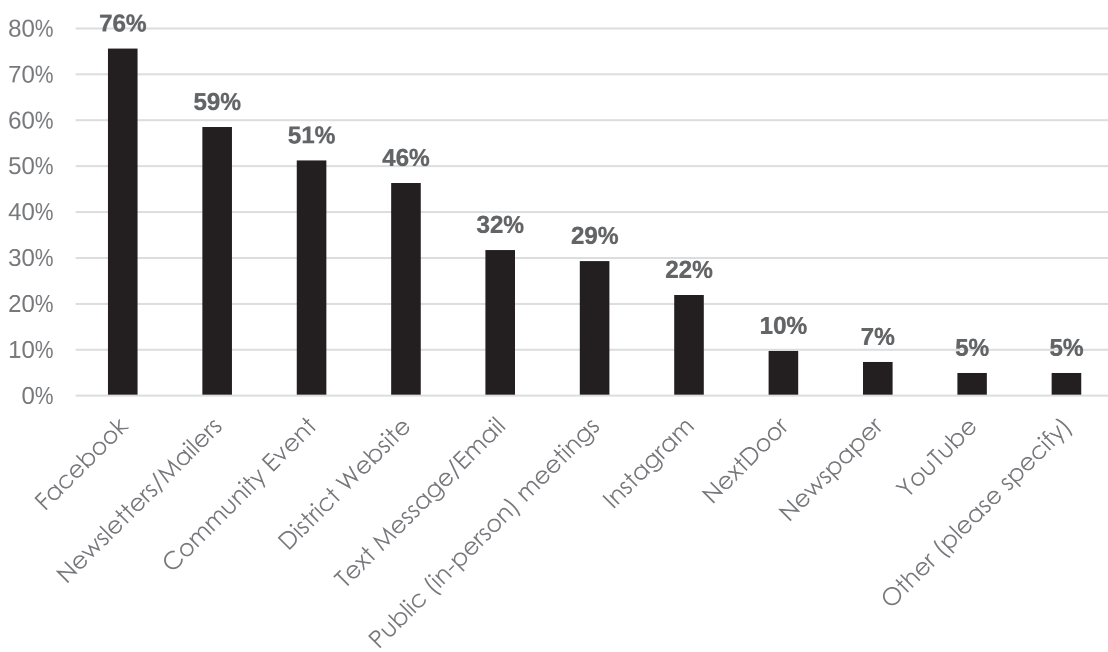
Communications & Engagement

Preferred Communication Methods

Question: What methods would you prefer that the fire district utilize to deliver information to you? (Select all that apply)

A total of 41 respondents answered this question. Results show a clear preference for **digital and community-based communication methods**, with social media and direct outreach ranking highest.

Figure 166: Preferred Communication Methods



The most frequently selected method was Facebook, chosen by 31 respondents (76%), indicating it is the District's most effective single platform for reaching the community. Newsletters or mailers were selected by 24 respondents (59%), followed closely by community events (21 respondents, 51%) and the district website (19 respondents, 46%).

Additional preferred methods included text message or email notifications (13 respondents, 32%) and public, in-person meetings (12 respondents, 29%). Lower-ranking platforms included Instagram (9 respondents, 22%), NextDoor (4 respondents, 10%), newspapers (3 respondents, 7%), and YouTube (2 respondents, 5%).

Two respondents (5%) selected "Other," noting the value of the District's participation in community events—particularly car seat safety and bicycle safety education in schools—while one response was intentionally humorous.

Community Engagement Opportunities

Question: What are some ways the fire district could better engage with the community?

This open-ended question received 24 responses. Overall, comments reflected strong support for current engagement efforts, alongside constructive ideas for expanded visibility and interaction.

The most common themes focused on:

- **Increased presence at community events**, including block parties, local sporting events, open houses, and public training activities.
- **Enhanced social media communication**, particularly more frequent and timely updates.
- **Expanded educational outreach**, especially in schools, through CPR training, fire safety education, CERT programs, and car seat installations.
- **Creative and informal engagement ideas**, such as community-friendly events, public training demonstrations, and family-oriented activities.

Several respondents explicitly stated that the District is already engaging well, using phrases such as "keep doing what you are doing" or noting that engagement efforts are effective. A smaller number of respondents indicated uncertainty or no specific suggestions.

Effectiveness of Current Communications

Question: How effective do you find the fire district's current methods of communication (website, social media, etc.)?

This question received 30 responses. Overall feedback indicates that most respondents view the district's communication methods as effective to very effective, though there is room for improvement in reach, consistency, and modernization.

Many respondents described current communications as "effective," "great," or "very effective," particularly when information is actively posted. Several respondents emphasized that Facebook and the website are useful tools, especially when content is timely and informative.

At the same time, some respondents noted:

- Limited awareness of the District's website
- Remnants of outdated or infrequent content
- A desire for information to be **pushed directly** to residents rather than requiring them to search for it
- Challenges reaching **younger families** through existing channels

A small number of responses expressed dissatisfaction or uncertainty, often tied to lack of exposure rather than negative experiences.

Suggested Improvements

Question: What improvements could be made to the fire district's communication strategies?

A total of 22 respondents answered this question. Suggestions generally reinforced themes identified in earlier questions and focused on **enhancing visibility, timeliness, and accessibility**.

Common suggestions included:

- **More frequent and timely updates**, especially during critical incidents such as wildfires.
- **Shorter, more visual posts** rather than long written messages.
- **Direct notification options**, such as text alerts or email subscriptions.
- **Expanded use of multiple platforms** to reach different demographics, including youth.
- Sharing **behind-the-scenes content**, such as training, daily operations, and public interactions.

Several respondents also indicated that current efforts are working well, noting "none" or expressing appreciation for recent improvements such as signage.

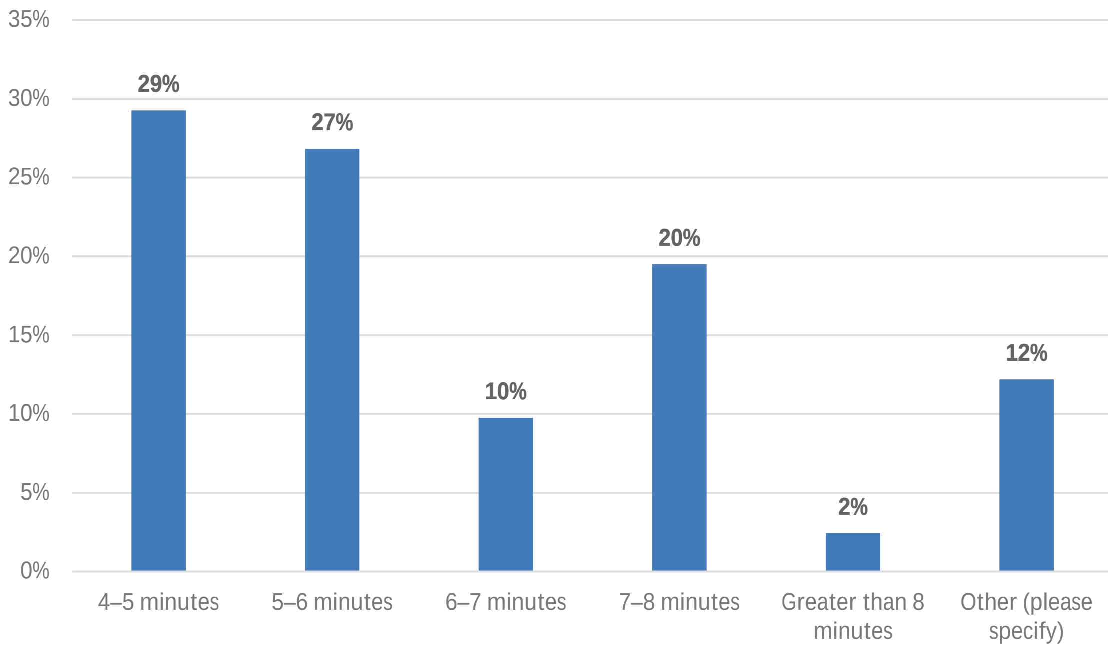
Service Expectations & Priorities

Response Time Expectations

Question: How long do you think it should take for emergency resources to arrive after you call 911?

A total of 41 respondents answered this question. Responses indicate that most community members expect emergency resources to arrive within a **four-to-six-minute window**, while also recognizing that response times may vary based on location and circumstances.

Figure 167: Response Time Expectations



Specifically, 12 respondents (29%) indicated an expectation of 4–5 minutes, and 11 respondents (27%) selected 5–6 minutes. An additional four respondents (10%) identified 6–7 minutes, while eight respondents (20%) selected 7–8 minutes. One respondent (2%) indicated an expectation of greater than eight minutes.

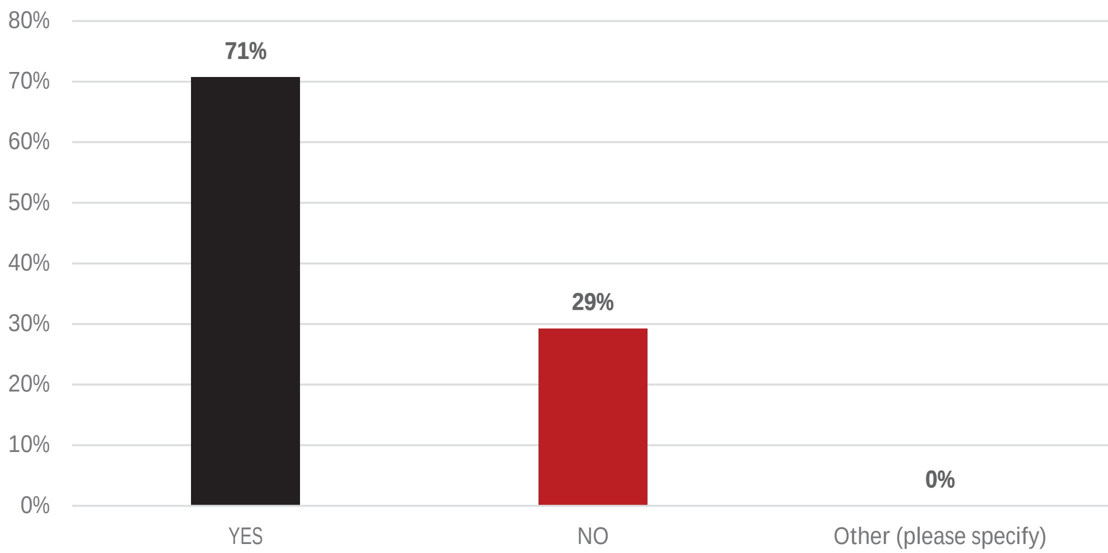
Five respondents (12%) selected "Other," with comments emphasizing variability based on distance from stations, differences between fire and EMS responses, and the importance of readiness and turnout time rather than strict travel time alone.

Location-Based Expectations

Question: Does that expectation change depending on where you are located?

All 41 respondents answered this question. A clear majority—29 respondents (71%)—indicated that their expectations for emergency response time do change depending on location, while 12 respondents (29%) stated that their expectations remain the same regardless of location.

Figure 168: Location-Based Expectations



This response pattern suggests broad community awareness of geographic and operational factors that influence emergency response performance.

Service Priority Ratings

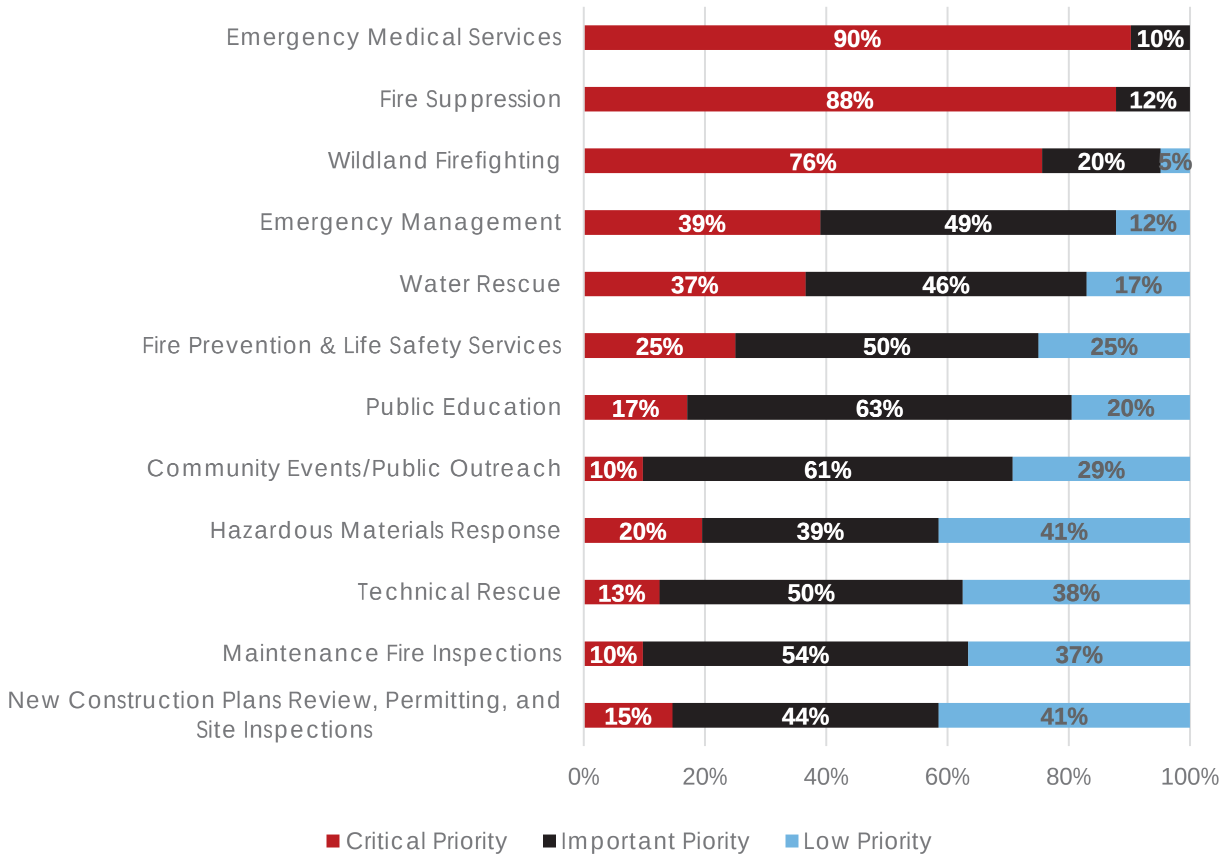
Question: Please rate the following services provided by the district using a scale of critical priority, important priority, or low priority.

A total of 41 respondents completed this question. Results show a strong and consistent prioritization of **core emergency response services**, particularly fire suppression, emergency medical services, and wildland firefighting.

The services most frequently rated as **Critical Priority** were:

- Emergency Medical Services: 90% rated as critical.
- **Fire Suppression:** 88% rated as critical.
- **Wildland Firefighting:** 76% rated as critical.

Figure 169: Service Delivery Priorities



Emergency Management (**39% critical**) and Water Rescue (**37% critical**) also received relatively high critical-priority ratings, indicating strong community awareness of large-scale incident preparedness and specialized response capabilities.

Prevention, education, and outreach services were more commonly rated as **Important Priority** rather than critical. These included:

- **Public Education:** 63% important priority
- Community Events/Public Outreach: 61% important priority
- **Fire Prevention & Life Safety Services:** evenly split between critical (25%) and important (50%)

Regulatory and inspection-related services—such as new construction plan review, permitting, site inspections, and maintenance fire inspections—were more frequently rated as **important or low priority**, reflecting community recognition of their value while prioritizing frontline emergency response.

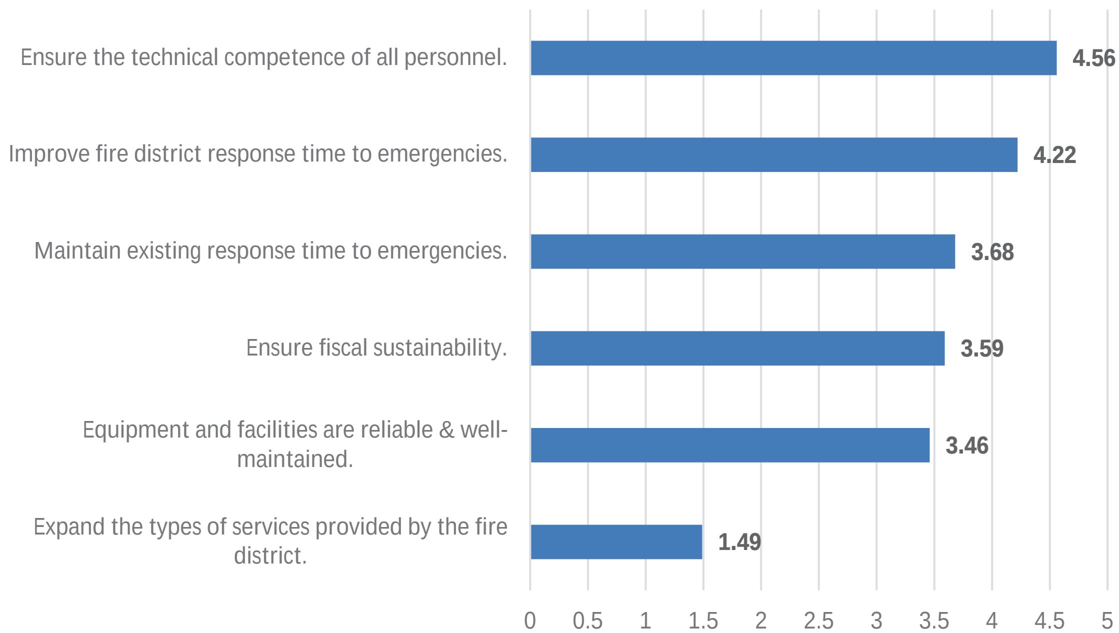
Overall, these results indicate that respondents place the greatest importance on **timely, effective emergency response**, while still valuing prevention, education, and regulatory services as essential supporting functions.

Planning Priorities

Question: Please compare each of the following elements and rank the planning considerations in order of importance.

A total of 41 respondents completed this ranking exercise, with one skipped response. Overall results indicate that respondents place the highest importance on personnel competence and emergency response capability, followed by fiscal sustainability and asset reliability.

Figure 170: Planning Priorities



The planning consideration ranked highest overall was ensuring the technical competence of all personnel, which received the strongest concentration of top rankings and the highest overall score. Improving fire district response time to emergencies also ranked highly, followed by maintaining existing response times, reinforcing the importance of response reliability.

Mid-ranked priorities included ensuring fiscal sustainability and maintaining reliable and well-maintained equipment and facilities, reflecting community interest in responsible resource management and operational readiness.

The lowest-ranked consideration overall was expanding the types of services provided by the fire district, indicating that respondents prioritize strong delivery of core services over service expansion.

Community Expectations of the Fire District

Question: Please list the top three expectations you have of your fire district.

This open-ended question generated a substantial number of responses, revealing strong consistency across respondent expectations. The most frequently cited expectations centered on **rapid and reliable emergency response**, **high levels of training and competence**, and **fiscal responsibility**.

Common themes included:

- Fast and dependable response times for fire and medical emergencies
- Well-trained, knowledgeable, and professional personnel
- Fiscal responsibility, including appropriate staffing, equipment maintenance, and sustainable budgeting
- Core service delivery, particularly fire suppression and emergency medical services
- Clear communication and community trust, including transparency and professionalism

While a small number of responses included humor or personal remarks, the overwhelming majority reinforced expectations aligned with operational excellence, professionalism, and responsible stewardship of public resources.

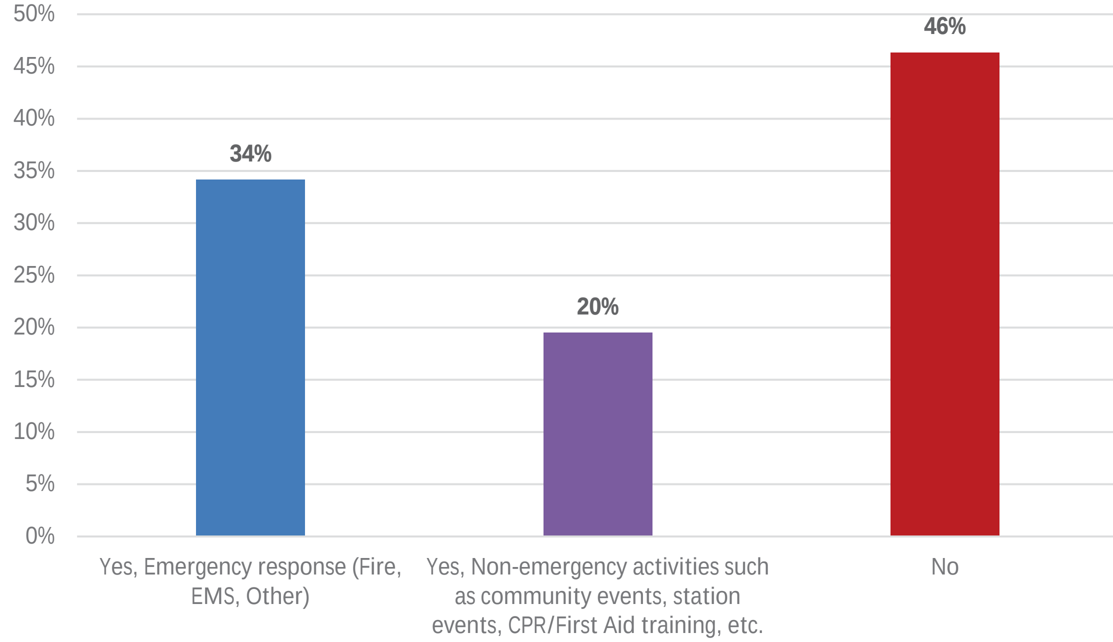
Service Experience & Satisfaction

Receipt of Services

Question: Have you received any services from the fire district?

A total of 41 respondents answered this question. Nearly half of respondents indicated that they have had direct experience with services provided by Benton County Fire District 4.

Figure 171: Respondents in Receipt of Services



Specifically, 14 respondents (34%) reported receiving emergency response services, including fire, emergency medical services, or other emergency assistance. An additional eight respondents (20%) indicated they had participated in non-emergency services, such as community events, station activities, or CPR/First Aid training.

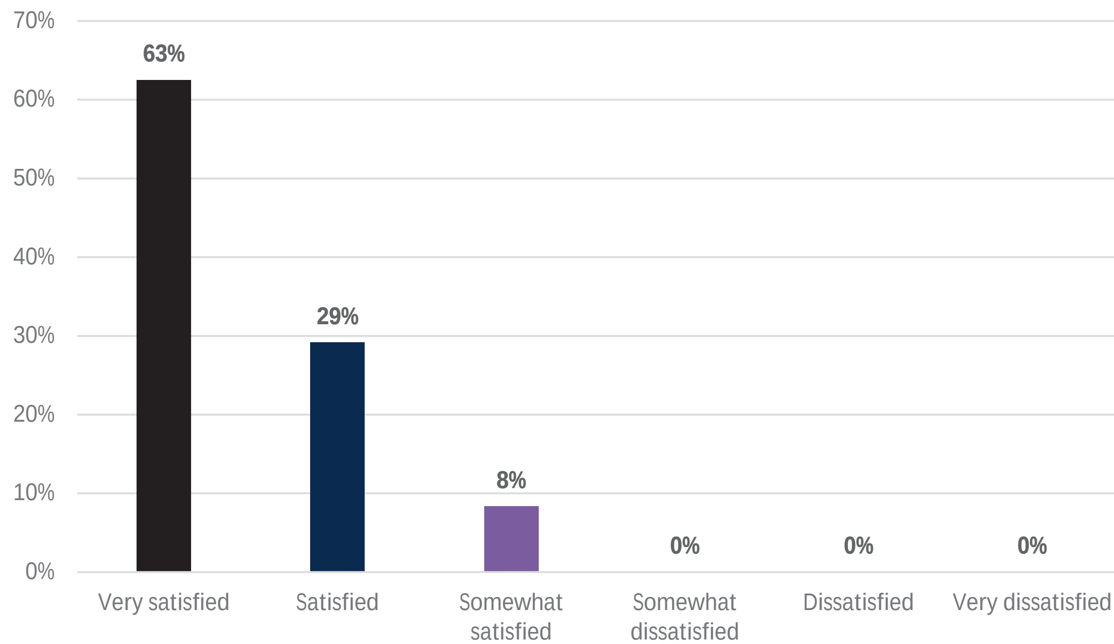
Nineteen respondents (46%) indicated they had not received services from the District.

Satisfaction With Services Received

Question: If you responded YES to the previous question, how satisfied were you with the service?

This question received 24 responses, consistent with the number of respondents who indicated they had received services. Satisfaction levels among those with direct experience were consistently high, with no respondents indicating dissatisfaction.

Figure 172: Rating of Received Services



Among respondents:

- 15 respondents (63%) reported being very satisfied.
- Seven respondents (29%) reported being satisfied.
- Two respondents (8%) reported being somewhat satisfied.

No respondents selected somewhat dissatisfied, dissatisfied, or very dissatisfied. These results indicate strong satisfaction among those who have interacted directly with the District.

What the District is Doing Well

Question: What is your fire district doing well?

A total of 31 respondents answered this open-ended question. Responses were overwhelmingly positive and focused on **core service delivery, professionalism, and community presence**.

The most commonly cited strengths included:

- **Emergency response performance**, particularly timely responses to fire and medical incidents.
- Professionalism, kindness, and compassion demonstrated by personnel.
- Fiscal responsibility and stewardship.
- **Community engagement**, including public education and outreach efforts.
- **Training and staffing**, with several respondents noting preparedness and operational competence.

Several respondents expressed appreciation simply for the district's willingness to seek feedback and pursue continuous improvement. A small number of responses reflected limited personal exposure rather than negative perceptions.

Gaps or Unmet Expectations

Question: Are there specific expectations of the District that are not currently being met?

A total of **21 respondents** answered this question. Most respondents indicated that expectations are currently being met.

Many responses explicitly stated "no," "none," or "not aware," while others expressed satisfaction with recent improvements such as station reopening and response time enhancements. A smaller number of responses identified concerns related to staffing consistency, real-time communication during incidents, or operational visibility at certain stations. Several comments referenced issues beyond the District's direct control, such as policy or scheduling matters.

Future Outlook

Desired Changes Over the Next 3–5 Years

Question: What changes or developments would you like to see in your fire district's services in the next three to five years?

This question received **30 responses**. Responses reflected awareness of community growth and a desire to ensure the district's capacity keeps pace with increasing demand.

Recurring themes included:

- **Additional staffing**, particularly to support response times and maintain advanced life support coverage.
- **Continued investment in training**, including emerging risks such as electric and hybrid vehicle incidents.
- Improved and more frequent communication, especially during active incidents.
- **Growth-related planning**, including equipment, personnel, and service capacity.
- **Expanded public education and outreach**, including prevention and harm-reduction initiatives.

While some respondents indicated no desired changes, the majority focused on sustaining service quality as population and service demands increase.

Demographics

Age, Gender, and Location

Question: Which of the following age groups includes your age?

A total of **40 respondents** answered this question. Responses indicate a broadly distributed adult population, with a concentration among middle-aged and older residents.

- 18–39 years of age: 7 respondents (18%)
- 40–59 years of age: 16 respondents (40%)
- 60 years of age or over: 16 respondents (40%)
- Prefer not to answer: 1 respondent (3%)

These results suggest that survey participation was strongest among residents aged **40 and older**, who together represented approximately **80%** of respondents.

Question: Gender

This question received **40 responses**. Responses were relatively balanced.

- Female: 18 respondents (45%)
- Male: 17 respondents (43%)
- Prefer not to answer: 5 respondents (13%)

Question: In which of the following do you live?

A total of **41 respondents** answered this question, with **one skipped response**.

- City of West Richland: 27 respondents (66%)
- Other areas within BCFD4, outside the City of West Richland: 14 respondents (34%)

The majority of respondents reside within the City of West Richland, while approximately one-third live in other areas of Benton County Fire District 4's service area.

Closing Comments

General Sentiment

Question: We appreciate the time and effort you have invested in completing this survey. If you have any additional comments or opinions, please note them below.

This optional question received 11 responses. Comments were overwhelmingly positive and appreciative in tone.

Most responses expressed gratitude for the District's service, including appreciation for firefighters, emergency responders, and community assistance activities such as helping senior citizens with smoke alarm installations. Several respondents encouraged the District to "keep up the good work" and thanked personnel for their dedication and professionalism. No substantive new concerns were raised in this section.

Key Survey Findings

1. Overall Satisfaction Is Strong and Consistent

Community satisfaction with Benton County Fire District 4 is high across all measures. Nearly all respondents reported being very satisfied or satisfied with fire and emergency medical services, and no respondents expressed dissatisfaction. Respondents who had direct experience with emergency or non-emergency services reported particularly strong satisfaction, citing professionalism, compassion, and effective response.

2. Core Emergency Services Are the Community's Top Priority

Survey results clearly show that residents prioritize core emergency response services above all others. Emergency medical services, fire suppression, and wildland firefighting were overwhelmingly rated as critical priorities, significantly outpacing prevention, outreach, and regulatory services. This indicates strong community support for maintaining and strengthening frontline response capabilities.

3. Response Time Expectations Are High but Informed

Most respondents expect emergency resources to arrive within four to six minutes, while also acknowledging that response times vary based on location, time of day, and incident conditions. A majority of respondents indicated that expectations change depending on where they are located within the District, reflecting realistic community understanding of geographic and operational constraints.

4. Personnel Competence and Training Matter More Than Service Expansion

When ranking planning considerations, respondents placed the highest importance on:

- Technical competence and training of personnel
- Improving and maintaining emergency response times
- Fiscal sustainability

Expanding the types of services offered by the District ranked lowest overall, indicating that the community prefers doing core services well rather than adding new services.

5. Communications Are Effective but Can Be Improved

Respondents rely heavily on Facebook as their primary information source, followed by newsletters/mailers, community events, and the District website. While most respondents find current communication methods effective, recurring themes included the desire for:

- More frequent and timely updates, especially during active incidents
- Direct notification options (email or text)

- Shorter, more visual content
- Expanded outreach to younger families

6. Community Engagement Is Valued and Largely Appreciated

Feedback shows strong appreciation for the District’s community presence, public education, and outreach efforts. Respondents expressed interest in expanded engagement through schools, open houses, training events, and greater visibility at community activities. Many comments emphasized that the district is already doing well in this area.

7. Growth Is a Shared Concern

Looking ahead, respondents consistently identified staffing, training, and resource capacity as critical considerations as the community continues to grow. While many respondents expressed satisfaction with current services, there is clear awareness that future demand will require careful planning to maintain service levels.

Key Survey Recommendations

1. Reinforce Focus on Core Emergency Response

The District should continue prioritizing:

- Emergency medical services
- Fire suppression
- Wildland firefighting

Survey data strongly supports aligning staffing, deployment, training, and funding decisions with these core services before considering service expansion.

2. Maintain and Strengthen Personnel Training and Competence

Given the emphasis respondents placed on technical competence, the District should continue investing in:

- Ongoing training and professional development
- Specialized response capabilities
- Preparation for emerging risks (e.g., wildland-urban interface, electric vehicle incidents)

This aligns directly with the community's highest-ranked planning priorities.

3. Use Survey Data to Inform Response Time Benchmarks

Community expectations for response times provide useful context for evaluating and communicating performance. The District can use this data to:

- Frame realistic response time goals.
- Explain geographic and operational factors that affect response.
- Support data-driven deployment and staffing decisions.

4. Enhance Communications Through Frequency and Direct Delivery

Survey results support maintaining Facebook as a primary platform while expanding:

- Email and text notification options.
- Timely updates during critical incidents.
- Short, visual content that highlights daily operations and training.

Improving awareness of the District website and alert sign-ups would also address gaps identified by respondents.

5. Continue and Expand Meaningful Community Engagement

Respondents value face-to-face engagement and educational outreach. The District should consider:

- Sustaining and expanding school-based education and safety programs
- Increasing visibility at community events
- Offering additional open houses, workshops, or public training opportunities

These efforts reinforce trust and visibility without detracting from core service delivery.

6. Plan Proactively for Growth While Demonstrating Fiscal Responsibility

Community feedback consistently emphasizes fiscal responsibility alongside service reliability. Strategic planning should continue to:

- Align staffing and resource decisions with growth trends
- Clearly communicate how funding supports response capability and readiness
- Reinforce transparency in resource use and long-term sustainability

Appendix D: Table of Figures