Tri-Lakes Monument FPD
Donald Wescott FPD

Monument, Colorado

October 2021

Cooperative Services Feasibility Study

Emergency Services Consulting International

Providing Expertise & Guidance that Enhances Community Safety

CONTENTS

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EXECUTIVE SUMMARY

The Tri-Lakes Fire Protection District (TLMFPD) and the Donald Wescott Fire Protection District (DWFPD) asked Emergency Services Consulting International (ESCI) to conduct a feasibility study of the unification potential of the two agencies. ESCI considered the current conditions of both districts including the management components, financial analysis, service delivery, staffing and deployment, response performance, emergency medical services, as well as fire and life safety and training programs. ESCI found two departments that serve their communities well and are functioned well together to provide services to all the citizens of both districts. Highlights of the study findings and recommendations are outlined in this summary.

Both fire districts recognize their functions as reflected in their mission and values are closely aligned. Management functions of both districts are similar. Some functions could be done more effectively in a larger organization that are not possible in the smaller organizations. Having sufficient staffing to match the workload is important. Administrative and support functions as well as emergency response functions require adequate staffing to complete necessary tasks. Analyzing the emergency response staffing of both departments revealed that there are just enough personnel to accomplish the operations as currently undertaken, however, each department is expending overtime to cover for planned and unplanned leaves or the station staffing drops. ESCI recommends that some additional staffing be hired to offset the need for overtime or temporary closing of stations. In the suggested organization of the emergency response staff and administrative/support staff, some positions can be filled that will make the combined organization stronger and potentially more effective. Examination of the administrative/support staff identified that both organizations are lean in this area. There will be a sufficient need for the unified entity to expand administrative positions to expand responsibilities over a larger number of individuals. Some individuals will need to take on slightly different roles in the new organization. The level of administrative and support staffing represents roughly 15 percent of the new proposed total staffing. This is a percentage that is frequently found in fire agencies to be effective.

ESCI reviewed the capital infrastructure of both departments. Stations were well-maintained and functional however improvements are recommended to enhance the functionality of station operations. Response station locations and response coverage was mapped to show the areas of 4-, 8-, and 12-minute travel times. ESCI made recommendations for long-term location adjustments to gain efficiency in coverage. These are concepts that can be implemented over time as new stations are planned and old stations remodeled. The location of the staffing should be reviewed for call load as well as the response time performance.

Significant to the unification is the location of Donald Wescott Station 1. This station is in a strategic location to serve a large portion of the TLMFPD with first due units. It appears that this will be even

stronger as new roadways open north-south routes. ESCI completed an analysis of the cost avoidance to TLMFPD for utilizing this station in place of constructing a station to the south. The savings on construction and staffing over five years would save $12 Million. This is a benefit for the citizens of both districts. The unified agency may choose to add personnel and staff a third ambulance to shorten response times as DWFPD medical calls are absorbed by the TLMFPD ambulance transport service.

The apparatus for both agencies combined have an average age of 10 years. The apparatus seems to be well maintained. Some vehicles are due for replacement. TLMFPD has a written and implemented replacement plan and DWFPD has been using end-of-year funds to make some purchases but lacks an overall replacement strategy.

Calls for service are approximately 54% emergency medical and motor vehicle accidents. Fire constitutes 3% of all calls. These proportions are not unusual for fire departments. The temporal data was not surprising with the majority of calls occurring within the waking hours with a slightly higher call load on weekends. Service delivery performance was difficult to assess as the data reported some anomalies. This was particularly true in the area of travel and overall response times to fires.

ESCI emphasizes the importance of establishing and regularly monitoring performance metrics for the deployment of resources. These metrics serve as the foundation for determining whether the organization is meeting the expectations of the community that it serves. Without regular and consistent performance evaluation, it is impossible to set and achieve goals established to meet community expectations.

Based on the results of the response data performance analysis the combined agency makes an effort to improve the accuracy of the data being compiled. This will include evaluating times recorded initially and how the data is transferred to the records management system (RMS). If the data is recorded in a delayed manner or if the data is manually reentered into the RMS these are sources of error that can make the data for measuring response performance unusable. If it is the goal of the agency to become accredited, good data is a necessary component.

ESCI provides a discussion of some of the partnering strategies for unification or consolidations. There are two that fulfill the needs of the department. Ultimately, the two districts desire to become one district. To use the exclusion-inclusion method (merger by inclusion), which is the simplest process, will require equal taxation rates to merge the two. The best route to the merger by inclusion step would be to form an Authority while working to create one taxation level for the DWFPD. Currently, there are two levels of taxation for DWFPD, one for the base district and one for the subdistrict. The Authority provides time to seek the approvals necessary for dissolving the subdistrict. It also demonstrates that the two jurisdictions can function operationally as one department.

ESCI's fiscal analysis considers the past five-year history for revenues and expenditures of the two entities. It also projects the individual department's revenues and expenditures 5 years into the future based on the historical trends. Since both districts have received permission from their citizens to maintain revenues should there be reductions in revenues due to reducing assessment ratios, they can survive individually or as a combined agency. Over the five years, both departments are viable barring any unpredictable changes such as additional annexations of property into the City of Colorado Springs with the exclusion of the properties from the fire districts. TLMFPD is less likely to be fiscally impacted but DWFPD is likely to be adversely impacted by that happening. The TLMFPD ending balance is increasing over the study period, the DWFPD ending balances decrease in years 2024 through 2026 and that is without capital expenditures for vehicle replacement. According to our analysis, the ending fund balance will drop below the recommended 25% of expenditures. Together as a combined entity, the sustainability of the financial condition is excellent. There is an increasing ending balance from the formation of the combined entity until 2026.

It is ESCI's opinion that the unification of DWFPD and TLMFPD is possible and ultimately in the best interest of the residents of both districts. There are definite advantages to both entities in consolidating into one department.

ORGANIZATIONAL OVERVIEW

The Organizational Overview component provides a summary of the two agencies, Tri-Lakes Monument Fire Protection District (TLMFPD) and Donald Wescott Fire Protection District (DWFPD). Both fire districts are Special Districts organized under Colorado Revised Statutes Title 32. This section will briefly discuss the composition, configuration, and services provided.

Service Area

The service area covered by the two departments is shown in Figure 1. TLMFPD serves an area of 52 square miles stretching from the northern El Paso County line to the north border of DWFPD in the south. TLMFPD is bordered in the west by Palmer Lake and the forest area. In the east, it extends east of Colorado Highway 83 and borders the Black Forest Fire Protection District. A portion of the district is a mix of higher densities found in urban and suburban areas. It has a strong commercial presence along the I-25 corridor as well. To the eastern side of the district, the area is predominately rural residential housing. In the future, the Colorado Highway 83 corridor may become more densely populated and will see additional commercial growth. TLMFPD serves this area from three fire stations staffed with full-time personnel. The agency has two structural fire engines, one ladder truck, and three Type 6 fire engines for wildland firefighting. Two ambulances provide medical transport. The area covered lies within unincorporated El Paso County and the Town of Monument, Colorado. The population of the district is estimated at 31,272.

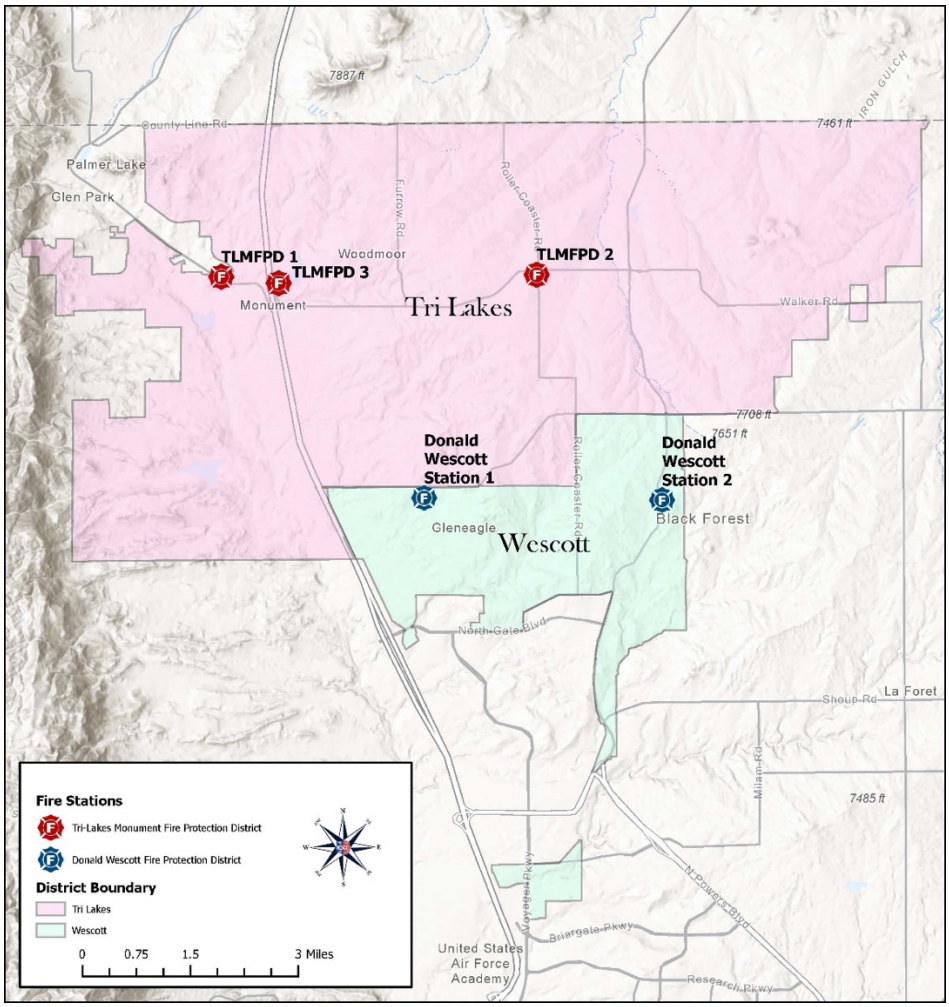
DWFPD covers 10 square miles of unincorporated El Paso County. It is bordered by the City of Colorado Springs on the south, Black Forest Fire District on the east, Tri-Lakes Monument Fire District on the north, and the United States Air Force Academy on the west. Portions of the district in the northwest corner are within the City of Monument. The estimated population of the district is 9,815. The district provides services from two fire stations, each with an on-duty three-person crew. A third station houses the on-duty battalion chief and storage but serves no emergency response role. The district supplements the paid staff with volunteers, although the number of active volunteers is declining, and few are fully qualified for structure fires. Advanced Life Support (ALS) ambulance service is provided by American Medical Response (AMR) under a county-wide contract. An AMR ambulance is currently quartered in Fire Station 2 although its response area is not restricted to the district. The district provides EMT or paramedic first-response to all medical emergencies but no patient transportation.

Approximately half of the DWFPD response area is rural with large lot, single-family dwellings. However, most of the population lives in the western third in smaller lot (¼ to ½ acre) suburban neighborhoods. Much of the rural area is considered wildland-urban interface. Of the approximately 3,500 structures in the district, 95% are residential. There is one large multi-family apartment complex and a similar one under construction. There are two elementary schools, four churches, two hotels, and 59 small

restaurants, retail stores, or office buildings. No buildings are more than three stories in height. All commercial development is within the extreme western portions of the district. A small geographic area of the district forms an enclave within the City of Colorado Springs and receives services jointly from the district and the Colorado Springs Fire Department. In this approximately one square mile area, there are 83 single-family homes, two churches, and one school. There are no hazardous materials facilities. Large areas of the rural and wildland-urban interface do not have fire hydrants.

The district is comprised of the district with one sub-district, the Donald Wescott Fire Protection District, and the Donald Wescott Fire Protection District Northern Sub-District. The entire Donald Wescott Fire Protection District has a mill levy of 7.0 mills and the northern sub-district has an additional 14.9 mills. Most of the property and population of the district is in the northern sub-district. The enclaved area is not within the sub-district.

Figure 1: Service Area



History

The Tri-Lakes Monument Fire Protection District is a result of consolidation. The Monument Volunteer Fire Department began in the late 1930s. The Woodmoor-Monument Fire Protection District was formed in the mid-1970s, to protect an area of new development. This was a statutory fire district with a tax base and paid staff. The Monument Volunteer Fire Department became Tri-Lakes Fire Protection District. Growth of the area in the late 1990s necessitated the hiring of full-time staff to supplement the volunteer staff. In 2004, the Woodmoor-Monument FPD and Tri-Lakes FPD became a regional fire authority and ultimately became one district on January 1, 2008.

The Donald Wescott Fire District was formed in 1981 and is named for Firefighter Donald Wescott who died in a structure fire in 1976. Before becoming a district, the organization was known as El Paso County Fire Station 1. Over the next 40 years, the district grew from an all-volunteer organization to a combination of paid personnel and volunteers, prior to reaching its current state with mostly paid staff. Three fire stations were added, Station 3 in 1983, Station 1 in 1997, and Station 2 in 2012. The department transitioned to 24-hour staffing in 2003 with the addition of paid staff.

In the early 2000s, the City of Colorado Springs began annexing southern areas of the DWFPD district. Ultimately this covered approximately two-thirds of the district, including all its commercial development. For many years the district served the annexed area and continued to collect its mill levy as a dual jurisdiction area primarily because the city did not have fire stations in this area. In 2018 the Colorado Springs Fire Department built stations capable of serving the annexed area and DWFPD discontinued services and discontinued its taxation of the area. This reduced district revenue by approximately two-thirds. A small area of primarily large rural residential lots remains in the district and is surrounded by the City of Colorado Springs.

In the fall of 2017, the district successfully asked the electors in the northern portion of the district to form a new Northern Sub-District and to establish a 14.9 mill levy for the sub-district. This, in addition to the 7 mills in the underlying fire district, provides most of the current funding for the district.

Governance

TLMFPD is organized under a service plan submitted in 1984 as a Special District by the authority of Colorado statutes. The district operates within the functions that it is authorized to provide. TLMFPD is governed by an elected seven-member Board of Directors (BOD or Board). The Board is responsible to set policies relating to the guidance of the CEO or Fire Chief. They are responsible for oversight of the CEO, the fiscal aspects, and ultimately the effectiveness of District operations.

DWFPD is governed by an elected five-member Board of Directors. This Board is responsible for all the policy, financial, and management functions of the fire protection district as required by CRS Title 32, the same as the TLMFPD board.

Both fire protection districts employ a Fire Chief to act as the chief executive officer of the district and to run the day-to-day operations. The employment is through an employment contract with the individual. The chiefs each have the responsibility to hire and terminate employees. The Wescott Fire Chief is currently employed on an interim basis under a six-month contract.

The two fire districts are similar operationally, utilizing a traditional rank structure. For administration, the two differ in that TLMFPD has more administrative staff to accomplish the functions required for a larger organization. DWFPD has the fire chief and one administrative assistant to accomplish administrative functions. Both assign administrative functions to the battalion chiefs as well. More discussion on the staffing is found in the Staffing and Personnel section of this report.

Both organizations have a union local to represent the firefighters. Neither has a collective bargaining agreement but both unions have the ability to meet and confer.

ISO Classification

The insurance Services Office (ISO) is a body that evaluates communities for fire protection capabilities. Many insurance companies use ISO information to determine the rates that they will charge their subscribers. The evaluation focuses on three primary areas: fire department—50%, water supply—40%, and alarm handling—10%. In addition, under the new evaluation framework, a credit of 5.5 points can be obtained for Community Risk Reduction efforts. ISO classifies communities on a rating scale of 1 to 10 scale with Class 1 being the best and Class 10 communities having no fire protection.

TLMFPD has an ISO rating of 3/3Y. This is a 3 for areas within 5 miles of the responding fire station and where there is water supply available within 1,000 feet. The 3Y is for structures that are not within 1,000 feet of a water supply but still within 5 road miles of a fire station. The 3Y classification indicates that there is enhanced fire protection within areas of no municipal water supply. This benefits homeowners on their insurance.

DWFPD's current ISO classification is 2 for the entire district, both in hydranted and non-hydranted areas. The addition of a 3,500-gallon water tender in 2020 satisfies the ISO requirement for water supply for areas more than 1,000 feet from fire hydrants. All areas of the district are within five miles of a fire station.

ISO reclassification is typically done after the unification of departments. ESCI recommends implementing the tender shuttle water delivery system across the entire entity and prioritizing training on the delivery system before the ISO evaluation. This may result in a reduction in rates overall.

MANAGEMENT COMPONENTS

It is important to determine if the departments have implemented foundational management elements and if these may require some reconciliation before a unification. This includes mission statements, records, and systems implementation, and information technology systems.

Foundational Documents

Both departments have established mission statements and values statements. TLMFPD has a vision statement as well.

The mission statement should tell why the department exists and perhaps how the mission will be executed.

TLMFPD's mission statement is:

> ***The mission of the Tri-Lakes Monument Fire Protection District is to minimize the loss of life and property resulting from fires, medical emergencies, environmental, and other disasters.***

DWFPD mission statement is:

- ***To provide Quality Fire suppression and Emergency Medical treatment through a quick, efficient, and professional response.***
- ***Through proper assessment on scene, we will risk a life to save a known life.***
- ***Through proper assessment on scene, we will risk little to save a structure.***
- ***It is through our prevention, education, and training efforts that we strive to prevent or limit the extent of any fire or other emergency.***

TLMFPD's Values Statement:

Excellence | Integrity | Loyalty | Respect | Service

DWFPD's Values Statement:

> ***We are dedicated to service. Service to us means being there when it counts and assisting in whatever the need. We ask ourselves when embarking on actions and activities.***

TLMFPD's Vision Statement:

> ***We will accomplish our mission through a progressive and professional system of personnel development, public education, fire suppression, code enforcement, medical services, and rescue skills. We will actively participate in our community, serve as role models, and strive to effectively and efficiently utilize all of the necessary resources at our command to provide a service deemed excellent by our citizens.***

The mission statement demonstrates that both districts have comparable reasons for existence and while the values are somewhat different there is a focus on service. While it is not a necessity, it may be a great culture-building exercise to set up a committee of peer respected personnel from each department who represent all ranks to work on new mission, vision, and values statements. The values statement is particularly important to begin the unification with a set of mutually shared values.

Management Documentation

Both agencies have regulatory documents consisting of policies and procedures, employee handbooks, and standard operating procedures or guidelines. These documents may be called by different names and may be divided up differently in different departments. DWFPD has a district handbook that is currently under review as well as Standard Operating Guidelines (SOG) that guide the response for on-scene operations. TLMFPD has a Policy and Guidelines manual. The manual is part of the Lexipol system. The templates that Lexipol furnishes are reviewed for legal compliance. This is a good way to assure compliance with new laws that may impact District policy or implementation of a policy. ESCI would recommend keeping the Lexipol system for policies.

Information Technology

Both departments utilize cloud-based applications. The Records Management System for incident/patient reports is Emergency Reporting Systems (ERS) now a part of ESO. Crew Sense is software used for Scheduling while Target Solutions is used for training information and policies. Phone systems for both departments are voice over internet protocol (VOIP) systems.

Computer systems for TLMFPD are Microsoft Windows operating systems whereas in DWFPD the district uses Apple (IOS) operating system hardware. DWFPD backs up local computers to a single disk, but it is unknown if the backup is stored offsite. TLMFPD has both local backups with cloud-based backup. Data stored off-site is encrypted to maintain data security. All TLMFPD applications have two-factor authentication and all connections between the TLMFPD stations are through a VPN tunnel. DWFPD also uses VPN (virtual private network) tunnel capability.

Combining the two systems should not be a complex operation. There may be some cost for the transition, both for the outside service provider and if there is a desire to bring all the hardware to one manufacturer. Having hardware with the same operating systems could be accomplished over time as units need to be replaced but for ease of support, it may be advantageous to do that transition at the time of consolidation.

FINANCIAL MANAGEMENT AND ANALYSIS

Considerable financial information and background data were provided to ESCI by staff of the Tri-Lakes Monument Fire Protection District (TLMFPD)and Donald Wescott Fire Protection District (DWFPD), which was reviewed in detail along with various Annual Audited Financial Reports and annual budgets. This data has enabled ESCI to develop the following discussion providing key stakeholders with historical, current, and future viewpoints of TLMFPD's and DWFPD's financial picture.

Current Conditions

TLMFPD is a 50-person career-staffed department, which provides traditional fire, EMS rescue services, and ambulance transport from three fire stations. The district operates on a modified accrual basis for the General Fund. The district has three outstanding leases for a fire administration building and two fire engines in the amount of $2,070,012 as of December 31, 2020. DWFPD is a 23-person primarily career-staffed department, which provides fire and basic EMS rescue services from two fire stations and a facility that houses the Battalion Chief. The district operates on a modified accrual basis for the General Fund. DWFPD has no outstanding debt.

Both districts operate on a calendar year basis. TLMFPD had $502,228,120 of taxable assessed value for the 2021 budget year. A mill levy of 18.4 was charged on this taxable value resulting in revenue of $9,240,997 for the 2021 budget. The total budgeted revenue for 2021 is $11,439,647. Expenditures are budgeted at $11,823,920 decreasing the fund balance by $384,273.

The City of Colorado Springs annexed approximately two-thirds of the property located within the original DWFPD and declared its intent to remove the annexed properties by the end of 2016 which decreased district revenue by 66%. The district asked and was approved for a subdistrict in the northern portion of the DWFPD. This subdistrict was named the Donald Wescott Fire Protection District Northern Subdistrict overlaying the DWFPD. The election approved an additional 14.9 mill levy above the 7 mills currently in place for DWPFD. Consequently, the Northern Subdistrict pays 7.0 mills for the Donald Wescott District and 14.9 mills for the Donald Wescott Northern Subdistrict. DWFPD had $128,443,600 of taxable assessed value for the 2021 budget year. A mill levy of 7.0 was charged on this taxable value resulting in revenue of $899,105 for the 2021 budget. The DWFPD Northern Subdistrict had $118,788,090 of taxable assessed value for the 2021 budget year. A mill levy of 14.9 was charged on that taxable value resulting in $1,769,943. The total property tax revenue from the two districts was budgeted at $2,669,048. The total budgeted revenue for the 2021 budget year was $3,001,348. The total budgeted expenditures for 2021 were $3,001,166 resulting in a $182 increase in the fund balance.

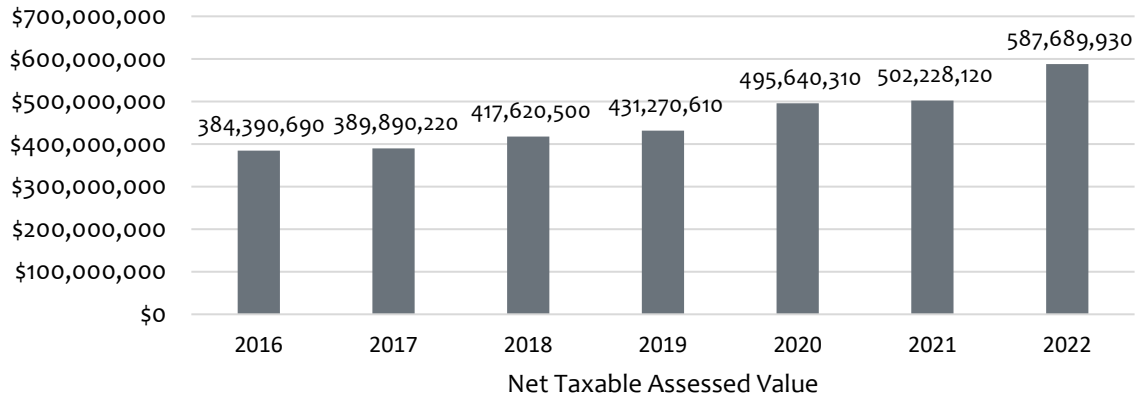
The budget process is the same for both Districts. The preliminary assessed values are received from the county in late August. The budget is prepared by the Chief and presented to the Board in September.

The budget is reviewed by the Board and staff and public hearings are held. In early December the final assessed values are received from the county and the Board approves the final budget and the certification of mill levies is presented to the county.

Property Values

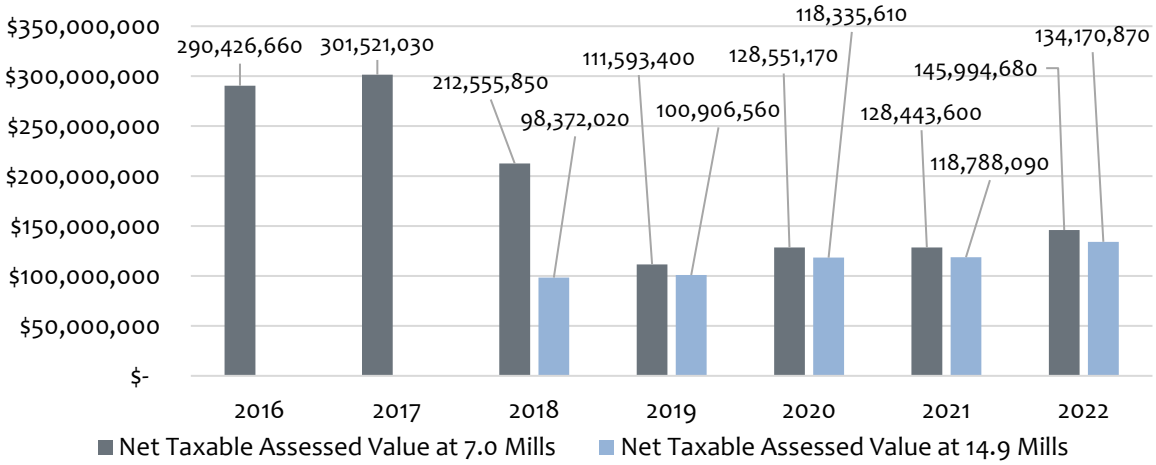
The *Total Assessed Value (TAV)* figures below display the certified total assessed property values for TLMFPD and DWFPD and the Northern Subdistrict from 2016 to 2022. The change in total assessed values from 2016 to 2022 is 52.89% and the average is 7.56% for TLMFPD. The graph below shows the Total Taxable Assessed Values for TLMFPD.

Figure 2: Taxable Assessed Value for TLMFPD



The change in total assessed values from 2016 to 2022 is (3.53%) for DWFPD and the Northern Subdistrict. The graph below shows the Total Taxable Assessed Values for DWFPD.

Figure 3: Taxable Assessed Value for DWFPD and Northern Subdistrict



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

The Gallagher Amendment, passed by voters in 1982, states that Colorado residential properties will contribute 45% of the total property tax revenue of the state. Commercial properties contribute 55%. Commercial properties are always assessed at 29% of the current fair market value. Senate Bill 293 repeals a moratorium on changing a ratio for valuation for assessment (assessment rate), which is the percentage applied to a property's actual value to determine the taxable amount upon which a mill levy is applied (see more discussion below).

In 1992, Colorado voters also passed the Colorado Taxpayer Bill of Rights, also known as the TABOR amendment. That amendment prohibits tax increases without a vote of the people living or owning property within a specific jurisdiction. Currently, when the residential assessment rate needs to go down, the state property tax administrator—along with the State Board of Equalization—adjusts it without a vote of the people. Conversely, if the residential assessment needs to go up, then a vote of Colorado taxpayers is required.

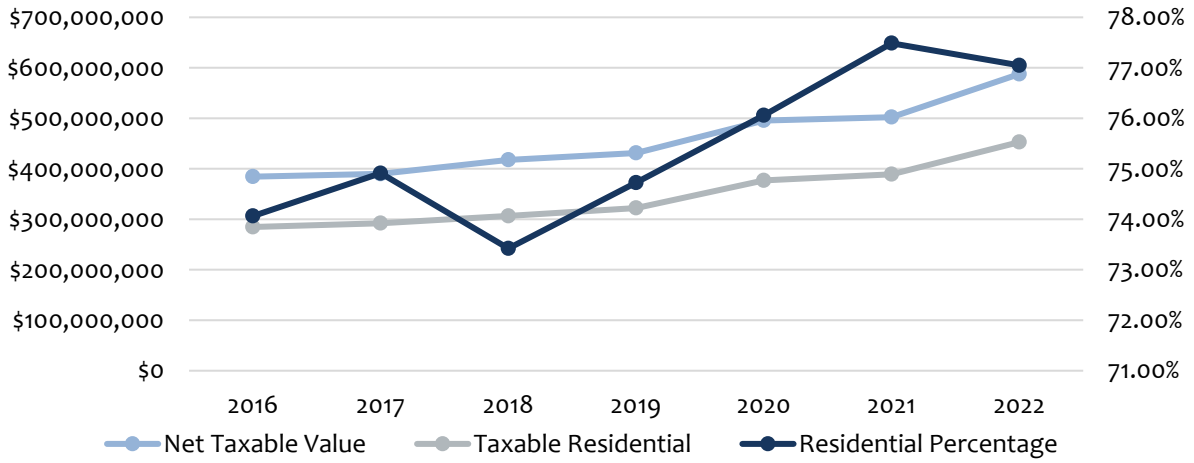
Colorado's residential assessment rate had not been adjusted since 2003 when it was lowered to 7.96% of the assessed value of the property. In 2017, the residential assessment rate was lowered to 7.2%. Between 2013 and 2017, some two-year periods required an upward adjustment on the residential assessment rate. Those rate increases did not occur, so the 2017 assessment rate adjustment is the first one in over a decade. The ratio was 7.20% for the budget years 2018 and 2019. The rate for budget years 2020 to 2022 is 7.15%. Senate Bill 293 repeals a moratorium on changing a ratio for valuation for assessments (assessment rate), which is the percentage applied to a property's actual value to determine the taxable amount upon which a mill levy is applied. It also has temporarily reduced the ratio of actual to assessed value for several categories of property and has created some new categories. The residential category is the one that will affect the districts' taxable assessed values most. The law reduces the ratio from 7.15% to 6.95% for budget years 2023 and 2024.

Both TLMFPD and DWFPD have passed ballot measures that maintain the revenues when the assessment ratio changes due to the Gallagher Amendment.

Colorado's Fire Protection Districts are dependent on property taxes. TLMFPD and DWFPD are no different. The percent of TLMFPD assessed value that is residential ranges from 77.49% in 2021 to a low of 73.42% in 2018. The 2022 percent of assessed value is 77.05%. The effect of the reduction in the ratio for residential property from 7.15% to 6.95% for TLMFPD is projected to be $1,065,476 over the next 4 years.

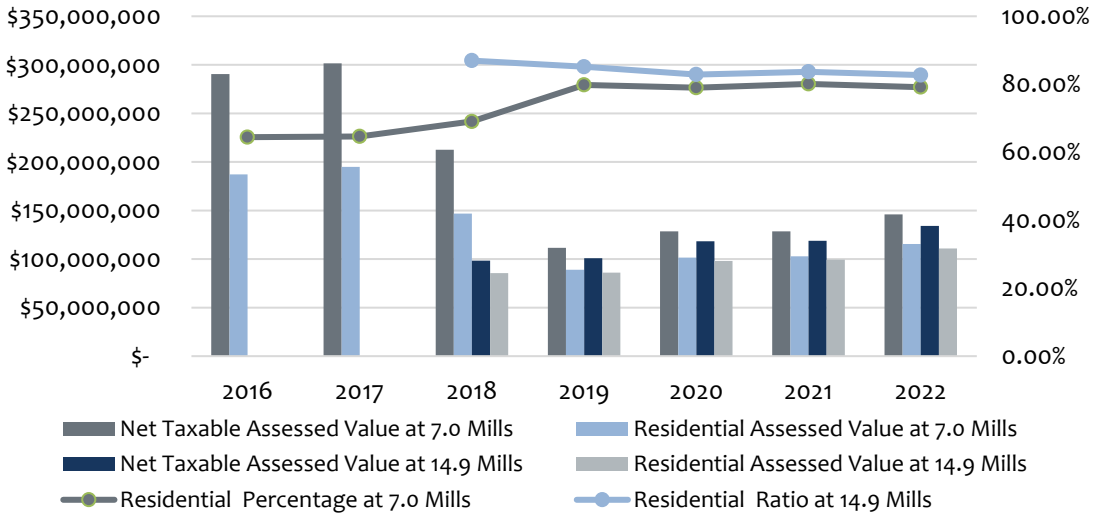
The percent of assessed value that is residential in DWFPD ranges from 80.09% in 2021 to a low of 64.43% in 2016. The percent of assessed value for residential property in DWFPD Northern Subdistrict ranges from 86.95% in 2018 to a low of 82.70% in 2022. The effect of the reduction in the ratio from 7.15% to 6.95% for DWFPD is $315,025 over the next 4 years.

Figure 4: Taxable Residential Assessed Value as Compared to Total Taxable Assessed Value for TLMPFD



As can be seen in the figure above, the Residential percentage of 77.49% of the total taxable assessed value is very high. The ratio that is applied to the residential property on the state level needs to be monitored.

Figure 5: Taxable Residential Assessed Value as Compared to Total Taxable Assessed Value for DWFPD and DWFPD Northern District



The Residential percentage of 80.09 percent for DWFPD and 86.95 percent for the Northern Subdistrict are very high. Changes in the residential valuations and/or the ratio can affect revenues quickly.

Revenues TLMFPD

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

The historical analysis helps illustrate how the districts fund their services—where the money comes from and where it goes. Historical budget data for the districts was provided by staff and was supplemented with a review of past audits and historical budget records. The historical analysis should provide the administration and elected officials with a solid basis upon which to evaluate recommendations and develop sustainable future policy.

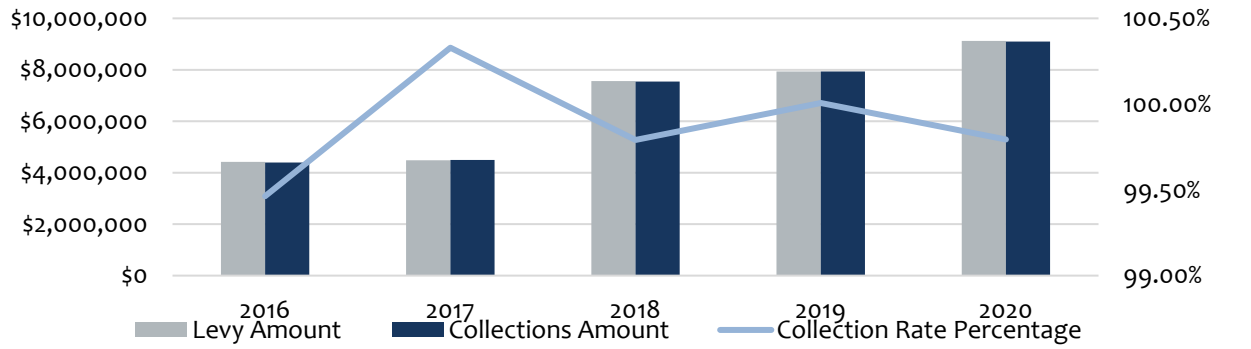
The following figure is a tabular short version of the TLMFPD financial resources in the General Fund. The line items are property taxes, specific ownership taxes, impact fees, wildland deployments, miscellaneous revenue, interest, ambulance revenue plus COEMS supplement, grants, and proceeds from debt financing.

Figure 6: TLMFPD Fiscal Years 2016 to 2020 Actual and 2021 Budget

Financial Resources by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget
Assessed Value	$384,390,690	$389,890,220	$417,621,040	$431,270,610	$495,640,310	$502,228,120
Levied $	$4,420,493	$4,483,738	$7,558,941	$7,935,379	$9,119,782	$9,240,997
Collection Rate	99.46%	100.33%	99.79%	100.01%	99.79%	100.00%
Mill Rate	11.5	11.5	18.1	18.4	18.4	18.4
Beginning Fund Balance	$2,610,950	$2,659,809	$2,620,128	$4,337,895	$6,386,100	$8,489,218
Property Taxes	$4,396,764	4,498,482	$7,543,123	$7,935,881	$9,100,964	$9,247,897
Specific Ownership Tax	$509,282	$604,734	$957,210	$960,733	$991,320	$900,000
Impact fees	$770	$125,943	$179,089	$121,485	$157,731	$125,000
Wildland Deployments	$23,806	-	-	-	$141,388	$50,000
Interest	$9,573	$9,620	$14,537	$18,081	$22,417	$20,000
Ambulance Revenues Plus COEMS Supplement	$820,411	$771,426	$831,053	$1,012,591	$1,072,917	$1,080,000
Grants	$176,360	$24,531	$400,672	$118,710	$4,704	-
Proceeds from Debt Financing	$754,538	-	$578,013	$607,853	$800,000	-
Miscellaneous	$39,542	$20,190	$6,917	$85,498	$125,455	$16,750
Total Revenues	$6,731,046	$6,054,926	$10,510,614	$10,860,832	$12,416,896	$11,439,647

The following figure graphically compares actual property taxes versus levied taxes and the collection rate for the district. The collection rate averages 99.88 percent for the 5 years of actual revenues reported for 2016 to 2020. The variations are mainly due to assessor adjustments.

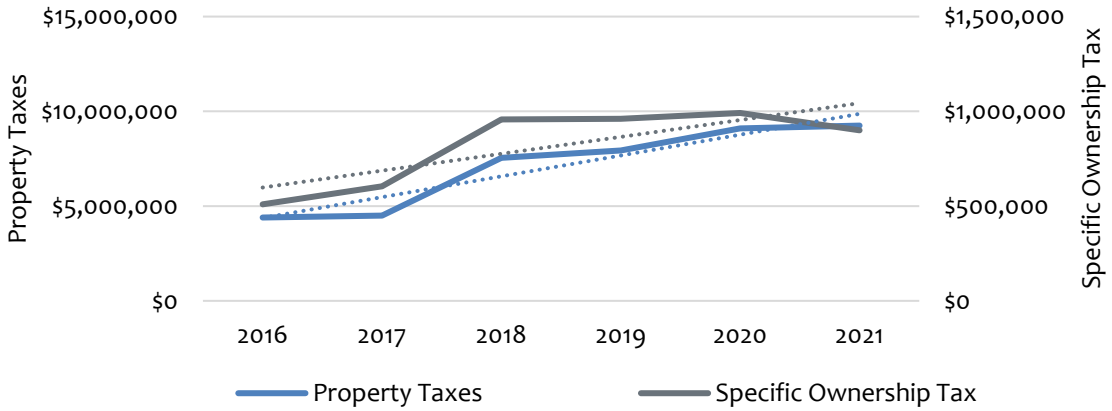
Figure 7: TLMFPD General Fund Property Tax Collection, Levied Amount and Collection Rate, 2016–2020



Property and Specific Ownership Taxes. Property and specific ownership taxes comprise anywhere from 73 to 89 percent of the district's 2016–2020 revenues. The district has experienced an overall increase in property tax revenues since 2016, mostly from Residential and Commercial Property assessments. From 2016 to 2020, the district realized a $4,704,200 increase (or 106.99 percent change) in property tax revenues, while Specific Ownership taxes increased $482,038 from 2016 to 2020 (94.65 percent change).

The following figure shows (graphically) increases along with linear trend lines.

Figure 8: TLMFPD Property and Specific Ownership Taxes, 2016–2020 Actual and 2021 Budget



This shows a steady increase in property taxes and specific ownership tax over the study time frame of 2016 to 2021.

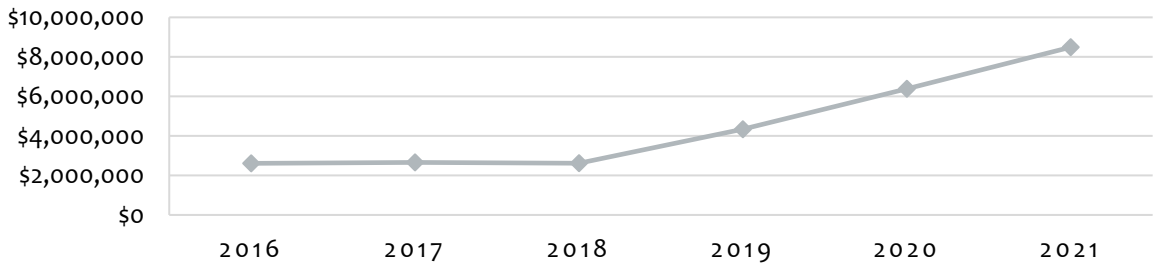
The other major source of income is the Ambulance Revenues Plus COEMS Supplement. The COEMS Supplement is reimbursement from the state for Medicaid transports.

Ambulance Revenues Plus COEMS Supplement. Ambulance revenues comprise anywhere from 8.6% to 12.7% of actual revenues from 2016 to 2020.

Sources for Capital. The district has a Capital Reserve Fund which has not been set up as a separate fund in the accounting system. The district should consider a separate Capital Reserve or Projects Fund to account for revenues and expenditures dedicated to capital projects. There is not a separate Debt Service Fund for the three outstanding leases which are operating expenses accounted for in the General Fund.

One last financial resource available to the district is the beginning fund balance. The following figure shows the beginning fund balance for the years 2016 to 2021.

Figure 9: Beginning Fund Balance, 2016–2021 TLMFPD



Between FY 2016 and FY 2021, the beginning fund balance increased by $5,878,268 (225% change).

Expenditures TLMFPD

The district's expenditures are budgeted in the General Fund. This includes operating, capital, and debt service expenditures. The following figure shows, in tabular format, the respective expenses for FY 2016 actual through FY 2021 as adopted.

Figure 10: TLMFPD Expenditures, 2016 – 2020 Actual and 2021 Budget

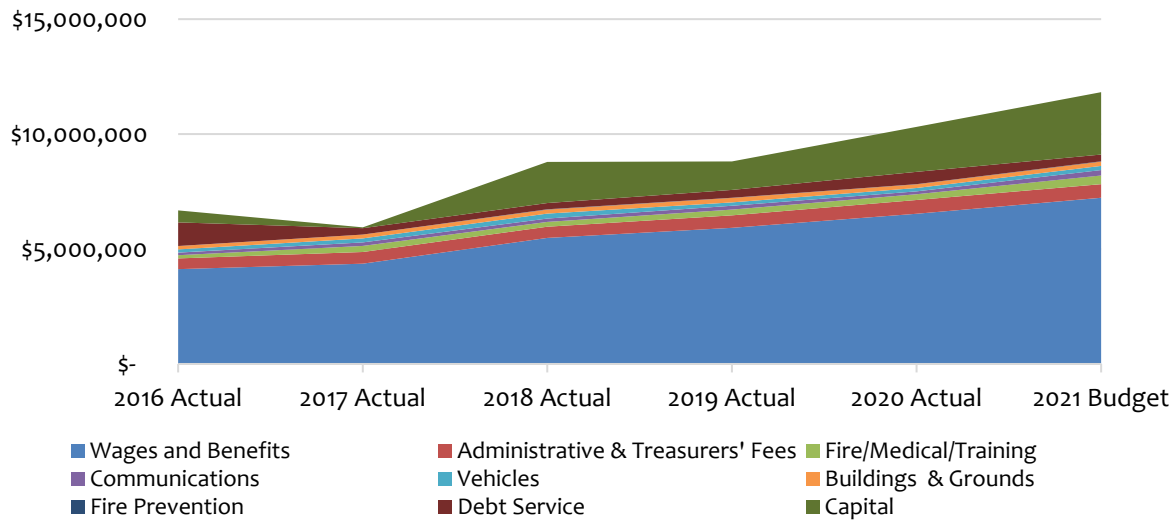
Financial Expenditures by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget
Treasurer's Fees	$66,070	$67,302	$113,147	$118,880	$136,514	$138,606
Salaries and Benefits	$4,125,081	$4,361,100	$5,482,260	$5,921,221	$6,536,901	$7,229,398
Administrative Expenditures	$333,762	$373,643	$262,141	$303,166	$324,214	$314,519
Fire Operations	$83,768	$194,581	$150,093	$175,313	$184,040	$291,475
Fire Prevention	$4,830	$5,216	$11,516	$5,361	$3,434	$15,000
Medical	$56,274	$71,711	$59,965	$77,991	$65,926	$89,000
Vehicles	$137,334	$173,425	$219,727	$147,355	$142,625	$179,750
Communications	$115,477	$151,035	$144,688	$165,310	$126,635	$234,700
Building and Grounds	$143,203	$166,801	$170,619	$195,171	$162,273	$188,664
Lease Interest	$52,635	$31,205	$24,390	$41,024	$61,088	$74,131
Lease Principal	$972,585	$241,738	$248,553	$303,161	$479,800	$217,071
Total Debt Service	$1,025,220	$272,943	$272,943	$344,185	$540,888	$291,202
Total Capital Expenditures	$525,098	$40,203	$1,791,839	$1,239,794	$1,953,813	$2,713,000
Impact Fee Refunds	-	$149,345	$762	-	-	-
Grand Total Expenditures	$6,616,117	$6,027,305	$8,679,700	$8,693,747	$10,177,264	$11,685,314
Revenues	$6,731,046	$6,054,926	$10,510,614	$10,860,832	$12,416,896	$11,439,647
Ending Fund Balance	$2,725,879	$2,687,430	$4,451,042	$6,504,980	$8,625,732	$8,243,551

The previous figure shows total expenditures for TLMFPD from 2016 actual through 2021 Budget.

- The total expenditures increased $5,069,197 from 2016 actual to 2021 Budget, an increase of 77 percent.
- The ending fund balance is budgeted to increase $5,517,672 from 2016 to 2021 Budget, an increase of 202.4 percent.

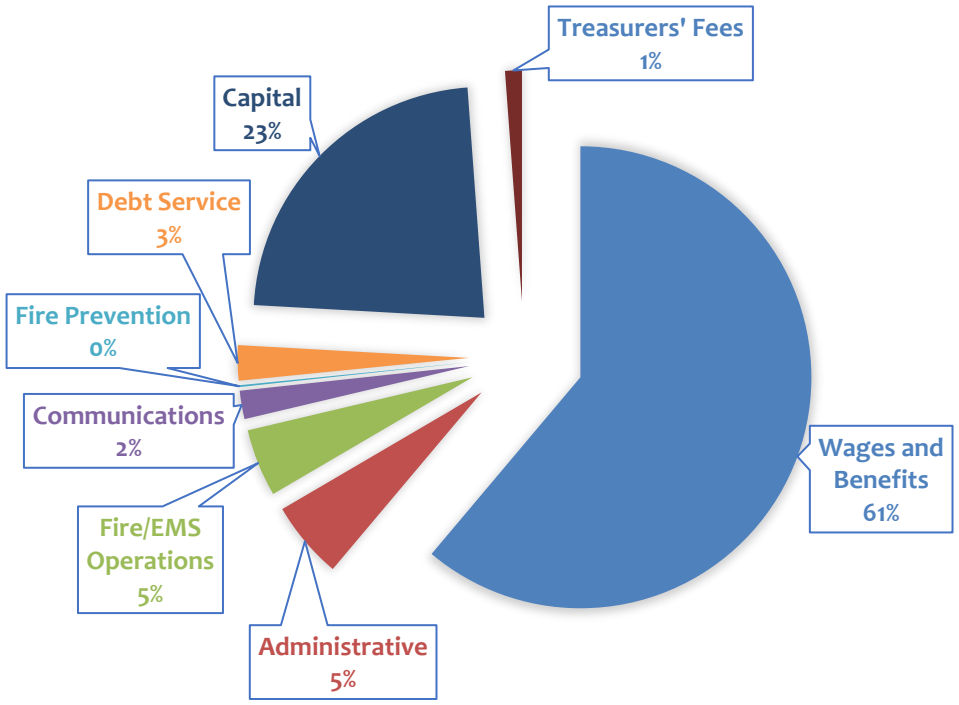
The following figure graphically displays the expenditures of the district for the entire period. The bulk of the district costs each year are for Salaries and Benefits (large blue area). Capital expenditures vary widely.

Figure 11: General Fund Expenditures by Type TLMFPD



The next figure breaks down the major areas of total fire district expenditures, as budgeted for 2021, and shows the percentage for each major category of expense. Clearly, at 61%, wages and benefits are the largest cost to the district. This is low for mostly career-staffed fire districts around the country. Generally, the number is in the 70% to the 80% range.

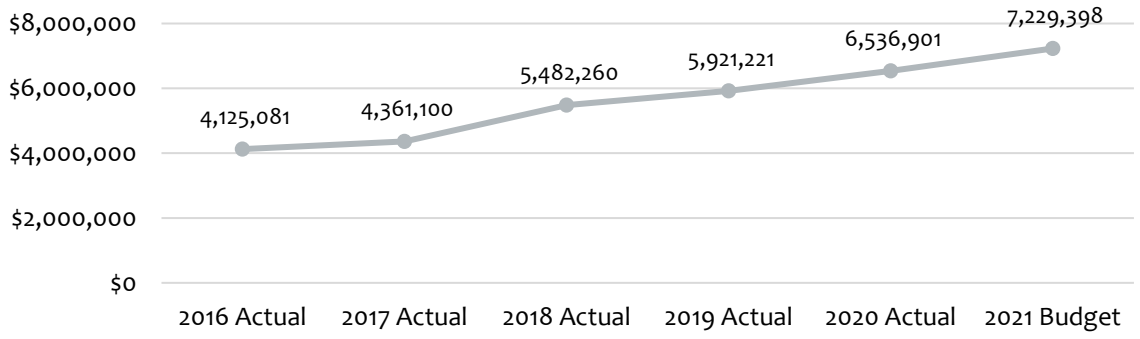
Figure 12: TLMFPD General Fund Budget 2021



Wages and Benefits. Wages and benefits comprise the largest portion of the budget for most fire districts. The district's wages and benefits vary from 61-72% of the total expenditure budget from 2016 to 2021 depending on the number of capital projects each year.

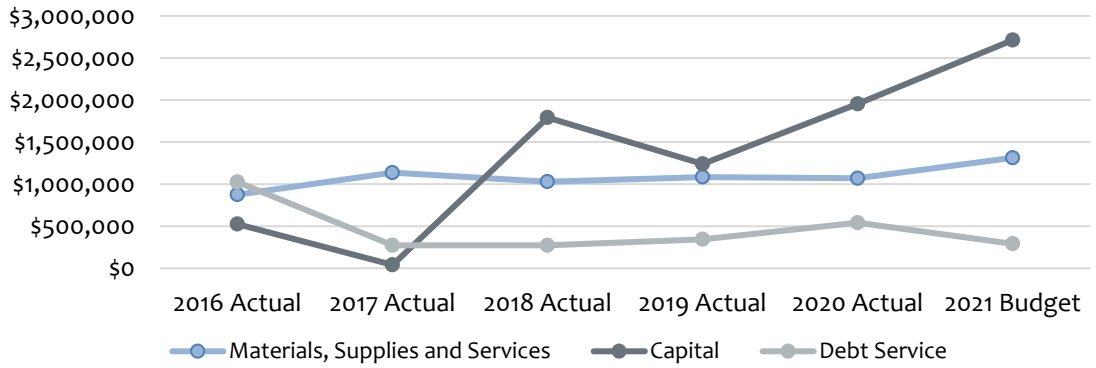
The following figure shows the growth in Wages and Benefits from the 2016 to 2021 Budget.

Figure 13: General Fund Wages and Benefit Totals TLMFPD



Materials, supplies, and services for Administration, Fire Operations, and Fire Prevention. These charges encompass 25-38% of the expenditure budget. Capital expenditures vary from 0.66-22.95% depending on the year. The debt service payments are between 2.4% and 15.3% of expenditures.

Figure 14: TLMFPD General Fund Materials/Supplies and Services, Capital, and Debt Service



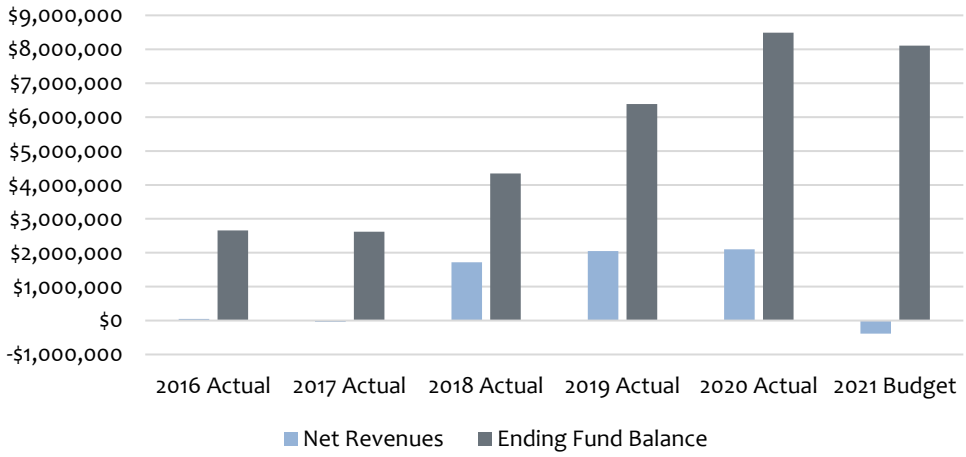
Net Revenue/Deficit and Fund Balance

The following figure displays net revenue gains/deficits and reserve balances for 2016 actuals through the Budget for 2021 for the General Fund.

When revenues are less than expenditures, such as in FY 2016, 2017, and 2021 Budget in the General Fund (figure below), then the fund shows an operating loss (blue bars), and fund balance is reduced (gray bars). Conversely, when the revenue exceeds expense, such as in FY 2018, 2019, and 2020, then the fund shows an operating gain, and the fund balance is increased.

General Fund. The district's General Fund revenues have been more than district expenditures over most of the study period. The result of this gain can be seen in the following figure), which shows the effect of the net gain or loss on the fund balance each fiscal year. As revenues have increased over time, the fund balance has also, in general terms, increased considerably. The ending fund balance (end balances roll over to the next years' beginning fund balance) has grown from $2,659,809 in FY 2016 to $8,625,732 in FY 2020.

Figure 15: Revenue, Expense, Net/Deficit, and Ending Fund Balance TLMFPD



Revenues DWFPD and Subdistrict

An analysis of departmental historical revenues and expenses for the DWFPD fire district was completed to help identify relevant financial trends, strengths, and weaknesses, and to lay the groundwork for the financial scenarios presented later in this section of the report. The historical analysis should provide the administration and elected officials with a solid basis upon which to evaluate recommendations and develop sustainable future policy.

The historical analysis helps illustrate how the district funds its services—where the money comes from and where it goes. Historical budget data for the districts was provided by staff and was supplemented with a review of past audits and historical budget records.

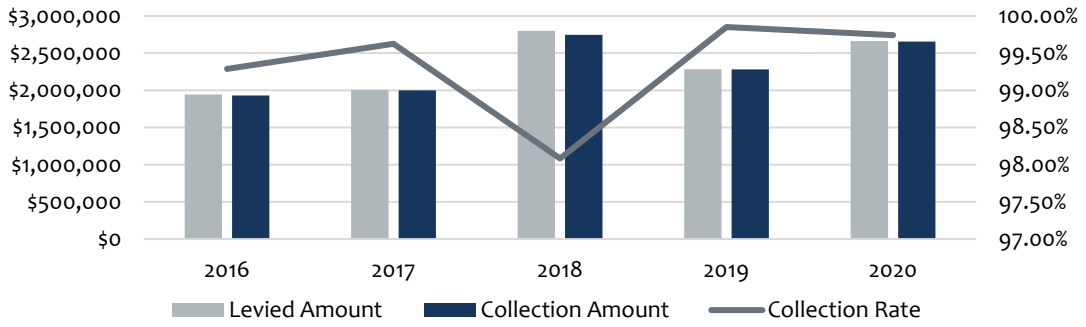
The following figure is a tabular short version of the financial resources of the General Fund. The line items are property taxes, specific ownership taxes, wildland deployments, miscellaneous revenue, interest, AMR Response, and grants.

Figure 16: DWFPD and Northern Subdistrict, Fiscal Years 2016 to 2020 Actual and 2021 Budget

Financial Resources by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget
Assessed Value	$290,426,600	$301,521,030	$212,555,850	$111,569,230	$128,551,170	$128,443,600
TIF	$12,686,590	$14,853,650	$21,964,700	$24,170	-	-
Mill Rate	7.00	7.00	7.00	7.00	7.00	7.00
Assessed Value			$98,372,020	$100,906,560	$118,335,610	$118,788,090
Mill Rate			14.90	14.90	14.90	14.90
Levied $	$1,944,180	$2,006,672	$2,799,881	$2,284,323	$2,663,059	$2,669,048
Collection Rate	99.29%	99.63%	98.08%	99.85%	99.74%	100.00%
Beginning Fund Balance	$1,041,228	$1,035,432	$1,656,234	$1,532,631	$1,591,675	$1,223,147
Property Taxes	$1,930,347	$1,999,164	$2,746,226	2,280,916	$2,656,164	$2,669,048
Specific Ownership Tax	$233,932	$285,956	$373,202	$276,603	$289,462	$256,000
Wildland Deployments	$50,546	$196,339	$131,050	$61,710	$219,328	$50,000
Interest	$596	$535	$1,079	$1,032	$869	$300
AMR Response	$89,935	$98,929	$108,822	$119,704	$8,454	$25,000
Grants	$41,216	$69,540	-	-	-	-
Miscellaneous	$13,833	$1,671	v1,535	$2,613	$66,953	$1,000
Total Revenues	$2,360,405	$2,652,134	$3,361,914	$2,742,578	$3,241,230	$3,001,348

The following figure graphically compares actual property taxes versus levied taxes and the collection rate for the district. The collection rate averages 99.32% for the 5 years of actual revenues reported for 2016 to 2020. The variations are mainly due to assessor adjustments.

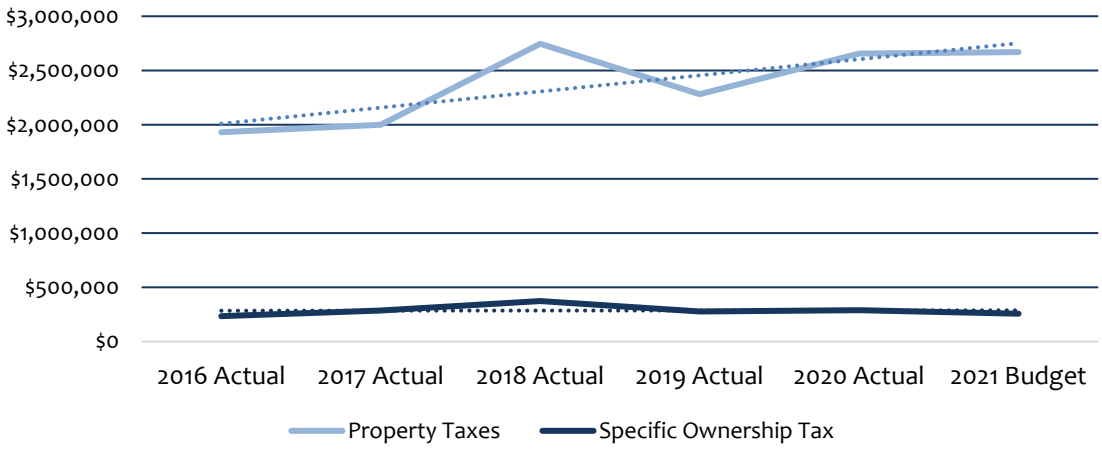
Figure 17: DWFPD and Northern Subdistrict General Fund Property Tax Collection, Levied Amount and Collection Rate, 2016–2020



Property and Specific Ownership Taxes. Property and specific ownership taxes comprise anywhere from 86-97% of the district's 2016–2020 revenues. The district has experienced an overall increase in property tax revenues since 2016, mostly from Residential Property assessments. From 2016 to 2020, the district realized a $725,817 increase (or 37.60% change) in property tax revenues, while Specific Ownership taxes increased $55,530 from 2016 to 2020 (23.74% change).

The following figure shows (graphically) increases along with linear trend lines.

Figure 18: DWFPD and Northern Subdistrict Property and Specific Ownership Taxes, 2016–2020 Actual 2021 Budget



Between FY 2016 and FY 2021, the beginning fund balance increased by $181,919 (17.47% change).

Expenditures DWFPD and Northern Subdistrict

All the district's expenditures are budgeted in the General Fund. This includes operating, capital, and debt service expenditures. The following figure shows, in tabular format, the respective expenses for FY 2016 through FY 2021 Budget.

Figure 19: DWFPD and Northern Subdistrict 2016 – 2021 Budget

Financial Expenditures by Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget
Treasurer's Fees	$29,181	$30,110	$41,193	$34,229	$39,842	$40,036
Salaries and Benefits	$1,618,729	$1,338,905	$1,658,794	$2,066,107	$2,609,272	$2,591,735
Administrative Expenditures	$148,153	$93,341	$56,961	$112,286	$126,403	$92,495
Fire Operations	$181,470	$253,954	$410,147	$251,531	$591,471	$82,000
Fire Prevention	$453	$2,557	$1,729	$2,195	$442	$2,500
Medical	$1,554	$4,158	$1,798	$1,497	$775	$4,000
Vehicles	$68,078	$58,191	$76,299	$80,260	$116,631	$76,000
Communications	$75,371	$76,334	$77,878	$87,116	$78,291	$71,000
Building and Grounds	$69,875	$49,874	$46,673	$48,313	$46,631	$41,400
Lease Interest	$78,800	$23,463	$49,960	-	-	-
Lease Principal	$94,537	$100,445	$1,065,814	-	-	-
Total Debt Service	$173,337	$123,908	$1,115,774	-	-	-
Capital Expenditures	-	-	-	-	-	-
Total Expenditures	$2,366,201	$2,031,332	$3,487,246	$2,683,534	$3,609,758	$3,001,166
Revenues	$2,360,405	$2,652,134	$3,361,914	$2,742,578	$3,241,230	$3,001,348
Ending Fund Balance	$1,035,432	$1,656,234	$1,530,902	$1,591,675	$1,223,147	$1,223,329

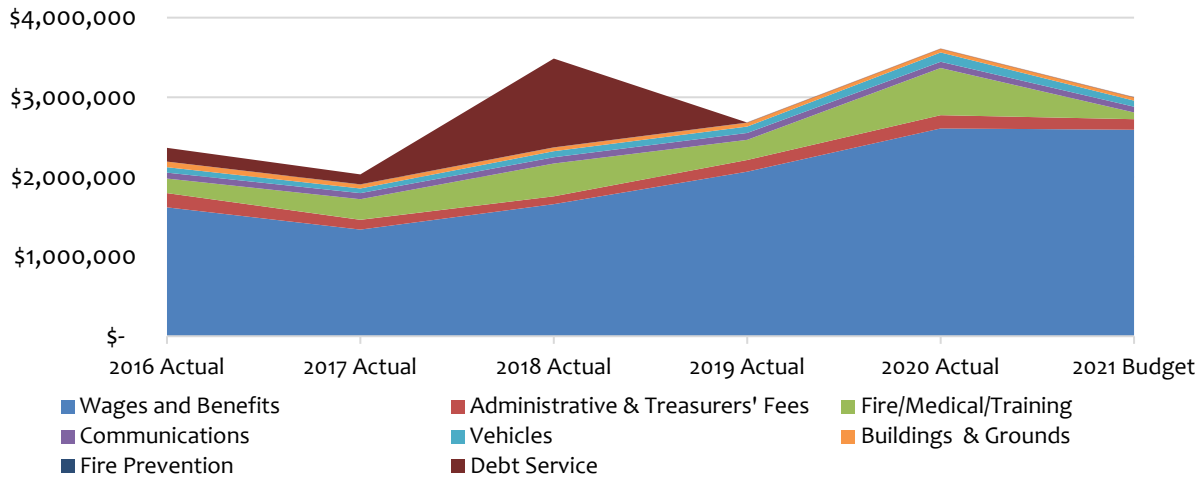
*This analysis used the 2021 Approved Budget with anticipated ending balance. Actual results depend on the results of a final budget. Ending balance might be different.

The previous figure shows total expenditures for DWFPD and Northern Subdistrict from 2016 actual through 2021 Budget.

- The total expenditures increased by $634,965 from the 2016 actual to the 2021 Budget, an increase of 27 percent.
- The ending fund balance is budgeted to increase $187,897 from the 2016 to 2021 Budget, an increase of 18.15 percent.

The following figure graphically displays all the expenditures of the district for the entire period. The bulk of the district cost each year is for Salaries and Benefits (large blue area). There are no budgeted capital items during the period, although capital purchases have been made from reserves or from ending balances in the past. The debt was paid off in 2018.

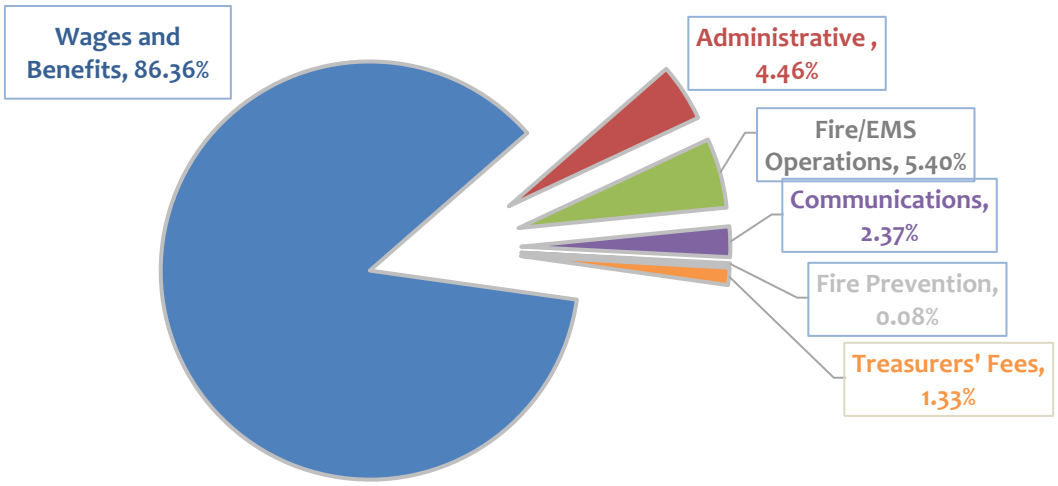
Figure 20: DWFPD and Northern Subdistrict - General Fund Expenditures by Type



The next figure breaks down the major areas of total fire district expenditures, as budgeted for 2021, and shows the percentage for each major category of expense. Clearly, at 86.36%, wages and benefits are the largest cost to the district. This is high for mostly career-staffed fire districts around the country. Generally, the number is in the 70-80% range. The district did not budget any Capital for any years of the study period and district debt was retired in 2018.

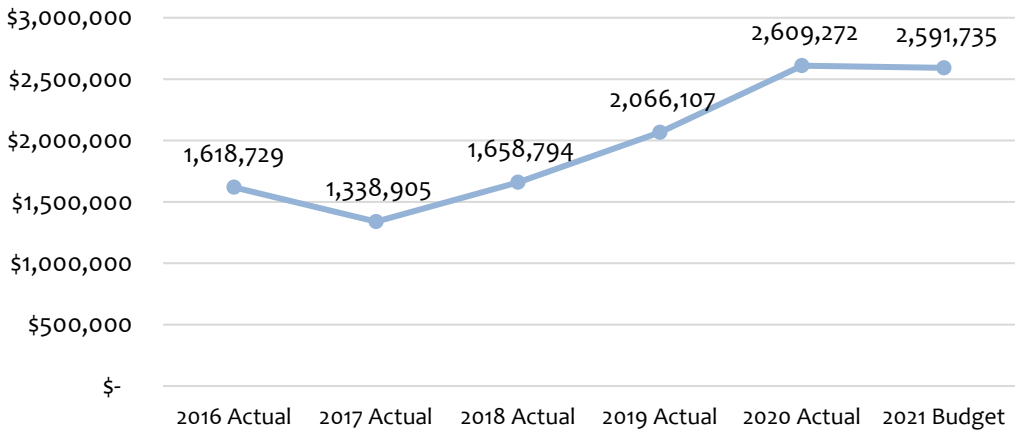
The district did not budget any capital for any years of the study period and does not have a capital replacement program for apparatus, vehicles, or major facility maintenance/expansion. However, within this period the district made several capital purchases funded from accumulated previous year end-of-year balances. In 2021, this was $61,000 for replacement portable radios. There are no capital expenditures planned for the next five years due to funding restraints. The district did retire the debt related to the construction of a fire station in 2018.

Figure 21: DWFPD and Northern Subdistrict - General Fund Budget 2021



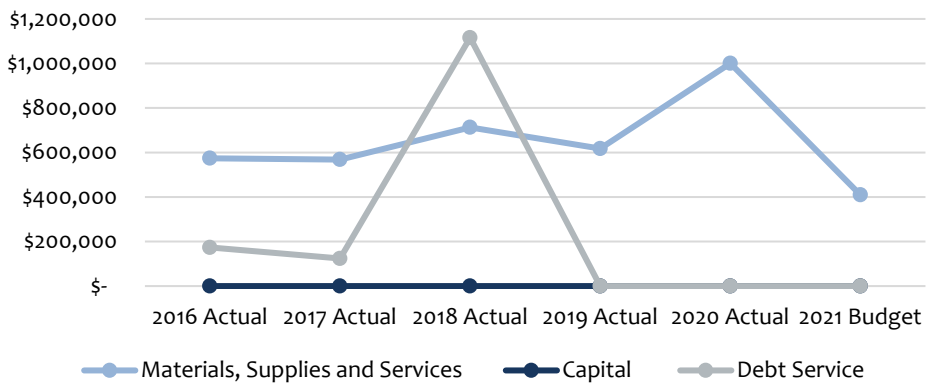
Wages and Benefits. Wages and benefits comprise the largest portion of the budget for most fire districts. The wages and benefits vary from 48-86% from 2016 to 2021 depending on the amount of Debt Service paid in each year.

Figure 22: DWFPD and Northern Subdistrict - General Fund Wages and Benefits Totals



Materials, supplies, and services for Administration, Fire Operations, and Fire Prevention. These charges encompass 13.6-52.4% of the expenditure budget. There are no capital expenditures for the district during this period. The debt service payments range from 0-32.0% of expenditures.

Figure 23: General Fund Materials/Supplies and Services, Capital, and Debt Service DWFPD and Northern Subdistrict



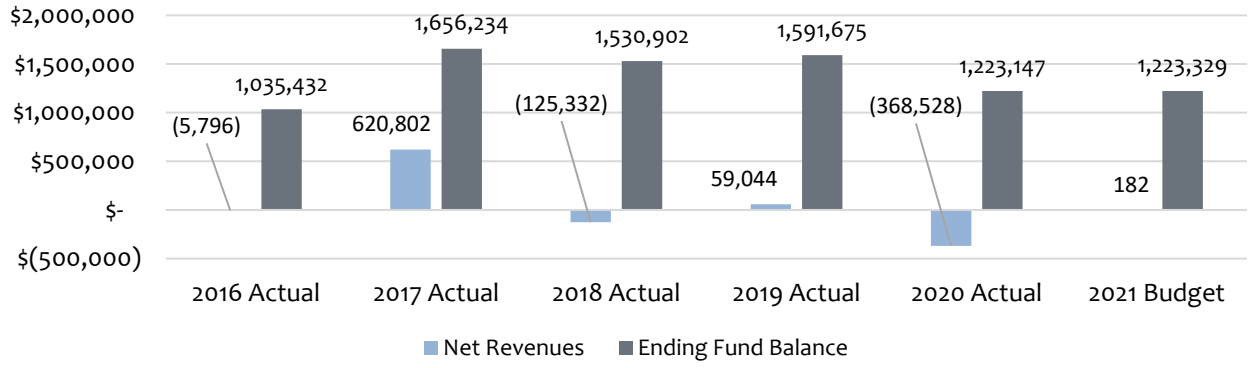
Net Revenue/Deficit and Fund Balance

The following figure displays net revenue gains/deficits and reserve balances for the General Fund for the years 2016 actual through the 2021 Budge.

When revenues are less than expenditures, such as in FY 2016, 2018, and 2020 in the General Fund (figure below), then the fund shows an operating loss (blue bars), and the fund balance is reduced (gray bars). Conversely, when the revenue exceeds expense, such as in FY 2017, 2019, and 2021 Budget, then the fund shows an operating gain and fund balance is increased.

General Fund. The district's General Fund revenues have been more than district expenditures for half of the study period. The result of this gain can be seen in the following figure, which shows the effect of the net gain or loss on the fund balance each fiscal year. As revenues have increased over time, the fund balance has also. The ending fund balance (end balances roll over to the next years' beginning fund balance) has grown from $1,035,432 in FY 2016 to $1,223,329 in FY 2020.

Figure 24: DWFPD and Northern Subdistrict - Revenue, Expense, Net/Deficit, and Ending Fund Balance



CAPITAL ASSETS & CAPITAL IMPROVEMENT PROGRAM

Three basic resources are required to successfully carry out the mission of a fire department—trained personnel, firefighting equipment, and fire stations. No matter how competent or numerous the firefighters are, if appropriate capital equipment is not available for use by responders, it would be impossible to deliver services effectively. The most essential capital assets for use in emergency operations are facilities and apparatus (response vehicles). Of course, the fire departments' financing ability will determine the level of the capital equipment they can acquire and make available for use by emergency personnel. This section of the report is an assessment of the respective capital facilities, vehicles, and apparatus of the two districts.

Facilities

Fire stations play an integral role in the delivery of emergency services for several reasons. A station's location will dictate, to a large degree, response times to emergencies. A poorly located station can mean the difference between confining a fire to a single room and losing the structure. Fire stations must be designed to adequately house equipment and apparatus, as well as meet the needs of the organization and its personnel. It is important to research needs based on service demand, response times, types of emergencies, and projected growth before making a station placement commitment.

A fire station should be able to support the departments' missions as they exist today and into the future. This includes examining the activities that take place within a fire station to ensure the structure is adequate in both size and function. Examples of these functions may include:

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

In gathering information from the two districts, ESCI asked the departments to rate the condition of each of their fire stations using the criteria in the following figure.

Figure 25: Criteria Utilized to Determine Fire Station Condition

Excellent	Like new condition. No visible structural defects. The facility is clean and well maintained. The Interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. No significant defect history. Building design and construction match the building purpose. Age is typically less than 10 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 purpose 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 purpose 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 an apron may exist. The roof has evidence of leaking and/or 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/or major defects are evident. It may not be well suited to its intended purpose. Age is typically greater than 40 years.

Figure 26: TLMFPD Station 1

Address/Physical Location:	18650 Highway 105; Monument, CO 80132
	This station supports responses in the north and west of the district. It is undergoing an addition and a remodel to adequately support the district's mission. This should make the living quarters more suitable for staffing. The staffing capability of the station is necessary to support the number of response units.

Survey Component	**Observations**					
Structure						
Construction Type	Type 1 – Cinder block					
Date of Construction	1998. Note: 1660 square foot addition and complete living quarters remodel to be complete Oct 2021					
Seismic Protection	No					
Auxiliary Power	Diesel Generator					
Condition	Excellent – Currently undergoing remodel and addition					
Apparatus Bays	3	Drive-through bays	1	Back-in bays		
Special Considerations	N/A					
Square Footage	9600 SF					
Facilities Available						
Separate Rooms/Dormitory/Other	6	Bedrooms	6	Beds	0	Dorm Beds
Maximum Station Staffing Capability	6					
Exercise/Workout	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes					
Safety & Security						
Fire Sprinklers	Yes					
Smoke Detection	Yes					
Decon/Biohazard Disposal	Yes					
Security	Combination lock doors					
Apparatus Exhaust System	Yes, exhaust connection					

Figure 27: TLMFPD Station 2

Address/Physical Location:	18460 Roller Coaster Road; Monument, CO 80132
	The station serves the middle to the eastern portion of the district. The station is staffed by a crew of five and houses an engine and ambulance.

Survey Component	**Observations**					
Structure						
Construction Type	Type 1 – Cinder block					
Date of Construction	2004					
Seismic Protection	No					
Auxiliary Power	Natural Gas Generator					
Condition	Good					
Number of Apparatus Bays	0	Drive-through bays	2	Back-in bays		
Special Considerations	North parking and septic system on the adjacent property; Possible Relocation					
Square Footage	6400 SF					
Facilities Available						
Separate Rooms/Dormitory/Other	7	Bedrooms	7	Beds	2	Dorm Beds
Exercise/Workout	Yes – apparatus floor					
Kitchen/Dormitory	Yes					
Individual Lockers/Storage Assigned	Yes					
Shower Facilities	Yes, a separate room with a bath for a female					
Training/Meeting Rooms	No					
Washer/Dryer	Yes					
Safety & Security						
Fire Sprinklers	No					
Smoke Detection	Yes					
Decon/Biohazard Disposal	Yes					
Security	Combination lock doors					
Apparatus Exhaust System	Yes, exhaust connection					

Figure 28: TLMFPD Station 3

Address/Physical Location:	1855 Woodmoor Drive; Monument, CO 80132
	This station serves the eastern part of the district and the Woodmoor subdivision to the east. The station can house up to six firefighters. An engine and battalion chief responds from the station.

Survey Component	Observations					
Structure						
Construction Type	Masonry					
Date of Construction	1984					
Seismic Protection	No					
Auxiliary Power	Natural Gas Generator					
Condition	Good					
Number of Apparatus Bays	2	Drive-through bays	1	Back-in bays		
Special Considerations	Not gender-sensitive; Pad needs repair; dayroom remodel planned					
Square Footage	5700 SF					
Facilities Available						
Separate Rooms/Dormitory/Other	5	Bedrooms	6	Beds	3	Dorm Beds
Exercise/Workout	Yes					
Kitchen	Yes					
Individual Lockers/Storage Assigned	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	No					
Washer/Dryer	Yes, with PPE Extractor					
Safety & Security						
Fire Sprinklers	No					
Smoke Detection	Yes					
Decon/Biohazard Disposal	Yes					
Security	Combination lock doors					
Apparatus Exhaust System	Yes, exhaust connection					

Figure 29: DWFPD Station 1

Address/Physical Location:	15415 Gleneagle Drive; Colorado Springs, CO 80921
	This station houses a crew of three firefighters. The station is located well for serving the northern part of the DWFPD and the southern part of the TLMFPD. It currently houses the DWFPD administrative staff.

Survey Component	**Observations**					
Structure						
Construction Type	Masonry					
Date of Construction	1997					
Seismic Protection	No					
Auxiliary Power	N/A					
Condition	Good					
Number of Apparatus Bays	2	Drive Through	1	Back in		
Special Considerations	N/A					
Square Footage	N/A					
Facilities Available						
Separate Rooms/Dormitory/Other	2	Bedrooms	8	Beds	1	Dorm Beds
Exercise/Workout	Yes					
Kitchen	Yes					
Individual Lockers/Storage Assigned	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes, and PPE extractor					
Safety & Security						
Fire Sprinklers	No					
Smoke Detection	Yes					
Decon/Biohazard Disposal	N/A					
Security	Yes					
Apparatus Exhaust System	Yes, exhaust connection					

Figure 30: DWFPD Station 2

Address/Physical Location:	15055 State Highway 83; Colorado Springs, CO 80921
	This station is in excellent condition and its design provides effective functioning of crews. It is located on a major north-south transportation route through the district. It has a firefighter sleeping dormitory and can house a total of 8 firefighters.

Survey Component	**Observations**					
Structure						
Construction Type	Wood Frame					
Date of Construction	2012					
Seismic Protection	No					
Auxiliary Power	Yes					
Condition	Excellent					
Number of Apparatus Bays	2	Drive-through bays	1	Back-in bays		
Special Considerations	N/A					
Square Footage	N/A					
Facilities Available						
Separate Rooms/Dormitory/Other	2	Bedrooms	6	Beds	1	Dorm
Exercise/Workout	Yes					
Kitchen	Yes					
Individual Lockers/Storage Assigned	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	No					
Washer/Dryer	Yes					
Safety & Security						
Fire Sprinklers	Yes					
Smoke Detection	Yes					
Decon/Biohazard Disposal	Yes					
Security	Yes					
Apparatus Exhaust System	Yes, exhaust connection					

Figure 31: DWFPD Station 3

Address/Physical Location:	15000 Sun Hills Drive
	This station is not a response station for fire crews other than the battalion chief. It is used primarily for storage and is located in a subdivision, not on major access routes.

Survey Component	**Observations**					
Structure						
Construction Type	Wood Frame					
Date of Construction	1983					
Seismic Protection	No					
Auxiliary Power	No					
Condition	Fair					
Number of Apparatus Bays	2	Drive-through bays	1	Back-in bays		
Special Considerations	Not ADA compliant; Not suitable for engine staffing					
Square Footage	N/A					
Facilities Available						
Separate Rooms/Dormitory/Other	1	Bedrooms	1	Beds	0	Dorm Beds
Exercise/Workout	Yes					
Kitchen	Yes					
Individual Lockers/Storage Assigned	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	No					
Washer/Dryer	Yes, with PPE Extractor					
Safety & Security						
Fire Sprinklers	No					
Smoke Detection	Yes, single station alarm					
Decon/Biohazard Disposal	No					
Security	Yes, Combination lock doors					
Apparatus Exhaust System	Yes, exhaust connection					

Apparatus

ESCI gathered data on the apparatus of both districts. It is important to understand the condition of the rolling stock, particularly the front-line apparatus. Having one replacement schedule reflecting apparatus of both entities is critical to understanding future liability. It is important to understand the economics of vehicle replacement. Currently, only TLMFPD has a replacement schedule, so ESCI created a combined schedule using the same replacement criteria used by TLMFPD. The next section discusses the importance of vehicle replacement planning.

Apparatus Replacement Planning

Fire apparatus are typically unique pieces of equipment, often very customized to operate efficiently in a narrowly defined mission. A pumper may be designed such that the compartments fit specific equipment and tools, with virtually every space on the truck designated in advance for functionality. This same vehicle, with its specialized design, cannot be expected to function in a completely different capacity, such as a hazardous materials unit or a rescue squad. For this reason, fire apparatus is very expensive and offers little flexibility in use and reassignment. As a result, communities across the country have sought to achieve the longest life span possible for these vehicles.

Unfortunately, no mechanical piece of equipment can be expected to last forever. As vehicles age, repairs tend to become more frequent, parts more difficult to obtain, and downtime for repair increases. Given the emergency mission that is so critical to the community, this factor of downtime is one of the most frequently identified reasons for apparatus replacement.

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

NFPA 1901: Standard for Automotive Fire Apparatus is a nationally recognized industry standard for the design, maintenance, and operation of fire suppression apparatus. The issue of replacement cycles for various types of apparatus has been discussed in the committee that develops the standard for many years. In developing its latest edition, the committee calls for a life cycle of 15 years in front-line service and, if maintained, can be placed in reserve status. Apparatus are recommended to be put out of service at the end of 25 years.

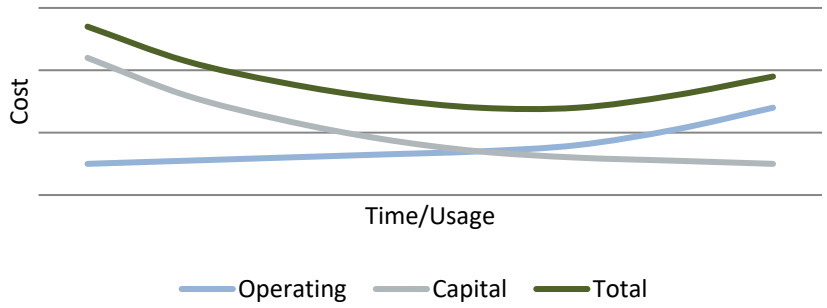
Does this mean that a fire engine cannot be effective as a front-line pumper beyond 15 years? A visit to many departments in the United States might prove otherwise. Small, volunteer fire departments with only a hundred or so calls per year often get up to 25 years from a pumper, though the technology is

admittedly not up-to-date. Likewise, busy downtown city fire stations in some urban communities move their engines out of front-line status in as little as eight years.

The reality is that it may be best to establish a life cycle that would be used in the development of replacement funding for various types of apparatus while applying a different method for determining the replacement date in real life to achieve greater cost efficiency where possible.

A conceptual model that may be used when a replacement cycle is considered is the *Economic Theory of Vehicle Replacement*. The theory states that, *as a vehicle ages, the cost of capital diminishes, and its operating cost increases*. The combination of these two costs produces a total cost curve. The model suggests the optimal time to replace any piece of apparatus is when the operating cost begins to exceed the capital costs. This optimal time may not be a fixed point but rather a range over time. The flat spot at the bottom of the total curve in the following figure represents the replacement window:

Figure 32: Economic Theory of Vehicle Replacement



Shortening the replacement cycle to this window allows for an apparatus to be replaced at optimal savings to the department. If the department does not routinely replace equipment in a timely manner, the overall reduction in replacement spending can result in a quick increase in maintenance and repair expenditures. Officials who assume that deferring replacement purchases is a good tactic for balancing the budget need to understand that two events may occur:

1. Costs are transferred from the capital budget to the operating budget.
2. Such deferral may increase overall fleet costs.

Regardless of its net effect on current apparatus costs, the deferral of replacement purchases unquestionably increases future replacement spending needs.

Apparatus Replacement Schedule

As the previous discussion on apparatus replacement advocated, a replacement can be fine-tuned aiming for a point where operating costs begin to exceed capital costs, however, certain assumptions have to be made. ESCI reviewed the front-line apparatus and applied the assumptions in Figure 33. The life expectancy assumptions are made for departments such as TLMFPD and DWFPD. Some apparatus require replacement sooner than predicted and others will outlast the predicted life expectancy. The replacement cost can vary based on options and features that might be unique to the department. The costs shown in Figure 33 are ESCI estimates which may differ based on options and continuous inflation.

Figure 33: Apparatus Replacement Assumptions

Vehicle Type	Life expectancy	Replacement Cost
Squad/Utility	10	$75,000
Custom Pumper	10	$750,000
Tanker/Tender	15	$375,000
Ladder	13	$1,500,000
Type 6/Brush	10	$160,000
Type 3 Engine	10	$360,000
Type I or III Ambulance	5	$230,000

To predict the future cost of the apparatus replacement ESCI must assume an inflation factor. The assumed annual inflation rate for fire apparatus is four percent, although that figure may be increasing based on the latest projected annual inflation figures. The estimated replacement cost for the front-line fleet is shown in Figure 34. These figures reflect the replacement frequency of TLMFPD for the front-line apparatus. This table calculates the replacement cost with inflation and shows the total needed amount over the total life of the fleet but also the annual contribution that should be made to the replacement fund to fully fund the schedule. These figures are reflected in the ESCI fiscal analysis presented later in this report. Units in the 500 series are DWFPD units and those in the 2200 series are TLMFPD units.

Figure 34: Apparatus Replacement Schedule

Unit	Year	Replacement Cost w/ Inflation	Current Cash Requirements	Annual Cash Required	Current Age	Life Expectancy	Replacement Year
E511	2007	$750,000	$750,000	N/A	14	10	OVERDUE
E2213	2019	$1,026,427	$205,285	$102,643	2	10	2029
E2212	2019	$1,026,427	$205,285	$102,643	2	10	2029
Q531	2010	$1,622,400	$1,372,800	$124,800	11	13	2023
T2231	2009	$1,560,000	$1,440,000	$120,000	12	13	2022
TN562	2001	$375,000	$375,000	N/A	20	15	OVERDUE
TN561	2020	$649,379	$43,292	$43,292	1	15	2035
B542	2018	$210,549	$63,165	$21,055	3	10	2028
M2282	2016	$230,000	$230,000	N/A	5	5	2021
M2281	2019	$258,719	$103,487	$51,744	2	5	2024
B2241	2015	$187,177	$112,306	$18,718	6	10	2025
B2242	2001	$160,000	$160,000	N/A	20	10	OVERDUE
B2243	2008	$160,000	$160,000	N/A	13	10	OVERDUE
U504	2008	$75,000	$75,000	N/A	13	10	OVERDUE
U550	1997	$75,000	$75,000	N/A	24	10	OVERDUE
U551	2003	$75,000	$75,000	N/A	18	10	OVERDUE
Total/ Average		$8,441,077	$5,445,621	$584,894			

The average age of the combined front-line fleet is 10.4 years. One engine, two Type-6 engines, three utility vehicles, and one tender are due for replacement. The inflated replacement cost of the entire front-line fleet is $ 8,441,077. Ideally, the funds in reserve to replace all the units based on the anticipated end of life would be $ 5,445,621 with an annual contribution to the fund of $ 584,894. Currently, DWFPD does not have a vehicle replacement program. Based on the criteria used five DWFPD units need replacement.

STAFFING AND PERSONNEL MANAGEMENT

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

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

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

In this section, ESCI explores each of the district's current staffing levels and evaluates them against the mission, identifying potential gaps and efficiencies that might be gained with their current operations. Several recommendations will be presented for combining the organizations and the services they provide in the Recommendations section of the report.

Administrative and Support Staffing

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

Like any other part of a fire protection district, administration and support functions need appropriate resources to function properly. By analyzing the administrative and support positions within an organization, an agency can achieve a common understanding of the relative resources committed to this function compared to industry best practices and similar organizations. The appropriate balance of administration and support compared to operational resources and service levels is critical to the success of the district in accomplishing its mission and responsibilities.

Typical responsibilities of the administration and support staff include planning, organizing, directing, coordinating, and evaluating the various programs within the district. A unique challenge for both TLMFPD and DWFPD is managing wildfire deployments and their related expenses. There is a need for administrative support to track and file for the reimbursement of these expenses. This list of functions is not exhaustive, and other functions may be added. It is also important to understand these functions do not occur linearly and, more often, coincide. This requires the Fire Chief and administrative support staff to focus on many different areas at the same time.

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

Figure 35: TLMFPD Administrative and Support Staff

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Admin/Support Staff (full-time & part-time)	*Individuals considered full-time or part-time staff primarily assigned to manage, plan, or support the activities of the agency and its programs.*		
Fire Chief	1	40	M–F
Deputy Chief/Logistics	1	40	M–F
Division Chief/Fire Marshal	1	40	M–F
Division Chief/Operations	1	40	M–F
Battalion Chief/Training	1	40	M–F
Director of Administration	1	40	M–F
EMS Coordinator	1	Varies	M–F

ESCI notes that the current level of administrative and support staffing represents roughly 10% of the TLMFPD total staffing. Over the last several months, the administrative team has been working on a re-organization of current staff to address administrative support issues. Currently, staff assigned to operational shift functions are also given administrative tasks.

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

Figure 36: DWFPD Administrative and Support Staff

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Admin/Support Staff (full-time & part-time)	*Individuals considered full-time or part-time staff primarily assigned to manage, plan, or support the activities of the agency and its programs.*		
Fire Chief	1	40	M–F
Administrative Assistant	1	40	M–F

ESCI notes that the current level of administrative and support staffing represents roughly 8% of the DWFPD total staffing.

It is our experience that effective administrative staffing totals for a fire protection district operation typically range up to 12-15% of agency staffing totals. Both TLMFPD and DWFPD operate below the expected and experienced normal threshold for effective administrative and support staff percentages. This does not mean they are not completing required functions and tasks but merely indicates they are operating with less than the normally experienced staff to complete those functions which could lead to delays or a lack of functional efficiency. It also means there is most likely difficulty achieving national consensus standard processes and practices based on a lack of staff to perform those functions. Interviews and discussions with staff from both TLMFPD and DWFPD communicated there were additional functions or tasks they would like to be able to perform but often cannot because the staff is limited.

Fire Protection District Administration

The main administrative function within both TLMFPD and DWFPD is established with the position of Fire Chief. While TLMFPD has a Deputy Chief and two Division Chiefs to assist, DWFPD does not have either. Some of the typical responsibilities of the Fire Chief include planning, organizing, directing, and budgeting for all aspects of the district's operations. Each district has an Administrative Assistant to the Fire Chief to assist with handling all other aspects of the District's administration. The detailed responsibilities of the Administrative Assistant for both TLMFPD and DWFPD will be discussed in the Personnel Management section of the study.

Fire Protection District Support Staffing

TLMFPD and DWFPD both have very lean organizational support staffing. The functions of fire prevention, fire inspections, fire investigations, life-safety education, training, EMS administration, quality improvement, and logistics are shared by very few FTEs and neither organization has individuals assigned to handle only these functions. Most of these support functions are assigned to operational staff who perform double duty. Additional detailed information regarding staffing for support functions are outlined in the Fire and Life Safety, Training, and EMS Oversight sections of the report.

Emergency Response Staffing

It takes an adequate and properly trained staff of emergency responders to put the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at an emergency scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved.

Tasks to perform at the scene of a fire can be broken down into two key components: life safety and fire flow. Responders base life safety tasks on the number of building occupants and their location, status, and ability to take self-preservation action. Life safety-related tasks involve the search, 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 safe entry by firefighters.

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

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

The first 15 minutes are the most crucial period in the suppression of a fire. The timing of these 15 minutes does not start when the firefighters arrive at the scene but begins when the fire initially starts. How effectively and efficiently firefighters perform during this period has a significant impact on the overall outcome of the event. This general concept applies to fire, rescue, and medical situations. Responders must perform critical tasks promptly to control fire or to treat a patient. Both TLMFPD and DWFPD are responsible for assuring that responding companies are capable of performing all described tasks in a prompt, efficient, and safe manner.

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

Some terms are interchangeable, such as assembly of firefighters on an incident, which may also be referred to as "Initial Full Alarm Assignment," "Effective Firefighting Force" (EFF), or "Effective

Response Force" (ERF). In the figures below, ESCI describes the NFPA 1710 level of staffing comprising this effective response force for three different scenarios.[1]

Figure 37: Initial Full Alarm Assignment for Residential Structure Fire

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

Figure 37 shows the staffing needed to safely and effectively mitigate a single-family, 2,000-square-foot two-story residential structure without a basement and no exposures. The following figure describes an initial full alarm assignment for an open-air strip-type shopping center. Note that as the risk and difficulty become greater, the staffing levels needed for effective mitigation increase.

Figure 38: Initial Full Alarm Assignment for Strip Shopping Center

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

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

Figure 39: Initial Full Alarm Assignment in a Three-Story Apartment Building

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

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

Additional crews are necessary when a fire escalates beyond the capability of the initial assignment, or the fire has unusual characteristics such as a wind-driven fire, or when involving an accelerant with a highly flammable compound. There are also types of scenarios that may not be fires, but mass casualty incidents, explosions, tornadoes, and so forth that may need additional staffing. It is difficult or impossible to staff for these worst-case incidents. These require a strong mutual aid or automatic aid plan for assistance and/or call-back policies.

The following figure depicts the emergency staffing employed by TLMFPD.

Figure 40: TLMFPD Total Emergency Response Staffing

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Operational Staff (full-time & part-time)	*Individuals considered full-time or part-time employees, primarily assigned to provide emergency services at the operational level.*		
Shift Battalion Chief	3	56	48/96
Lieutenants	9	56	48/96
Engineers	9	56	48/96
FF/Paramedics	9	56	48/96
Paramedic	5	56	48/96
FF/EMT	11	56	48/96

A baseline overview of the staffing model, staffing levels, and relief factors provides an opportunity to review and analyze the current staffing patterns, shifts, and options to increase efficiency, effectiveness, and capabilities. The current TLMFPD leadership roles of Battalion Chiefs (3 FTEs) and Lieutenants (9 FTEs), to engineers, firefighters, FF/Paramedics, and Paramedics (25 FTEs) ratio for full-time positions within TLMFPD operations is at 48%. It is important to note that the Division Chief of Operations currently provides daily leadership support for operations and administrative tasks as well. This oversight falls back to the Battalion Chief after the Division Chief goes home for the day. Operational duties can detract from the Division Chief's ability to provide administrative support and vice versa.

The following figure depicts the emergency staffing employed by DWFPD.

Figure 41: DWFPD Total Emergency Response Staffing

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Operational Staff (full-time & part-time)	*Individuals considered full-time or part-time employees, primarily assigned to provide emergency services at the operational level.*		
Shift Battalion Chief	3	56	48/96
Lieutenants	6	56	48/96
Engineers	6	56	48/96
FF/Paramedics	4	56	48/96
FF/EMT	2	56	48/96

The current DWFPD Battalion Chiefs (3 FTEs), Lieutenants (6 FTEs), to Engineers, Firefighters and FF/Paramedics (12 FTEs) ratio for full-time positions within DWFPD operations is at 75%. It is important to

note that the Fire Chief currently provides support for daily operations and administrative tasks as well. This oversight falls back to the Battalion Chief after the Fire Chief goes home for the day. Operational duties can detract from the Fire Chief's ability to provide administrative support and vice versa.

Emergency Response Staff Allocation

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

The districts operate with a company officer assigned to each fire engine and truck company daily. The districts' promoted apparatus operators serve as the individual responsible for all aspects of maintaining and operating fire engines and aerial units. This position fills as needed, depending on the availability of daily staffing. Career firefighters staff each fire station daily. When fully staffed, one lieutenant, one engineer, and one firefighter staff each of the fire stations on each apparatus. This is rarely the case due to vacancies created by scheduled or unscheduled leave, and more likely, TLMFPD and DWFPD can expect one officer and two firefighters assigned per engine.

TLMFPD provides ALS transport services and has two ambulances in service daily. This provides an additional four persons for staffing. The daily staffing for these units is achieved with a paramedic and an EMT. On some shifts the paramedic assigned is not a firefighter. This represents a total shift staffing of 14 FTEs for TLMFPD and 7 FTEs for DWFPD, not including administrative staff. DWFPD contracts ambulance services through AMR, a private ambulance service.

TLMFPD Standard Operating Procedures (SOPs) direct the following first alarm assignment for structure fires.

Figure 42: TLMFPD Initial 1st Alarm

Initial Full Alarm Assignment—2,000 ft² Residential Structure Fire	
Battalion Chief	1
2 Engines	6
1 Truck	3
1 Ambulance	2
1 Mutual Aid Engine	3
Total Minimum Personnel	**15**

The on-duty minimum staffing for a first alarm does not meet the need for a routine house fire without mutual aid assistance. An initial 1st Alarm Assignment is typically not sufficient for a strip shopping mall or an apartment building unless there is fire protection built into these structures. This is a type of fire that

is likely within the jurisdiction and represents a higher level of risk than the typical medium-size residential dwelling. Because TLMFPD staffs most response units with a minimum of three firefighters, an initial full alarm force for this level of hazard would commit the majority, if not all, of the on-duty staffing to one fire. Furthermore, due to the geographical size of the jurisdiction, it is not reasonable to expect or plan on this as a means of providing coverage for such an event and still providing required services to the jurisdiction as a whole.

Conversely DWFPD Standard Operating Procedures (SOPs) direct the following first alarm assignment for structure fires.

Figure 43: DWFPD Initial 1st Alarm

Initial Full Alarm Assignment—2,000 ft² Residential Structure Fire	
Battalion Chief	1
Mutual Aid Battalion Chief	1
2 Engines/Truck	6
2 Mutual Aid Engine	6
Total Minimum Personnel	**14**

The on-duty minimum staffing for a first alarm does not meet the need for a routine house fire without the assistance of mutual aid. An initial 1st Alarm Assignment even with mutual aid is typically not sufficient for a strip shopping mall or an apartment building unless there is fire protection built into these structures. This is a type of fire that is likely within the jurisdiction and represents a higher level of risk than the typical medium-size residential dwelling.

Because DWFPD staffs most response units with a minimum of three firefighters, an initial full alarm force for this level of hazard would commit the entire on-duty staffing to one fire. Furthermore, due to the geographical size of the jurisdiction, it is not reasonable to expect or plan on this as a means of providing coverage for such an event and still provide required services to the jurisdiction as a whole. DWFPD splits its staff between two stations without a defined response zone. This requires the on-duty crews to determine who will answer the calls for medical and motor vehicle collisions based on location and not by using a predetermined zone allocation.

Emergency Medical Staffing

TLMFPD provides ALS transport services with two ambulances daily. These ambulances are staffed with Paramedics and EMTs. Some of the staff assigned to the ambulance are firefighters also but TLMFPD employs several paramedics who are not firefighters. DWFPD does not provide transport services and contracts with AMR for transport services to their district. AMR is a private ambulance service that houses one ambulance in DWFPD Fire Station 2. It was noted that for DWFPD there are times when there are no paramedics available for the shift and DWFPD staff is unable to provide advanced life support.

Staff Allocation of Various Functions

TLMFPD and DWFPD allocate their career staff to three fire stations each based on the specific geographic requirements and service level needs of the area. The staff for each fire station receives calls for service and responds in the appropriate apparatus. For example, a fire call would require a fire engine, whereas a brush fire call would require a brush truck. Some fire stations are also equipped with a ladder truck, water tender, and brush truck apparatus in addition to an engine (or pumper). If required to respond in either of these apparatus, staff must move from their current apparatus assignment and relocate to the required or requested apparatus.

As discussed, TLMFPD Fire Station 1 and TLMFPD Fire Station 2 have ambulance medic units. The TLMFPD Battalion Chief is located at Fire Station 3 to provide necessary command and control coverage during incidents and manage the administrative duties for the shift. The DWFPD Battalion Chief is located at DWFPD Fire Station 3. It should be noted that DWFPD Fire Station 3 does not house suppression units. This allocation of staff for TLMFPD and DWFPD across the stations and units is a typical three-person staffing model across the United States for career organizations. The minimum staffing available in each district could be as low as 14 personnel for TLMFPD and 7 personnel for DWFPD.

Staff Scheduling Methodology

TLMFPD and DWFPD utilize a traditional three platoon system operating on a 48-hour shift rotation per position to achieve the daily staffing of career personnel. The total number of positions required becomes a policy decision based on the needs of the jurisdiction. The jurisdiction also establishes the number of employees needed above the minimum to allow for vacancies due to vacation, sick, and other types of leave. This staff requirement above the minimum yields a total number of full-time employees required to ensure necessary daily minimum staffing is achieved according to policy. Minimum staffing for TLMFPD is three firefighters per engine company and three per ladder company. This overall staffing methodology is very common across the United States for firefighters working on a 24 to 48-hour shift and proves effective for agencies with moderate workloads. Large agencies with heavy workloads have implemented different staffing models to avoid employee fatigue. Staffing for 48 hours reduces the number of crew changes that occur in a given period. It should be noted that minimum staffing for DWFPD is sometimes as low as two on a suppression unit and on occasion DWFPD Fire Station 2 is not staffed at all.

The Fair Labor Standards Act (FLSA) stipulates different overtime thresholds for EMS and fire employees. Comingling the two types of employees should be evaluated to ensure compliance. A common industry practice to achieve optimal staffing and efficiency is to determine the appropriate minimum staffing factor and then the relief factor based on the needed coverage for sick, vacation, and other unplanned leave. Neither TLMFPD nor DWFPD have an established relief factor and in most cases,

every vacancy requires the use of overtime to fill the position. Maintaining minimum staffing for scheduled and unscheduled leave can be challenging for fire departments.

Deployment Methods and Staffing Performance for Incidents

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

Emergency Fire Incidents

The current daily operational staffing for TLMFPD is 14 individuals per shift starting at 0800 hours and DWFPD staffs 7 individuals per shift starting at 0800 hours. It is important to note that this staffing level is only realized when all personnel are on duty. Traditional vacation and sick leave regularly impact on-duty numbers. This number does not include the Fire Chiefs or administrative staff. Fully staffed, this equates to a force capable of meeting the response needs of the community. Fire departments across the United States typically establish a "minimum staffing" level. This number reflects the minimum number of personnel a department will have on duty before beginning to hire overtime. TLMFPD has established 14 personnel as its minimum staffing level, four of which are assigned to ambulances. DWFPD has established 7 personnel as its minimum staffing. This current staffing provides the ability for the department to consistently and effectively respond with an appropriate number of personnel to mitigate small to moderate-sized incidents without the assistance of mutual aid companies. Because TLMFPD and DWFPD use minimum staffing of three per engine company, there are times when the on-scene staff is not sufficient to begin interior firefighting operations following NFPA and OSHA. This is the case in many fire departments across the country. These standards require a "two-in/two-out" rule for firefighter numbers before entering an immediately dangerous to life and health atmosphere (IDLH). Dispatching multiple fire stations must be used to ensure this requirement is met. The periods when a fire station is unable to respond to emergency calls within its assigned area is an issue of response reliability and is covered in detail later in this report.

Emergency Medical Incidents

TLMFPD provides transport services for the citizens of TLMFPD. Two staffed units conduct daily operations inside the district. DWFPD relies on AMR for its transport needs. Both TLMFPD and DWFPD frequently supply additional staffing or mitigate the incident until transport arrives. This necessary and frequently required support of the EMS system places a drain on the fire district's current ability to handle additional calls for service when units are committed. Across the nation, a majority of emergency systems provide some first responder care until advanced life support resources can arrive if the agency does not provide those services. By design, most systems work together in tandem or a tiered response, TLMFPD and DWFPD should be no different.

Special Operations Incidents

Neither TLMFPD nor DWFPD have dedicated hazardous materials teams and rely on Colorado Springs Fire Department for hazmat responses. All members of both TLMFPD and DWFPD are operations level trained. They provide initial response and scene size-up to determine the need for assistance from their regional team. Hazardous materials incidents by their physical nature prove difficult to mitigate and even more difficult with limited staff. NFPA 472: *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents* describes these operations.

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

Wildland Firefighting

In recent years, many people across the nation have come to understand the dangers and damaging effects that wildland fires cause across the Midwest and the West Coast of the United States, and those dangers are no different in Colorado. TLMFPD and DWFPD both have wildland firefighting capabilities and deploy members across the western United States to assist with battling wildland fires. Wildland fires pose challenges, including their expense, their extensive periods to mitigate and bring under control, and sometimes require outside support. These external resources are associated with increased costs for specialized equipment, such as air support and fire retardants.

Responsibilities and Activity Levels of Personnel

In every fire department, there exist some activities accomplished that are outside of the "regular" duties of responding to emergency incidents. These typically involve general maintenance of self-contained breathing apparatus (SCBA), hose testing, air monitor calibration, EMS quality assurance, and work on various committees. TLMFPD and DWFPD rely upon individuals who have a particular interest in these additional areas to accomplish the tasks along with the use of contractors to perform the specific testing or services. In addition to the benefit of completing these tasks, the additional responsibilities serve to develop further knowledge, skills, and abilities of the participating individuals. These individuals learn project management, time management, and budgeting skills that prepare them for future promotional opportunities.

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

Personnel Management

Although the delivery of emergency services to the citizens and visitors of a community is critical, effective management and organization of an emergency services agency are just as critical to its success. The personnel that deliver those services are the backbone of the system. However, without the proper administrative and support personnel to handle supervision, command, and control, operational personnel may not be able to perform satisfactorily. Personnel Management for TLMFPD and DWFPD is accomplished by a single administrative assistant within each district's administration.

Policies, Rules and Regulations, and Guidelines

The TLMFPD Policy Manual, which includes standard operating guidelines (SOGs), standard operating procedures (SOPs), needs an update. This is a difficult task for most organizations to complete amongst the other daily tasks required by administrative staff. TLMFPD also has administrative policies and procedures incorporated in an Employee Handbook. SOGs are arranged in a way that they can be easily referenced for review. TLMFPD was using Lexipol for their policy and procedure management but has recently changed to use Target Solutions for employee access and management. The Fire Chief is currently reviewing and approving all TLMFPD guidelines, policies, and procedures.

DWFPD uses SOGs as well as a Human Resources Policy and Procedure Manual. The Human Resources Policy and Procedure Manual is currently being reviewed and updated. These are accessed by the employees through Emergency Reporting Systems software. Discussions with staff reveal that DWFPD does not have well-defined administrative policies regarding hiring practices.

Neither TLMFPD nor DWFPD have a standard process for review or periodic updates. Furthermore, ESCI recommends the development of a guideline that directs the process of periodic review and changes. Each agency should create a committee for the SOGs/SOPs review. A good way to ensure this review will occur is to have a committee of members review one-third of the guidelines each year and recommend changes. There should also be a process to trigger changes of a guideline that has been modified due to a new method or a technology change.

Job Descriptions

TLMFPD and DWFPD employ several different positions with job descriptions that are not unlike other agencies of similar size and organization. TLMFPD currently employs the positions of Firefighter, Firefighter/EMT, Engineer, Firefighter/Paramedic, Paramedic, Lieutenant, Battalion Chief, Fire Marshal,

Division Chief, Deputy Chief, and Fire Chief. DWFPD employs many of the same positions as TLMFPD. Job descriptions should receive periodic reviews and revisions. TLMFPD and DWFPD have reviewed and updated all position descriptions in the last year.

Compensation

TLMFPD and DWFPD's ability to attract, hire and retain employees has a direct impact on its ability to effectively and efficiently provide the desired services. Agencies should provide periodic reviews of current compensation structures, market competitiveness, and district compensation philosophies. These internal and external comparisons of equitable positions and workloads ensure the agency can attract and maintain an effective workforce. Both TLMFPD and DWFPD evaluate their pay and benefits yearly. DWFPD participates as part of the North Group Administrative Assistants who periodically meet and review pay scales and plans to ensure competitive packages are provided. Neither TLMFPD nor DWFPD have a collective bargaining agreement in place. Both departments however have a meet and confer agreement. A high-level evaluation of pay and benefits, along with staff discussions reveals that TLMFPD offers better financial pay and benefits. FLSA laws should be consulted to ensure employees are compensated appropriately based on the job descriptions. Recent changes to how DWFPD calculates FLSA pay periods have caused significant pay disparity with TLMFPD staff who work the same schedule.

Disciplinary Process

Under the existing organizational configuration, personnel-related decisions are made at different levels. The Fire Chief for both TLMFPD and DWFPD can hire, discharge, and promote. Discipline can be issued at several levels of the organization based on the severity of the infraction. Discipline policies are loosely defined and under review for both agencies. In most cases, the ability to issue and carry out discipline is done through the chain of command starting with the company officer. Personnel-related decisions can, and often do, subject an organization to potentially extensive liability exposure. Risk can result from a hiring mistake, improperly processed disciplinary process, wrongful termination claims, and more. Access to legal counsel can reduce this liability. The employees are afforded an appeal process through the established grievance policy that is non-binding.

Counseling Services

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

Available programs include critical incident stress management, employee assistance programs (EAP), and intervention programs, to name a few. TLMFPD offers an Employee Assistance Program and a Critical Incident Stress Management PEER support team. DWFPD draws support from El Paso County Critical Incident Stress Management programs and does not offer an Employee Assistance Program. Awareness level training is also offered to all members to communicate and make each member aware of the availability of resources.

Application, Recruitment, and Retention Process

TLMFPD periodically advertises through Daily Dispatch and IO Solutions. IO Solutions is a company that performs hiring and recruitment functions for TLMFPD. TLMFPD also uses the company BIS for background checks on potential candidates for hire. TLMFPD requires a Candidate Physical Ability Test (CPAT) offered through the National Testing Network to be eligible for hire and the IO Solutions company requires a knowledge-based test. TLMFPD then requires parts of an NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments* medical exam and a psychological evaluation.

DWFPD has a loose and poorly defined hiring process. In most cases, DWFPD is required to hire candidates from their volunteers who are active to fill open positions. DWFPD uses locally designed written tests and interviews for the selection process in addition to a criminal background check. The national Candidate Physical Ability Test (CPAT) test is not used but an in-house physical fitness evaluation is required. Candidates are required to pass an NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments* medical exam without a psychological evaluation.

DWFPD has experienced significant turnover in the past few years due to the uncertainty of future organizational stability and has expressed a lack of qualified or interested candidates for succession.

Performance Reviews, Testing, Measurement, and Promotion Process

TLMFPD and DWFPD provide annual performance reviews for full-time employees that include a comprehensive analysis of employee performance goals and objectives. The district conducts periodic physical competency testing and performance reviews of knowledge, skills, and abilities. Both agencies require a Physical Ability Test (PAT) to include the Arduous Pack Red Card Test. Promotional testing is completed on an as-needed basis to fill open Engineer, Lieutenant, and Battalion Chief positions.

Health and Safety

NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program* is the industry standard for the development and administration of a fire department safety program. At the time of this report, TLMFPD and DWFPD have a safety committee in place. The establishment and empowerment of a safety committee can be one of the best tools to increase the safety of firefighters. ESCI strongly encourages

the districts to ensure all activities of the safety committee are in alignment with Chapter 4 of NFPA 1500. To be effective, safety committees must be diverse in their representation from across the district, ensuring representation by shift, rank, function, and interest, and including representation from non-uniformed and staff members as well. The committee should meet monthly and include in its mission raising awareness and modifying member behaviors that will result in a safe work environment. Additionally, the committee should review all accidents, injuries, near-miss incidents, and workplace safety suggestions. The committee should analyze the information before them and report the findings to the Fire Chief. As opposed to being reactionary through the development of additional rules, ESCI recommends that the committee should work to implement member safety education programs and encourage members' safety self-awareness. The committee should maintain regular and open meeting times and locations; minutes of the meetings should be recorded and posted for all members of the district to review. A diverse representation of command staff and labor representatives should constitute the committee. ESCI underscores the importance of maintaining a functioning safety committee.

Both TLMFPD and DWFPD recognize the importance of separating the safety committee to form sub-committees for peer support, fitness, health, and wellness. These sub-committees allow for a more focused effort to address firefighter, EMT, and paramedic needs regarding health and wellness.

As the discussion of unification continues, one of the positions that will see the biggest impact of the increased growth is the administrative assistant for both TLMFPD and DWFPD who also provide the human resource functions for each agency. As the organization grows or considers future mergers, the function of HR will become more demanding and essential. A report published by the Society for Human Resource Management (SHRM) supports the necessity for one HR specialist per 100 FTEs.[2] Survey documents show 50 employees currently employed by TLMFPD. A unification with Donald Wescott Fire Protection District could result in 70 FTEs. While the number of employees, if that occurs, is less than 100, it is good to recognize that there is not one full-time human resource personnel. ESCI recommends a proactive approach, that would include hiring an HR generalist before unification or as the organization grows in personnel. Policies and procedures need to be in place to facilitate the effective unification of two or more organizations. As the organization grows, these processes will become labor-intensive and require more emphasis from HR personnel. An HR generalist, and detailed personnel policies, would guide the districts as they unify.

ALTERNATIVE DEPLOYMENT OPTIONS

The bulk of this report focused primarily on the conditions that existed at the time of ESCI's site visit to TLMFPD and DWFPD. This portion of the report provides comments and recommendations related to the deployment of personnel with a focus on future service delivery and an improvement in overall efficiency.

Fire Protection Services Deployment Options

The preceding analysis has focused on the current state of TLMFPD and DWFPD service delivery and provided a summary of each District's overall performance. Combined with focused interviews and information gathered during the site visit evaluation, ESCI has developed potential options for the continued improvement and growth of TLMFPD and DWFPD systems.

Both agencies have demonstrated a commitment to providing the best-in-class response to fire and EMS-related incidents. Consistent with their commitment to providing excellence in emergency response, ESCI identified the following general observations relating to the system.

- Based on the information provided throughout this document, the current system, with independent resources from TLMFPD and DWFPD is providing high-quality fire and EMS pre-hospital care. However, the sustainability of the DWFPD system appears to be in question. During interviews with DWFPD representatives, it became unclear as to the long-term sustainability of the organization based on current practices and financial stability.
- Without changing anything, both TLMFPD and DWFPD need to evaluate how staffing is accomplished to provide coverage for annual vacancies and leave time taken. Both agencies are currently utilizing overtime (callback of off-duty personnel) to provide coverage and thus overtime expenditures are very high. Addressing this initially will reduce overtime and morale issues associated with mandatory call back for coverage.
- The current staffing model for DWFPD is not adequate to cover vacancies between their two fire stations. On some occasions, DWFPD will shut down Fire Station 2 when staffing is unavailable.
- Both TLMFPD and DWFPD offer wildland firefighting services through deployable assets. These assets are a valuable piece of not only the TLMFPD and DWFPD response system but the entire region. Efforts should be made to ensure that these resources remain ready and able to provide support when needed. These deployable resources however should not be prioritized over initial fire protection for district emergency response needs.
- Based on the data acquired, TLMFPD should consider EMS response models that begin to focus on a Community Paramedic Program with the ability to provide basic life support (BLS) transport for low acuity patient care.

- Due to minimum staffing and distribution across the geographical area, upon immediate dispatch, TLMFPD and DWFPD do not have the proper staff to commence interior firefighting operations in conjunction with industry standards and OSHA 29 CFR 1910.134(g)(4)(i) guidelines for roughly 43.46 percent of the TLMFPD and DWFPD combined service area. These guidelines and industry standards require two firefighters to be on-scene and available outside the hazard area while two are inside (two-in/two-out).
- Both TLMFPD and DWFPD require mutual aid resources to handle fires of significant nature.

ESCI based the following detailed options on the above observations gathered from this analysis. These options do not constitute a single path for improvement but provide the policymakers with a framework to develop an enhanced service delivery system. The following analysis of these options will provide TLMFPD and DWFPD with the information necessary to select the most appropriate and sustainable option and provide prioritization for future funding decisions.

The options identified during this report will be presented in the following order:

- Option 1: Maintain Current Response Model—No Change
- Option 2: Combine TLMFPD and DWFPD to Establish a Complete Fire-Based EMS System Response Model
- Option 3: Combine TLMFPD and DWFPD to Establish a Complete Fire-Based EMS System Response Model including an Established Relief Factor for Minimum Staffing

It is important to recognize that ESCI based the options presented upon the data available at the time of this report and we did not consider factors not readily available when forming the possibilities. Detailed analysis, including extensive financial modeling of options, is beyond the scope of this study. Further, TLMFPD and DWFPD may find that they would prefer to implement some variation of the options presented here. For comparison, Figure 44 shows the current staffing model for TLMFPD and DWFPD for each station. The options discussed later refer back to this table with modifications highlighted in light blue to help identify when staffing levels may require changes.

Figure 44: Current TLMFPD and DWFPD Deployment Model Staffing per Station[3]

Station	Engine	Truck	Fire Based Ambulance	Battalion Chief	Total Required Staffing
TLMFPD Station 1		3	2		5
TLMFPD Station 2	3		2		5
TLMFPD Station 3	3			1	4
Total Staff	**6**	**3**	**4**	**1**	**14**
DWFPD Station 1		3			3
DWFPD Station 2	3				3
DWFPD Station 3				1	1
Total Staff	**3**	**3**		**1**	**7**

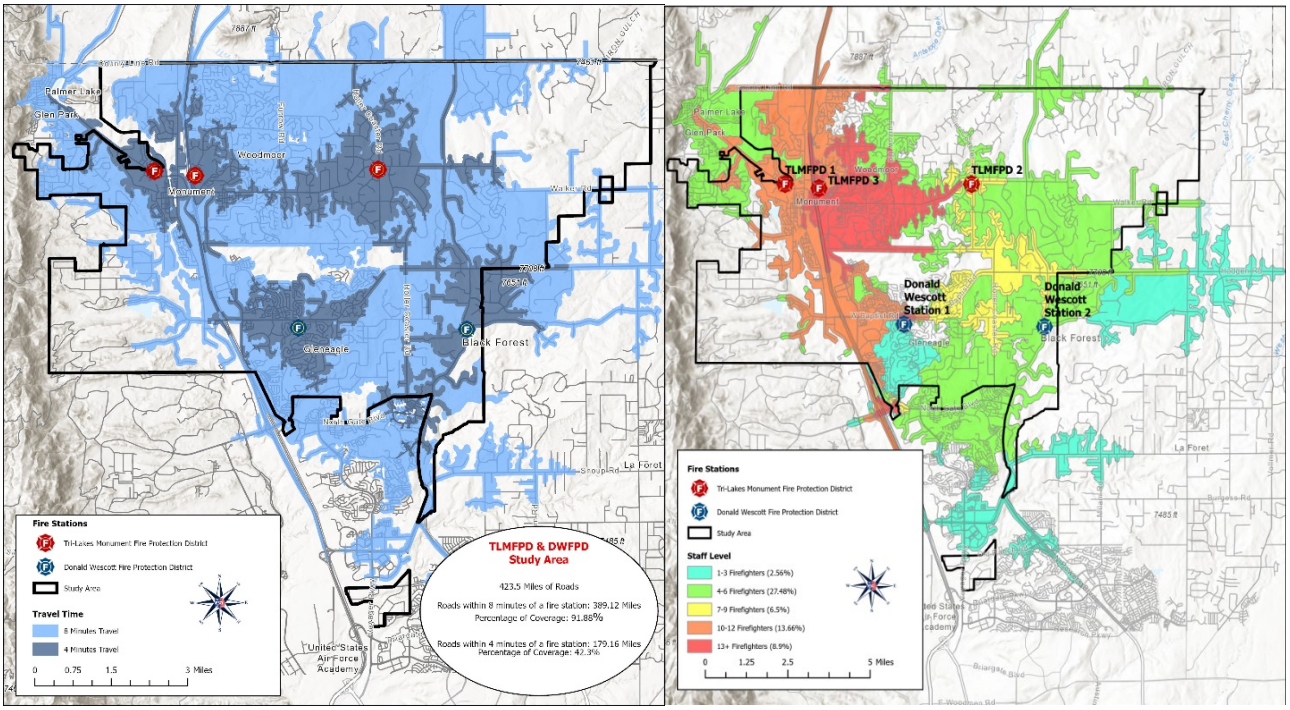
Option 1: Maintain Current Response Model—No Change

Maintaining the current service delivery model is an option for TLMFPD and DWFPD. ESCI does not recommend maintaining the current response model. Some changes must be made.

Resource Distribution and Concentration for Option 1

The following figures detail the resource distribution and concentration for Option 1.

Figure 45: Option 1 Status Quo Resource Distribution and Concentration



With current ERF concentrations, roughly 43.5 percent of the TLMFPD and DWFPD service area upon immediate dispatch does not have the proper staff to commence interior firefighting operations in conjunction with industry standards and OSHA 29 CFR 1910.134(g)(4)(i) guidelines in the first 8 minutes. These guidelines and industry standards require two firefighters to be on the scene and available outside the hazard area while two are inside (two-in/two-out). The ability to generate an ERF of greater than four firefighters for the service area in less than 8 minutes is 56.54 percent.

Financial Impacts of Option 1

If TLMFPD and DWFPD were to choose Option 1, there would be no change in financial obligations. It should also be noted that if no change is made the DWFPD will face tax increases to continue the service they are providing based on capital replacement and staffing costs.

Option 2: Combine TLMFPD and DWFPD to Establish a Complete Fire-Based EMS Transport System Response Model

The development of a complete fire-based EMS system would include a combination of ALS and BLS first response and the ability to transport patients to definitive care. There are numerous advantages to the implementation of this level of service delivery. The first is autonomy afforded to the districts to manage all levels of pre-hospital care and consistency of service over a long period. DWFPD would not have to routinely re-negotiate private ambulance contracts and address the challenges associated. The fire department can be more proactive and dynamic in developing EMS response plans. A combination of ALS and BLS transport could be combined with a Community Paramedic Program to manage the constant changes in service delivery demand. Contractual agreements with private ambulances are generally less responsive to change and are time restrictive. The disadvantage of a fire-based EMS system is the staffing requirements associated, specifically in the development or recruitment of paramedics. There is usually an increase in medical liability for an organization providing advanced life support (ALS) care. Another disadvantage relates to the significant requirements for apparatus, capital equipment, and the disposable supplies required to provide ALS care.

Option 2 Administrative and Support Staffing

During a developmental period, TLMFPD and DWFPD would combine their staff to provide administrative and support staffing for the necessary command and control of organizational development before combining emergency response staffing.

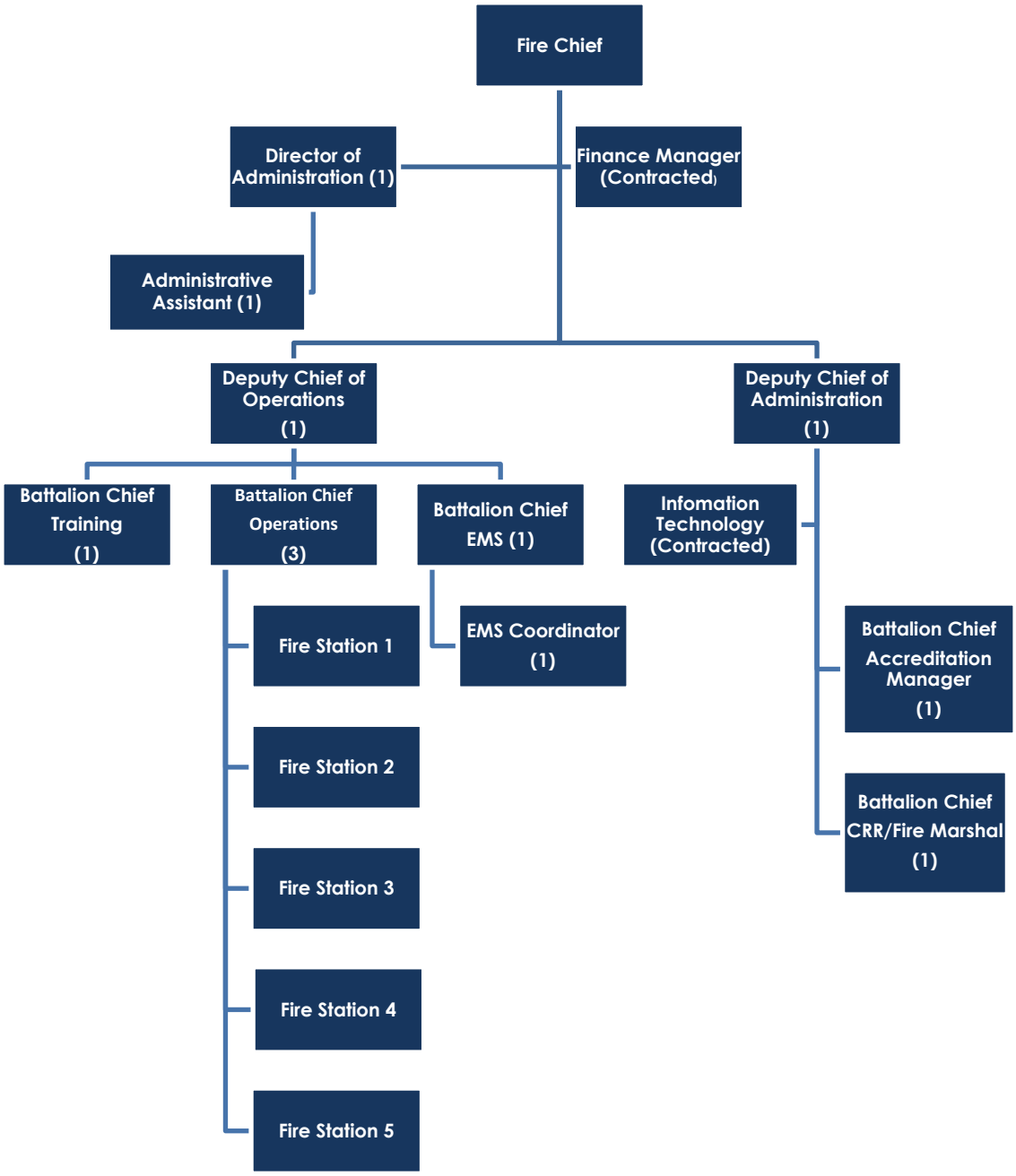
The following figure reviews the proposed Option 2 administration and organizational support structure.

Figure 46: Option 2 Proposed Administrative and Support Staff

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Admin/Support Staff (full-time)	*Individuals considered full-time staff primarily assigned to manage, plan, or support the activities of the agency and its programs.*		
Fire Chief	1	40	M–F
Deputy Chief	2	40	M–F
Battalion Chief/Fire Marshal/CRR	1	40	M–F
Battalion Chief/EMS	1	40	M–F
Battalion Chief/Training	1	40	M–F
Battalion Chief/Accreditation Manager	1	40	M–F
Director of Administration	1	40	M–F
Administrative Assistant	1	40	M–F
EMS Coordinator	1	40	M–F
Total Admin and Support Staff	**10**		

ESCI notes the proposed Option 2 level of administrative and support staffing represents roughly 15 percent of the new proposed total staffing. It is ESCI's experience that typical effective administrative staffing totals for a fire department operation range up to 15 percent of agency totals. After reviewing the functions and responsibilities assigned to the workgroup, ESCI concludes that the number of full-time equivalents (FTEs) assigned would be in line with the normally experienced administrative levels to appropriately support the responsibilities of department administration of a fire department the size and complexity of both districts combined. Furthermore, this would reduce the number of administrative tasks needing to be assigned to operational shift personnel. Reducing those assigned tasks will ensure proper focus and attention can be directed to required functions. Inappropriately staffing the administrative and support functions creates a situation in which important organizational activities are at best delayed, but in worst-case scenarios get completely missed.

Figure 47: Option 2 Proposed Administrative and Support Staff Org Chart



The proposed organizational chart would provide 10 administrative and support staff employees to manage the needs of the combined organizations. This organizational chart takes into considerations observations regarding a lack of dedicated resources to training, community risk reduction, and EMS oversight. Each of these functions is vital to the success of the organization and deserves proper attention daily.

Option 2 Emergency Response Staffing

The proposed Option 2 emergency response staffing includes the total staff needed to adequately staff the existing fire stations and add one fire-based transport removing the need for a private ambulance service contract in the DWFPD. The figure below depicts the needed staff and is followed by a detailed analysis of the proposal versus the current FTEs allocated by both TLMFPD and DWFPD.

Figure 48: Option 2 Proposed Total Emergency Response Staffing

Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Operational Staff (full-time)	*Individuals considered full-time employees, primarily assigned to provide emergency services at the operational level.*		
Shift Battalion Chief	3	56	48/96
Lieutenants	15	56	48/96
Engineers	15	56	48/96
FF/Paramedics	13	56	48/96
Paramedic	5	56	48/96
FF/EMT	15	56	48/96

Option 2 proposed emergency response staffing ratio of Battalion Chiefs (3 FTEs) and Lieutenants (15 FTEs), to Engineers, firefighter/EMTs, FF/Paramedics, and Paramedics (48 FTEs) for full-time positions within operations would be roughly 27 percent. This officer-to-line staff ratio is normally seen by ESCI to be between 25 to 33 percent. This proposal would place Option 2 in the middle range of what is normally experienced by ESCI. It is important to note that the Division Chief of Operations would still provide support for daily operations and administrative tasks as well. This oversight would continue to fall back to the Battalion Chief after the Division Chief of Operations goes home for the day. Operational duties can detract from the Division Chief's ability to provide administrative support and vice versa.

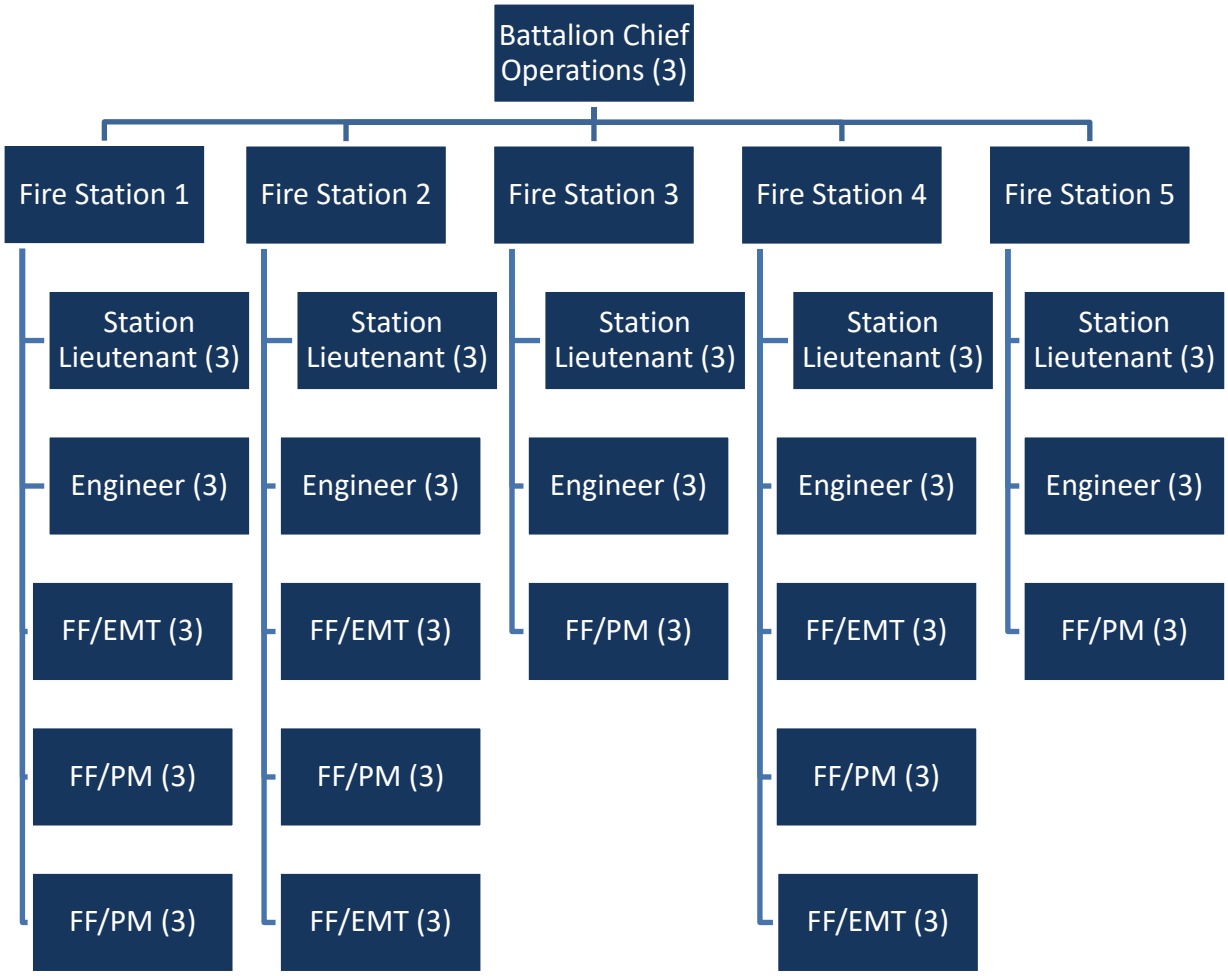
The following figure is an example of staffing a fire-based (transporting) EMS system with the current TLMFPD and DWFPD staffing. Additional staffing of approximately 2 FTEs per shift would be assigned to Fire Station 4 (DWFPD Fire Station 1) to place a third ambulance in service. The Battalion Chief at DWFPD Fire Station 3 would be removed from service and the station closed. Those positions are shown below in blue and differ from the current staffing model depicted in Figure 44.

Figure 49: Option 2 Emergency Response Staffing Fire-Based EMS Transport

Station	Engine	Truck	Fire Based Ambulance	Battalion Chief	Total Required Staffing
Station 1		3	2		5
Station 2	3		2		5
Station 3	3			1	4
Station 4		3	2		5
Station 5	3				3
Total Staff	**9**	**6**	**6**	**1**	**22**

TLMFPD and DWFPD face unique challenges as an organization considering fire-based EMS. First, TLMFPD and DWFPD will have an adequate number of paramedics to support a fire-based EMS system, including ambulance transport if combined. During the initial phases of development, TLMFPD and DWFPD may consider BLS staffing on the engines/trucks and ALS staffing on the ambulances as the priority. Another consideration and ESCI's recommendation would be a balance of BLS/ALS apparatus based on call volume and acuity. For example, based on the service demand, the suppression units could have BLS staffing supported by paramedics from the ambulances when needed. Eventually, providing ALS staffing on all units would be the standard. Second, both agencies are already providing ALS care; therefore, the only increase in liability would relate to ambulance transport. This increased liability would be limited as TLMFPD is already providing that service. Finally, TLMFPD's financial obligations for providing a fire-based EMS transport system to both jurisdictions would also be limited. Currently, the districts are already funded to provide ALS first response. Ambulance transport would provide a medical billing mechanism to fund the replacement of capital equipment and supplement staffing requirements.

Figure 50: Option 2 Proposed Emergency Response Staffing Org Chart



The staffing outlined in Figure 50 reflects the minimum staff needed to operate five suppression units and three transport units for the shift. It also reflects one Battalion Chief to provide the necessary command and control for the shift.

While the minimum staffing of each apparatus is vitally important to accomplishing critical tasks on emergency scenes, the ability to assemble the ERF in the recommended time frame is the ultimate goal.

The total minimum staffing configuration for Option 2 is listed below.

Figure 51: Option 2 Proposed Total Minimum Staffing

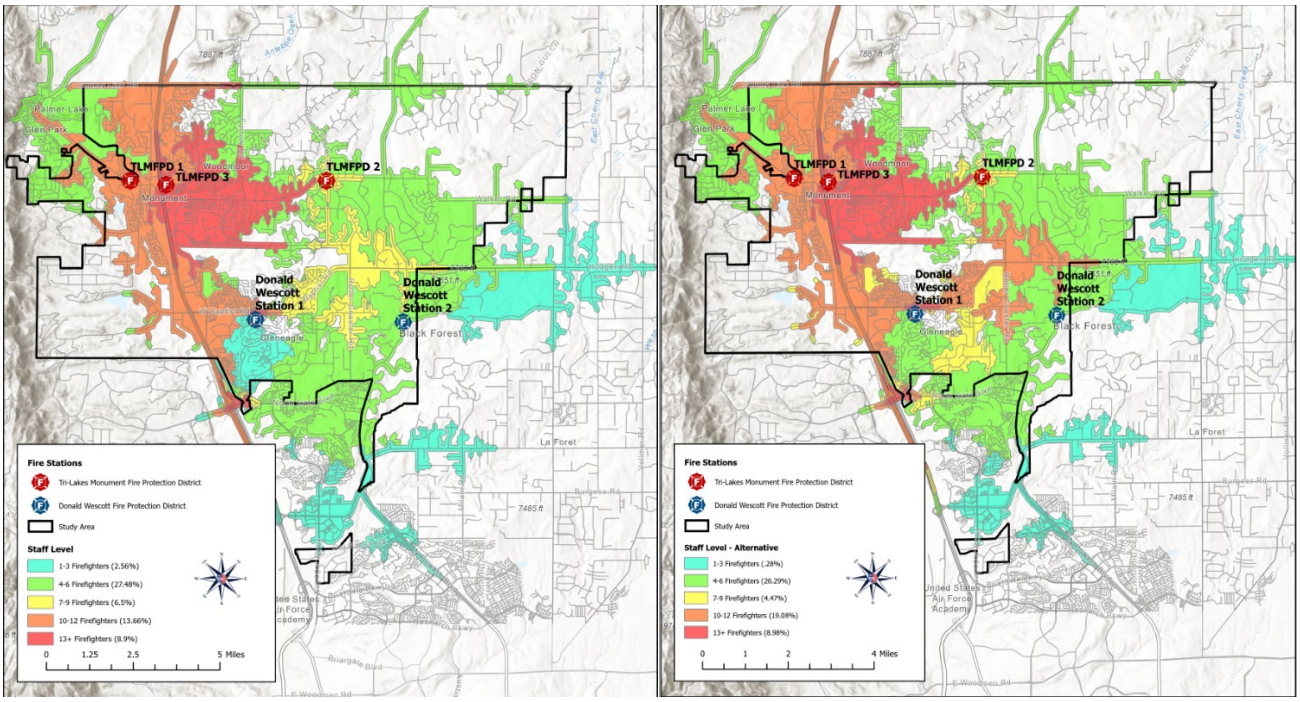
Position Title	Number of Positions	Hours Worked/Week	Work Schedule
Career Admin/Support Staff (full-time & part-time)	*Individuals considered full-time or part-time staff primarily assigned to manage, plan, or support the activities of the agency and its programs.*		
Fire Chief	1	40	M–F
Deputy Chief	2	40	M–F
Battalion Chief/Fire Marshal/CRR	1	40	M–F
Battalion Chief/EMS	1	40	M–F
Battalion Chief/Training	1	40	M–F
Battalion Chief/Accreditation Manager	1	40	M–F
Director of Administration	1	40	M–F
Administrative Assistant	1	40	M–F
EMS Coordinator	1	40	M–F
Shift Battalion Chief	3	56	48/96
Lieutenants	15	56	48/96
Engineers	15	56	48/96
FF/Paramedics	13	56	48/96
Paramedic	5	56	48/96
FF/EMT	15	56	48/96
Total Combined Staff	**76**		

The proposed Option 2 staffing configuration uses all TLMFPD and DWFPD current staffing with no additional positions. Current TLMFPD staffing uses some paramedics that are not cross-trained as firefighters. This practice could continue and through time be converted to all cross-trained staff.

Resource Distribution and Concentration for Option 2

The resource distribution does not change for Option 2 as the station locations remain constant. However, the following figure details the change in resource concentration for Option 2.

Figure 52: Current ERF versus Option 2 ERF Resource Concentration



As depicted in Figure 52 the ERF for Option 2 is enhanced by the addition of an ambulance at the current DWFPD Fire Station 1. As stated previously, roughly 43.5 percent of TLMFPD and DWFPD's service area does not have ERF capabilities upon immediate dispatch to commence interior firefighting operations in conjunction with industry standards and OSHA guidelines. These guidelines and industry standards require two firefighters to be on the scene and available outside the hazard area while two are inside (two-in/two-out). This will improve upon the unification of both jurisdictions and the inability to provide the required minimum of four firefighters upon immediate dispatch in the service area would decrease to approximately 41.2 percent. The ability to assemble a better ERF in the 8-minute time frame is enhanced in almost all categories.

Financial Impacts of Option 2

If TLMFPD chooses to implement Option 2, a total of 76 FTEs will be needed. The changes in expenditures for personnel at the higher level of salaries and benefits for the unified department are analyzed in the Fiscal Analysis section of this report.

Option 3: Combine TLMFPD and DWFPD to Establish a Complete Fire-Based EMS Transport System Response Model with an Established Relief Factor for Minimum Staffing

In addition to the unification of resources and achieving efficiency of service provided in Option 2, another consideration is the adequate and appropriate staffing of emergency response units when vacancies occur. A common industry practice to achieve optimal staffing and efficiency is to determine the appropriate minimum staffing factor and then the relief factor based on the needed coverage for sick, vacation, and other unplanned leave.

Minimum Staffing Factor Determination

The starting point for the analysis was to determine the minimum number of personnel needed to fill the minimum 22 daily staffing positions for fire operations and avoid overtime for unscheduled hours.

Minimum Staffing

- 365 days per year x 24 hours per day = 8,760 hours per year per position.
- 8,760 hours per year x (22) minimum positions daily = 192,720 hours per year that must be staffed for 24/7 coverage.
- 56-hour workweek equals 2,912 scheduled hours per position annually: 192,720/2,912 = 66.18 (66) FTE positions for minimum staffing.
- TLMFPD and DWFPD currently have 67 FTEs budgeted for fire suppression and EMS transport staffing.

Fifty-Six-Hour Relief Factor

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

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

- In most cases, the calculations would use an average of firefighter paid leave, time off for training, unscheduled time off, and position vacancies for a three-year period. Because Option 2 is combining two agencies a theoretical probable calculation of time off for firefighter paid leave, time off for training, unscheduled time off, and position vacancies can be assumed. As time passes actual usage can be used to dial in the needed relief factor.
- A theoretical possibility of four employees off per day would yield roughly 35,040 hours of time off for paid leave, time off for training, unscheduled time off, and position vacancies.

- 35,040 hours = 730 shifts that need to be filled to account for leave or vacancies annually.
- 730 days/shifts divided by the 56-hour workweek employee minimum staff count of 66 = an average of 11 days/shifts of leave per employee (FTE) per year.
- Number of on-duty shifts per year: 2,912/48 = 60.6 (61) on-duty shifts.
- Subtract the average 11 days/shifts of leave from the scheduled 61 = 50 on-duty shifts annually per FTE.
- Divide 56-hour workweek 61 scheduled shifts by the 50 on-duty shifts = a relief factor of 1.22 or 14.52 (15) FTE positions over minimum staffing levels will cover the theoretical average utilized leave.

Current Staffing vs. Current Budgeted FTEs for TLMFPD and DWFPD

The TLMFPD and DWFPD need 81 budgeted, uniformed FTE personnel to achieve the 1.22 relief factor and currently have 67 budgeted uniformed FTE available between TLMFPD and DWFPD. Therefore, TLMFPD and DWFPD are short 14 budgeted FTEs based on theoretical annual leave and vacancy usage to cover operational staffing.

Maintaining minimum staffing for scheduled and unscheduled leave can be challenging for fire departments. TLMFPD and DWFPD's FY 2021 overtime budget is $1,081,890 combined. Policymakers should evaluate the calculations used to determine the current relief factors and determine if increasing the current FTEs per shift would reduce the current overtime costs.

Hiring 14 can be done in one step or in multiple steps such as illustrated in the figure below. The process of adding the staff will impact cost and training of the personnel.

Figure 53: Option 3 Schedule of Additional FTEs

	Year 1	Year 2	Year 3	Year 4	Total
One Year	14 FTE				14 FTE
Two Year	7 FTE	7 FTE			14 FTE
Three Year	5 FTE	5 FTE	4 FTE		14 FTE
Four Year	4 FTE	4 FTE	4 FTE	2 FTE	14 FTE

A fire-based EMS system can also contribute to the fiscal responsibility of the overall emergency response system. An all-hazard organization with the ability to mitigate fire, EMS, rescue, and hazardous materials responses can utilize personnel and resources effectively for fire and EMS needs. A firefighter paramedic/EMT assigned to an ambulance can add to the effective response force (EFR) on a structure

fire or provide medical care as needed. The apparatus and personnel can be utilized at the highest efficiency resulting in the effective use of taxpayer funding.

Financial Impacts of Option 3

If TLMFPD and DWFPD choose to implement Option 3, an increase in overall FTEs will be needed. TLMFPD and DWFPD would need a total of 14 extra FTEs to account for the established relief factor required for minimum staffing daily on engines, trucks, and ambulances.

Four scenarios for adding additional firefighters were depicted in Figure 53. The financial impacts of these scenarios are depicted in the following figure.

Figure 54: Financial Impacts of Option 3A

	Year 1	Year 2	Year 3	Year 4	Total
One Year	$ 1,373,817 10 FF-EMT 4 FF-PM				$1,373,817 14 FTE
Two Year	$ 731,969 4 FF-PM 3 FF-EMT	$714,744 7 FF/EMT			$1,446,713 14 FTE
Three Year	$513,823 4 FF-PM 1 FF-EMT	$510,532 5 FF-EMT	$436,651 4 FF-EMT		$1,461,006 14 FTE
Four Year	$418,268 4 FF/PM	$408,425 4 FF-EMT	$436,651 4 FF-EMT	$233,534 2 FF-EMT	$1,496,878 14 FTE

This option reflects the additional salaries with inflation and benefits, needed to add 14 new full-time positions. The above calculations split the positions, half paramedic and half EMT. The above calculations do not include any raises other than inflation increases that may happen in the future during the period.

SERVICE DELIVERY AND PERFORMANCE

Tri-Lakes Monument Fire Protection District and Donald Wescott Fire Protection District both provide an all-hazards response to calls for service within their respective service areas. As a combined district, personnel would continue to provide quality service to the community when requested. This section of the report provides an evaluation of multiple elements that comprise the ability of the department to serve its citizens.

Service Demand Analysis

The first element of service delivery focuses on the current, historical, and projected calls for service as it relates to the combined department. Understanding the details of responses enables leadership and elected officials to better plan towards provision to existing calls for service as well as projected future demand.

Incident Type

The term all-hazards used above is a broad term covering the fact that the departments respond to a wide range of incident types. To assist fire departments in gathering quality data that has the greatest impact on the planning process, the National Fire Incident Reporting System (NFIRS) was developed. NFIRS created a structure of nine broad categories comprised of three-digit codes for the incident types then categorized as series based on the first digit of each code. This system is illustrated in the following figure.

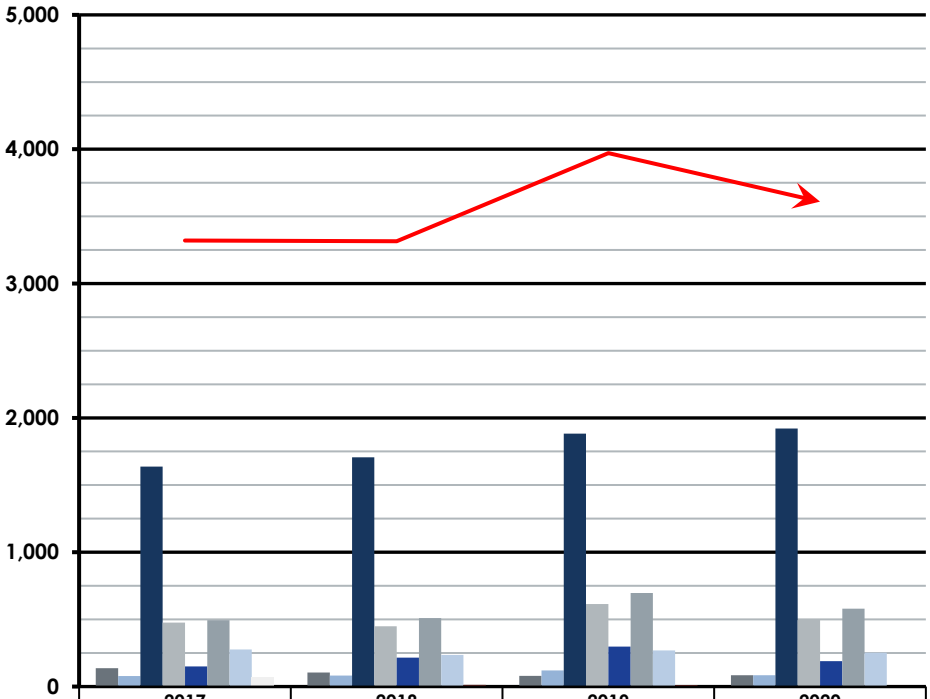
Figure 55: NFIRS Incident Types

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

Based on the NFIRS classification system, the following figure illustrates the nature of calls for service within the combined department. As illustrated, there was an overall increase of 8.7% in demand for

service from 2017 to 2020. There were increases in hazardous condition incidents, emergency medical service incidents, motor vehicle collision incidents, service call incidents, and canceled/good intent incidents. There were decreases in fire incidents, alarm incidents, and other incidents. While there was a decrease in service demand from 2019 to 2020, a contributing factor to that may be the impact of the COVID-19 pandemic. Future years will likely see increasing service demand.

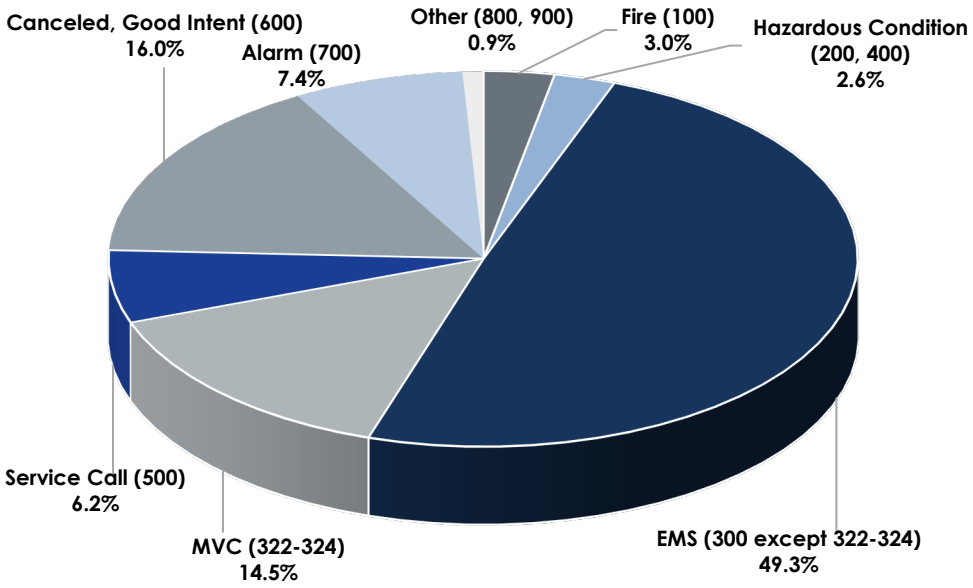
Figure 56: Service Demand by NFIRS Incident Type



	2017	2018	2019	2020
Fire (100)	137	105	80	84
Hazardous Condition (200, 400)	78	82	120	84
EMS (300 except 322-324)	1,638	1,706	1,883	1,921
MVC (322-324)	476	449	614	496
Service Call (500)	150	215	297	189
Canceled, Good Intent (600)	494	509	696	580
Alarm (700)	276	236	269	252
Other (800, 900)	71	13	12	4
Total	3,320	3,315	3,971	3,610

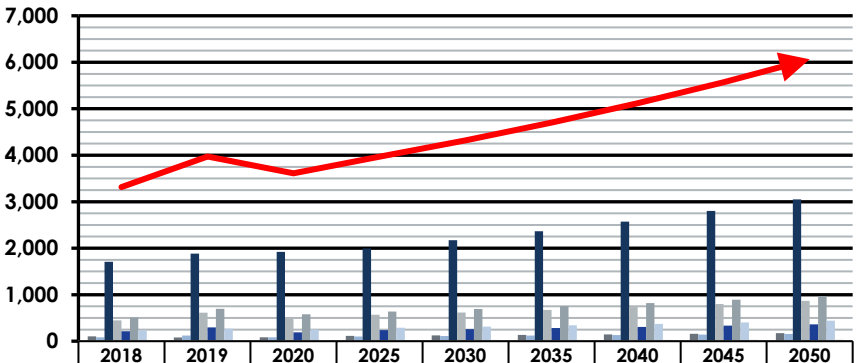
The preceding figure provides valuable insight as to the year-to-year progression of service demand. There is also value in viewing the same data from the perspective of how each type of incident compares to the whole. As illustrated in the following figure, the greatest demand for service is for emergency medical service incidents—like departments throughout the nation. The lowest demand for service is for other incidents.

Figure 57: Service Demand by NFIRS Incident Frequency



By creating a comparative relationship between historical population and historical service demand, it is possible to extrapolate a projected service demand into the future. This is illustrated below. This is only a theoretical projection and may be impacted by unusual changes in population, unusual events occurring, changes in the service area, etc.

Figure 58: Projected Service Demand, 2025–2050



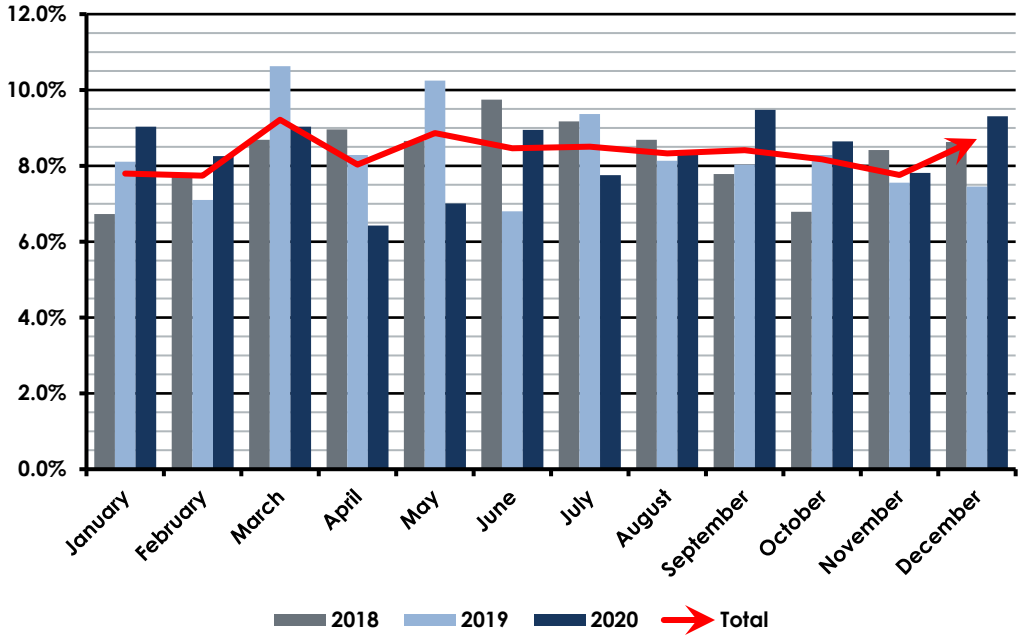
	2018	2019	2020	2025	2030	2035	2040	2045	2050
Fire (100)	105	80	84	113	123	134	146	159	173
Hazardous Condition (200, 400)	82	120	84	102	111	120	131	143	155
EMS (300 except 322-324)	1,706	1,883	1,921	1,995	2,172	2,364	2,573	2,801	3,049
MVC (322-324)	449	614	496	568	618	673	733	797	868
Service Call (500)	215	297	189	238	259	281	306	333	363
Canceled, Good Intent (600)	509	696	580	636	692	754	820	893	972
Alarm (700)	236	269	252	288	314	342	372	405	441
Other (800, 900)	13	12	4	28	30	33	36	39	43
Total	3,315	3,971	3,610	3,968	4,319	4,701	5,118	5,571	6,064

Temporal Variation

For purposes of providing the most reliable service to the community, leadership and elected officials must understand the temporal nature of service demand. With knowledge of when incidents occur, the planning process can include the provision of sufficient resources to handle the demand as well as scheduling non-incident activities during times of lesser demand for service. These non-incident activities may include hydrant testing, hose testing, training, apparatus maintenance, pre-incident planning, public education, and more.

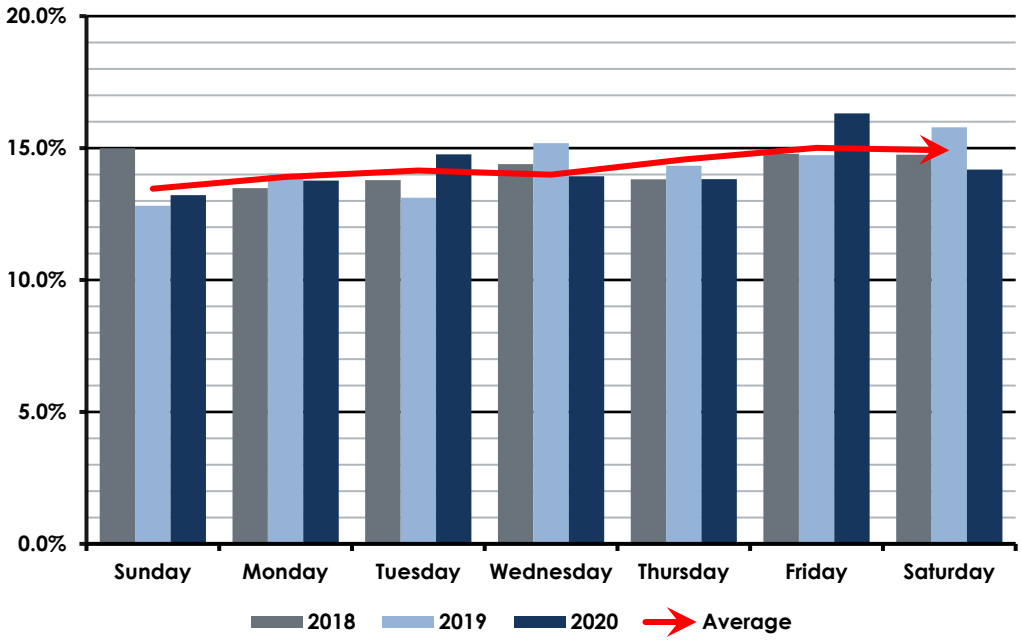
The first component of temporal variation considers the service demand each month of the year. As illustrated below, the lowest demand for service occurs in January, February, April, and November. The greatest demand for service occurs in March and May.

Figure 59: Combined Service Demand by Month, 2018–2020



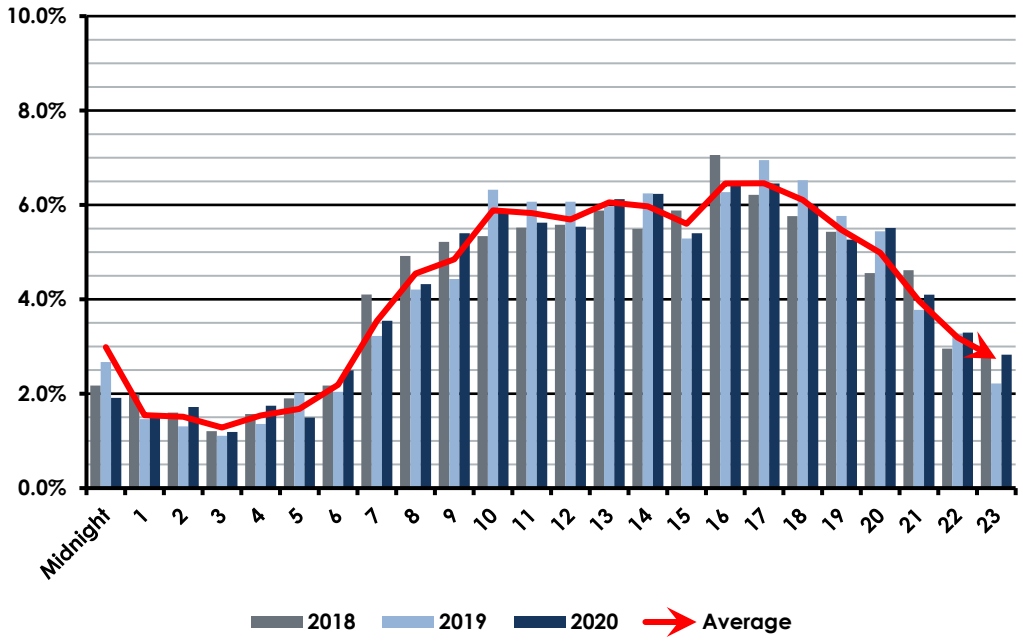
The second component of temporal variation considers the service demand each day of the week. As illustrated below, the lowest demand for service occurs Sunday with a gradual increase throughout the week—reaching the highest demand on Friday/Saturday.

Figure 60: Combined Service Demand by Day, 2018–2020



The final component of temporal variation considers the service demand each hour of the day. As illustrated below, the lowest demand for service occurs at 3 a.m. and begins a gradual increase through the early morning hours. This gradual increase coincides with the population waking and beginning preparations for the day and steepens as they move from their homes to begin daily activities. At 10 a.m. service demand plateaus and remains level until reaching the highest peak at 4 p.m., level for an additional hour. Then, at 6 p.m. service demand begins a steady decline coinciding with the movement of the population from work, to evening activities and finally to their homes. This decline steepens at 8 p.m. as the population retires for the night and continues until returning to the lowest demand for service.

Figure 61: Service Demand by Hour, 2018–2020



As illustrated above, the lowest demand for service occurs in the early morning hours. It is important to note that while demand is lowest during these hours, this is also the timeframe when the greatest number of fatal residential fires occur. In a national study issued in 2018, it was identified that during the period from 2014 to 2016, the greatest number of fatal residential fires occurred between 1 a.m. and 2 p.m. and between 4 a.m. and 5 a.m.—with the 8-hour peak between 11 p.m. and 7 a.m. accounting for 48% of fatal residential fires[4].

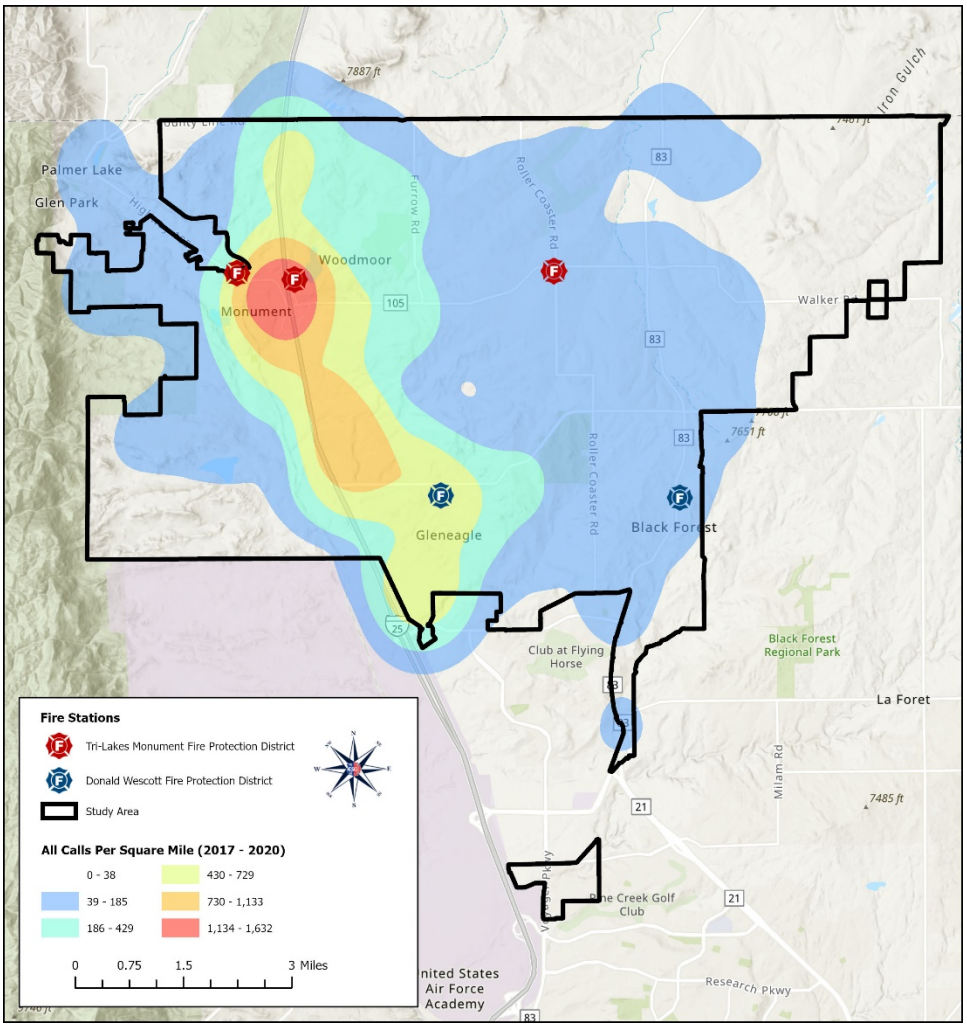
Resource Distribution Analysis

The second element of service delivery focuses on the geographical location of department resources as it relates to various standards. For leadership and policymakers, an understanding of this relationship provides value to discussions of location and quantity of resources within the community.

Geographical Service Demand.

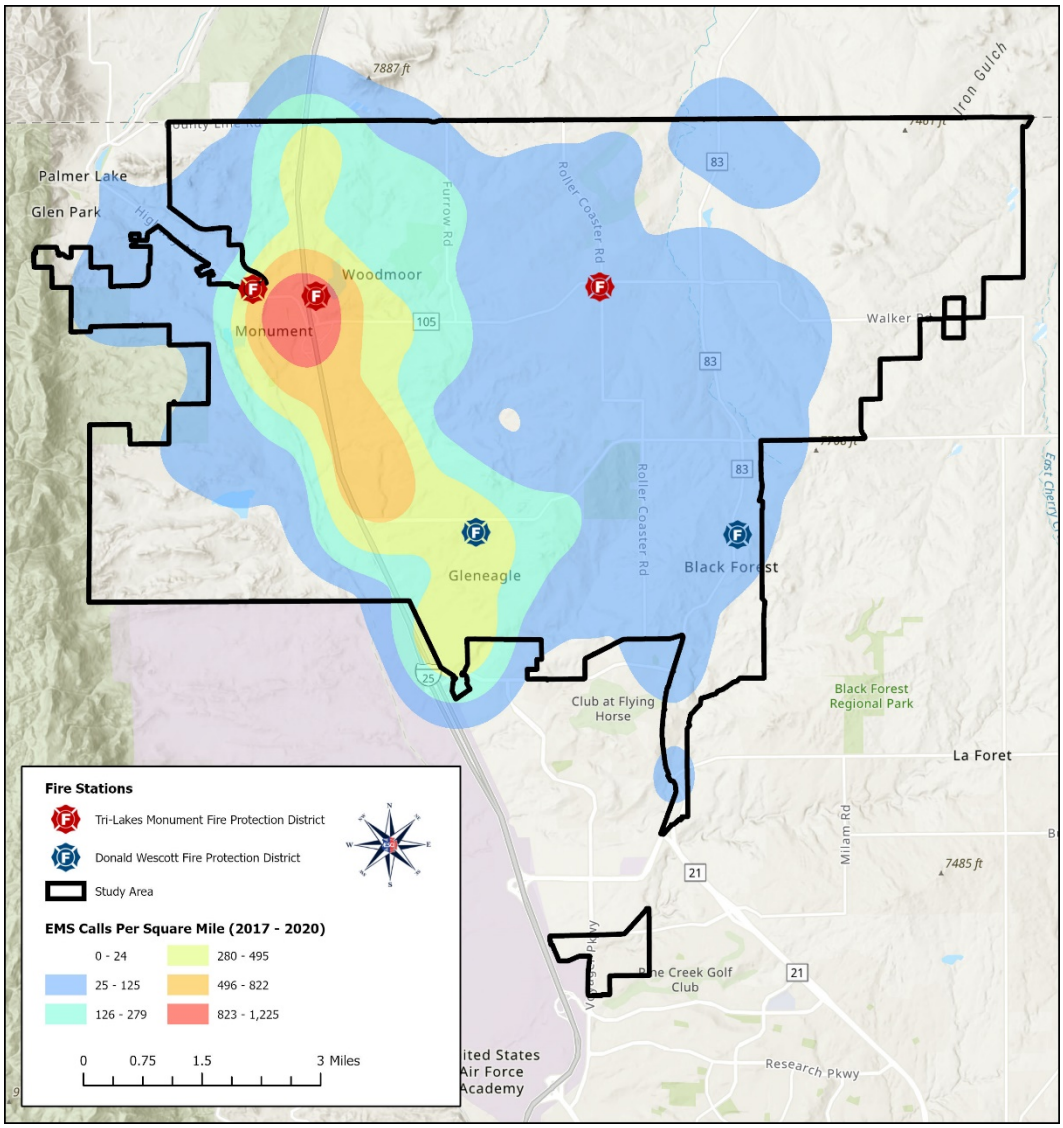
Before analyzing resource distribution, it is useful to examine the geographic distribution of service demand. ESCI uses geographic information systems software (GIS) to plot the location of incidents within the study area and calculates the mathematical density of incidents (incidents per square mile) in the study area. As illustrated in the figure below, the highest service demand occurs in the Monument area and then extends south and then outward from that location.

Figure 62: Service Demand by Geographic Location (All Incidents), 2018–2020



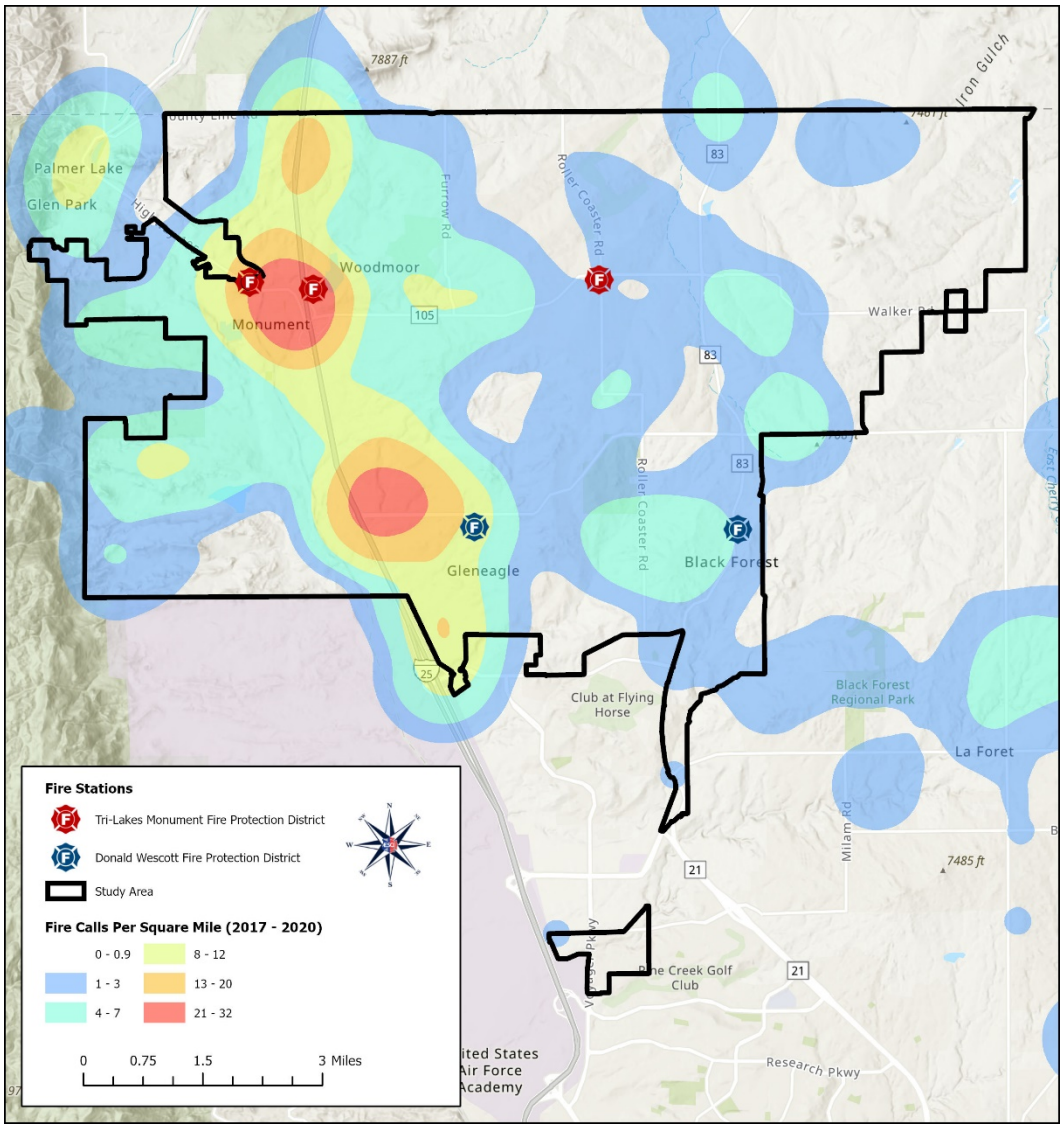
With the greatest percentage of service demand falling within the category of emergency medical incidents, as illustrated below, the demand for these incidents follows a pattern similar to overall incidents.

Figure 63: Service Demand by Geographic Location (EMS Incidents), 2018–2020



As illustrated in the figure below, the geographical location of fire incidents has two epicenters—one near Monument and the other just west of Gleneagle.

Figure 64: Service Demand by Geographic Location (Fire Incidents), 2018–2020



ISO Distribution

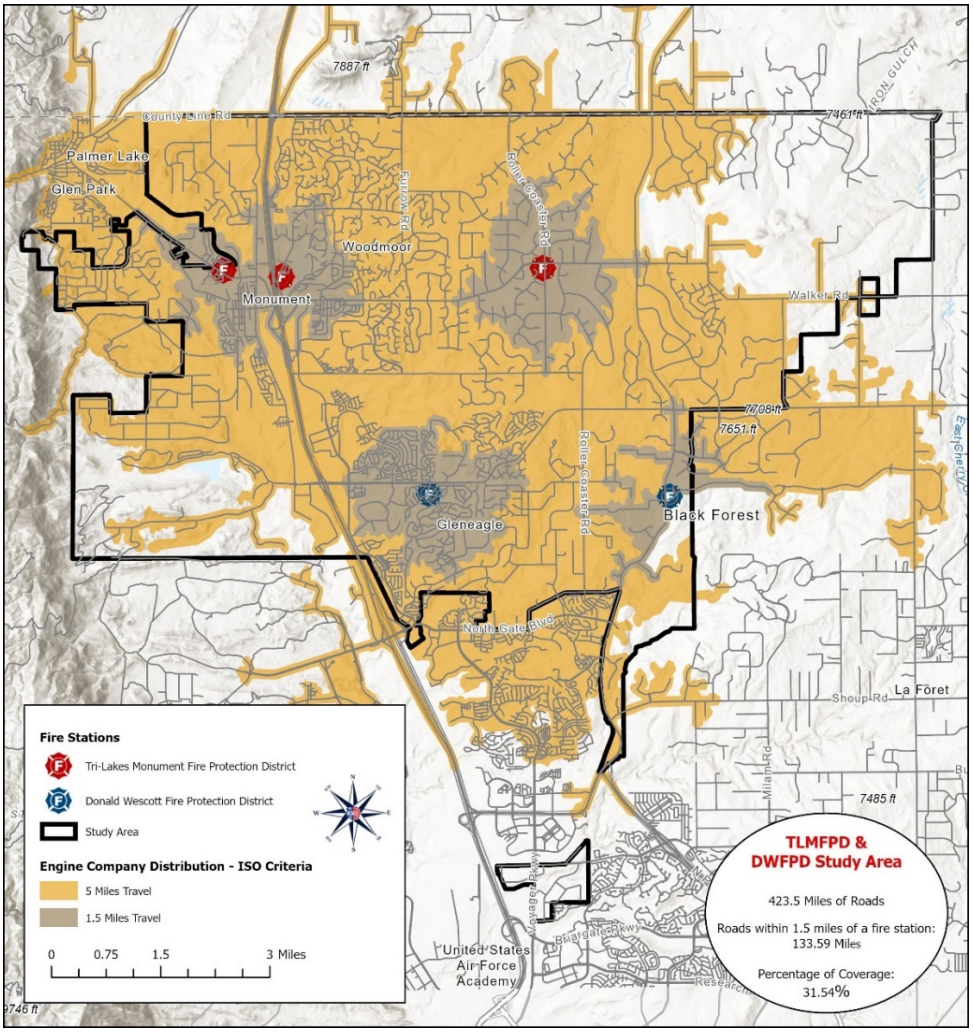
The Insurance Services Office (ISO) is a national insurance industry organization that evaluates fire protection for communities across the country. ISO assesses all areas of fire protection as broken down into four major categories including emergency communications, fire department, water supply, and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

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

Travel Distance from A Fire Station

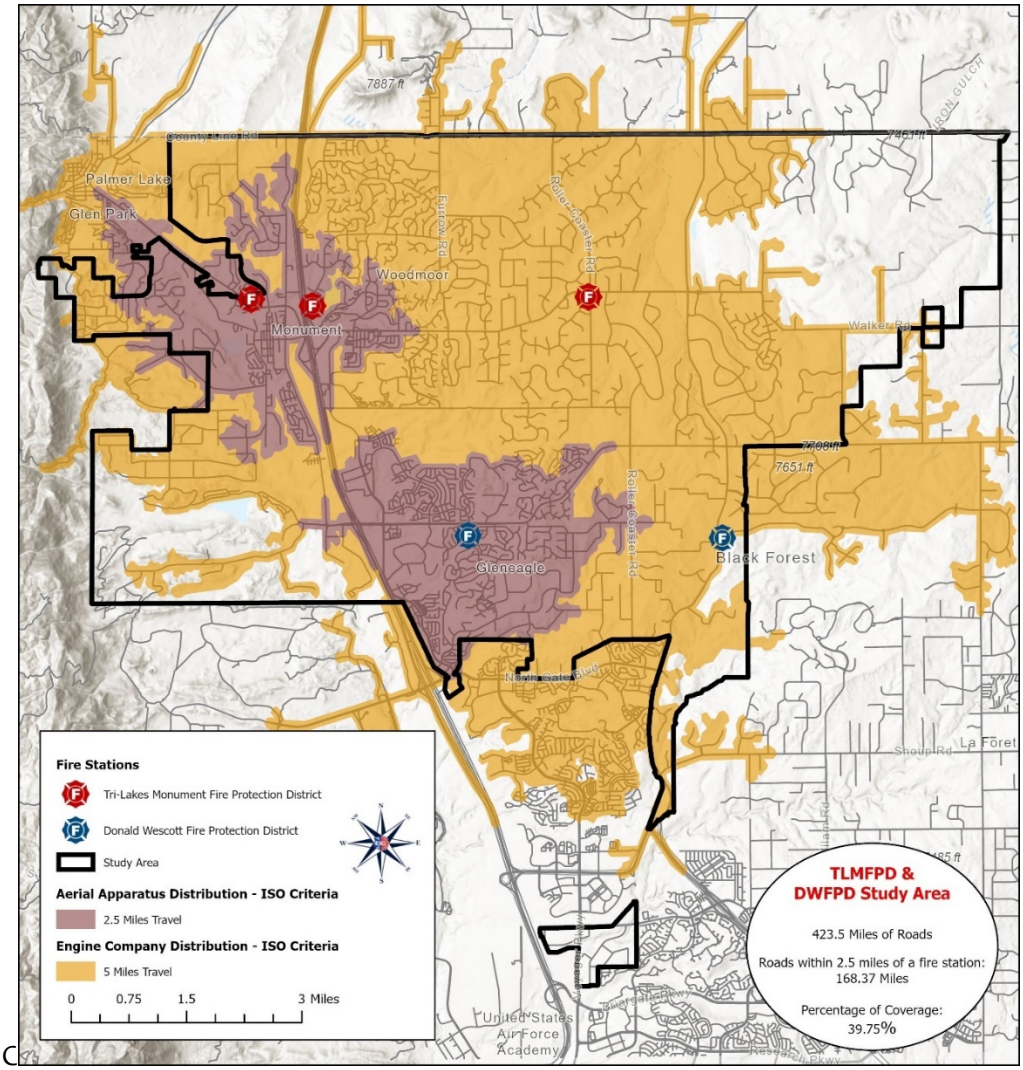
The first of three travel distance measures analyzed by ISO is the percentage of the service area that falls within a 1.5-mile travel distance of a fire station housing an engine or other water pumping apparatus. This 1.5 road-mile standard is used to estimate a 4-minute travel time for first responding units as required by NFPA 1710. As illustrated in the following figure, 31.54% of the service area falls within the 1.5-mile travel distance.

Figure 65: 1.5-Mile Engine Distribution per ISO Criteria



The second travel distance measure analyzed by ISO is the area that falls within a 2.5-mile travel distance of an aerial apparatus. The purpose of this measurement is to determine if areas with buildings over 3 stories in height or requiring more than 3500 gallons per minute fire flow are within the 2.5-mile response. TLMFPD and DWFPD utilize apparatus that can both pump water and have an aerial capability. These are housed at TLMFPD station 1 and DWFPD station 1. As illustrated in the following figure, 39.75% of the service area falls within a 2.5-mile travel distance of an aerial apparatus. The area covered is the location of most structures falling into the categories above.

Figure 66: 2.5-mile Aerial Distribution per ISO Criteria

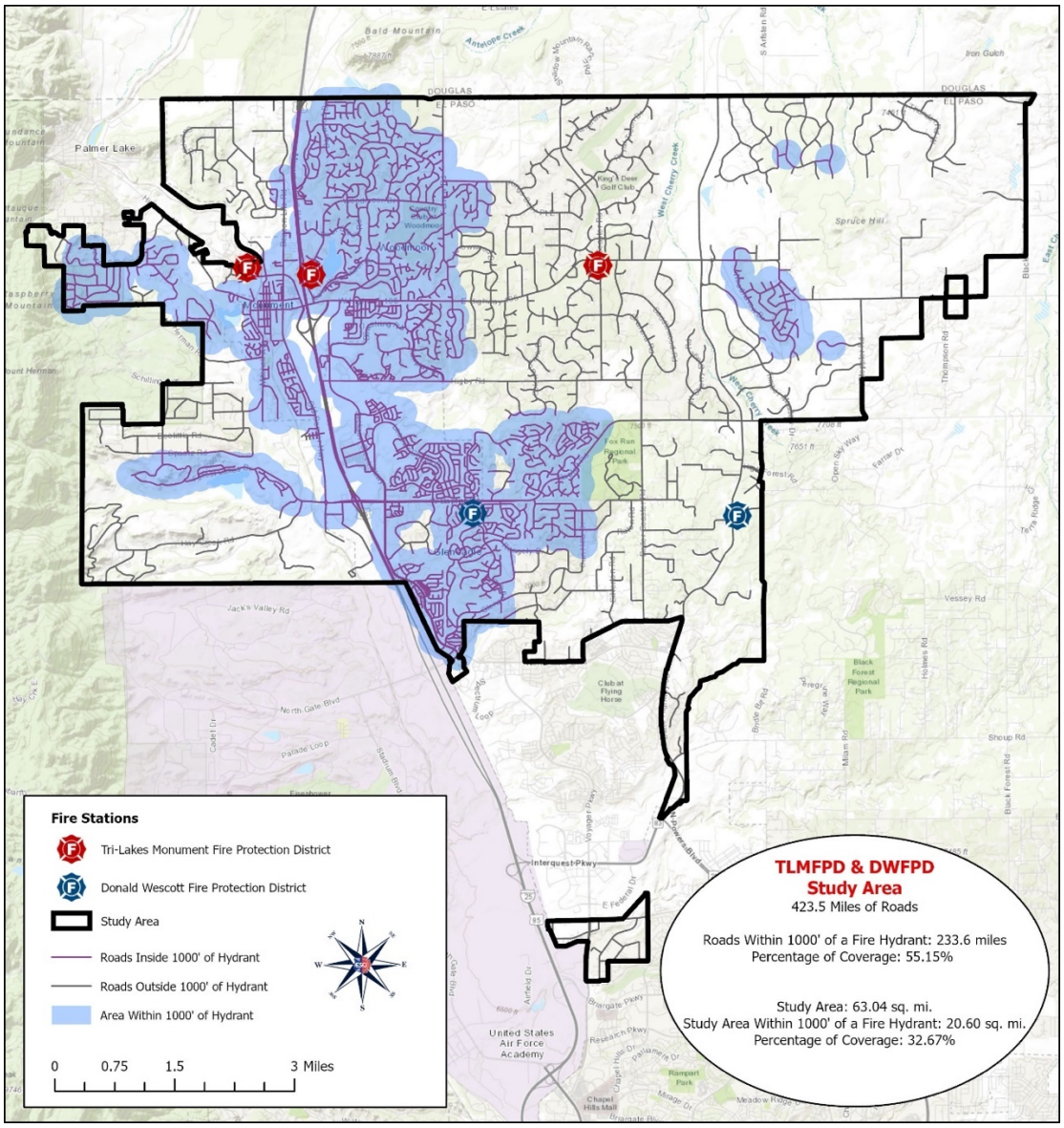


The final travel distance measure analyzed by ISO is the percentage of the service area that falls within a 5-mile travel distance of a fire station. To receive a PPC® rating that recognizes fire coverage is available, structures must generally be located within 5-miles of a fire station. Areas outside of 5-miles are subject to receiving a PPC® rating of 10 (no fire department protection available).

Water Supply Distribution

ISO evaluates a community's availability of a sufficient water supply, which is critical for the extinguishment of fires. Included in this evaluation are the geographic location and distribution of fire hydrants. Structures outside a 1,000-foot radius of a fire hydrant are subject to a lower Public Protection Classification® rating than areas with adequate hydrant coverage, thus signifying limited fire protection. Exceptions are made when a fire department can show that either a dry hydrant or a suitable water tender operation is possible to provide the needed volume of water for fire suppression activities for a specific period. As illustrated in the figure below, 32.67% of the combined service area falls within 1,000 feet of a fire hydrant. DWFPD has demonstrated to ISO that they can operate a tender relay system for supplying water to fires in the non-hydranted areas.

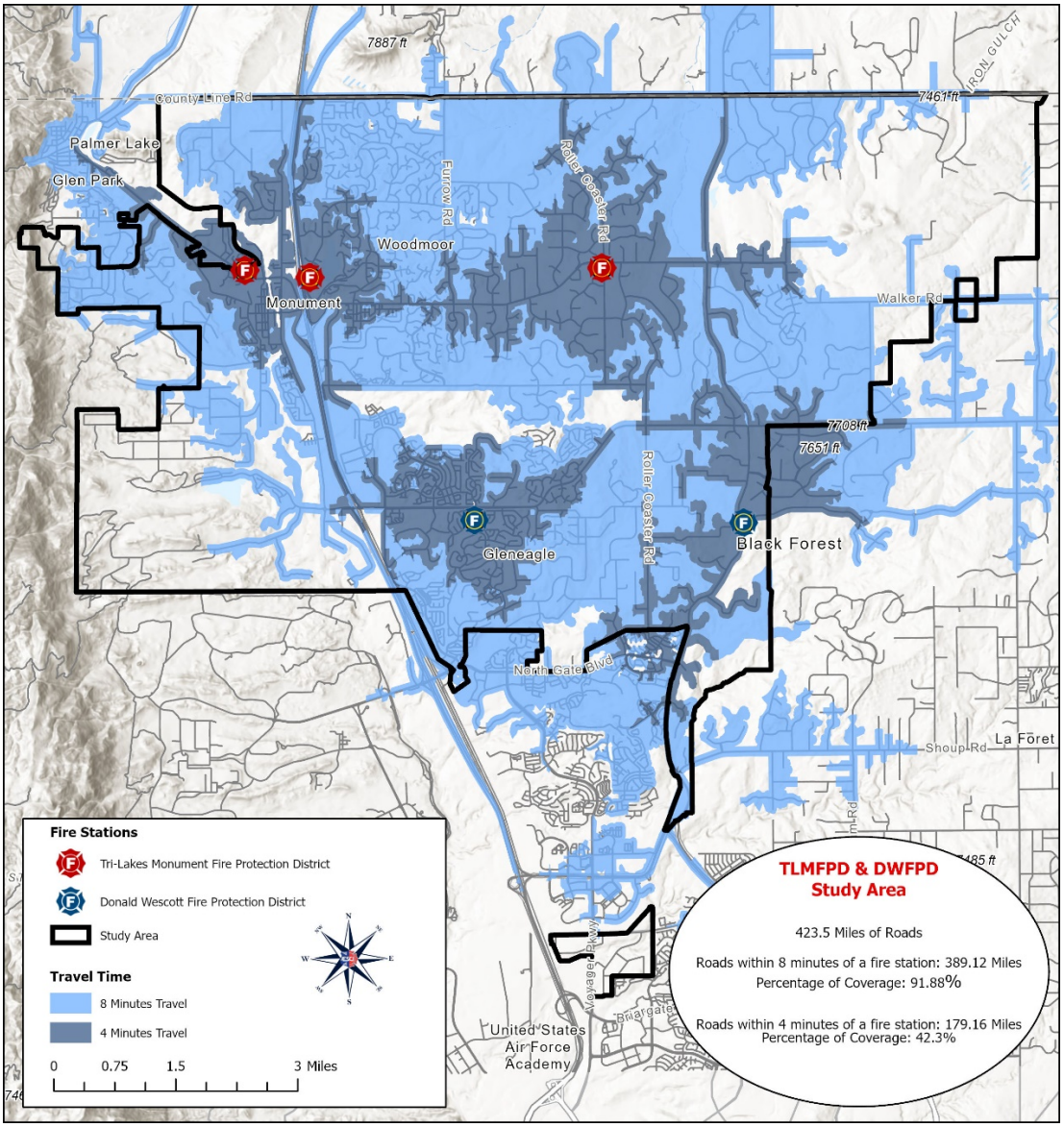
Figure 67: ISO Hydrant Coverage



NFPA Distribution

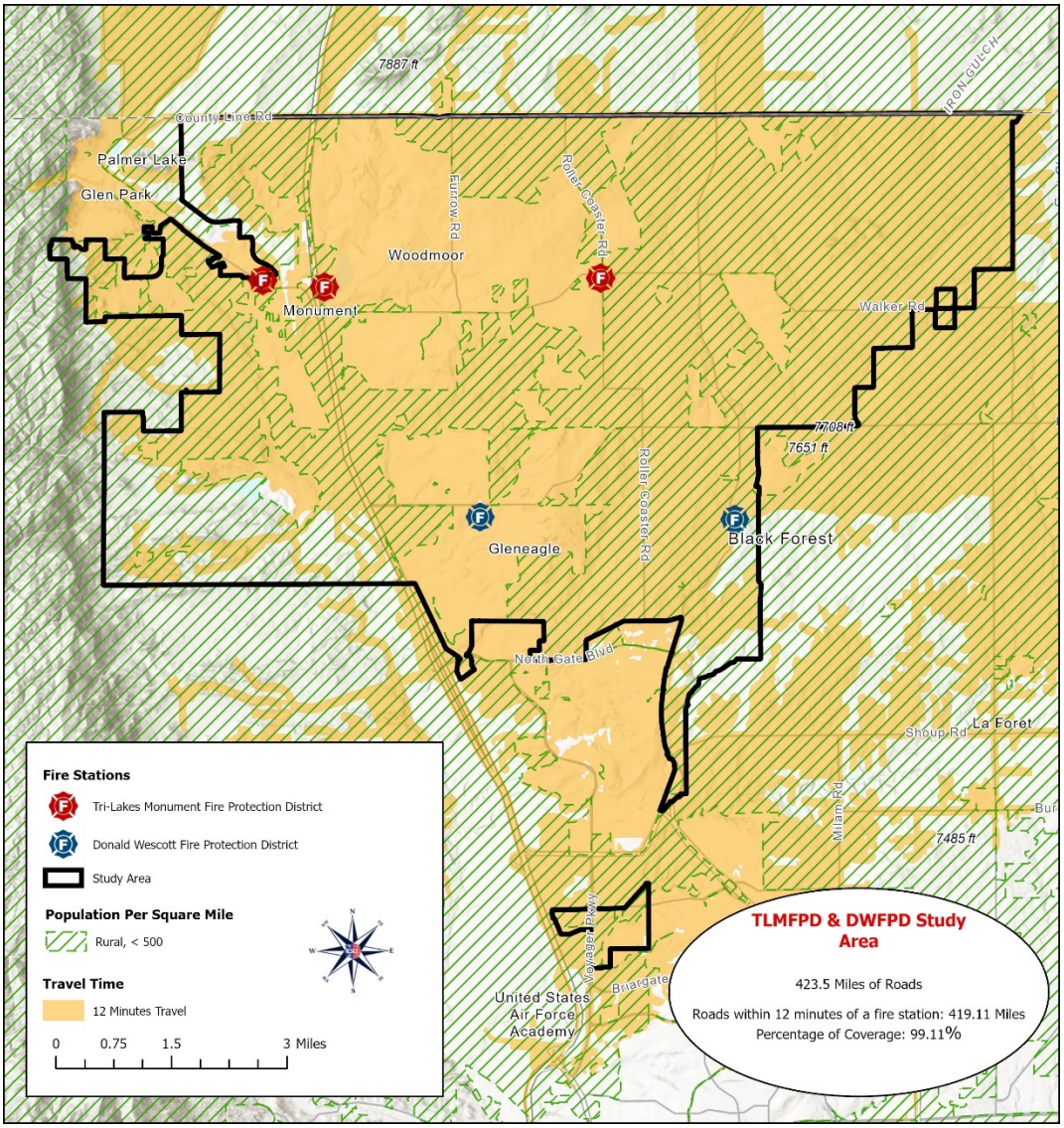
National Fire Protection Association (NFPA) standards and the Center for Public Safety Excellence (CPSE) accreditation of fire departments both evaluate response time criteria for purposes of analyzing resource distribution. For low/medium hazard incidents, the first unit should arrive within 4 minutes and the full assignment should arrive within 8 minutes. Travel time is calculated using the posted speed limit and adjusted for negotiating turns, intersections, and one-way streets. As illustrated below, 42.3% of the service area falls within a 4-minute travel time and 91.88% falls within an 8-minute travel time. As additional roads are added to the road network that there may be significant improvements in coverage. An example of this is the extension of Gleneagle Drive from Baptist Road to Higby Road.

Figure 68: 4-Minute/8-Minute Travel Time per NFPA Criteria



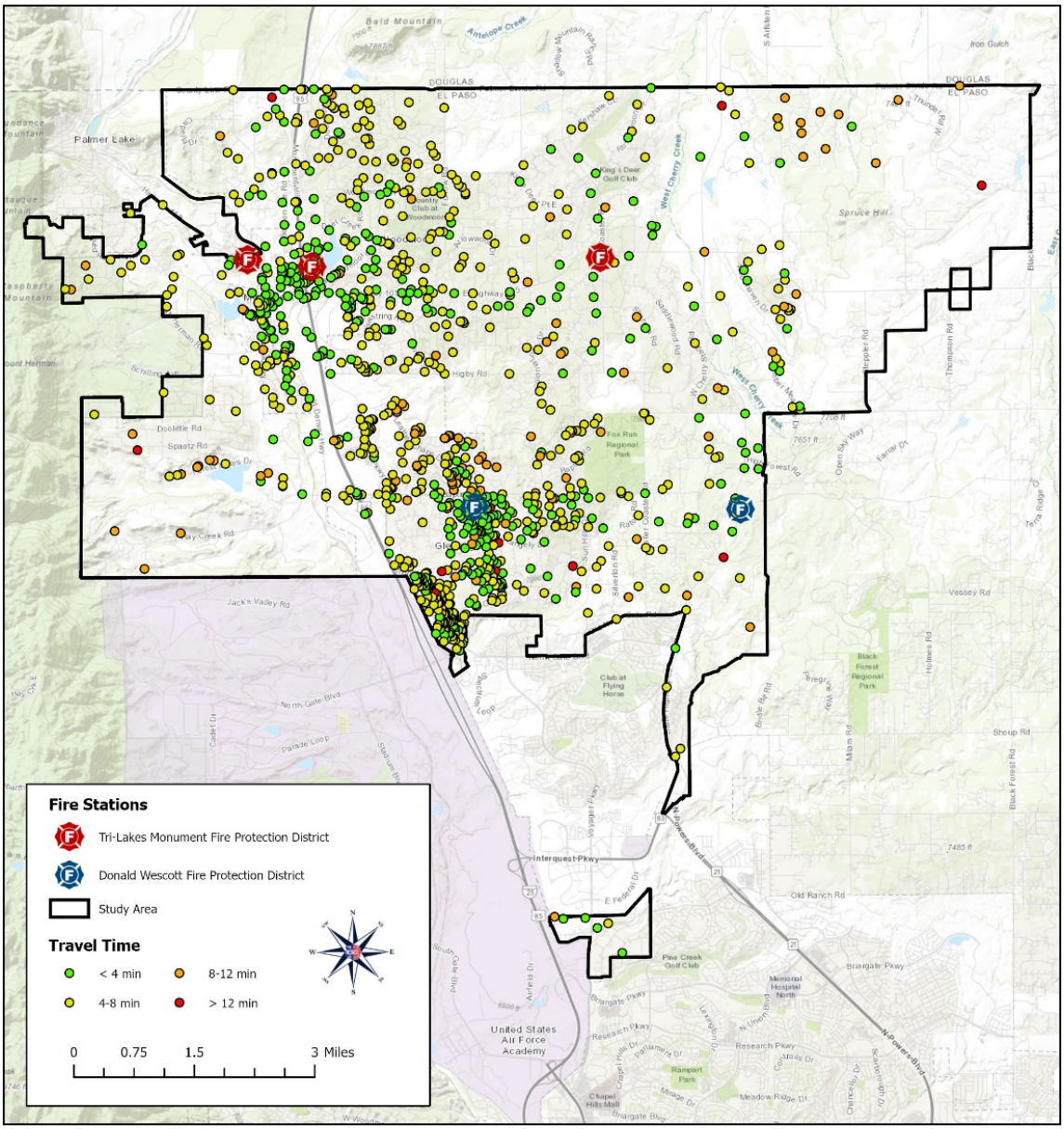
As there is a large part of the service area that has a rural population density, there is also value in viewing the coverage that is within a 12-minute travel time. As illustrated in the figure below, 99.11% of the service area is within a 12-minute travel time.

Figure 69: 12-Minute Travel Time



The preceding figures illustrated travel time from a theoretical perspective, assuming all units are in-station at the time of dispatch. The following figure illustrates actual travel time performance during 2020. For the entire study period, travel time less than 4 minutes occurred on 38.4% of incidents, 4–8 minutes on 47.38% of incidents, 8–12 minutes on 10.36% of incidents, and 3.87% of incidents were over 12 minutes. The following figure shows one year of actual travel time experience. The areas closest to the stations are typically shorter travel times than areas farther away.

Figure 70: Actual Travel Time Performance, 2020



Response Performance Analysis

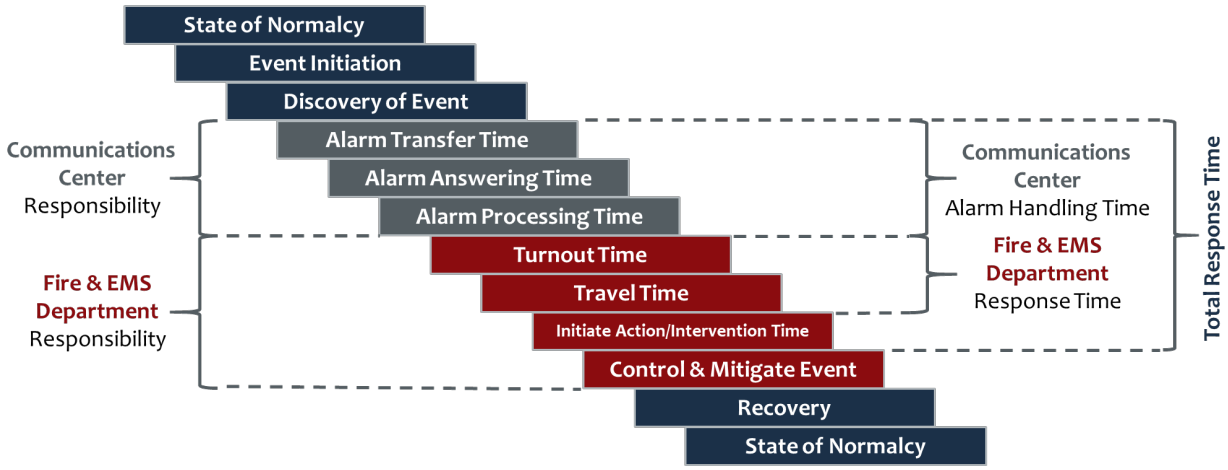
The third element of service delivery focuses on response time performance. In general, the public does not focus on service demand or resource distribution. The key factor of service delivery that means the most to them is response performance. Response performance can be simply defined as how long it takes from the public calling for assistance until the first unit arrives to provide that assistance.

The simplified definition above does not fully identify the measures involved as there are multiple components between the beginning and ending point identified. The full process is referred to as the *response time continuum* and is comprised of the following components:

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

The following figure illustrates the individual components and how they interrelate to encompass the entire response time continuum.

Figure 71: Response Time Continuum



To have the opportunity to have the lowest overall total response time within the community, department leadership should track the individual components regularly. This enables leadership to implement operational changes to effect improved performance, where possible.

In analyzing response performance, ESCI generates percentile measurements of response time performance. The use of percentile measurement using the components of response time follows the recommendations of industry best practices. The best practices are derived by the Center for Public Safety Excellence (CPSE), Standard of Cover document, and the National Fire Protection Association (NFPA) 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments.*

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

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

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

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

As this report progresses through the performance analysis, it is important to keep in mind that each component of response performance is not cumulative. Each is analyzed as an individual component, and the point at which the fractile percentile is calculated exists in a set of data unto itself. Throughout this section, each performance measure will provide the combined performance as well as the individual performance by each department.

Call Processing Time Performance

Call processing time is a measure of the time between a dispatcher getting the call and the resources being dispatched. For this measure, there are two applicable standards as illustrated below.

Figure 72: Call Processing Performance Standards

Standard	Performance
NFPA 1221: *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*	64 seconds at the 90th percentile 106 seconds at the 95th percentile
NFPA 1710 *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* recommends	64 seconds at the 90th percentile 106 seconds at the 95th percentile

Department leadership should work closely with leadership from the El Paso County Communications Center to monitor and improve performance for this measure, as appropriate. This partnership is important as the fire department does not directly supervise the dispatch center. As illustrated below, the overall call processing time performance is 1 minute, 51 seconds. When analyzed by individual incident type, performance ranged from 1 minute, 33 seconds for emergency medical incidents to 8 minutes, 21 seconds for fire incidents.

Figure 73: Combined Call Processing Time Performance, 2018–2020

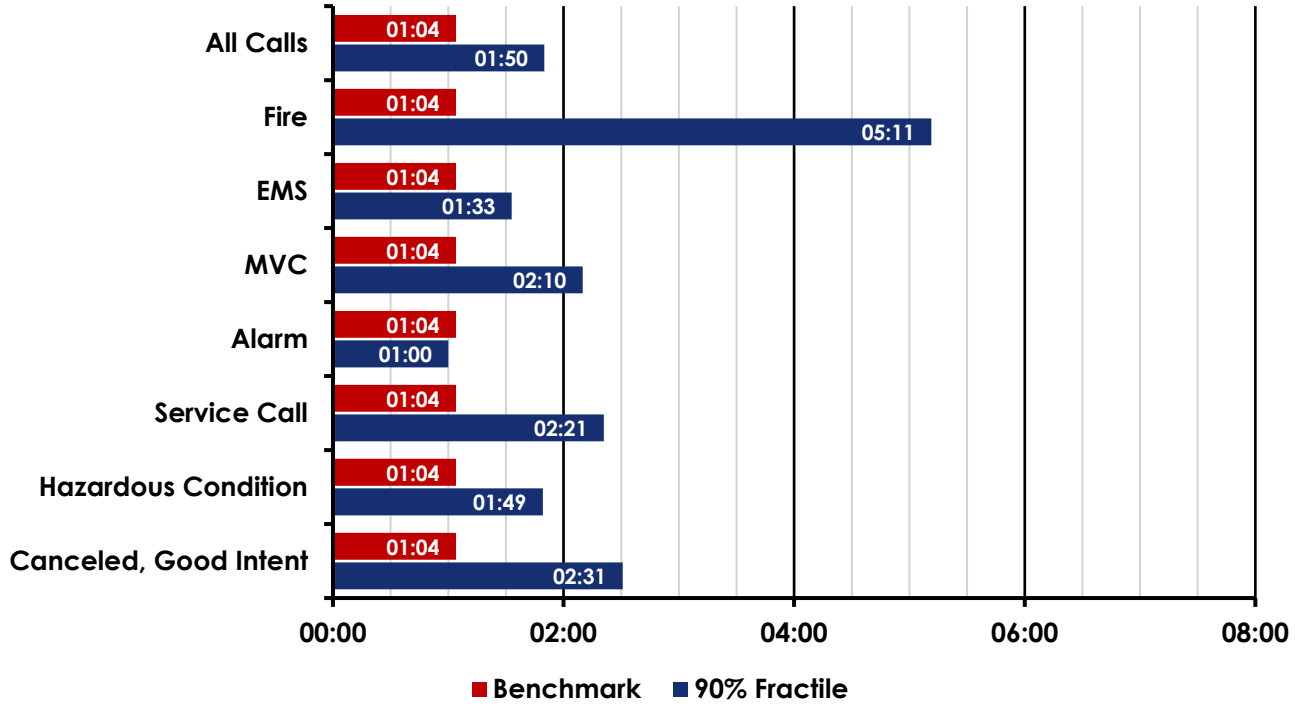


Figure 74: TLMFPD Call Processing Performance, 2018–2020

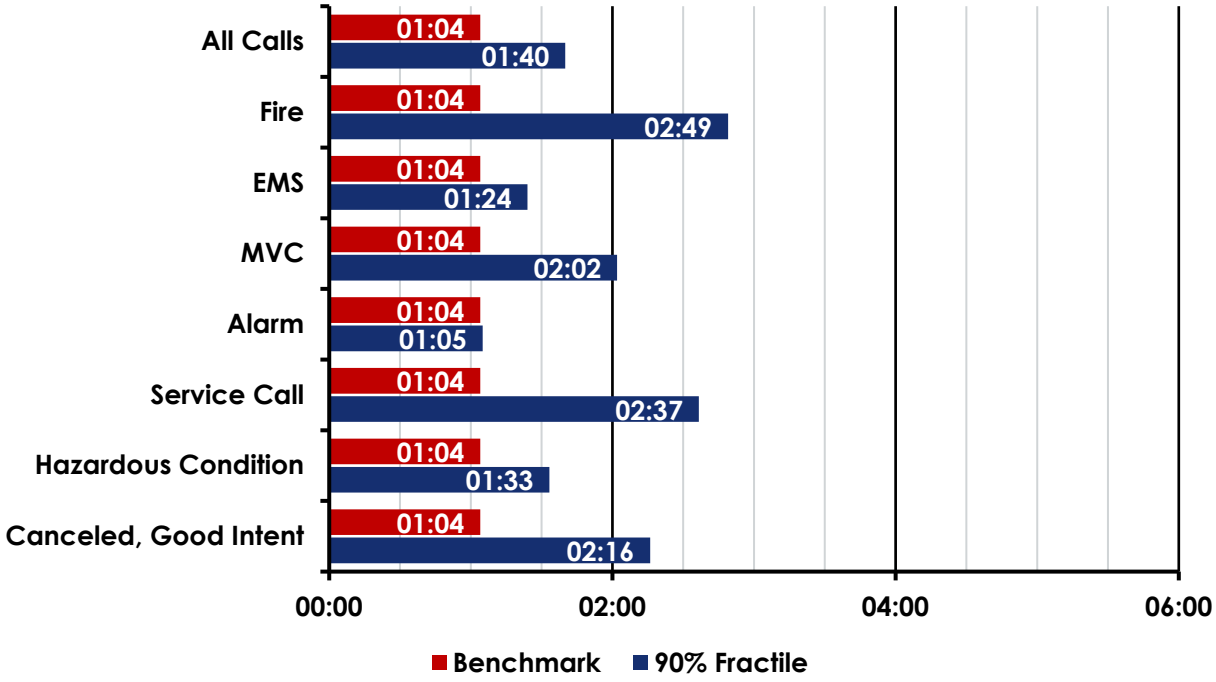
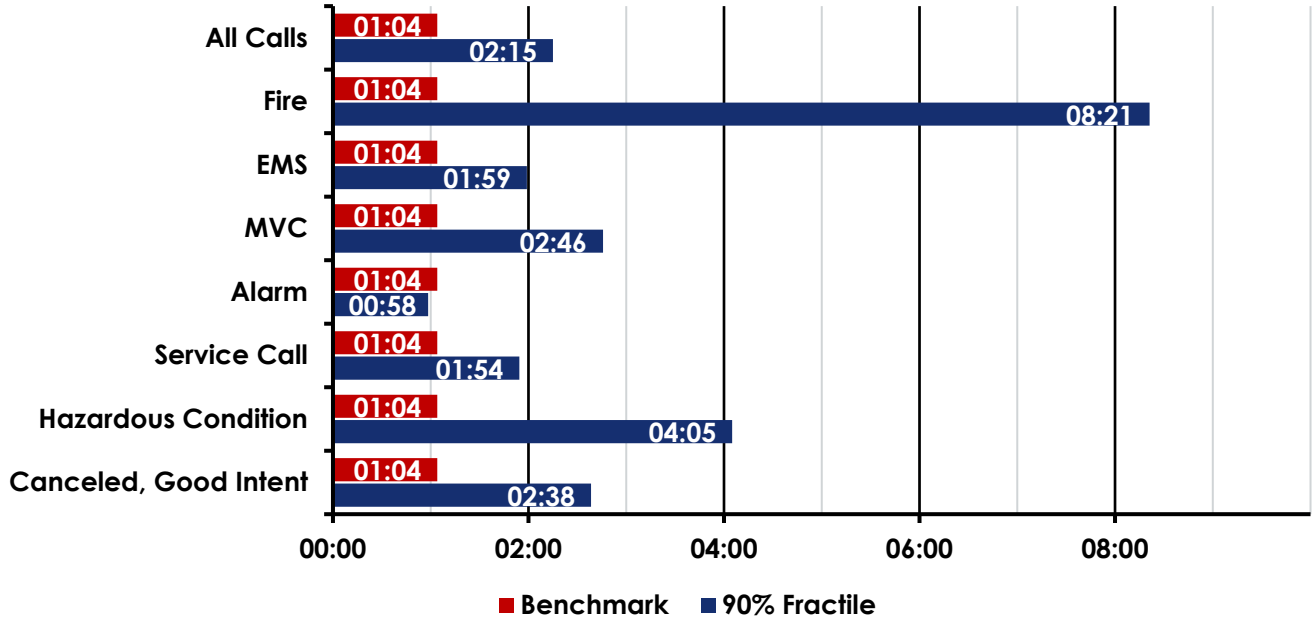


Figure 75: DWFPD Call Processing Time Performance, 2018–2020



The call processing times are generally longer than the standard but not unusually so. The fire call processing time is quite unexpected compared to the others. There is no clear reason for why this occurs.

Turnout Time Performance

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

Figure 76: Turnout Time Performance Standard

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

Within turnout time, there are multiple factors that department leadership should consider when looking at performance. Each of these factors may impact the ability to quickly board the apparatus and respond to incidents.

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

As illustrated in the figure below, the overall turnout time performance is 2 minutes. When analyzed by individual incident type, performance ranged from 1 minute, 37 seconds for motor vehicle collision incidents to 2 minutes, 16 seconds for alarm incidents.

Figure 77: Combined Turnout Time Performance, 2018–2020

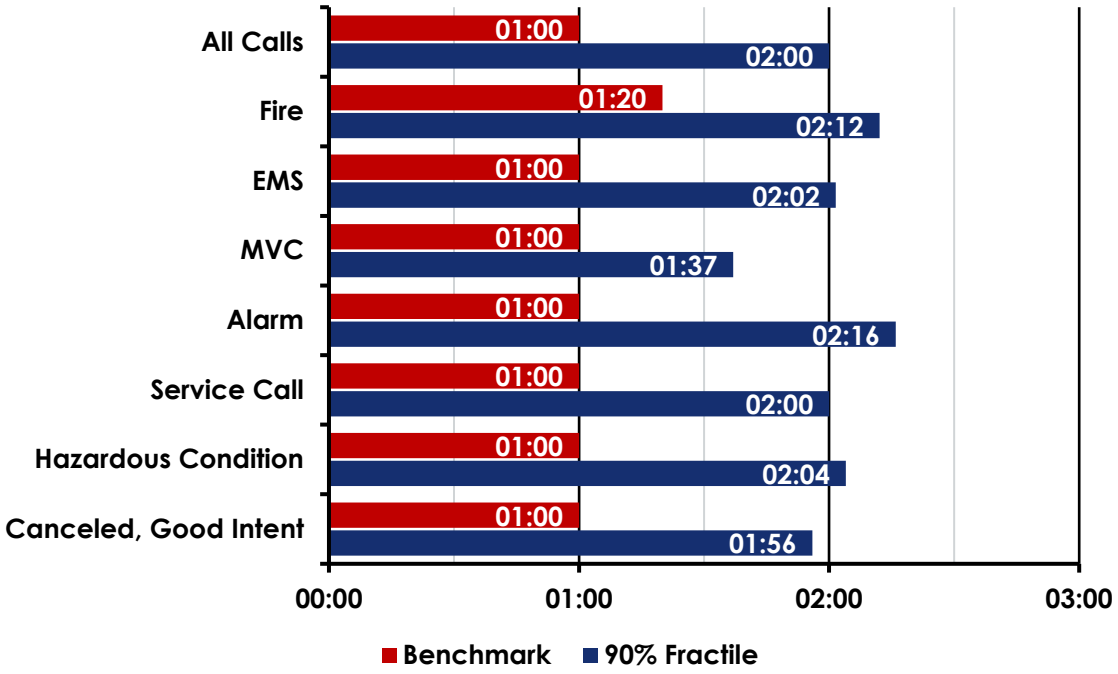


Figure 78: TLMFPD Turnout Time Performance, 2018–2020

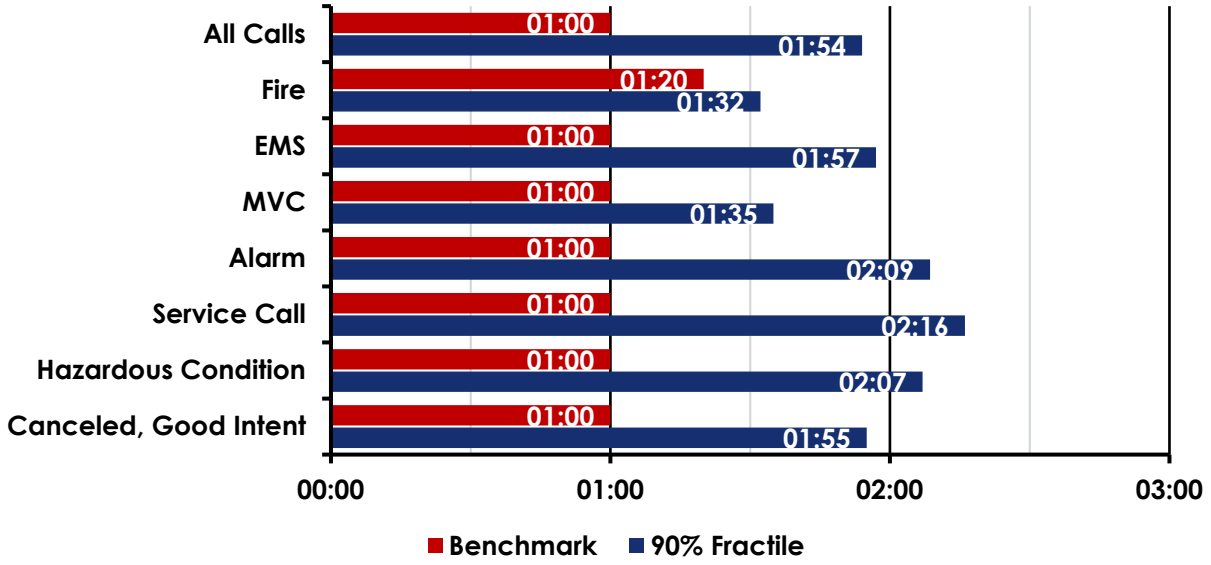
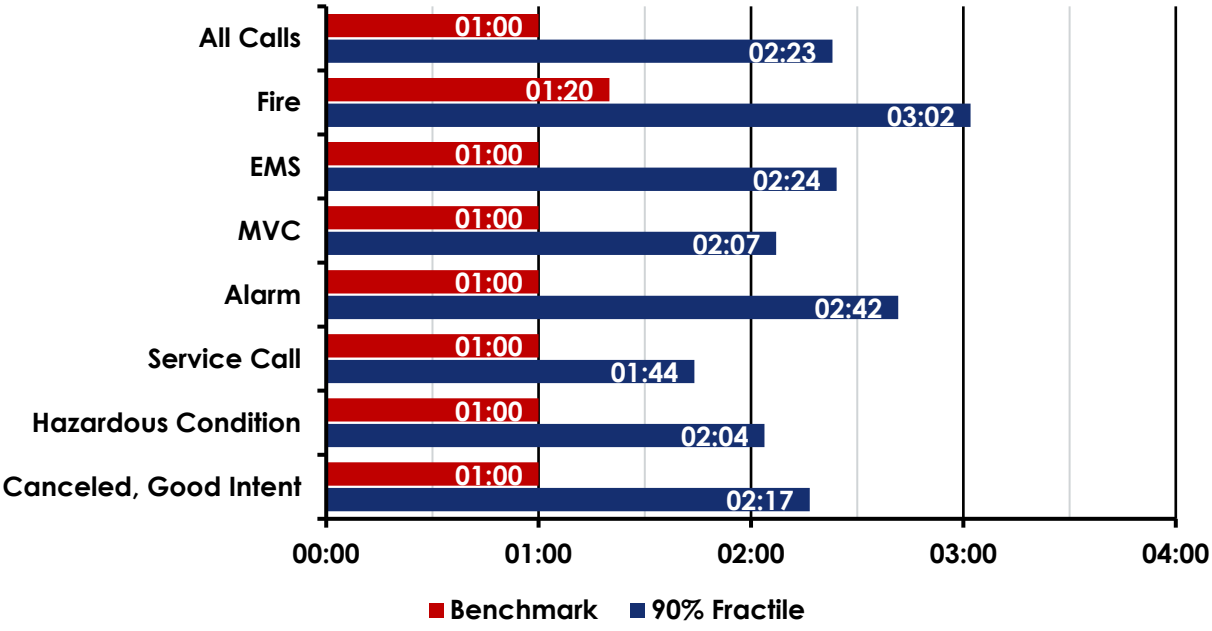


Figure 79: DWFPD Turnout Time Performance, 2018–2020



These times are generally good although somewhat over the standard.

Travel Time Performance

Travel time performance is a measure of the time the responding unit spends on the road to the incident. Department personnel have some control over this measure as it relates to driving skill and route choices. However, the greatest impact on travel time performance is the specific geographical location of the incident as it compares to the apparatus location at the time of dispatch. Additional impacts include weather, traffic conditions, time of day, etc. For this measure, there is one applicable standard.

Figure 80: Travel Time Performance Standard

Standard	Performance
NFPA 1710 *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* recommends	4 minutes at the 90th percentile

As illustrated in the figure below, the overall travel time performance is 8 minutes, 57 seconds. When analyzed by individual incident type, performance ranged from 8 minutes, 9 seconds for motor vehicle collision incidents to 15 minutes, 9 seconds for fire incidents.

Figure 81: Combined Travel Time Performance, 2018–2020

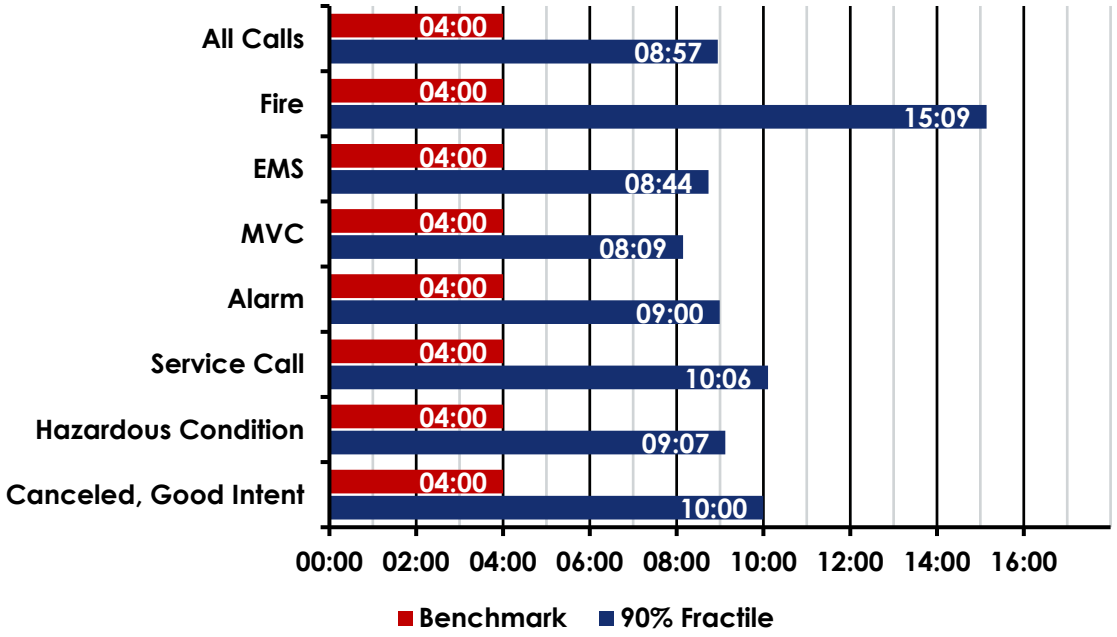


Figure 82: TLMFPD Travel Time Performance, 2018–2020

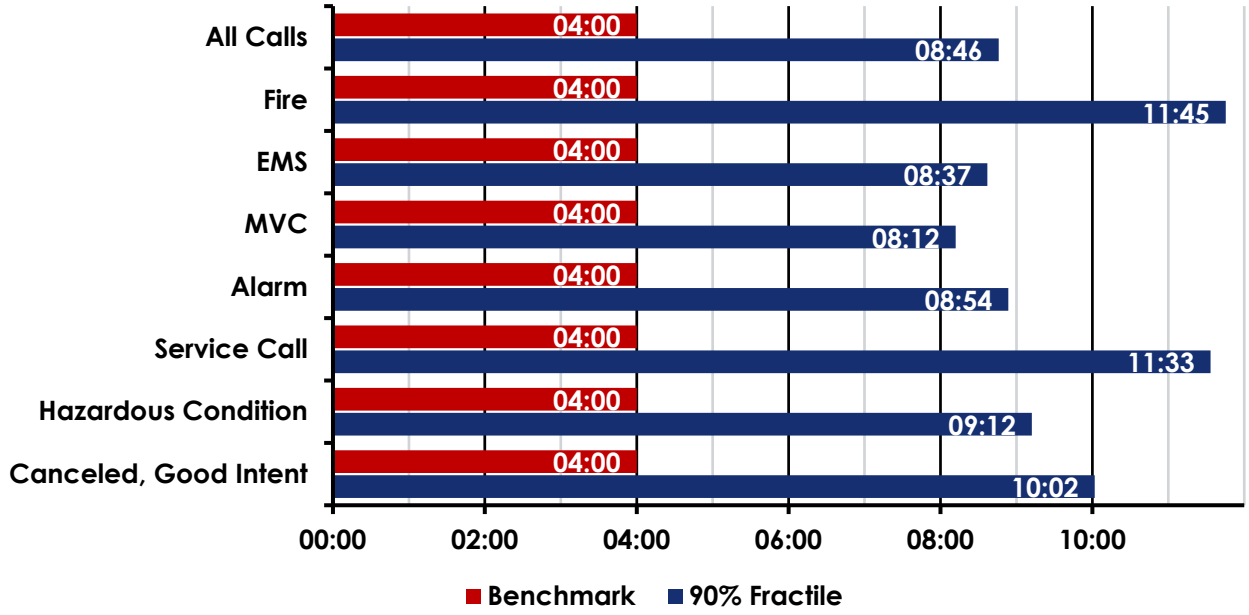
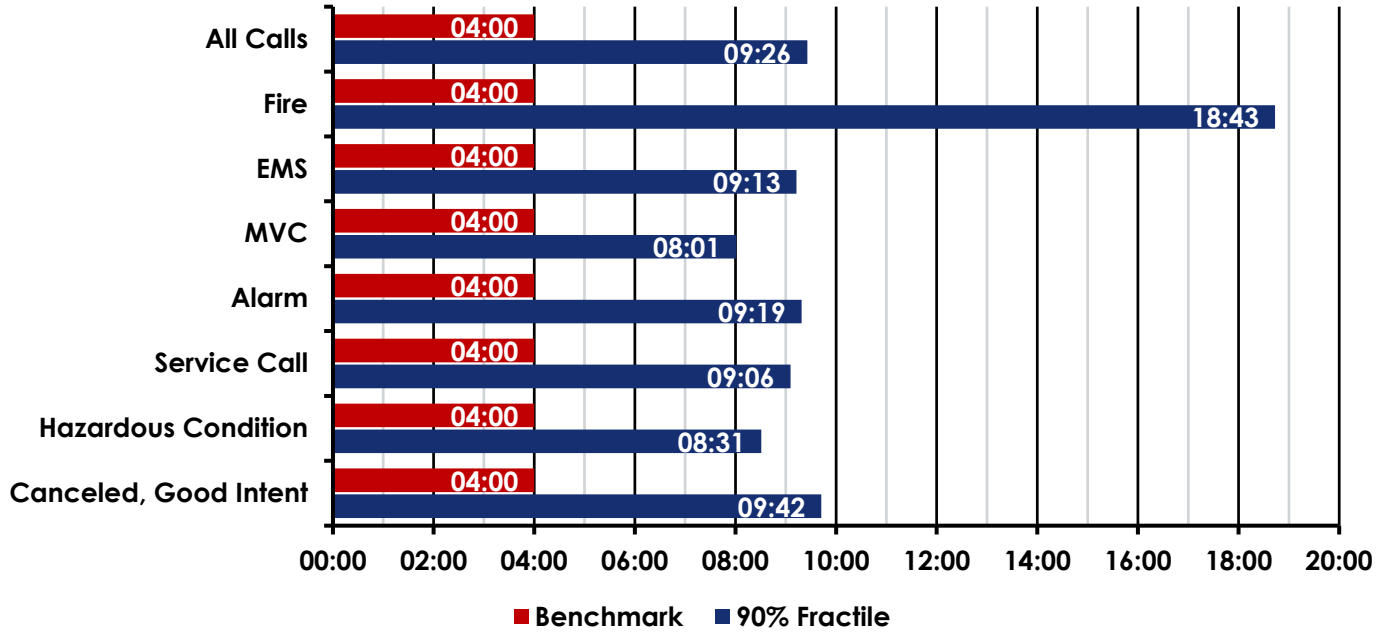


Figure 83: DWFPD Travel Time Performance, 2018–2020



The travel times at the 90th percentile exhibit unexpected results. The graphs compare the fractile time against the urban response standard of 4 minutes, ESCI recognizes that these responses are not strictly urban. There is a mix of responses to urban, suburban, and rural population areas in the analysis. The incident heat map in Figure 62 shows that the greatest number of calls occur near stations which would

validate that most calls should have short travel times. Additionally, the travel time analysis of the road system in Figure 68 shows that 92 percent of the roads in the district can be reached within 8 minutes travel time. The actual data shows travel times that are much longer than can be readily explained.

Response Time Performance

Response time performance is a measure of the combination of turnout time and travel time and is the most commonly used measure of fire department response performance. As a combination of the two measures, it is also impacted by the same factors identified for each measure. For this measure, there is not a specific applicable standard. However, by combining the individual component standards, the following figure illustrates expected performance.

Figure 84: Response Time Performance Standard

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

As illustrated in the figure below, the overall response time performance is 10 minutes, 17 seconds. When analyzed by individual incident type, performance ranged from 9 minutes, 21 seconds for motor vehicle collision incidents to 16 minutes, 28 seconds for fire incidents.

Figure 85 Combined Response Time Performance, 2018–2020

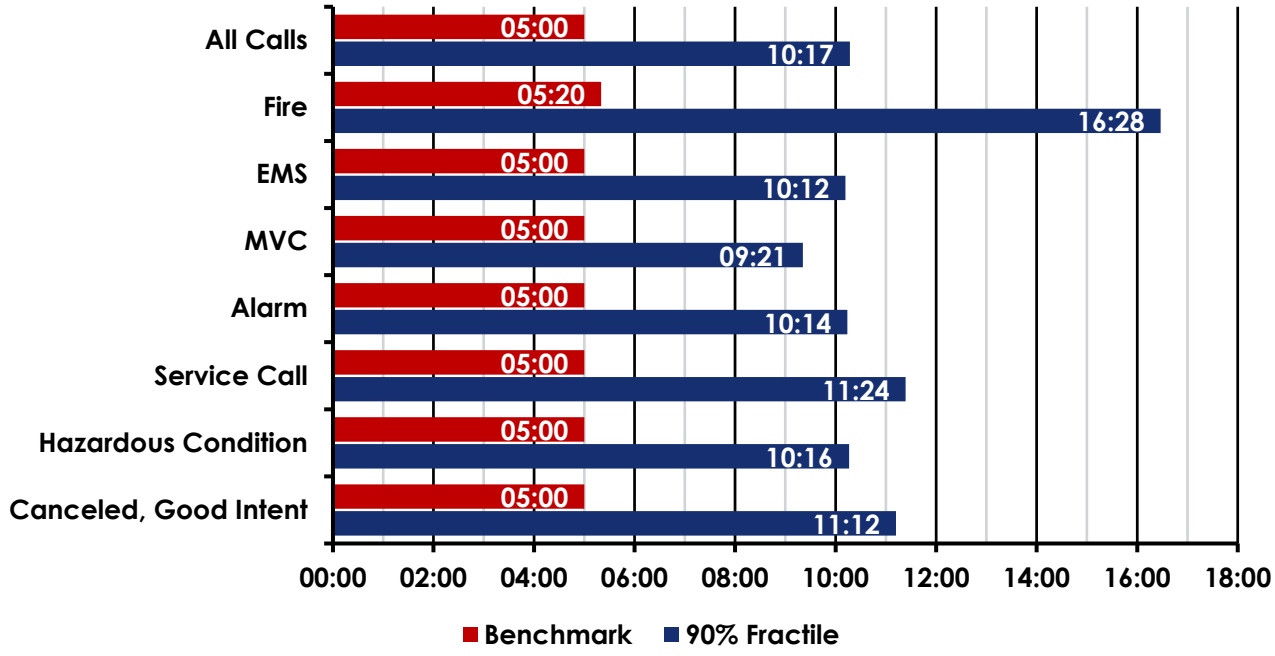


Figure 86: TLMFPD Response Time Performance, 2018–2020

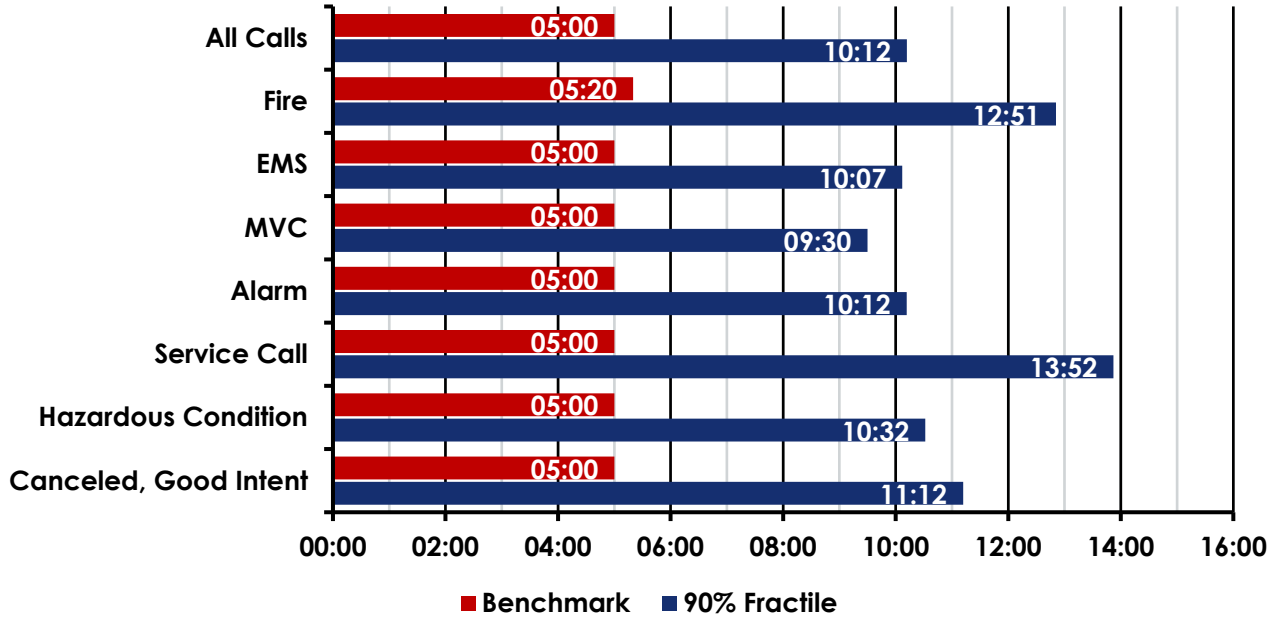
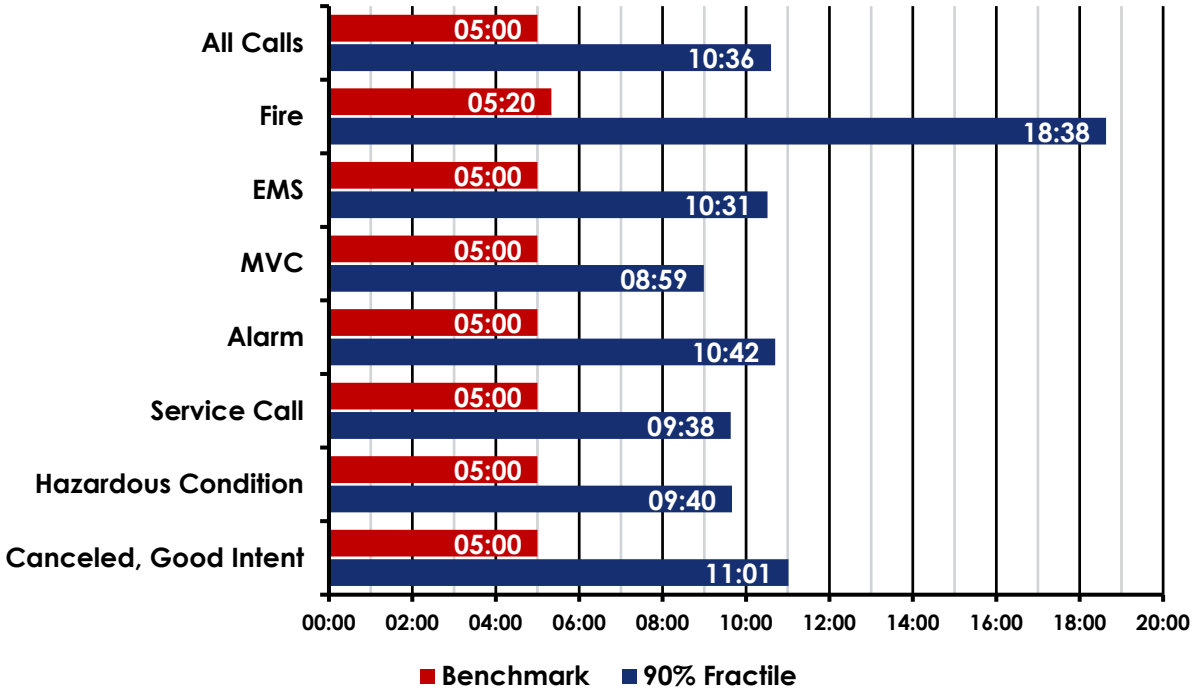


Figure 87: DWFPD Response Time Performance, 2018–2020



As might be expected from the long travel times discussed previously, the response times are extended beyond what can be explained easily. Some extended times may be due to incorrect data, this will be discussed further under the Findings and Recommendations section of this report.

Total Response Time

Total response time is a measure of the time from when the 911 call is answered until the dispatched unit arrives on the scene. This measure combines call processing time performance, turnout time performance, and travel time performance. For this measure, there is not a specific applicable standard. However, by combining the individual component standards, the following figure illustrates expected performance.

Figure 88: Total Response Time Performance Standard

Component	Performance
Call Processing Time	64 seconds at the 90th percentile
Turnout Time	Fire and Special Operations Incidents 80 seconds at the 90th percentile All Other Incidents 60 seconds at the 90th percentile
Travel Time	4 minutes at the 90th percentile
Combined	Fire and Special Operations Incidents 6 minutes, 24 seconds at the 90th percentile All Other Incidents 6 minutes, 4 seconds at the 90th percentile

As illustrated in the figure below, the overall total response time performance is 12 minutes. When analyzed by individual incident type, performance ranges from 11 minutes, 19 seconds for alarm incidents to 26 minutes, 40 seconds for fire incidents.

Figure 89: Combined Total Response Time Performance, 2018–2020

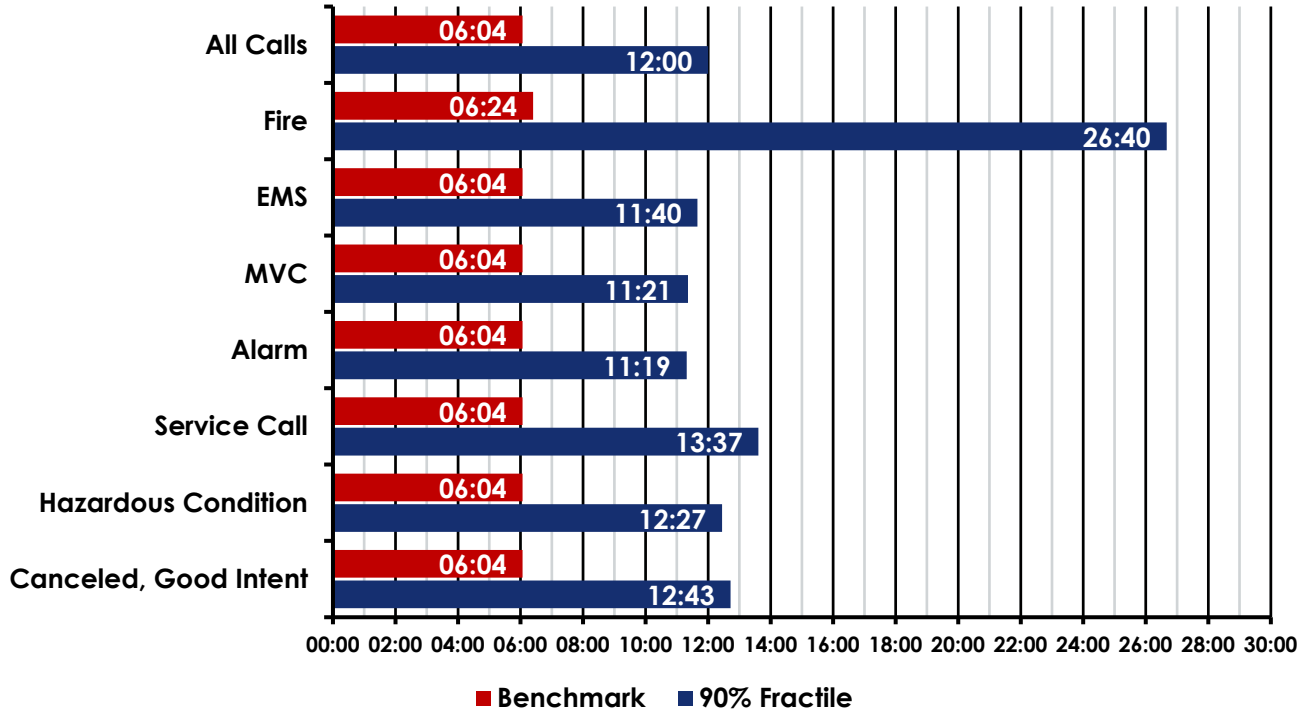


Figure 90: TLMFPD Total Response Time Performance, 2018–2020

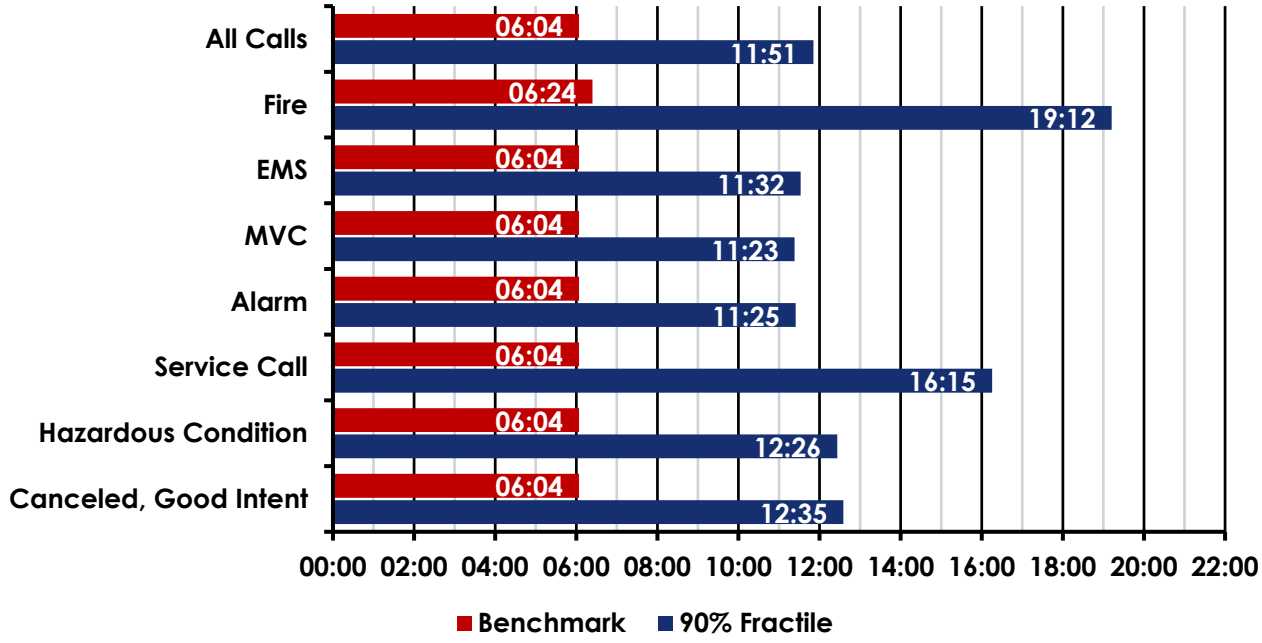
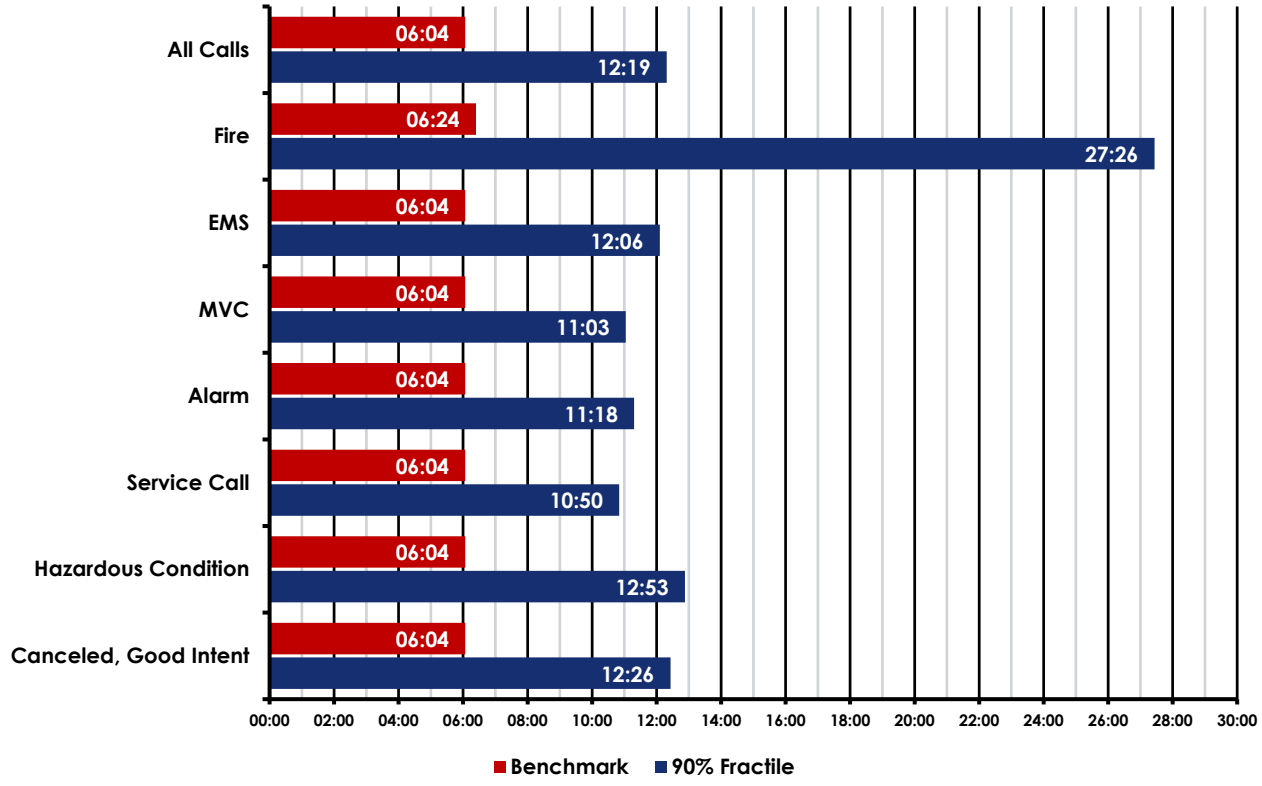


Figure 91: DWFPD Total Response Time Performance, 2018–2020



The components of total response time are longer than expected therefore the total response time is longer than expected. The extremely long response time for fire is partially due to the travel times but also the long call processing time for fire-type calls.

Resource Concentration Analysis

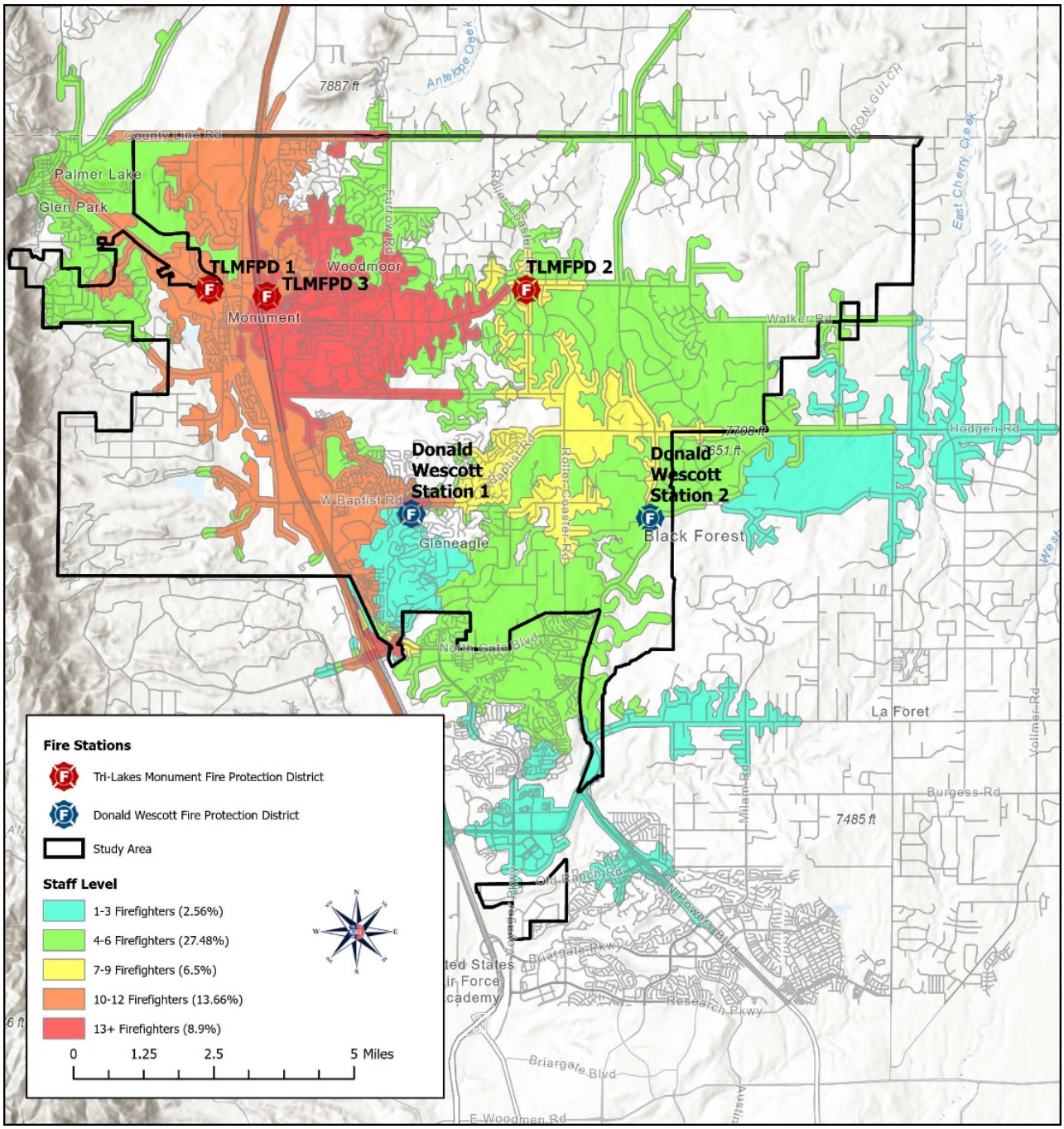
The fourth element of service delivery focuses on the ability to assemble a specific number of resources within a specific measurement of time. This concept is known in the fire service as an effective response force (ERF). When a department can assemble sufficient resources within an appropriate amount of time, they are in the best situation to decrease the loss of life or property. The following figure illustrates the ERF recommended through standards such as NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* and the Commission on Fire Accreditation (CFAI) Standards of Cover, 6th Edition.

Figure 92: Recommended Effective Response Force

Functions/Tasks	Single-Family Residence (2,000 ft²)	Open Air Strip Shopping Center (13,000–196,000 ft²)	3-Story Garden Apartment (1,200 ft²)
Command	1	2	2
Apparatus Operator	1	2	2
Handlines (2 members each)	4	6	6
Support Members	2	3	3
Victim Search and Rescue team	2	4	4
Ground Ladders/Ventilation	2	4	4
Aerial Device Operator (if ladder used)	(1)	(1)	(1)
Initial Rapid Intervention Team	4	4	4
Initial Medical Care Component	N/A	2	2
Total	**16 (17)**	**27 (28)**	**27 (28)**

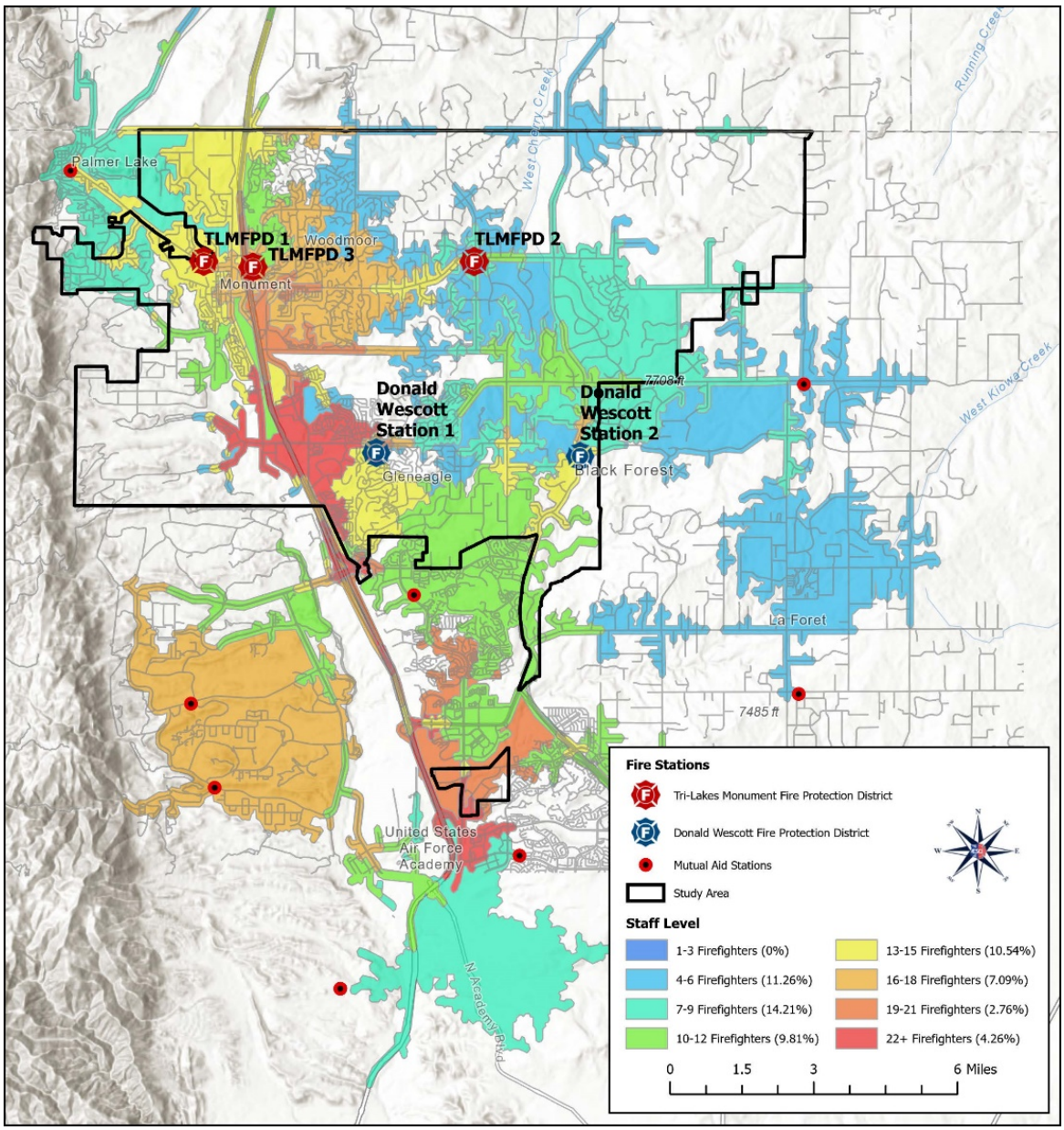
The ability to meet this performance standard rests essentially on two key factors, the geographical location of stations related to incidents and the number of staff assigned to each station. As illustrated in the following figure, within most of the service area, the department is unable to assemble the recommended ERF within 8 minutes.

Figure 93: Effective Response Force, 8-minute Travel



As illustrated in the figure below, with the addition of mutual aid resources, approximately 14% of the service area is then able to meet the recommended ERF for a residential structure fire.

Figure 94: Effective Response Force, 8-minute Travel (With Mutual Aid Resources)

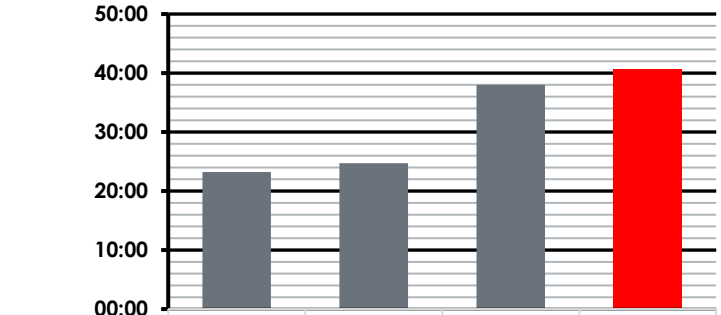


Response Time Performance for Structure Fires

The figures above illustrate a theoretical effective response force based on all apparatus being in their assigned station at the time of dispatch. The ability to illustrate actual performance is extremely limited. Instead, the following figure illustrates the time it takes for units to arrive at the scene of structure fires where three or more units arrived on-scene. This, combined with knowledge of staffing patterns, enables leadership to consider the department's ability to assemble sufficient resources. This figure only

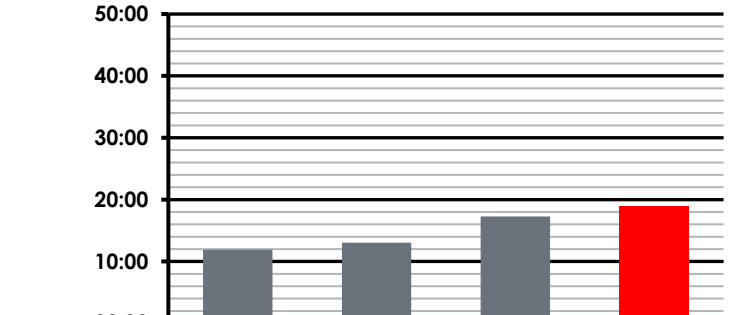
includes department resources and does not consider the arrival of automatic aid or mutual aid resources. The analysis is calculated on a small number of data points.

Figure 95: Combined Structure Fire Order of Arrival, 2018–2020



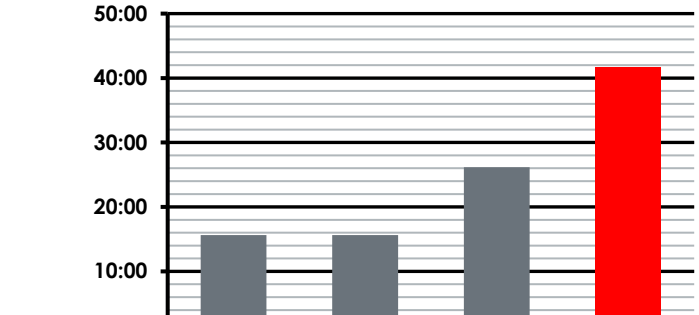
	1st Unit	2nd Unit	3rd Unit	All
90th Percentile	23:13	24:44	38:00	40:33

Figure 96: TLMFPD Structure Fire Order of Arrival, 2018–2020



	1st Unit	2nd Unit	3rd Unit	All
90th Percentile	11:54	13:02	17:16	19:00

Figure 97: DWFPD Structure Fire Order of Arrival, 2018–2020



	1st Unit	2nd Unit	3rd Unit	All
90th Percentile	15:38	15:38	26:10	41:37

Response Reliability

The final element of service delivery focuses on the ability of the department to provide reliable service to the community. While resource distribution, geography, and many of the other factors already discussed impact reliability, workload and call concurrency can also significantly impact it as well.

Call Concurrency

Call concurrency analyzes incidents to determine the number of incidents occurring simultaneously. As more incidents occur simultaneously, the ability of the department to have sufficient resources to respond to additional calls for service may be stressed. As illustrated below, the department's call concurrency is limited, with only 2 or fewer incidents occurring 94.02% of the time.

Figure 98: Combined Call Concurrency, 2018–2020

Concurrent Incidents in Progress	2017	2018	2019	2020	Change Over Study Period
Single Incident	70.96%	76.66%	69.95%	72.91%	1.95%
Two Incidents	22.40%	20.30%	20.74%	21.11%	-1.29%
Three Incidents	5.56%	2.74%	5.36%	4.88%	-0.69%
Four Incidents	0.93%	0.30%	1.19%	0.91%	-0.01%
Five Incidents	0.15%	0.00%	0.48%	0.17%	0.02%
More than Five Incidents	0.00%	0.00%	2.28%	0.03%	0.03%

Figure 99: TLMFPD Call Concurrency, 2018–2020

Concurrent Incidents in Progress	2017	2018	2019	2020	Change Over Study Period
Single Incident	83.42%	81.31%	79.23%	83.22%	-0.20%
Two Incidents	15.33%	17.30%	15.69%	14.82%	-0.51%
Three Incidents	1.21%	1.31%	1.97%	1.89%	0.68%
Four Incidents	0.04%	0.08%	0.50%	0.07%	0.03%
Five Incidents	0.00%	0.00%	0.23%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	2.37%	0.00%	0.00%

Figure 100: DWFPD Call Concurrency, 2018–2020

Concurrent Incidents in Progress	2017	2018	2019	2020	Change Over Study Period
Single Incident	96.54%	97.87%	92.83%	93.41%	-3.13%
Two Incidents	3.34%	2.13%	6.86%	6.26%	2.92%
Three Incidents	0.12%	0.00%	0.32%	0.33%	0.21%

Workload (Unit Hour Utilization)

Workload is a measure of the volume of work for individual units. This is important to analyze and monitor to ensure that demand for service does not rest too much on any one unit. As workload for those units increases, they are not available to respond to additional calls for service and their service area must receive apparatus from other zones. This may negatively affect response time performance as well as create undue stress on personnel.

While there are limited formal performance measures to use as a target measure, in May 2016, Henrico County (VA) Division of Fire published an article after studying their department's EMS workload[5]. As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for their department. The next figure is a summary of the findings as it relates to commitment factors.

Figure 101: Commitment Factors as Developed by Henrico County (VA) Division, 2016

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

For purposes of this analysis, those units that are cross-staffed by the same personnel were combined into a single unit. Each combined single unit encompasses all incident responses by each of the individual component units. The analysis also is based on all units being in-service 24-hours/day, 365 days/year. As illustrated in the figure below, none of the department's current resources are at a concerning level of workload. Leadership should continue to monitor to quickly identify any changes that may impact service reliability.

Figure 102: Combined Unit Hour Utilization, 2018–2020

Unit	2017	2018	2019	2020	Change Over Study Period
Chief Officers					
2202 Battalion Chief	3.20%	3.40%	3.27%	2.68%	-0.52%
C-500 Chief	0.84%	0.07%	0.17%	0.44%	-0.40%
C-501 Chief	0.22%	0.05%	0.24%	0.07%	-0.15%
C-502 Chief	0.26%	0.00%	0.00%	2.54%	2.28%
Engines					
2211/2231/2241 Engine/Tower/Brush	3.99%	4.24%	4.21%	4.36%	0.37%
2212 Engine	3.09%	2.57%	3.16%	2.59%	-0.50%
2213/2243 Engine/Brush	4.98%	5.82%	6.35%	5.26%	0.28%
E-511 Engine	1.93%	0.69%	1.08%	1.32%	-0.62%
E-512 Engine	0.57%	0.09%	0.23%	0.25%	-0.32%
E-513 Engine	0.13%	0.33%	0.46%	0.96%	0.82%
Aerials					
L-531 Ladder	7.98%	1.64%	3.25%	2.37%	-5.61%
Medics					
M-582 Medic	2.55%	1.40%	2.06%	0.62%	-1.93%
2281 Medic	7.71%	8.60%	7.78%	7.50%	-0.21%
2282/2242 Medic/Brush	3.88%	5.40%	5.57%	4.45%	0.56%

EMERGENCY COMMUNICATIONS

Both agencies are dispatched by the same communications center. The El Paso County Sheriff operates the communications center. The center serves a population of approximately 500,000 in unincorporated El Paso County. The center provides service for 22 fire and 7 law enforcement agencies. This center dispatches all the surrounding mutual aid departments for TLMFPD and DWFPD except for the Larkspur Fire Protection District to the north and Colorado Springs Fire Department in the south. This facilitates mutual and auto-aid responses by streamlining the steps necessary to order aid. The City of Colorado Springs and the Douglas County Sheriff's Office (DCSO) communications transmit and receive calls for assistance in different ways. DCSO transferred calls by telephone line or 911 transfer. Colorado Springs center has a CAD-to-CAD transfer capability.

This center houses both the public safety answering point (PSAP) for 9-1-1 as well as the 50 law and fire telecommunicators. All telecommunicators are cross-trained to serve as 9-1-1 call takers as well as dispatchers. The center is equipped with the latest technology. The center uses the Tri-Tech computer-aided dispatch (CAD) system. It has separate power routing and a diesel power generator in case of grid failure. The center systems are redundant. There is a designated backup communications center should there be some reason to abandon or close the center.

The center's trainers are Association of Public-Safety Communication Officials (APCO) and the National Emergency Number Association (NENA) certified. They train dispatchers based on an in-house and on-the-job curriculum. All dispatchers are certified by the International Academies of Emergency Dispatch (IEMD) for medical dispatch protocols.

There is no station alerting system other than what the fire departments have put together. These systems operate as pagers on the trunked radio system. The activation of the pager then controls station audio, lighting, and other peripherals based on the individual department's needs. There is no supervision on the system which would confirm the pager activation was received at the station. TLMFPD units have automatic vehicle location (AVL) and mobile data terminals (MDT) which allows the communications center to know the unit's location and status. DWFPD does not have MDT capability and reports status by radio transmission. A representative for the communications center advised that most fire agencies subscribe to a modified "closest unit response". The CAD will recommend the home jurisdiction for a response unless CAD predicts that their response time exceeds a preset time interval and then the CAD will choose the actual closest unit. Each fire agency designs its response guidelines. ESCI recommends implementing actual closest unit response. ESCI recommends implementing a station alerting system with supervisory capability for the best service to the citizen and potentially increased points for an ISO rating.

The two agencies operate radios on the Pikes Peak Regional Communications Network (commonly referred to as the 800 MHz system) and use the same channels for communicating. However, when the transition occurs each mobile and handheld radio (probably DWFPD as there are fewer) will need to have their alias reprogrammed so the system identifies them as one agency.

Another issue that needs lead time is the planning of this transition in the center. The center's representative told ESCI that there will need to be redistricting within the CAD geographical data and changes in response directions that could take several months to implement. The Authority along with the center may need to change paging functions in CAD and within the stations.

FIRE AND LIFE SAFETY PROGRAMS

Historians quote Benjamin Franklin saying, "An ounce of prevention is worth a pound of cure." The key to a fire district's success in reducing fires, human suffering, and property loss is a robust suite of fire prevention, life safety, and education programs creating a comprehensive Community Risk Reduction Plan. The following section will analyze TLMFPD and DWFPD's current fire and life safety programs and reference national standards, along with recommendations if the two agencies were to pursue unification.

> *Implementing a successful Community Risk Reduction program brings additional resources to the effort through partnerships within the fire department as well as the community served. This community-based approach increases public safety because of the collective work with the community to understand, assess, and provide inclusive solutions to community safety issues.*[6]

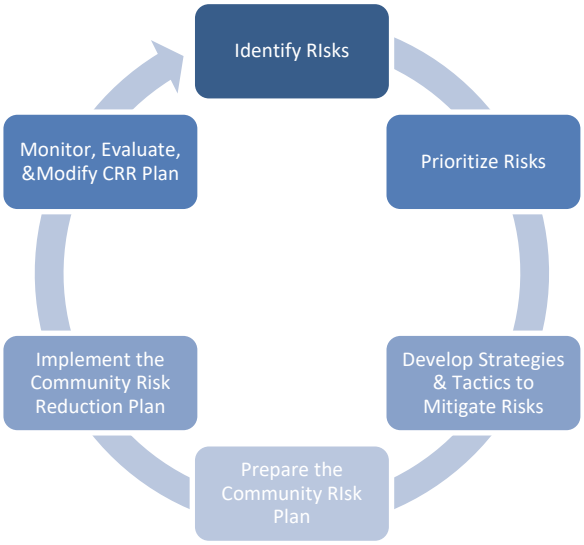
Planning and Risk Reduction

A Community Risk Reduction (CRR) plan begins with an overall five-step process that is the foundation of the overall fire and life safety strategy. According to the U.S. Fire Administration, Fire departments are uniquely positioned to know their communities better than most organizations. Firefighters and emergency medical services responders see firsthand how people live and the needs they have.[7]

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

A Community Risk Assessment (CRA) is one of the first steps in developing a CRR plan. Each community is distinctive, and an assessment process helps identify specific or unique risks. The process should evaluate residential, commercial, and industrial properties. The following graphic shows a systematic approach for completing a CRR plan.

Figure 103: Community Risk Reduction Strategy



TLMFPD and DWFPD did not have a comprehensive CRR plan for their respective jurisdictions when this study was conducted. However, TLMFPD has developed a Community Wildfire Protection Plan (CWPP) with local Homeowner Associations. A unified organization should consider expanding this CWPP and developing a CRR plan that focuses on all the risks throughout the area. These plans will build a solid foundation for the unified organization to establish its fire and life safety programs.

Fire & Life Safety Code Enforcement

One of the most effective ways to combat fire is to prevent it. A robust fire prevention program based on identified risks, applicable codes, and ordinances is vital to guard against the loss of property and life. One part of an effective prevention program begins with reviewing new construction plans and inspections during the initial construction phase. This program continues through the building process and into regular inspections throughout the jurisdiction's area. This process may continue beyond structures and into the urban-wildland interface in some organizations.

Fire Code Adoption

The planning process begins with the identification of a Fire Marshal and the adoption of a fire code. Following is the status for each department relating to the adoption of the International Fire Code (IFC).

Figure 104: Fire Code Adoption per Department

Department	Fire Marshal	Current Fire Code
TLMFPD	Division Chief Bumgarner	2015 IFC w/ amendments moving 2021 within 12 months
DWFPD	Battalion Chief Ridings	2009 IFC

As the figure above shows, there is a difference in the fire code versions adopted by each fire department. ESCI recommends that the fire code and amendments of each fire district be of the same version. TLMFPD is working with El Paso County Fire Agencies on code adoption and revisions. This group is working with external stakeholders such as the Home Builders Association and Pikes Peak Regional Building Department. They anticipate moving to a new version of the IFC within the next 12 months. ESCI considers a consistent fire code is essential.

Plans Review

TLMFPD contracts with the City of Colorado Springs for the plans review process and jointly inspects these projects during the construction phase. DWFPD contracts with Peak Consulting for the plans review process. Both agencies are involved with the planning process through third-party contracted groups. The following figure summarizes the new construction, fire protection plan review, and ancillary programs.

Figure 105: New Construction Plan Review and Inspections

New Construction Inspections & Involvement	TLMFPD	WFPD
FD consulted in proposed new construction	Yes via 3rd party	Yes via 3rd party
FD consulted on proposed occupancy changes	Yes	Yes
FD consulted on proposed tenant improvements	Yes	Yes
Perform fire & life-safety plan reviews	Yes	Yes, via 3rd party
FD sign-off on new construction	Yes, via 3rd party	Yes, via 3rd party
Charges for inspections or reviews	Yes	Yes, via 3rd party
Special risk inspections	Yes	Wildfire Mitigation
Storage tank inspections	No	No
Key-box entry program in place	Yes, Knox system	Yes, Knox system
Hydrant flow records maintained	Water District	Water District

Both agencies have similar levels of involvement in new commercial construction plan review and occupancy changes or improvements. ESCI noted that both agencies use third-party plan reviewers and inspectors. ESCI recommends that the organizations evaluate the third-party contractors to find which

contractor provides the best value for the unified organization. The district may want to consider the benefits and drawbacks of bringing this position internally after unification.

Occupancy Inspections

A successful prevention program also includes periodic inspections of non-residential occupancies paying particular attention to facilities identified as high risk and any change in occupancy use.

Annual fire code inspections within the agencies are limited to commercial occupancies and are completed as time allows. Currently, neither agency uses engine company inspections or self-inspection programs. If pursuing consolidation, increasing the quantity and frequency of fire code inspections should be considered. There are several standard methods of completing occupancy inspections on an ongoing basis. Some organizations use a self-inspection program for low-hazard occupancies that provide education on common types of dangers and violations in the occupancy and ask the owner to complete the self-inspection form and return it stating that the business corrected hazards. Those businesses that do not return the form then receive an on-site inspection. This is known as a self-inspection program and helps increase the efficiency and effectiveness of occupancy inspections.

Another method to increase the efficiency and effectiveness of occupancy inspections is to train the personnel assigned to engine companies and ambulances to perform the routine inspections on occupancy types that are non-technical in nature. If needed, an inspector from the Life Safety Division follows up to determine if business owners corrected any hazards noted by personnel. Some programs schedule reinspection only after the company has attempted a follow-up inspection without success.

Equally, some departments employ additional personnel in the Life Safety Division as inspectors who perform all the occupancy inspections and the more technical inspections. This usually requires the department to staff more inspectors to accomplish the number of inspections jurisdiction's area. There is the possibility for other innovative approaches towards inspections that meet NFPA standards and ISO requirements for credit. Should unification occur, the new organization can explore implementing one of the more common methods or a design more specific to the fire district's needs. The Community Risk Analysis should dictate the frequency of inspections.

Figure 106: Fire Inspections by Department

Department	Occupancies Inspected	Frequency of Inspection
TLMFPD	All commercial structures are inspected by Fire Marshal.	Yearly
DWFPD	Battalion Chiefs perform inspections on all commercial structures.	Yearly

Pre-Plans

At the time of the study, neither agency employed a formal pre-planning process. As a result, a combined organization will face the challenge of individuals responding to unfamiliar occupancies. The use of pre-plans can ensure a consistent response and provide an added level of firefighter safety.

Fire & Life Safety Public Education Programs

According to the United States Fire Administration, fires in the U.S. are trending downward since 2010, but deaths from fires are rising[8]. The fire department plays a significant role in communicating the importance of fire safety and prevention to the public to reverse this trend of fire deaths. Fire and life safety programs build positive working relationships while increasing community interaction between the constituents and the fire organization. Both districts have strong relationships with their communities, although the fire districts should do more to tie these relationships to fire and life safety education equally between the districts. These relationships can play a significant role in community support for additional funding or implementing new safety initiatives. In addition, increasing public education informs the community about the organization's capabilities, community risks, solutions to those risks, and future needs. The following figure is a summary of the programs offered by each.

Figure 107: Life Safety & Public Education Services

Education Services	TLMFPD	WFPD
PIO/Public Educator Assigned	Yes	Assigned to BC
911 Education Program	Yes	Yes
Exit Drills in Home (EDITH)	No	Yes
Smoke Alarm Program	Yes	Yes
Carbon Monoxide Alarm Program	Yes	Yes
Fire Safety	Yes	Yes
Injury Prevention	Yes	Yes
Fire Extinguisher Classes	Yes	Yes
Eldercare and Safety	Yes	No
Prevention Curriculum in Schools	Yes Pre-K to 1st grade	Yes
Babysitting Classes	No	Yes
CPR/First Aid Classes	Yes	Yes
BP Checks	Yes	Yes
Wildfire Defensible Space Education	Yes	Yes

Both organizations have a comprehensive public education program. These efforts must continue if unification is pursued. The opportunity to engage the public and gain support for a potential merger during the delivery of these programs can have significant benefits to the organizations and the public. ESCI noted an opportunity for improvement concerning public education data collected for planning. The ability to quantify the department's efforts towards educational events needs to be categorized, recorded, and published. This will become important as TLMFPD looks to move towards accreditation. If

unification occurs, the unified district will undoubtedly continue the accreditation efforts for the newly combined agency.

Fire Cause & Origin Investigation

Accurately determining the cause of a fire is an essential element of a fire prevention program. When intentionally set fires occur, identification and prosecution of the responsible offender is critical in preventing additional fires, injuries, fatalities, and catastrophic economic effects.

Both organizations participate in the initial determination of fire cause and origin. The use of a county investigation team provides support when needed for investigations. Specific law enforcement jurisdictions perform criminal investigations when required. Both agencies use the City of Colorado Springs for their Juvenile Firesetter programs. The following figure shows the number of certified fire investigators for each department, corresponding law enforcement agencies, and juvenile fire setter programs.

Figure 108: Fire Cause Determination & Juvenile Fire Setter Program

Department	Fire Cause Determination	Juvenile Firesetter Program
TLMFPD	One qualified investigator, EL Paso County SO, and county investigation team provides fire investigation beyond initial cause.	Fire Marshal with support from the City of Colorado Springs
DWFPD	BC and company officer initial investigations, EL Paso County SO and county investigation team provides fire investigation beyond initial cause.	Battalion Chiefs with referral to the City of Colorado Springs

With the established partnerships between the fire districts and the City of Colorado Springs, law enforcement, and the sharing of resources through a countywide investigation team, it appears that the departments have the appropriate capabilities and sound practices necessary for the determination of fire-cause and origin, and the investigation of suspicious fires. However, if unification is pursued, consideration should be given to the value of managing a portion of these duties internally.

TRAINING PROGRAMS

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

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

General Training Competencies

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

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

- The organization has a process in place to identify training needs. The process identifies the tasks, activities, knowledge, skills, and abilities required to deal with anticipated emergency conditions.
- The agency's training program is consistent with the mission statement, goals, and objectives and meets its needs.
- The training program is consistent with legal requirements for performing mandatory training.
- The agency identifies minimum levels of training required for all positions in the organization.
- A command and staff development program in place encourages the pursuit of professional credentialing.

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

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

- Facilities Training: 18 Hours
- Company Training: 192 Hours
- Officer Development Training: 12 Hours
- New Driver Training: 60 Hours
- Driver Continuing Education: 12 Hours
- Hazardous Materials Training: 6 Hours
- New Recruit Training: 240 Hours
- Pre-fire Planning: Annual Review

Even though the Insurance Service Organization (ISO) requires specific detailed required training for department personnel, training programs must go beyond simply fulfilling mandatory hours. Emergency

services training administrators and instructors must ensure that firefighters, EMS personnel, and officers are not only competent but also self-confident in the variety of skills necessary to perform effectively in high-stress situations.

Incident Command System Training

TLMFPD uses the Incident Command System and requires all employees to be trained in the National Incident Management System (NIMS). TLMFPD firefighters are required to have completed NIMS 100,200, and 700. Officers are encouraged to complete NIMS 300 and 400 training. The districts use an accountability system for tracking members during emergency operations and should make sure they are compatible with the ultimate goal of one unified system-wide method of accountability. DWFPD has implemented the Blue Card system of Incident Command. This system differs from the command system currently in use by TLMFPD. The unification of TLMFPD and DWFPD must include a common command system for all units to work under.

All data presented supports that both TLMFPD and DWFPD are meeting or exceeding all standards for training hours and covering all required subject matter. As the agencies consider unification, they should use the recommended general training competencies to guide the expansion of their training program to meet the needs of a combined larger agency. Interviews with staff from both agencies expressed concern for the continuation of their training programs without degradation in standards.

Training Administration

To function effectively, a training program must be managed. An additional element of effective administration is the development of program guidance in the form of training planning, goals, and defined objectives. Management for both agencies support training and it shows by the amount of training being conducted and coordinated throughout the year. This provides for a busy calendar of events as the geographical area can create challenges with arranging for conducting training evolutions outside of first due territories.

EMS training requirements are provided by Centura Health and internal events. The EMS training is spread throughout the year to accomplish the required continuing education requirements for recertification of Advanced Cardiac Life Support, Prehospital Trauma Life Support, and Cardiopulmonary Resuscitation. Additional trainings include advanced airway procedures.

Currently, both TLMFPD and DWFPD manage their training programs with members from operations holding the rank of Battalion Chief. TLMFPD has a full-time Battalion Chief of Training – 40 hours/week. DWFPD has an operations Battalion Chief that also manages training. Shift subject matter experts also participate in developing and delivering training content. Based on the size of each organization the needs are being met. However, as the agencies grow or unify the needs will be harder to manage based

on the increased number of members. Operational members tasked with additional administrative support functions must prioritize their daily, weekly, monthly, and yearly assignments. Operational emergency functions and daily responses can interrupt or delay the accomplishment of these scheduled tasks.

TLMFPD and DWFPD have worked to create a North Group Training Consortium to try to regionalize training needs and delivery. Both agencies use Target Solutions® to manage their agencies' training documentation and delivery of electronic needs. This allows for ease of tracking and scheduling of required ISO training hours. It is not a substitute however for the physical delivery of hands-on training. TLMFPD and DWFPD employ the use of certified fire service instructors as needed.

Training Schedules

As with many fire departments, one of the challenges at TLMFPD and DWFPD with conducting training sessions with on-duty firefighters is the necessity to maintain sufficient personnel and apparatus to ensure adequate response-emergency response capability during drills and classes. Competency-based training sessions occur frequently at both agencies. In addition to ensuring personnel have the quality knowledge, skills, and abilities necessary to deliver effective and efficient emergency services, training programs have the added effect of improving employee morale. TLMFPD and DWFPD utilize a variety of on-duty and off-duty training schedules to accomplish the required training hours set by ISO. A detailed utilization study once the agencies unify would help identify opportunities for improved training. The program should be balanced into three areas: statistically based training reflecting current call volume, special team training, and re-certification course requirements. Furthermore, the required ISO training requirements can be broken down and scheduled across the entire year to ensure compliance. The North Group Training Alliance regularly coordinates the delivery of EMS and fire continuing education hours amongst the participating agencies to make delivery easier for all to participate.

Training Facilities

The ability to train in a realistic environment is critical to developing and maintaining skills. Many of the skills necessary to be truly effective must be taught and practiced in a controlled environment allowing for skill development while ensuring that firefighters are as safe as possible. Additionally, ISO requires the regular use of dedicated training locations to gain maximum credit for Public Protection Classification scoring. Neither TLMFPD nor DWFPD currently has designated drill grounds or buildings for fireground evolutions. TLMFPD plans to develop an area next to station one for a training facility. This should resolve the current need for drill grounds.

Currently, TLMFPD and DWFPD must rely upon space at their fire stations, other publicly available locations, and the Air Force Academy. The use of these spaces is limited based upon availability at the time of need. Access to live fire training facilities comes from the Air Force Academy when available.

COVID 19 restrictions have made training at the Air Force Academy difficult. The use of non-fire department locations (i.e., business parking lots) can have a negative impact by interfering with the operations of the respective businesses. The use of available public spaces does not allow for consistency in conducting training evolutions as the availability may change on a daily or hourly basis. During site visit interviews and through the documentation provided, it is apparent that current training facilities are inadequate. There is only one designated classroom with limited seating capacity for TLMFPD and DWFPD is similarly situated.

Training Record Keeping

Training records are maintained utilizing the Target Solutions® records management system for both TLMFPD and DWFPD. The system is working well and should make the unification of the systems easier without a loss of continuity.

Training Program Goals and Objectives

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

Goals and objectives provide the foundation for an effective training program. These goals and objectives can be determined by creating a training committee of dedicated employees who are passionate about department training. An analysis of each district's ability to complete tasks and evolutions outlined in NFPA 1410, *Standard on Training for Emergency Scene Operations* will provide the basic evaluation of where to begin. Furthermore, Post Incident Analysis (PIA) review can also provide much-needed information as to weaknesses and gaps in service ability. Once these gaps are identified, the training program can be constructed to address the deficiencies.

TLMFPD and DWFPD will continue to have challenges providing adequate training as long as the staff is limited. Currently, staff from the Operations Division performs the training functions based on the current needs. If unification proceeds the agency should establish appropriate dedicated staff to provide training as well as coordinate the efforts of the training program. The required staff to accomplish this mission is determined by the jurisdiction and the goals and objectives established as well as meeting required ISO training requirements.

EMERGENCY MEDICAL SERVICES AND SYSTEM OVERSIGHT

The Emergency Medical Services and System Oversight component provides a summary of services relating to pre-hospital medical care. ESCI used focused interviews with internal and external stakeholders combined with the EMS survey to develop a comprehensive perspective of current and future EMS needs throughout the TLMFPD and DWFPD through unification.

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

Current State

TLMFPD functions as a fire-based advanced life support (ALS) emergency medical services (EMS) response system. The department staffs two ambulances. TLMFPD strives to maintain ALS providers on all first response suppression units as well as their two ambulances. However, due to staffing and limited paramedics, this is not always the case and on some days first response suppression units are BLS. This is not uncommon in the region. The fire-based EMS system is a common system utilized across the United States and is growing in usage. The advantage of the fire-based system is that TLMFPD does not have to rely on other agencies for initial first response and/or subsequent transport.

DWFPD currently provides first response ALS and BLS services with their suppression units. They contract with private ambulance service American Medical Response (AMR) to provide ALS transport services for their fire protection district. Similar to TLMFPD, they cannot always provide ALS services due to staffing and on some days only have BLS capabilities. Furthermore, they sometimes shut down Fire Station 2 because of a lack of ability to staff any services.

Emergency medical calls accounted for 51.4 percent of the calls for service to which TLMFPD responded during the calendar year 2020. Simultaneously, DWFPD responded to 41.2 percent of calls for service related to EMS. These figures are consistent with the rates realized by most agencies across the United States.

Medical Control and Oversight

EMS oversight is managed differently by TLMFPD and DWFPD. Each has individuals responsible for managing the specifics of each District's needs regarding EMS. TLMFPD uses the Division Chief of Operations with help from an EMS coordinator while DWFPD uses a Lieutenant. Both systems rely on

local, regional, and state regulations for guidance. One similarity is that neither system has a specific person who has sole responsibility for administration without being required to provide operational duties as well. This can cause disruptions in timelines for the completion of required and necessary tasks.

Both systems utilize a licensed physician, Dr. Timothy Hurtado, to serve as the Medical Director for the agency. This is beneficial as it provides continuity between systems. The Medical Director serves as the authority for TLMFPD and DWFPD to provide an emergency medical response. Both agencies utilize medical protocols for guidance. The Medical Director participates in quality assurance reviews and conducts regular interactions with TLMFPD and DWFPD crews.

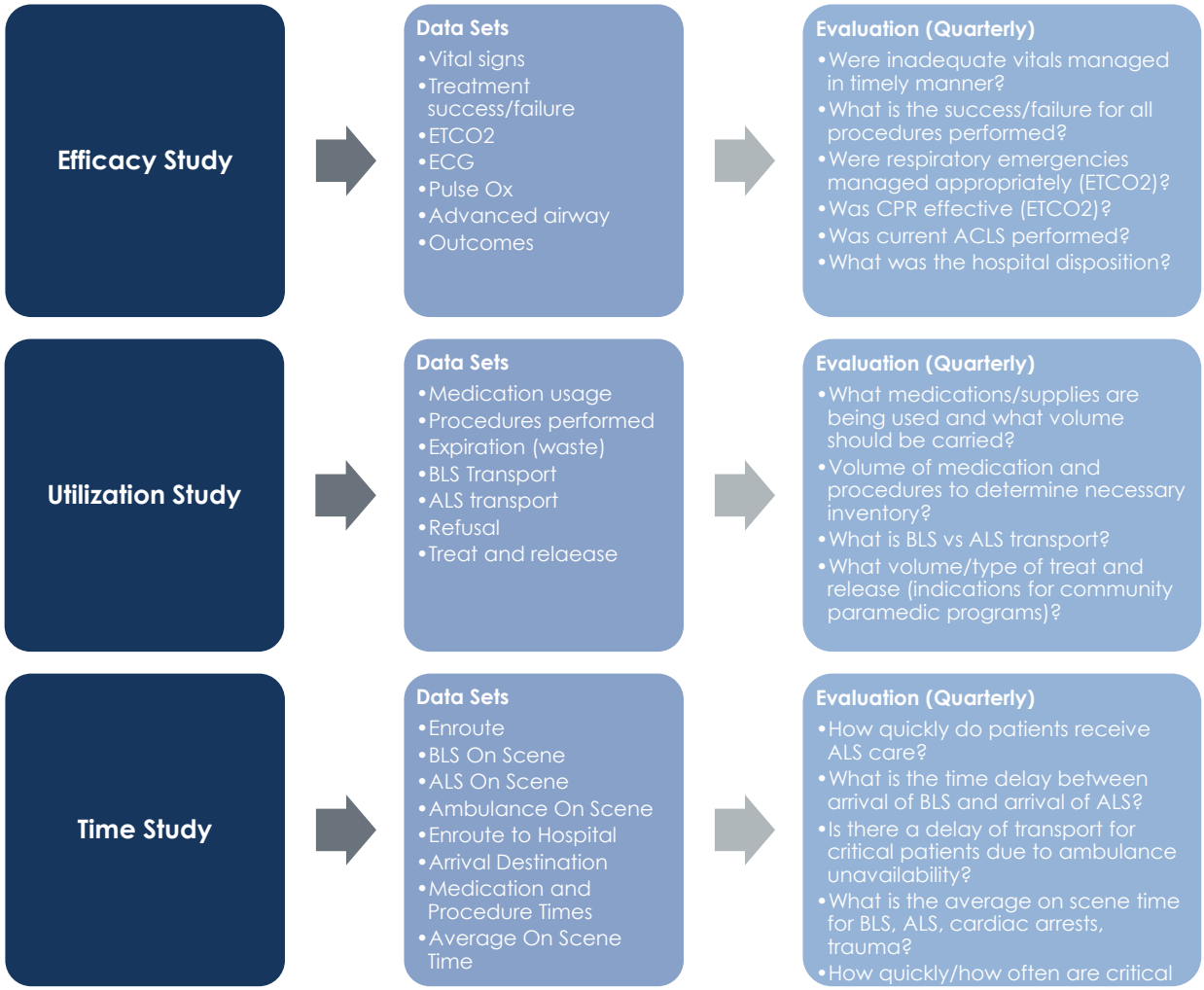
Quality Management/Quality Improvement

TLFPD and DWFPD both have a formal quality management (QM) program that requires the Training Lieutenant or EMS Coordinator to review 100 percent of its medical responses. This management program identifies improvement areas, has established criteria for system performance, and identified objectives for measurement. TLMFPD utilizes a QM committee while DWFPD does not. A QM committee can help maintain an objective review of system performance. Both agencies review 100 percent of their patient refusals. TLMFPD utilizes the EMS coordinator and DWFPD contracts with Centura Health for some of their EMS oversight needs.

ESCI recommends a thorough internal retrospective data review and corresponding quality improvement (QI) program be established during unification. This program should be managed by one individual for consistency and expanded as the organization grows. The program should be broken down into three sections. The first is a time study looking at areas to improve initial response. Second, is an efficacy study evaluating the patient care provided as it relates to national standards and best practices. The third area of evaluation is a utilization study. This study looks at opportunities for improved efficiency, inventory control, and corresponding fiscal responsibility.

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

Figure 109: Data Set and Quality Management/Improvement Criteria



Record Management and Data Collection

TLMFPD utilizes the ESO® software for patient care reporting and documentation. This software allows for easy reporting and data collection. Furthermore, it is compliant with local, state, and national required reporting requirements. DWFPD utilizes Emergency Reporting System® (ERS) which is not. The TLMFPD reporting software is integrated with the Computer-Aided Dispatch (CAD). The DWFPD ERS software is not. TLMFPD has a more robust and detailed patient care reporting and documenting system based on the fact they transport as part of their daily operations.

EMS Training and Skills Evaluation

TLMFPD and DWFPD document clinical skills for their paramedics and EMTs. This is maintained in an electronic format. Because TLMFPD is responsible for transport services they tend to monitor and document more specific measurable outcomes and skills for their members. This would include

advanced skills and success rates. For example, intubation, intravenous access attempts, and medication administration.

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

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

The standards applied to intubations can also be applied to intravenous vascular access. ESCI suggests that TLMFPD and DWFPD consider the competency definition established by CoAEMSP and establish performance measures for system paramedics that account for the fact that paramedics are performing these procedures in the field as opposed to the controlled conditions in which paramedic students perform.

TLMFPD recently demonstrated a commitment to education by applying for and receiving Colorado certification for EMR CE Group, EMT CE Group, and Paramedic CE Group. This was a collaborative effort between Wescott Fire, Black Forest Fire, Falcon Fire, and TLMFPD (parent organization). If unification is undertaken TLMFPD and DWFPD should consider a balanced EMS education program during the process. One portion of the program should reflect statistical data to illustrate areas of needed improvement. Looking for areas of improvement or opportunities (focused CE) for additional levels of patient care will tailor the continuing education process to local needs. The second portion should be to fulfill the continuing education requirements for EMS certifications. A training calendar should be established that assigns specific monthly training to a specific purpose as well as concentration on a combined system. DWFPD does not transport currently and will require some specific training to ensure system standards of performance are not compromised.

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

Figure 110: Example of Balanced EMS Training Schedule

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

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

CONSIDERATIONS WITH UNIFICATIONS

The Fire service has stood in the face of conflagration for decades. An industry that can be responsive to the ever-changing needs of the customer they serve struggles to embrace change within the industry itself. The culture of the traditional fire service can be heavily bureaucratic and steeped in traditional ways. We will look at the culture, otherwise known as "the way we do things around here,"[9] closer. We will then review considerations when attempting to unify two organizations concerning culture and change in general.

Culture

All unification efforts result in cultural change. The very fact that there is an addition of personnel at all levels across the organization means that the culture will change.

A common comparison for defining cultures is called the "cultural iceberg."[10] Meaning that what you see on the surface is not all there is. There is much more below the surface that contributes to the culture of an organization. Fire departments do an excellent job of living their espoused values day in and day out. But as we look deeper at culture, other artifacts, values, and assumptions manifest as the department's culture. Some of these indicators are:

- Uniforms are worn in public
- Fire department jargon
- Fire station atmosphere
- Hazardous work environments
- The relative number of policies
- Meeting schedules
- Disconnected work centers
- Traditional ceremonies
- Formal organizational structure
- Disconnected personally
- Unionized labor
- Public image
- Belief in Team
- Promotional desire
- Work ethic
- Completive nature
- Management theory
- Staff and management work relationship
- Communications styles
- Is there a fear of failure?
- Condition of apparatus
- Image of self

ESCI recommends that these indicators be identified early into the unification process and a deliberate plan designed to determine which indicators are beneficial for the organization and integrate those valuable cultural artifacts.

Why Change Fails

John Kotter, Professor of Leadership at the Harvard Business School, states that there are eight main reasons why transformations fail.[11] These reasons are:

- Not establishing a significant enough sense of urgency
- Not creating a powerful enough guiding coalition
- Lacking a vision
- Under communicating the vision by a factor of ten
- Not removing obstacles for the new vision
- Not systematically planning for and creating short-term wins
- Declaring victory too soon
- Not anchoring changes in the organization's culture

A few of these critical factors in change are discussed below.

Sense of Urgency

Establishing a sense of urgency is essential to the change process. The ability to get momentum for change to begin takes a large amount of effort. Without this urgency, personnel struggle to see the need for change, and without need, cooperation can be challenging to achieve. There are several reasons that organizations fail during this phase of implementing change. First, leaders often underestimate the amount of effort it takes to drive change in organizations. Second, leadership overestimates that the sense of urgency that has been communicated well enough. Third, the lack of patience and the attitude of "enough with the planning let's get moving on this." The last is, leadership becomes paralyzed with the thoughts of the potential drawback of the change. It is crucial to create a clear sense of urgency with a transparent, concise, and all-inclusive description of the issues at hand. This will create motivation and cooperation in the efforts to drive change. Even though the urgency relays the need to hurry, it is essential to measure momentum and move deliberately, creating a balance of forward movement and not becoming stuck in "analysis paralysis."

The Right Team

Creating a powerful guiding team is vital in unifications. Individuals with suitable leadership capacity, credibility, and connections from up and down the organization's hierarchy should make up the team. Personnel from all ranks, especially the people who have been in the organizations for many years and

personnel viewed as influential by their peers, need to be part of the guiding team. In addition, key leadership roles must be involved, and those that are looked at for the department's guidance. All these individuals' buy-in is critical to show that change is a priority from top to bottom in the department.

The guiding team needs to anticipate issues and engage with stakeholders about concerns before they even happen. There is going to be some level of resistance to change in every unification effort that departments attempt. Creating a sense of urgency with the right team driving unification efforts can help move these aside.

Communication

It is difficult for individuals to understand how they can truly make a difference in the organization. Giving timely and honest information about their organization is critically important for them to connect the dots. Communicating the vision and being transparent in critical performance criteria, like economic sustainability, are key to understanding the why, the what, and the how of change. Fire Departments commonly fail in communications, and it will kill the desire to make the change happen. Often departments think there is a clear, broad-based understanding of the unification vision. However, it turns out that only a very small group of personnel understands the reasons for the change, and the message gets lost in translation. This creates an absence of gut-level buy-in[12]. Considering that change will have a personal connection to everyone, this connection will be different for each person. A best practice is to communicate through various techniques, like in person, video, and written media. Most of all, over-communicating is critical. Most leaders vastly underestimate how many repetitions it takes for a message to be understood.

Short-term Wins

Handling easier decisions during the initial stages of the partnering process is a good idea. Using these more manageable tasks to demonstrate successes keeps the sense of urgency up and ensures that people do not become burned out. The major concerns with unification projects are personnel issues and organizational burnout. These projects can be a heavy lift for organizations and ensuring that personnel who already have a full workload do not become overworked during the 12- to 18-month period is critical. Building from easier tasks like deciding on uniforms, schedules, and shift start times and moving to more complex decisions like organizational structure and benefits packages helps create momentum.

The departments should approach change by looking at what's working well within the organizations. This method is contrary to how the fire service generally approaches situations. Usually, emergency services look to solve and fix problems, not expand on successes. However, by developing what is working well from each department and combining these, the level of positivity remains high. Positivity's effect on individuals and organizations is an excellent method to ensure that change is successful and long-lasting.

Summary

The fact is that no matter how well one plans for unification, it is still a messy process. Issues arise that were unforeseen, or circumstances change that require adjustments in plans. The key is to construct a program that has a clear vision and an undertone of urgency. Over-communicating what the planned change honestly means for the individuals helps create a sense of belonging and allows the individual to see how they fit to complete the overall vision. Make sure that every success is celebrated and communicated to keep the interest high and momentum moving forward. Embed any cultural changes into the fabric of the new organization to ensure that people and the organization do not revert to what is easy or past practices.

PARTNERING STRATEGIES

General Partnering Strategies

Potential advantages for partnering are varied depending on the agencies involved. The advantages include shared growth potential, shared overhead costs, long-term sustainability, shared resources, depth of response capability, more robust special operations capability, potential savings due to economies of scale, and even more political capabilities. General partnering strategies fall in a range from remaining autonomous to the creation of a new organization. ESCI explains these strategies in greater detail following this overview.

To evaluate the opportunities for cooperative efforts effectively, a basic understanding of the methods for collaboration available to DWFPD and TLMFPD are considered. Due to the preferred options available in this unification opportunity, ESCI has limited the discussion to those options considered desirable and viable. The following alternatives will be evaluated and discussed:

- Maintaining the Status Quo
- Forming a new fire district
- Inclusion into one district
- Fire Authority

Status Quo

This is a do-nothing option. While typically viewed negatively, in some cases the best action is no action. In this case, maintaining the status quo means that certain issues will need to be addressed. The participating agencies remain as they are today, as neighboring agencies that respond collaboratively with each other for assistance and collaborate as is their current practice but remain independent.

The advantages of this approach are that it is the easiest option to implement and creates the least amount of work or stress on the organizations. Maintaining the status quo also maintains local control. That is, the currently elected boards continue to oversee their agencies as their electorates desire, without the complication of considering the views of a different or expanded constituency.

The disadvantages of this approach are that the opportunities for efficiency (either financial or service level) through greater collaboration are not realized, and some duplication and overlap continue. In today's environment, taxpayers typically hold their elected officials accountable for delivering a quality level of service at an affordable rate and expect creative thinking to solve problems or achieve those ends. While "maintaining the status quo" is easy and involves the least amount of impact on the agencies, it can also be one of the riskier decisions to make politically.

In this situation, the long-term sustainability of the entities must be considered. According to the five-year forecast analysis for DWFPD shows a slightly decreasing contribution to the annual ending balance. This analysis also does not consider any apparatus replacement or facilities improvement.

Fire District Options[13]

There are several options for the two fire districts to combine into one district. The two that may be of interest are the legal consolidation and the inclusion-exclusion methods.

A merger is a complete combining of the participating fire districts into one agency. One or more fire districts are absorbed into and become part of the surviving district. There are two types of mergers: a legal consolidation and a fire district-to-fire district transfer, otherwise known as an inclusion-exclusion merger. Colorado Revised Statutes Title 32, Section 32-1-102, Subsection (4), Legislative declaration states:

> *The general assembly further declares that it is the policy of this state to provide for and encourage the consolidation of special districts and to provide the means therefore by simple procedures in order to prevent or reduce duplication, overlapping, and fragmentation of the functions and facilities of special districts; that such consolidation will better serve the people of this state; and that consolidated districts will result in reduced costs and increased efficiency of operation.*

In other words, the Colorado legislature has determined that combining agencies for greater efficiency is good government and has developed mechanisms to encourage agencies to capture those opportunities for efficiency.

Legal Consolidation

There exists a process for blending the two fire districts into one consolidated district within the Colorado Revised Statutes CRS 32-1-602. A pre-consolidation agreement created by the districts should define the expectations for the resulting merger. One district passes a consolidation resolution proposing the consolidation because "specified services of each of the districts may be operated effectively and economically as a consolidated district and that the public health, safety, prosperity, and general welfare of the inhabitants of the special districts initiating the consolidation will be better served by the consolidation of such districts or services."

The resolution should specify the services offered by the consolidated district, the name of the consolidated district, whether there will be five or seven directors, and other special conditions including a time limit for the other district(s) to approve (not to exceed 6 months). The other board(s) passes a concurring resolution agreeing to the consolidation. These are filed with the court which schedules a hearing to determine the legality and whether it is in the public interest to form a consolidated district. If

the court determines that the filing is in order, it will set an election within each district for approval. Approval by a majority of eligible voters within each of the special districts establishes the consolidated district.

The organizational board (members of consolidating boards) selects the board members who will be on the new board and sets terms based on the length of terms for which they have been elected. The remaining board members may serve on an advisory board until the end of their term.

The advantages of a legal consolidation are that it is permanent, it creates only one layer of government, it reflects citizen buy-in (if approved), it can establish director wards, and it can establish a 7-member board. Disadvantages include requiring an election, it may require the Board of County Commissioners' approval, it cannot include municipalities (as partners), and it is more expensive than a fire district-to-fire district merger or Fire Authority formation. Having a consolidation election requires increased costs for the election and the informational campaign, to make sure the public is fully aware, is much more challenging, particularly if there is an opposing element that may not be well-informed of the issues.

Exclusion/Inclusion (Merger by Inclusion)

A simpler method of a merger is allowed by Colorado law and can be used if the districts' mill levies are equal at the time of the exclusion and inclusion. The two district boards approve an Intergovernmental Agreement (IGA) that defines the expectations of both parties. The absorbing district approves a resolution that agrees to include all the properties from the other district. The district ultimately being dissolved creates a resolution that agrees to exclude the properties in the district so that the properties can be included in the absorbing district. Both districts file a joint request for the exclusion-inclusion with the District Court. The Court will issue an Order of Exclusion and Inclusion. After the process is complete the district, with all property excluded, files to dissolve the district. Legal counsel advises that two or three board members' residences should remain in the dissolving district to ensure eligible electors serve as board members and vote in the dissolution election.

All assets would become the merged district's assets and financial responsibilities, such as contracts and pensions unless defined otherwise and agreed to prior. Bonded indebtedness would remain with the properties within the originating district and not be assumed by the greater taxpayers.

The advantage of the exclusion-inclusion model is that it is permanent, creates only one layer of government, taxes either decrease or stay the same, does not require Board of County Commissioner approval, is relatively simple, and does not require a vote of the districts' citizens if there is no tax increase to any taxpayers. Even if not conducting an election, it should still be proceeded by an informational campaign so that as many citizens understand the process as possible.

Fire Authority

Another option exists to begin operating as one entity. The Colorado Constitution Article XIV, Section 18(2)a, and the Colorado Revised Statutes 29-1-203 both allow for the provision of services through a cooperative agreement between governmental jurisdictions. Under these provisions, two or more entities may provide a service that they are empowered to provide as a separate entity. This process is often used in situations where the two or more participating governments differ in type and revenue sources or where governments have differing rates of taxation. An example of the former is a municipality (sales tax funding) and a special district (property tax revenues) cooperating. An example of the latter is two special districts having differing mill levies.

In the Authority model, the partnering governments fund through some formula the provision of services. The Authority can contract back for employees from an agency (i.e., one agency has all the employees) or all the employees are transferred to the new Authority. Obligations and assets owned by the governments may be transferred to the Authority. Contracts also can be assigned to the Authority which operates the services for the cooperating governments.

Like any other type of significant consolidation, the formation of a fire authority requires careful planning. Because the fire authority creates a new entity, there is an added layer of complexity to the planning. The new entity will need to register with the Internal Revenue Service (IRS), establish new accounts with the County and vendors, contracts will need to be assigned and negotiated, labor agreements need to be negotiated, and payroll systems may need to be re-established, etc. In other words, the formation of a new entity can be incredibly time intensive and attention to detail is critical.

Authorities can be temporary until mill levies can be equalized to transition into one district or continue to operate indefinitely. The funding formula can be set by contract and contributions determined by a variety of methods. Often these formulas are determined by service demand or assessed property valuation within the respective government or even a combination of the two.

The ownership or transfer of ownership of capital assets is not prescribed by law and will be determined by the pre-consolidation agreement. Although ownership of facilities and equipment will most likely be transferred to the newly formed fire authority, the responsibility for bonded indebtedness for capital assets will remain that of the originating agency until the debt is satisfied.

The Authority model is useful as described above where taxation levels or methods differ. It can be an intermediate step toward legal consolidation or a fire district-to-fire district merger, it does not require an election, it is customizable to meet unique needs, it may be less expensive, it may be quicker to accomplish, and it can include municipalities. The disadvantage is that Authorities can be dissolved relatively easily by a vote of one board or council. Depending on the complexity of the Authority, it could

be exceedingly difficult for staff and legal to unwind back to separate entities again. An Authority does not have taxing capability, creates an extra layer of government, and is subject to non-appropriation. The pre-existing boards remain for taxation purposes and to appropriate the money that is provided to the Authority to fund the operations. This creates some level of administrative duplication and adds complexity for the Fire Chief, who must spend a lot of time working with each of the boards.

Specific Partnering Options

In discussion with the Fire Chiefs and board representatives, ESCI determined that the status quo is not the desired option. There are reasons why this option is not desirable. The two agencies have considered the options and are ultimately desiring to create a unified department.

Probably the most time-efficient process that the entities can take is the formation of a Fire Authority. This provides for a singular operational organization with disparate districts, boards, and taxation levels. The existing fire boards would continue to provide direction to their representatives and approve the annual district budget, certify a mill levy, and appropriate funds to the Authority. While the Authority Board is the decision-making body for the Authority, it is the responsibility of the representatives from each board to keep the separate governing bodies updated.

DWFPD functions with a two-tiered mill levy due to the underlying district and an overlaid sub-district. The subdistrict exists ostensibly because of the differing levels of service. This is because the enclave area surrounded by the City of Colorado Springs is remote from the DWFPD fire stations making it difficult to provide the same level of service from those stations. The difference between the base district and the overlaying sub-district is discussed in more detail in several sections of this report. Changes to this dual-layer taxation will require some time and effort to remove the sub-district and come to one mill levy. The Authority model provides the time to do that in preparation for an inclusion/exclusion process.

Ultimately, the goal is to operate as one fire district. To do this, it is possible to use the exclusion/inclusion option. WDFPD would exclude properties with TLMFPD including those properties into the district. To do this without an election the resulting mill levy would have to be at the lowest level so that there are only taxation reductions and no increases. Currently, the lowest mill levy is the DWFPD District's 7 mills. This would not result in sufficient revenues to operate the district. Therefore, the DWFPD needs to take steps to come to one mill levy.

Both the formation of an authority or moving two entities into one district requires more rigorous legal guidance than can be offered in this report, therefore ESCI recommends that the two entities consult an attorney for legal guidance.

FISCAL FORECASTS

ESCI developed two forecasts of revenues and expenditures for the next five years. The first analyzes both districts using the assumptions that assessed values continue as per trend analysis and inflation is projected for expenditures and capital expenditures as provided by each district. The second forecast assumes the formation of an Authority with the combined revenue and expenditures and a capital replacement schedule for both districts. The assumptions for revenues and operating expenditures are the same for both forecasts.

The first analysis is to assess the financial sustainability of each district on its own. The forecast is based upon historical actual revenues and expenditures and informed assumptions about how those revenues and expenditures will change in the future. The key assumptions used in the forecast are presented in the following discussion by the forecast results and selected metrics.

This scenario has been prepared for stakeholder consideration. This is considered a status quo service level scenario meaning there are no new positions to add and comparative year-over-year growth assumptions in revenues and expenses with anticipated future needs in capital improvements.

Forecast 1 for TLMFPD

The following charts show the results of a status quo forecast with anticipated increases in assessed valuation at 18.4 mills.

Revenue/Resource Inputs

Figure 111: Financial Revenue Assumptions for TLMFPD

Financial Resources by Type	Assumptions
Assessed Value	Trend Analysis of Actual Value for 2016 to 2022 Times AV Rate 29%, 26.4%, and 6.95% as per State*
Levied $	Mill Levy times Av divided by 1000
Collection Rate	100%
Mill Levy Rate	18.4 Mills
Beginning Fund Balance	Prior Year Ending Fund Balance
Property Taxes	AV/1000 times Mill Rate plus an assumed fee of $7,500 for Palmer Lake
Specific Ownership Tax	Constant $950,000
Impact Fees	Constant $125,000
Interest	Calculated as 1/2% times Average Annual Balance for each year
Ambulance Revenues Plus COEMS Supplement	Increase by the Average Annual Increase 6.33%
Wildland	Not Projected - Income Would be Offset by Expenditures
Grants	Not Projected - Income Would be Offset by Expenditures
Miscellaneous	Constant $17,500
Grand Total Revenues	Sum of all Projected Revenues

*The categories of the multi-family residential, lodging property, and renewable energy property were not separated for the 26.4 percent ratio as the information was not available.

- Property and specific ownership taxes:
  - Property taxes. Assessed values have been projected using the Trend Function. The calculation uses the historical data of 2016 to 2020 to create a projection for each year. This calculation was applied to the actual values of each category of property (i.e. Commercial, Residential, Agricultural, etc.) then the values of each category were multiplied by the ratio for that category of property to calculate the assessed values (i.e.29%, 26.4%, or 6.95%). The property tax income is subject to the current mill rate and a collection rate of 100%.
  - $7,500 is added to the property tax revenue for the Palmer Lake fee.
  - Specific ownership taxes have been forecast at a constant rate of $950,000
- Impact Fees: Constant $125,000.
- Ambulance revenue is projected using the average annual increase from 2016 to 2020 or 6.33%.

- Wildland revenue: Constant $50,000.
- Other Revenue Sources:
  - The forecast assumes that Miscellaneous revenue will be a constant of $16,500 which includes $4,000 for Fire Inspection Fees.
  - The forecast does not anticipate any grant funding.
  - Interest is calculated based on the average of the Beginning and Ending Fund Balance divided by 2, times the assumed interest rate of ½%.
- Capital Reserve:
  - General Fund transfers into a Capital Reserve have been made in the last few years. Based on the Capital Replacement Schedule from TLMFPD; a contribution of $256,284 per year is being projected in later scenarios

Expenditure Inputs

Figure 112: Financial Expenditure Assumptions TLMFPD

Financial Expenditures by Type	Assumptions
Treasurers Fees	1.5% of Property Taxes levied
Wages Benefits	Increased by 5% per year
Administration Expense	Increased by 10% per year
Fire Operations	Increased by 4% a year
Fire Prevention	Increased by 4% a year
Medical	Increased by 4% per year
Vehicles	Increased by 5% per year
Communications	Increased by 4% a year
Building and Grounds	Increased by 5% per year
Total Lease Payments	Total of principal and interest for 3 leases plus any new leases issued within Study Period
Transfer to Capital Reserve	Annual contribution to cover capital replacement schedule
Total Capital Expenditures	From the Capital Replacement schedule
Impact Fee refunds	Nothing Budgeted unknown
Grand Total Expenditures	Total of all Expenditures
Change in Fund Balance	Difference between Revenues and Expenditures
Ending Fund Balance	Beginning Fund Balance plus the change in Fund Balance
Ending Capital Reserve Fund	Previous Years Ending Fund Balance Plus current years contribution, Less purchases plus Interest at 1/2% on Average Balance

- Wages and Benefits:
  - For purposes of this forecast, it is assumed that the wages will increase by 5% per year.
  - Forecast uses a 10% increase each year for benefits.
- Other Service Charges:
  - The forecast assumes an average annual increase of 4%.
- Materials and Supplies:
  - The forecast uses an annual increase of 4% for materials and supplies.
  - Any costs involving energy are increased at 5% - Vehicles and Utility costs which is part of Building and Grounds.
- Transfer into Capital Fund:
  - Transfers to the Capital Reserve are projected at $400,000 per year to cover the cost of scheduled replacements.
- General Fund Capital Outlay:
  - The forecast for all scenarios is from the TLMFPD projected replacement schedule.
  - Utilizing ESCI Replacement Schedule using TLMFPD criteria for the replacement for the combined scenario.
- Debt Service:
  - The forecast continues the lease payments on the current outstanding leases and any new leases projected.

Figure 113: Scenario—Revenue Projections TLMFPD

Financial Resources by Type	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Assessed Value	$502,228,120	$587,689,930	$587,807,913	$624,783,056	$661,798,409	$698,774,038
Levied $	$9,240,997	$10,813,495	$10,815,666	$11,496,008	$12,177,091	$12,857,442
Collection Rate	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Mill Rate	18.40	18.40	18.40	18.40	18.40	18.40
Beginning Fund Balance	$8,489,218	$8,104,945	$10,053,309	$12,315,029	v14,186,326	$17,225,342
Property Taxes	$9,247,897	$10,820,995	$10,823,166	$11,503,508	v12,184,591	$12,864,942
Specific Ownership Tax	$900,000	$950,000	$950,000	$950,000	$950,000	$950,000
Impact fees	$125,000	$125,000	$125,000	$125,000	$125,000	$125,000
Wildland Deployments	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Interest	$20,000	$45,396	$55,921	$66,253	$78,529	$93,380
Ambulance Revenues Plus COEMS Supplement	$1,080,000	$1,148,364	$1,221,055	$1,298,348	$1,380,534	$1,467,921
Proceeds from Debt Financing	-	-	$1,575,000	$1,025,000	-	-
Miscellaneous	$16,750	$16,500	$16,500	$16,500	$16,500	$16,500
Total General Fund Revenues	$11,439,647	$13,156,255	$14,816,642	$15,034,609	$14,785,153	$15,567,744

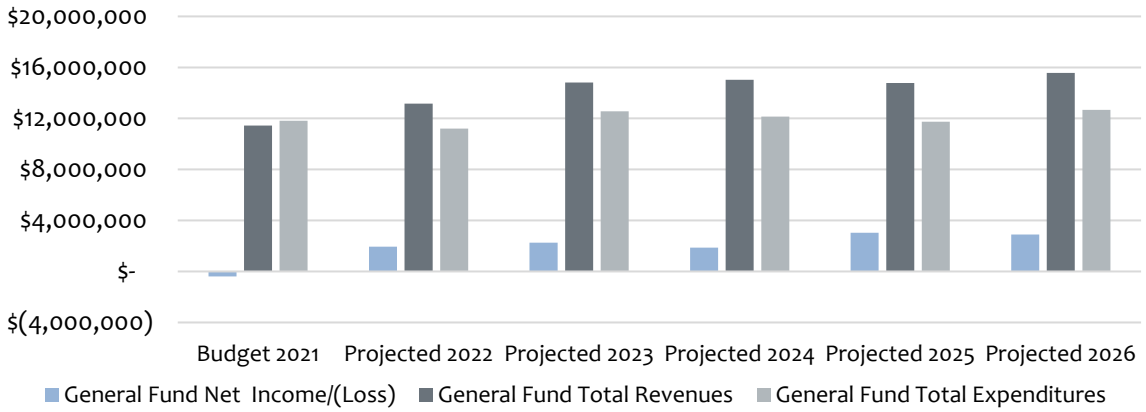
Figure 114: Status Quo Scenario - General Fund Expenditures Projections TLMFPD

Financial Expenditures by Type	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Treasurer's Fees	$138,606	$162,202	$162,235	$172,440	$182,656	$192,862
Salaries and Benefits	$7,229,398	$7,665,040	$8,129,882	$8,626,125	$9,156,155	$9,722,559
Administrative Expenditures	$453,125	$471,250	$490,100	$509,704	$530,092	$551,296
Fire Operations	$291,475	$303,134	$315,259	$327,870	$340,985	$354,624
Fire Prevention	$15,000	$15,600	$16,224	$16,873	$17,548	$18,250
Medical	$89,000	$92,560	$96,262	$100,113	$104,117	$108,282
Vehicles	$179,750	$188,738	$198,174	$208,083	$218,487	$229,412
Communications	$234,700	$244,088	$253,852	$264,006	$274,566	$285,548
Building and Grounds	$188,664	$196,704	$205,089	$213,836	$222,961	$232,478
Lease Interest	$74,131	$67,201	$59,987	$52,476	$44,656	36,515
Lease Principal	$217,071	$178,258	$185,473	$192,984	$200,804	$208,945
Total Debt Service	$291,202	$245,459	$245,460	$245,460	$245,460	$245,460
New Debt Service			$121,154	$198,841	$198,921	$198,921
Capital Expenditures	$2,713,000	-	-	-	-	-
Facilities		$1,015,000	$100,000	$100,000	$100,000	$100,000
Equipment		$76,016	$11,230	$49,961	$154,190	$11,924
Fleet		$532,100	$2,210,000	$1,105,000	-	$415,000
Grand Total Expenditures	$11,823,920	$11,207,891	$12,554,922	$12,138,312	v11,746,138	$12,666,615
Revenues	$11,439,647	$13,156,255	$14,816,642	$15,034,609	$14,785,153	$15,567,744
Ending Fund Balance	$8,104,945	$10,053,309	$12,315,029	$14,186,326	$17,225,342	$20,126,470

The fund balance increases by $12,021,525 from the 2021 Budget to 2026 or 131%.

Forecast Results

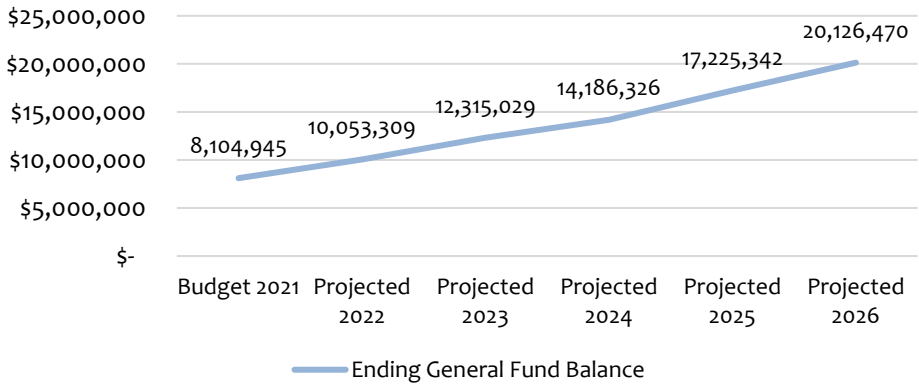
Figure 115: Status Quo Scenario - Net Income, Revenues, and Expenditures TLMFPD



Employing the assumptions presented above, General Fund revenues are expected to increase from $11,439,647 in FY 2021 to $15,567,744 in FY 2026 at an average annual rate of 7.22% for the forecast period. Expenditures are expected to increase from $11,823,920 in FY 2021 to $12,666,615 in FY 2026. The reason why the difference is small is that the $2,713,000 of capital is budgeted for 2021. As shown in

Figure 115, revenue exceeds expenditures for the projected years 2022 – 2026. The following graph shows the General Fund Ending Balance.

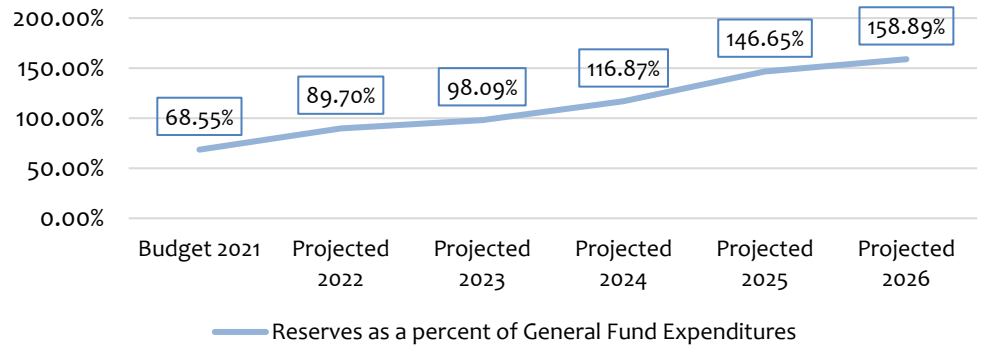
Figure 116: Status Quo-General Fund Ending Balance TLMFPD



The following figure shows more clearly the relationship between the ending fund balance and expenditures. The district is in an excellent position for fund balance. The graph shows the ending fund balance as a percent of General Fund expenditures. The requirement for a three percent emergency reserve can easily be met. From a policy standpoint, 25% is considered an ideal percentage when

developing a reserve policy. In fact, the GFOA considers 16 percent to be the minimum baseline level that a government should maintain.[14]

Figure 117: Status Quo Scenario—Ending Balance as Percentage of General Fund Expenditures TLMFPD



Forecast 1 for DWFPD and Northern Subdistrict

The following charts show the assumptions and results of a status quo forecast with anticipated increases in assessed valuation at the designated mill levies for the main district and the subdistrict.

Revenue/Resource Inputs

Figure 118: Revenue Assumptions for DWFPD and Northern Subdistrict

Financial Resources by Type	Assumptions
Assessed Value	Trend Analysis of Actual Value for 2016 to 2022 Times AV Rate 29%, 26.4% and 6.95% as per State *
Levied $	Mill Levy times Av divided by 1000
Collection Rate	100%
Mill Levy Rate	7.0 Mills WDFPD and 14.9 Mills Northern Subdistrict
Beginning Fund Balance	Prior Year Ending Fund Balance
Property Taxes	AV/1000 times Mill Rate plus an assumed fee
Specific Ownership Tax	Constant $256,000
Interest	Calculated as 1/2% times Average Annual Balance for each year
AMR Response	Not Projected - No Revenue Expected
Wildland	Projected at the Actual Average over 2016 to 2020 -$110,000
Grants	Not Projected - Income Would be Offset by Expenditures
Miscellaneous	Constant $1,000
Grand Total Revenues	Sum of all Projected Revenues

*The categories of multi-family residential, lodging property, and renewable energy property were not separated for the 26.4 percent ratio as information was not available.

- Property and specific ownership taxes:
  - Property taxes. Assessed values have been projected using the trend function. The calculation uses the historical data of 2016 to 2020 for DWFPD and 2018 to 2020 for the Northern Subdistrict to create a projection for each year. This calculation was applied to the actual values of each category of property (i.e. Commercial, Residential, Agricultural, etc.) then the values of each category were multiplied by the ratio for that category of property to calculate the assessed values (i.e. 29%, 26.4 or 6.95%). The property tax income is subject to the current mill rate and a collection rate of 100.00 percent.
  - Specific ownership taxes have been forecast at a constant rate of $256,000.
- AMR Response is projected as zero. No revenue is expected to be received.
- Wildland revenue:
  - Wildland revenue is being projected at the average of 2016 – 2020 or $110,000.
- Other Revenue Sources:

- The forecast assumes that Miscellaneous revenue will be a constant of $1,000.
- The forecast does not anticipate any grant funding.
- Interest is calculated based on the average of the Beginning and Ending Reserves divided by 2 times the assumed interest rate of 0.5%.

- Capital Reserve:
  - General Fund transfers into a Capital Reserve have not been made due to revenue issues.

Expenditure Inputs

Figure 119: Financial Expenditure Assumptions DWFPD and Northern Subdistrict

Financial Expenditures by Type	Assumptions
Treasurers Fees	1.5% of Property Taxes levied
Wages Benefits	Increased by 5% per year Increase 10% per year for benefits
Administration Expense	Increased by 10% per year
Fire Operations	Increased by 4% a year
Fire Prevention	Increased by 4% a year
Medical	Increased by 4% per year
Vehicles	Increased by 5% per year
Communications	Increased by 4% a year
Building and Grounds	Increased by 5% per year
Total Lease Payments	There are no scheduled lease payments
Transfer to Capital Reserve	There is no replacement schedule
Total Capital Expenditures	There is no replacement schedule
Grand Total Expenditures	Total of all Expenditures
Change in Fund Balance	Difference between Revenues and Expenditures
Ending Fund Balance	Beginning Fund Balance plus the change in Fund Balance
Ending Capital Reserve Fund	Interest at 1/2% on Average Balance

- Wages and Benefits:
  - For purposes of this forecast, it is assumed that the wages will increase by 5% per year.
  - Forecast uses a 10% increase each year for benefits.
- Other Service Charges:
  - The forecast assumes an average annual increase of 4%.
- Materials and Supplies:

  - The forecast uses an annual increase of 4% for materials and supplies.
  - Any costs involving energy are increased at 5% - Vehicles and Utility costs, which is in Building and Grounds.

- Transfer into Capital Fund:
  - There are no transfers into a capital reserve fund as there is not revenue for a replacement schedule.

- General Fund Capital Outlay:
  - There are not any scheduled capital expenditures due to the lack of funds to make purchases.

Forecast Results

The Status Quo projection has a problem maintaining a robust growing fund balance.

Figure 120: Scenario—Status Quo Forecast, Trend Analysis Assessed Value Projections DWFPD and Northern Subdistrict

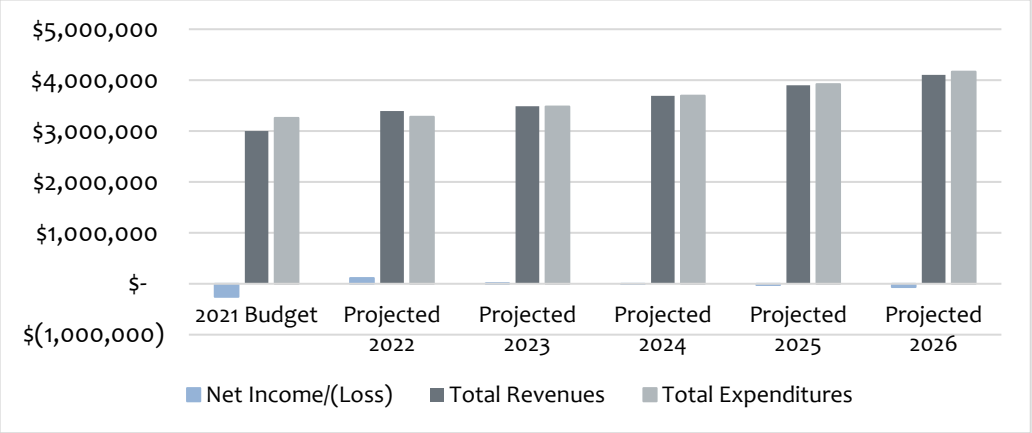
Financial Resources by Type	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
AV - WDFPD	$128,443,600	$145,994,680	$151,287,519	$ 161,550,142	$ 171,812,813	$ 182,077,807
Mill Rate - WDFPD	7.00	7.00	7.00	7.00	7.00	7.00
AV - Northern Subdistrict	$118,788,090	$134,170,870	$138,016,140	$146,956,099	$155,896,134	$164,836,048
Mill Rate - Northern Subdistrict	14.90	14.90	14.90	14.90	14.90	14.90
Levied $	$2,669,048	$3,021,109	$3,115,453	$3,320,497	$3,525,542	$3,730,602
Collection Rate	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Beginning Fund Balance	$1,221,418	$965,000	$1,077,101	$1,085,161	$1,084,361	$1,059,987
Property Taxes	$2,669,048	$3,021,109	$3,115,453	$3,320,497	$3,525,542	$3,730,602
Specific Ownership Tax	$256,000	$256,000	$256,000	$256,000	$256,000	$256,000
Wildland Deployments	$50,000	$110,000	$110,000	$110,000	$110,000	$110,000
Interest	$300	$5,105	$5,406	$5,424	$5,361	$5,140
AMR Response	$25,000	-	-	-	-	-
Grants	-	-	-	-	-	-
Miscellaneous	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Total Revenues	$3,001,348	$ 3,393,214	$3,487,859	$3,692,921	$3,897,903	$4,102,742

Figure 121: Status Quo Scenario - General Fund Forecast DWFPD and Northern Subdistrict

Financial Expenditures by Type	2021 Budget*	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Treasurers Fees	$40,036	$45,317	$46,732	$49,807	$52,883	$55,959
Wages Benefits	$2,681,735	$2,850,580	$3,031,343	$3,224,968	$3,432,479	$3,654,993
Administration Expense	$92,495	$96,195	$100,043	$104,044	$108,206	$112,534
Fire Operations	$82,000	$85,280	$88,691	$92,239	$95,928	$99,766
Fire Prevention	$2,500	$2,600	$2,704	$2,812	$2,925	$ 3,042
Medical	$4,000	$4,160	$4,326	$4,499	$4,679	$4,867
Vehicles	$76,000	$79,800	$83,790	$87,980	$92,378	$96,997
Communications	$71,000	$73,840	$76,794	$79,865	$83,060	$86,382
Building and Grounds	$41,400	$43,342	$45,376	$47,506	$49,738	$52,075
Total Lease Payments	-	-	-	-	-	-
Transfer to Capital Reserve	$166,600 -	-	-	-	-	-
Total Capital Expenditures	-	-	-	-	-	-
Grand Total Expenditures	$3,257,766	$ 3,281,113	$3,479,799	$3,693,721	$3,922,277	$ 4,166,615
Change in Fund Balance	($256,418)	$112,100	$8,060	($800)	($24,374)	($63,873)
Ending Fund Balance	$965,000	$1,077,101	$1,085,161	$1,084,361	$1,059,987	$996,114

*This analysis used the 2021 Approved Budget with anticipated ending balance. Actual results depend on the results of a final budget. Ending balance might be different.

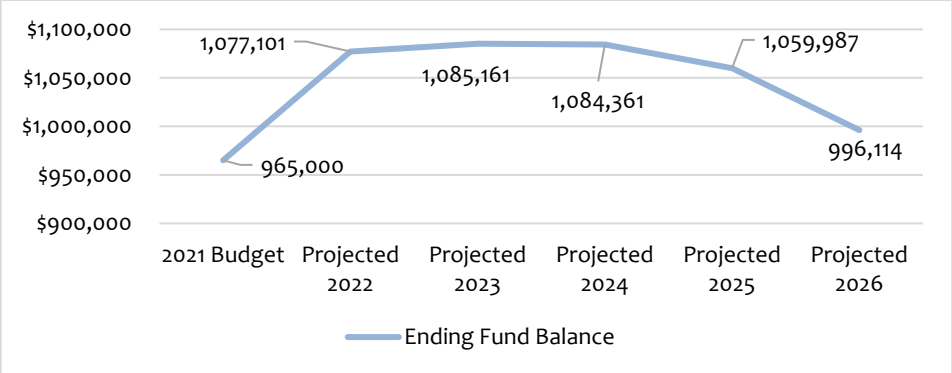
Figure 122: Status Quo Scenario - General Fund Net Income, Revenues Expenditures DWFPD, and Northern Subdistrict



Employing the assumptions presented above, General Fund revenues are expected to increase from $3,001,348 in FY 2021 to $4,102,742 in FY 2026 at an average annual rate of 7.34% for the forecast period. Expenditures are expected to increase from $3,257,766 in FY 2021 to $4,166,615 in FY 2026 at an average annual rate of 5.78% for the forecast period. As shown in

Figure 122, revenue is less than expenditures for three of the five years and the amount of loss is increasing each year. The following graph shows the General Fund Ending Balances:

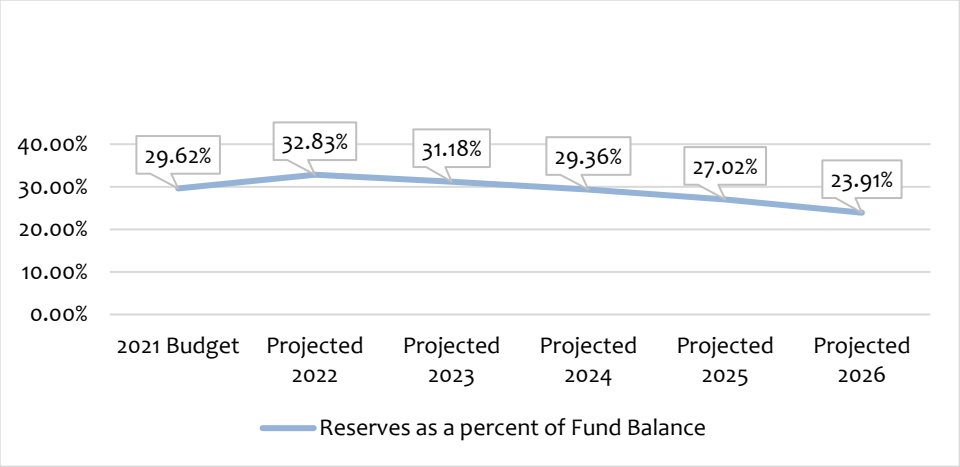
Figure 123: Status Quo Scenario—General Fund Ending Balance DWFPD and Northern Subdistrict



The following figure shows more clearly the relationship between the ending fund balance and expenditures. The district is in good shape but the percentage is dropping. The graph shows the ending fund balance as a percent of General Fund expenditures. The requirement for a three percent emergency reserve can easily be met. From a policy standpoint, 25 percent is considered an ideal

percentage when developing a reserve policy. In fact, the GFOA considers 16 percent to be the minimum baseline level that a government should maintain.

Figure 124: Status Quo Scenario- Ending Balance as Percentage of General Fund Expenditures DWFPD and Northern Subdistrict



Forecast 2 for Unification – Authority Model

As stated in the Partnering Strategies, ESCI recommends that the two districts form an authority. This form of organization involves merging the two districts financially except for the property tax revenue and specific ownership taxes (SOT). The two districts will have a financial statement that shows income from the property tax and SOT that is collected and then is paid to the Authority for the operation of the districts.

ESCI recommends that the Authority implement a separate Capital Projects Fund to collect funds and purchase capital items, especially apparatus. These pieces of equipment are very expensive and are necessary for the successful operation of the authority to provide the services needed. This fund needs to be set up in the accounting system and reported separately from the General Fund both in budgeting and in the audited financial statements.

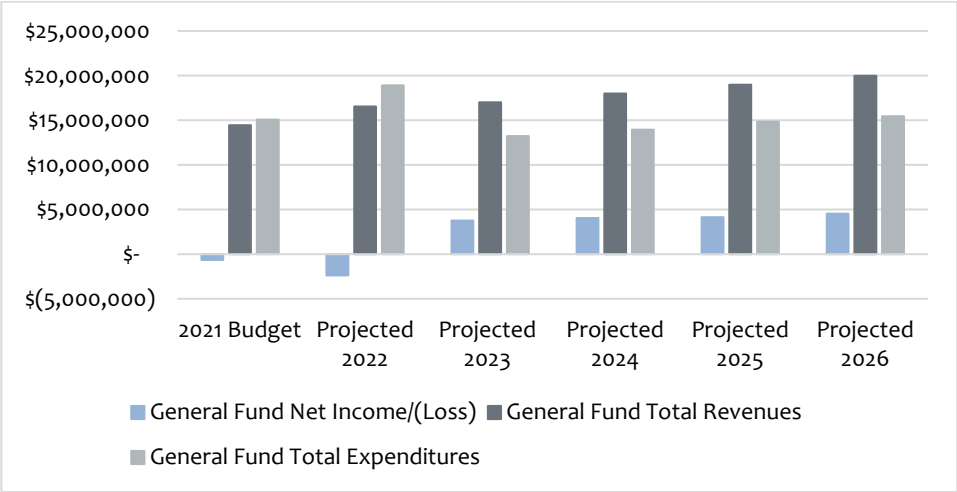
Figure 125: Scenario—Formation of an Authority encompassing TLMFPD, DWFPD, the Northern Subdistrict, and Adding a Capital Projects Fund - Revenues

Resources Financial by Type	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
AV Tri-Lakes	$502,228,120	$587,689,930	$ 587,807,913	$624,783,056	$ 661,798,409	$698,774,038
Levied $	$9,240,997	$10,813,495	$10,815,666	$11,496,008	$12,177,091	$12,857,442
Mill Levy	18.40	18.40	18.40	18.40	18.40	18.40
AV Wescott	$128,443,600	$145,994,680	$151,287,519	$161,550,142	$171,812,813	$182,077,807
Levied $	$899,105	$ 1,021,963	$ 1,059,013	$1,130,851	$1,202,690	$1,274,545
Mill Levy	7.00	7.00	7.00	7.00	7.00	7.00
AV Wescott Sub-District	$118,788,090	$134,170,870	$138,016,140	$146,956,099	$155,896,134	$164,836,048
Levied $	$1,769,943	$1,999,146	$2,056,440	$2,189,646	$2,322,852	$ 2,456,057
Mill Levy	14.90	14.90	14.90	14.90	14.90	14.90
Collection Rate	100%	100%	100%	100%	100%	100%
Beginning Reserve Balance	$9,710,636	$9,069,945	$6,692,546	$10,467,651	$14,515,352	$18,651,761
Property Taxes	$11,916,945	$13,842,103	$13,938,619	$14,824,005	$15,710,133	$16,595,544
Specific Ownership Tax	$1,156,000	$1,206,000	$1,206,000	$1,206,000	$1,206,000	$1,206,000
Impact fees	$125,000	$125,000	$125,000	$125,000	$125,000	$125,000
Wildland Deployments	$100,000	$160,000	$160,000	$160,000	$160,000	$160,000
Interest	$20,300	$39,406	$42,900	$62,458	$82,918	$104,582
Ambulance Revenues Plus COEMS Supplement	$1,105,000	$1,155,864	$1,228,566	$1,305,848	$1,388,034	$ 1,475,421
Additional Ambulance Revenues			$300,000	$300,000	$300,000	$300,000
Fire Inspection Revenue	$4,250	$4,000	$4,000	$4,000	$4,000	$4,000
Grants	-	-	-	-	-	-
Miscellaneous	$13,500	$13,500	$13,500	$13,500	$13,500	$13,500
Revenues	$14,440,995	$16,538,373	$17,011,085	$17,993,311	$18,982,085	$19,976,547

Figure 126: Scenario—Formation of an Authority encompassing TLMFPD, DWFPD, the Northern Subdistrict, and Adding a Capital Projects Fund – Expenditures and Totals

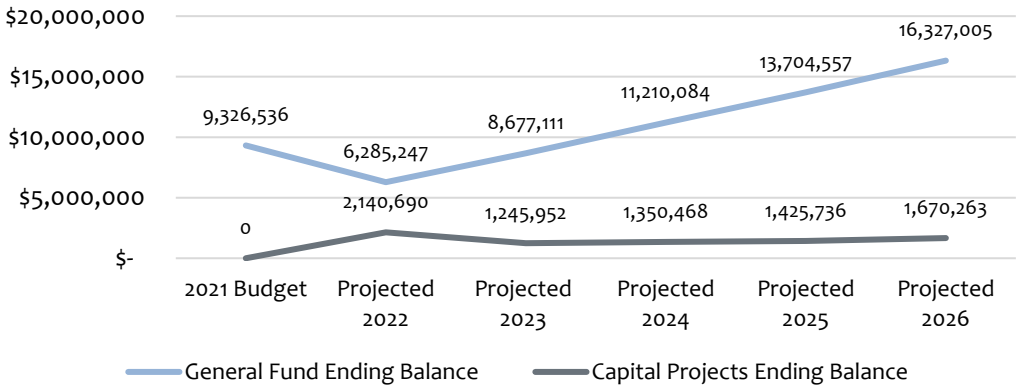
Financial Expenditures by Type	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Treasurer's Fees	$178,651	$207,519	$208,967	$222,248	$235,539	$248,821
Salaries and Benefits	$9,911,133	$9,515,620	$10,161,225	$10,851,093	$11,588,634	$12,377,551
Costs to Equalize Salary and Benefits	-	$158,361	$168,616	$179,619	$191,428	$204,111
Costs for Additional 14 Employees	-	$1,373,817	$1,467,340	$1,568,022	$1,676,469	$1,793,344
Administrative Expenditures	$545,620	$567,445	$590,143	$613,748	$638,298	$663,830
Fire Operations	$373,475	$388,414	$403,951	$420,109	$436,913	$454,389
Fire Prevention	$17,500	$18,200	$18,928	$19,685	$20,473	$21,291
Medical	$93,000	$96,720	$100,589	$104,612	$108,797	$113,149
Vehicles	$255,750	$268,538	$281,166	$294,395	$308,251	$322,766
Communications	$305,700	$317,928	$330,645	$343,871	$357,626	$371,931
Building and Grounds	$230,064	$240,046	$250,165	$260,715	$271,714	$283,182
Lease Interest	$74,131	$67,201	$59,987	$52,476	$44,656	$36,515
Lease Principal	$217,071	$178,258	$185,473	$192,984	$200,804	$208,945
Total Debt Service	$291,202	$245,459	$245,460	$245,460	$245,460	$245,460
Capital Expenditures	$2,713,000					
Facilities	-	$1,015,000	-	-	-	-
Equipment	-	$76,016	$11,230	$49,961	$154,190	$11,924
Fleet	-	$2,973,000	$1,297,920	$196,851	$187,177	-
Transfer to Capital Reserve	-	$5,800,508	$464,895	$340,095	$288,351	$128,694
Grand Total Expenditures	$15,081,686	$18,915,773	$13,235,980	$13,946,610	$14,845,675	$15,447,100
Revenues	$14,440,995	$16,538,373	$17,011,085	$17,993,311	$18,982,085	$19,976,547
Ending Fund Balance	$9,069,945	$6,692,546	$10,467,631	$14,515,352	$18,982,085	$23,181,208
Capital Fund Balance	-	$2,576,950	$1,429,461	$1,518,206	$1,627,244	$1,764,417

Figure 127: Scenario Formation of Authority General Fund Net Income, Total Revenues, and Expenditures



Employing the assumptions presented above, General Fund revenues are expected to increase from $14,440,995 in 2021 to $19,976,547 in 2026 at an average annual rate of 7.67% for the forecast period of 2022-2026. Expenditures are expected to increase from $15,081,686 in 2021 to $15,447,100 in 2026 at an average annual rate of .49% for the forecast period. As shown in Figure 127 the revenue exceeds expenditures for all years except 2022 when a large transfer is made to the Capital Projects Fund. In this financial analysis, the transfer to capital projects fund is included in annual expenditures and the Fleet capital purchases are paid from the Capital Projects Fund.

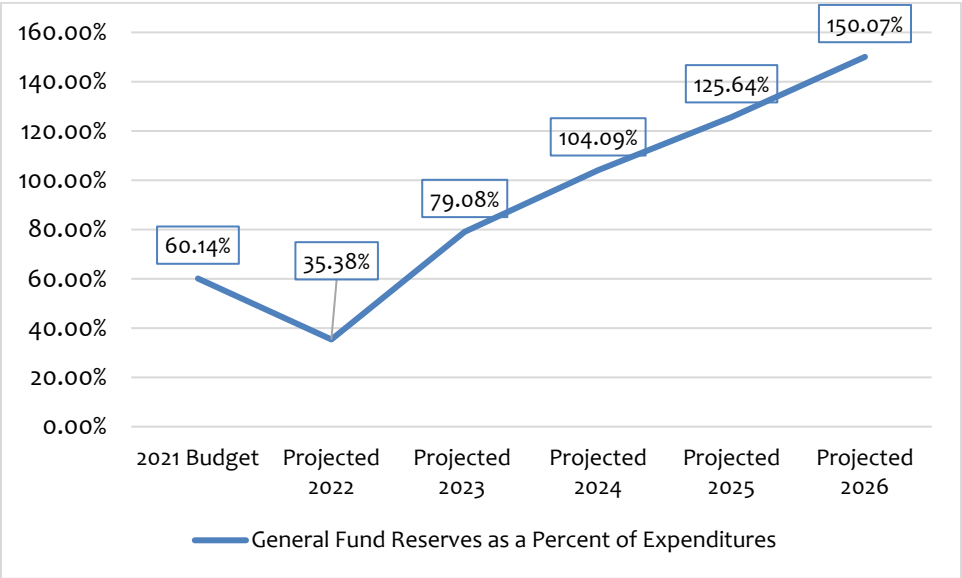
Figure 128: Scenario Formation of Authority Ending Fund Balance General Fund and Capital Reserve Fund



The General Fund Ending Balance is increasing, and the Capital Project Fund is decreasing due to capital purchases. The balance begins to increase with the contributions made for the next capital purchase.

There are major purchases to be made due to several apparatus being overdue for replacement.

Figure 129: Formation of Authority General Fund Reserves as a Percentage of Expenditures



The figure above shows that General Fund Reserves are adequate and increasing each year. The addition of a Capital Reserve Fund levels off the General Fund expenditures and sets aside a separate fund for capital purchases.

Other Options for Increasing Staffing

The others option discussed in the staffing sections are not used in this analysis. Additional staffing would be added based on the desired options chosen.

Implications of Districts Merger

ESCI was asked to show the revenue differences in a full merger at a common tax rate of 18.4 mills. A full merger would mean a loss of revenue of about $350,000, which would increase some each year.

Figure 130: Revenue from Merged Districts at 18.4 Mills

Revenue Projections	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Combined Assessed Value	$733,684,610	$739,095,432	$786,333,198	$833,611,221	$880,851,846
Mill Levy	18.4	18.4	18.4	18.4	18.4
Revenue	$13,499,797	$13,599,356	$14,468,531	$15,338,446	$16,207,674
Difference	($334,807)	($331,763)	($347,974)	($364,186)	($380,370)

FINDINGS AND RECOMMENDATIONS

In this section of the report, there is a summation of findings that are pertinent to the unification of Donald Wescott FPD and Tri-Lakes Monument FPD. Some of these findings are drawn from other sections of the report and are given further consideration in the following discussion.

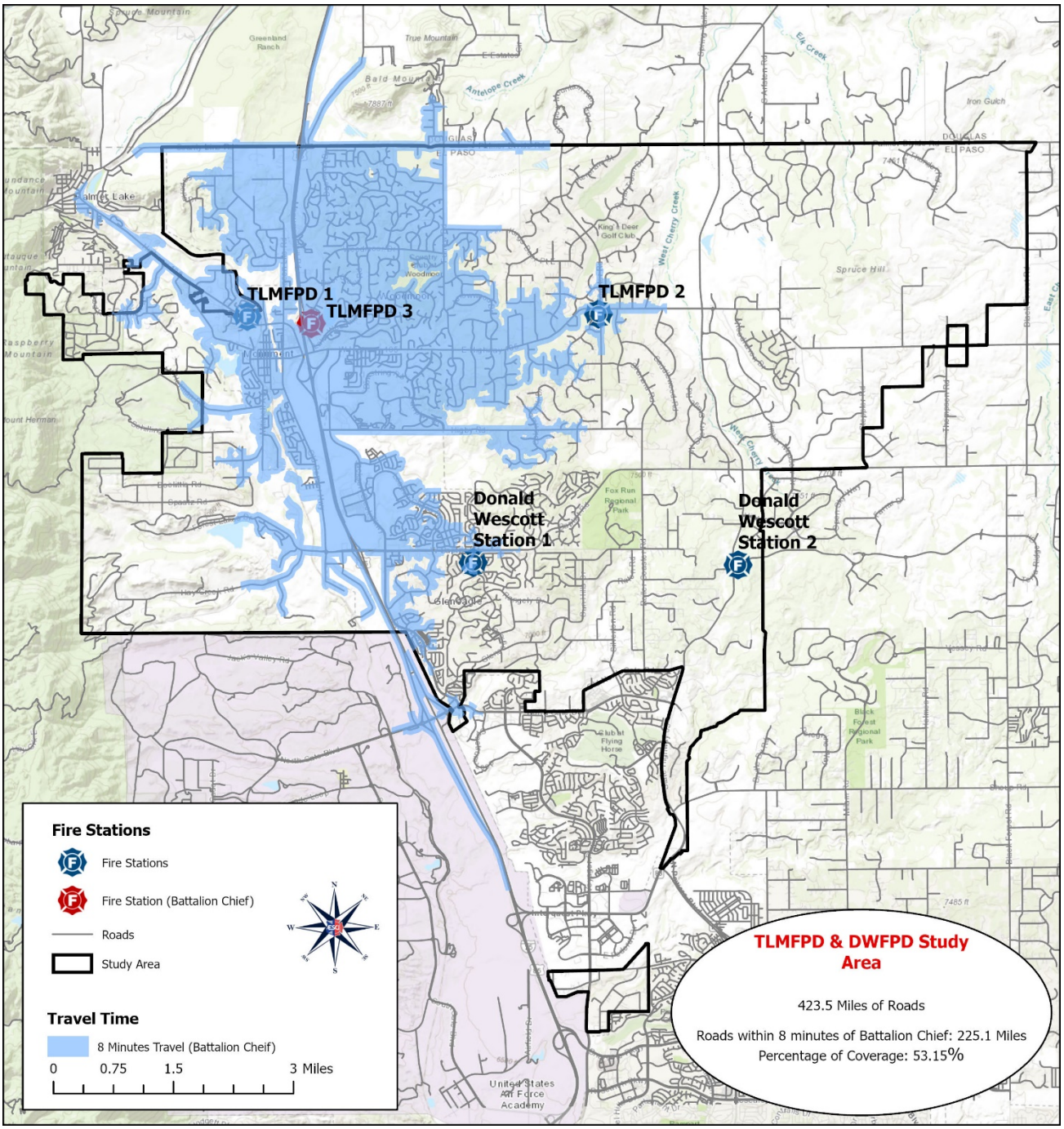
Staffing

Between the two districts, the number of current personnel is sufficient to fill the necessary positions as outlined in the staffing plan. Some positions may not be doing the same function that they are doing now. The positions that have been added to the organizational structure should allow the Authority to be more effective. Additional line staffing is suggested to be added to offset the high overtime spending. ESCI recommends a prudent approach of adding some new personnel each year while determining the actual amount of leave usage and the best level of staffing required. A full-time human resource manager is suggested for the number of personnel and the increasing complexity to administer programs for the number of personnel.

ESCI reviewed the issue of the number of battalion chiefs needed in the Authority. The need for Battalion Chiefs is based on three factors. The first is a span of control that can be efficiently supervised by the Battalion Chief. Another is the area of coverage that a battalion chief can cover with effective response times. Last, the number of calls that demand his or her attention during a shift. Typically, one battalion chief can oversee 5 - 7 stations and the personnel in the station. This is a span of control of 5 to 7 for which the chief is responsible. Lieutenants supervise the crews in each station and report to the Battalion Chief.

The coverage of the Battalion Chief should be a recommended eight minutes or less travel time. This puts a chief on the scene of an incident with the required effective response force. Locating the BC at TLMFPD Station 3 will have the coverage as shown in Figure 131. This location covers the higher incident density area of the Authority so the number of calls should be in the majority. It constitutes about 50 percent of the jurisdiction road coverage. The workload throughout the Authority is not anticipated to cause a high percentage of concurrent calls. The response time performance of the BC should be monitored by management to assure that this station is suitable for response and the number of battalion chiefs is adequate.

Figure 126: Battalion Chief Coverage in the Authority



Stations

TLMFPD Station 1 serves the north and west side of the district. It sits near the edge of the district and much of its response area is in the Town of Palmer Lake. The station is in excellent condition and currently under remodel and expansion which will improve its effectiveness. It is located next to a planned future regional training facility.

TLMFPD Station 3 serves the Town of Monument and the Woodmoor community. It is in good condition but lacks some amenities that make it less suitable for accommodating firefighters of different genders. The station seems crowded for the staffing it supports. TLMFPD will need to replace the front apron pad. There is a dayroom remodel planned for the station.

TLMFPD Station 2 serves the eastern area of the district. The structure is well-constructed, and the condition is good, however, the septic system for this station is located on neighboring property. The current owner is receptive to having the system on his or her property, but this might be an issue for future owners. Also, growth in Monument or the county is towards the east which is currently outside of the coverage area for Station 2. At that time district management may need to build another station further east or to relocate this station. Management has conducted some due diligence for a possible site further east along Highway 105.

DWFPD Station 1 serves the northern part of its district and houses the administrative offices for the district. The station utilizes the dormitory-style sleeping area which does not allow for much privacy for individuals. The station lacks auxiliary power should there be a municipal power system failure. The service area is the northern portion of DWFPD and the southern part of TLMFPD.

DWFPD Station 2 is roomy and is in generally excellent condition. The sleeping arrangements for the firefighters are dormitory-style. It does have the advantage of being on Highway 83 which is a major north-south route that can expedite responses to other areas within the district. It is located close to the district boundary which reduces the efficiency of the response area.

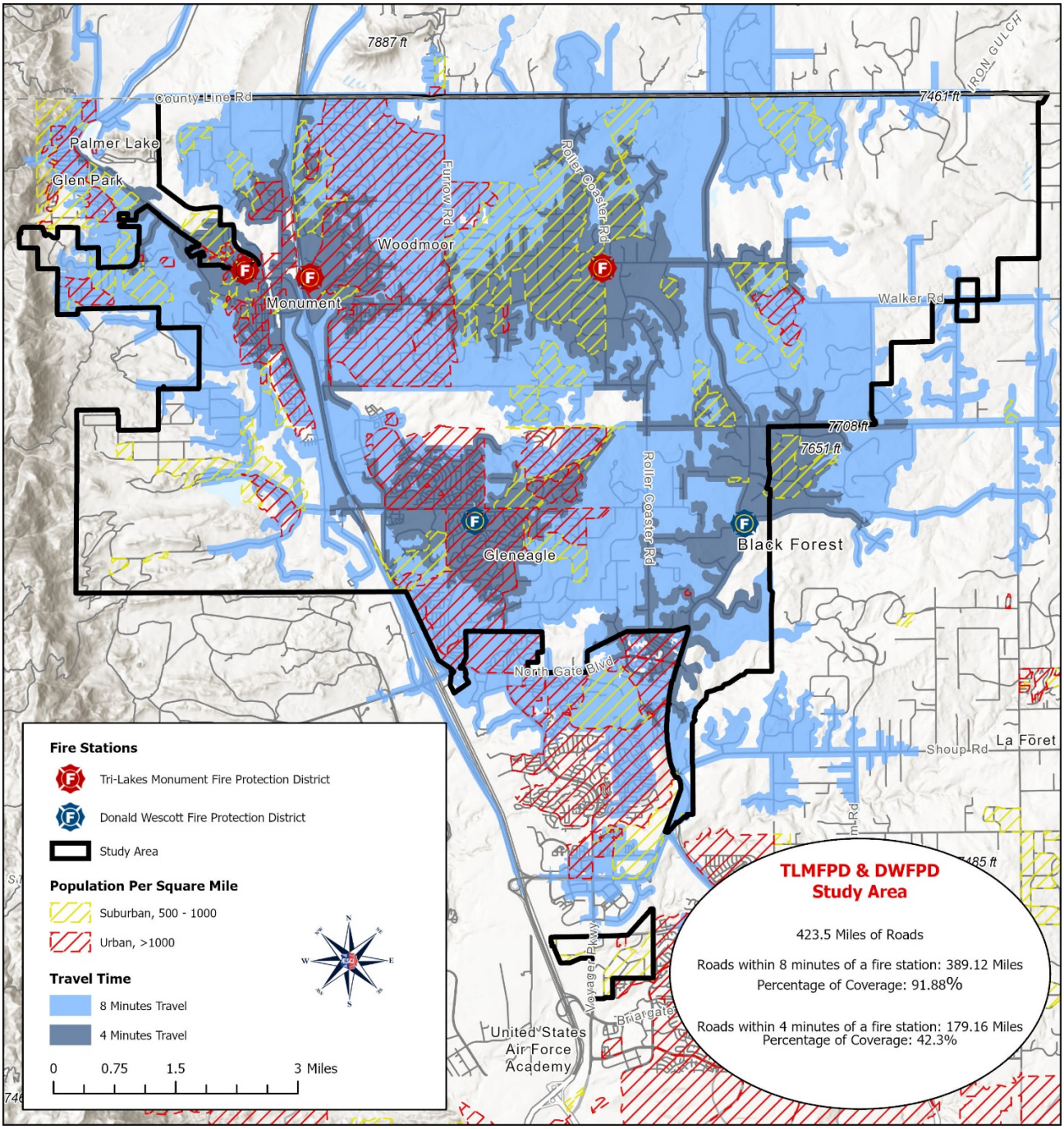
DWFPD Station 3 is not a response station except for the DWFPD battalion chief. This station is used mostly for storage. DWFPD anticipates that the station and property will be sold, so for purposes of response coverage, it was not considered.

Discussion of Station Response Coverage

In the past, several stations within the combined district jurisdiction have been built close to the district borders. Generally, this is not an efficient use of the response capability. For example, if a station is built adjacent to the border of the jurisdiction the station serves only half of its potential within the district it serves. Also, stations built near each other may reduce the station efficiency as opposed to spacing at

the limit of the travel time for each station. For example, if the maximum desired travel distance based on the desired response time is two miles, then stations spaced roughly four miles apart are maximizing their efficient response pattern.

Figure 132: Station Coverage with Population Density Overlay



ESCI notes that TLMFPD Station 1 and DWFPD Stations 1 and 2 are all examples of stations that are close to the boundary lines. TLMFPD Stations 1 and 3 are examples of having a significant overlap of the

response areas. It may be that the stations have evolved this way historically when the departments were volunteer. The districts constructed stations close to where the volunteers lived or where donated land existed.

Also, DWFPD Station 1, although close to the boundary with TLMFPD, by unification will make that station more efficient for the combined entity. The southern area of TLMFPD is lacking adequate coverage for optimum response. The DWFPD Station 1 is well situated for coverage into this area.

The location of TLMFPD Station 1 is well situated if in the future the Town of Palmer Lake wished to contract for services with the combined entity. The same may be true of DWFPD Station 2 if Black Forest FPD, in the future, becomes a part of the combined entity. The implementation of the closest appropriate unit response also causes increased efficiency of coverage.

The concepts of efficiency and response coverage are for the Authority's management to consider as it contemplates station relocation or location of new stations. The potential relocation of TLMFPD Station 2 to a point further east on Highway 105 does not appear to gain a response advantage. It would appear to reduce the Station 2 coverage of the higher density neighborhoods for a less populated area. There may be advantages to relocate that station for other valid reasons, but response area coverage may not be one.

Modern Station Design

As the Authority decides on remodel or redesign of stations some attention should be given to the design concepts that were cited in the Facilities section of the report there are several criteria that most newer stations meet in their design. These include:

- Residential living space and sleeping quarters for on-duty personnel. Most departments are generally designing stations with individual sleeping rooms. This gives individuals some privacy and quiet for sleeping or studying. The bathrooms and showers are gender-specific or, if shared, are lockable for privacy.
- Adequate area is provided for storage of equipment and supplies.
- Kitchen and living areas (dayrooms) are sufficiently large to accommodate the number of firefighters assigned to the station.
- Sufficient area for administrative and management functions including an office for the station officer that is sufficiently separated to assure private conversations. Office areas are equipped with sufficient computer and network capacity to allow for work to be done efficiently.
- Training areas that have room for training materials and supplies. Some of these areas may include teleconferencing capability for remote training.

- A dedicated area for firefighter fitness to maintain firefighter response readiness.
- An area for cleaning of apparatus and equipment which includes good decontamination processes and proper disposal of biohazards. The contaminated area where firefighters remove their bunker gear and equipment to be cleaned should be remote and separate from the living areas. Firefighters should have the ability to clean up before entering the living areas.
- Some departments provide a meeting space for the public as a part of the service that they provide.

There are differing opinions as to the use of dormitory sleeping areas versus private rooms. There is concern over the lack of comradery becoming prevalent in the fire service today. It is the opinion of some that this is the result of firefighters retreating to their rooms in the evenings after dinner and not spending as much time in the dayroom together. Others believe that the ability to have a private area for study is advantageous as trying to study with conversations and television is distracting. ESCI feels that an individual's privacy in a place to sleep is becoming very important and may outweigh any advantages of a dormitory-style setting.

Cost Avoidance

Cost is a key part of a unification decision, and a part of the cost analysis is those expenses avoided or revenues gained due to the unification implementation.

TLMFPD was anticipating the addition of a station in the southwestern part of the district to give effective coverage to that area. The cost of building a station and implementing staffing will cost TLMFPD a capital expenditure of approximately $6 Million and an ongoing staffing cost of $ 1,151,760 per year. The DWFPD Station 1 can service the southern area of the TLMFPD district (see Figure 68) and it currently has the staffing without additional hires. Decision-makers, in doing the cost analysis of a unification, need to factor in the cost avoidance of not having to build and staff a station. Over five years TLMFPD would recognize a cost avoidance of $11,758,800 if the station was paid for in cash, or more if financed. Salaries would inflate over that period as well.

DWFPD is currently deploying a battalion chief out of DWFPD Station 3. There is no need either due to call load or response time to have two battalion chiefs on duty in the unified entity. If the battalion chief will be located at the TLMFPD Station 3 then DWFPD Station 3 will no longer be used or needed in the response strategy. This station could be sold for additional revenue.

Development of Response Standards and Targets

ESCI emphasizes the importance of establishing and regularly monitoring performance metrics for the deployment of resources. These metrics serve as the foundation for determining whether the organization is meeting the expectations of the community that it serves. Without regular and

consistent performance evaluation, it is impossible to set and achieve goals established to meet community expectations.

TLMFPD and DWFPD have not established formalized response standards and benchmarks that are advised as a tool with which to make the best future deployment decisions. In the absence of established standards, ESCI offers the following discussion to TLMFPD and DWFPD leaders and decision-makers.

ESCI emphasizes the importance of the establishment of response performance metrics by TLMFPD and DWFPD. Once established, these standards provide measurable goals for service delivery. These form the foundation upon which they will base the planning for deployment of personnel. Absent these processes, the organization is not able to determine where it needs to go, nor is it able to know when it is achieving its goals and meeting the community's expectations.

Response standards must be developed by the individual community, based on the expectations of elected officials and citizens balanced against the financial aspect of what a community is able and willing to afford. For this reason, ESCI cannot establish these standards for TLMFPD and DWFPD but rather will provide guidance and examples of what we consider to be acceptable metrics. In the following figure, ESCI offers sample statements that are representative of community expectations for common types of emergencies in the service area.

Figure 133: Example of Community Expectations, Response Goals[15]

Service	Community Outcome Expectations
Fire Suppression	For all fire incidents, responders shall arrive promptly with sufficient resources to stop the escalation of the fire and keep the fire to the area of involvement. An effective concentration of resources shall arrive within time to be capable of containing the fire, rescuing at-risk victims, and performing salvage operations while providing for the safety of the responders and public.
Wildland Fire Suppression	For all wildfire incidents, the department shall arrive promptly with sufficient resources to first protect homes and other buildings, then begin controlling the rate of fire spread.
Emergency Medical Services	For emergency medical incidents, the department shall arrive promptly with sufficiently trained and equipped personnel to provide medical services that will stabilize the situation, provide care and support to the victim, and reduce, reverse, or eliminate the conditions that have caused the emergency while providing for the safety of the responders. When warranted, timely transportation of victim(s) to appropriate medical facilities shall be accomplished effectively and efficiently.
Vehicle Extrication	For vehicle accidents where the rescue of victims is required, responders shall arrive promptly with sufficient resources to stabilize the situation and extricate the victim(s) from the emergency without causing further harm to the victim, responders, public, and the environment.

Note that the response goals presented in Figure 133 do not address specific staffing or response time performance. Defining and identifying the community risk hazards, the critical tasks, the staff, and the response time necessary to meet the response goals is something that should be accomplished by the Authority in consultation with the policymakers.

Data Quality

Based on the results of the response data performance analysis, an effort must be made to improve the accuracy of the data being compiled. Evaluate how the time is recorded initially and how the data is transferred to the records management system (RMS). If the data is recorded in a delayed manner or if the data is manually reentered into the RMS these are sources of error that can make the data for measuring response performance unusable. It is the goal of the Authority to become accredited, good data is a necessary component.

Financial Stability and Equity

While the forecast for the DWFPD demonstrated stability over the next five-year period the analysis did show decreasing fund balance in the three out years and without needed apparatus replacement for those overdue for replacement. ESCI has a concern that further annexations either by the City of Colorado Springs or the Town of Monument (assuming they contract with TLMFPD to serve it) may

erode the revenues even further. As more tax base is excluded from a standalone Wescott district there will be pressure to increase taxes just to maintain the status quo. Should there be an economic rollback and property values fall, the revenue to operate the district will reduce with no capacity to maintain operations.

If TLMFPD does build a station in the southern end of their district the effectiveness of WDFPD Station 1 will be decreased and TLMFPD will be required to expend both capital and operational funds to build this station. The estimate is that 20 percent of WDFPD's responses are for TLMFPD's district today and that number is likely to increase with growth in the area. Building another station that would reduce the effectiveness by 20 percent does not serve the citizens of either district well. If the current process of utilizing DWFPD's resources to cover the TLMFPD area continues it causes inequity in that the citizens of DWFPD will be supporting the operation of the TLMFPD district. Therefore, the best way to resolve this quandary is to operate as one entity.

Recommendations

Based on the findings from this study ESCI recommends the following:

- Form an Authority – Unification of the two fire districts should begin by forming an Authority based on discussions from other sections of this report. This is the first step in ultimately forming one fire protection district. The financial forecast indicates that it is possible to proceed and be financially successful barring some major economic downturn.
- Dissolve the Subdistrict - The Donald Wescott district should proceed to dissolve the subdistrict and have one district with a single mill levy. This will facilitate the ability to merge into one district with one taxation rate sooner.
- Establish Response Criteria – The Authority should establish response goals as described in the Findings. Routinely monitor the response performance to assure progress is being made to reach the goals.
- ISO improvement - For maximum ISO evaluation in non-hydanted areas TLMFPD will need to add tenders for water delivery. DWFPD has two tenders that can serve the Authority and the reclassification will have water delivery capability in the non-hydranted areas of the combined entity. Also as discussed in the Communications section there may be ISO credit for gaining supervision of the station alerting system. Implementation of a Community Risk Reduction program may also boost the ISO evaluation. With the additional personnel in the Fire Prevention structure, this is an area to explore as well.
- Station Evaluation – The future repositioning of stations throughout the Authority should be a consideration for reasons discussed above in the Findings. This will allow the Authority to secure

future station sites either through developer contributions or purchase of the land as a part of a strategic plan. Stations may need to be closed and repositioned to effectively utilize the personnel.

- Third Ambulance Evaluation – If call load warrants it, establish a third ambulance to service the DWFPD portion of the Authority in place of a contract. The contract does not provide any revenue for housing the ambulance at a station. Dynamic deployment draws the contract ambulance into the Colorado Springs area frequently. The third ambulance would supply a closer, dedicated ambulance in the southern area of the Authority. Further, with the added capacity the Authority could solicit contracting ambulance service to the Town of Palmer Lake. This will be a benefit to the citizens of that town in reducing the response time as well as helping to support the staffing of the third ambulance.
- Training Center - Pursue the development of the training center drill ground as funds will allow. This will be of value to the Authority and other departments as a regional asset. Establish use fees to offset costs of maintaining a facility for northern El Paso County.
- DWFPD volunteers - Consider repurposing the volunteers to assist with support or outreach functions of the Authority. The robust wildland mitigation program is one program that could utilize volunteer help and would greatly assist the community.

CONCLUSION

ESCI was asked to consider the feasibility of Donald Wescott Fire Protection District and Tri-Lakes Monument Fire Protection District unifying into one agency. Both districts participated in providing a substantial amount of information regarding their operations and fiscal positions. Adding to this information was an on-site visit by a team of consultants observing and asking additional questions. All information gathered was evaluated considering national standards and best practices, considering what the current conditions are and what the service might be if combined. From this evaluation, ESCI made several recommendations for implementation regardless of the final decision and several recommendations to be implemented if the unification occurs. In addition, and equally important, ESCI personnel looked for indications that it may not be in the best interest of the two districts to proceed with consolidation i.e. red flags. It is ESCI's opinion that the consolidation would be in the best interest of the citizens of northern El Paso County and the Town of Monument within the jurisdictional boundaries of the districts. It would also be in the best interest of the employees of the two districts in the long term, providing increased stability, career progression, and other factors such as job safety.

ESCI appreciates the trust placed in our consultants to provide experienced analysis and recommendations. As the decisions are made, ESCI stands ready to answer questions or offer suggestions as may be needed. ESCI expresses its thanks to the board, fire chiefs, and staff that participated in the study.

APPENDIX A: TABLE OF FIGURES

REFERENCES

[1] NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (National Fire Protection Association 2020 ed.) Article 5.2.4 Deployment.

[2] Society for Human Resource Management. (2015). *How Organizational Staff Size Influences HR Metrics.* Alexandria: Society for Human Resource Management.

[3] This staffing model does not include a two person staff assigned to the private ambulance contracted by AMR.

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

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

[6] Sawyer, et al., THE NFPA Urban and Life Safety Taskforce. 2016, Quincy, MA

[7] US Fire Administration, Prevention. https://www.usfa.fema.gov/prevention/crr.html

[8] US Fire Administration, Statistics. https://www.usfa.fema.gov/data/statistics/

[9] Burke, W. Warner, and George H. Litwin. "A Causal Model Of Organizational Performance And Change". Journal Of Management 18, no. 3 (1992): 523-545.

[10] Craig, Gary. Cultural Assessment: Considerations, Approaches, and Implications. PDF. Denver: Vector Group, 2013

[11] Kotter, John and Dan Cohen. 2002. The Heart of Change. Boston: Harvard Business Review Press.

[12] Kotter, John and Dan Cohen. 2002. The Heart of Change. Boston: Harvard Business Review Press.

[13] Some of the following material referenced is from a presentation by Dino Ross of Ireland Stapleton Pryor and Pascoe PC presented to the Colorado State Fire Chiefs April 1, 2015.

[14] See GFOA Best Practice, "Appropriate Level of Unrestricted Fund Balance in the General Fund," (2009), www.gfoa.org. The Best Practice states that reserves equal to about 16 percent of revenues or

expenditures is the minimum a government should consider for its policy and that the actual target that a government adopts should be based on an analysis of the salient risks that a government faces (which in many cases may call for a higher reserve level than 16 percent).

[15] Based on examples provided in the publication Center for Public Safety Excellence (CPSE) Community Risk Assessment: Standards of Cover, 6th Edition.