Yamhill & Polk Counties
Fire Departments & Districts

McMinnville, Oregon

December 2020

Fire District & Departments
Agency Analysis Addendum

An Evaluation of the Potential for Consolidation

Emergency Services
Consulting International

Providing Expertise & Guidance that Enhances Community Safety

CONTENTS

ACKNOWLEDGMENTS

Emergency Services Consulting International (ESCI) wishes to extend its sincere appreciation to all those who contributed to this project—the appointed and elected officials, fire chiefs, officers, and representatives of the fire districts included in this study; along with many other individuals who lent their time and assistance to this project.

Our sincere appreciation is extended to each of you…

Jeff Meyers
Station Captain

Bert Hanifan
Operations Lieutenant

Rich Leipfert
Fire Chief

Amy Hanifan
Operations Chief

Debbie McDermott
Fire Marshal

Brett Putman
Fire Chief

Fred Hertel
Fire Chief

N. Terry Lucich
Fire Chief

Fred Hertel
Fire Chief

Scott Law
Training Chief

Fred Hertel
Fire Chief

N. Terry Lucich
Fire Chief

…and each of the volunteer and career firefighters and support staff who daily serve the citizens and visitors of Yamhill County and Polk County with honor and distinction!

INTRODUCTION

In late 2019, led by the City of McMinnville Fire Department, Emergency Services Consulting International (ESCI) was retained to conduct a *Cooperative Services Feasibility Study* to determine the potential of consolidating various fire districts and municipal fire departments in both Yamhill County and Polk County, Oregon, into a single organization. The following report represents the results of this study.

ESCI understands that the fire departments and districts may be referred to using different monikers. However, for purposes of clarity and consistency, the following names and acronyms will be utilized in this report:

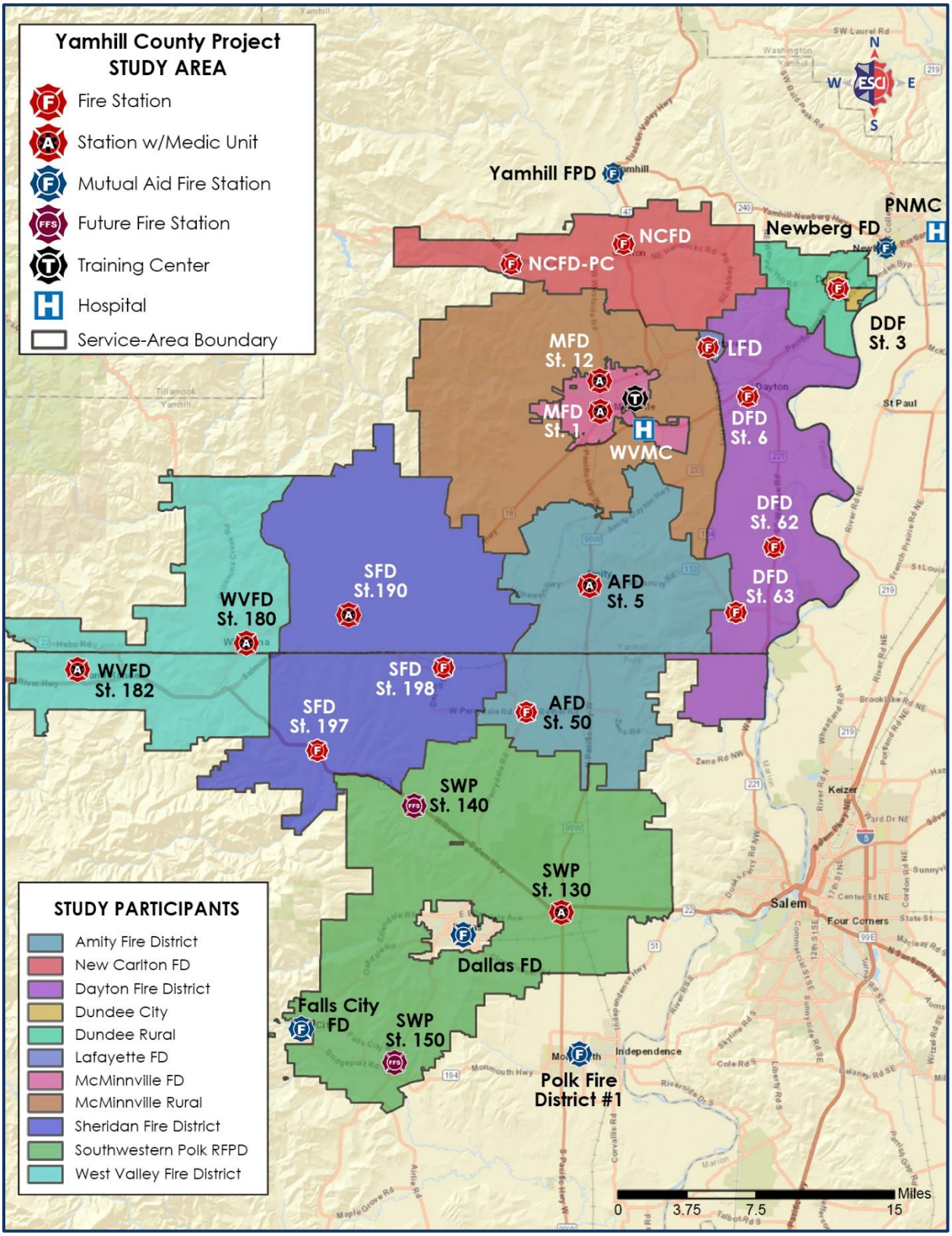
- Amity Fire District (AFD)
- Dayton Fire District (DFD)
- Dundee Fire District (DDF)
- Layfayette Fire Department (LFD)
- McMinnville Fire Department (MFD)
- New Carlton Fire District (NCFD)
- Sheridan/SW Polk/West Valley Fire Districts (SFD/SWP/WVFD or the Collective Fire Districts)

While the participants in this study include both fire districts and municipal fire departments, the term "fire department" will be used to describe either type of organization unless otherwise specified.

Project Study Area

The following figure illustrates the overall study area for this project, each fire department's service area boundaries, and their respective fire stations. In addition, some mutual aid fire stations have been included along with hospital locations.

Figure 1: Yamhill Project Study Area Map



APPENDIX A: PLANNING & IMPLEMENTATION

If a merger strategy is chosen, it should be done as the result of a joint planning process, addressing the restructuring of the agencies as they integrate at the policy level, as well as at the operational, administrative, and support levels. Greater efficiency can be achieved if the collaboration is permanent, with one methodology, one set of work rules, one standardized level of service to the community, and one organizational structure to administer it.

The process of considering and implementing any of these recommendations starts first with a shared vision by the respective fire district board members, city councils, and fire department leadership. Using the shared vision, goals, and objectives can propel the agencies toward the vision. This process tends to be the framework of an implementation plan for a merger.

Establish Implementation Working Groups

Various Implementation working groups should be established that will be charged with the responsibility of performing the necessary detailed work involved in analyzing and weighing critical issues and identifying specific tasks. Membership for these implementation working groups should be identified as part of that process as well.

The following list provides some key recommended working groups used in most integration processes and describes some of their primary assigned functions and responsibilities. The actual number and titles of the working groups will vary depending on the type and complexity of the strategies pursued.

Joint Implementation Committee (Task Force)

This committee should be comprised of management representatives and some members of the boards of each fire district and the city councils. This may also include outside stakeholders, such as business and community interests. The responsibilities of this group are to do the following:

- Develop goals and objectives which flow from the joint vision statement approved by the vision sessions.
- Include recommendations contained in this report, where appropriate.
- Establish the workgroups and commission their work.
- Identify anticipated critical issues the workgroups may face and develop contingencies to address these.

- Establish timelines to keep the workgroups and the processes on task.
- Receive regular updates from the workgroup chairs.
- Provide regular status reports to the policymakers as a committee.

Governance Working Group

This group will be assigned to examine and evaluate various governance options for the integration effort. A recommendation and the proposed process steps will be provided back to the Joint Implementation Committee. Once approved, this group is typically assigned the task of shepherding the governance establishment through to completion. The membership of this group typically involves one or more elected officials and senior management from each participating agency. Equality of representation is a key premise.

Finance Working Group

This group will be assigned to review the financial projections contained in the study and complete any refinements or updating necessary. The group will look at all possible funding mechanisms and will work in partnership with the Governance Working Group to determine the impact on local revenue sources and options. The membership of this group typically involves senior financial managers and staff analysts, and may also include representatives from each district's administrative staff.

Administration Working Group

Working in partnership with the Governance Working Group, this group will study the administrative and legal aspects of the selected strategies they are assigned and will identify steps to ensure the process meets all administrative best practices and legal requirements. Where necessary, this group will oversee the preparation and presentation of policy actions such as proposed ordinances, joint resolutions, dissolutions, and needed legislation to the policymakers. This group may wish to retain the services of qualified legal counsel to ensure all legal requirements are met. The membership of this group typically involves senior management staff from the entities involved and may also include legal counsel.

Operations Working Group

This group will address the details necessary to make operational changes. This involves a detailed analysis of assets, processes, procedures, service delivery methods, deployment, and operational staffing. Detailed integration plans, steps, and timelines will be developed. The group will coordinate closely with the Logistics/Support Services Working Group. The membership of this group typically involves senior management, mid-level officers, training staff, volunteer leadership, and labor representatives. This list often expands with the complexity of the services provided by the agencies.

Logistics/Support Services Working Group

This group will be responsible for any required blending of capital assets, disposition of surplus, upgrades necessary to accommodate operational changes, and the preparation for ongoing administration and logistics of the cooperative effort. The membership of this group typically involves mid-level agency management, administrative, and support staff. Where involved, support functions such as maintenance or fire prevention may also be represented.

Labor Working Group

This group will have the responsibility, where necessary, for blending the workforces involved. This often includes the analysis of differences between collective bargaining agreements, shift schedules, policies, and working conditions. The process also includes work toward developing a consensus between the bargaining units on any unified agreement that would be proposed. Often, once the policymakers articulate the future vision, labor representatives are willing to step up and work together as a team to identify challenges presented by differing labor agreements and offer potential consensus solutions. The membership of this group typically involves labor representatives from each bargaining unit, senior management, and, as needed, legal counsel.

Interagency Communications Working Group

This group will be charged with developing an internal and external communication policy and procedure to ensure consistent, reliable, and timely distribution of information related exclusively to the cooperative effort. The group will develop public information releases to the media and will select one or more spokespersons to represent the communities in their communication with the public on this process. The importance of speaking with a common voice and theme, both internally and externally, cannot be overemphasized. Fear of change can be a strong force in motivating a group of people to oppose that which they do not clearly understand. A well-informed workforce and public will reduce conflict. The membership of this group typically involves public information officers and senior management.

Meet, Identify, Challenge, Refine, & Overcome

Once the working groups are established, they will set their meeting schedules and begin their various responsibilities and assignments. It will be important to maintain organized communication up and down the chain of command. The working group chairs should also report regularly to the Joint Implementation Committee. When new challenges, issues, impediments, or opportunities are identified by the working groups, this needs to be communicated to the Joint Implementation Committee immediately, so that the information can be coordinated with the findings and processes of the other working groups.

Where necessary, the Joint Implementation Committee and a working group chairperson can meet with the policymakers to discuss significant issues that may require a refinement of the original joint vision.

The process is continuous as the objectives of the implementation plan are accomplished one by one. When adequate objectives have been met, the Joint Implementation Committee can declare various goals as having been fully met, subject to implementation approval by the policy bodies. This formal turning over will mark the point at which implementation ends and integration of the agencies, to whatever extent has been recommended, begins.

APPENDIX B: RESULTS OF THE ONLINE SURVEY

The survey was comprised of seven questions, with the seventh asking for comments and suggestions for improvement. A total of 151 respondents completed the survey. The following figures represent the results of the survey.

Question #1: *"I am currently employed or affiliated with one of the following (if you are affiliated with more than one, select the one in which you spend most of your time)."*

Organization	Responses	Percent Total[1]
Amity Fire District	26	17%
Dayton Fire District	2	1%
Dundee Fire/Rescue	14	9%
McMinnville Fire Department	**44**	**29%**
New Carlton Fire District	4	3%
Lafayette Fire District	14	9%
Sheridan Fire District	24	16%
Southwestern Polk Fire District	10	7%
West Valley Fire District	11	7%
None of the Above	2	1%

[1]Rounded to the nearest integer.

Question #2: *"My current position with one of the fire districts/departments involved in this study is…"*

Position	Responses	Percent Total[1]
Career firefighter	29	19%
Volunteer, resident, or paid on-call firefighter	**53**	**35%**
Career officer (Captain or Lieutenant)	3	2%
Volunteer or paid on-call officer (Captain or Lieutenant)	19	13%
Career officer (above the rank of Captain)	8	5%
Volunteer or paid on-call officer (above rank of Captain)	3	2%
Career or Volunteer Fire Chief	9	6%
Other non-uniformed support position (fleet, etc.)	4	3%
Non-uniformed administrative support staff	2	1%
Appointed or elected official	13	9%
Other	8	5%

[1]Rounded to the nearest integer.

Question #3: *"If you are assigned to an emergency operations position in one of the fire districts/departments participating in this study, what is your current level of EMS certification?"*

EMS Certification	Responses (149)	Percent Total[1]
Emergency Medical Responder	22	15%
Emergency Medical Technician	28	19%
Advanced EMT	3	2%
EMT-Intermediate	3	2%
Paramedic	29	19%
Other	6	4%
None of the above	**58**	**39%**

[1] Rounded to the nearest integer.

Question #4: *"My opinion of a possible "consolidation" into a single fire district or department of two or more of the fire agencies involved in this study is…"*

Respondent Opinion	Responses (151)	Percent Total[1]
FAVOR (depending on configuration)[2]	**118**	**78%**
AGAINST (regardless of configuration)[2]	12	8%
No opinion	9	6%
Other (comments only)	9	6%

[1] Rounded to the nearest integer.

[2] Includes individuals not directly employed or affiliated with any of the fire agencies.

Question #5: *"I am a member of a local fire district/department union/bargaining unit affiliated with one of the fire agencies participating in this study?"*

Response	Responses (149)	Percent Total[1]
Yes	46	31%
No	**71**	**48%**
Not applicable	32	31%

[1] Rounded to the nearest integer.

Question #6: *"In your opinion, what are the top three or four critical issues related to your fire district/department?"*

Question #7: *"Please list any suggestions you have on how fire protection, EMS, other emergency services, and other services can be improved throughout Yamhill and Polk Counties, as well as any other comments you think would be valid as related to this study."*

Responses to the preceding two questions tended to mirror each other. The following represents the most common issues:

- Insufficient staffing of career and volunteer personnel
- Poor response time performance
- Inadequate operations, deployment, and station locations
- Lack of necessary funding
- Insufficient training

APPENDIX C: SERVICE DELIVERY & PERFORMANCE

A key aspect to consider in the potential consolidation of the various fire districts and municipal fire departments within the study area is the ability to provide services to the community when requested. Throughout the service delivery and performance analysis, historical performance for each individual jurisdiction will be illustrated and a comparison of the same data combined into a single agency that will be identified as Yamhill County. SWP is not included in this analysis as there was no data provided for that jurisdiction. Each of the following components has an impact on the agency's ability to provide service and should be a part of regular monitoring and planning. The key components of service delivery and performance are:

- Service Demand
- Resource Distribution
- Resource Concentration
- Resource Reliability
- Response Performance

Service Demand Analysis

Incident Type Analysis

The first component evaluated is service demand by incident type. While service demand can be measured simply as the number of incidents within a given time period, seeing that same demand categorized by incident type provides policymakers the ability to assess current demand and plan for future demand. The National Fire Incident Reporting System (NFIRS) has developed a classification system to categorize various types of incidents. These codes identify the various types of incidents to which the fire department responds and allows the fire department to document the full range of incidents it handles. This information can be used to analyze the frequency of different types of incidents, provide insight on fire and other incident problems, and identify training needs. The codes are three digits and are grouped into series by the first digit, as illustrated in Figure 2.

Figure 2: 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

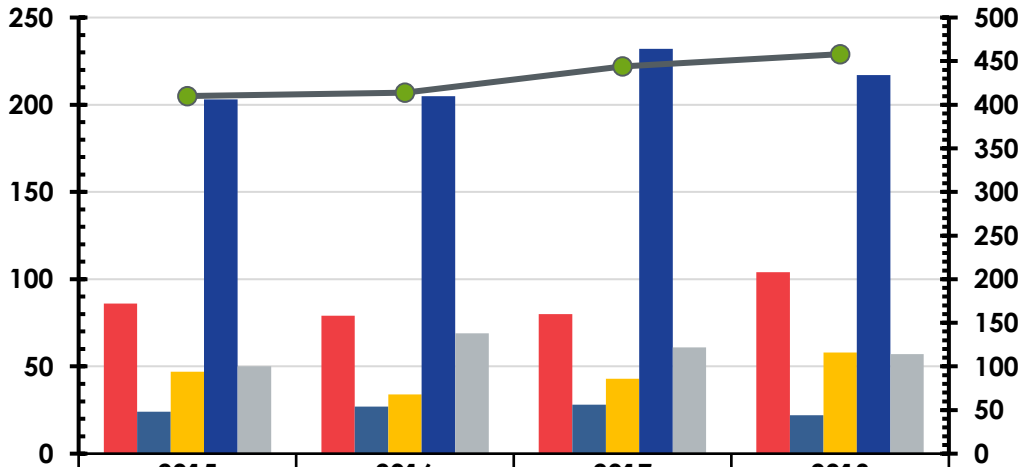
Incidents by NFIRS Incident Type—Linear

The first analysis of incidents by NFIRS type provides a view of incidents over time for each jurisdiction.

Amity Fire District

From 2015 to 2018, AFD experienced an increase of 11.71% in service demand overall, which was comprised of a 0.98% increase from 2015 to 2016, a 7.25% increase from 2016 to 2017, and a 3.15% increase from 2017 to 2018. This change encompassed a decrease of 8.33% in alarm incidents, an increase in all other incident types ranging from 6.90% for emergency medical incidents to 23.4% for other incidents.

Figure 3: AFD Incidents by NFIRS Type, 2015–2018

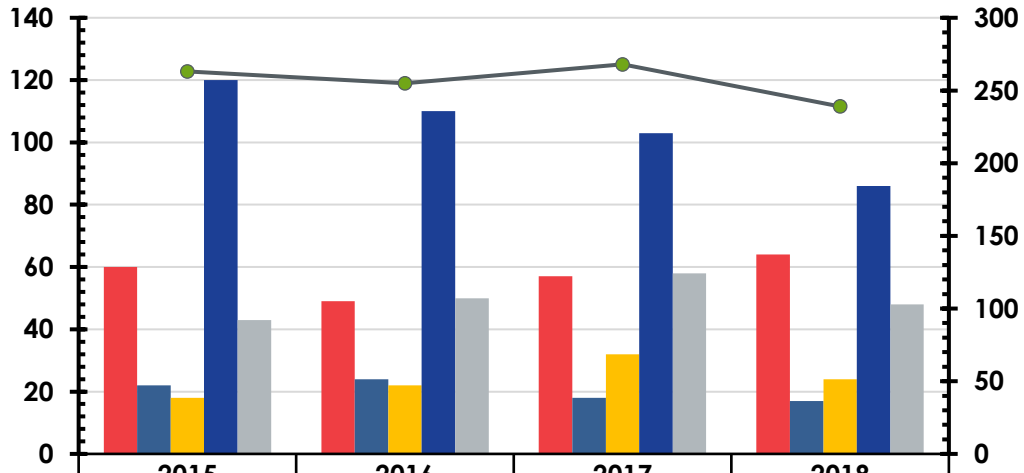


	2015	2016	2017	2018
Fire	86	79	80	104
Alarm	24	27	28	22
Other	47	34	43	58
EMS	203	205	232	217
MVC	50	69	61	57
Total	410	414	444	458

Dayton Fire District

From 2015 to 2018, DFD experienced a decrease of 9.13% in service demand overall, which was comprised of a 3.04% decrease from 2015 to 2016, a 5.10% increase from 2016 to 2017, and a 10.82% decrease from 2017 to 2018. This change encompassed decreases in alarm incidents of 22.73% and emergency medical incidents of 28.33%. The remaining incident types increased, ranging from 6.67% for fire incidents to 33.33% for other incidents.

Figure 4: DFD Incidents by NFIRS Type, 2015–2018

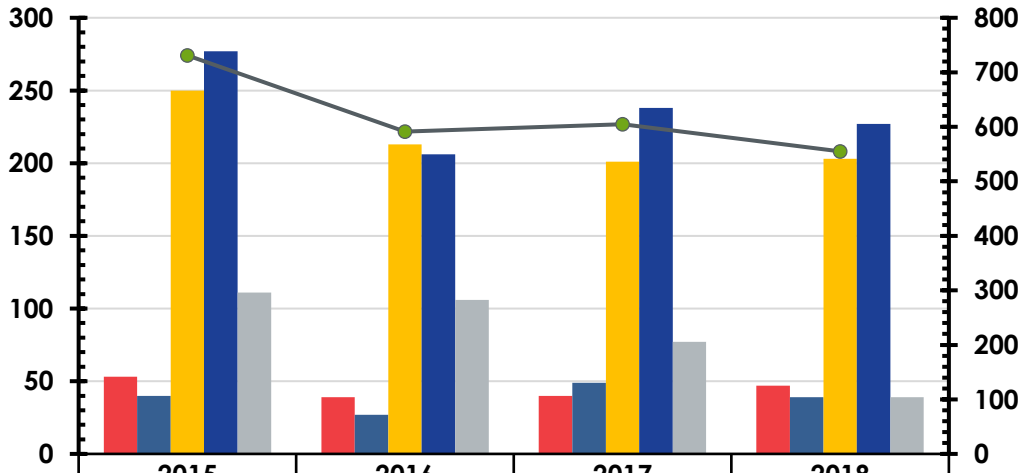


	2015	2016	2017	2018
Fire	60	49	57	64
Alarm	22	24	18	17
Other	18	22	32	24
EMS	120	110	103	86
MVC	43	50	58	48
Total	263	255	268	239

Dundee Fire District

From 2015 to 2018, DDF experienced a decrease of 24.08% in service demand overall, which was comprised of a 19.15% decrease from 2015 to 2016, a 2.37% increase from 2016 to 2017, and an 8.26% decrease from 2017 to 2018. This change encompassed a decrease in all incident types, ranging from 2.5% for alarm incidents to 64.86% for motor vehicle collision incidents.

Figure 5: DDF Incidents by NFIRS Type, 2015–2018

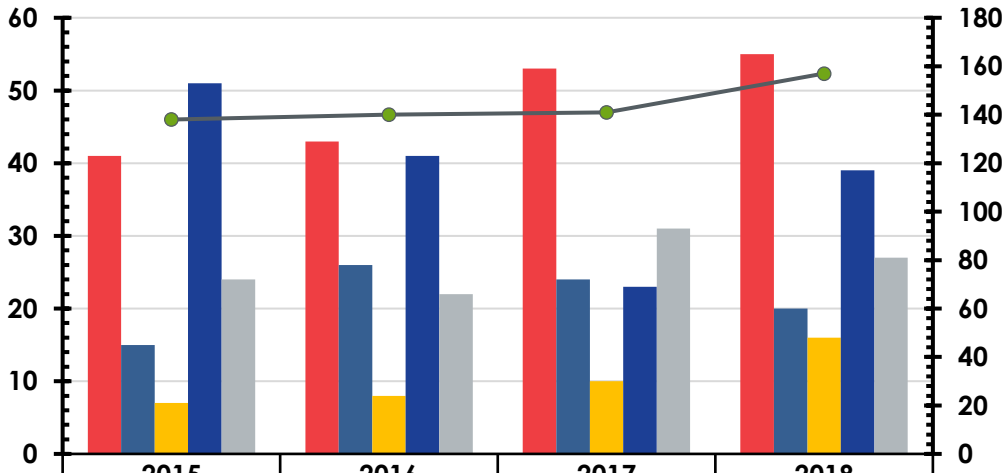


	2015	2016	2017	2018
Fire	53	39	40	47
Alarm	40	27	49	39
Other	250	213	201	203
EMS	277	206	238	227
MVC	111	106	77	39
Total	731	591	605	555

Lafayette Fire Department

From 2015 to 2018, LFD experienced an increase of 4.50% in service demand overall, which was comprised of a 1.45% increase from 2015 to 2016, a 0.71% increase from 2016 to 2017, and an 11.35% increase from 2017 to 2018. This change encompassed a decrease of 23.53% in emergency medical incidents, an increase in all other incident types ranging from 12.50% for motor vehicle collision incidents to 128.57% for other incidents.

Figure 6: LFD Incidents by NFIRS Type, 2015–2018

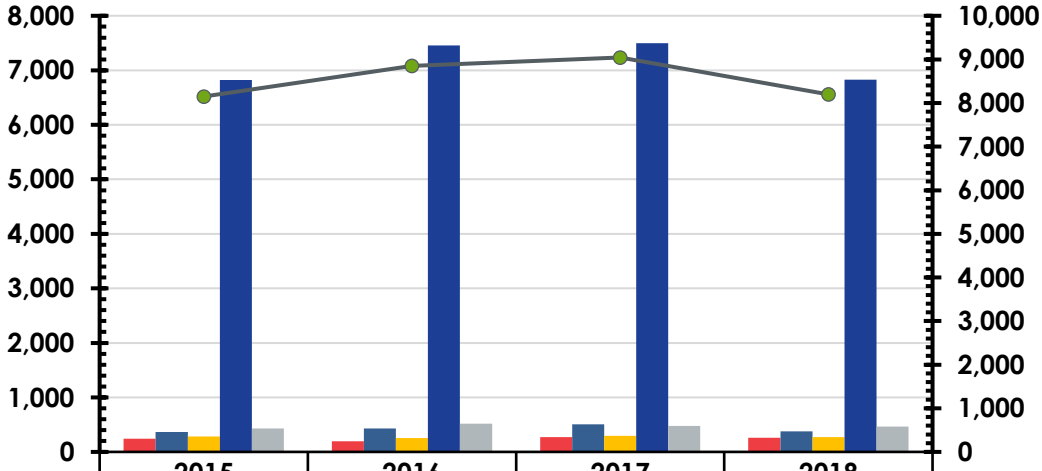


	2015	2016	2017	2018
Fire	41	43	53	55
Alarm	15	26	24	20
Other	7	8	10	16
EMS	51	41	23	39
MVC	24	22	31	27
Total	138	140	141	157

McMinnville Fire Department

From 2015 to 2018, MFD experienced an increase of 0.48% in service demand overall, which was comprised of an 8.59% increase from 2015 to 2016, a 2.20% increase from 2016 to 2017, and a 9.35% decrease from 2017 to 2018. This change encompassed a decrease of 5.61% in other incidents and an increase in all other incident types ranging from 0.09% for emergency medical incidents to 8.33% for motor vehicle collision incidents.

Figure 7: MFD Incidents by NFIRS Type, 2015–2018

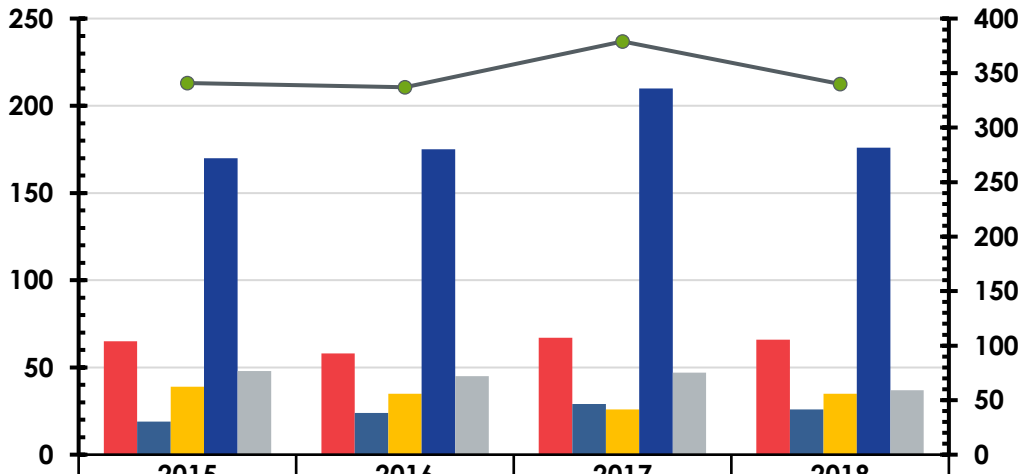


	2015	2016	2017	2018
Fire	245	195	271	257
Alarm	367	427	508	378
Other	285	251	293	269
EMS	6,820	7,459	7,495	6,826
MVC	432	517	477	468
Total	8,149	8,849	9,044	8,198

New Carlton Fire District

From 2015 to 2018, NCFD experienced an increase of 0.33% in service demand overall, which was comprised of a 1.17% decrease from 2015 to 2016, a 12.46% increase from 2016 to 2017, and a 10.29% decrease from 2017 to 2018. This change encompassed a decrease of 10.26% in other incidents and a decrease of 22.92% in motor vehicle collision incidents. There was an increase in all other incident types ranging from 1.54% for fire incidents to 36.84% for alarm incidents.

Figure 8: NCFD Incidents by NFIRS Type, 2015–2018

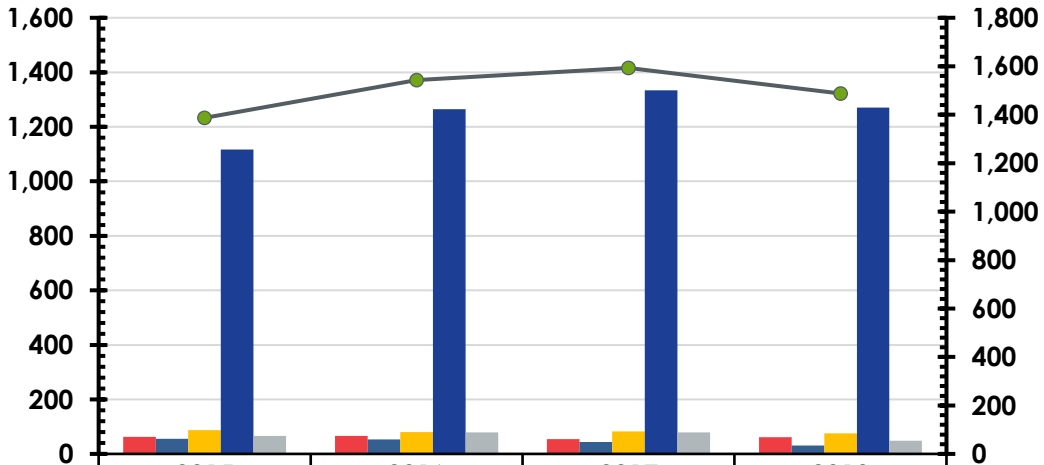


	2015	2016	2017	2018
Fire	65	58	67	66
Alarm	19	24	29	26
Other	39	35	26	35
EMS	170	175	210	176
MVC	48	45	47	37
Total	341	337	379	340

Sheridan Fire District

From 2015 to 2018, SFD experienced an increase of 7.21% in service demand overall, which was comprised of an 11.25% increase from 2015 to 2016, a 3.24% increase from 2016 to 2017, and a 6.65% decrease from 2017 to 2018. This change encompassed an increase of 13.79% in emergency medical incidents and a decrease in all other incident types ranging from 1.61% for fire incidents to 43.64% for alarm incidents.

Figure 9: SFD Incidents by NFIRS Type, 2015–2018

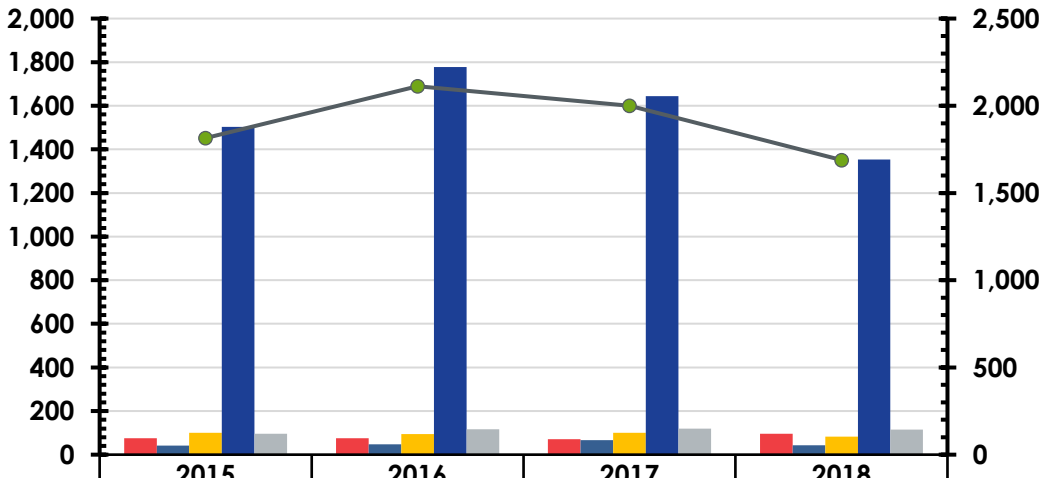


	2015	2016	2017	2018
Fire	62	66	54	61
Alarm	55	53	44	31
Other	87	80	82	76
EMS	1,117	1,265	1,334	1,271
MVC	66	79	79	48
Total	1,387	1,543	1,593	1,487

West Valley Fire District

From 2015 to 2018, WVFD experienced a decrease of 6.94% in service demand overall, which was comprised of a 16.36% increase from 2015 to 2016, a 5.30% decrease from 2016 to 2017, and a 15.55% decrease from 2017 to 2018. This change encompassed a decrease of 18.00% in other incidents and a decrease of 9.98% in emergency medical incidents. There was an increase in all other incident types ranging from 4.88% for alarm incidents to 28.00% for fire incidents.

Figure 10: WVFD Incidents by NFIRS Type, 2015–2018

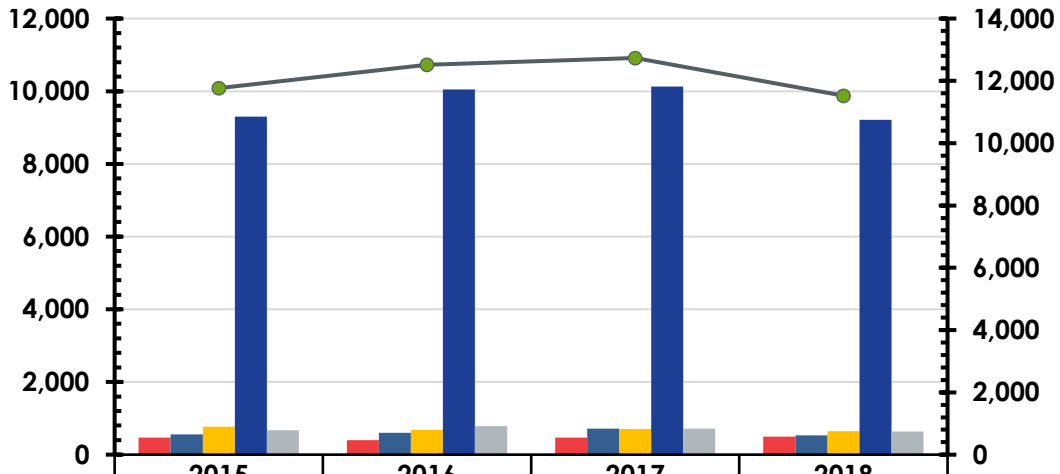


	2015	2016	2017	2018
Fire	75	76	71	96
Alarm	41	48	66	43
Other	100	94	100	82
EMS	1,503	1,778	1,644	1,353
MVC	96	116	119	115
Total	1,815	2,112	2,000	1,689

Yamhill County

When viewed as a consolidated agency, from 2015 to 2018, Yamhill County experienced a decrease of 2.07% in service demand overall, which was comprised of a 6.40% increase from 2015 to 2016, a 1.71% increase from 2016 to 2017, and a 9.50% decrease from 2017 to 2018. This change encompassed an increase of 4.86% in fire incidents and a decrease in all other incident types ranging from 0.88% for emergency medical incidents to 16.21% for other incidents.

Figure 11: Yamhill County Incidents by NFIRS Type, 2015–2018



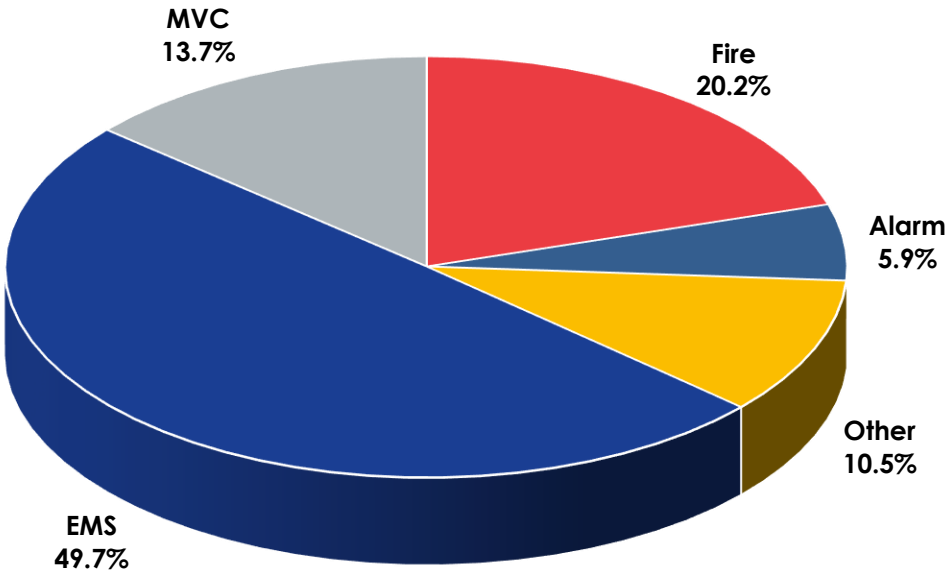
	2015	2016	2017	2018
Fire	473	397	471	496
Alarm	556	606	712	529
Other	771	684	711	646
EMS	9,297	10,050	10,128	9,215
MVC	670	783	712	638
Total	11,767	12,520	12,734	11,524

Incidents by NFIRS Incident Type—Percentage

While the preceding section illustrated the change in service demand over time, it is also valuable to analyze response data to compare the various types of incidents to the overall total number of incidents. This comparison provides leadership with valuable data when determining the types of resources that may need to be added as service demand increases. This comparison is illustrated in the following figures.

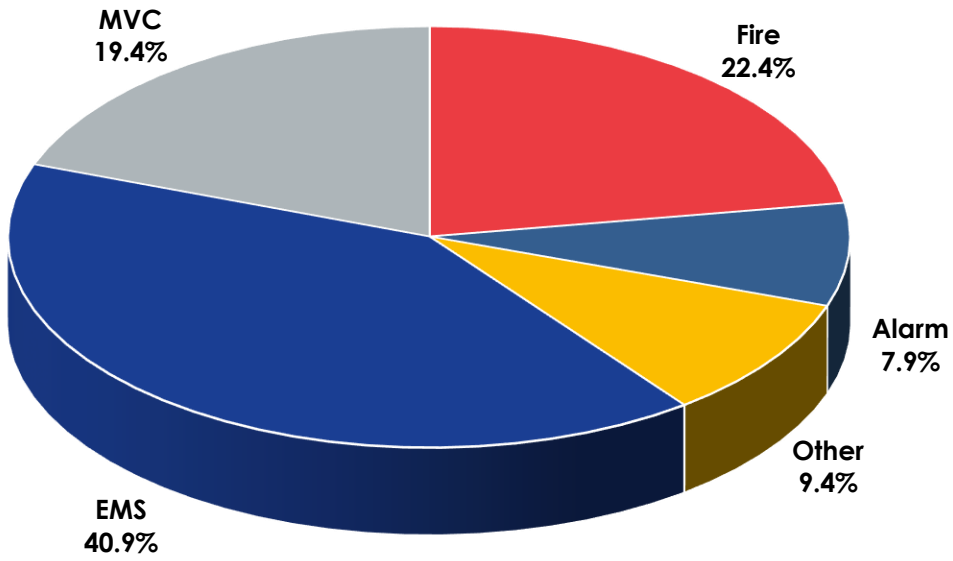
Amity Fire District

Figure 12: AFD Incidents by NFIRS Type, 2015–2018



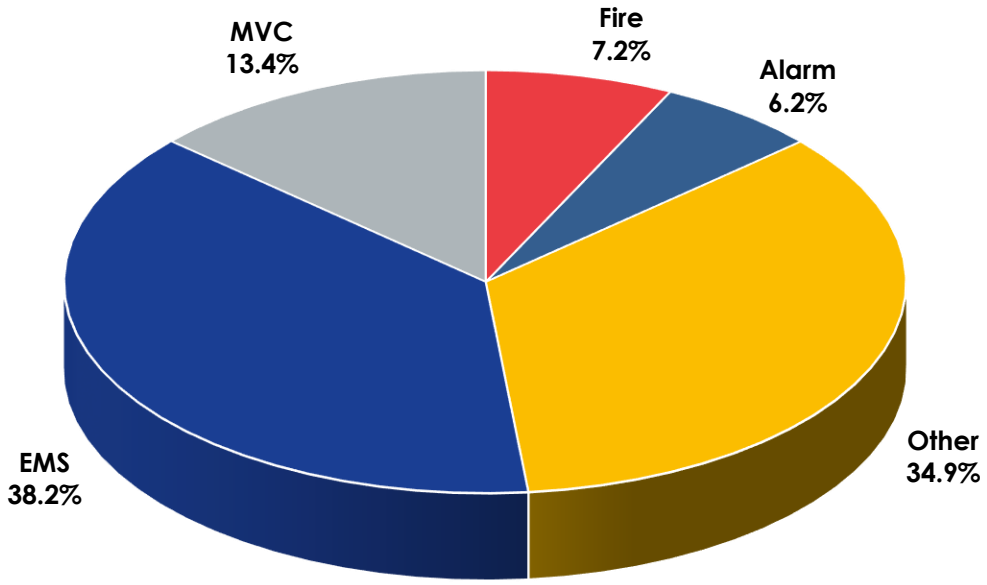
Dayton Fire District

Figure 13: DFD Incidents by NFIRS Type, 2015–2018



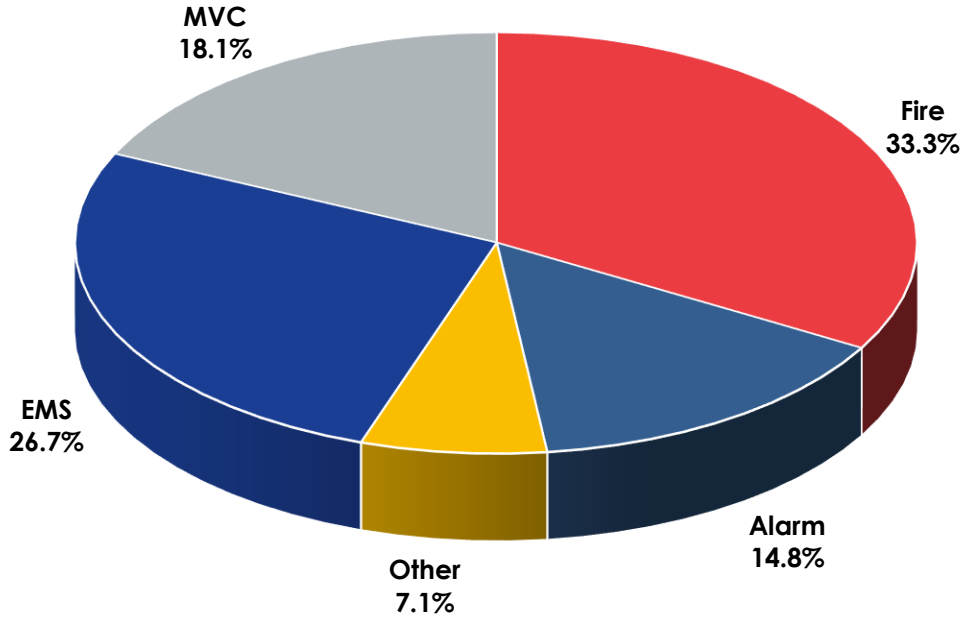
Dundee Fire District

Figure 14: DDF Incidents by NFIRS Type, 2015–2018



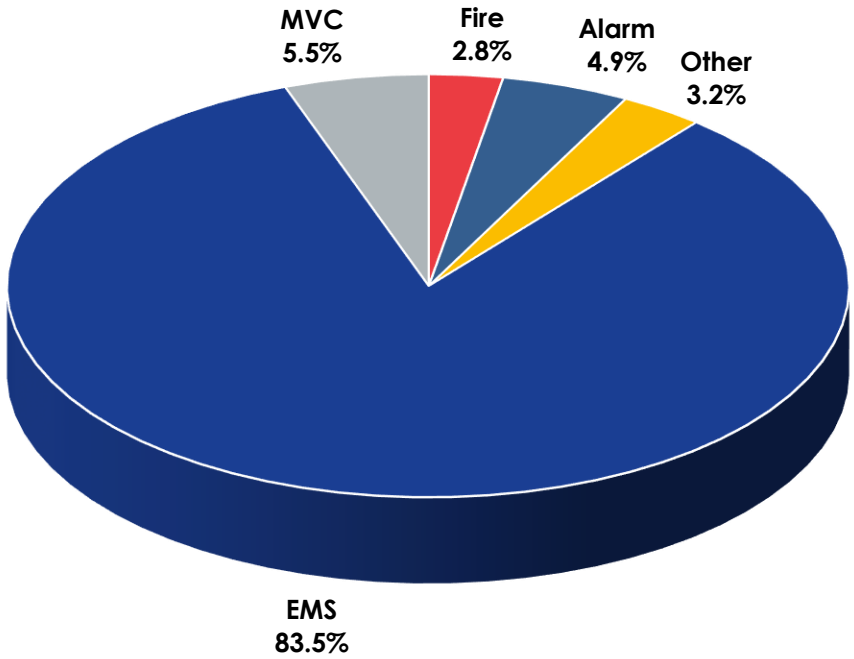
Lafayette Fire Department

Figure 15: Lafayette Incidents by NFIRS Type, 2015–2018



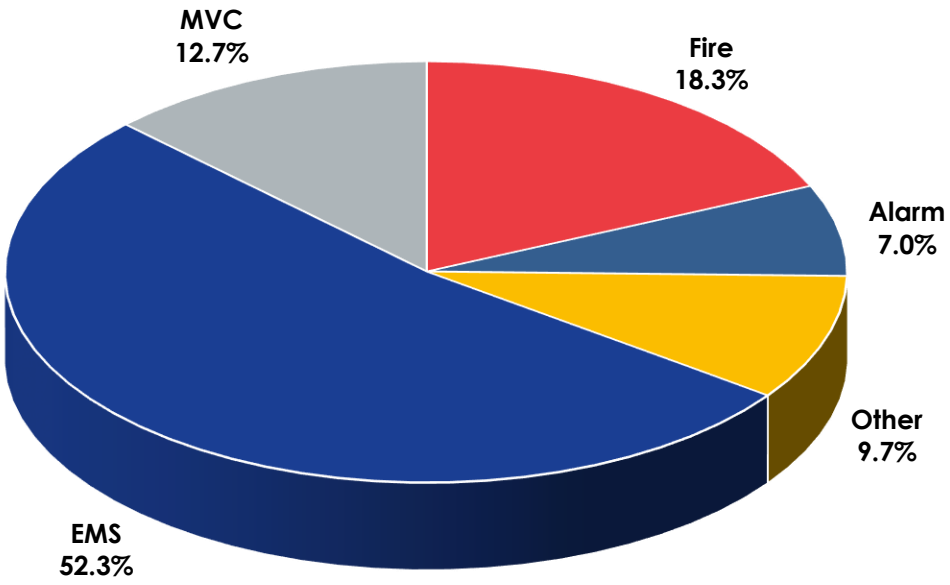
McMinnville Fire Department

Figure 16: MFD Incidents by NFIRS Type, 2015–2018



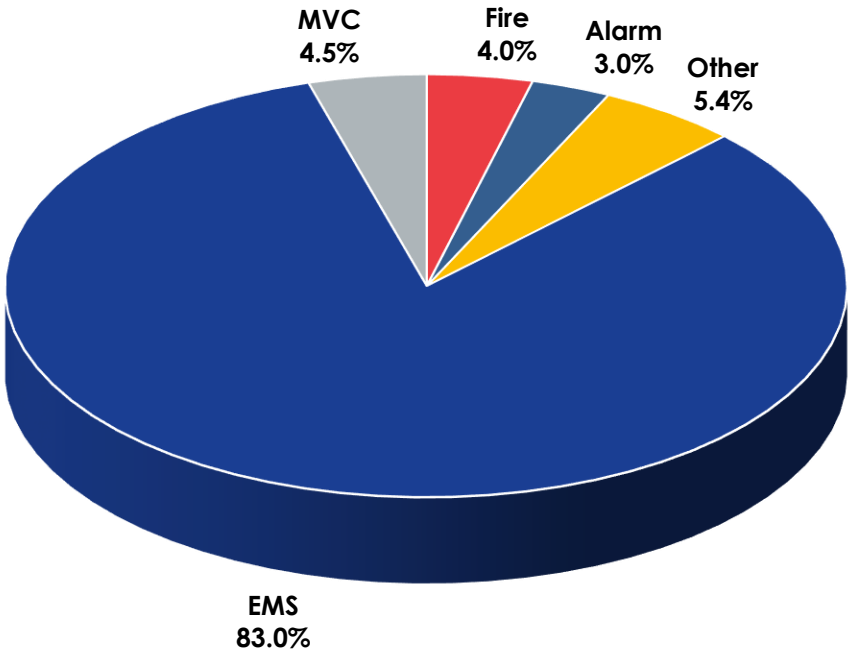
New Carlton Fire District

Figure 17: NCFD Incidents by NFIRS Type, 2015–2018



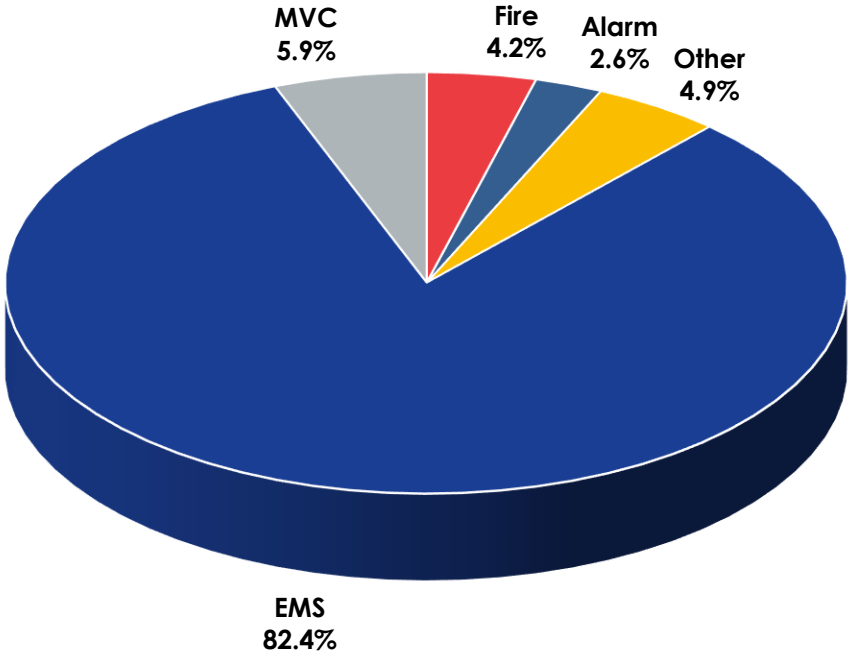
Sheridan Fire District

Figure 18: SFD Incidents by NFIRS Type, 2015–2018



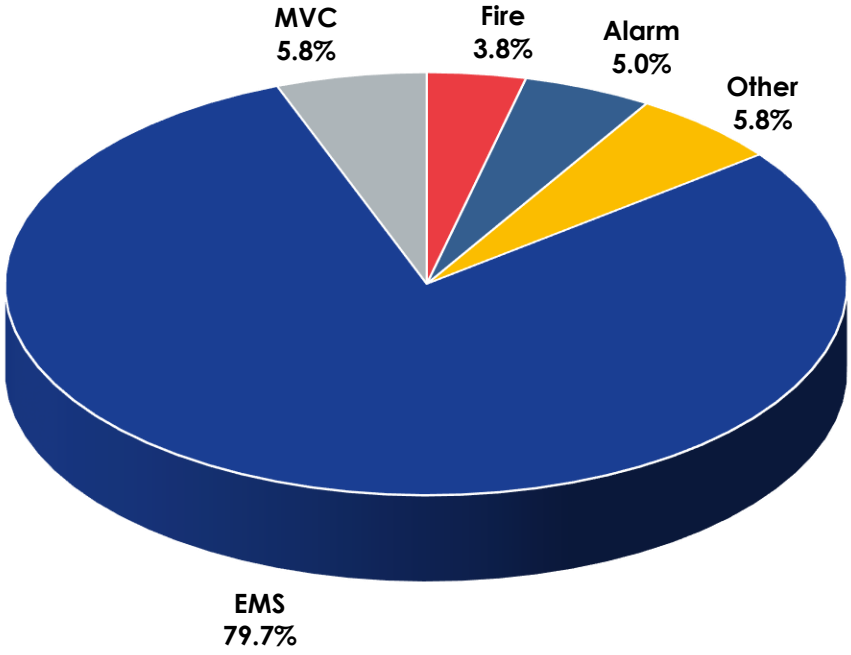
West Valley Fire District

Figure 19: WVFD Incidents by NFIRS Type, 2015–2018



Yamhill County

Figure 20: Yamhill County Incidents by NFIRS Type, 2015–2018



Temporal Analysis

The second component evaluated is service demand as it relates to the month of the year, day of the week, and time of the day. A key benefit of temporal analysis is to provide leadership the ability to not only consider the overall resource deployment model but also to allow for scheduling of non-incident activities when service demand is lower. Non-incident activities include hydrant testing, hose testing, training, apparatus maintenance, public education, pre-fire planning, etc. Each temporal component is presented as the percentage relative to the total service demand for that component.

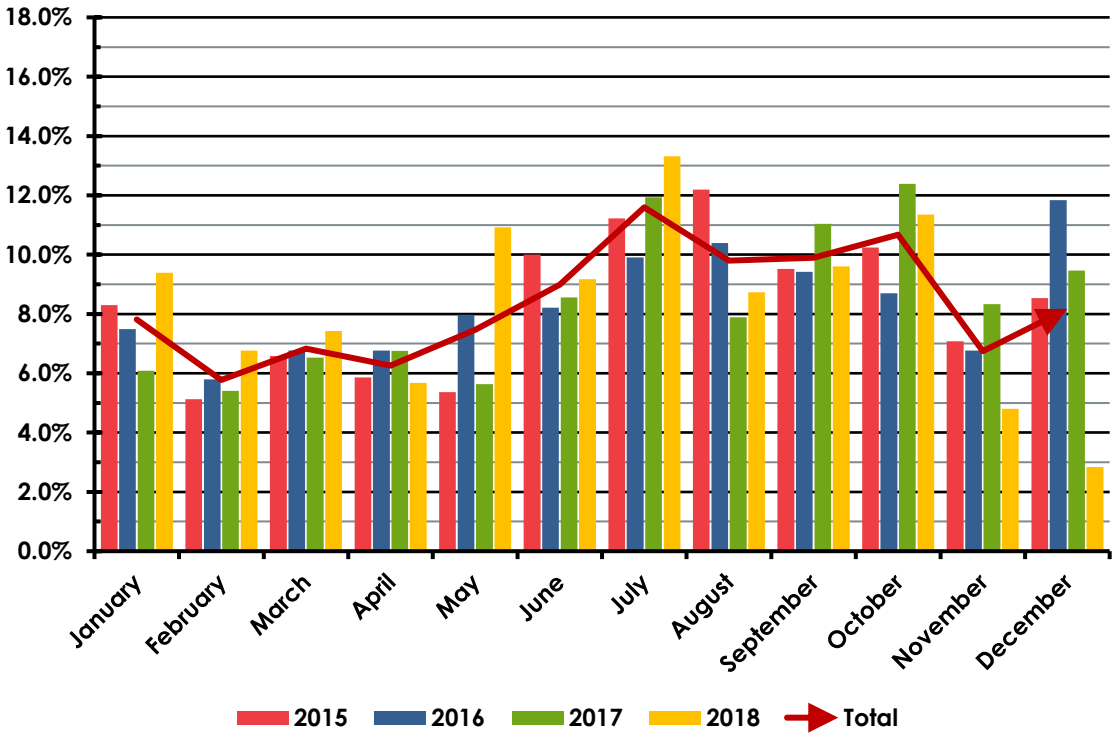
Temporal Analysis by Month

Service demand by month is the first temporal component evaluated and illustrated in the following figures.

Amity Fire District

The greatest service demand for AFD occurs in July, September, and October. The lowest demand for service occurs from November through April. When possible, non-incident activities should be scheduled to avoid July, September, and October.

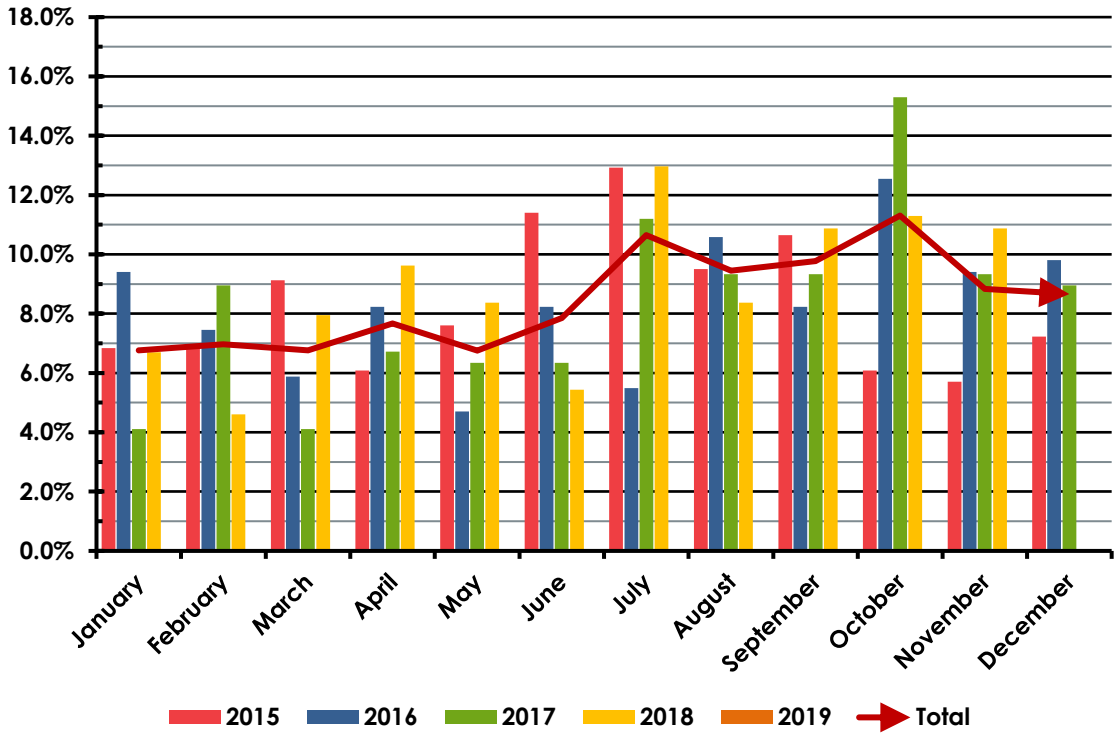
Figure 21: AFD Temporal Analysis by Month, 2015–2018



Dayton Fire District

The greatest service demand for DFD occurs in July and September through December. The lowest demand for service occurs from January through June. When possible, non-incident activities should be scheduled to avoid July and September through December.

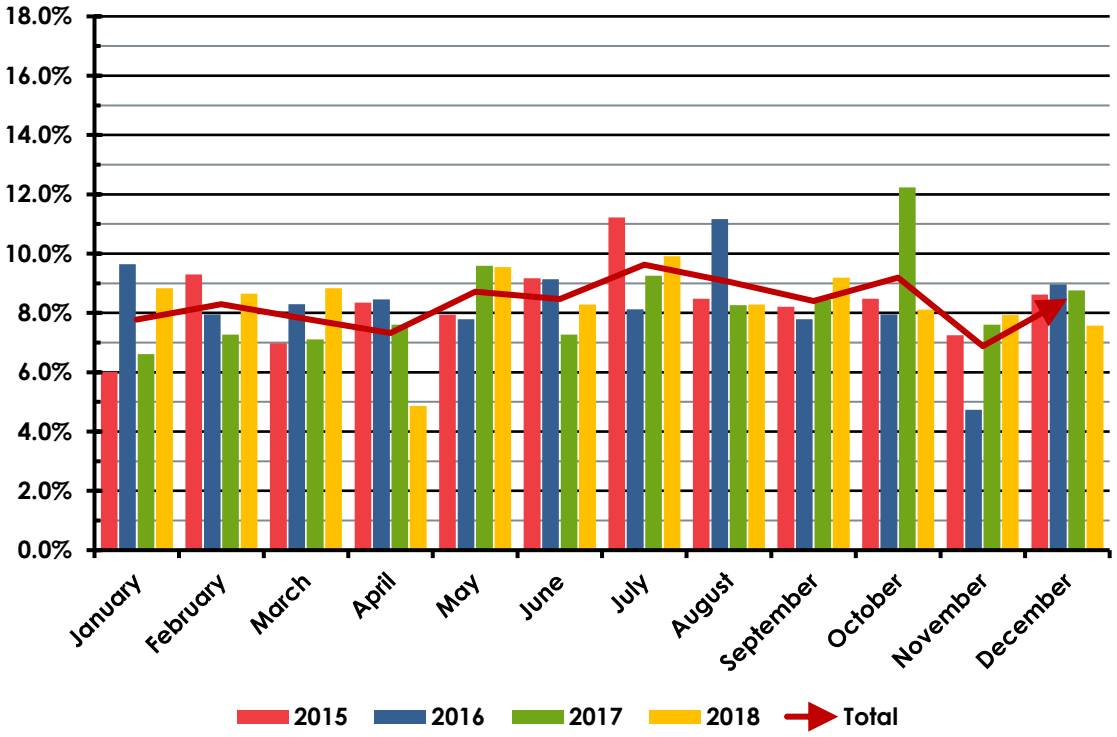
Figure 22: DFD Temporal Analysis by Month, 2015–2018



Dundee Fire District

Service demand for DDF is level overall, without any significant variances. This provides an ability to conduct non-incident activities throughout the year.

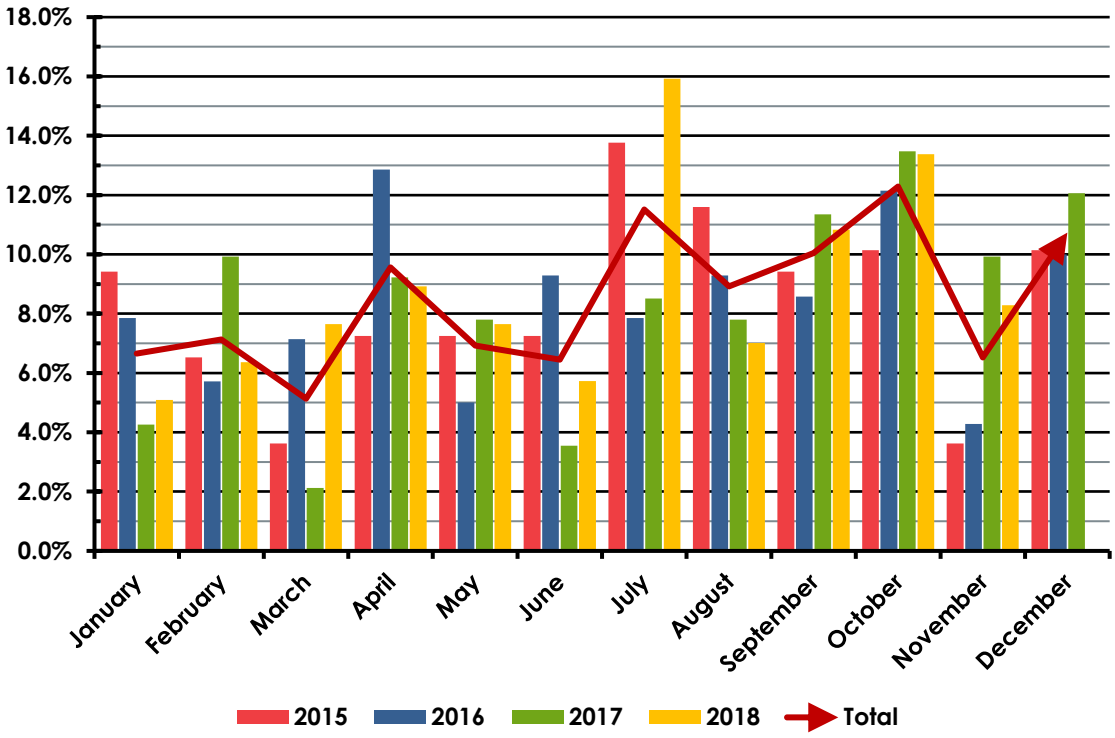
Figure 23: DDF Temporal Analysis by Month, 2015–2018



Lafayette Fire Department

The greatest service demand for LFD occurs in July, October, and December. The lowest demand for service occurs January through April. When possible, non-incident activities should be scheduled to avoid July and October through December.

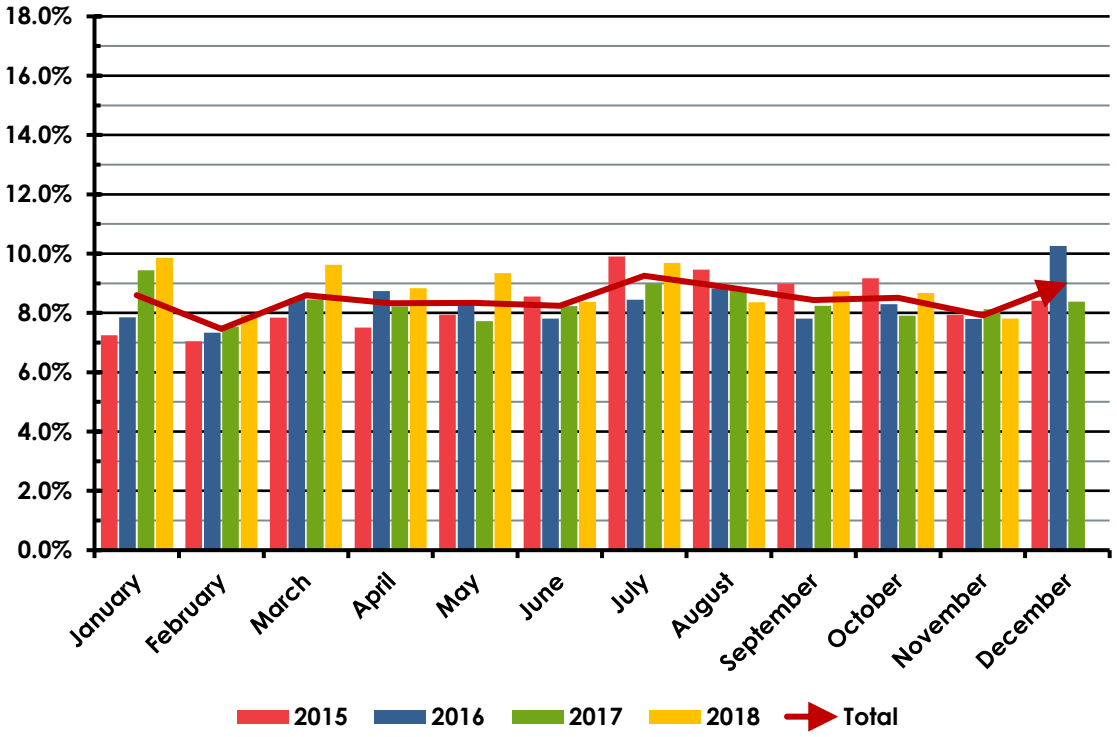
Figure 24: LFD Temporal Analysis by Month, 2015–2018



McMinnville Fire Department

Service demand for MFD is level throughout the year, without significant variance. This enables leadership to plan non-incident activities throughout the year.

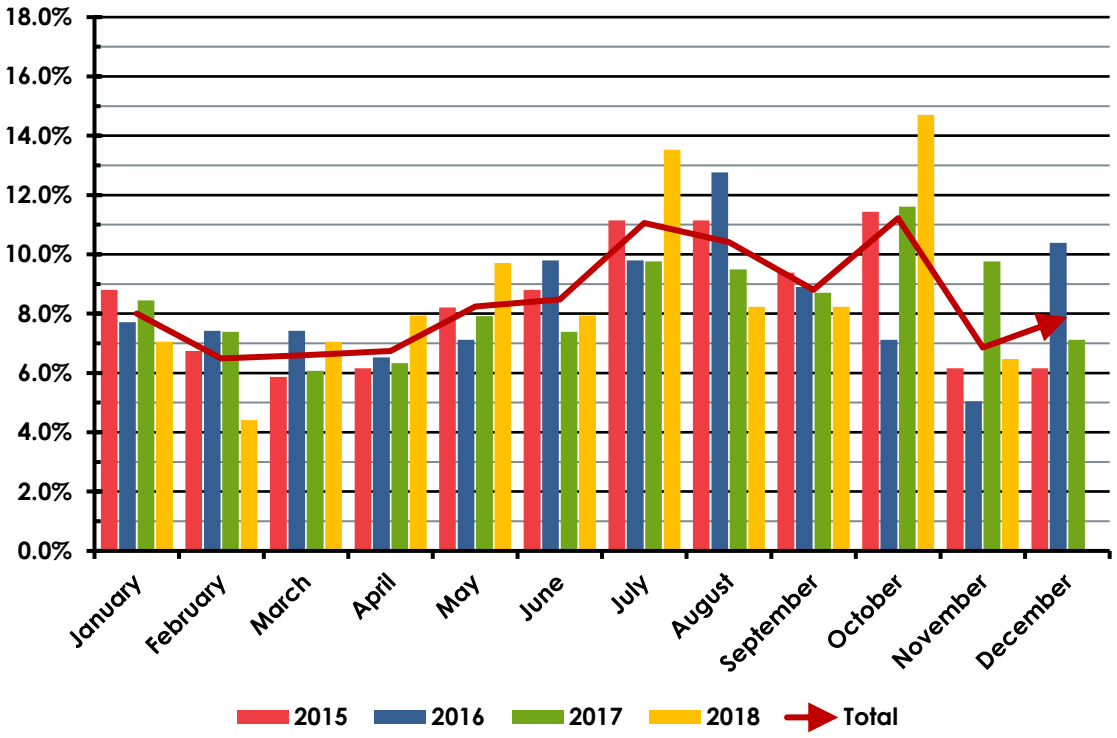
Figure 25: MFD Temporal Analysis by Month, 2015–2018



New Carlton Fire District

The greatest service demand for NCFD occurs in July and October. The lowest demand for service occurs from November through March. When possible, non-incident activities should be scheduled to avoid July and October.

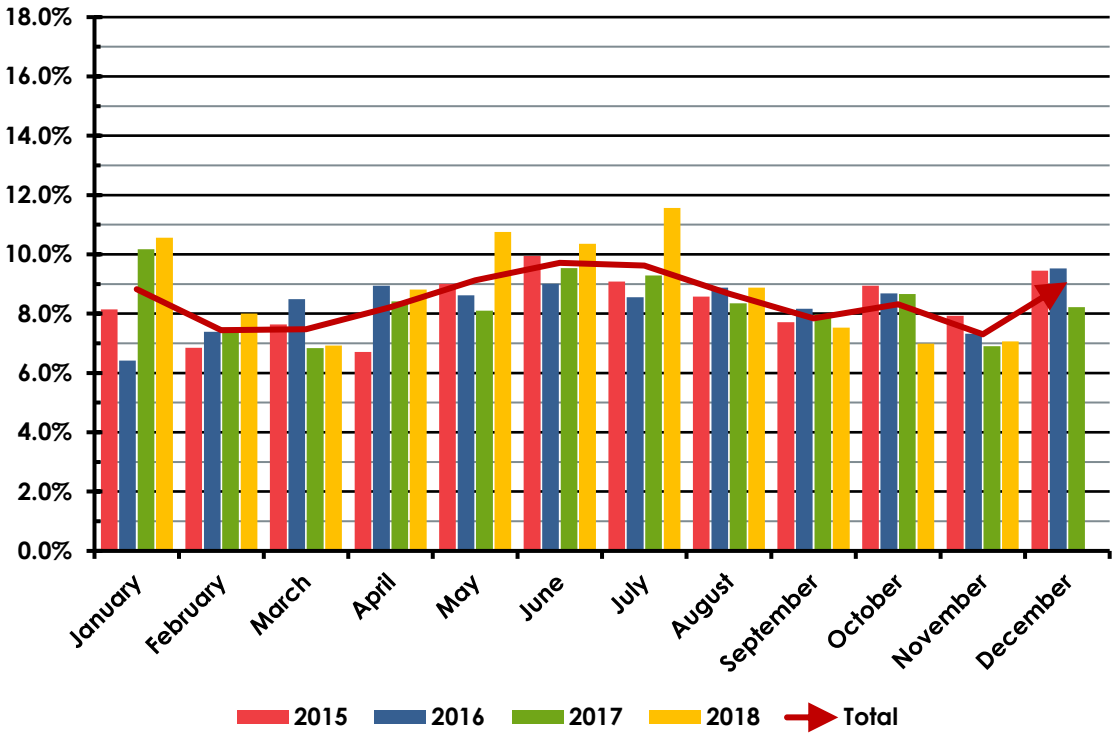
Figure 26: NCFD Temporal Analysis by Month, 2015–2018



Sheridan Fire District

The greatest service demand for SFD occurs in January and May through July. The lowest demand for service occurs in March and September through November. When possible, non-incident activities should be scheduled to avoid January and May through July.

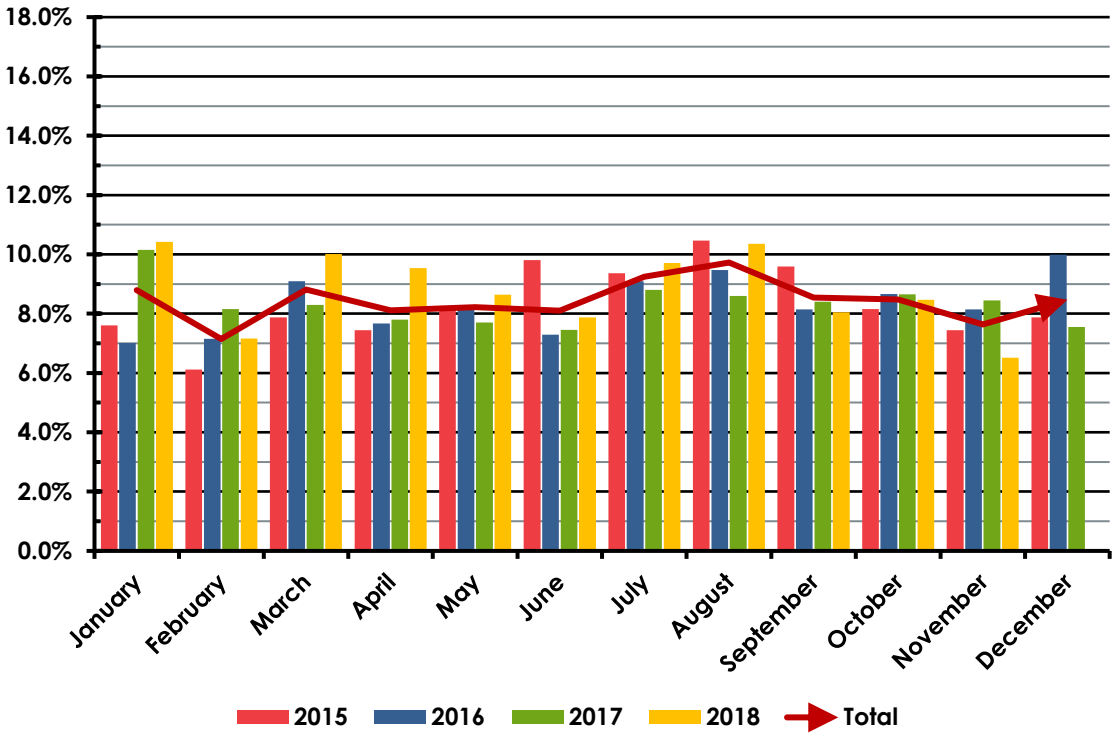
Figure 27: SFD Temporal Analysis by Month, 2015–2018



West Valley Fire District

The greatest service demand for WVFD occurs in January, March, July, and August. The lowest demand for service occurs from September through December. When possible, non-incident activities should be scheduled to avoid January, March, July, and August.

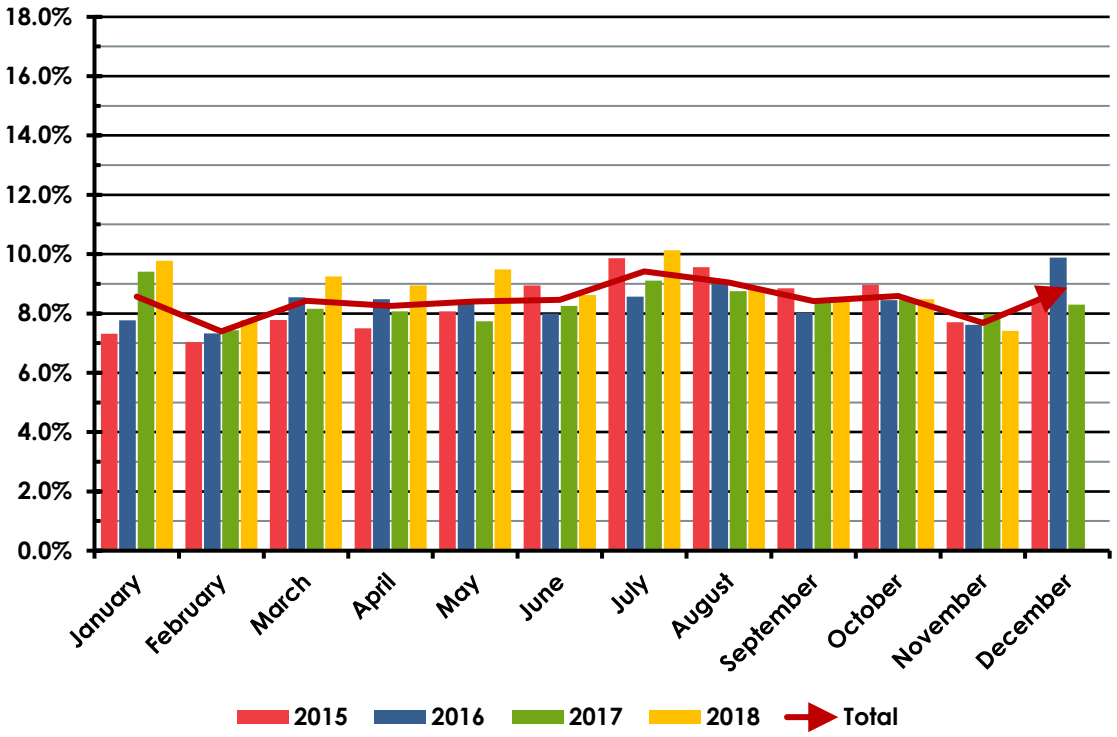
Figure 28: WVFD Temporal Analysis by Month, 2015–2018



Yamhill County

When viewed as a consolidated agency, service demand is relatively flat, without great variation. While this would indicate that leadership may schedule non-incident activities throughout the year, having the detailed analysis by district/department would allow leadership to vary that scheduling based on the demand within the specific area.

Figure 29: Yamhill County Temporal Analysis by Month, 2015–2018



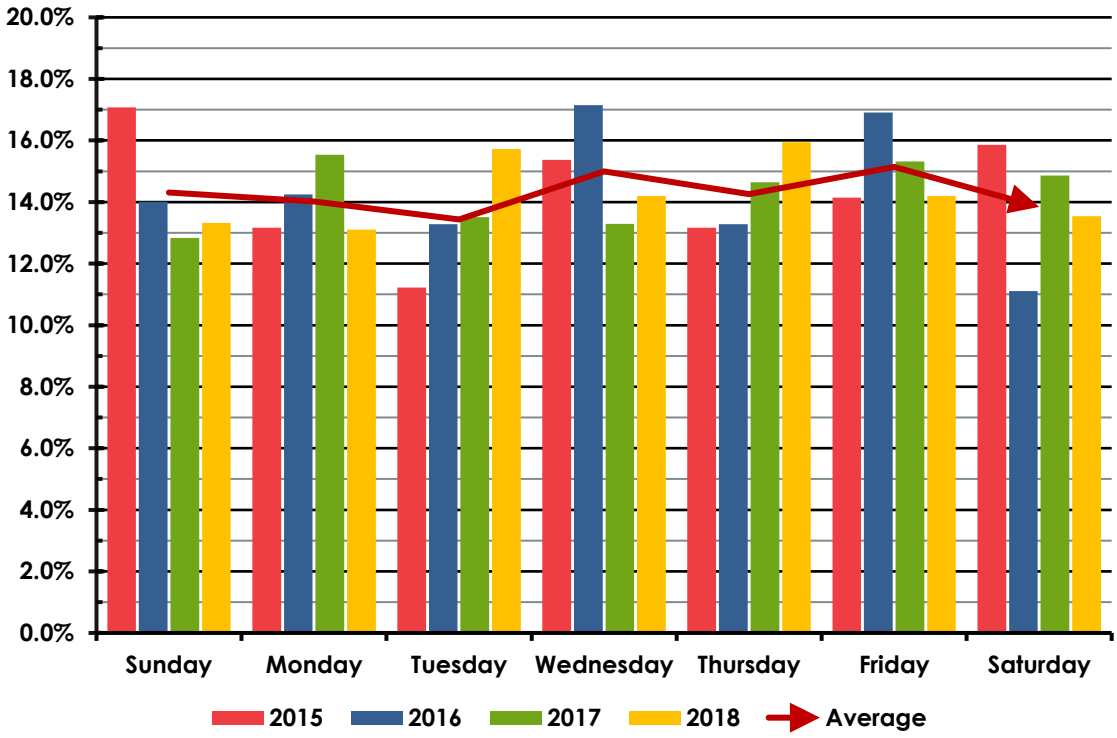
Temporal Analysis by Day of Week

Service demand by day of the week is the second temporal component evaluated. As the preceding data will enable leadership to plan operational schedules and non-incident activities during months with lesser service demand, so this analysis will provide a similar relationship to scheduling based on the day of the week.

Amity Fire District

The greatest service demand for AFD occurs on Wednesdays and Fridays. The lowest demand for service occurs Saturday through Tuesday. When possible, non-incident activities should be scheduled to avoid Wednesdays and Fridays.

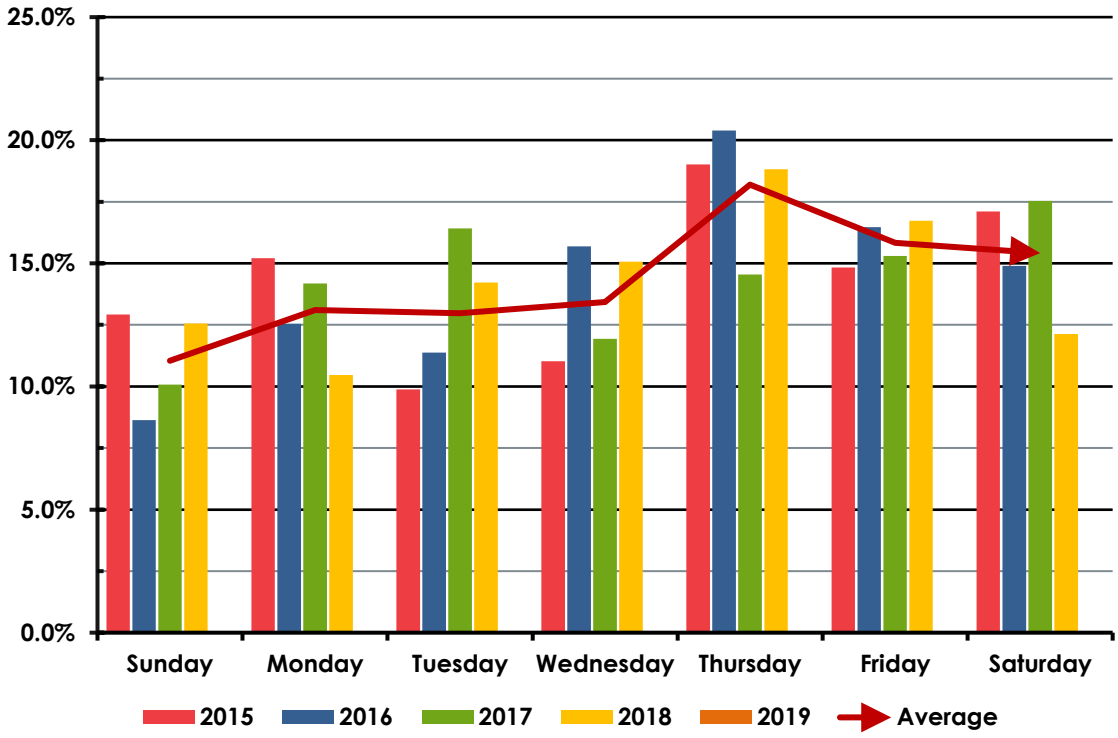
Figure 30: AFD Temporal Analysis by Day of Week, 2015–2018



Dayton Fire District

The greatest service demand for DFD occurs on Thursdays and Fridays. The lowest demand for service occurs Saturday through Tuesday. When possible, non-incident activities should be scheduled to avoid Thursdays and Fridays.

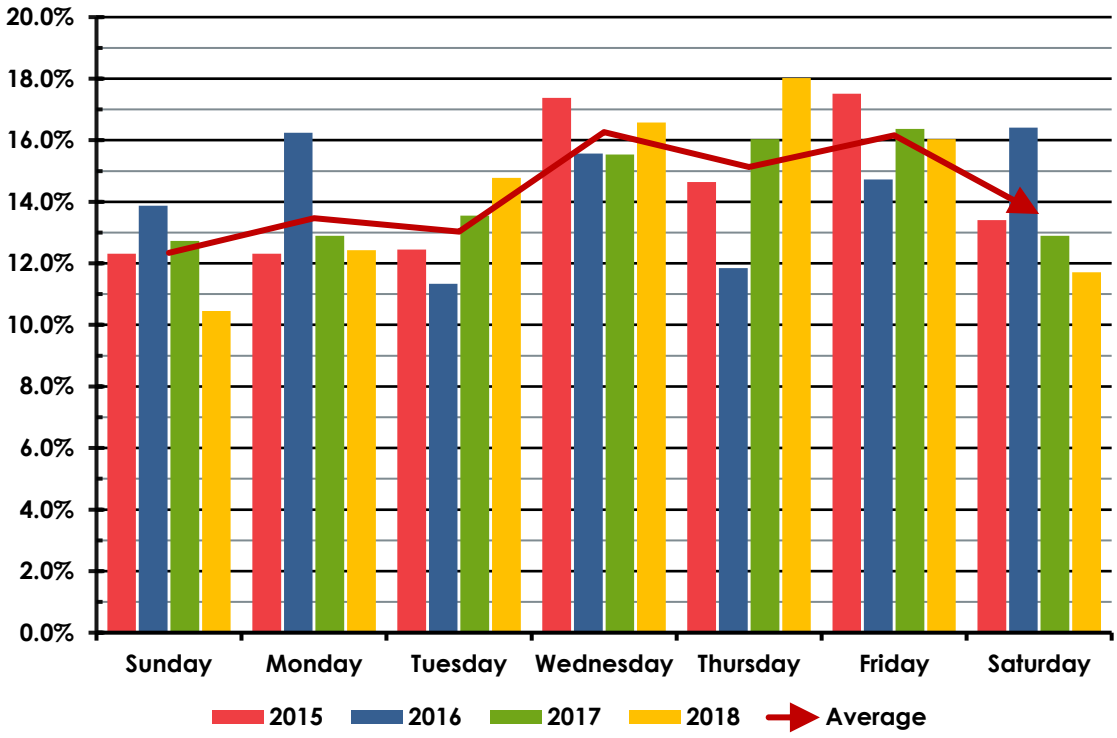
Figure 31: DFD Temporal Analysis by Day of Week, 2015–2018



Dundee Fire District

The greatest service demand for DDF occurs Wednesday through Friday. The lowest demand for service occurs Saturday through Monday. When possible, non-incident activities should be scheduled to avoid Wednesday through Friday.

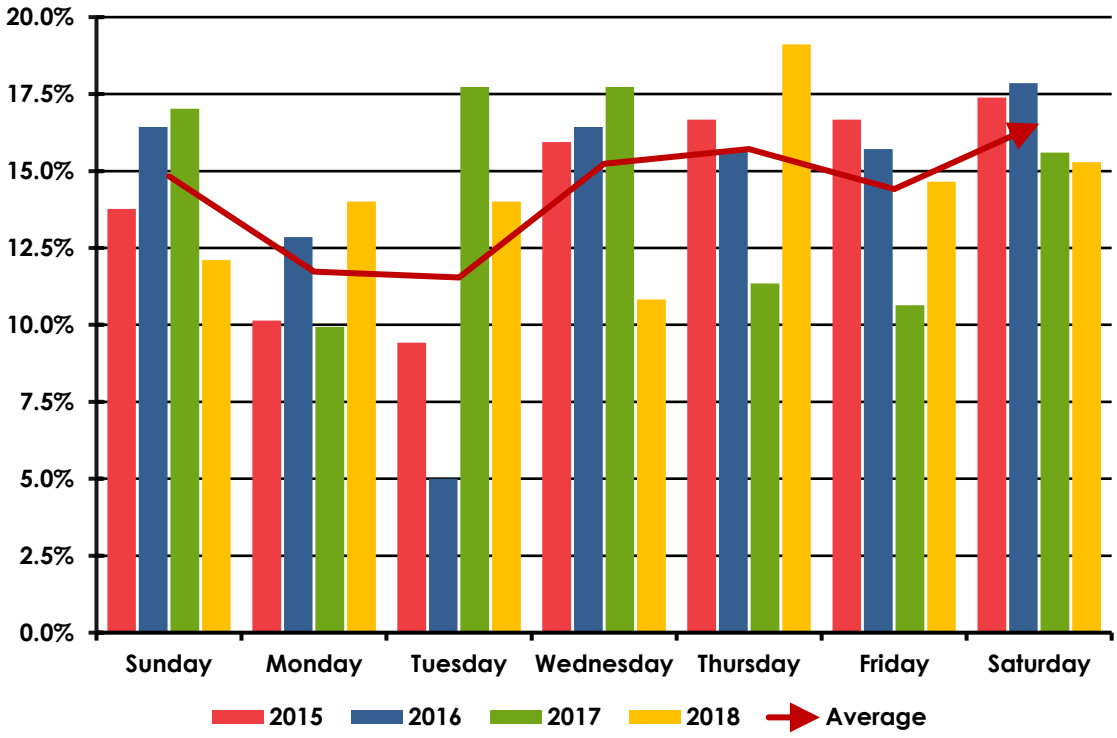
Figure 32: DDF Temporal Analysis by Day of Week, 2015–2018



Lafayette Fire Department

The greatest service demand for LFD occurs on Wednesday through Saturday. The lowest demand for service occurs Mondays and Tuesdays. When possible, non-incident activities should be scheduled to avoid Wednesday through Saturday.

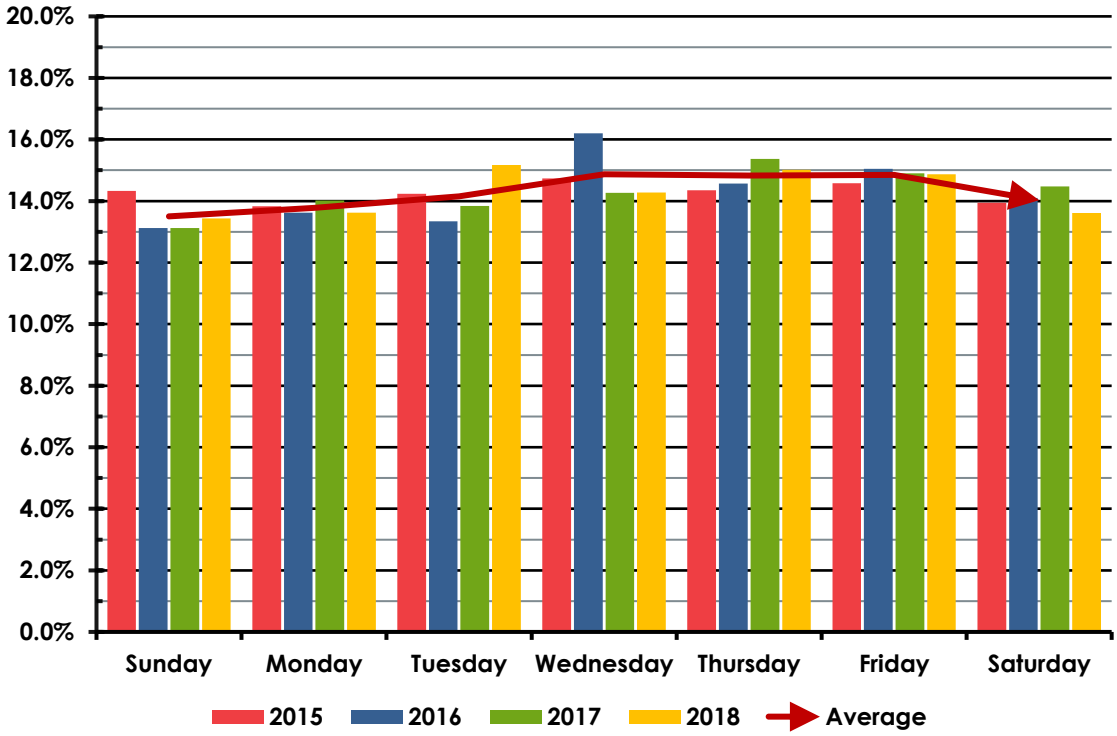
Figure 33: LFD Temporal Analysis by Day of Week, 2015–2018



McMinnville Fire Department

Service demand for MFD is fairly level throughout the week, with no significant variation. This enables leadership to schedule non-incident activity on any day of the week.

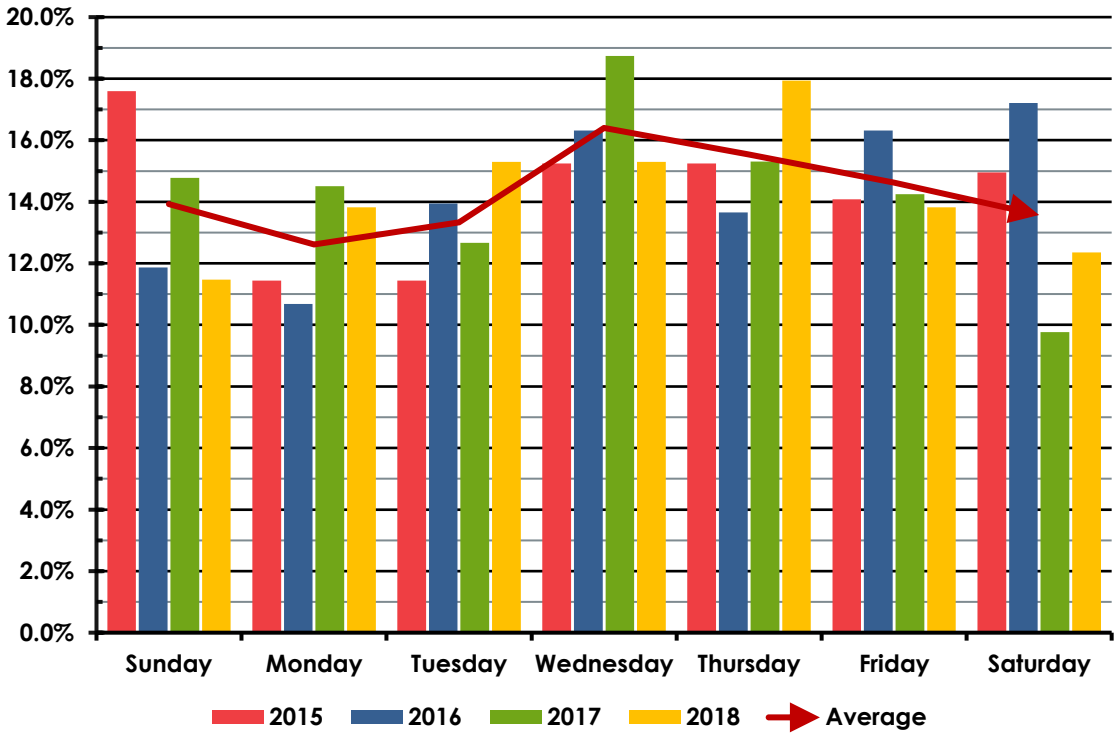
Figure 34: MFD Temporal Analysis by Day of Week, 2015–2018



New Carlton Fire District

The greatest service demand for NCFD occurs Wednesday through Friday. The lowest demand for service occurs Saturday through Tuesday. When possible, non-incident activities should be scheduled to avoid Wednesday through Friday.

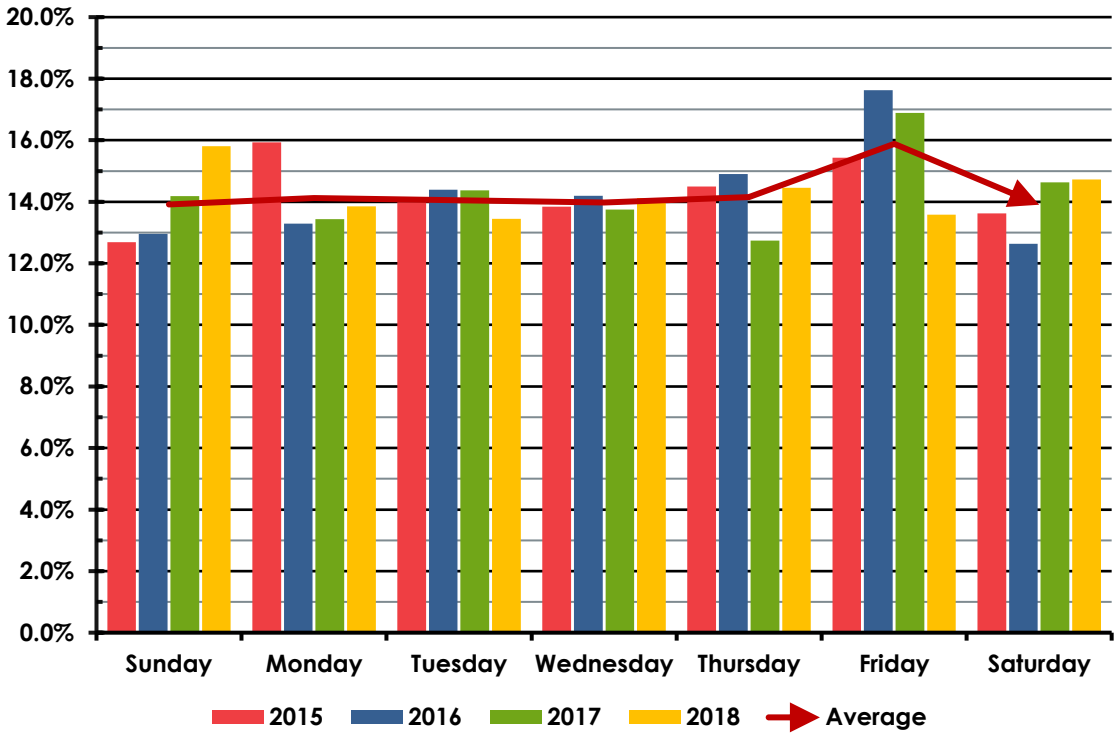
Figure 35: NCFD Temporal Analysis by Day of Week, 2015–2018



Sheridan Fire District

The greatest service demand for SFD occurs on Fridays. The lowest demand for service occurs Sunday through Thursday. When possible, non-incident activities should be scheduled to avoid Fridays.

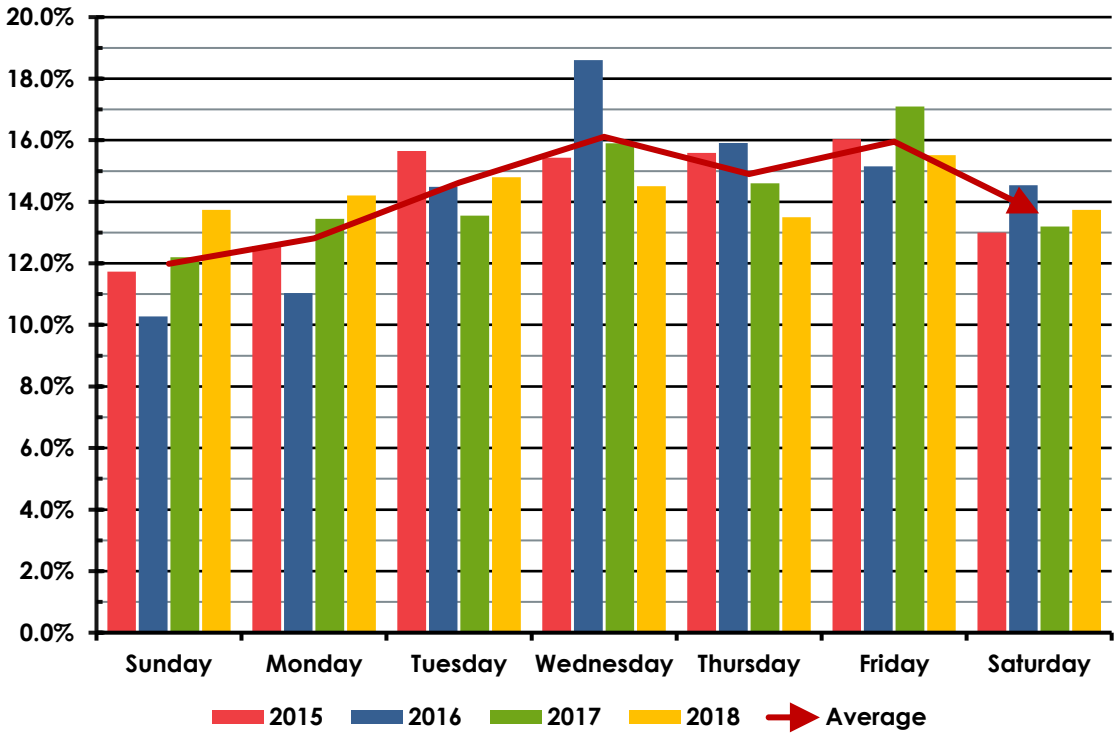
Figure 36: SFD Temporal Analysis by Day of Week, 2015–2018



West Valley Fire District

The greatest service demand for WVFD occurs on Wednesdays and Fridays. The lowest demand for service occurs Saturday through Monday. When possible, non-incident activities should be scheduled to avoid Wednesdays and Fridays.

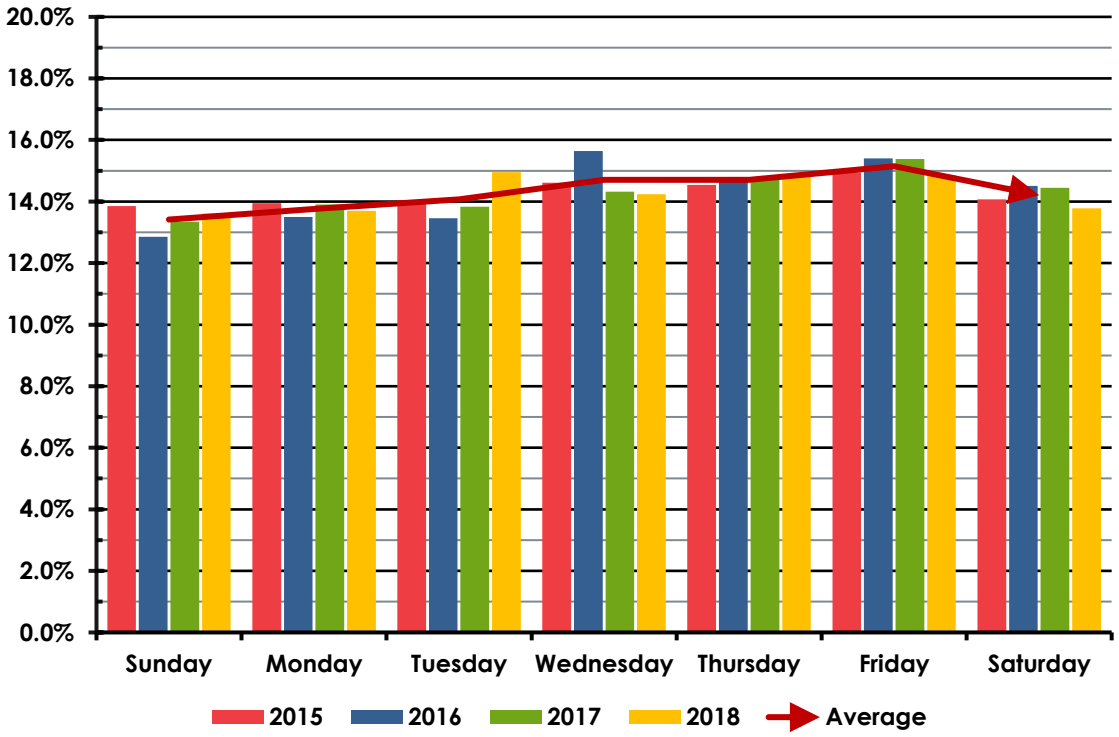
Figure 37: WVFD Temporal Analysis by Day of Week, 2015–2018



Yamhill County

As a consolidated agency, the service demand is relatively flat, with a slight increase mid-week. Based on the overall view, non-incident activities should be scheduled earlier in the week. However, the consolidated agency would also have the benefit of scheduling more specifically based on individual areas as illustrated previously.

Figure 38: Yamhill County Temporal Analysis by Day of Week, 2015–2018



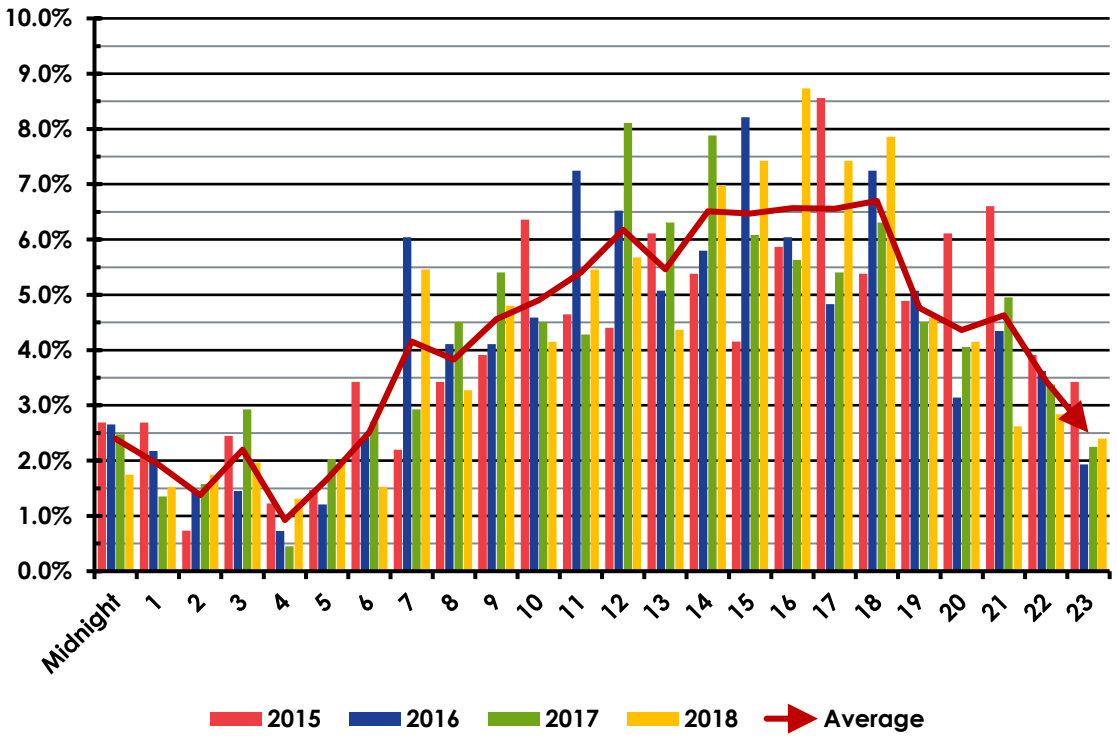
Temporal Analysis by Time of Day

Service demand by time of day is the final temporal component. As already illustrated in the prior two sections, leadership may utilize this analysis for scheduling non-incident activities during times of lesser service demand.

Amity Fire District

Service demand for AFD, as it relates to the time of day, follows a fairly common pattern found within most communities. Near 7:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 2:00 p.m. and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 5:00 a.m.

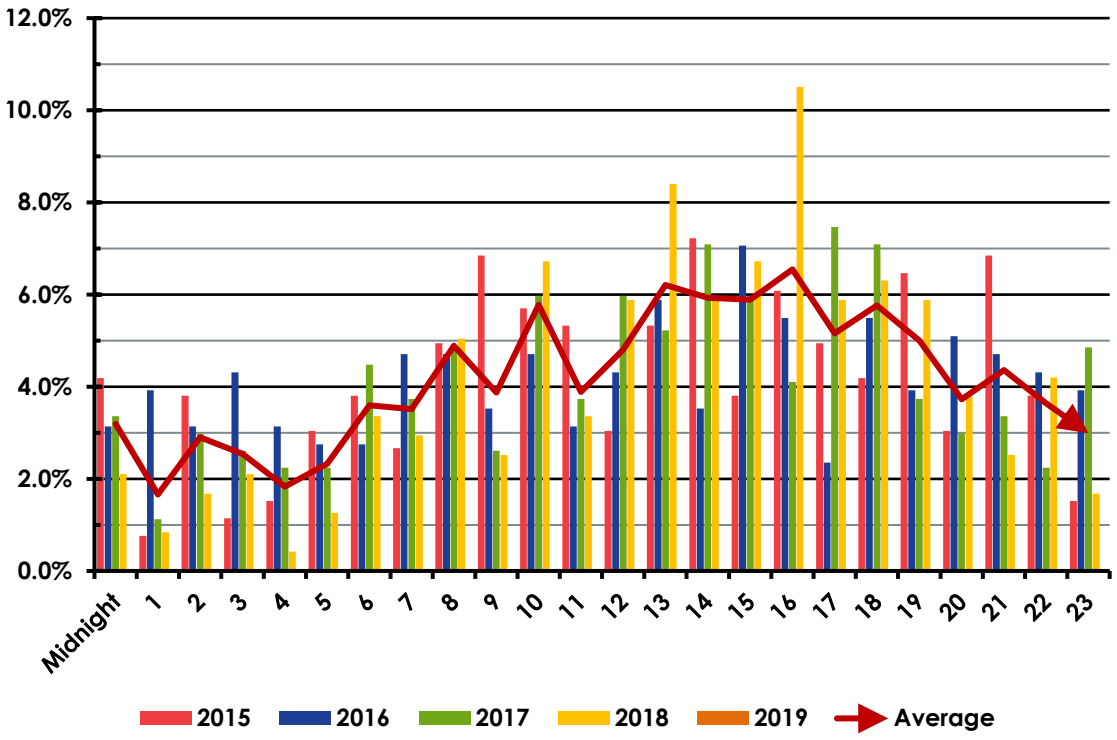
Figure 39: AFD Temporal Analysis by Time of Day, 2015–2018



Dayton Fire District

Service demand for DFD, as it relates to time of day, follows this similar pattern. Near 7:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 1:00 p.m. and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 5:00 a.m.

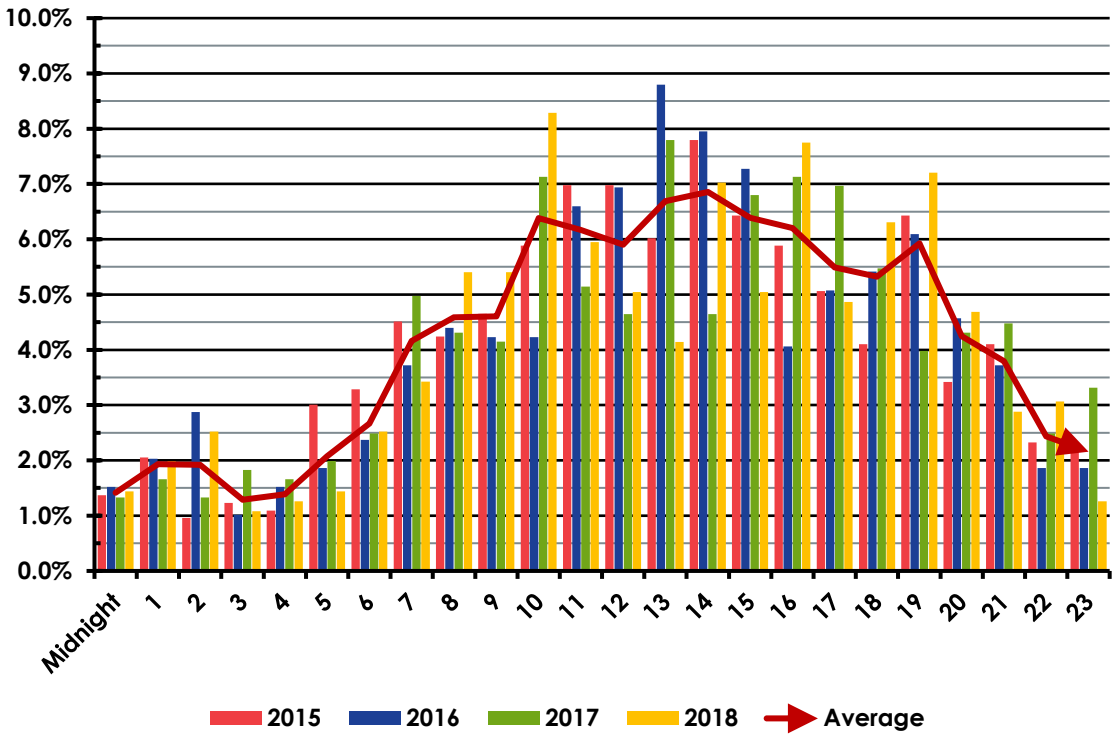
Figure 40: DFD Temporal Analysis by Time of Day, 2015–2018



Dundee Fire District

Service demand for DDF, as it relates to time of day, follows this similar pattern. Near 7:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 1:00 p.m. and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 5:00 a.m.

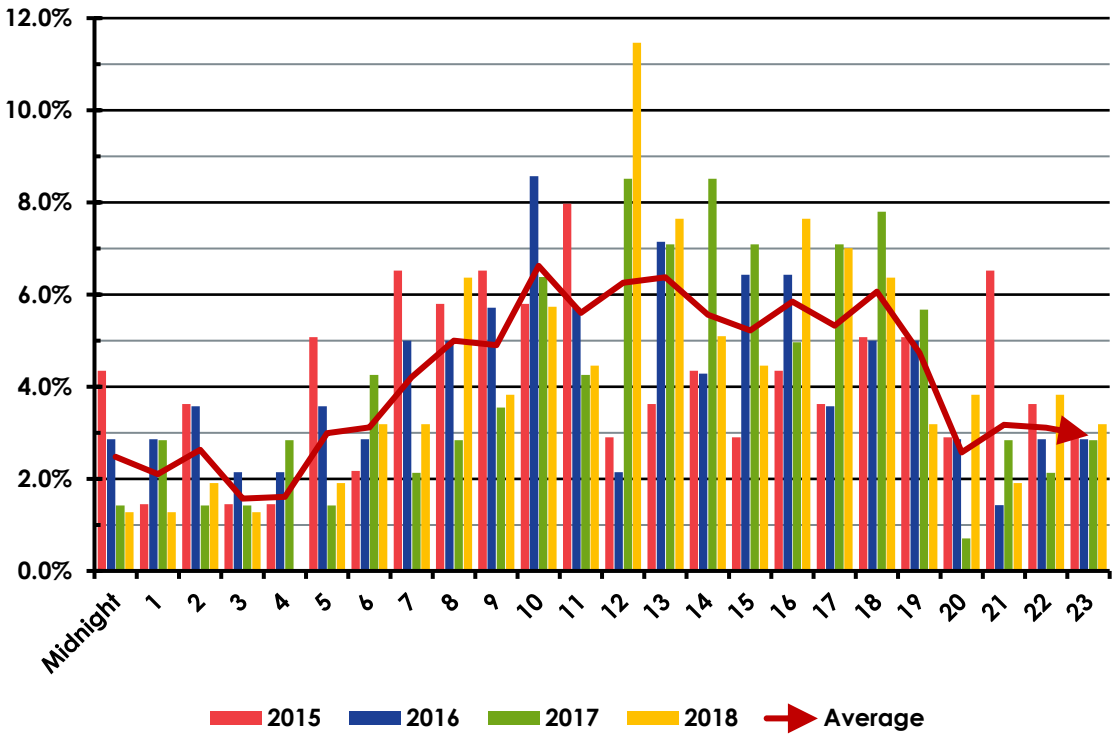
Figure 41: DDF Temporal Analysis by Time of Day, 2015–2018



Lafayette Fire Department

Service demand for LFD, as it relates to time of day, follows this similar pattern. Near 6:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near Noon and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of 9:00 p.m. until 4:00 a.m.

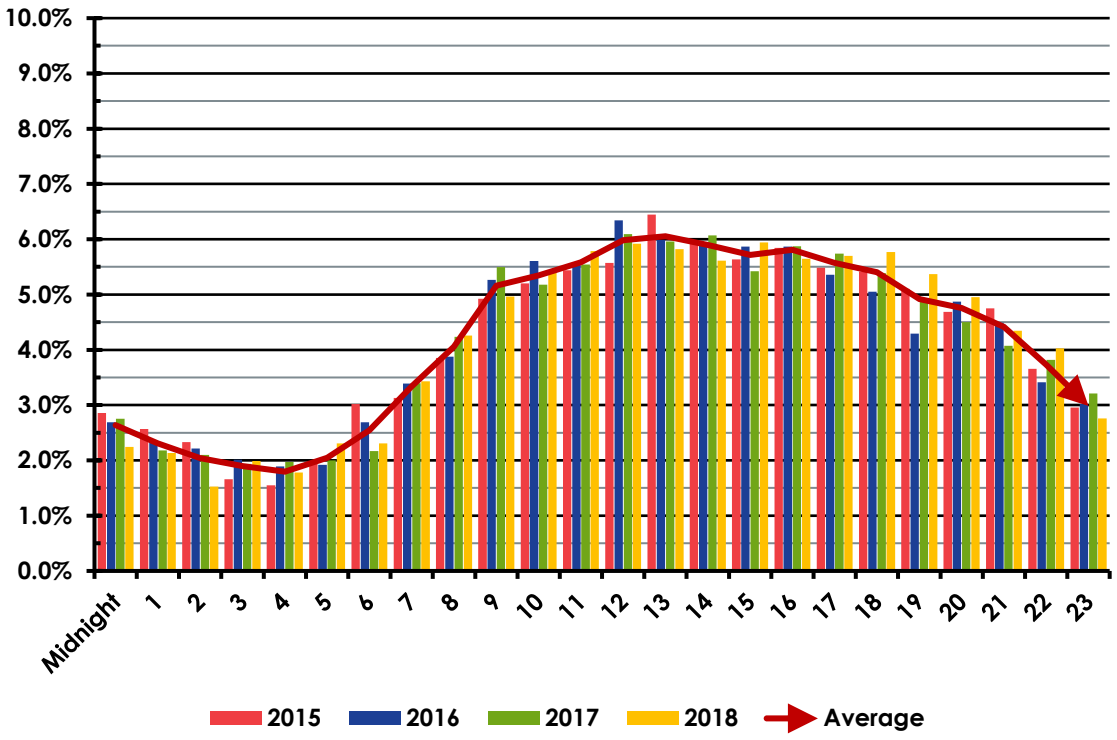
Figure 42: LFD Temporal Analysis by Time of Day, 2015–2018



McMinnville Fire Department

Service demand for MFD, as it relates to time of day, follows this similar pattern. Near 6:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near Noon and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 5:00 a.m.

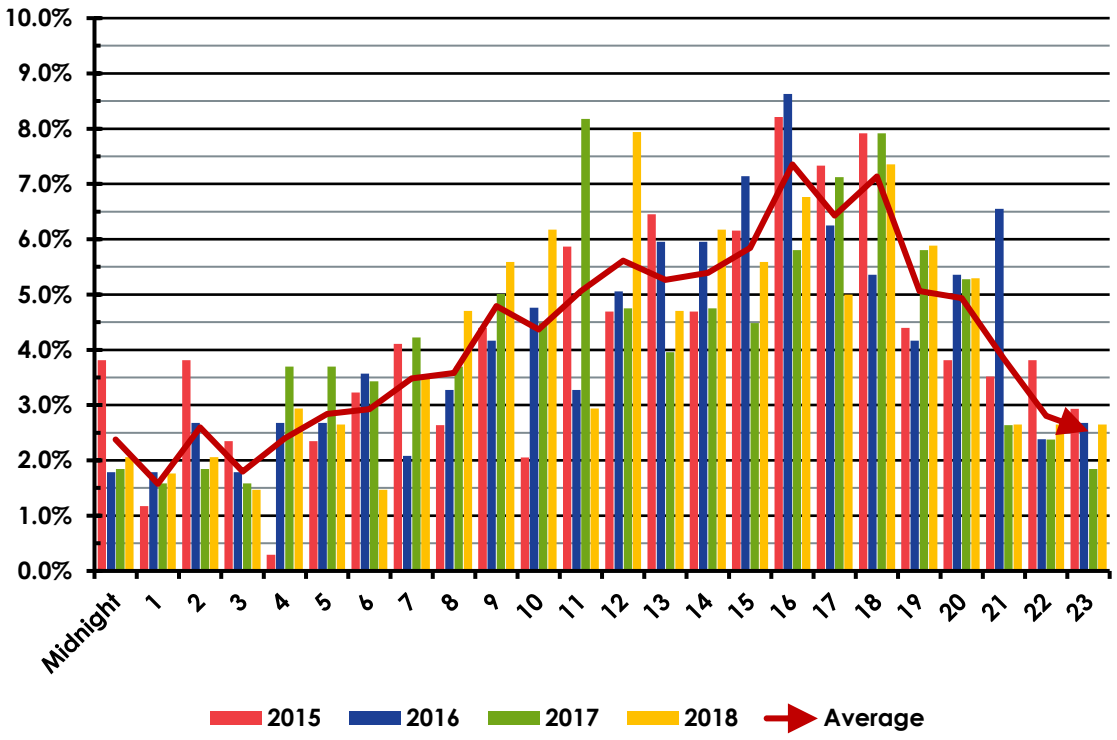
Figure 43: MFD Temporal Analysis by Time of Day, 2015–2018



New Carlton Fire District

Service demand for NCFD, as it relates to time of day, follows this similar pattern. Near 5:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 4:00 p.m. and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 3:00 a.m.

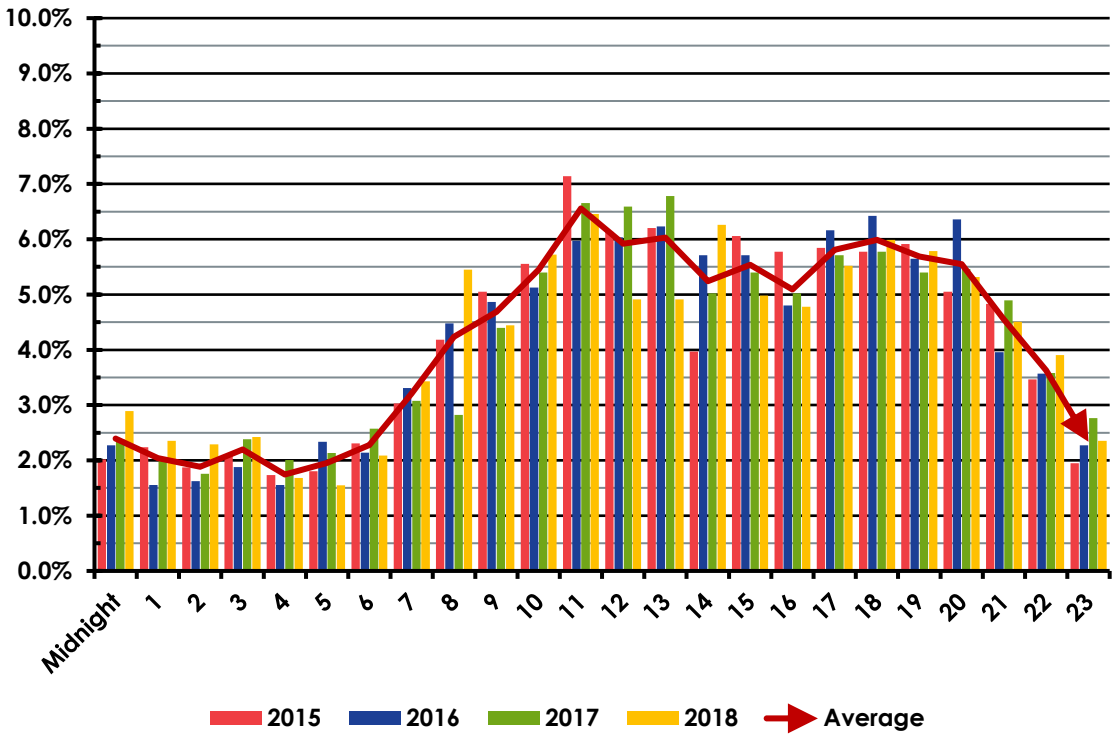
Figure 44: NCFD Temporal Analysis by Time of Day, 2015–2018



Sheridan Fire District

Service demand for SFD, as it relates to time of day, follows this similar pattern. Near 7:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 11:00 a.m. and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 8:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 6:00 a.m.

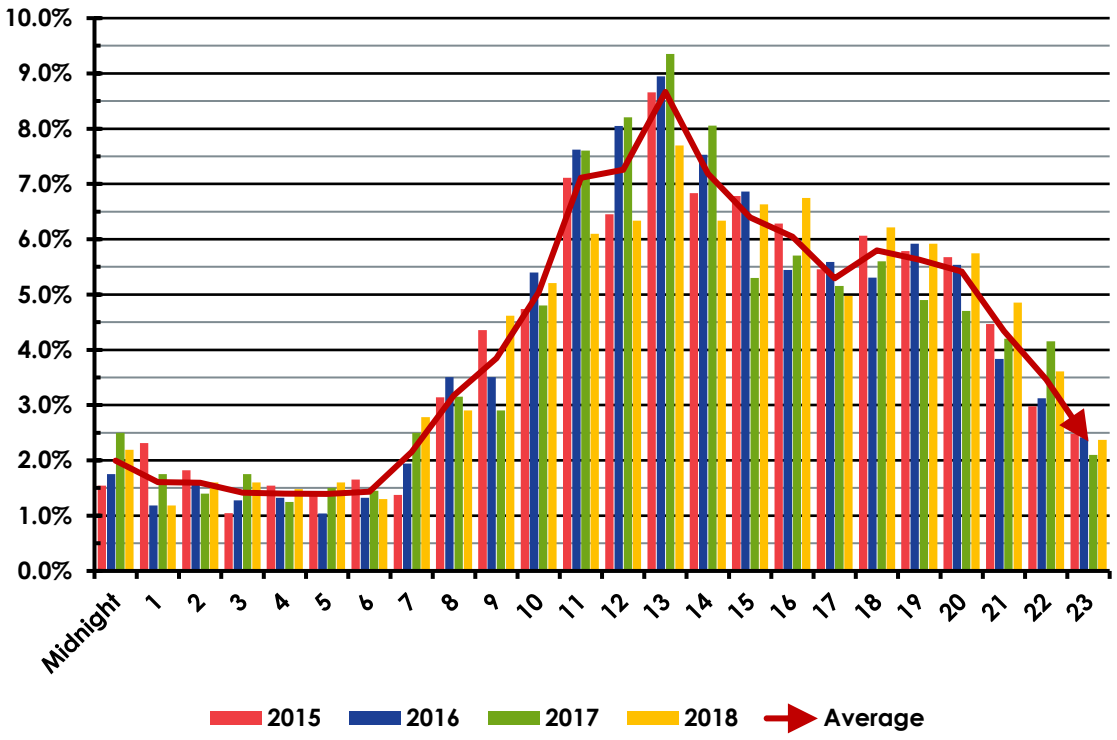
Figure 45: SFD Temporal Analysis by Time of Day, 2015–2018



West Valley Fire District

Service demand for WVFD, as it relates to time of day, follows this similar pattern. Near 7:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 1:00 p.m. and then begins its first decline. As the population begins to return home and start evening activities, the demand for service has a slight increase near 6:00 p.m. and then continues to decrease. The lowest demand for service occurs in the late-night hours of Midnight until 6:00 a.m.

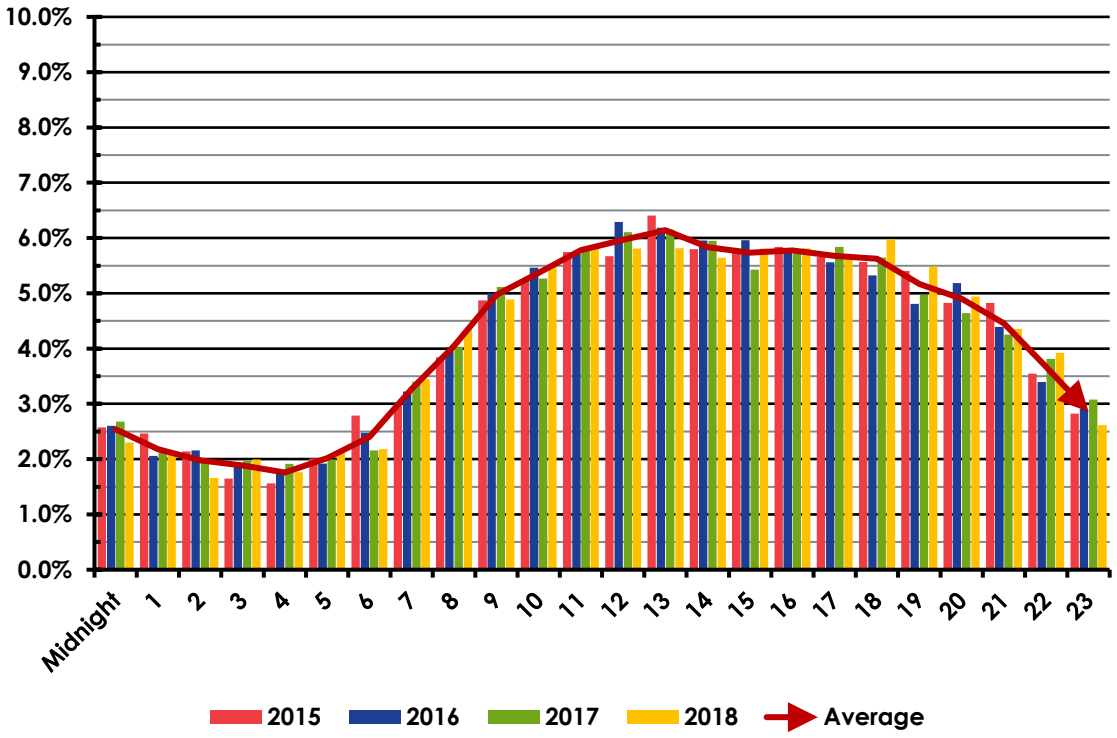
Figure 46: WVFD Temporal Analysis by Time of Day, 2015–2018



Yamhill County

When viewed as a consolidated agency, service demand for Yamhill County, as it relates to time of day, follows this similar pattern. Near 7:00 a.m., service demand begins an upward trend that tends to relate to the movement of the population—rising from their beds and starting their travels within the community. An overall peak in service demand is reached near 1:00 p.m. and continues through the afternoon. As the population begins to return home and start evening activities, the demand for service begins decreasing near 6:00 p.m. and continues to decline. The lowest demand for service occurs in the late-night hours of Midnight until 5:00 a.m.

Figure 47: Yamhill County Temporal Analysis by Time of Day, 2015–2018



While service demand is lowest during those early morning hours, it should be noted that most fatal residential fires occur most frequently late at night or early in the morning. Based on findings from a national study, from 2014 to 2016, residential fatal fires were highest between 1:00 a.m. to 2:00 a.m., and 4:00 a.m. to 5:00 a.m. The 8-hour peak period (11 p.m. to 7 a.m.) accounted for 48% of fatal residential fires.[1]

[1] 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.

Resource Distribution Analysis

The second component of service delivery is to analyze the geographic distribution of resources as it relates to fire service standards as well as actual service demand. ESCI uses geographical information systems software (GIS) to analyze resource distribution as well as to plot the location of incidents within the study area. The incident analysis is then illustrated as the mathematical density of incidents (incidents per square mile).

ISO Distribution

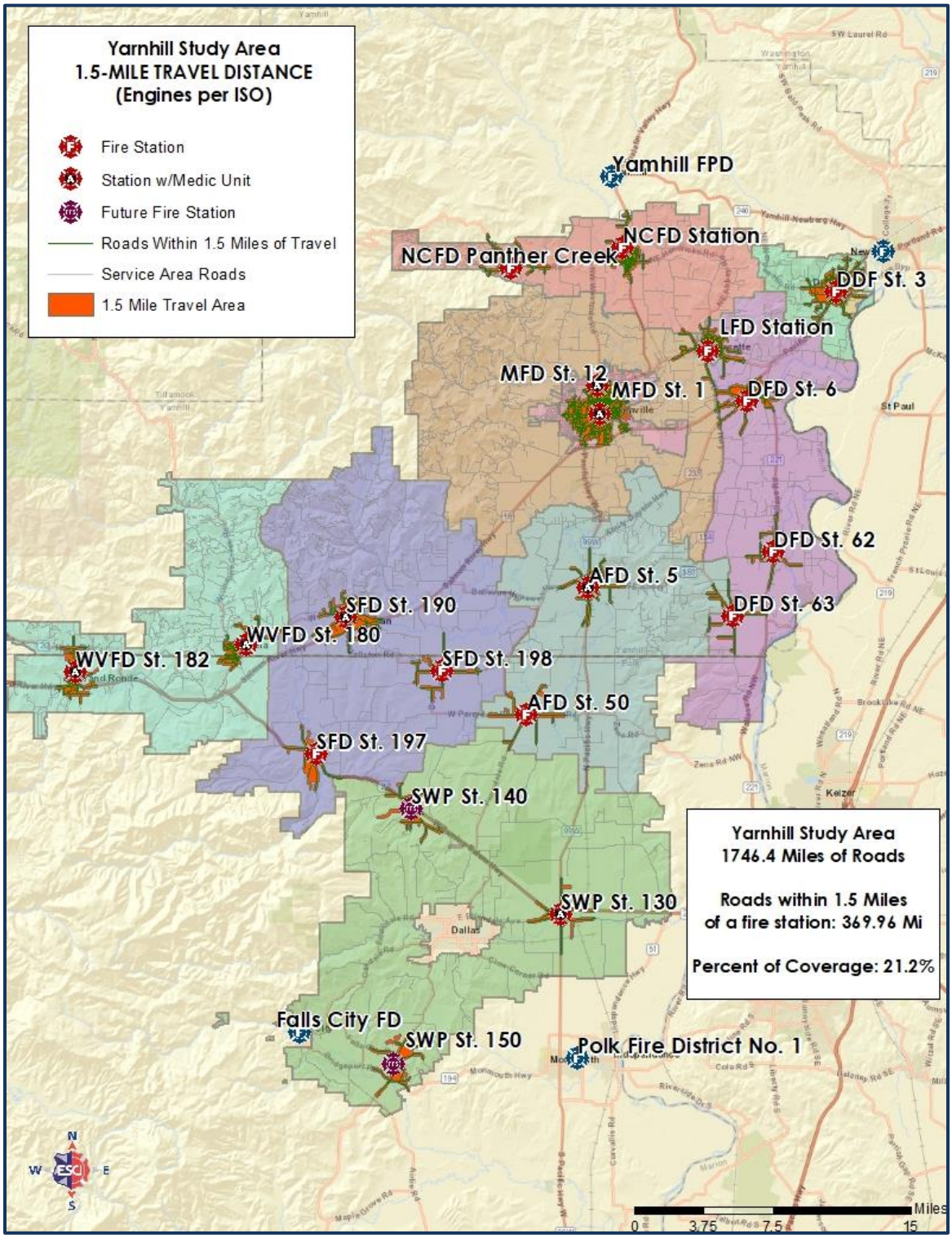
The Insurance Services Office (ISO) is a national insurance industry organization that evaluates fire protection for communities across the country. ISO assesses all areas of fire protection as broken down into four major categories, including emergency communications, fire department, water supply, 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, 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 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

ISO evaluates the percentage of the service area that falls within a 1.5-mile travel distance of a fire station. As illustrated in the following figure, the overall percentage of coverage as a consolidated agency is 21.2%.

Figure 48: Yamhill County 1.5-Mile Engine Distribution per ISO Criteria



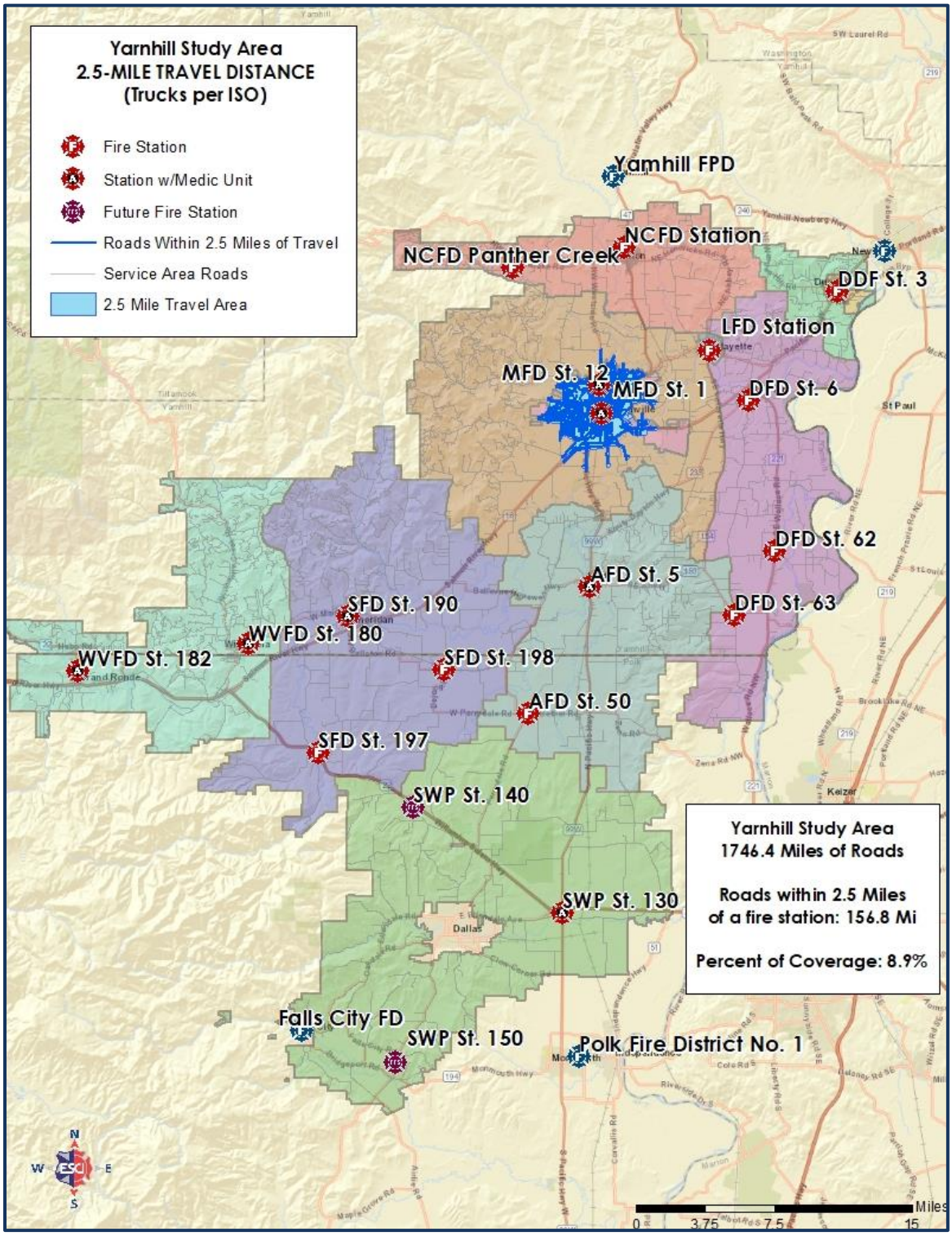
The following figure lists the percentage of coverage for each agency.

Figure 49: 1.5-Mile Coverage by Agency

Agency	Coverage
Amity Fire District	19.7%
Dayton Fire District	25.5%
Dundee Fire District	49.0%
Lafayette Fire Department	100%
McMinnville Fire Department	21.7%
New Carlton Fire District	22.3%
Sheridan Fire District	17.7%
Southwestern Polk RFPD	13.8%
West Valley Fire District	12.9%

ISO then evaluates the percentage of the service area that falls within 2.5-mile travel distance from an aerial apparatus. As illustrated in the following figure, the overall percentage of coverage as a consolidated agency is 8.9%.

Figure 50: Yamhill County 2.5-Mile Truck Distribution per ISO Criteria



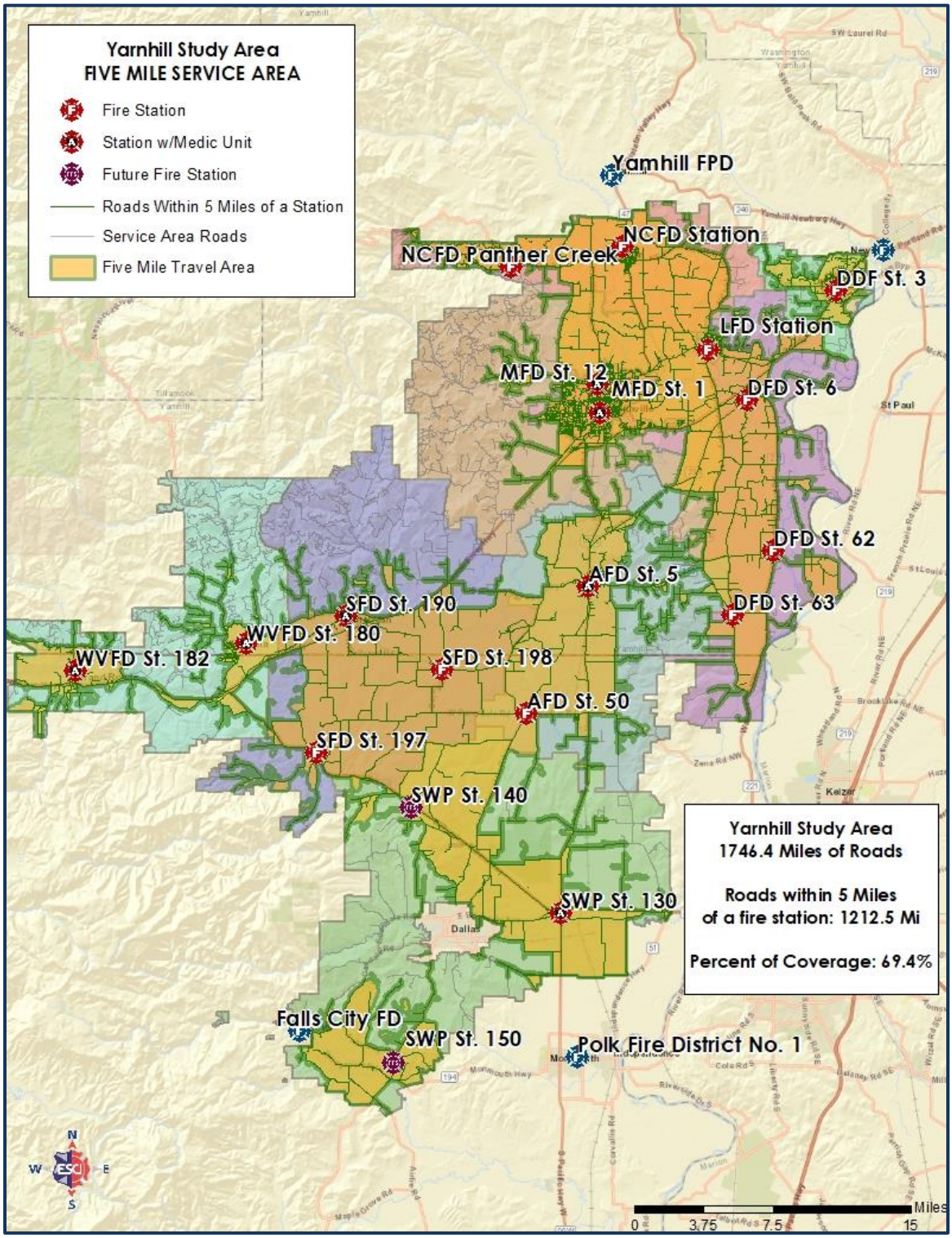
The following figure lists the percentage of coverage for each agency.

Figure 51: 2.5-Mile Coverage by Agency

Agency	Coverage
Amity Fire District	0%
Dayton Fire District	0%
Dundee Fire District	0%
Lafayette Fire Department	0%
McMinnville Fire Department	35.9%
New Carlton Fire District	0%
Sheridan Fire District	0%
Southwestern Polk RFPD	0%
West Valley Fire District	0%

Next, ISO evaluates the percentage of the service area that falls within a 5-mile travel distance of a fire station. As illustrated in the following figure, the overall percentage of coverage as a consolidated agency is 69.4%.

Figure 52: Yamhill County 5-Mile Coverage per ISO Criteria



The following figure lists the percentage of coverage for each agency.

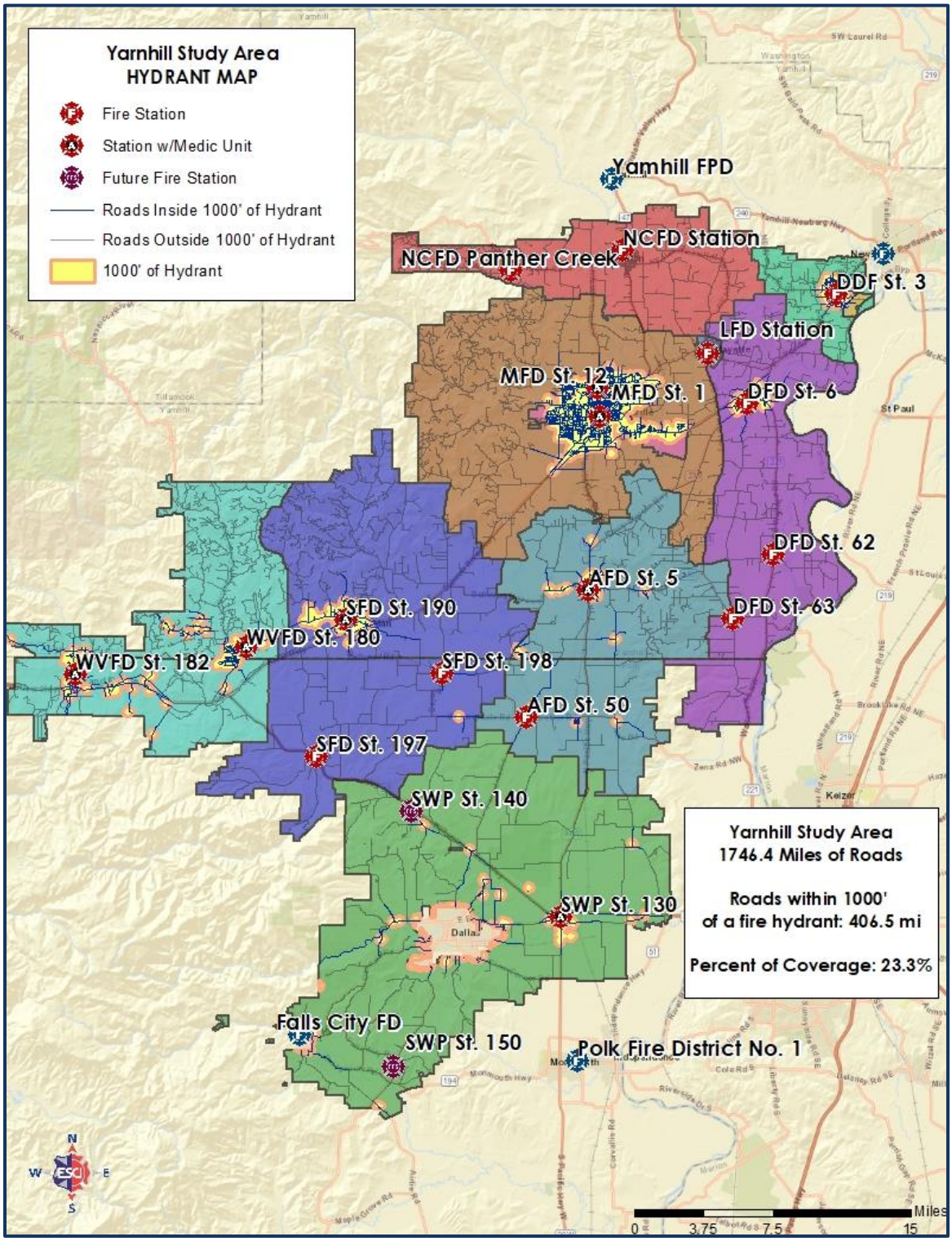
Figure 53: 5-Mile Coverage by Agency

Agency	Coverage
Amity Fire District	83.1%
Dayton Fire District	86.7%
Dundee Fire District	86.6%
Lafayette Fire Department	100%
McMinnville Fire Department	65.7%
New Carlton Fire District	83.3%
Sheridan Fire District	60.8%
Southwestern Polk RFPD	73.6%
West Valley Fire District	47.4%

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 tanker operation is possible to provide the needed volume of water for fire suppression activities for a specific period. As illustrated in the following figure, the overall percentage of coverage as a consolidated agency is 23.3%.

Figure 54: Yamhill County Hydrant Coverage per ISO Criteria



The following figure lists the percentage of coverage for each agency.

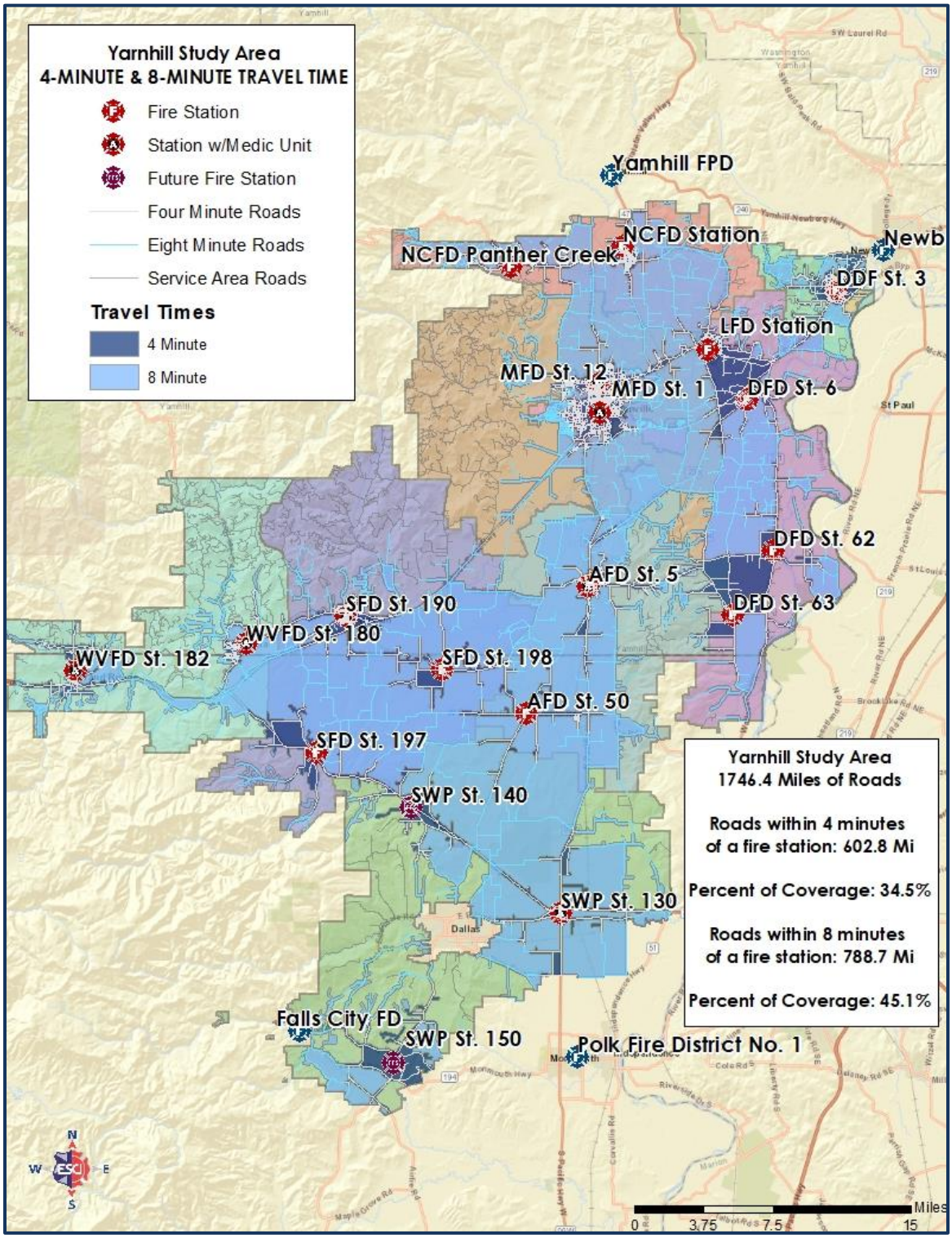
Figure 55: Hydrant Coverage by Agency

Agency	Hydrant Coverage
Amity Fire District	20.8%
Dayton Fire District	12.4%
Dundee Fire District	33.7%
Lafayette Fire Department	0%
McMinnville Fire Department	39.2%
New Carlton Fire District	0%
Sheridan Fire District	15.4%
Southwestern Polk RFPD	21.4%
West Valley Fire District	23.6%

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 in the following figure, the overall percentage of coverage as a consolidated agency is 34.5% within 4 minutes and 45.1% within 8 minutes.

Figure 56: Yamhill County 4-Minute/8-Minute Travel Time per NFPA Criteria



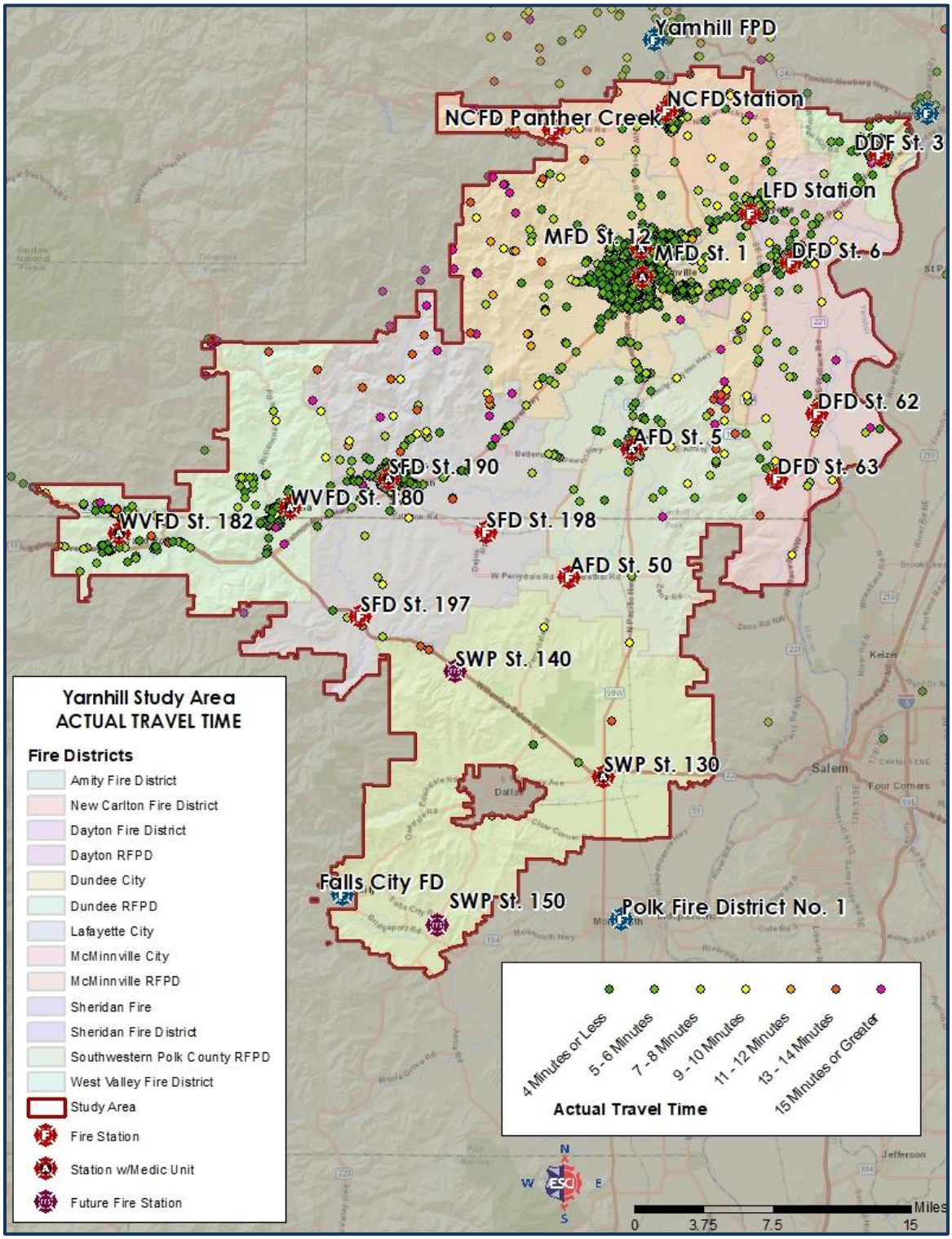
The following list illustrates the percentage of coverage within 4 minutes and 8 minutes for each agency.

Figure 57: 4-Minute/8-Minute Travel Time by Agency

Agency	4 Minutes	8 Minutes
Amity Fire District	39.6%	100%
Dayton Fire District	47.0%	98.0%
Dundee Fire District	64.0%	92.9%
Lafayette Fire Department	100%	100%
McMinnville Fire Department	33.33%	73.5%
New Carlton Fire District	33.2%	94.4%
Sheridan Fire District	27.3%	70.0%
Southwestern Polk RFPD	37.0%	91.0%
West Valley Fire District	19.1%	51.0%

While the preceding figure illustrates the theoretical travel times, this assumes that units are always responding from the station nearest to the incident. At times, the unit may be responding from elsewhere in the service area or from a station further away from the incident. The following figure illustrates the travel time to actual incidents in 2018. As a consolidated agency, travel time to 65.08% of incidents was 4 minutes or less, 23.65% of incidents was 4–8 minutes, 5.88% was 8–12 minutes, and 5.38% was greater than 12 minutes.

Figure 58: Yamhill Actual Travel Time, 2018



The following figure illustrates the actual travel time for each agency.

Figure 59: Actual Travel Time by Agency

Agency	Less Than 4 Minutes	4–8 Minutes	8–12 Minutes	Greater Than 12 Minutes
Amity Fire District	36.49%	33.33%	20.70%	9.47%
Dayton Fire District	25.60%	42.26%	24.40%	7.74%
Dundee Fire District	70.24%	17.99%	6.23%	5.54%
Lafayette Fire Department	35.24%	43.81%	19.05%	1.90%
McMinnville Fire Department	53.17%	34.99%	7.97%	3.87%
New Carlton Fire District	24.54%	27.78%	35.19%	12.50%
Sheridan Fire District	58.87%	26.94%	7.87%	6.32%
West Valley Fire District	39.02%	33.82%	17.75%	9.41%

Resource Concentration Analysis

The third component evaluated analyzes the ability of an agency to provide a sufficient level of personnel to effectively handle an incident within a reasonable amount of time.[2] This is to ensure that enough people and equipment arrive soon enough to safely control a fire or mitigate any emergency before there is substantial damage or injury.

The following figure provides an example of the various functions to be performed and the ideal number of personnel required to complete those functions. Volunteer agencies responding within rural communities often have personnel multi-task to complete the functions with fewer people on the scene.

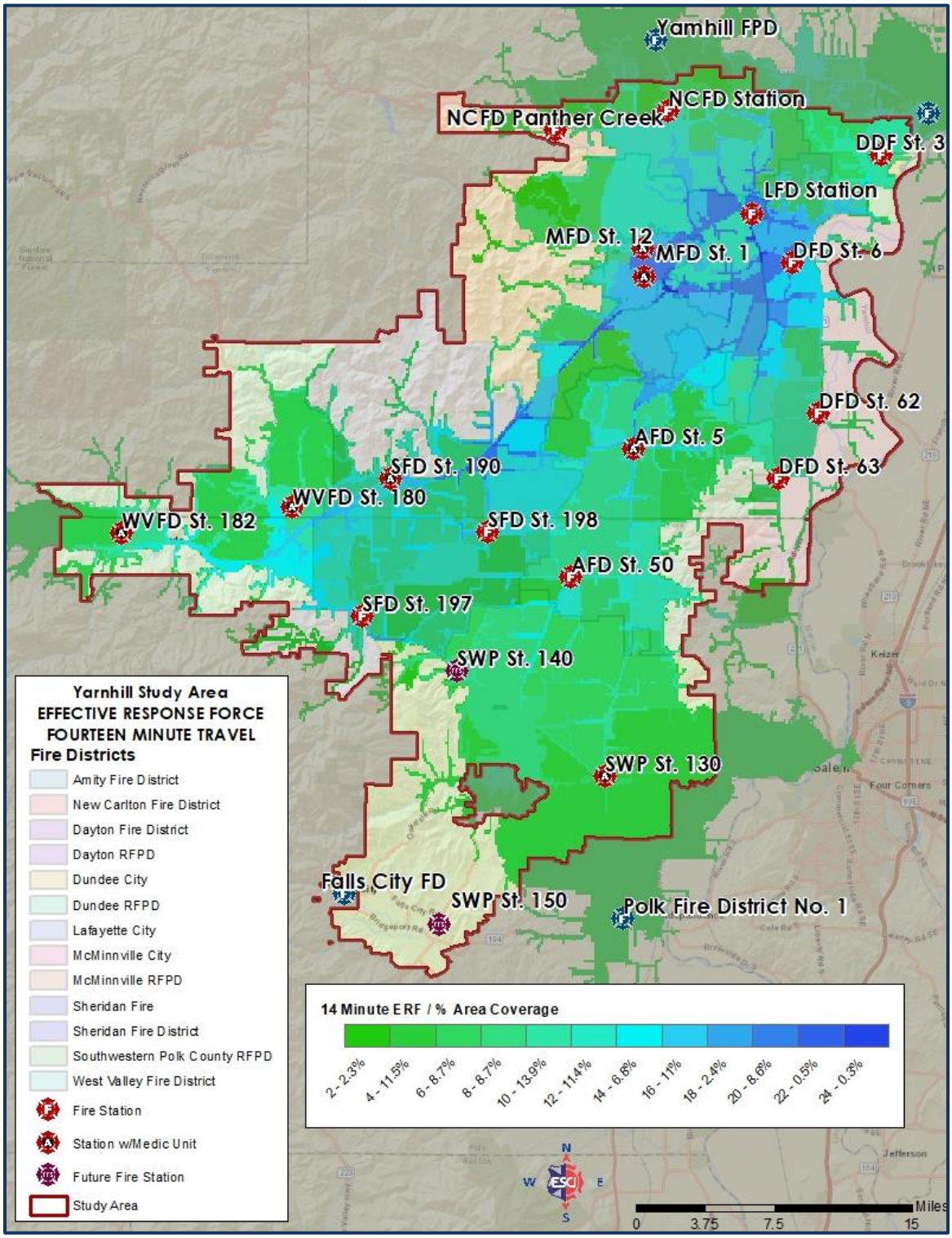
Figure 60: Initial Full Alarm Assignment
2,000 ft² Residential Structure Fire

Support	Number
Command	1
Apparatus Operator	1
Handlines (2 members each)	4
Support Members	2
Victim Search and Rescue Team	2
Ground Ladders/Ventilation	2
Aerial Device Operator (if ladder used)	(1)
Initial Rapid Intervention Team	4
Total	**16 (17)**

As most of the study area falls within the categories of a rural population and volunteer fire organization, the relevant standard provides for the arrival of 6 or greater staff within 14 minutes of dispatch. Figure 61 illustrates the effective response force as a consolidated agency. An effective response force of 2–6 firefighters can be achieved in 22.5% of the service area, 8–12 firefighters in 34.0% of the service area, 14–18 firefighters in 20.2% of the service area, and 20–24 firefighters in 9.4% of the service area.

[2] NFPA 1720: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*.

Figure 61: Yamhill Consolidated District Effective Response Force



The following figure illustrates the same information for each service area separate from the consolidated agency.

Figure 62: Effective Response Force by Agency

Agency	2–6 Firefighters	8–12 Firefighters	14–18 Firefighters	20–24 Firefighters
Amity Fire District	21.1%	54.5%	32.7%	1.2%
Dayton Fire District	23.4%	27.2%	29.8%	14.1%
Dundee Fire District	18.3%	75.1%	6.0%	0%
Lafayette Fire Department	0%	0%	2.4%	97.3%
McMinnville Fire Department	13.8%	19.8%	27.5%	24.6%
New Carlton Fire District	29.3%	46.5%	12.8%	4.9%
Sheridan Fire District	13.2%	41.8%	20.3%	5.1%
Southwestern Polk RFPD	34.5%	36.2%	3.75%	0%
West Valley Fire District	32.7%	24.6%	18.9%	0%

Workload and Response Reliability

The fourth component of the service delivery analysis evaluates the ability of the agency to provide reliable service to the community. This ability may be impacted by both workload and call concurrency.

Unit Hour Utilization

Workload refers to the amount of work a unit incurs within a given time frame. While this may be analyzed by the number of incidents within that time frame, there is greater value in analyzing the actual time spent on incidents during that time frame. This measure of time spent on incidents is referred to as unit hour utilization. During the analysis of the data provided, it was identified that the unit level data had identical time stamps for all units on a given incident. Due to this inaccuracy, ESCI was unable to evaluate the unit hour utilization for the response units within the service area and recommends that the agency ensure more accurate documentation of each individual unit responding.

Call Concurrency

Another key factor impacting the reliability of an agency to respond to incidents is call concurrency—the number of incidents occurring simultaneously within a jurisdiction. From a logical standpoint, the greater the number of concurrent incidents, the more units are already assigned to responses. As additional incidents occur, the agency may have a decreased ability to assign units that are still able to meet the various response time standards and provide reliable service.

Amity Fire District

As illustrated in the following figure, AFD call concurrency has remained low and easily handled by the district—operating apparatus from two stations. Two or fewer incidents occurred simultaneously 96.29% of the time.

Figure 63: AFD Call Concurrency, 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	85.27%	89.41%	82.97%	-2.70%
Two Incidents	13.04%	9.91%	13.32%	2.15%
Three Incidents	1.21%	0.68%	3.49%	188.43%
Four Incidents	0.48%	0.00%	0.22%	-54.17%
Five Incidents	0.00%	0.00%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	0.00%	0.00%

Dayton Fire District

As illustrated in the following figure, DFD call concurrency has remained low and easily handled by the district—operating apparatus from one main station and two substations. Two or fewer incidents occurred simultaneously 100% of the time.

Figure 64: DFD Call Concurrency, 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	94.90%	92.54%	87.88%	-7.40%
Two Incidents	4.71%	7.46%	12.12%	157.32%
Three Incidents	0.39%	0.00%	0.00%	-3,900%
Four Incidents	0.00%	0.00%	0.00%	0.00%
Five Incidents	0.00%	0.00%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	0.00%	0.00%

Dundee Fire District

As illustrated in the following figure, DDF call concurrency has remained low and easily handled by the district—operating apparatus from one main station. Two or fewer incidents occurred simultaneously 99.46% of the time.

Figure 65: DDF Call Concurrency, 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	93.23%	82.81%	89.91%	-3.56%
Two Incidents	6.43%	15.37%	9.55%	48.52%
Three Incidents	0.34%	1.49%	0.36%	5.88%
Four Incidents	0.00%	0.17%	0.18%	1,800%
Five Incidents	0.00%	0.17%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	0.00%	0.00%

Lafayette Fire Department

As illustrated in the following figure, LFD call concurrency has remained low and easily handled by the department—operating apparatus from one station. Two or fewer incidents occurred simultaneously 100% of the time.

Figure 66: LFD Call Concurrency, 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	94.29%	88.65%	93.63%	0.70%
Two Incidents	5.71%	10.64%	6.37%	11.56%
Three Incidents	0.00%	0.71%	0.00%	0.00%
Four Incidents	0.00%	0.00%	0.00%	0.00%
Five Incidents	0.00%	0.00%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	0.00%	0.00%

McMinnville Fire Department

As illustrated in the following figure, MFD call concurrency has remained low and easily handled by the department—operating apparatus from a single station. Three or fewer incidents occurred simultaneously 83.89% of the time.

Figure 67: MFD Call Concurrency, 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	35.10%	33.43%	32.91%	-6.24%
Two Incidents	32.91%	31.64%	31.61%	-3.95%
Three Incidents	18.47%	19.33%	19.37%	4.87%
Four Incidents	8.36%	9.73%	9.76%	16.75%
Five Incidents	3.64%	3.65%	4.33%	18.96%
More than Five Incidents	1.53%	2.22%	2.02%	32.03%

New Carlton Fire District

As illustrated in the following figure, NCFD call concurrency has remained low and easily handled by the district—operating apparatus from two stations. Two or fewer incidents occurred simultaneously 99.03% of the time.

Figure 68: NCFD Call Concurrency 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	93.46%	93.86%	89.71%	-4.01%
Two Incidents	6.54%	5.56%	9.32%	42.51%
Three Incidents	0.00%	0.58%	0.64%	6,400.00%
Four Incidents	0.00%	0.00%	0.32%	3,200.00%
Five Incidents	0.00%	0.00%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	0.00%	0.00%

Sheridan Fire District

As illustrated in the following figure, SFD call concurrency has remained low and easily handled by the district—operating as a combined agency along with Southwestern Polk RFPD and West Valley FD. Two or fewer incidents occurred simultaneously 97.11% of the time.

Figure 69: SFD Call Concurrency 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	78.92%	80.21%	78.48%	-0.56%
Two Incidents	18.29%	16.90%	17.55%	-4.05%
Three Incidents	2.53%	2.51%	3.16%	24.90%
Four Incidents	0.26%	0.38%	0.81%	211.54%
Five Incidents	0.00%	0.00%	0.00%	0.00%
More than Five Incidents	0.00%	0.00%	0.00%	0.00%

West Valley Fire District

As illustrated in the following figure, WVFD call concurrency has remained low and easily handled by the district—operating as a combined agency along with Sheridan Fire District and Southwestern Polk RFPD. Two or fewer incidents occurred simultaneously 94.44% of the time.

Figure 70: WVFD Call Concurrency 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	78.84%	77.94%	74.49%	-5.52%
Two Incidents	18.13%	18.08%	19.95%	10.04%
Three Incidents	2.79%	2.95%	4.66%	67.03%
Four Incidents	0.24%	0.71%	0.84%	250.00%
Five Incidents	0.00%	0.15%	0.06%	6,000%
More than Five Incidents	0.00%	0.15%	0.00%	0.00%

Yamhill County

When viewed as a consolidated agency, as illustrated in the following figure, Yamhill County call concurrency would be manageable based on the number of units within the consolidated agency. Five or fewer incidents occurred simultaneously 89.94% of the time.

Figure 71: Yamhill County Call Concurrency 2016–2018

Concurrent Incidents in Progress	2016	2017	2018	Percentage of Change
Single Incident	14.78%	13.90%	15.80%	6.90%
Two Incidents	22.66%	21.35%	24.30%	7.24%
Three Incidents	24.03%	23.02%	23.61%	-1.75%
Four Incidents	17.26%	18.26%	16.48%	-4.52%
Five Incidents	10.91%	11.59%	9.74%	-10.72%
More than Five Incidents	10.36%	11.89%	10.06%	-2.90%

Response Performance

The final component of service delivery is response performance. In most communities, this is the forward-facing component that is most desired by the citizens and the policymakers so they are aware of how quickly they may receive aid when requesting emergency services.

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 and 1720: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career and Combination 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 in the middle of a data set and thus tends not to be as strongly influenced by data outliers.

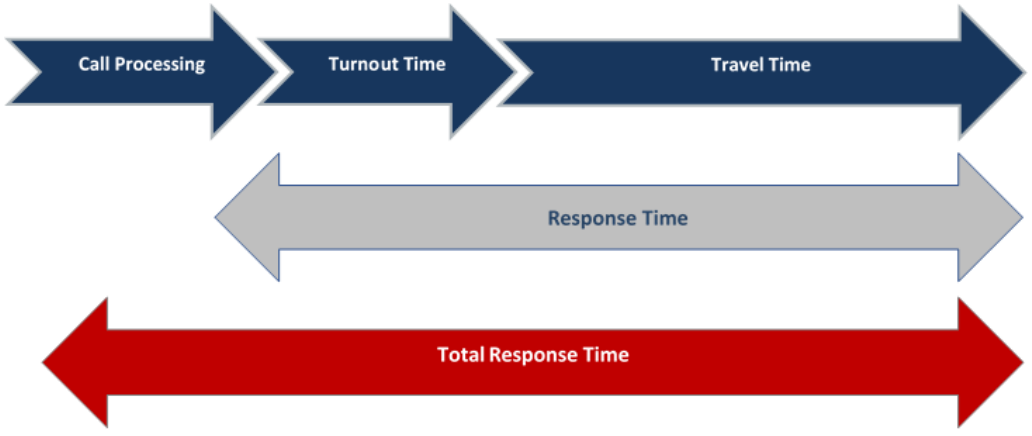
Percentile measurements are a better measure of performance because they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 10% of the values are greater than the value stated, and all other data are at or below this level. This can be compared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

The *response time continuum*—the time between when the caller dials 911 and when assistance arrives—is comprised of several 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, 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.

Figure 72: Response Time Continuum



Total response time is the amount of time a resident or business waits for resources to arrive at the scene of an emergency beginning when they first placed a 911 call. This process begins for the fire department once the appropriate unit is dispatched by the communications center. The NFPA standard for alarm handling and call processing is derived from NFPA 1221: *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems* and provides for communication centers to have alarm handling time of not more than 15 seconds, 90% of the time and not more than 20 seconds, 95% of the time. Additionally, NFPA 1221 requires the processing of the call to occur within 64 seconds, 90% of the time for high-priority incidents.

Tracking the individual components of response time enables jurisdictions to identify deficiencies and areas for improvement. In addition, knowledge of current performance for the components listed above; is an essential element of developing response goals and standards that are relevant and achievable. Fire service best practice documents recommend that fire jurisdictions monitor and report the components of total response time.

When analyzing the data provided, ESCI identified that, likely, the individual unit data was not accurate. Overall, all units responding to a specific incident were recorded as having the exact same timestamps. MFD staff provided a cross-reference of dispatched complaint code as compared to emergency or non-emergency response. Thus, the following analysis includes only those incidents expected to be an emergency response based upon that cross-reference. ESCI recommends that leadership work to improve documentation to include accurate recording of individual unit timestamps.

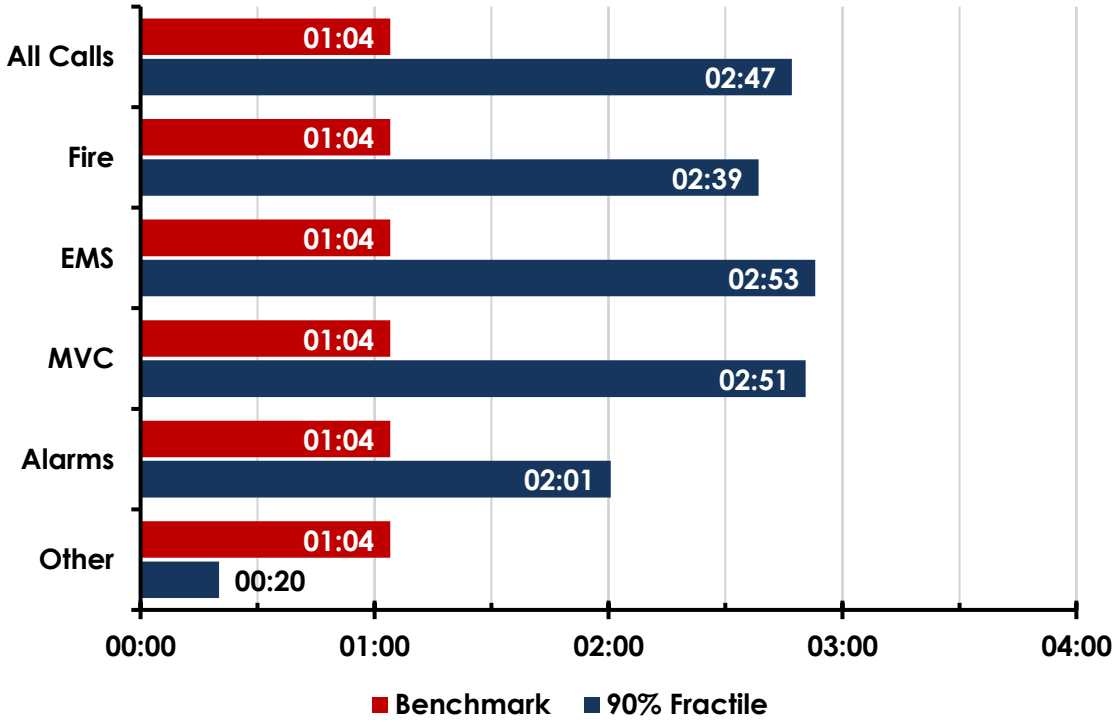
Call Processing Time Performance

Call processing time performance is the measure of time between the dispatcher receiving the call for service and notifying emergency response units. Within the study area, there are multiple communications centers providing dispatch services to the various entities. Department leadership should work closely with each communications center to work towards monitoring and improving system performance.

Amity Fire District

AFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is greater than double the expected measure at 2 minutes, 47 seconds for all incidents. Performance by incident type ranged from 20 seconds for other incidents to 2 minutes, 53 seconds for emergency medical incidents.

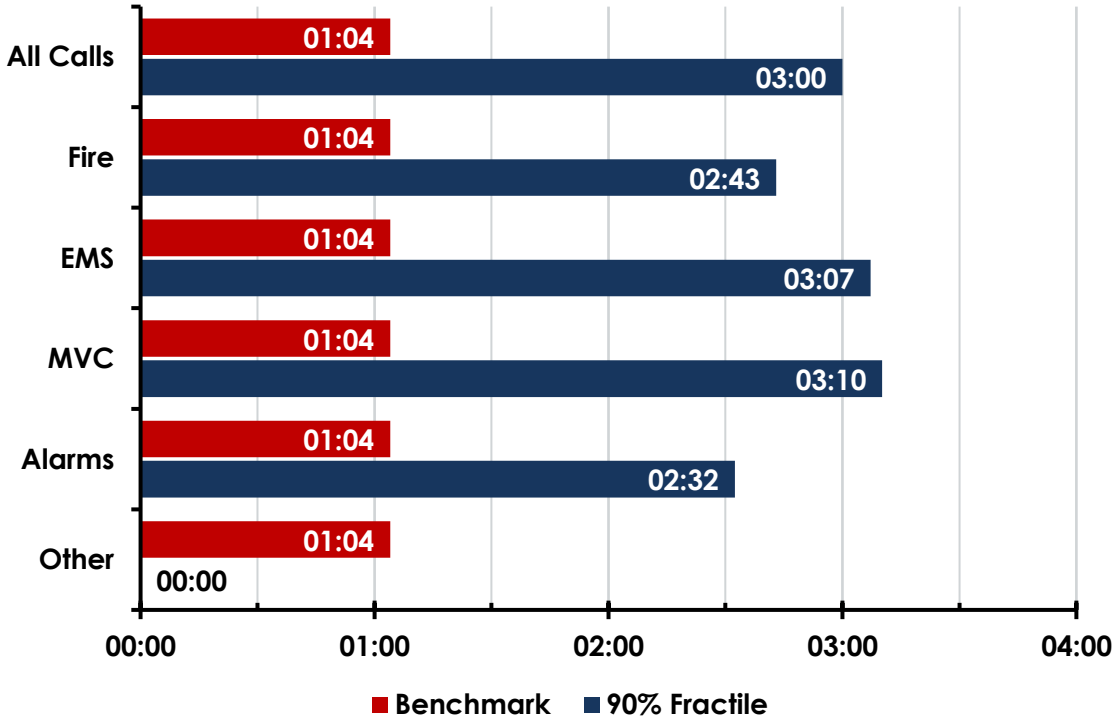
Figure 73: AFD Call Processing Time Performance, 2015–2018



Dayton Fire District

DFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is nearly triple the expected measure at 3 minutes for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 3 minutes, 10 seconds for motor vehicle collision incidents.

Figure 74: DFD Call Processing Time Performance, 2015–2018



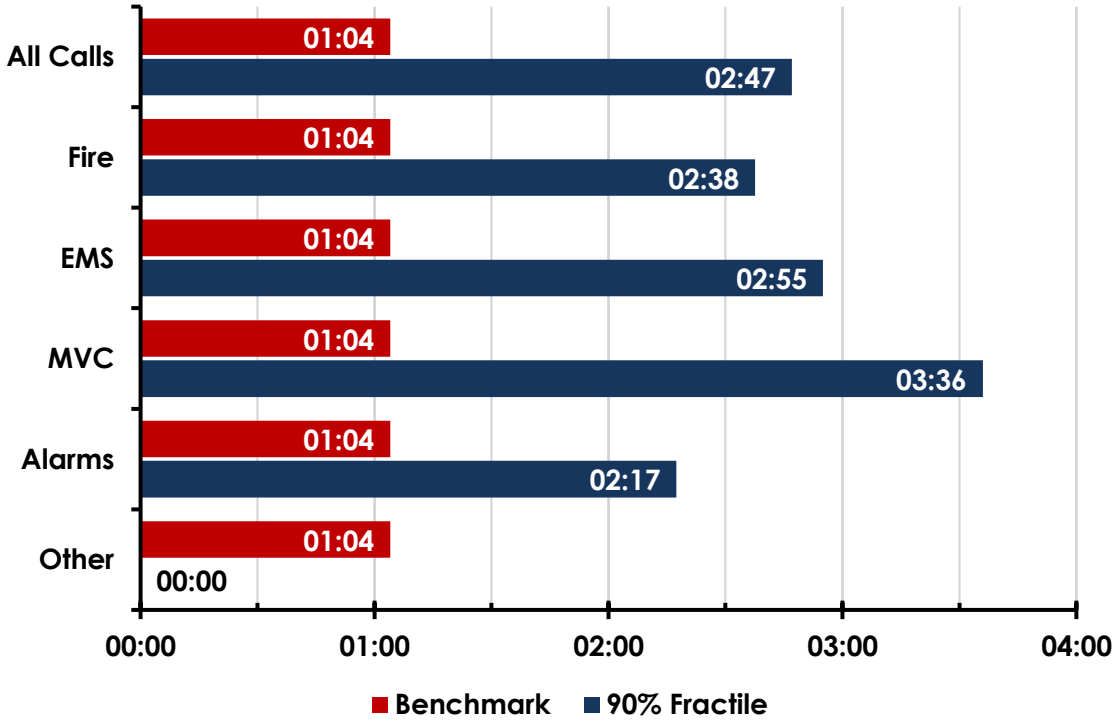
Dundee Fire District

DDF is dispatched through the Washington County Consolidated Communications Agency (WCCCA). The data did not have the correct timestamps for ESCI to perform an analysis of this performance measure.

Lafayette Fire Department

LFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is greater than double the expected measure at 2 minutes, 47 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 3 minutes, 36 seconds for motor vehicle collision incidents.

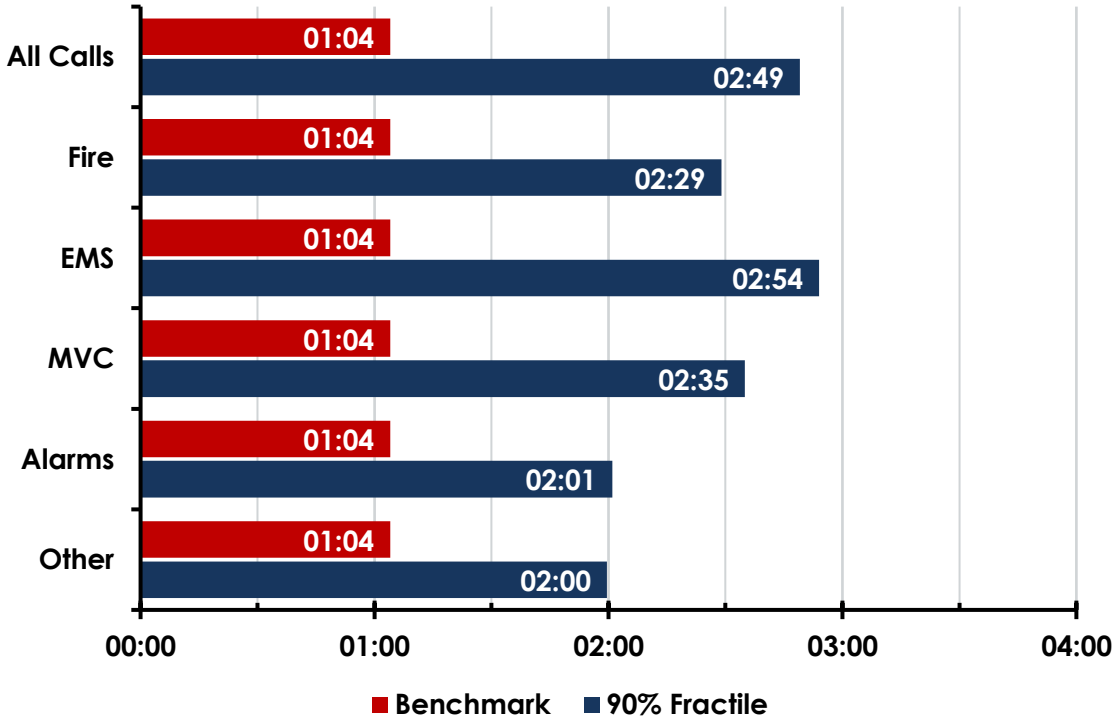
Figure 75: LFD Call Processing Time Performance, 2015–2018



McMinnville Fire Department

MFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is greater than double the expected measure at 2 minutes, 49 seconds for all incidents. Performance by incident type ranged from 2 minutes for other incidents to 2 minutes, 54 seconds for emergency medical incidents.

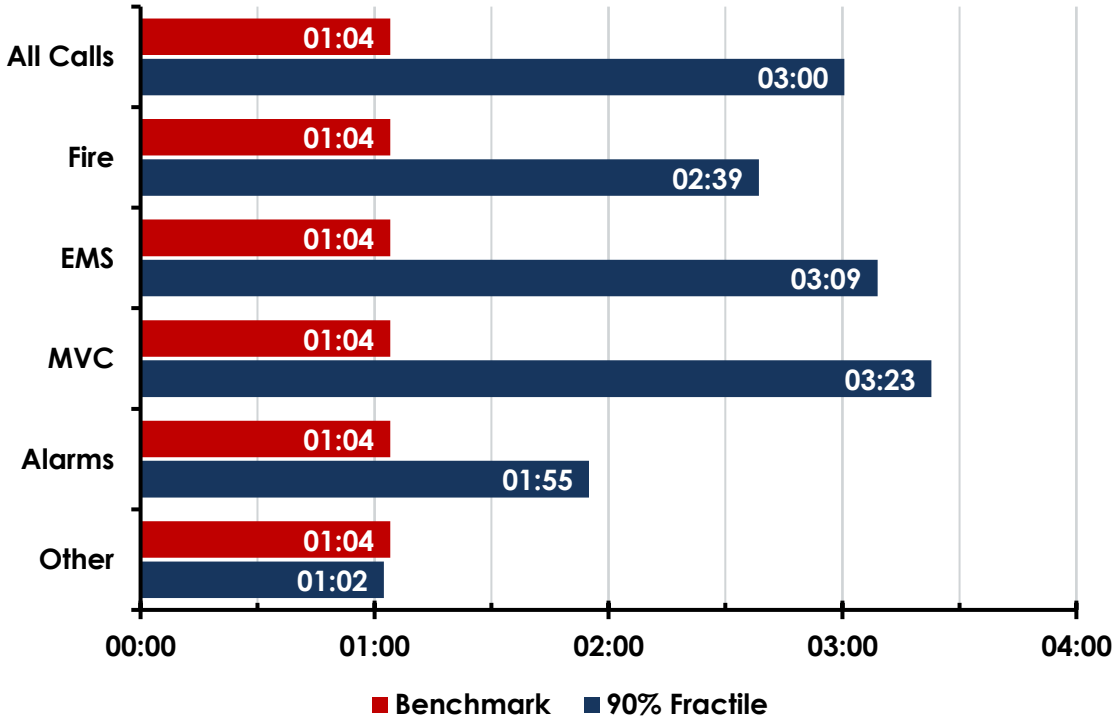
Figure 76: MFD Call Processing Time Performance, 2015–2018



New Carlton Fire District

NCFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is nearly triple the expected measure at 3 minutes for all incidents. Performance by incident type ranged from 1 minute, 2 seconds for other incidents to 3 minutes, 23 seconds for motor vehicle collision incidents.

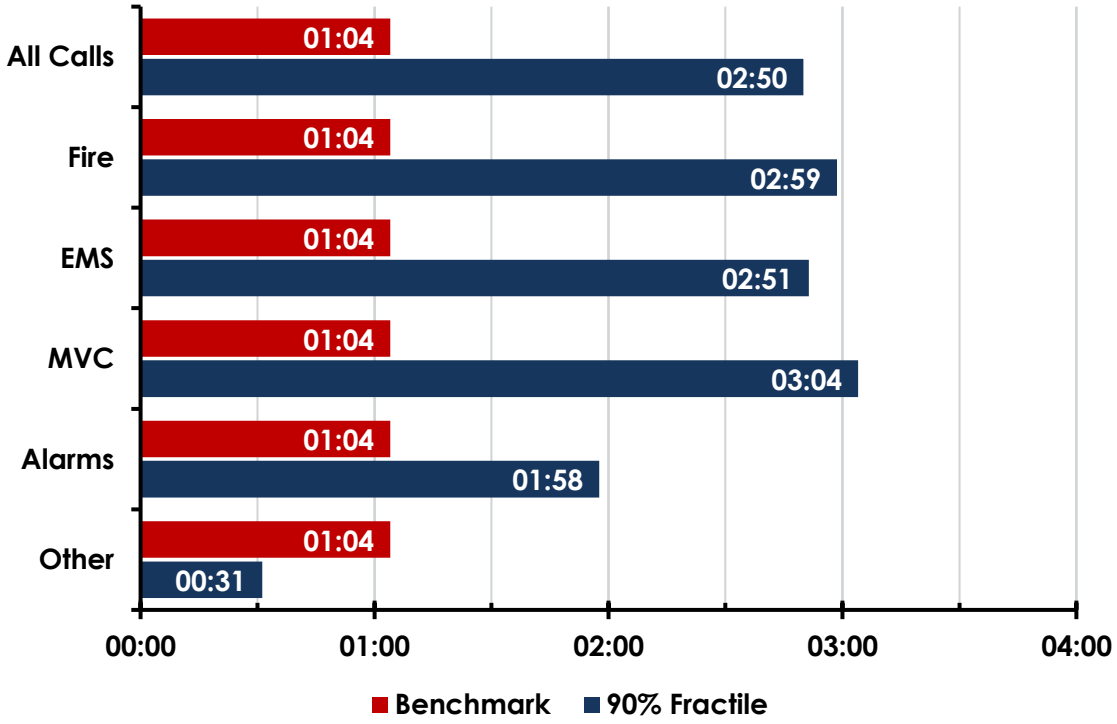
Figure 77: NCFD Call Processing Time Performance, 2015–2018



Sheridan Fire District

SFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is greater than double the expected measure at 2 minutes, 50 seconds for all incidents. Performance by incident type ranged from 31 seconds for other incidents to 3 minutes, 4 seconds for motor vehicle collision incidents.

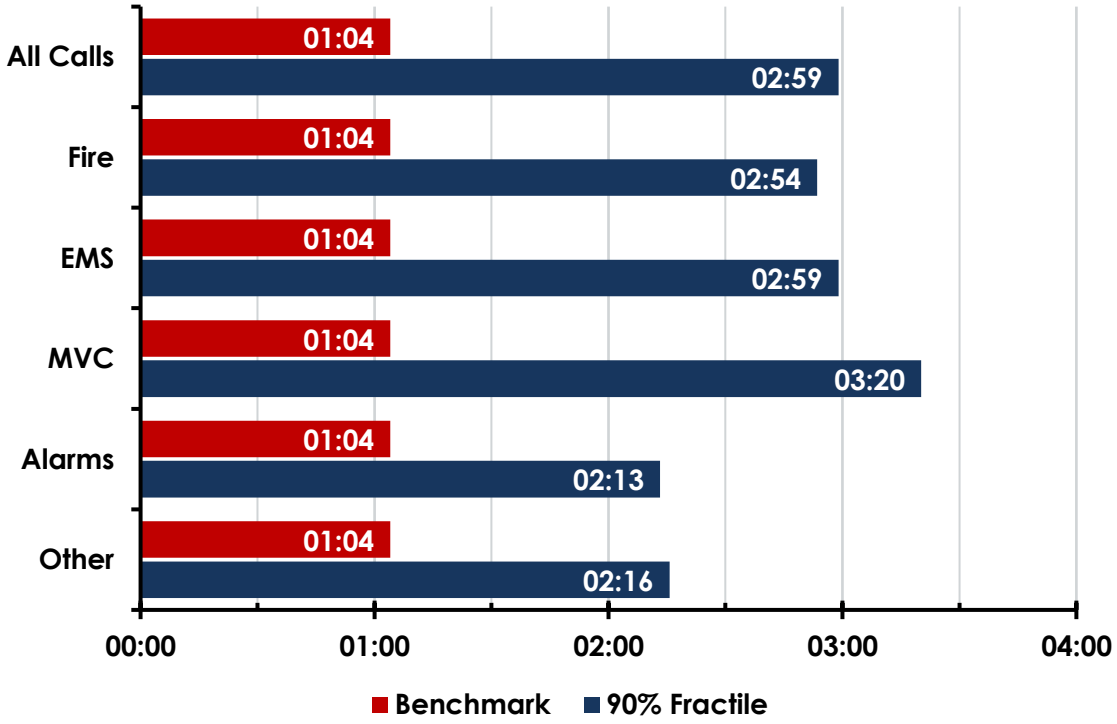
Figure 78: SFD Call Processing Time Performance, 2015–2018



West Valley Fire District

WVFD is dispatched through the Yamhill Communications Agency (YCOM). As illustrated in the following figure—based upon the data provided—it appears that performance is greater than double the expected measure at 2 minutes, 59 seconds for all incidents. Performance by incident type ranged from 2 minutes, 13 seconds for alarm incidents to 3 minutes, 20 seconds for motor vehicle collision incidents.

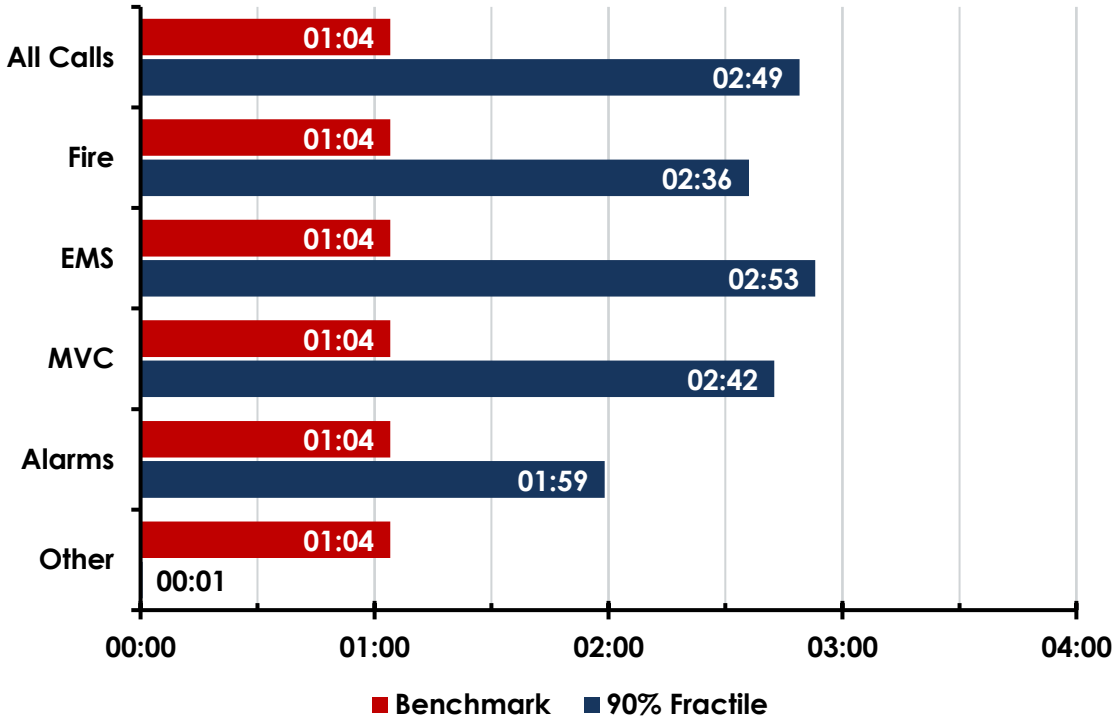
Figure 79: WVFD Call Processing Time Performance, 2015–2018



Yamhill County

As illustrated in the following figure—when viewed as a consolidated agency—it appears that performance is greater than double the expected measure at 2 minutes, 49 seconds for all incidents. Performance by incident type ranged from 1 second for other incidents to 2 minutes, 53 seconds for emergency medical incidents.

Figure 80: Yamhill County Call Processing Time Performance, 2015–2018



Turnout Time Performance

While the preceding measure is under the control of the dispatch agency, the ability to quickly react to the notice of an alarm and begin responding is the first component under the direct control of the fire department. Turnout time is the measure of time from when response personnel are notified of the incident and the unit begins responding to the location.

With most of the agencies within the study area functioning with volunteer staffing, this measure from NFPA 1710 does not specifically apply. However, it is beneficial for leadership to see the comparison and monitor overall performance. Armed with this information, leadership may consider any methods that can be implemented to improve turnout time performance, which will likewise improve response time performance.

For staffed stations, personnel should work towards meeting the measure of fewer than 60 seconds (01:00)—measured at the 90th percentile— for incidents other than fire and special operations. For those incidents, performance should be less than 1 minute, 20 seconds (01:20). Areas that may be impacting performance could include:

- Notification systems.
- Station layout impacting the path of travel from living quarters to apparatus bays.
- Personnel activities during duty hours.

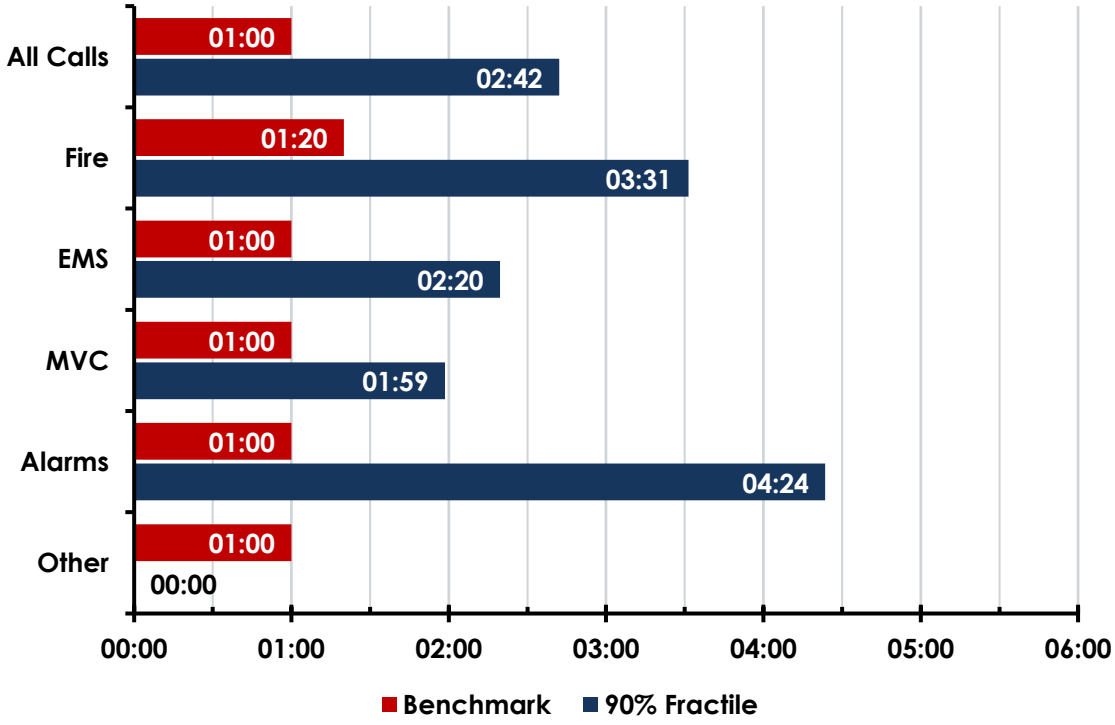
For non-staffed stations, areas that may be impacting performance could include:

- Notification systems.
- Distance from volunteer locations to fire station.
- Quick access to fire station and subsequent path to the apparatus bays.

Amity Fire District

As illustrated in the following figure, AFD turnout time performance is 2 minutes, 42 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 4 minutes, 24 seconds for alarm incidents.

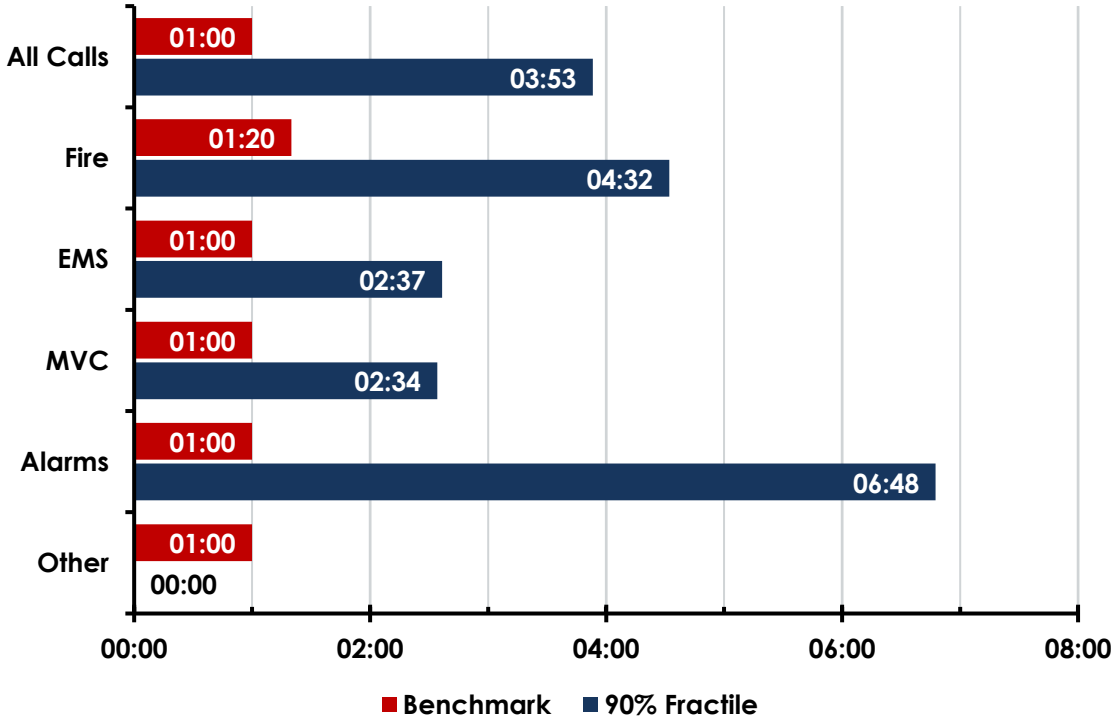
Figure 81: AFD Turnout Time Performance, 2015–2018



Dayton Fire District

As illustrated in the following figure, DFD turnout time performance is 3 minutes, 53 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 6 minutes, 48 seconds for alarm incidents.

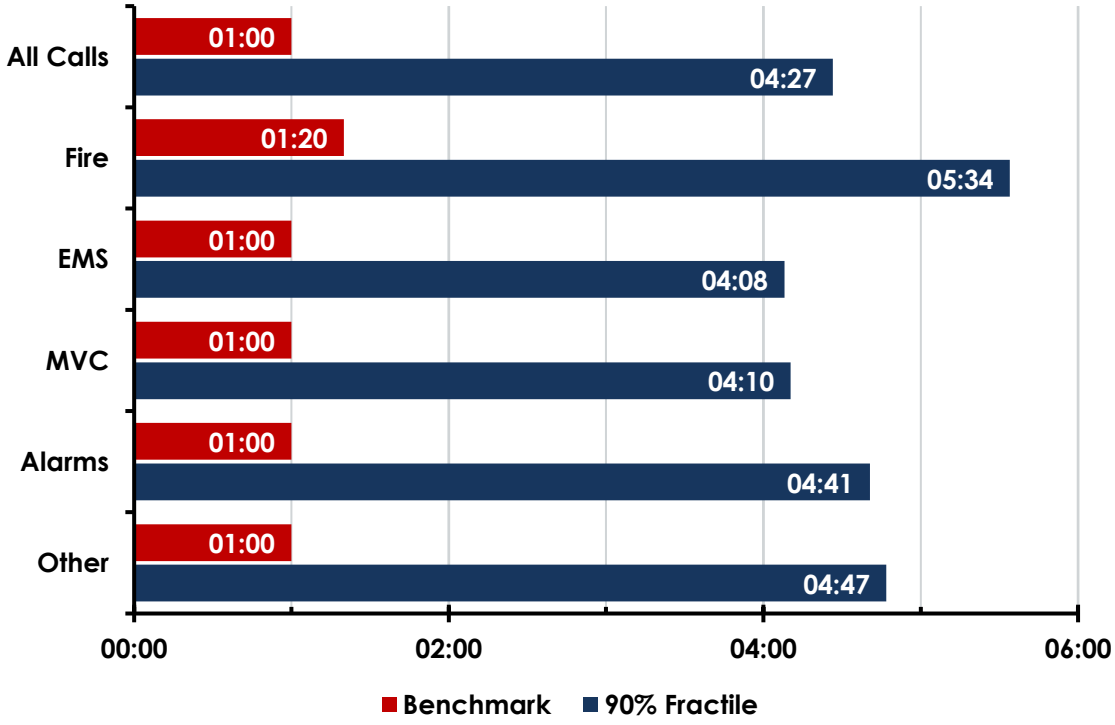
Figure 82: DFD Turnout Time Performance, 2015–2018



Dundee Fire District

As illustrated in the following figure, DDF turnout time performance is 4 minutes, 27 seconds for all incidents. Performance by incident type ranged from 4 minutes, 8 seconds for emergency medical incidents to 5 minutes, 34 seconds for fire incidents.

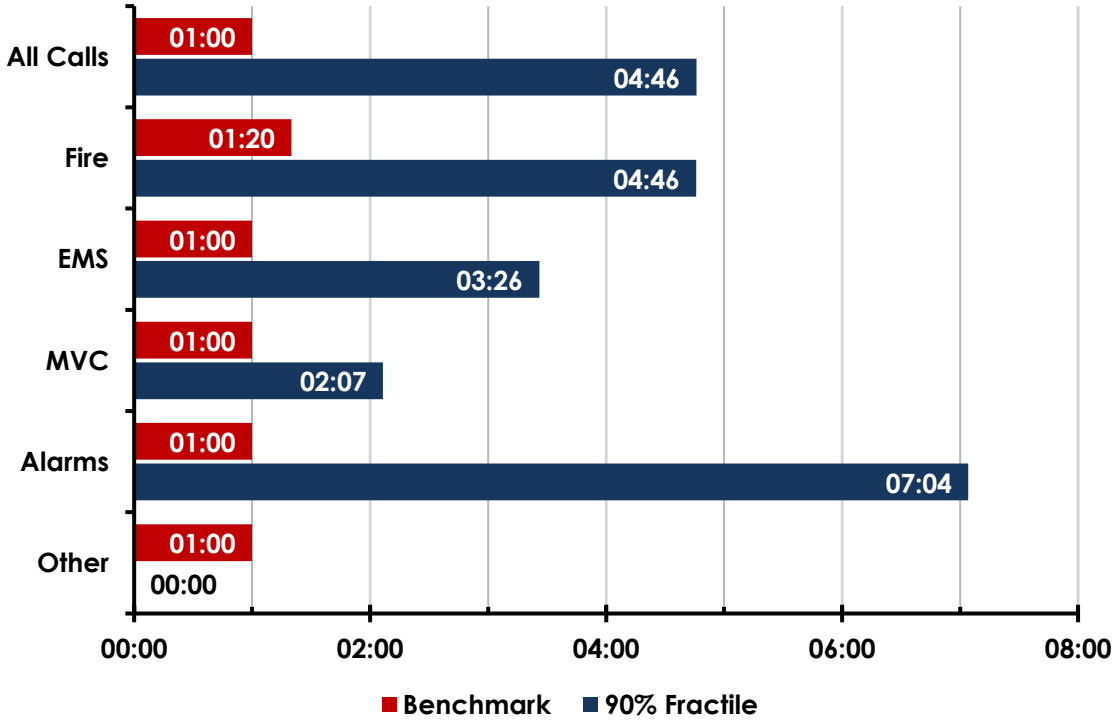
Figure 83: DDF Turnout Time Performance, 2015–2018



Lafayette Fire Department

As illustrated in the following figure, LFD turnout time performance is 4 minutes, 46 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 7 minutes, 4 seconds for alarm incidents.

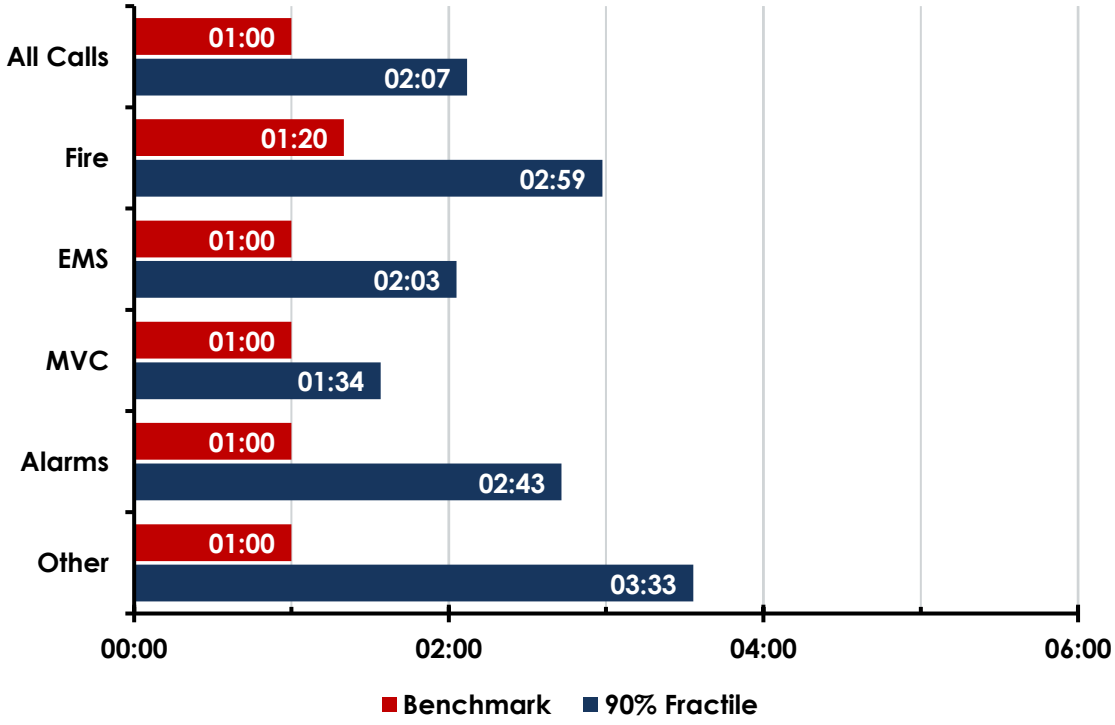
Figure 84: LFD Turnout Time Performance, 2015–2018



McMinnville Fire Department

As illustrated in the following figure, MFD turnout time performance is 2 minutes, 7 seconds for all incidents. Performance by incident type ranged from 1 minute, 34 seconds for motor vehicle collision incidents to 3 minutes, 33 seconds for other incidents.

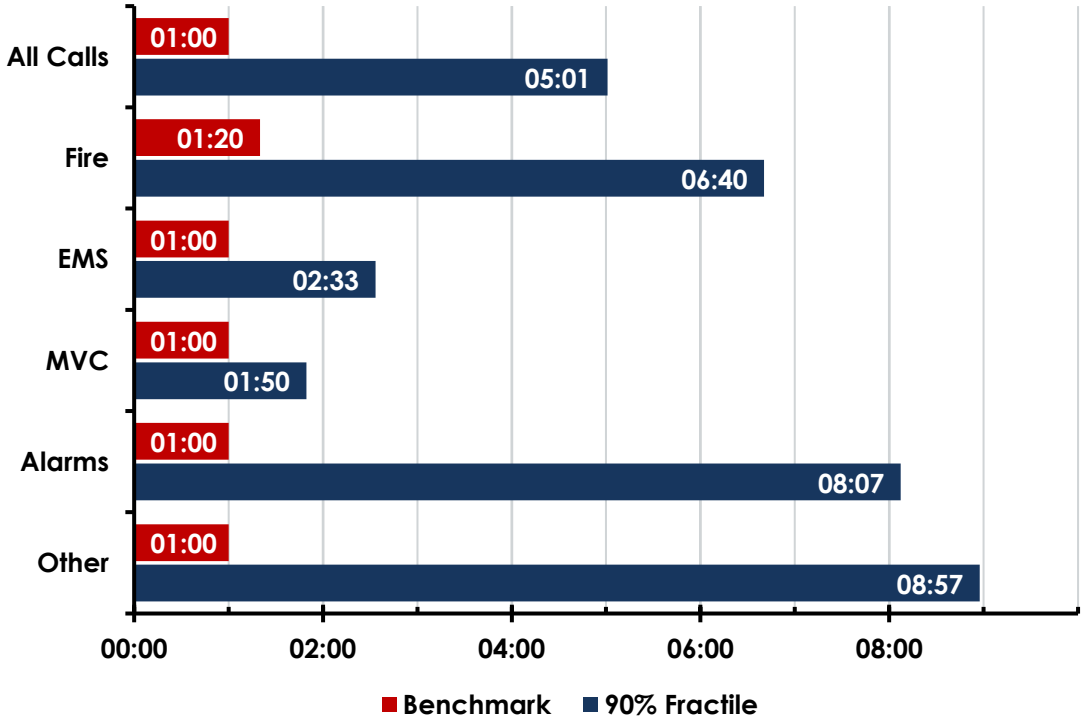
Figure 85: MFD Turnout Time Performance, 2015–2018



New Carlton Fire District

As illustrated in the following figure, NCFD turnout time performance is 5 minutes, 1 second for all incidents. Performance by incident type ranged from 1 minute, 50 seconds for motor vehicle collision incidents to 8 minutes, 57 seconds for other incidents.

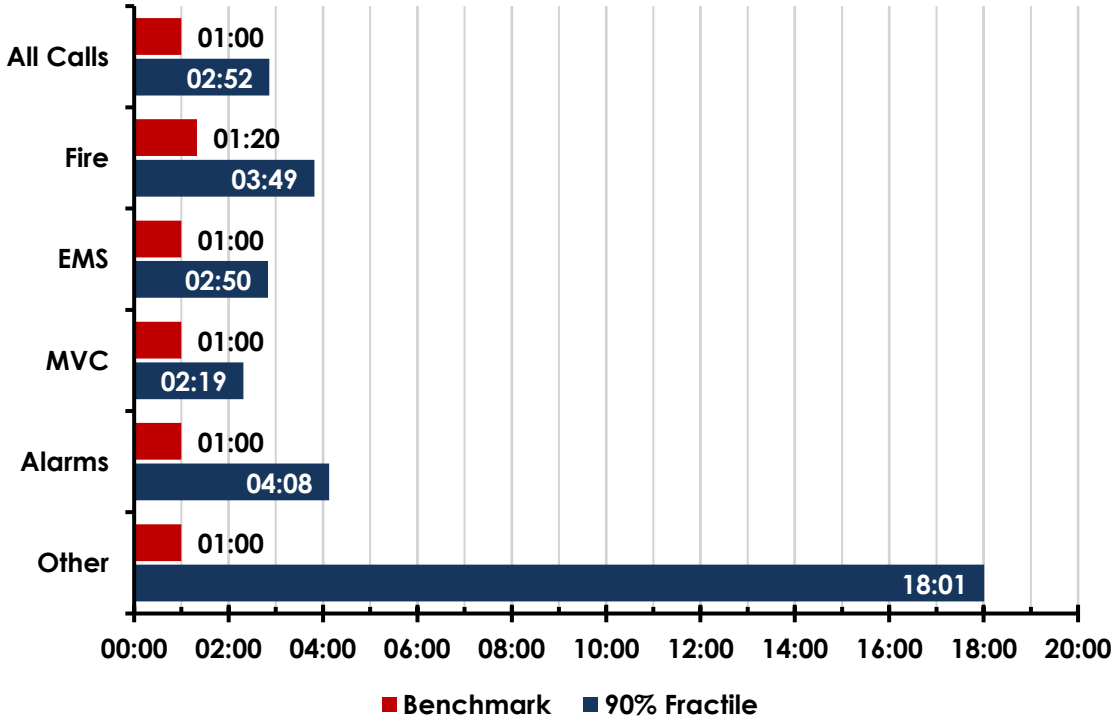
Figure 86: NCFD Turnout Time Performance, 2015–2018



Sheridan Fire District

As illustrated in the following figure, SFD turnout time performance is 2 minutes, 52 seconds for all incidents. Performance by incident type ranged from 2 minutes, 19 seconds for motor vehicle collision incidents to 18 minutes, 1 second for other incidents.

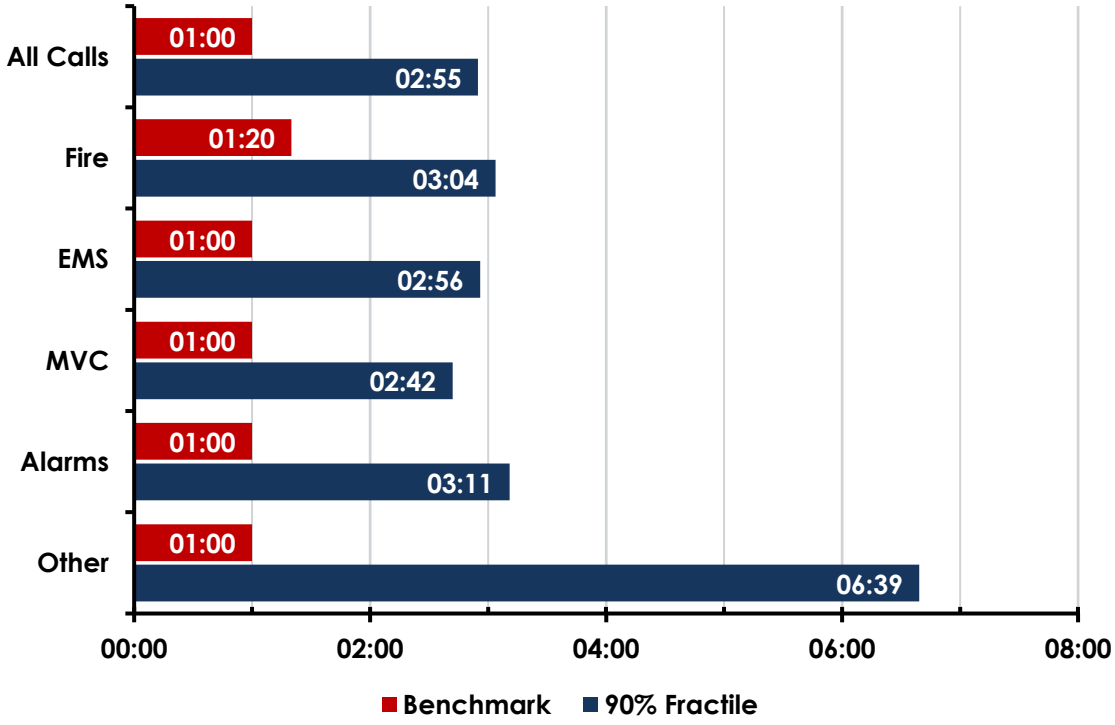
Figure 87: SFD Turnout Time Performance, 2015–2018



West Valley Fire District

As illustrated in the following figure, WVFD turnout time performance is 2 minutes, 55 seconds for all incidents. Performance by incident type ranged from 2 minutes, 42 seconds for motor vehicle collision incidents to 6 minutes, 39 seconds for other incidents.

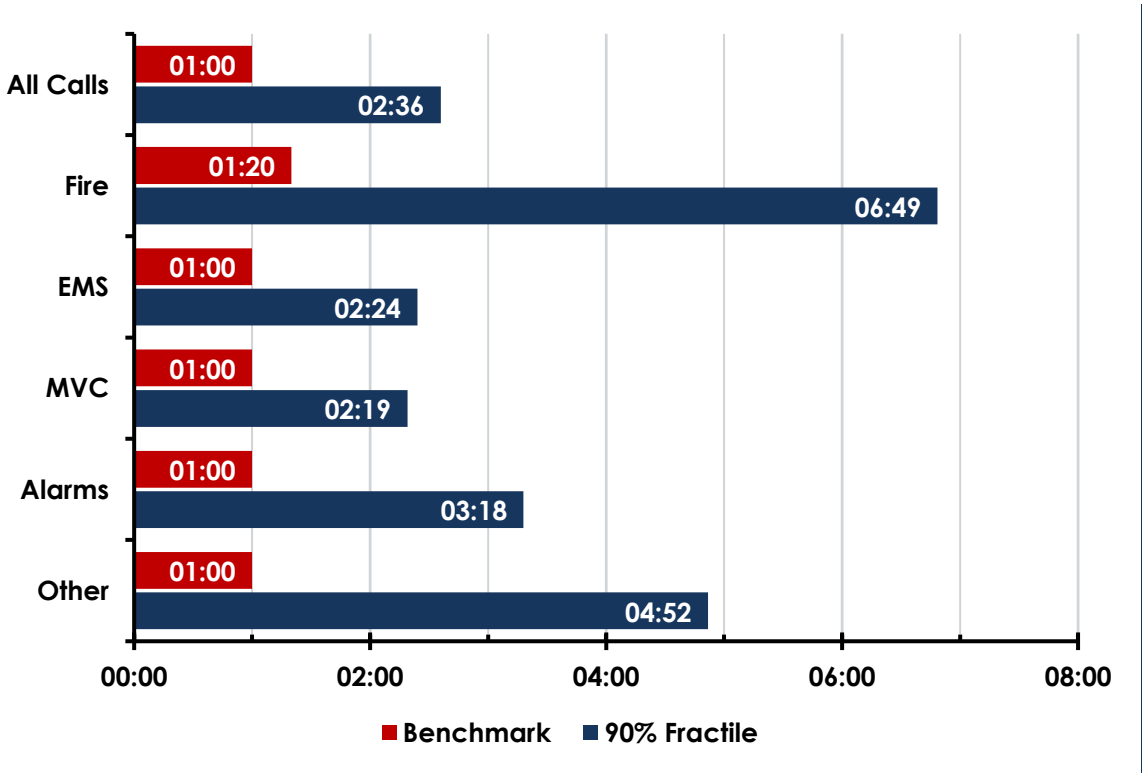
Figure 88: WVFD Turnout Time Performance, 2015–2018



Yamhill County

As illustrated in the following figure, turnout time performance for Yamhill County as a consolidated agency is 2 minutes, 36 seconds for all incidents. Performance by incident type ranged from 2 minutes, 19 seconds for motor vehicle collision incidents to 6 minutes, 49 seconds for fire incidents.

Figure 89: Yamhill County Turnout Time Performance, 2015–2018



Travel Time Performance

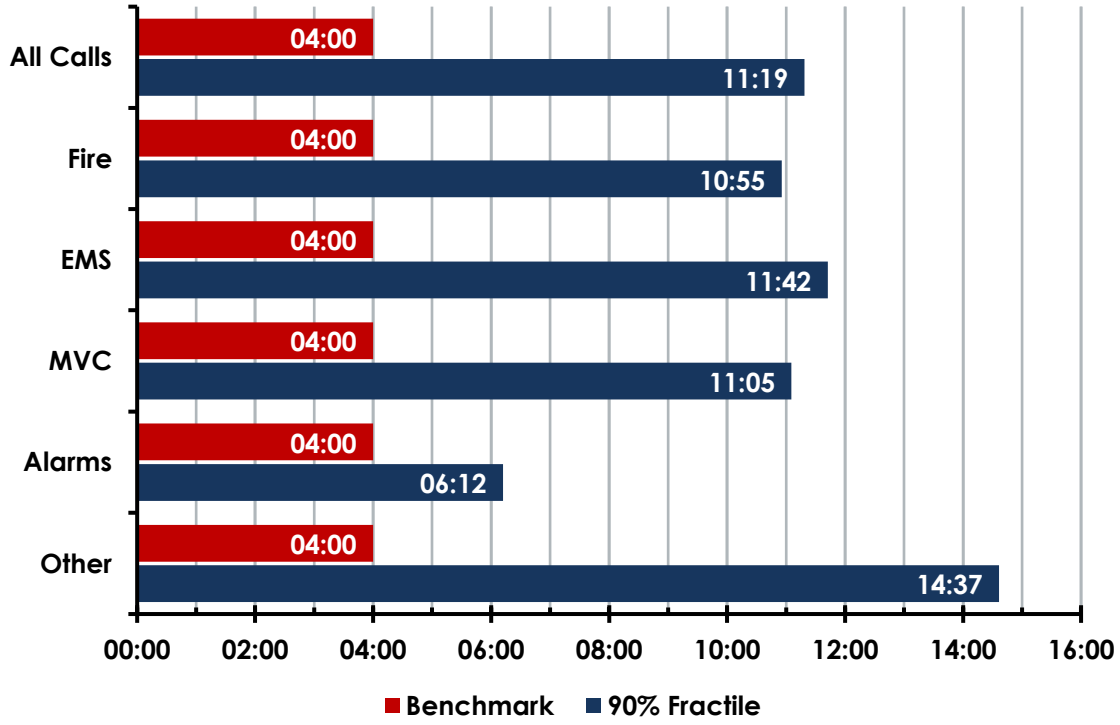
Travel time is often the key contributor to overall response time as the distance between the fire station and the incident may be greater than the target of four minutes. For example, with only 34.5% of the study area within the 4-minute travel time, it is reasonable that travel time performance at the 90th percentile will be greater than four minutes.

Within rural communities served by volunteer departments, it is often difficult for leadership to position resources to meet a 4-minute travel time measure. The call volume may not balance out the cost of adding additional resources. While this measure from NFPA 1710 does not apply to the study area, the comparison provides leadership an ability to review performance and establish department-specific measures. Once those department-specific measures are developed, leadership should continue to monitor and implement changes as needed.

Amity Fire District

As illustrated in the following figure, AFD travel time performance is 11 minutes, 19 seconds for all incidents. Performance by incident type ranged from 6 minutes, 12 seconds for alarm incidents to 14 minutes, 37 seconds for other incidents.

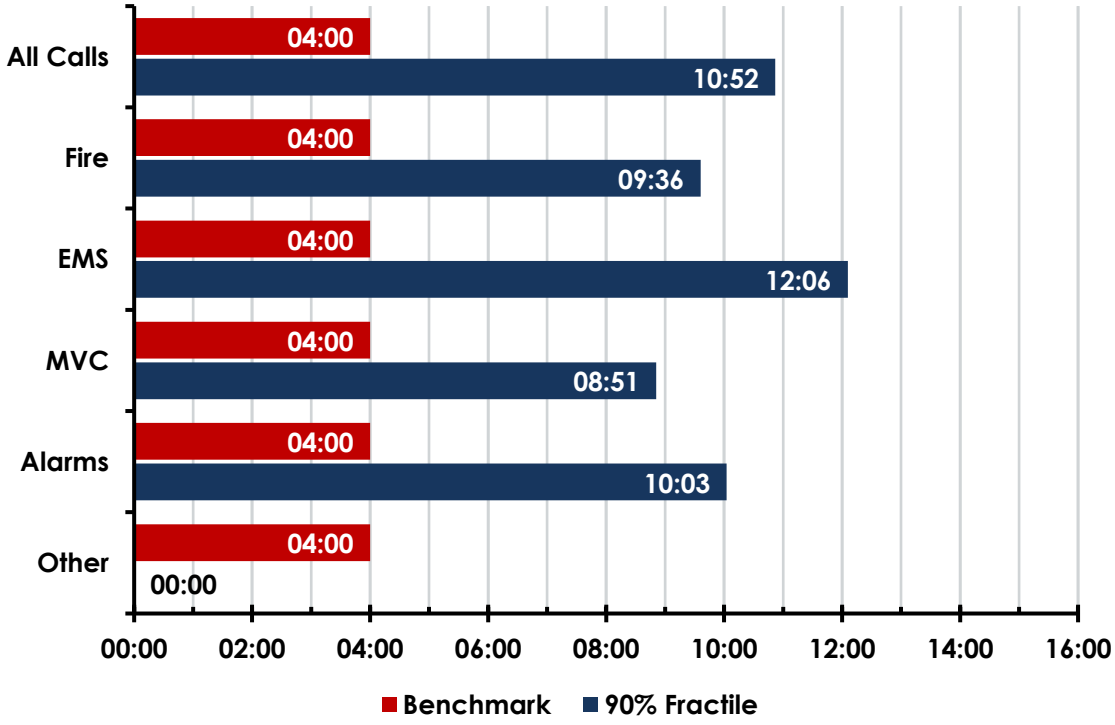
Figure 90: AFD Travel Time Performance, 2015–2018



Dayton Fire District

As illustrated in the following figure, DFD travel time performance is 10 minutes, 52 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 12 minutes, 6 seconds for emergency medical incidents.

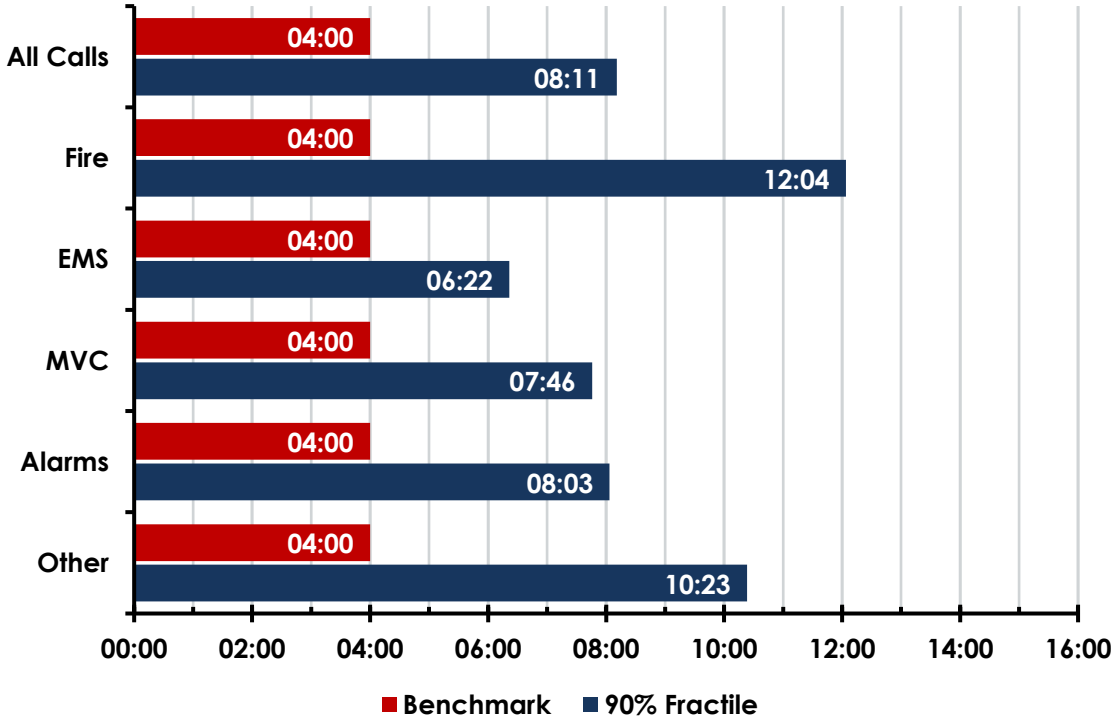
Figure 91: DFD Travel Time Performance, 2015–2018



Dundee Fire District

As illustrated in the following figure, DDF travel time performance is 8 minutes, 11 seconds for all incidents. Performance by incident type ranged from 6 minutes, 22 seconds for emergency medical incidents to 12 minutes, 4 seconds for fire incidents.

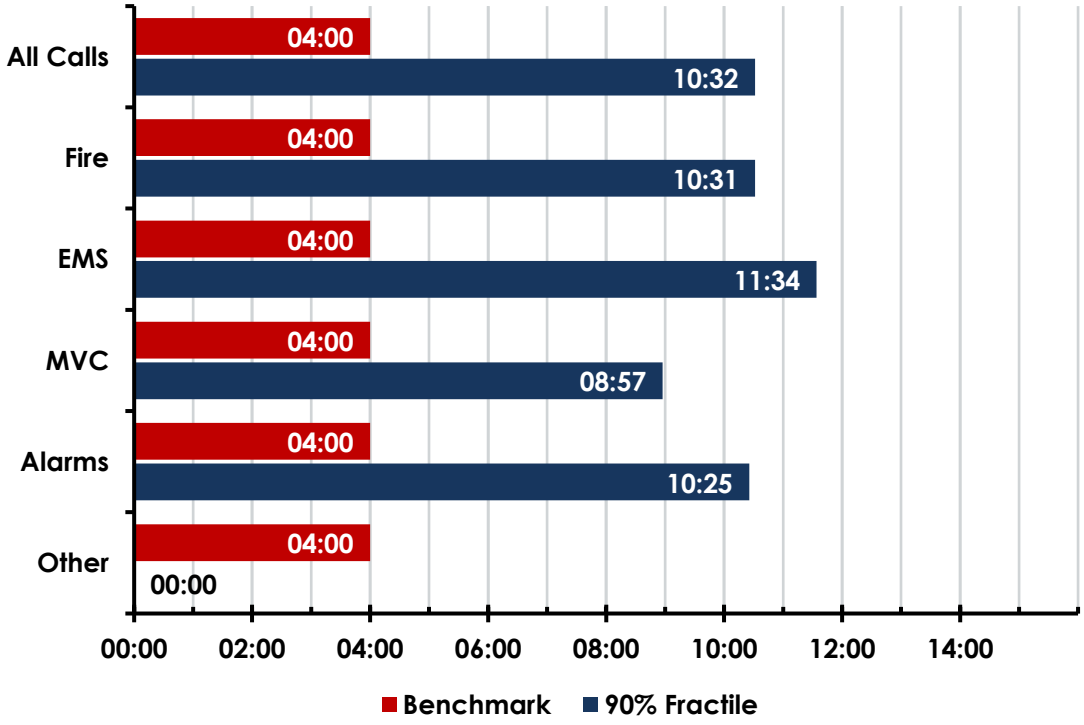
Figure 92: DDF Travel Time Performance, 2015–2018



Lafayette Fire Department

As illustrated in the following figure, LFD travel time performance is 10 minutes, 32 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 11 minutes, 34 seconds for emergency medical incidents.

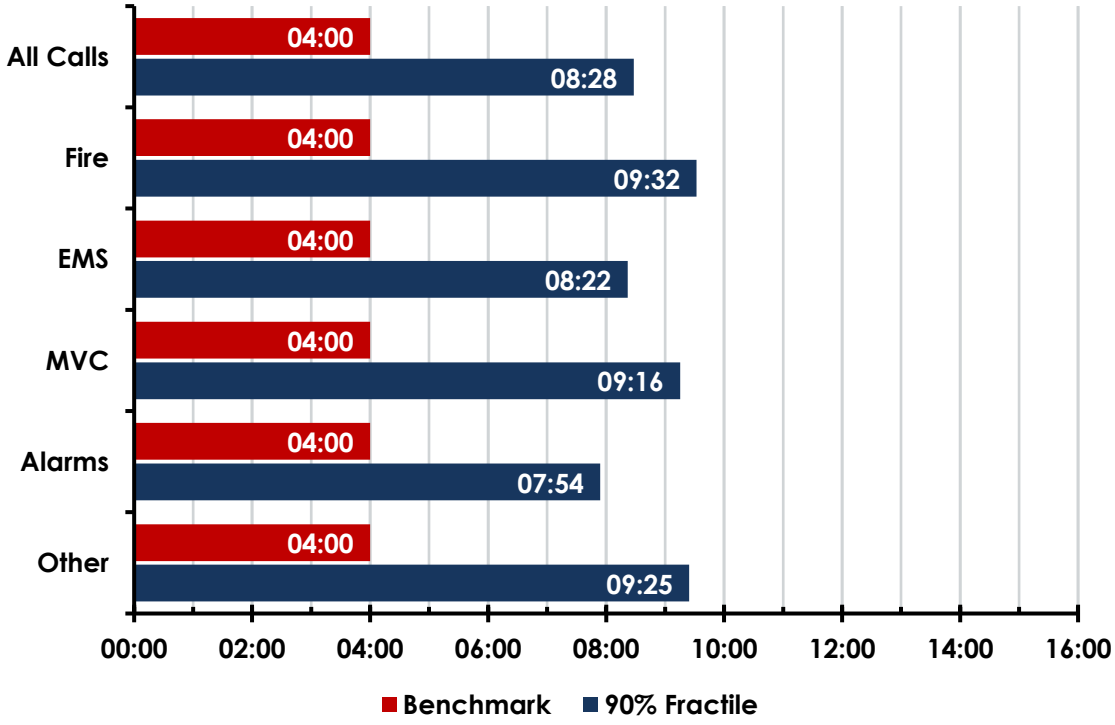
Figure 93: LFD Travel Time Performance, 2015–2018



McMinnville Fire Department

As illustrated in the following figure, MFD travel time performance is 8 minutes, 28 seconds for all incidents. Performance by incident type ranged from 7 minutes, 54 seconds for alarm incidents to 9 minutes, 32 seconds for fire incidents.

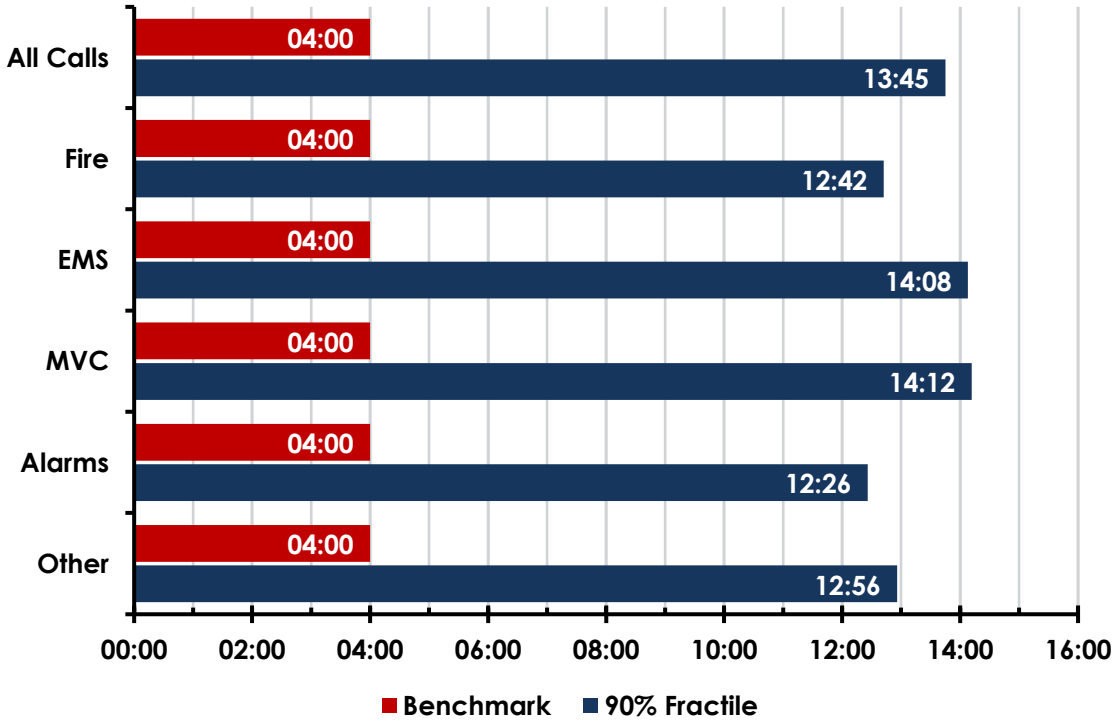
Figure 94: MFD Travel Time Performance, 2015–2018



New Carlton Fire District

As illustrated in the following figure, NCFD travel time performance is 13 minutes, 45 seconds for all incidents. Performance by incident type ranged from 12 minutes, 26 seconds for alarm incidents to 14 minutes, 12 seconds for motor vehicle collision incidents.

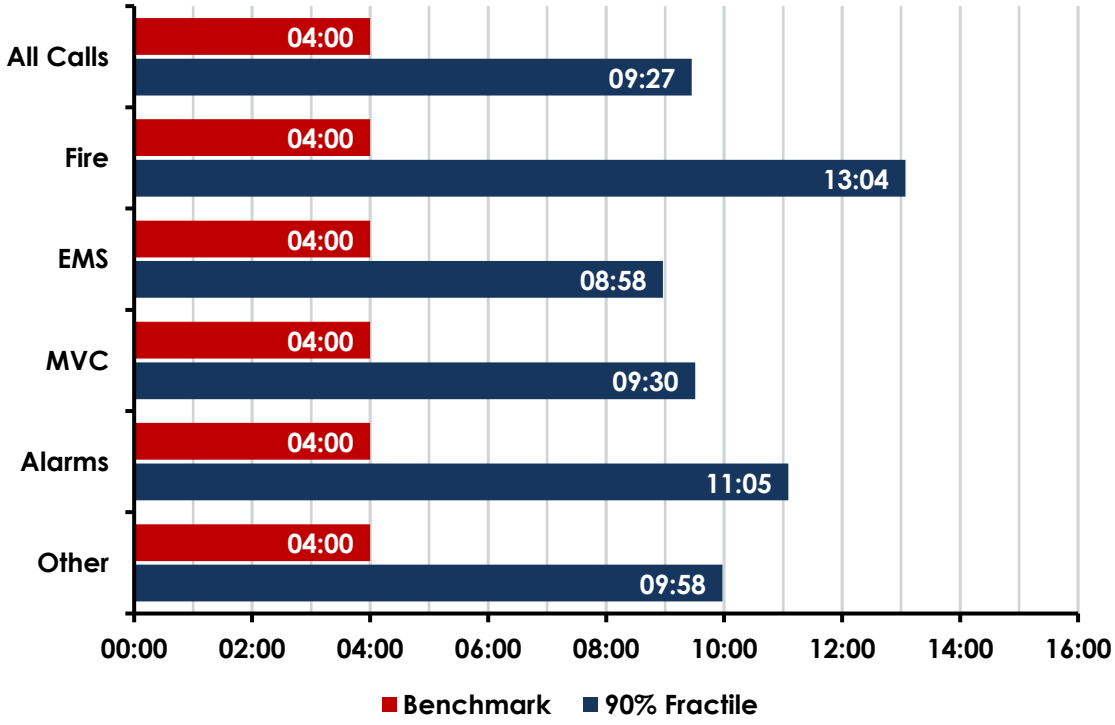
Figure 95: NCFD Travel Time Performance, 2015–2018



Sheridan Fire District

As illustrated in the following figure, SFD travel time performance is 9 minutes, 27 seconds for all incidents. Performance by incident type ranged from 8 minutes, 58 seconds for emergency medical incidents to 13 minutes, 4 seconds for fire incidents.

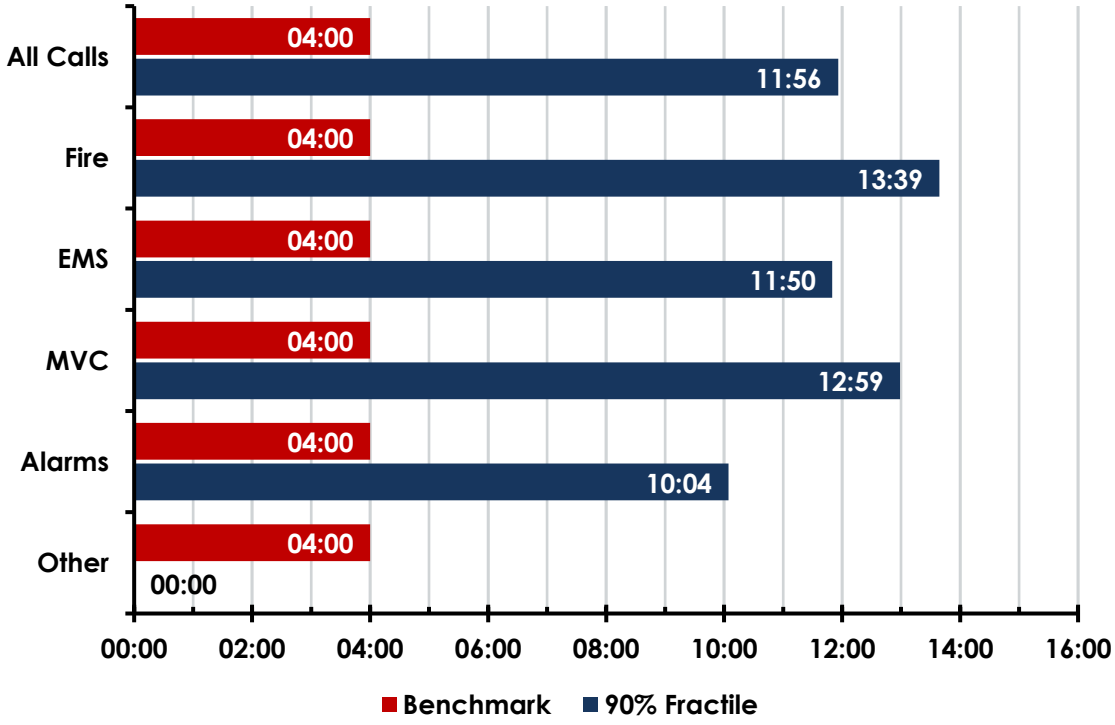
Figure 96: SFD Travel Time Performance, 2015–2018



West Valley Fire District

As illustrated in the following figure, WVFD travel time performance is 11 minutes, 56 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 13 minutes, 39 seconds for fire incidents.

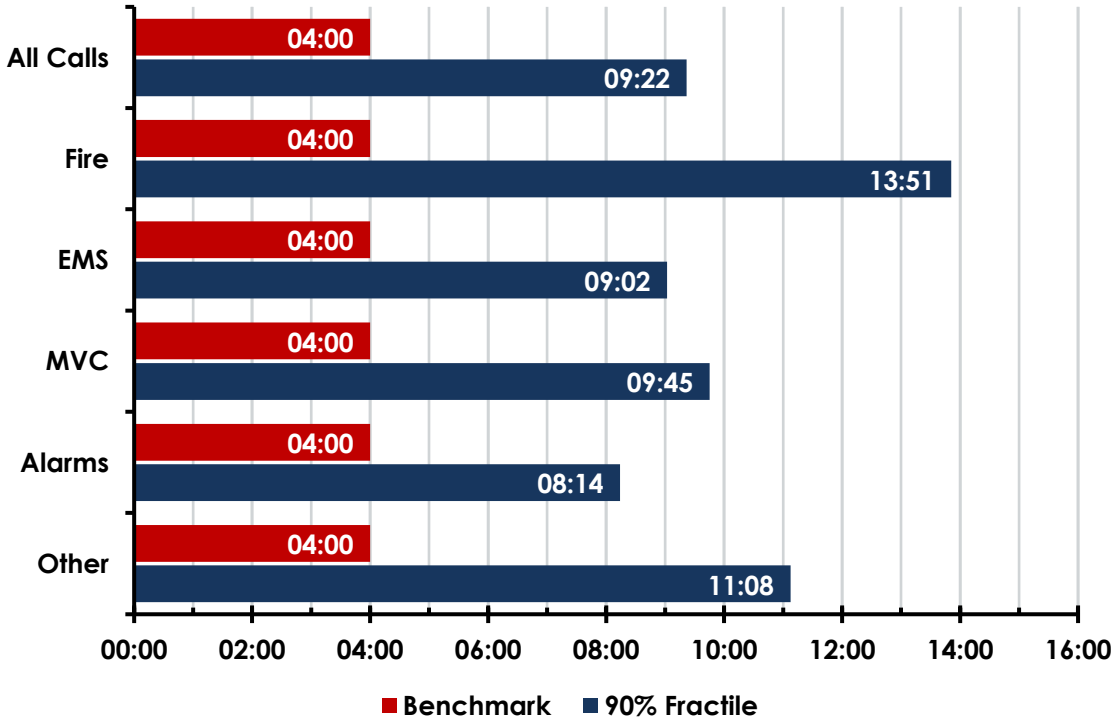
Figure 97: WVFD Travel Time Performance, 2015–2018



Yamhill County

As illustrated in the following figure, travel time performance for Yamhill County as a consolidated agency is 9 minutes, 22 seconds for all incidents. Performance by incident type ranged from 8 minutes, 14 seconds for alarm incidents to 13 minutes, 51 seconds for fire incidents.

Figure 98: Yamhill County Travel Time Performance, 2015–2018



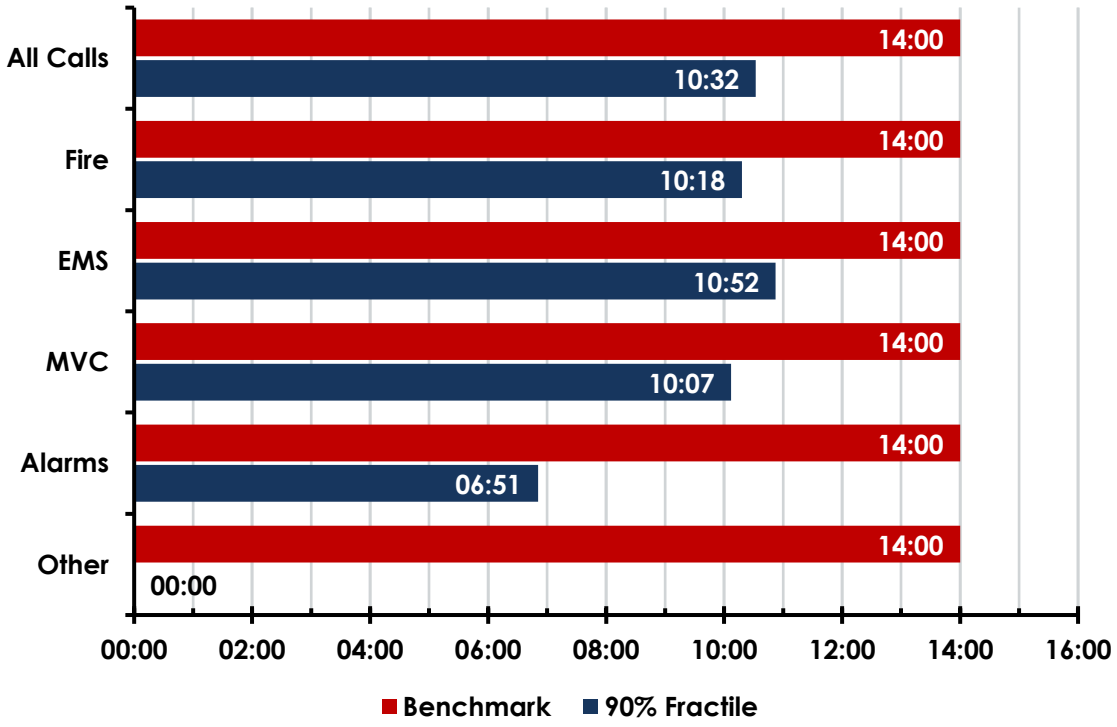
Response Time Performance

Response time is the combination of turnout time and travel time and is often the measure that is tracked and reported the most. Citizens and leadership are often interested in the performance of the department as it relates to response time. As a rural community with volunteer agencies, the expected performance is 14 minutes or less at the 80th percentile—achieving a minimum of six operational staff on-scene. Response time performance is impacted by the same issues already identified in the turnout time and travel time sections.

Amity Fire District

As illustrated in the following figure, AFD response time performance falls within the recommended performance at 10 minutes, 32 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 10 minutes, 52 seconds for emergency medical incidents.

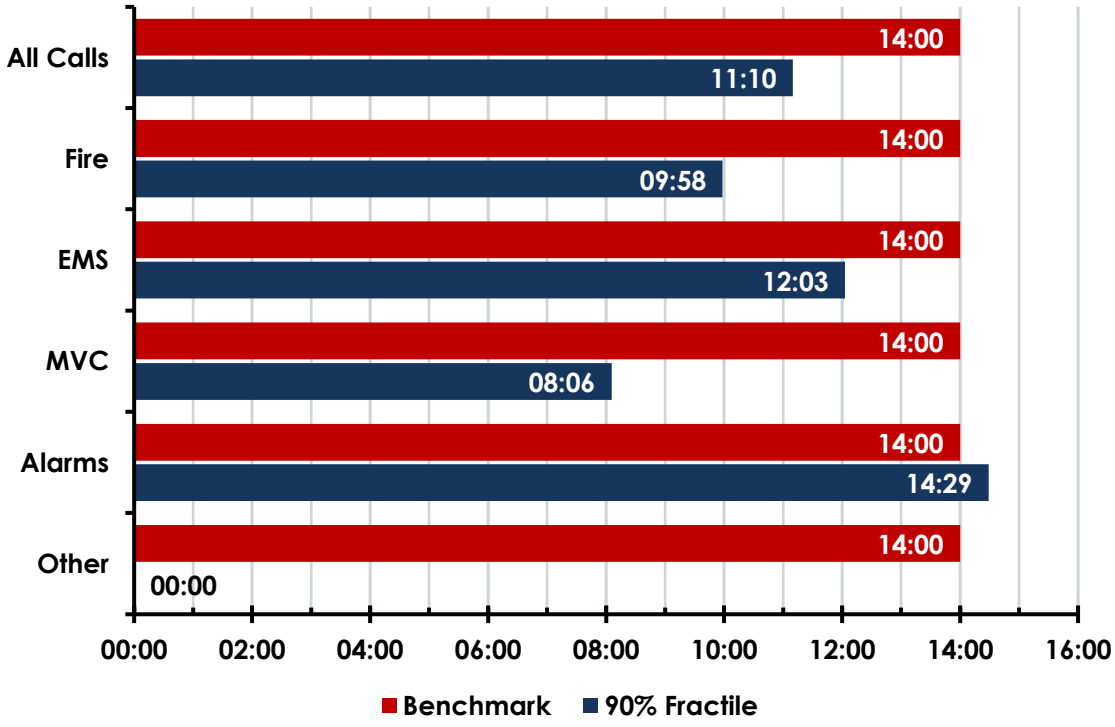
Figure 99: AFD Response Time Performance, 2015–2018



Dayton Fire District

As illustrated in the following figure, DFD response time performance falls within the recommended performance at 11 minutes, 10 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 14 minutes, 29 seconds for alarm incidents.

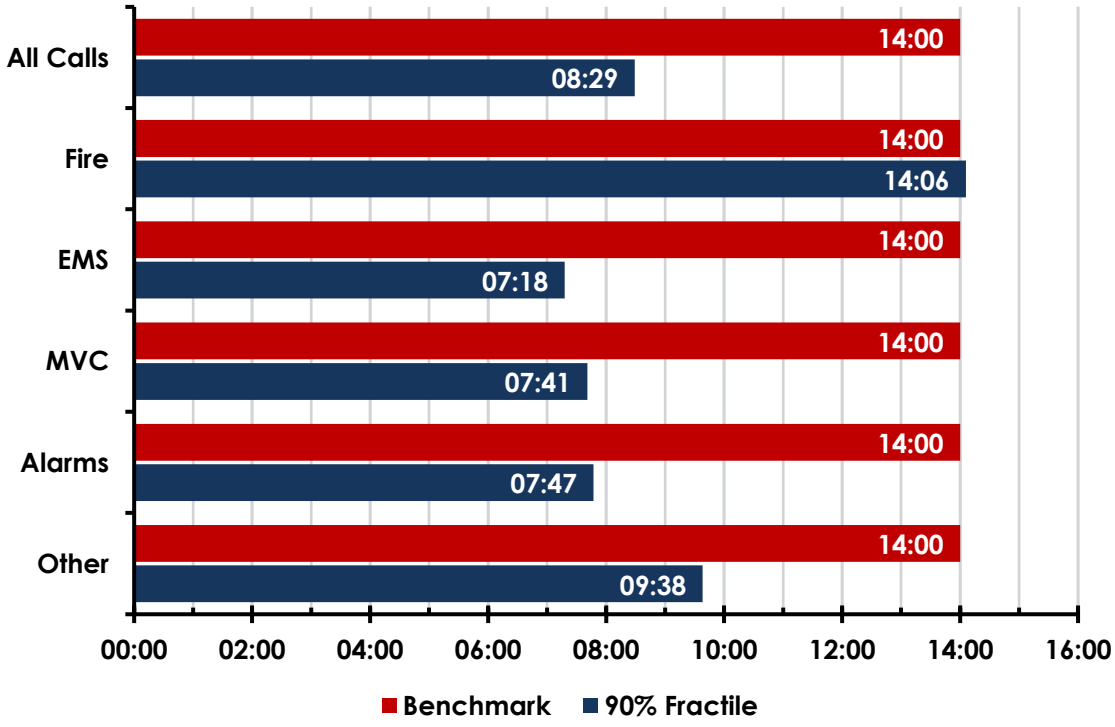
Figure 100: DFD Response Time Performance, 2015–2018



Dundee Fire District

As illustrated in the following figure, DDF response time performance falls within the recommended performance at 8 minutes, 29 seconds for all incidents. Performance by incident type ranged from 7 minutes, 18 seconds for emergency medical incidents to 14 minutes, 6 seconds for fire incidents.

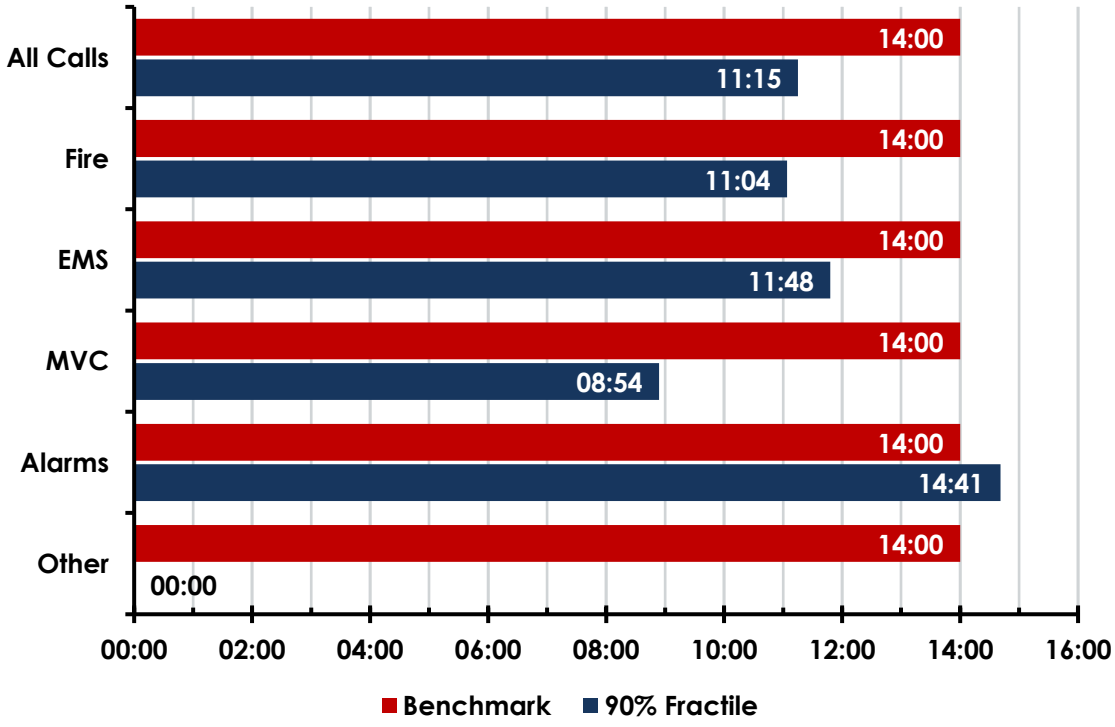
Figure 101: DDF Response Time Performance, 2015–2018



Lafayette Fire Department

As illustrated in the following figure, LFD response time performance falls within the recommended performance at 11 minutes, 15 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 14 minutes, 41 seconds for alarm incidents.

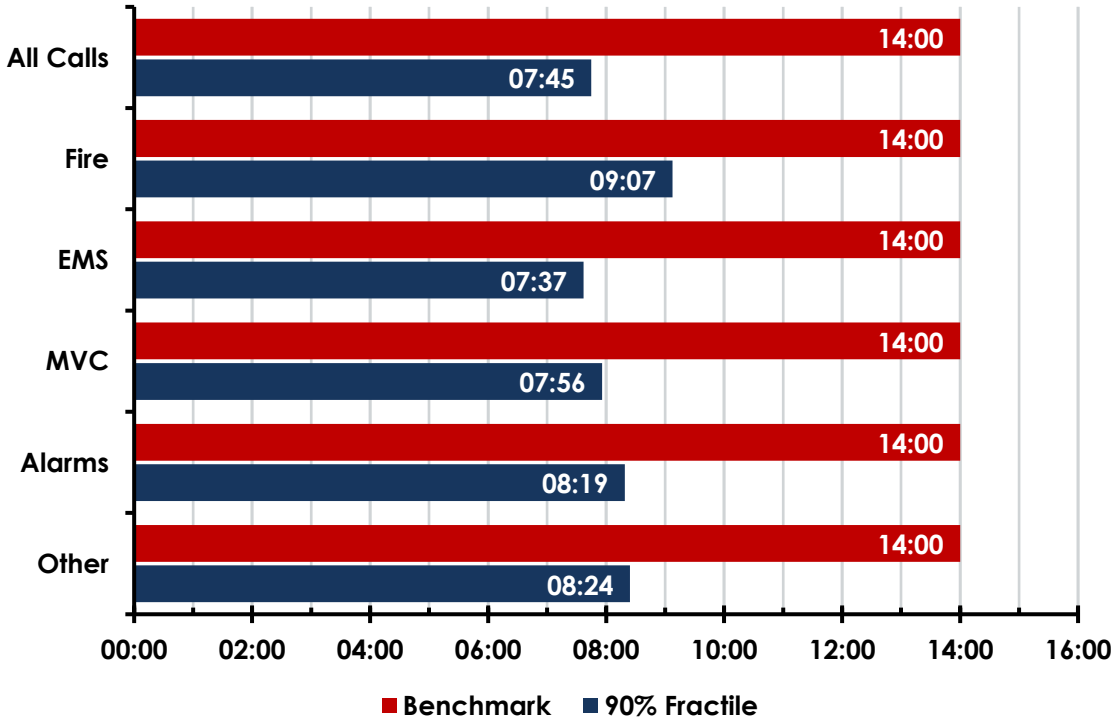
Figure 102: LFD Response Time Performance, 2015–2018



McMinnville Fire Department

As illustrated in the following figure, MFD response time performance falls within the recommended performance at 7 minutes, 45 seconds for all incidents. Performance by incident type ranged from 7 minutes, 37 seconds for emergency medical incidents to 9 minutes, 7 seconds for fire incidents.

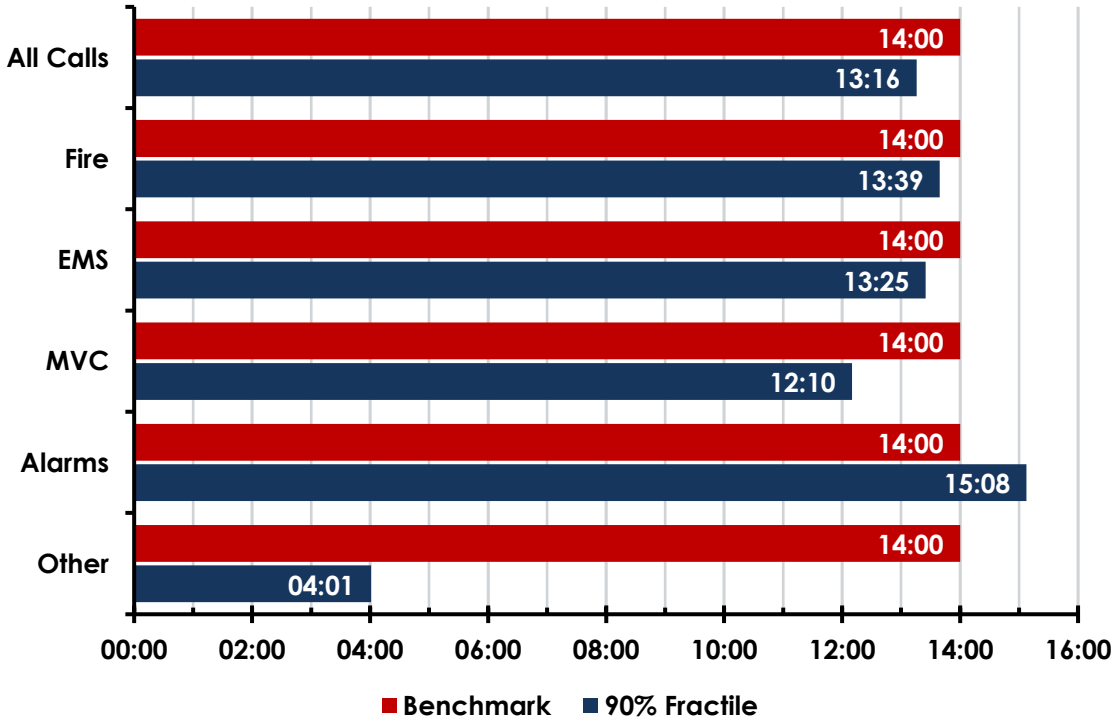
Figure 103: MFD Response Time Performance, 2015–2018



New Carlton Fire District

As illustrated in the following figure, NCFD response time performance falls within the recommended performance at 13 minutes, 16 seconds for all incidents. Performance by incident type ranged from 4 minutes, 1 second for other incidents to 15 minutes, 8 seconds for alarm incidents.

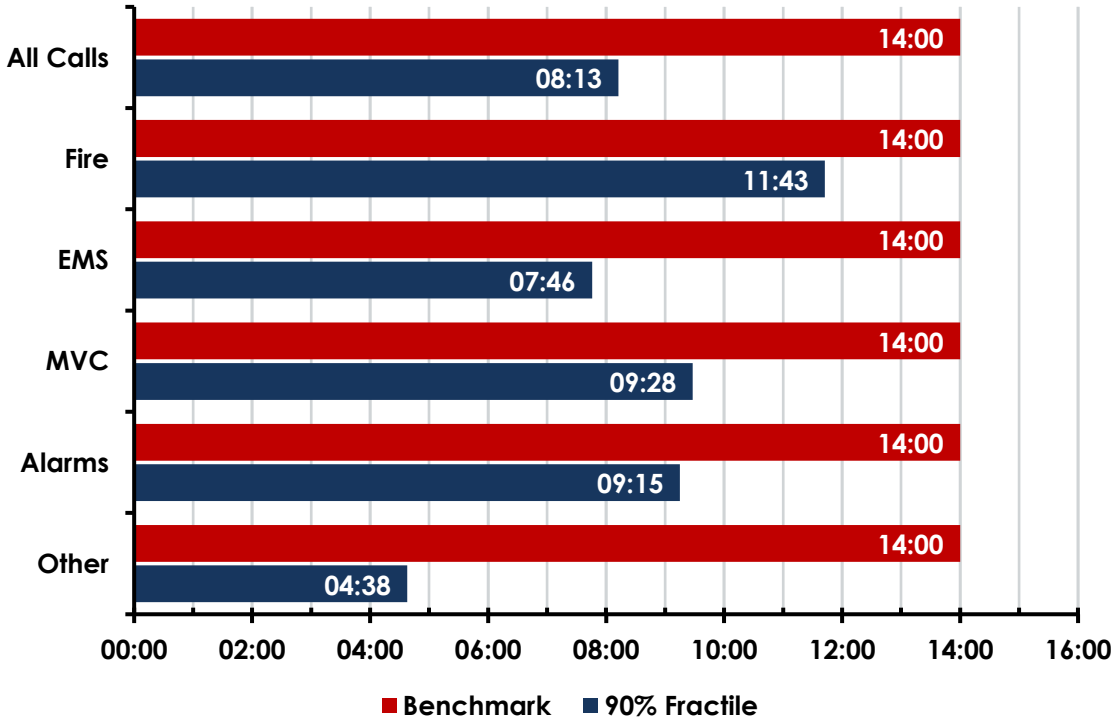
Figure 104: NCFD Response Time Performance, 2015–2018



Sheridan Fire District

As illustrated in the following figure, SFD response time performance falls within the recommended performance at 8 minutes, 13 seconds for all incidents. Performance by incident type ranged from 4 minutes, 38 seconds for other incidents to 11 minutes, 43 seconds for fire incidents.

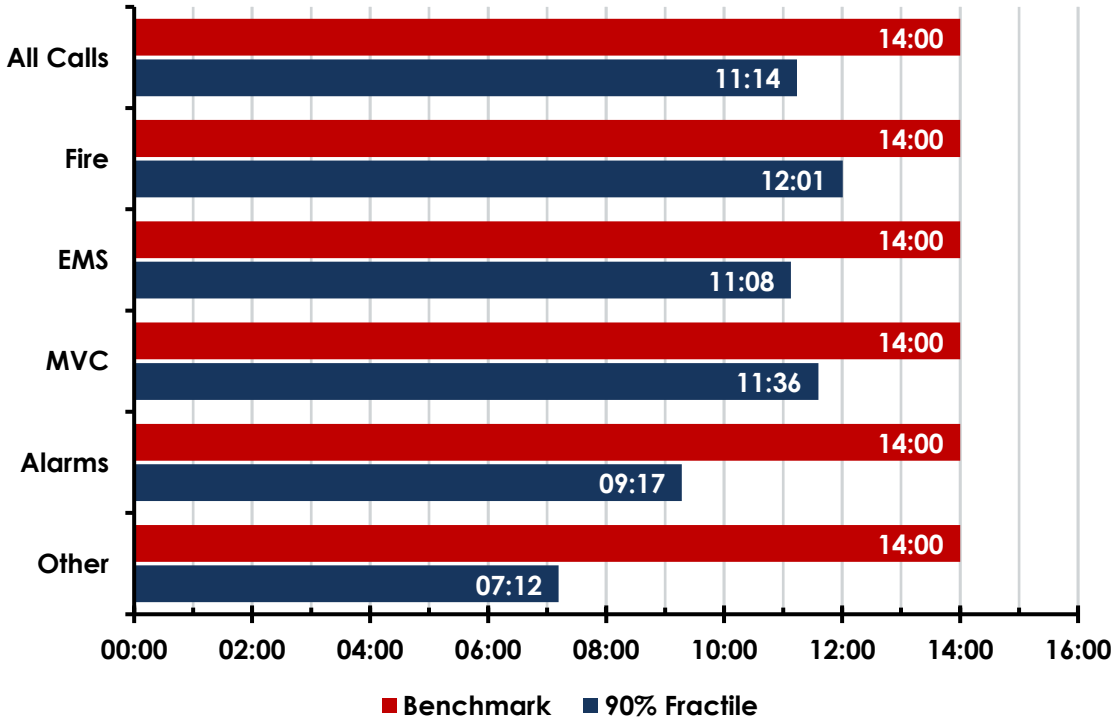
Figure 105: SFD Response Time Performance, 2015–2018



West Valley Fire District

As illustrated in the following figure, WVFD response time performance falls within the recommended performance at 11 minutes, 14 seconds for all incidents. Performance by incident type ranged from 7 minutes, 12 seconds for other incidents to 12 minutes, 1 second for fire incidents.

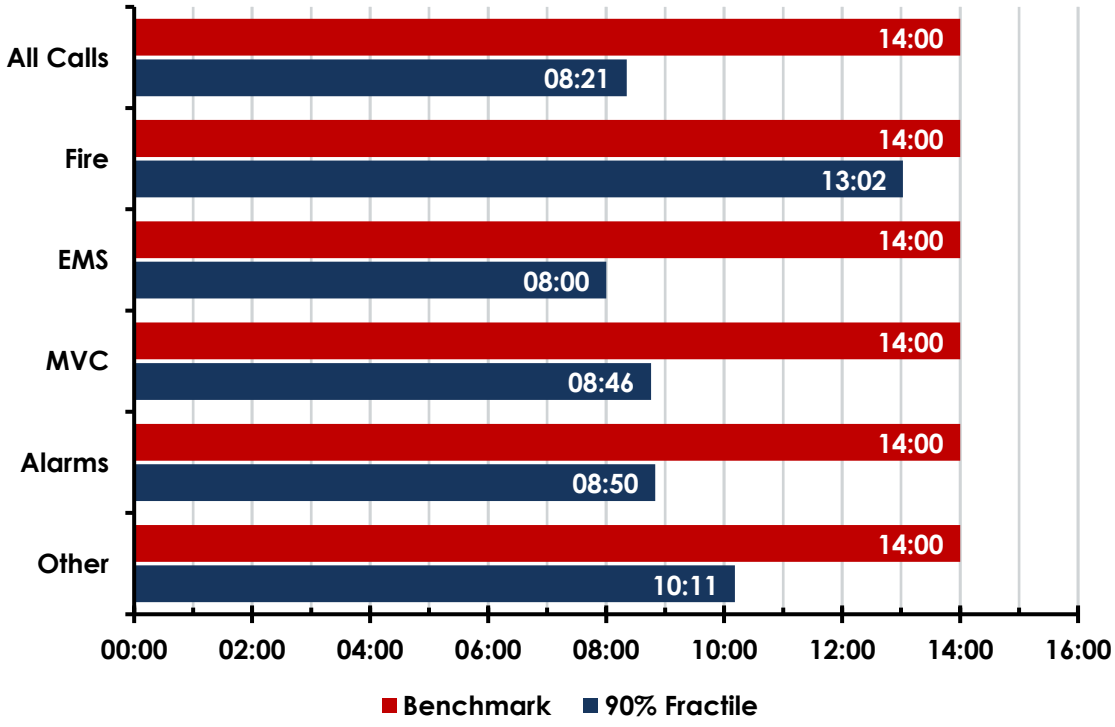
Figure 106: WVFD Response Time Performance, 2015–2018



Yamhill County

As illustrated in the following figure, response time performance for Yamhill County as a consolidated agency falls within the recommended performance at 8 minutes, 21 seconds for all incidents. Performance by incident type ranged from 8 minutes, 0 seconds for emergency medical incidents to 13 minutes, 2 seconds for fire incidents.

Figure 107: Yamhill County Response Time Performance, 2015–2018



Total Response Time Performance

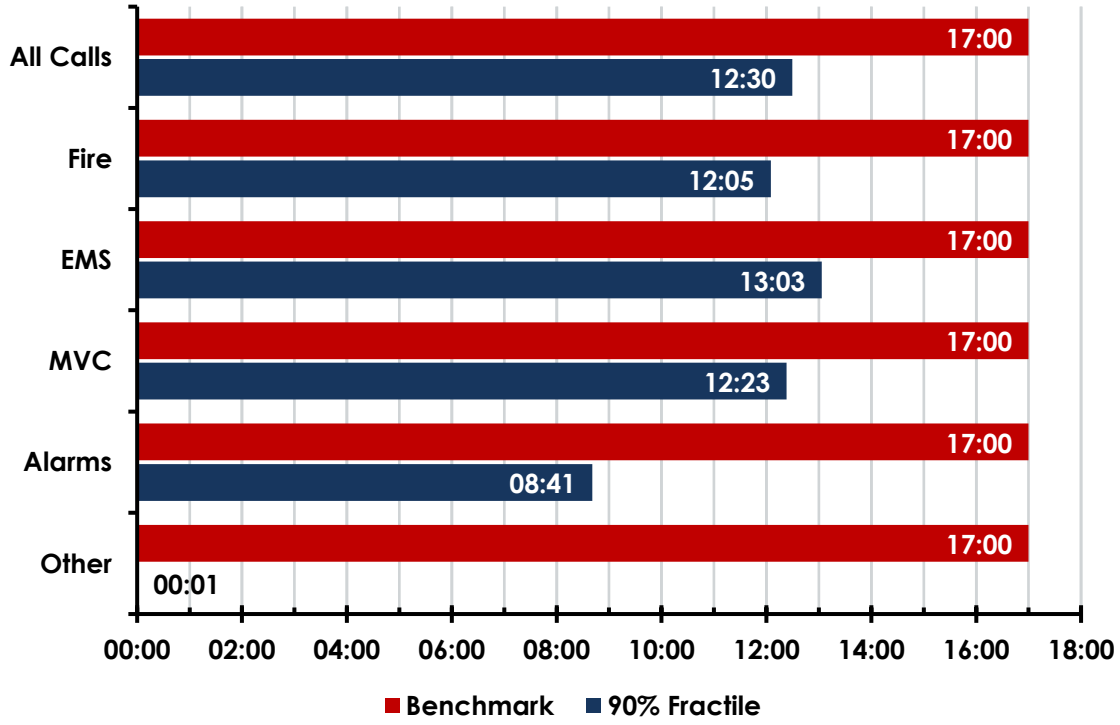
Total response time combines all the measures into a single measurement and reflects the measure of time from when the 911 call is initiated until the first unit arrives on the incident scene. The data provided to ESCI did not contain the timestamp of the 911 call and, thus, the following figures illustrate the measure of time from when the dispatcher received the incident until the first unit arrived.

For purposes of this study, ESCI combined the call processing target time of 1 minute, the turnout time target of 2 minutes, and the response time target of 14 minutes to set the target measure at 17 minutes at the 80th percentile. While this is not represented in a specific standard, it is a logical compilation based on the available standards and provides a fair evaluation for leadership.

Amity Fire District

As illustrated in the following figure, AFD total response time performance falls within the combined target measure at 12 minutes, 30 seconds for all incidents. Performance by incident type ranged from 1 second for other incidents to 13 minutes, 3 seconds for emergency medical incidents.

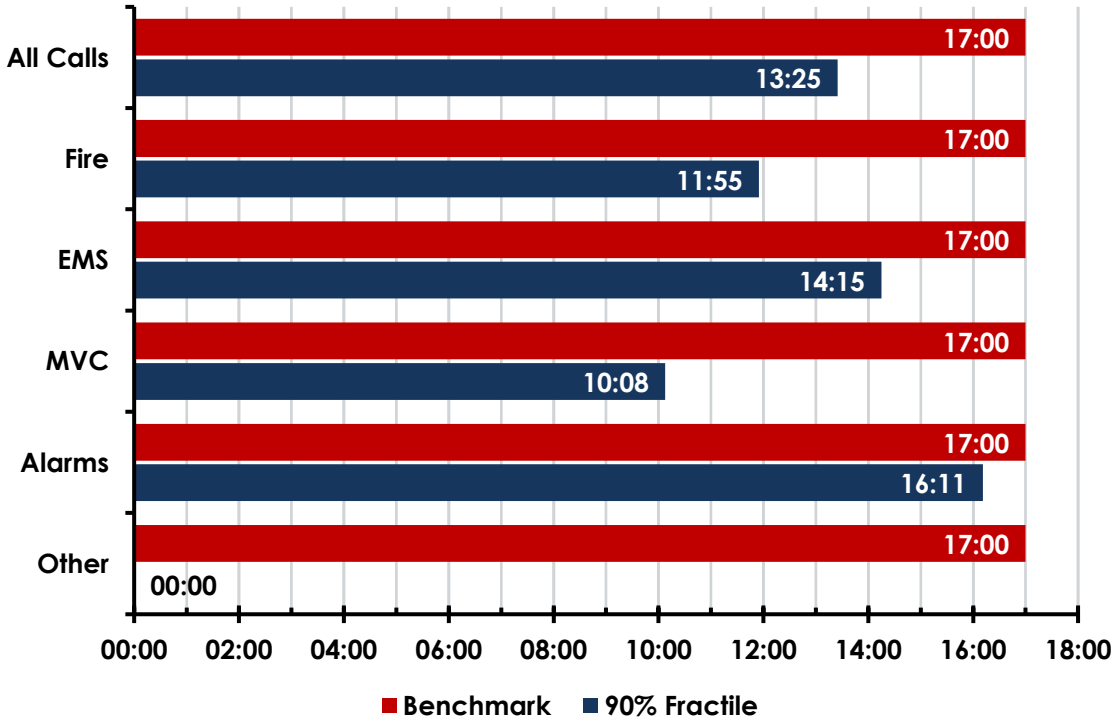
Figure 108: AFD Total Response Time Performance, 2015–2018



Dayton Fire District

As illustrated in the following figure, DFD total response time performance falls within the combined target measure at 13 minutes, 25 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 16 minutes, 11 seconds for alarm incidents.

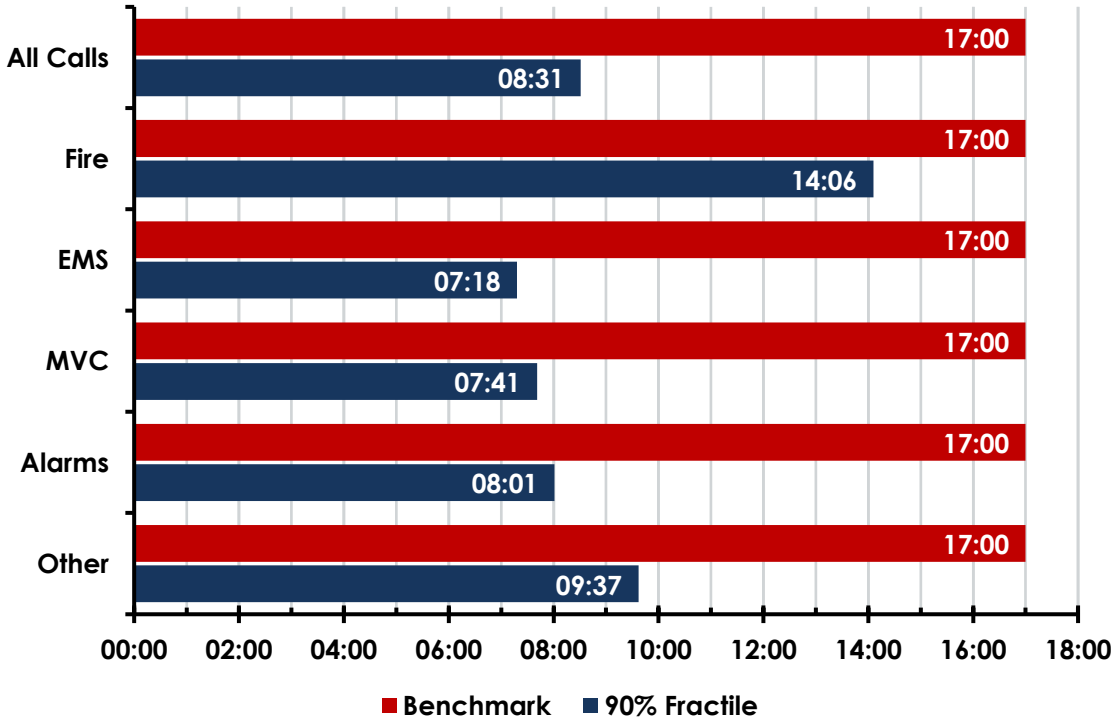
Figure 109: DFD Total Response Time Performance, 2015–2018



Dundee Fire District

As illustrated in the following figure, DDF total response time performance falls within the combined target measure at 8 minutes, 31 seconds for all incidents. Performance by incident type ranged from 7 minutes, 18 seconds for emergency medical incidents to 14 minutes, 6 seconds for fire incidents.

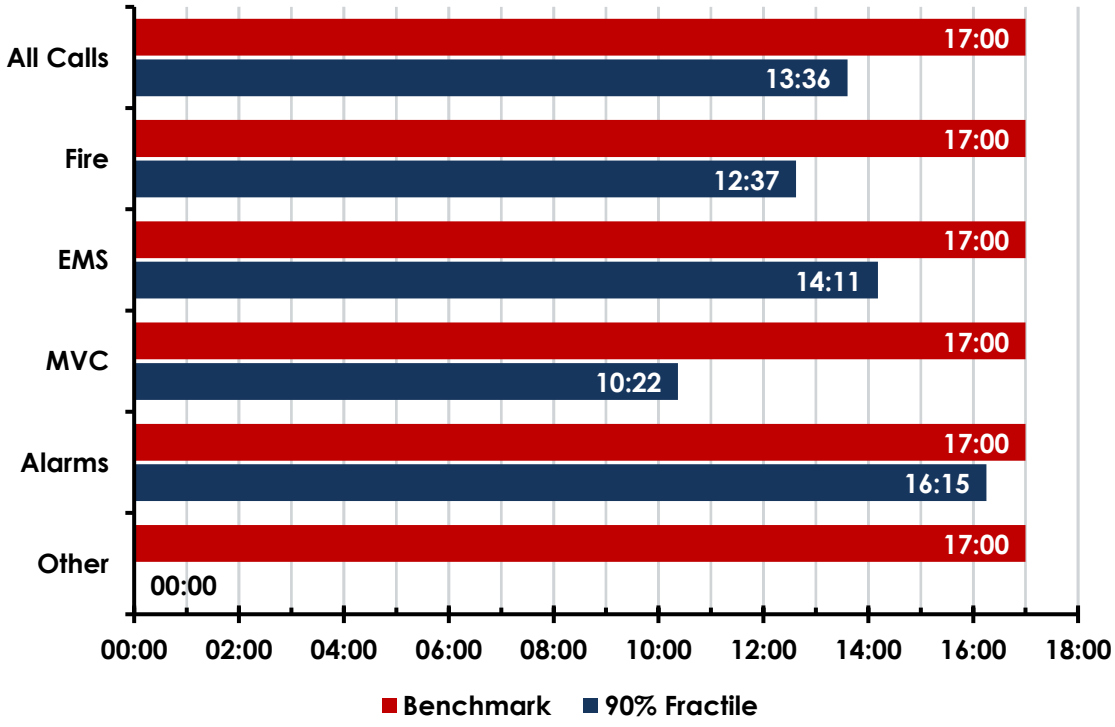
Figure 110: DDF Total Response Time Performance, 2015–2018



Lafayette Fire Department

As illustrated in the following figure, LFD total response time performance falls within the combined target measure at 13 minutes, 36 seconds for all incidents. Performance by incident type ranged from 0 seconds for other incidents to 16 minutes, 15 seconds for alarm incidents.

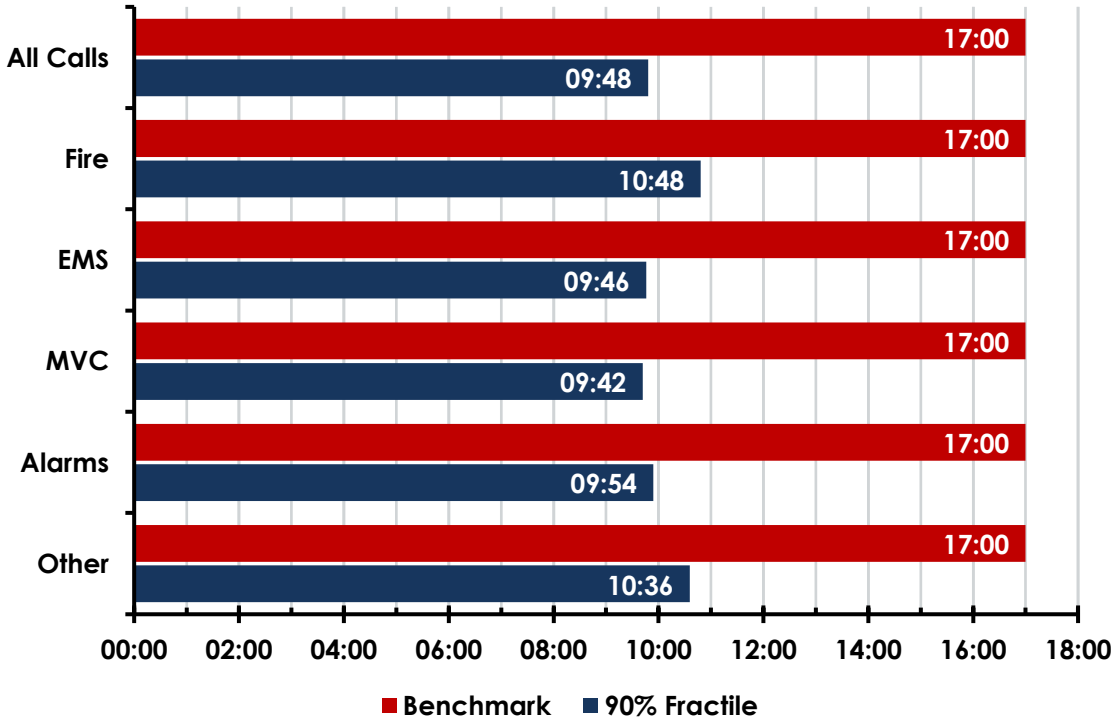
Figure 111: LFD Total Response Time Performance, 2015–2018



McMinnville Fire Department

As illustrated in the following figure, MFD total response time performance falls within the combined target measure at 9 minutes, 48 seconds for all incidents. Performance by incident type ranged from 9 minutes, 42 seconds for motor vehicle collision incidents to 10 minutes, 48 seconds for fire incidents.

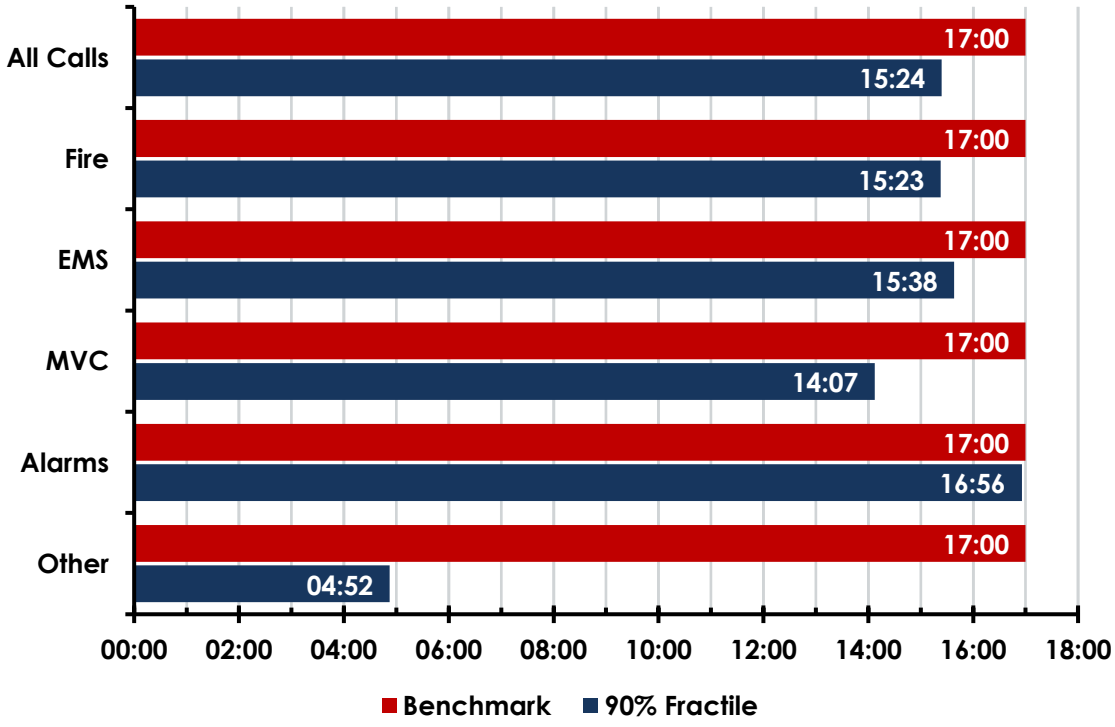
Figure 112: MFD Total Response Time Performance, 2015–2018



New Carlton Fire District

As illustrated in the following figure, NCFD total response time performance falls within the combined target measure at 15 minutes, 24 seconds for all incidents. Performance by incident type ranged from 4 minutes, 52 seconds for other incidents to 16 minutes, 56 seconds for alarm incidents.

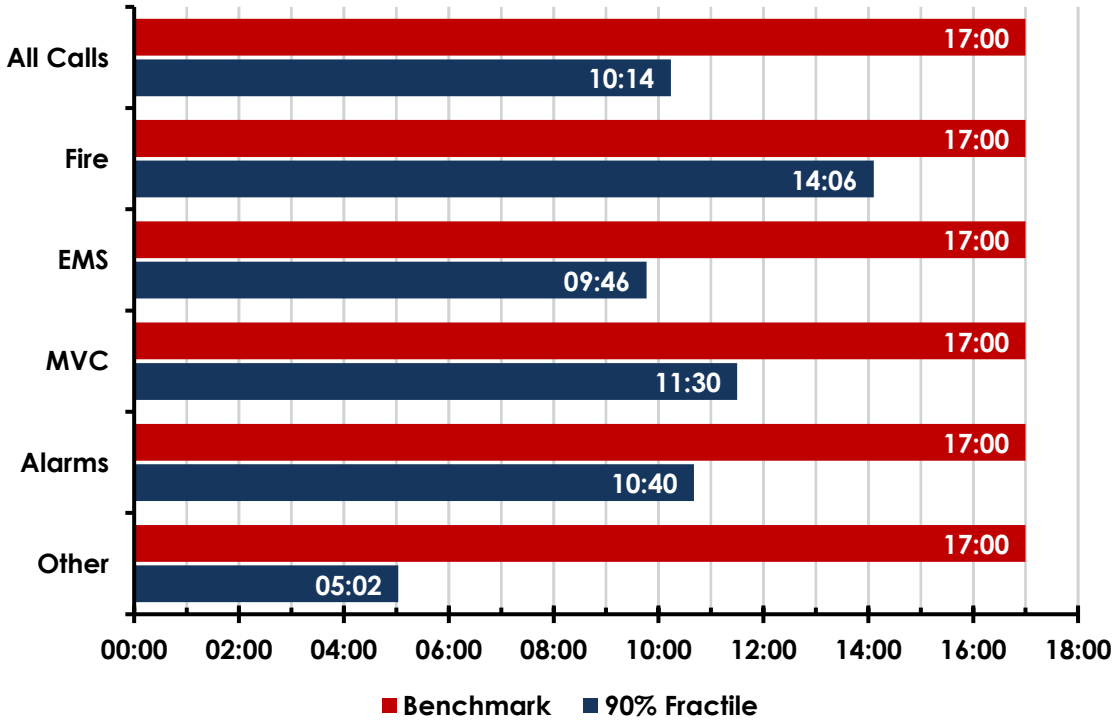
Figure 113: NCFD Total Response Time Performance, 2015–2018



Sheridan Fire District

As illustrated in the following figure, SFD total response time performance falls within the combined target measure at 10 minutes, 14 seconds for all incidents. Performance by incident type ranged from 5 minutes, 2 seconds for other incidents to 14 minutes, 6 seconds for fire incidents.

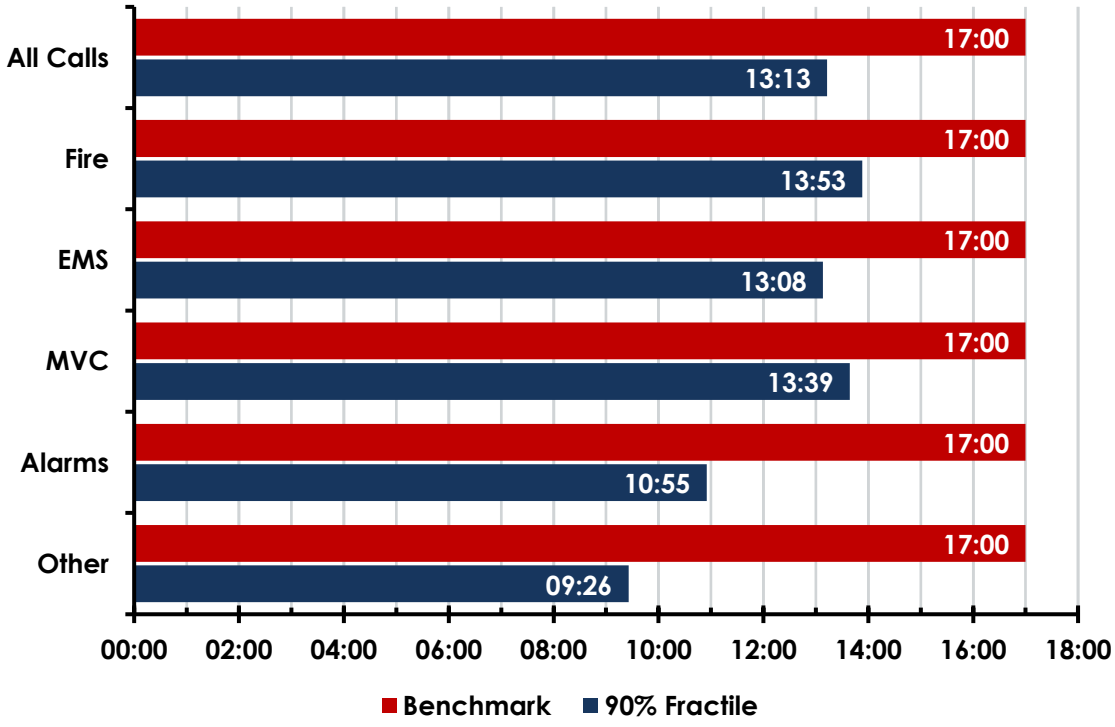
Figure 114: SFD Total Response Time Performance, 2015–2018



West Valley Fire District

As illustrated in the following figure, WVFD total response time performance falls within the combined target measure at 13 minutes, 13 seconds for all incidents. Performance by incident type ranged from 9 minutes, 26 seconds for other incidents to 13 minutes, 53 seconds for fire incidents.

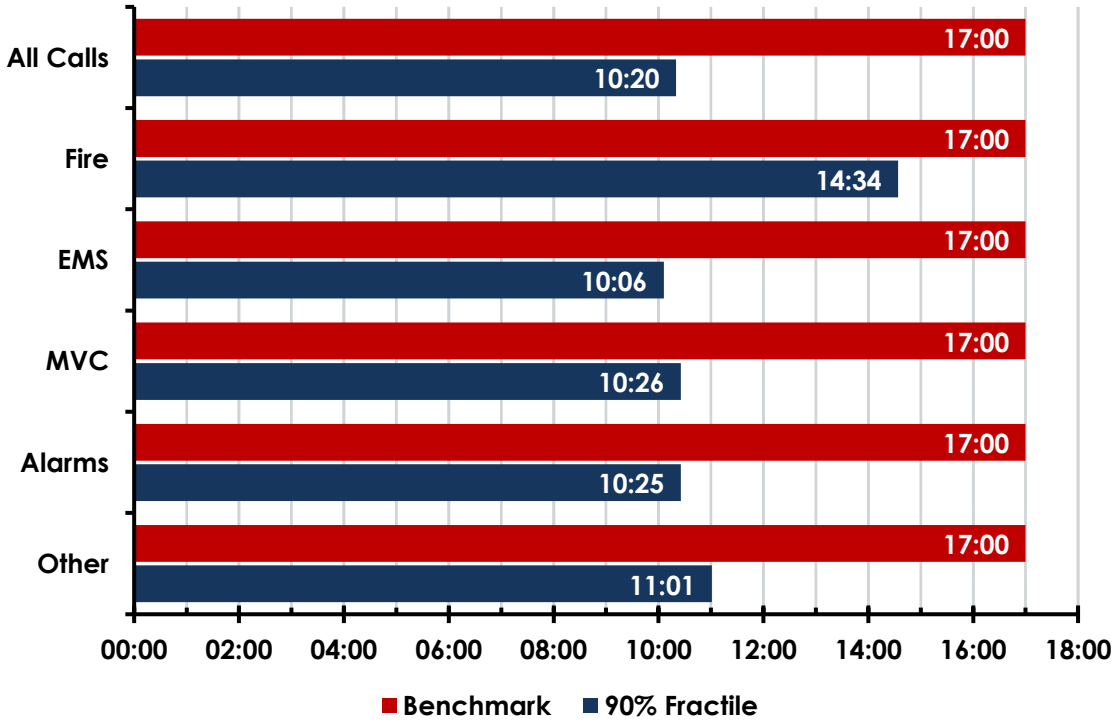
Figure 115: WVFD Total Response Time Performance, 2015–2018



Yamhill County

As illustrated in the following figure, total response time performance for Yamhill County as a consolidated agency falls within the combined target measure at 10 minutes, 20 seconds for all incidents. Performance by incident type ranged from 10 minutes, 6 seconds for emergency medical incidents to 14 minutes, 34 seconds for fire incidents.

Figure 116: Yamhill County Total Response Time Performance, 2015–2018



APPENDIX D: FINANCIAL REVIEW

This appendix provides background information on the historical and current financial condition of the Amity Fire District, Dayton Fire District, Dundee Fire District, Lafayette Fire Department, McMinnville Fire Department, New Carlton Fire District, and the Sheridan FD/Southwestern Polk RFPD/West Valley FD IGA.

To provide an understanding of the fire service financial resources and costs within the overall study area, ESCI first reviewed the individual historical revenues and expenditures for each respective agency. This review includes, to the extent the data were available, a five-year historical review. Individual agency historical trend data were later used to develop key assumptions leading to financial forecasts of revenue, expense, and fund balance (if applicable) for the period FY 2020–25, given various potential new district configurations.

This comparative snapshot of historical financial results sets the stage for modeling the likely financial outcomes of fire department consolidation proposals to help judge the fiscal viability of the alternatives now and into the future. This analysis relies on extensive documentation provided by the departments, including actual and adopted budget documents and departments' comprehensive annual financial reports (CAFRs) and audits as available.

Financial analysis is an important part of determining the potential for fire department consolidation. To this end, ESCI has developed data-driven models for each respective option based upon data provided. A modeled budget is designed to represent each agency's monetary policy and practices fairly and to neutralize differences or account for financial peculiarities. This modeling approach allows for a fair comparison to be made of the agencies, affording a realistic public cost of each agency's operations and provides a means to evaluate the financial impact of integration effectively.

Historical Revenues and Expenses

The following discussion presents historical revenue and expense for each agency. A brief summary of each department is provided, along with a comparative millage rate. Each department has different and diverse revenue streams with different categories of expenses. Therefore, descriptions and analyses in each section may differ slightly from one another.

Amity Fire District

Amity is a fire protection district authorized under the provisions of Oregon Statute Chapter 478 and is a municipal corporation governed by an elected board. It operates on a July 1 to June 30 fiscal year and uses a modified cash basis for accounting. This methodology, while allowed by Oregon law, is not equivalent to the generally accepted accounting principles (GAAP) basis used by cities, counties, and many larger fire districts and focuses on available cash resources. As shown in the following figure, the District maintains both a General Fund millage rate, currently a total of $1.29/$1,000 taxable value (comprised of a $0.84/$1,000 permanent rate and a $0.45/$1,000 voter-approved five-year operational levy), and a Debt Service millage rate of $0.94/$1,000 taxable value. The five-year operational levy was passed in 2016 with revenues beginning in FY 2017.

The District maintains three separate funds of which the General Fund is its primary operating fund. Other funds include the Capital Improvement and Bonded Debt Funds. The following analysis combines all funds and respective fund balances. Interfund transfers result in net zero and are not shown.

Figure 117: Amity Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$419,503,634
Operating Budget	$737,928
Millage (General Fund plus Debt)	1.29 + 0.94 = 2.23 Mills

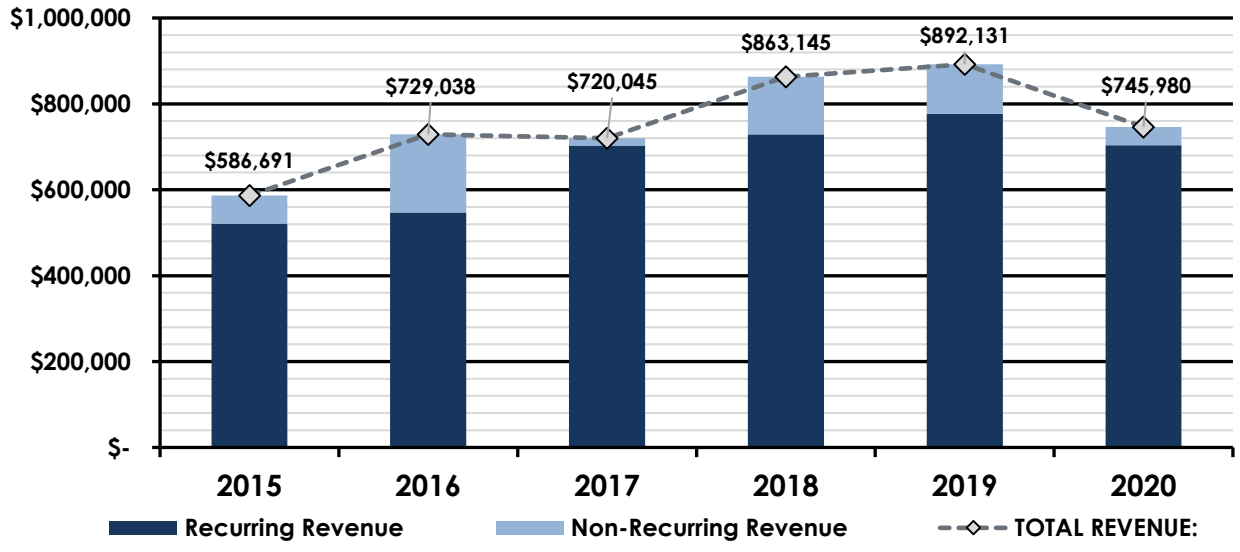
The following figure summarizes actual Amity Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary source of District revenues is property taxes, which, as of FY 2017, is comprised of a current year and five-year operational levy in the General Fund and a debt service levy in the Debt Service Fund.

Figure 118: Amity Fire District Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Taxes—Current Year	499,537	517,773	677,970	704,549	747,350	678,536
Taxes—Prior Year	20,495	27,944	21,974	17,159	18,000	21,000
Interest/Earnings	939	1,397	3,227	7,271	11,619	4,000
Recurring Revenue	**520,971**	**547,114**	**703,171**	**728,979**	**776,969**	**703,536**
Grants	5,000	106,034	6,645	0	9,990	4,944
Sale of Surplus	44,050	2,000	0	5,051	0	500
Reimburse/Conflagration	15,304	73,445	9,324	128,575	104,297	36,000
Miscellaneous	1,366	445	905	540	875	1,000
Non-Recurring Revenue	**65,720**	**181,924**	**16,874**	**134,166**	**115,162**	**42,444**
TOTAL REVENUE:	**$586,691**	**$729,038**	**$720,045**	**$863,145**	**$892,131**	**$745,980**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Recurring revenues comprise the bulk of the District's annual revenue, which has grown each year from FY 2015 through FY 2019 actual with overall revenue increasing from $587,000 in FY 2015 to $892,000 in FY 2019 or 52%. This represents an average annual increase of approximately 11% and is driven by the increase in tax revenue, which has increased at an average of approximately 10.2% annually with the addition of the five-year operational levy included starting in FY 2017. Excluding the impact of the increase due to the added levy, the average annual increase in tax revenue from FY 2015–19 has been closer to 3.8%.

Figure 119: Amity Fire District Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



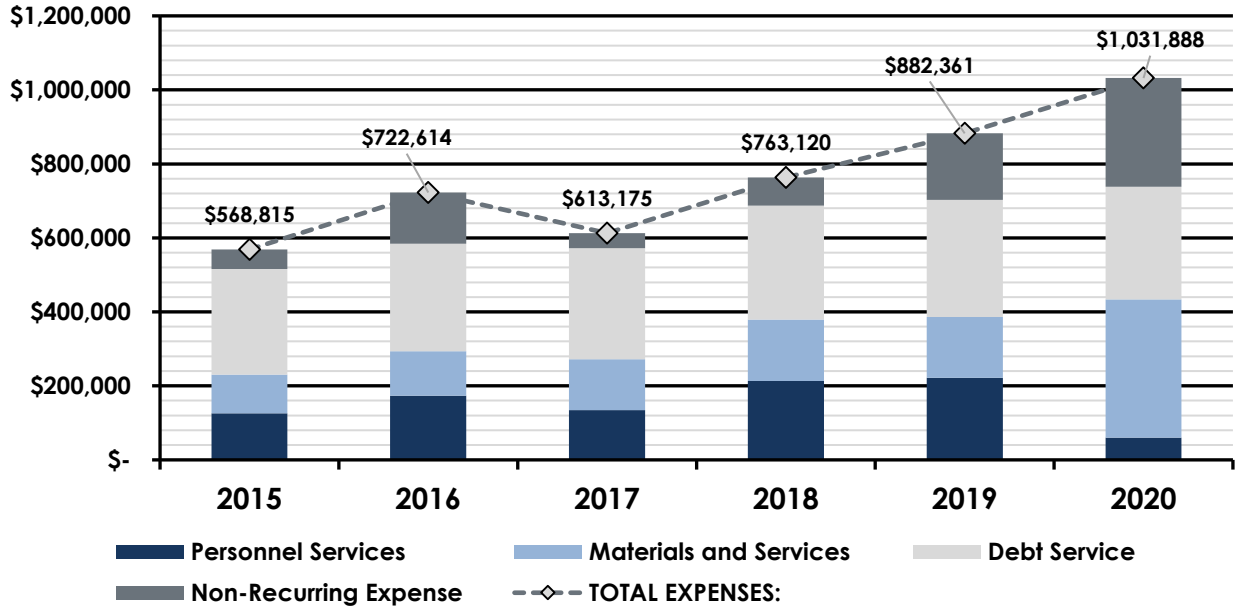
The following figure shows Amity Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have varied between $40,000 and $180,000 from FY 2015–19, with the bulk of annual expenditures on equipment. During the historical period, actual equipment expenditures have averaged approximately $75,000 annually.

Figure 120: Amity Fire District Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Personnel Services	126,067	173,520	134,269	213,364	222,071	60,515
Materials & Services	104,779	119,890	138,057	165,683	163,764	373,000
Debt Service	285,398	291,162	299,762	308,028	316,482	304,413
Recurring Expense	**516,244**	**584,572**	**572,088**	**687,075**	**702,317**	**737,928**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	0	40,000
Equipment	52,571	138,042	41,087	76,045	65,044	253,960
Apparatus	0	0	0	0	115,000	0
Non-Recurring Expense	**52,571**	**138,042**	**41,087**	**76,045**	**180,044**	**293,960**
TOTAL EXPENSES:	**$568,815**	**$722,614**	**$613,175**	**$763,120**	**$882,361**	**$1,031,888**

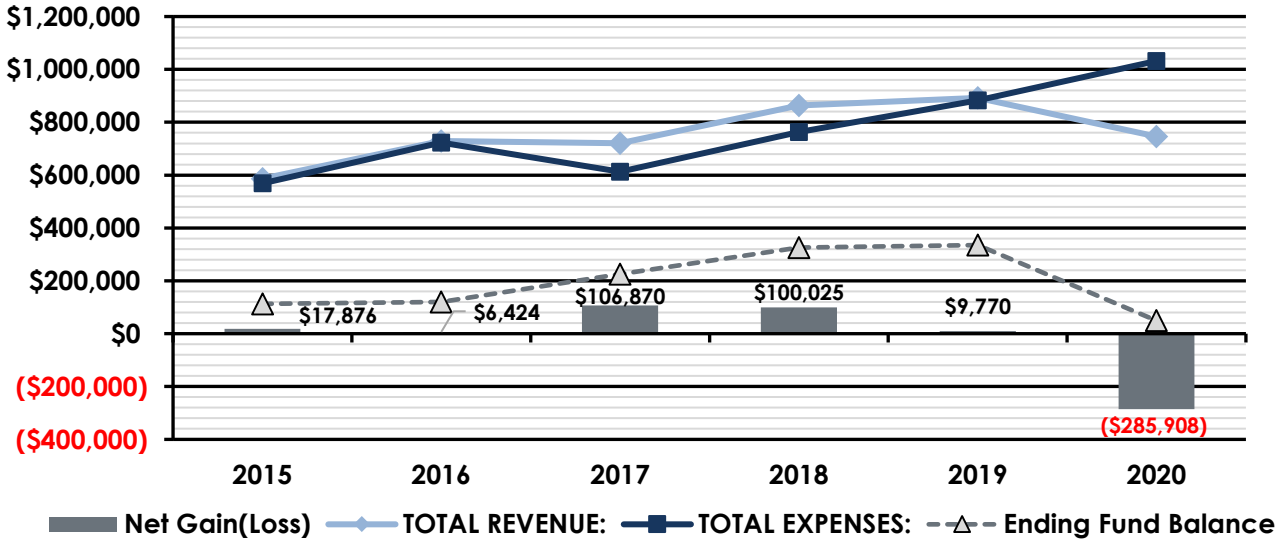
The following figure shows District expense by major category and illustrates the variable impact of capital expenditures on overall expense. Total District expense has generally increased by 11.6% per year from FY 2015 through FY 2019. This trend has been driven by an increase in recurring expense of approximately 8% per year. The ratio of Personnel Services, Materials & Services, and Debt has generally only varied slightly as recurring costs have increased from FY 2015 to FY 2019. Personnel costs, while increasing slightly, have averaged just under 30% of recurring costs. In FY 2020, they dropped significantly as the District entered into a management agreement. Materials & Services have averaged just under 23%, while debt service costs have averaged near 50% of recurring costs through FY 2019.

Figure 121: Amity Fire District Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The following figure summarizes the District's historical financial trajectory with a comparison of total revenue, total expense, and the difference between the two, whether positive or negative, and how that difference impacts the annual ending fund balance of the District. From FY 2015 through FY 2019, the District earned slightly more recurring revenue than it spent on recurring obligations. This represents sound financial practice and generally has a positive impact on ending fund balance each year. Best financial practice requires that recurring costs such as personnel, operating, and debt obligations are funded through recurring rather than one-time revenue sources such as fund balance or, even worse, incurring more debt. The figure shows total expense and it is clear to see how the impact of surplus revenue over expense in FY 2017–18 positively affects ending fund balance while one-time capital expenses as shown in the FY 2020 adopted budget will require expenditure of reserve funds that lowers fund balance. The FY 2020 budget also shows an increase in recurring expense over recurring revenue, which is a longer-term issue that must be addressed to maintain sound financial footing for the District.

Figure 122: Amity Fire District Total Expense, Revenue, Net Change, and Impact on Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted



Dayton Fire District

Dayton is a fire protection district authorized under the provisions of Oregon Statute Chapter 478 and is a municipal corporation governed by an elected board. It operates on a July 1 to June 30 fiscal year and uses a modified cash basis for accounting. As shown in the following figure, the District has a General Fund millage rate of $1.2303/$1,000 taxable value, which funds the general operating budget, including annual debt service through a transfer. The District maintains two separate governmental funds of which the General Fund is its primary operating fund. The other District fund is the Debt Service Fund. The following analysis combines both funds and respective fund balances. Interfund transfers result in net zero and are not shown.

Figure 123: Dayton Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$462,000,000
Operating Budget (Estimated)	$544,766
Millage	1.2303 mills

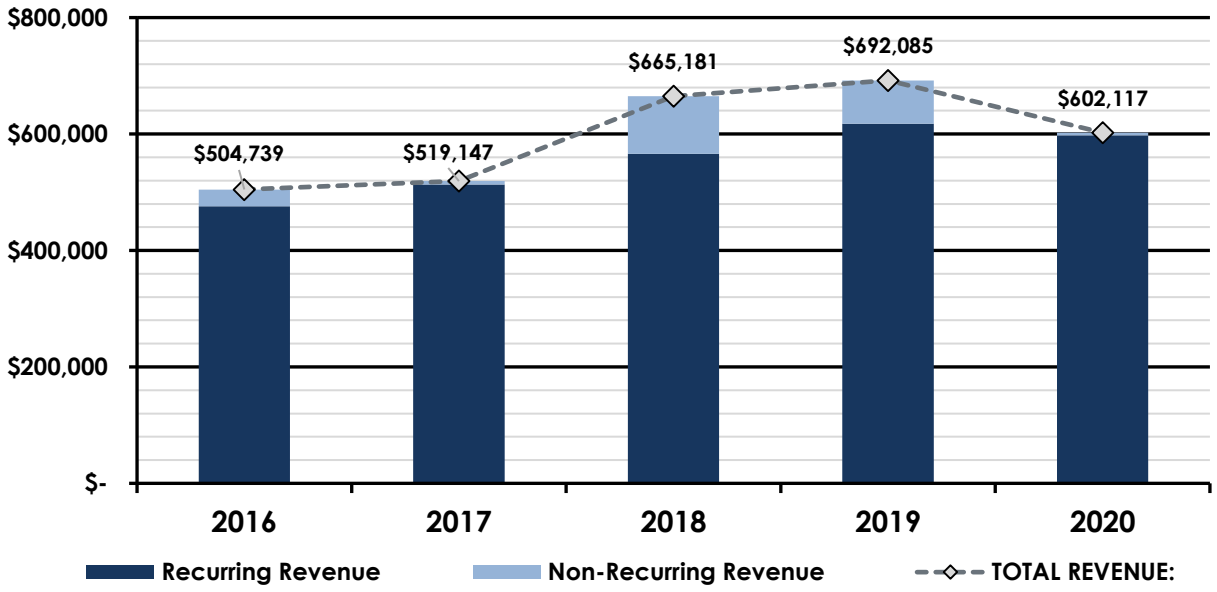
The following figure summarizes actual Dayton Fire District revenues for the period FY 2016–19 and estimated revenues for FY 2020. Estimates are based upon historical projections using the available data. The primary source of District revenues is property taxes.

Figure 124: Dayton Fire District Revenue, FY 2016 Actual–FY 2020 Estimated

Revenue	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Taxes—Current Year	468,942	481,641	541,772	572,212	557,117
Taxes—Prior Year	3,315	23,835	10,634	22,618	20,000
Interest/Earnings	3,790	7,645	13,762	22,982	20,000
Recurring Revenue	**476,047**	**513,121**	**566,168**	**617,812**	**597,117**
Grants	0	0	0	0	0
Sale of Surplus	10,000	0	900	0	0
Reimbursements/Conflagration	0	0	86,489	67,935	0
Miscellaneous	18,692	6,026	11,624	6,338	5,000
Non-Recurring Revenue	**28,692**	**6,026**	**99,013**	**74,273**	**5,000**
TOTAL REVENUE:	**$504,739**	**$519,147**	**$665,181**	**$692,085**	**$602,117**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Recurring revenues comprise the bulk of the District's annual revenue, which has grown each year from FY 2016 through FY 2018 actual, from $476,000 in FY 2016 to $618,000 in FY 2019 or 30%. This represents an average annual increase of approximately 9.1% and is driven by the increase in tax revenue.

Figure 125: Dayton Fire District Recurring vs. Non-Recurring Revenue, FY 2016 Actual–FY 2020 Adopted



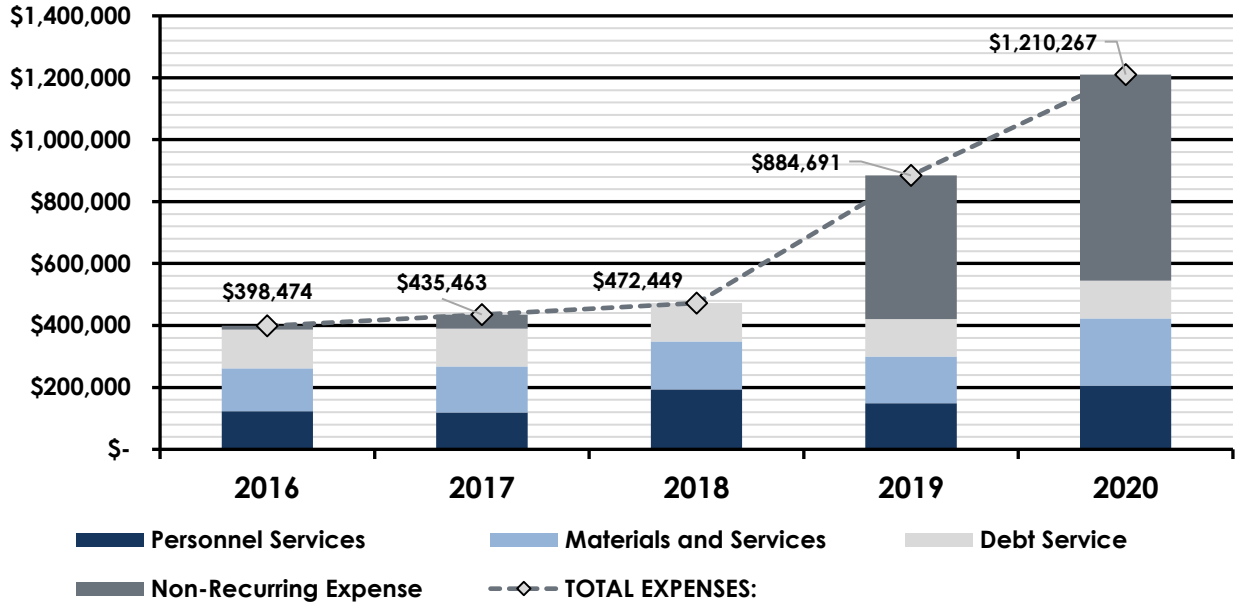
The following figure shows Dayton Fire District expenses for the period FY 2016-19 actual and FY 2020 as estimated. Capital expenses are considered non-recurring expenses and have varied greatly between $0 and $464,000 from FY 2016–19, with the large expenditure in FY 2019 on apparatus replacement. During the historical period, actual equipment expenditures have ranged from $0 to $45,000 annually.

Figure 126: Dayton Fire District Expense, FY 2016 Actual–FY 2020 Estimated

Expense	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Personnel Services	123,068	119,385	193,546	149,333	205,716
Materials & Services	138,488	148,390	154,812	150,483	216,700
Debt Service	125,188	122,238	124,091	120,797	122,350
Recurring Expense	**386,744**	**390,013**	**472,449**	**420,613**	**544,766**
Land	0	0	0	0	0
Buildings	0	0	0	0	0
Equipment	11,730	45,450	0	0	0
Apparatus	0	0	0	464,078	665,501
Non-Recurring Expense	**11,730**	**45,450**	**0**	**464,078**	**665,501**
TOTAL EXPENSES:	**$398,474**	**$435,463**	**$472,449**	**$884,691**	**$1,210,267**

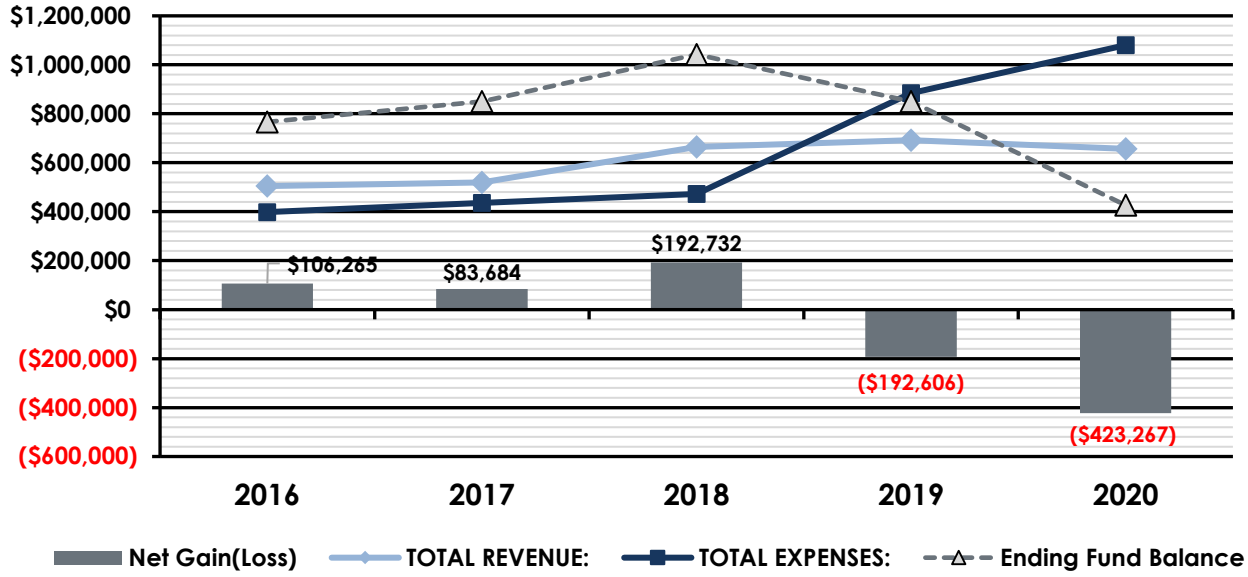
The following figure shows District expense by major category and illustrates the variable impact of capital expenditures, particularly apparatus replacement, on overall expense. Excluding the large capital apparatus purchases in FY 2019 and estimated in FY 2020, total District expense has generally increased by 9% per year from FY 2016 through FY 2019. This trend has been driven by an increase in recurring expense of approximately 9% per year. The ratio of Personnel Services, Materials & Services, and Debt has generally only varied slightly as recurring costs have increased from FY 2016 to FY 2019. As Personnel and Materials & Services costs have increased, debt service as a percentage of recurring costs has fallen from 32% in FY 2016 to an estimated 22.5% in FY 2020.

Figure 127: Dayton Fire District Expense by Major Category, FY 2016 Actual–FY 2020 Adopted



The following figure summarizes the District's historical financial trajectory with a comparison of total revenue, total expense, and the difference between the two, whether positive or negative, and how that difference impacts the annual ending fund balance of the District. From FY 2016 through FY 2018, the District earned slightly more revenue than it spent on recurring and non-recurring expenditures. This represents sound financial practice and generally has a positive impact on ending fund balance each year. Best financial practice requires that recurring costs such as personnel, operating, and debt obligations are funded through recurring rather than one-time revenue sources such as fund balance or, even worse, incurring more debt. The figure shows total expense and it is clear to see how the impact of surplus revenue over expense in FY 2016–18 positively affects ending fund balance while one-time capital expenses, as shown in FY 2019 and FY 2020, required expenditure of reserve funds that lower the fund balance. This two-year trend of using fund balance to pay for capital apparatus has significantly reduced District reserves. The District has been prudent in its use of reserve funds to pay for one-time, programmed capital replacement but will need to monitor recurring revenue versus expense to ensure a healthy, future fund balance is maintained.

Figure 128: Dayton Fire District Total Expense, Revenue, Net Change and Impact of Ending Fund Balance FY 2016 Actual–FY 2020 Adopted



Dundee Fire Department/Dundee Rural Fire Protection District

The City of Dundee Fire Department (DDF) is one of several external service departments of the City General Fund (GF). DDF also provides fire protection services to the Dundee Rural Fire Protection District (District) on a contractual basis. Under the current agreement, the District pays 85% of its permanent tax levy to the City for services. The District also funded approximately one-third of the cost of the City fire station built in 2014 and the term of the current agreement runs concurrently with the District construction bond. Financial data for the District was only available for the FY 2017 and FY 2018 actual budgets and the FY 2019 and FY 2020 adopted budgets, while City Fire Department data was available from FY 2015 actual through FY 2020 forecast (by the City). Each budgeting entity is discussed separately below.

The City operates on a July 1 to June 30 fiscal year and uses a modified cash basis for its fund accounting. The DDF operating budget is found within the GF while major fire department capital expenditures are found within a separate fund; the Equipment Reserve Fund, which maintains its own fund balance and receives an annual transfer from the GF for the purpose of funding the purchase of apparatus and equipment. Revenue and expenses related to the construction of the new fire station are accounted for in the Fire Station Construction Fund which expires June 30, 2020, and a summary of all revenue sources and expenditures related to the fire station project are shown in the following figure. The City's Bonded Debt Fund accounts for the annual debt service on the voter approved debt used to finance the construction of the fire station and whose debt is scheduled to retire in 2040.

Figure 129: Dundee Fire Station Construction Project Revenue Sources/Uses Recap, FY 2013–FY 2020

Funding Source	
Item	**Amount**
USDA Rural Development Loan	2,578,000
Dundee Rural Fire Protection District Bonds	1,239,284
Settlements	1,059,860
Private Grants/Contributions	70,184
Interest Earnings	16,665
General Fund Transfers	230,414
TOTAL PROJECT REVENUE:	**$5,194,407**
Funding Use	
Item	**Amount**
Land Acquisition	230,217
Engineering/Architecture	479,827
Other Professional	297,767
Building Permits	17,987
Site Improvements	537,000
Building Construction	3,434,722
Furnishings/Phone System	46,848
Loan Interest/Fees	35,627
Legal Fees	114,413
TOTAL PROJECT EXPENSE:	**$5,194,408**

For the purposes of this summary, only actual revenue and expense (and neither the GF transfers nor the fund balances) in these funds are included in the analysis. However, to determine an equivalent millage needed to fund the fire department, an unspecified general revenue source is included after accounting for specific fire department revenues. The following figure shows the FY 2020 City taxable assessed value after removal of approximately $4.9 million, which is diverted to the City urban renewal zone (according to its adopted urban renewal plan), and the DDF adopted operating budget, which includes debt service on the fire station construction bond. The GF millage shown is an equivalent millage proportional to the cost of Personnel Services and Materials & Services less any fire department specific revenues, while the debt service millage is that required to fund the annual fire station bonded debt payment. Total equivalent millage is 1.96 mills necessary to fund the fire department in FY 2020 after fire department related revenues (such as the District contract fee) are subtracted.

Figure 130: Dundee Fire Department Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2019–20)[1]	$302,314,048
Operating Budget (includes debt)	$689,800
Equivalent Millage (GF plus Debt)	1.4522 + 0.5078 = 1.96 Mills

[1] Reduced by $4.9 million committed to the urban renewal plan.

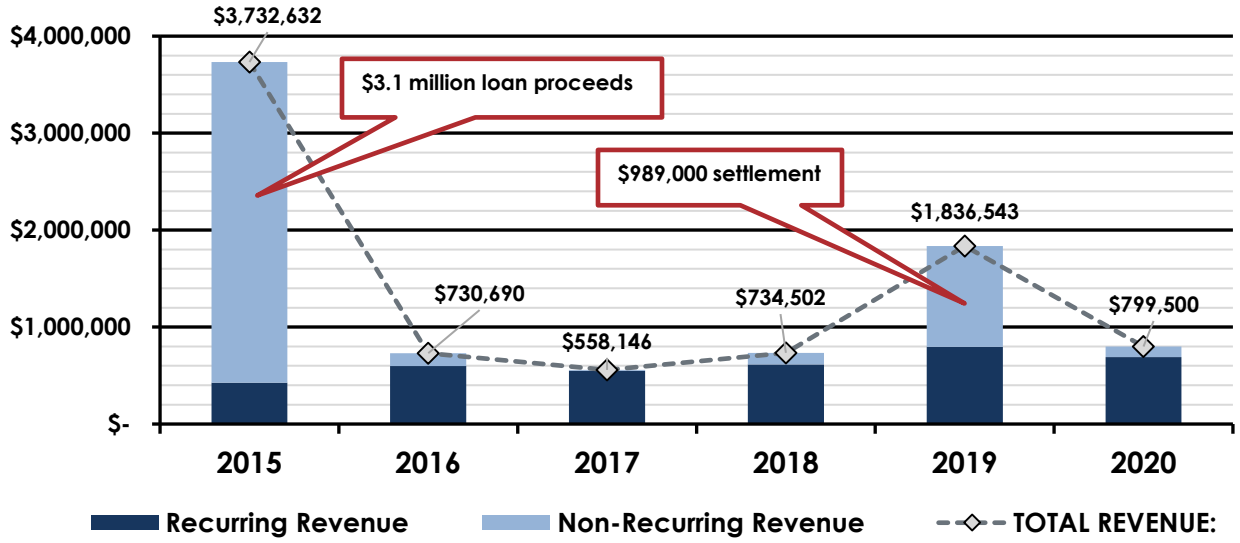
The following figure summarizes actual DDF revenues for the period FY 2015–19 and forecast revenues for FY 2020. The primary source of departmental revenues is property taxes comprised of a share of the City current year levy in the General Fund and a debt service levy in the Bonded Debt Fund. A secondary source is the Dundee Rural Fire Protection District service fee. Although the District pays 85% of what it collects from its permanent rate—including current year and prior years taxes, the Fire Chief has the authority to allow a reduction in the amount paid to the City by an amount which represents a state equipment program grant match for which only the District is eligible.

Figure 131: Dundee Fire Department Revenue, FY 2015 Actual–FY 2020 Forecast

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Forecast
City General Revenues	313,541	388,655	302,975	374,202	547,701	439,015
Dundee RFPD Contract	80,435	76,361	87,257	88,837	93,778	99,785
Charges for Services	3,155	810	2,701	2,276	1,258	0
Bonded Debt Fund Rev	30,512	131,645	154,303	149,552	152,370	151,000
Recurring Revenue	**427,643**	**597,471**	**547,236**	**614,867**	**795,107**	**689,800**
Grants	0	0	0	0	0	24,200
Conflagration Reimbrsmnt	10,401	22,524	5,957	119,613	53,444	0
Fire Station Const Fund	3,208,238	185	85	22	987,992	80,500
Fire Equipment Reserve FB	86,350	110,510	4,868	0	0	5,000
Non-Recurring Revenue	**3,304,989**	**133,219**	**10,910**	**119,635**	**1,041,436**	**109,700**
TOTAL REVENUE:	**$3,732,632**	**$730,690**	**$558,146**	**$734,502**	**$1,836,543**	**$799,500**

The following figure compares DDF recurring and non-recurring revenue to total revenue. Recurring revenues typically comprise the bulk of the department's annual revenue, except for FY 2015 when the City received fire station construction loan proceeds of $3.1 million and FY 2019 when the City received a negotiated settlement resulting from fire station construction defects. It should be noted that the Fire Station Construction Fund will no longer exist after FY 2020 as all associated funds have been expended with the completion of the fire station. Recurring revenues have increased from $428,000 in FY 2015 to $795,000 in FY 2019, representing an 86% increase or approximately 16.8% annually. Based on the forecast FY 2020 amount, the annual increase might be closer to 10%. This trend is driven by the increasing demand on general revenues due to higher annual expenditures. Up through FY 2020, the City transferred funds from the GF to the Fire Equipment Reserve Fund. However, after FY 2020, this will no longer be the case, and future large apparatus/equipment purchases under the apparatus/equipment replacement plan will likely be funded through a separate voter-approved bond levy.

Figure 132: Dundee Fire Department Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Forecast



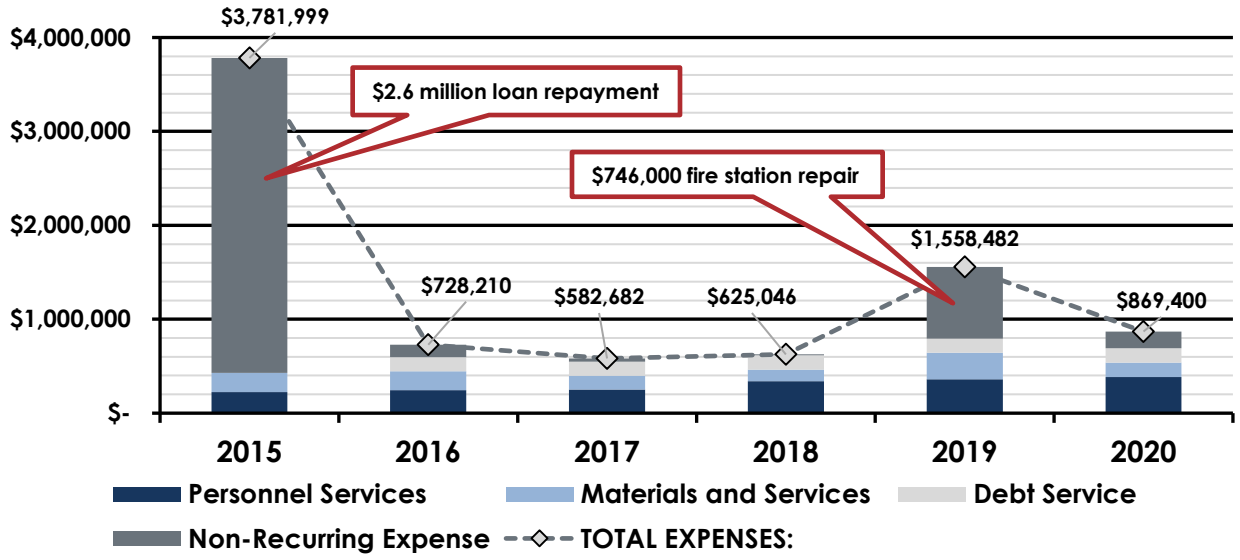
The following figure shows DDF expenses for the period FY 2015 actual and FY 2020 as forecast. Capital expenses are considered non-recurring expenses and the repayment of a construction loan in FY 2015 is also shown as a non-recurring expense.

Figure 133: Dundee Fire Department Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Forecast
Personnel Services	223,254	245,248	252,442	340,401	359,768	386,200
Materials & Services	204,389	202,080	144,651	124,323	285,196	153,400
Debt Service	0	150,143	150,143	150,143	150,143	150,200
Recurring Expense	**427,643**	**597,471**	**547,236**	**614,867**	**795,107**	**689,800**
Loan Repayment	2,594,606	0	0	0	0	0
Buildings	671,351	12,755	16,482	0	746,012	117,900
Equipment	88,399	117,984	18,964	10,179	17,363	56,700
Apparatus	0	0	0	0	0	5,000
Non-Recurring Expense	**3,354,356**	**130,739**	**35,446**	**10,179**	**763,375**	**179,600**
TOTAL EXPENSES:	**$3,781,999**	**$728,210**	**$582,682**	**$625,046**	**$1,558,482**	**$869,400**

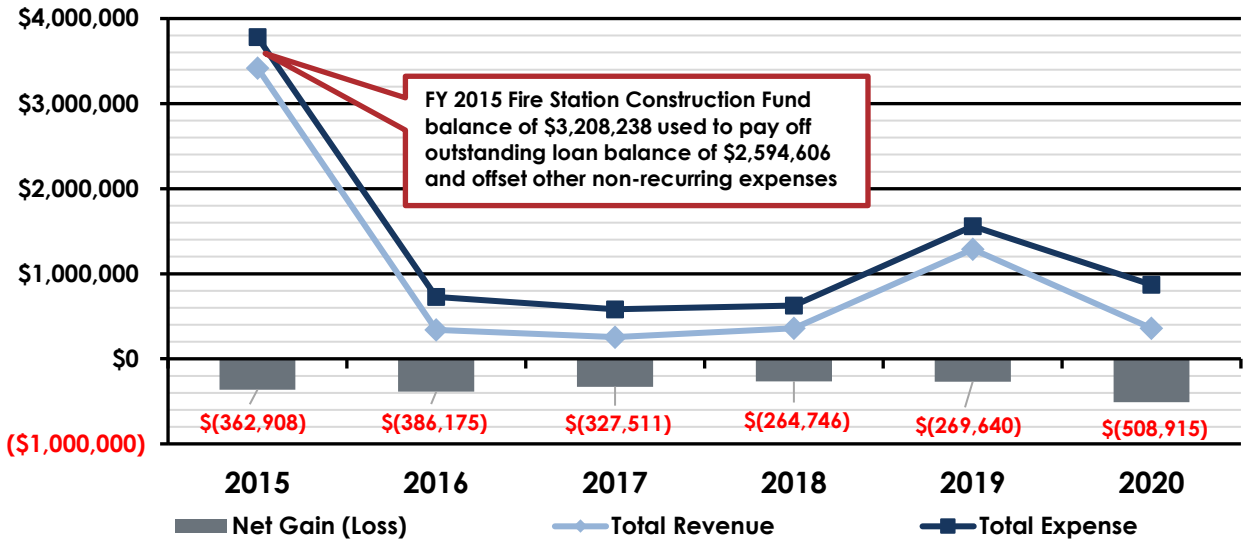
The following figure shows DDF expense by major category. Major spikes in total expenditures are caused by repayment of a construction loan ($2.6 million) and capital construction costs of $670,000 in FY 2015 and fire station repair costs of $746,000 in FY 2019. Equipment/Apparatus costs have generally fluctuated between lows of near $20,000 and a high of near $120,000. Recurring costs have increased from $428,000 in FY 2015 to $795,000 in FY 2019, an increase of 86% or an average annual increase of 16.8%. Materials & Services costs have fluctuated significantly, decreasing from a high of just over $200,000 in FY 2015 to a low of $124,000 in FY 2018 before climbing back to $285,000 in FY 2019. Personnel Services costs have steadily risen from $223,000 in FY 2015 to $360,000 in FY 2019, an increase of 61% over the period or an average of almost 12.7% annually. Annual debt service costs of $150,000 were added in FY 2016.

Figure 134: Dundee Fire Department Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The Dundee Fire Department budget lies within the City General Fund and it is instructive to examine the estimated net financial impact on the City General Fund of historical department-specific revenue (including dedicated fund balance for fire station construction and equipment acquisition) and expense (including pay off of fire department specific construction indebtedness). The following figure shows total department historical revenue, expense, and the difference between the two whether positive or negative. The difference would have had a direct impact on the City General Fund. When expense exceeds department-specific revenue and dedicated fund balance, additional GF revenues are necessary to support the expenditures and maintain services.

Figure 135: Dundee Fire Department Total Expense, Revenue, and Estimated Net Impact to City General Fund, FY 2015 Actual–FY 2020 Amended



Dundee RFPD is a fire protection district authorized under the provisions of Oregon Statute Chapter 478 and is a municipal corporation governed by an elected board. It operates on a July 1 to June 30 fiscal year and uses a modified cash basis for accounting. As shown in the following figure, the District maintains both a General Fund millage rate, currently $0.558/$1,000 taxable value, and a Debt Service millage rate of $0.3986/$1,000 taxable value. The District maintains three separate funds of which the General Fund is its primary operating fund. Other funds include the Equipment Reserve and Debt Service Funds. The following analysis combines all funds and respective fund balances. Interfund transfers result in net zero and are not shown.

Figure 136: Dundee Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$199,429,857
Operating Budget	$192,425
Millage (General Fund plus Debt)	0.558 + 0.3986 = 0.9566 Mills

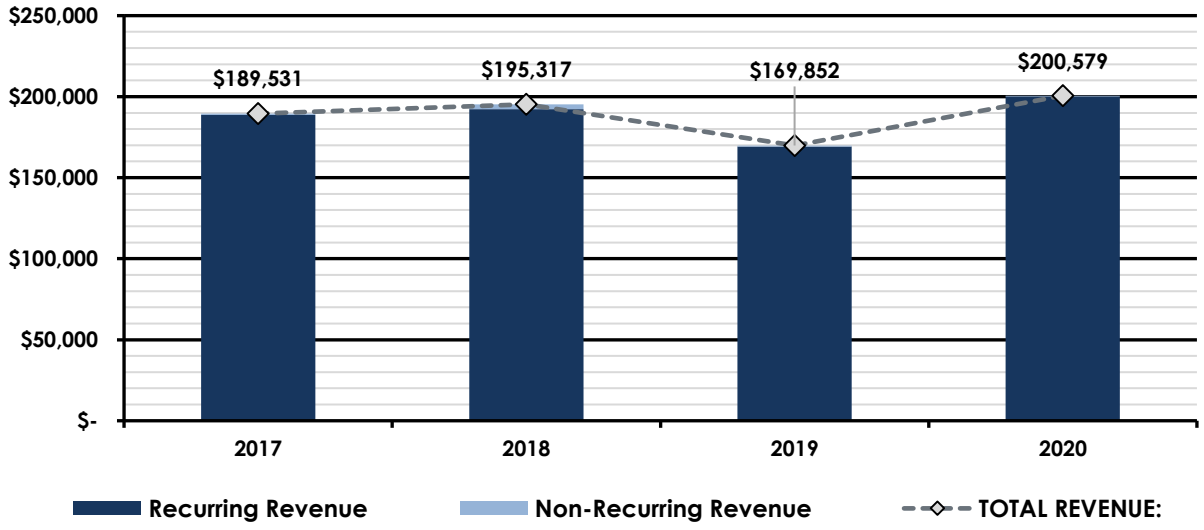
The following figure summarizes actual Dundee Fire District revenues for the period FY 2017–18 and adopted revenues for FY 2019–20. The primary source of District revenues is property taxes comprised of a current year levy in the General Fund and a debt service levy in the Debt Service Fund.

Figure 137: Dundee Fire District Revenue, FY 2017 Actual–FY 2020 Adopted

Revenue	2017 Actual	2018 Actual	2019 Adopted	2020 Adopted
Taxes—Current Year	179,150	184,558	162,812	185,317
Taxes—Prior Year	9,636	7,662	6,331	9,903
Interest/Earnings	25	96	109	4,859
Recurring Revenue	**188,811**	**192,316**	**169,252**	**200,079**
Grants	0	2,500	0	0
Sale of Surplus	120	1	0	0
Miscellaneous	600	500	600	500
Non-Recurring Revenue	**720**	**3,001**	**600**	**500**
TOTAL REVENUE:	**$189,531**	**$195,317**	**$169,852**	**$200,579**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Recurring revenues comprise almost 100% of the District's annual revenue, which has grown slightly from FY 2017 through FY 2018 actual with overall revenue increasing from $189,531 in FY 2017 to $195,317 in FY 2018. Although not indicative of a trend, this represents an annual increase of approximately 3% and is driven by the increase in tax revenue.

Figure 138: Dundee Fire District Recurring vs. Non-Recurring Revenue, FY 2017 Actual–FY 2020 Adopted



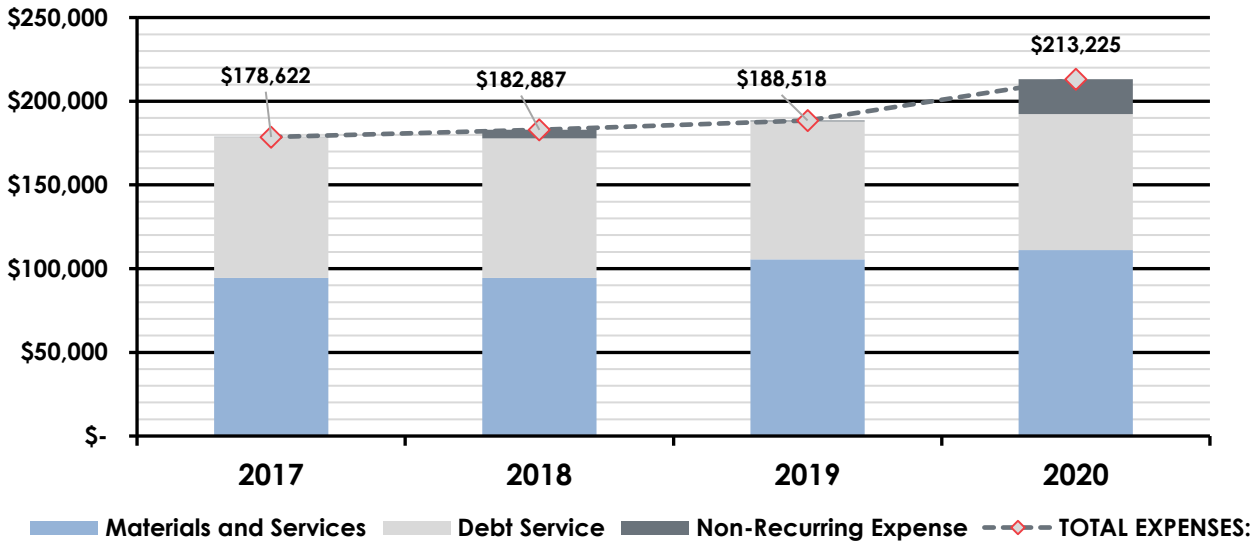
The following figure shows Dundee Fire District expenses for the period FY 2017–18 actual and FY 2019–20 as adopted. Capital expenses are considered non-recurring expenses and have been generally low, $5,000 or less annually, prior to the FY 2020 adopted amount of $20,800. These expenses have been exclusively for equipment.

Figure 139: Dundee Fire District Expense, FY 2017 Actual–FY 2020 Adopted

Expense	2017 Actual	2018 Actual	2019 Adopted	2020 Adopted
Personnel Services	0	0	0	0
Materials & Services	94,397	94,397	105,478	111,085
Debt Service	84,140	83,490	82,540	81,340
Recurring Expense	**178,537**	**177,887**	**188,018**	**192,425**
Land	0	0	0	0
Buildings	0	0	0	0
Equipment	85	5,000	500	20,800
Apparatus		0	0	0
Non-Recurring Expense	**85**	**5,000**	**500**	**20,800**
TOTAL EXPENSES:	**$178,622**	**$182,887**	**$188,518**	**$213,225**

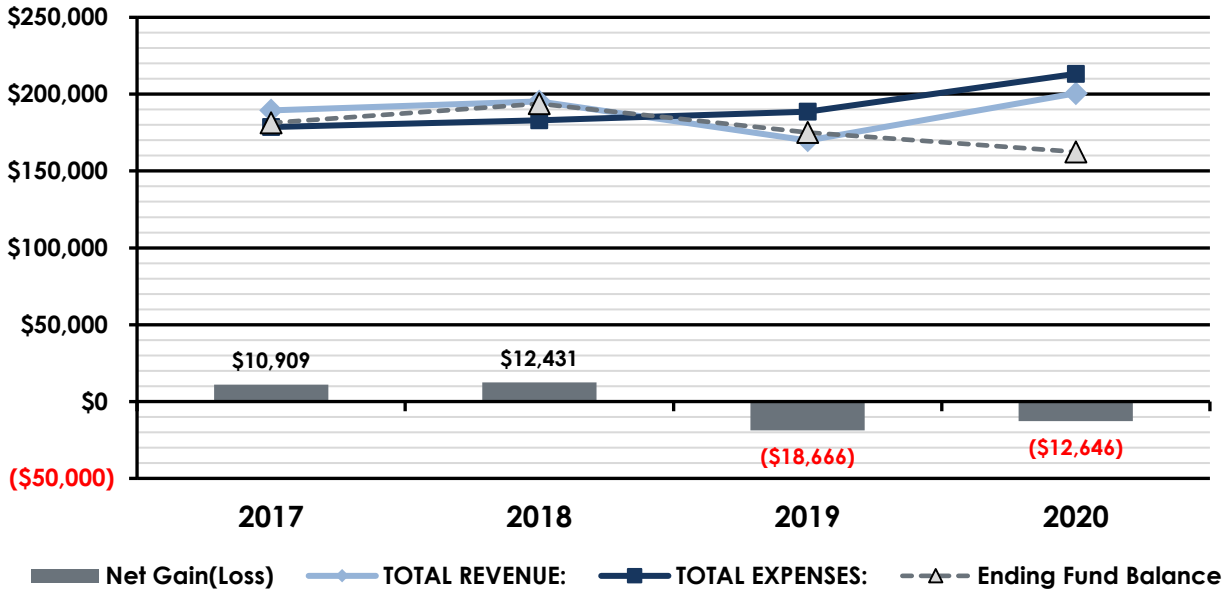
The following figure shows District expense by major category. Actual, total District expenses increased by 2.4% between FY 2017 and FY 2018. When compared to FY 2020 adopted, the average annual increase could be as high as 6.1%. This trend has been driven by an increase in the annual service contract, which jumped from an average of $88,000 in FY 2017–18 to an average of $97,000 in FY 2019–20 as adopted; an increase of 10.2%. The District contracts for management services and has no personnel costs. Debt service costs have been and are projected to remain relatively stable at an average of $83,000 per year.

Figure 140: Dundee Fire District Expense by Major Category, FY 2017 Actual–FY 2020 Adopted



The following figure summarizes the brief historical and proposed financial trajectory of the District with a comparison of total revenue, total expense and the difference between the two, whether positive or negative, and how that difference impacts the annual ending fund balance of the District. From FY 2017 through FY 2018, the District earned slightly more recurring revenue than it spent on recurring obligations. This represents sound financial practice and generally has a positive impact on ending fund balance each year. Best financial practice requires that recurring costs be funded through recurring rather than one-time revenue sources such as fund balance or, even worse, incurring more debt. The adopted FY 2019–20 budgets show expense exceeding revenue, which requires the use of fund balance to cover the net annual loss. This, in turn, reduces the combined District ending fund balance from just under $200,000 in FY 2018 to approximately $160,000 in FY 2020. If this trend holds, it presents a longer-term issue that must be addressed to maintain sound financial footing for the District.

Figure 141: Dundee Fire District Total Expense, Revenue, Net Change and Impact of Ending Fund Balance, FY 2017 Actual–FY 2020 Adopted



Lafayette Fire Department

The Lafayette Fire Department is one of several City of Lafayette external service departments housed within the City General Fund (GF). Its annual operating budget was approximately12.3% of the General Fund in FY 2019. While the operating budget is found within the GF, fire department capital expenditures are found within a separate fund; the Fire Capital Equipment Fund (FCE Fund), which maintains its own fund balance and receives an annual transfer from City general revenues. For purposes of this summary, only actual revenue and expense (and neither the GF transfer nor the fund balance) in this fund are included in the analysis. The final fire truck lease payment to Municipal Leasing Credit Corporation is due in FY 2020.

In FY 2019, the City issued direct bank bonds (General Obligation Bonds Series 2019) for the purpose of building a fire station. Interest is due beginning in FY 2020, while the principal is due starting in FY 2023, with the bond debt retiring in FY 2049. The City has levied an ad valorem tax shown in the analysis below to service the payment. Bond activity is accounted for in the separate Fire Station Debt Service Fund (FSDS Fund). Estimated tax revenue, interest, bond proceeds, and debt service payments are included in the summary, and for the purposes of this summary, it is estimated that the station will be built in FY 2021 at a cost of $5.2 million.

The City operates on a July 1 to June 30 fiscal year and uses a modified cash basis for accounting. Shown in the following figure is the City taxable value for FY 2020 and the Lafayette Fire Department GF net operating budget, which includes Personnel Services, Materials & Services, and Debt Services costs less any fire department-specific revenues. Debt Service in the figure only includes the fire station construction bonded debt since the final engine lease purchase payment of $77,162 is due in FY 2020 and uses the remaining fund balance in the Fire Equipment Capital Fund.

To calculate an equivalent millage rate necessary to fund the net operating budget, the operating budget was divided by the taxable value (divided by 1,000), giving an equivalent millage rate of $0.9983/$1,000 taxable value. The same was done for the fire station construction bond debt service amount for FY 2020, giving an equivalent millage rate of $0.777/$1,000 taxable value, and the two equivalent millage rates were added to determine the total equivalent millage rate needed to fund the fire department ($1.7753/$1,000). This calculation gives an approximation of the total impact to City taxpayers of the cost for providing fire service in FY 2020. However, it should be noted that supporting costs such as Budget/Finance, Human Resources, Legal, Risk Management, IT, and City Administration are not included. It can be assumed that these costs would add an additional 5–10% to the operating budget as a more accurate indication of the full cost of providing fire service.

Figure 142: Lafayette Fire Department Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$233,722,857
Net Operating Budget	$414,928
Millage (General Fund plus Debt)	0.9983 + 0.777 = 1.7753 Mills

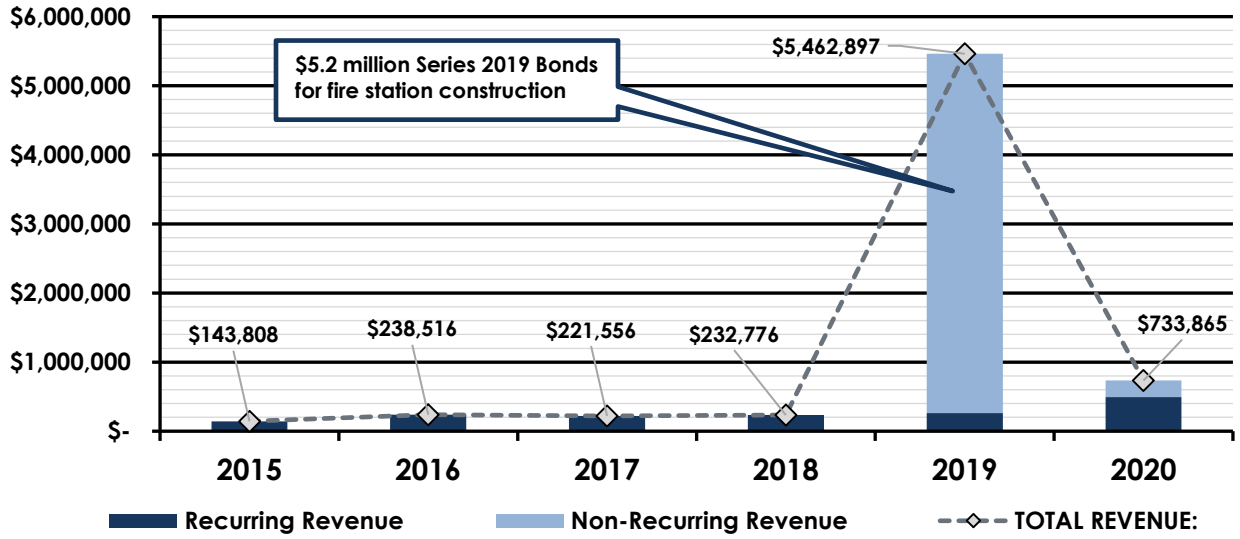
The following figure summarizes actual Lafayette Fire Department revenues for the period FY 2015–19 and adopted revenues for FY 2020. City General Revenues are those GF revenues used to offset fire department operating expenses found within the GF. A separate mill levy in the Fire Station Debt Service Fund (FSDS) begins in FY 2020 and is shown as a recurring revenue source. Fund balance in the Fire Equipment Capital (FEC) Fund is used here as a general term to show recurring funding necessary from the FEC Fund (regardless of source within the fund) to offset the fire apparatus lease purchase payment. Interest/earnings are shown as a revenue source from both the FEC and FSDS Funds.

Figure 143: Lafayette Fire Department Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
City General Revenues	142,176	159,459	141,439	151,270	179,202	233,317
Taxes (FSDS Fund)	0	0	0	0	0	181,611
Use of Fund Bal (FEC)	0	77,162	77,162	77,162	77,162	77,162
Interest/Earnings	1,632	1,895	2,955	4,344	6,533	3,500
Recurring Revenue	**143,808**	**238,516**	**221,556**	**232,776**	**262,897**	**495,590**
Bond Proceeds	0	0	0	0	5,200,000	0
Use of Fund Bal (FEC)	0	0	0	0	0	238,275
Non-Recurring Revenue	**0**	**0**	**0**	**0**	**5,200,000**	**238,275**
TOTAL REVENUE:	**$143,808**	**$238,516**	**$221,556**	**$232,776**	**$5,462,897**	**$733,865**

The following figure compares recurring and non-recurring revenue to total revenue. Recurring revenues comprise 100% of the annual revenue through FY 2018 prior to issuance of the Series 2019 bonds for fire station construction. Bond premium ($215,125) and debt issuance costs ($61,901) are not included here since bond issuance was considered a GF activity in FY 2019. Recurring revenues prior to FY 2019 include those GF revenues necessary to fund the fire department operating budget as well as Fire Equipment Capital Fund resources, including fund balance, needed to fund the lease purchase agreement. Beginning with FY 2020, recurring revenues include Fire Station Debt Service Fund mill levy used to fund the Series 2019 bond requirement.

Figure 144: Lafayette Fire Department Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



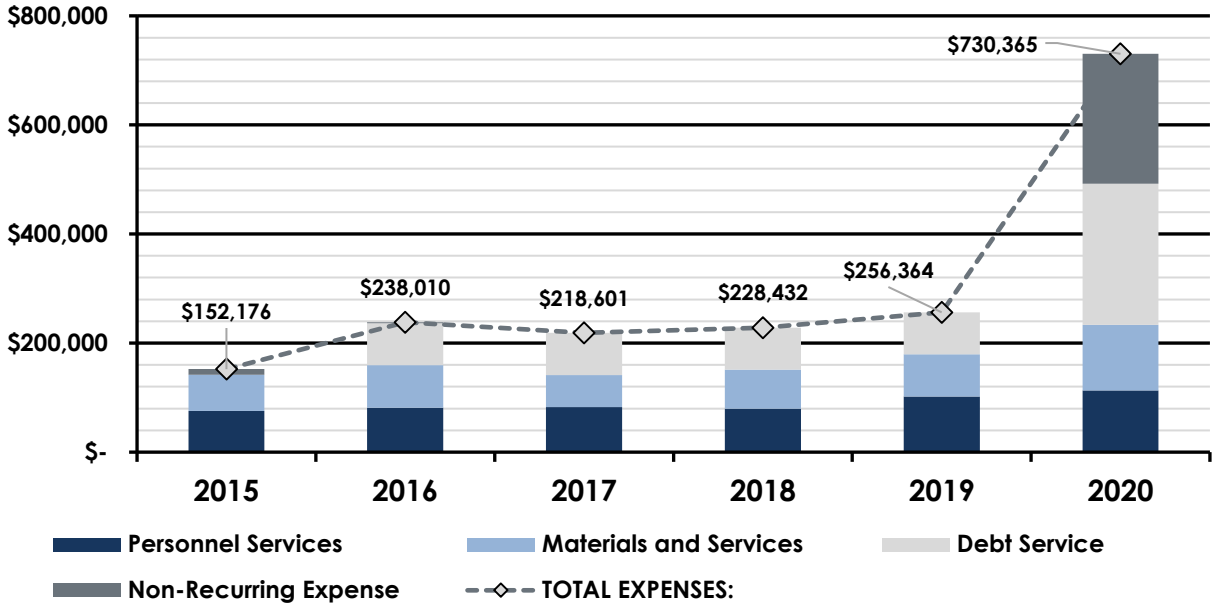
The following figure shows Lafayette Fire Department expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have been generally low, less than $10,000, to non-existent prior to the FY 2020 adopted amount of $238,275, which would essentially deplete the Fire Equipment Capital Equipment Fund absent additional transfer from the GF. These expenses have been used exclusively for equipment. For the purposes of this summary, it is assumed that the fire station will be constructed in FY 2021–22 and will use the entire $5.2 million bond proceeds.

Figure 145: Lafayette Fire Department Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Personnel Services	75,487	81,644	82,666	79,493	88,190	113,317
Materials & Services	66,689	77,815	58,773	71,777	91,012	120,000
Debt Service	0	77,162	77,162	77,162	77,162	258,773
Recurring Expense	**142,176**	**236,621**	**218,601**	**228,432**	**256,364**	**492,090**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	0	0
Equipment	10,000	1,389	0	0	0	238,275
Apparatus	0	0	0	0	0	0
Non-Recurring Expense	**10,000**	**1,389**	**0**	**0**	**0**	**238,275**
TOTAL EXPENSES:	**$152,176**	**$238,010**	**$218,601**	**$228,432**	**$256,364**	**$730,365**

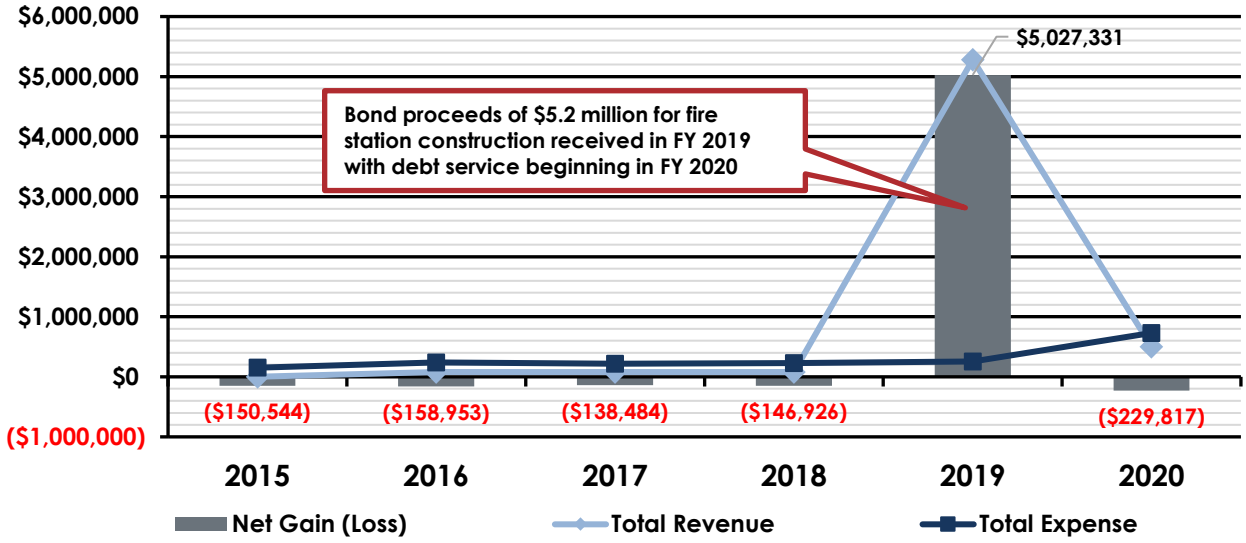
The following figure shows department expense by major category. Actual, total department operating expenses (less debt service) increased by 26% between FY 2015 and FY 2019 for an average annual increase of approximately 6%. When compared to FY 2020 adopted, the average annual increase could be as high as 10.4%. Personnel Services costs have increased at an average annual rate of 7.8% when FY 2020 is considered. Debt service costs increased from zero in FY 2015 to $77,162 for the next four years with the purchase of a fire apparatus through a five-year lease purchase agreement. Interest on the Series 2019 bond begins in FY 2020 and is combined with the final lease purchase payment. The spike in non-recurring expenses in the FY 2020 adopted budget reflects the commitment of the Fire Equipment Capital Fund balance to equipment purchases.

Figure 146: Lafayette Fire Department Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The Lafayette Fire Department lies within the City General Fund and has no fire department-specific recurring revenues such as fees for service, special assessments, or other similar sources. Therefore, the department is reliant upon general revenues and a debt service mill levy beginning in FY 2021 to fund all future recurring expenditures which will continue to increase at an annual rate of approximately 15.6% when debt service is included with Personnel and Materials & Services costs. Bond proceeds are available beginning in FY 2020 to offset fire station construction costs, as shown in the following figure, and, to the extent that Fire Equipment Capital Fund balance may not be fully expended in FY 2020, it will be available for other capital expenses until exhausted. The following figure shows total department historical revenue (including bond proceeds and dedicated equipment reserve funds), expense, and the difference between the two, whether positive or negative. The difference would have had a direct impact on the City General Fund. When expense exceeds department-specific revenue and dedicated fund balance, additional GF revenues are necessary to support the expenditures and maintain services.

Figure 147: Lafayette Fire Department Total Expense, Revenue, and Estimated Net Impact to City General Fund, FY 2015 Actual–FY 2020 Amended



McMinnville Fire Department

The McMinnville Fire Department is one of several City of McMinnville external service departments housed within the City General Fund or GF (Fund 01). Program-specific revenues and both operating and capital expenses associated with traditional fire, rescue, and prevention activities are budgeted within the GF (Fire Operations as 01-15-070 and Fire Prevention as 01-15-073). Fire department expenditures were approximately 15.4% of the FY 2019 GF expenditure budget. MFD also provides ambulance service to both the City and an area around the City under the terms and conditions of the Yamhill County Ambulance Service Agreement. While ambulance service is provided by the department, revenue and expense (both operating and capital) associated with this service have been budgeted in a separate, proprietary or enterprise fund with its own fund balance separate from the General Fund; the Ambulance Fund (Fund 79).

With the adoption of the FY 2020 budget, the EMS program was moved fully within the General Fund as an integral part of the GF Fire budget, similar to the Fire Prevention program (and now shown as Ambulance 01-15-079 in the City budget). For purposes of this summary, only actual ambulance revenue and expense (and neither the GF transfers nor the fund balance) in this fund are included in the analysis. It should be noted that, prior to inclusion in the GF, the ambulance fund was annually charged for services provided by various GF departments, including Administration, Budget/Finance, IT, and Communications. The annual transfer was between 7.5–8% of the other operating costs.

The City operates on a July 1 to June 30 fiscal year and uses a modified accrual basis for fund accounting with a current financial resources focus. Shown in the following figure is the estimated City taxable value for FY 2020 and the combined McMinnville Fire Department net operating budget, which includes Personnel Services, Materials & Services, Debt Services, and Capital costs less any fire department-specific revenues.

To calculate an equivalent millage rate, the net operating budget was divided by the taxable value (divided by 1,000), giving an equivalent millage rate of $1.5285/$1,000 taxable value. This calculation gives an approximation of the total impact to City taxpayers of the cost for providing fire service in FY 2020. However, it should be noted that supporting costs such as Budget/Finance, Human Resources, Legal, Risk Management, IT, and City Administration are not included at all with the absorption of ambulance services into the GF. The full cost of providing fire, rescue, and EMS services would most likely be increased an additional 5–10% for these overhead costs above what is shown in the summary below.

Figure 148: McMinnville Fire Department Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$2,820,653,990
Net Operating Budget	$4,311,427
Equivalent Millage	1.5285 Mills

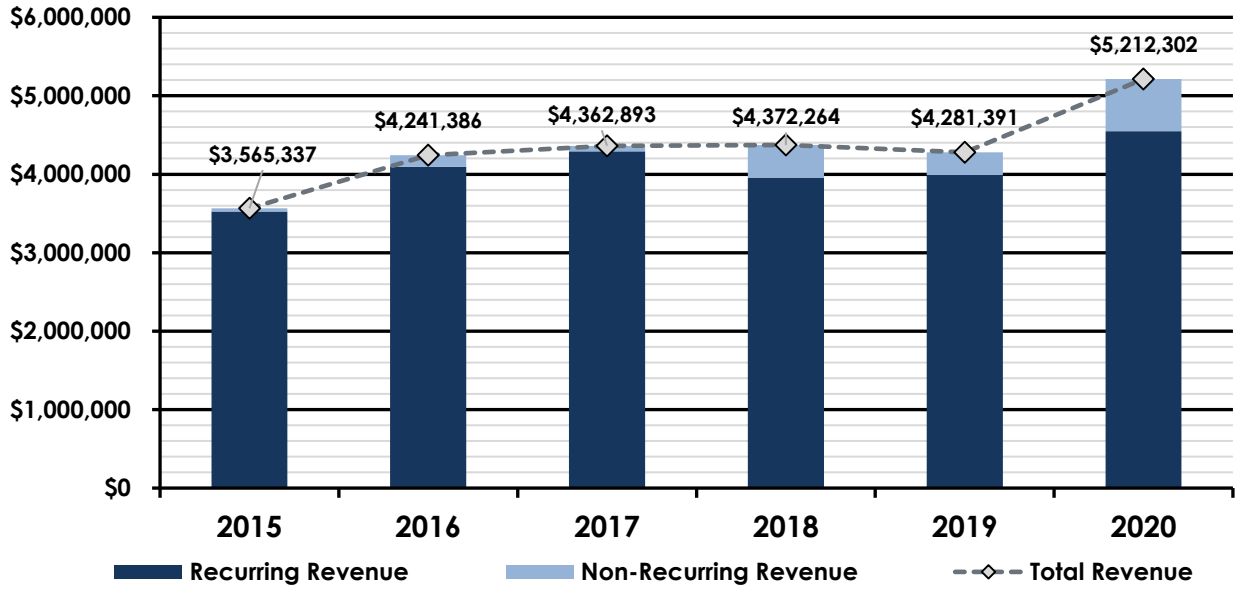
The following figure summarizes actual McMinnville Fire Department revenues for the period FY 2015–19 and amended revenues for FY 2020. The fire and ambulance budgets are shown separately since the ambulance service was budgeted in a separate proprietary fund until FY 2020. As mentioned above, transfers to/from the ambulance fund and fund balance are not shown. Only actual department-specific revenues are shown here.

Figure 149: McMinnville Fire Department Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Amended
General Fund (01)—Fire						
Lic./Permits/Fees	1,836	7,925	8,659	11,152	102,407	209,000
Interest/Earnings	19,386	17,119	18,472	19,696	19,305	17,370
Property Rentals	0	0	0	0	34,500	27,000
Service Contract(s)	327,379	337,200	484,884	364,681	375,617	542,886
Recurring Revenue	**348,601**	**362,244**	**512,014**	**395,529**	**531,829**	**796,256**
Grants	0	14,458	16,759	0	0	0
GEMT Reimburse	0	0	0	0	0	171,144
Conflag. Reimburse	4,282	58,403	0	236,707	177,657	10,000
Misc./Other	33,502	16,055	23,423	12,454	21,036	53,652
Non-Recur Revenue	**37,784**	**88,916**	**40,182**	**249,161**	**198,692**	**234,796**
TOTAL REVENUE:	**$386,385**	**$451,159**	**$552,196**	**$644,690**	**$730,522**	**$1,031,052**
Ambulance Fund (79)—EMS						
Transport Fees	3,009,770	3,577,616	3,627,278	3,396,353	3,293,431	3,500,000
FireMed Fees	127,200	124,860	132,225	134,890	136,080	135,000
Interest/Earnings	1,965	1,831	1,737	225	279	0
EMS Collections	35,802	31,274	19,859	31,804	26,581	25,000
Service Contract(s)	0	0	0	0	0	91,000
Recurring Revenue	**3,174,737**	**3,735,581**	**3,781,098**	**3,563,271**	**3,456,371**	**3,751,000**
Grants	0	0	0	0	0	0
GEMT Reimburse	0	0	0	0	0	383,250
Conflag. Reimburse	2,663	46,484	0	150,509	76,936	15,000
Misc./Other	1,552	8,162	29,599	13,794	17,562	32,000
Non-Recur Revenue	**4,214**	**54,646**	**29,599**	**164,303**	**94,499**	**430,250**
TOTAL REVENUE:	**$3,178,952**	**$3,790,226**	**$3,810,697**	**$3,727,574**	**$3,550,870**	**$4,181,250**

The following figure compares the department's recurring and non-recurring revenue combined to total revenue. Recurring revenues comprise the bulk of department-specific revenues, with the variability due primarily to fluctuation in conflagration payments from the State of Oregon for wildfire response. Total revenues increased significantly with a jump of $0.5 million in ambulance fees between FY 2015–16. Between FY 2016 and FY 2019, total revenue remained relatively flat, averaging $4.3 million annually. The jump in the adopted FY 2020 budget reflects a pass-through reimbursement from the federal government through the State of Oregon to the City for 50% of the difference between the amount paid by Medicaid for EMS services and the cost for service. These GEMT reimbursements are shown here as non-recurring but will likely become a recurring revenue source. Several of the fire agencies in this study offer the FireMed™ program, which is an emergency medical service that provides area residents an alternative to paying ambulance and user fees. The annual fees range from $70–$90, depending on where participants reside.

Figure 150: McMinnville Fire Department Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



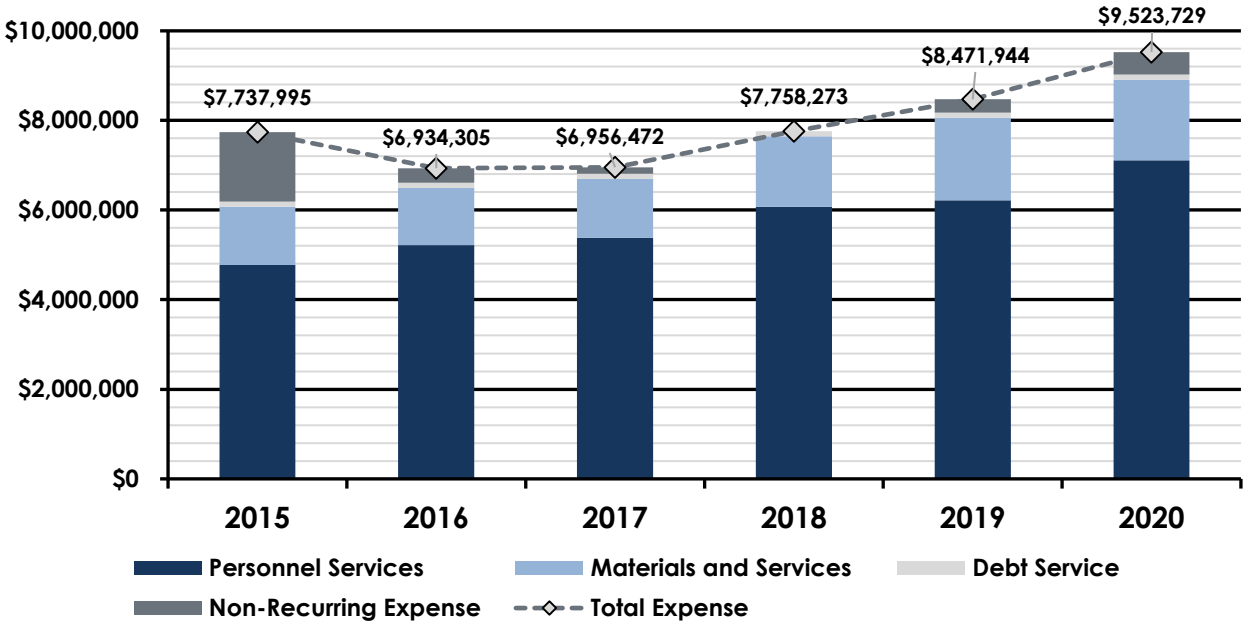
The following figure shows the McMinnville Fire Department expenses for the period FY 2015–19 actual and FY 2020 as amended. Capital expenses are considered non-recurring expenses, although the department could consider an average annual capital expenditure amount of $4–500,000 as typical between the fire and ambulance budgets. As mentioned, the ambulance fund transfers have not been considered for the purposes of this analysis, nor has an analysis of the ambulance fund balance.

Figure 151: McMinnville Fire Department Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Amended
General Fund (01)—Fire						
Personnel Services	1,897,122	2,117,101	2,118,173	2,474,450	2,586,822	3,062,459
Materials/Services	452,416	507,646	513,512	559,787	682,838	728,632
Debt Service	115,292	115,291	115,291	115,291	115,291	115,293
Recurring Expense	**2,464,830**	**2,740,038**	**2,746,976**	**3,149,529**	**3,384,951**	**3,906,384**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	12,612	103,125
Equipment	2,800	5,344	4,282	0	0	3,103
Apparatus	1,332,370	97,699	137,568	0	42,199	130,000
Non-Recur Expense	**1,335,170**	**103,043**	**141,850**	**0**	**54,811**	**236,228**
TOTAL EXPENSES:	**$3,800,000**	**$2,843,082**	**$2,888,827**	**$3,149,529**	**$3,439,761**	**$4,142,612**
Ambulance Fund (79)—EMS						
Personnel Services	2,880,073	3,100,488	3,264,187	3,601,287	3,629,446	4,049,709
Materials/Services	847,121	773,116	798,803	1,007,458	1,163,580	1,068,391
Debt Service	0	0	0	0	0	0
Recurring Expense	**3,727,194**	**3,873,604**	**4,062,990**	**4,608,744**	**4,793,026**	**5,118,100**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	4,204	34,375
Equipment	22,116	3,494	4,656	0	38,273	58,642
Apparatus	188,686	214,125	0	0	196,679	170,000
Non-Recur Expense	**210,802**	**217,619**	**4,656**	**0**	**239,156**	**263,017**
TOTAL EXPENSES:	**$3,937,996**	**$4,091,223**	**$4,067,646**	**$4,608,744**	**$5,032,182**	**$5,381,117**

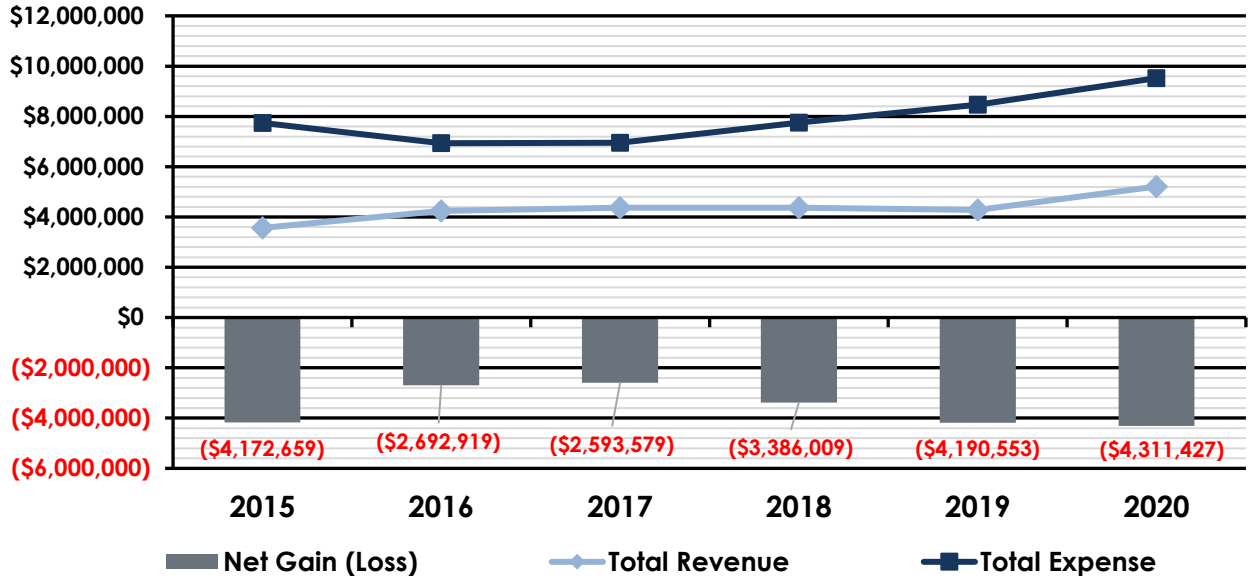
The following figure shows combined fire department expenses by major category. Actual, total department operating expenses (less debt service and capital costs) have increased by 32% between FY 2015 and FY 2019 for an average annual increase of approximately 7.5%. When compared to FY 2020 amended, the average annual increase could be closer to 8%. Personnel Services costs have increased at an average annual rate of 6.8%. Debt service has remained steady at $115,292 since FY 2015. Materials & Services costs have increased at an average annual rate of 9.2% since FY 2015.

Figure 152: McMinnville Fire Department Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



Although the McMinnville Fire Department now lies wholly within the City General Fund, it is instructive to examine the estimated net financial impact on the City General Fund of historical department-specific revenue (less transfers into ambulance fund) and expense (less fund transfers out of ambulance fund and use of ambulance fund balance). The following figure shows total department historical revenue, expense, and the difference between the two, whether positive or negative. The difference, absent any fund balance use in the ambulance fund, would have had a direct impact on the City General Fund. When expense exceeds department-specific revenue, additional GF revenues are necessary to support the expenditures and maintain services. The higher negative subsidy required in FY 2015 reflects the acquisition of a major capital apparatus while the net difference from FY 2016 on is more reflective of the annual trend which is increasing dependence upon additional, undesignated GF revenues. This annual subsidy has increased from $2.7 million in FY 2016 to $4.2 million by FY 2019; an increase of $1.5 million or almost 56% over the period.

Figure 153: McMinnville Fire Department Total Expense, Revenue, and Estimated Net Impact of City General Fund, FY 2015 Actual–FY 2020 Amended



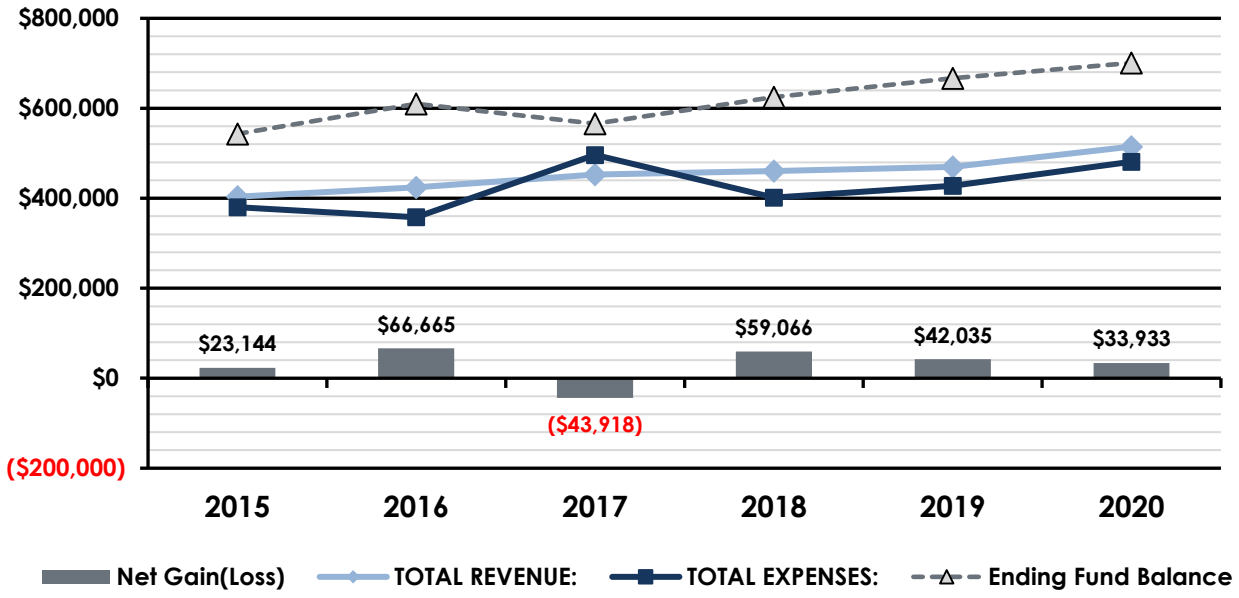
The City provides fire and rescue services to the unincorporated area around the City known as the McMinnville Rural Fire Protection District through a service contract. Although the revenue and expense resulting from this contract are included in the City of McMinnville Fire Department analysis above, it is worth reviewing some details about the District itself for the purposes of considering future cooperative services options. The following figure provides the estimated assessed property value and operating budget (estimated tax revenue) for FY 2020 based upon the adopted mill rate of 0.9576 mills.

Figure 154: McMinnville Rural Fire Protection District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$496,980,994
Operating Budget	$475,909
Millage	0.9576 Mills

The following figure shows the District's total annual revenue, expense, and net gain or loss, and how that impacts the annual ending fund balance. The service agreement represents almost 95% of the District's annual recurring expenditures, while the only non-recurring expenditures are funds provided to the City for the acquisition of equipment and vehicles used to provide services to the District. Revenue generally exceeds expenditures, except in FY 2017, where the equipment funding reached $124,000 and required the use of the fund balance. Other than FY 2017, revenue has exceeded annual expense, and fund balance has continued to grow from $543,095 in FY 2015 to an estimated $700,876 in the FY 2020 adopted budget.

Figure 155: McMinnville Rural Fire Protection District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance, FY 2017 Actual–FY 2020 Adopted



New Carlton Fire District

New Carlton is a fire protection district authorized under the provisions of Oregon Statute Chapter 478 in 2006 and is a municipal corporation governed by an elected board. It operates on a July 1 to June 30 fiscal year and uses a modified cash basis for accounting. As shown in the following figure, the District maintains both a General Fund millage rate, currently $1.05/$1,000 taxable value, and a Debt Service millage rate of $0.38/$1,000 taxable value. The District maintains four separate funds, of which the General Fund is its primary operating fund. Other funds include the Debt Service, Equipment Replacement and Building Funds. The following analysis combines all funds and respective fund balances. Interfund transfers result in net zero and are not shown.

Figure 156: New Carlton Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$322,171,380
Operating Budget	$449,346
Millage (General Fund plus Debt)	1.05 + 0.38 = 1.43 Mills

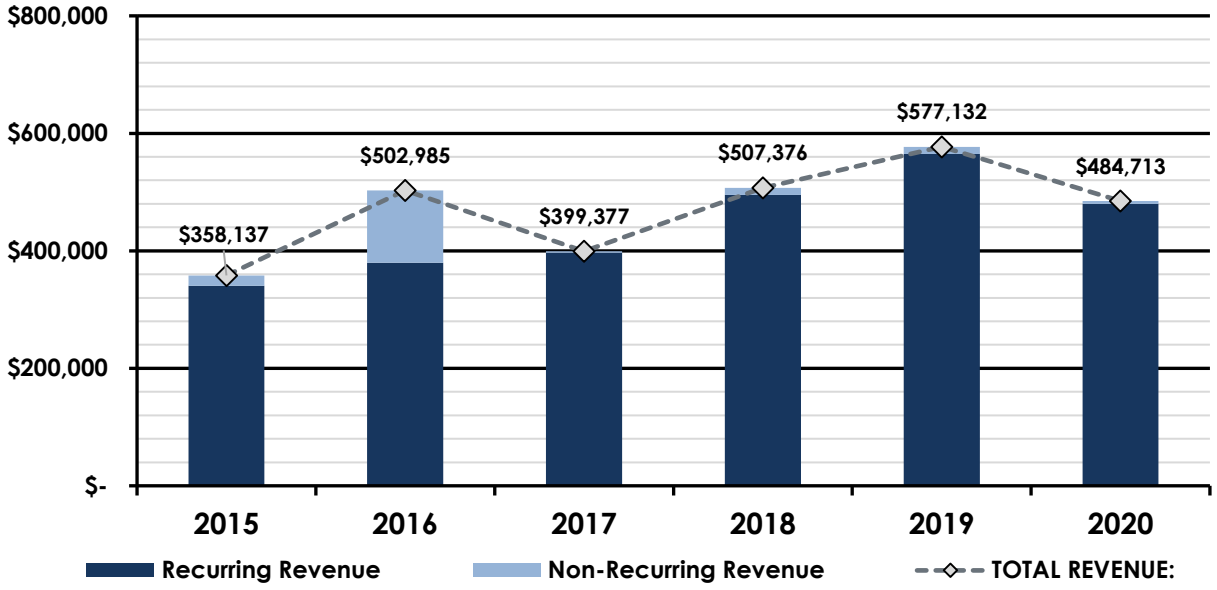
The following figure summarizes actual New Carlton Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary sources of District revenues are property taxes through FY 2017, after which the District entered into a service agreement, which provides approximately 15% of its recurring revenue stream.

Figure 157: New Carlton Fire District Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Taxes—Current Year	323,210	356,405	369,932	383,253	409,341	406,663
Taxes—Prior Year	15,135	19,534	19,636	15,354	21,427	17,000
Interest/Earnings	2,104	3,724	7,086	7,761	15,027	6,050
Service Contract	0	0	0	88,835	119,208	50,000
Recurring Revenue	**340,449**	**379,663**	**396,654**	**495,203**	**565,003**	**479,713**
Miscellaneous	17,688	123,322	2,723	12,173	9,729	1,000
Other	0	0	0	0	2,400	4,000
Non-Recurring Revenue	**17,688**	**123,322**	**2,723**	**12,173**	**12,129**	**5,000**
TOTAL REVENUE:	**$358,137**	**$502,985**	**$399,377**	**$507,376**	**$577,132**	**$484,713**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Clearly, recurring revenues make up most of the District's annual revenue except for FY 2016. The District's overall revenue has grown each year from FY 2015 through FY 2019 actual with overall revenue increasing from $360,000 in FY 2015 to $580,000 in FY 2019 or 61%. This represents an average annual increase of 12.7% and is driven by the increase in tax revenue, which has increased at an average of 6.2% annually, and the addition of the service agreement revenue starting in FY 2018.

Figure 158: New Carlton Fire District Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



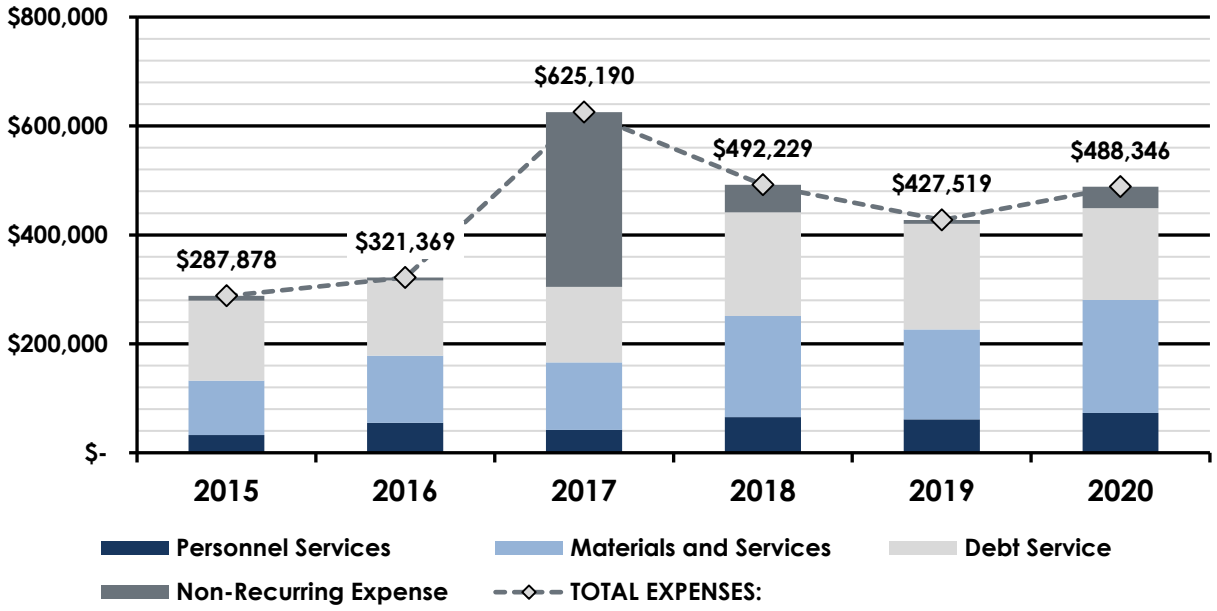
The following figure shows New Carlton Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have generally been very low except for a spike in FY 2017 representing capital apparatus replacement. The District has typically expended a variable amount of funds on capital equipment each year but has averaged $14,000/year.

Figure 159: New Carlton Fire District Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Personnel Services	32,808	54,974	42,032	65,687	61,264	72,900
Materials & Services	99,854	123,339	123,728	185,363	165,148	207,500
Debt Service	146,683	138,130	139,080	190,292	193,843	168,946
Recurring Expense	**279,345**	**316,443**	**304,840**	**441,342**	**420,255**	**449,346**
Land	0	0	0	0	0	0
Buildings	0	3,463	0	0	0	10,000
Equipment	8,533	1,463	1,350	50,887	7,264	29,000
Apparatus	0	0	319,000	0	0	0
Non-Recurring Expense	**8,533**	**4,926**	**320,350**	**50,887**	**7,264**	**39,000**
TOTAL EXPENSES:	**$287,878**	**$321,369**	**$625,190**	**$492,229**	**$427,519**	**$488,346**

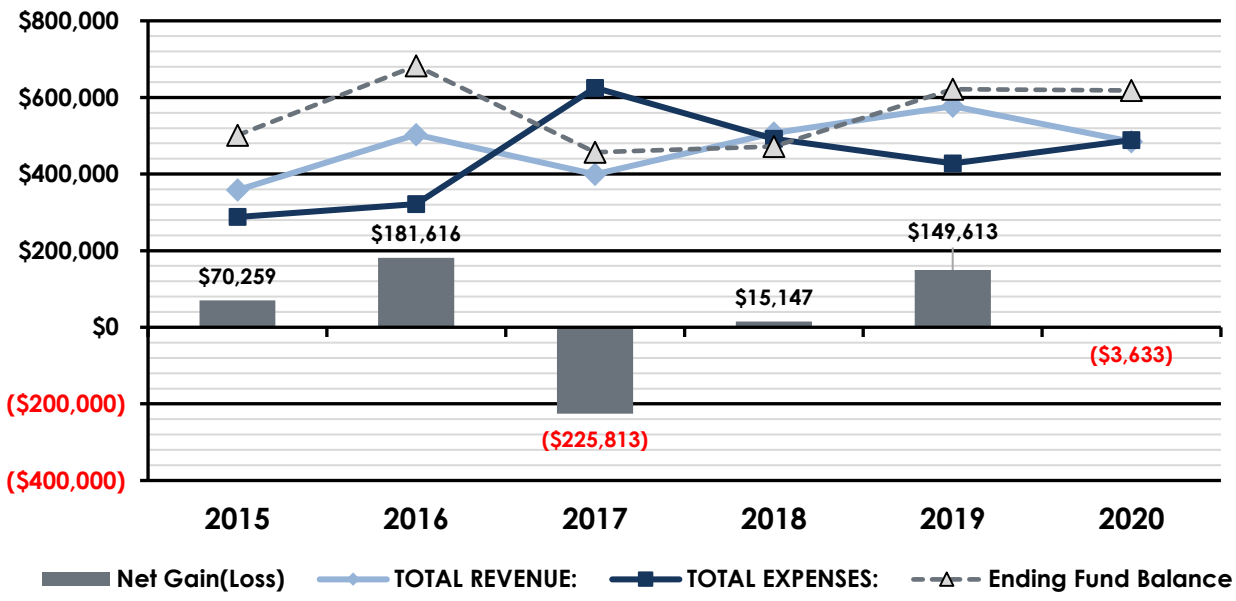
The following figure shows District expense by major category and illustrates the impact of the capital apparatus purchase in FY 2017 on overall expense. Excluding the non-recurring expenditure spike in FY 2017, total District expense has generally increased by 48.5% or 10.4% per year from FY 2015 through FY 2019. This trend has been driven by an increase in recurring expense of approximately 10.7% per year. Personnel Services costs have remained relatively low, between 12–15% of total recurring expenses. Materials & Services have varied between 36% and 42%, increasing at an average annual rate of 13.5%, while Debt Service costs have varied from 43–53% of recurring expenses, having increased from an average of $141,000 per year in FY 2015–17 to an average of $192,000 per year in FY 2018–19.

Figure 160: New Carlton Fire District Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The following figure summarizes the historical financial trajectory of the District with a comparison of total revenue, total expense, and the difference between the two, whether positive or negative and how that difference impacts the annual ending fund balance of the District. From FY 2015 through FY 2019, the District earned more recurring revenue than it spent on recurring obligations. This represents sound financial practice and generally has a positive impact on ending fund balance each year. Best financial practice requires that recurring costs such as personnel, operating, and debt obligations are funded through recurring rather than one-time revenue sources such as fund balance or, even worse, incurring more debt. The figure shows total expense, and it is clear to see how the one-time purchase of capital apparatus requires the use of fund balance since overall expense exceeds both recurring and non-recurring revenue sources. District financial policy acknowledges the periodic need for large, one-time expenditures of this sort with reserves committed to and funded appropriately based upon a long-term plan. The figure shows the impact of this policy as ending fund balance is again built up over the next several years to just over $600,000.

Figure 161: New Carlton Fire District Total Expense, Revenue, Net Change and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted



Sheridan FD/Southwestern Polk RFPD/West Valley FD

In FY 2020, the Sheridan, Southwestern Polk, and West Valley Fire Protection Districts entered into an Intergovernmental Agreement (IGA) for cooperative services in the areas of administration, operations, and finance under one Fire Chief. For the purposes of historical analysis, each district's finances are discussed separately in the following discussion.

Sheridan

Sheridan is a fire protection district providing traditional fire/rescue and ambulance services, authorized under the provisions of Oregon Statute Chapter 478 and which annexed and merged with the City of Sheridan Fire Department in 1978. It is a municipal corporation governed by an elected board and operates on a July 1 to June 30 fiscal year and uses a modified cash basis (modified accrual method used through FY 2017) for fund accounting with a current financial resources measurement focus. The District covers the City of Sheridan and an unincorporated area around the City in both Yamhill and Polk Counties. As shown in the following figure, the District maintains both a General Fund permanent millage rate of $1.1188/$1,000 taxable value and a Local Option Levy millage rate of $0.35/$1,000 taxable value for a total of 1.4688 mills. The District maintains five separate governmental funds, of which the General Fund is its primary operating fund. Other funds include the Building Maintenance Fund, the Equipment Reserve Fund, the John Fancher Memorial Fund (used for donated funds and awards to members), and the Trust and Agency Fund (otherwise known as the Station 9 Spending Authority). The following analysis combines all funds and respective fund balances. Interfund transfers result in net zero and are not shown.

Figure 162: Sheridan Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$473,517,609
Operating Budget	$2,531,200
Millage (Perm plus Local Opt)	1.1188 + 0.35 = 1.4688 Mills

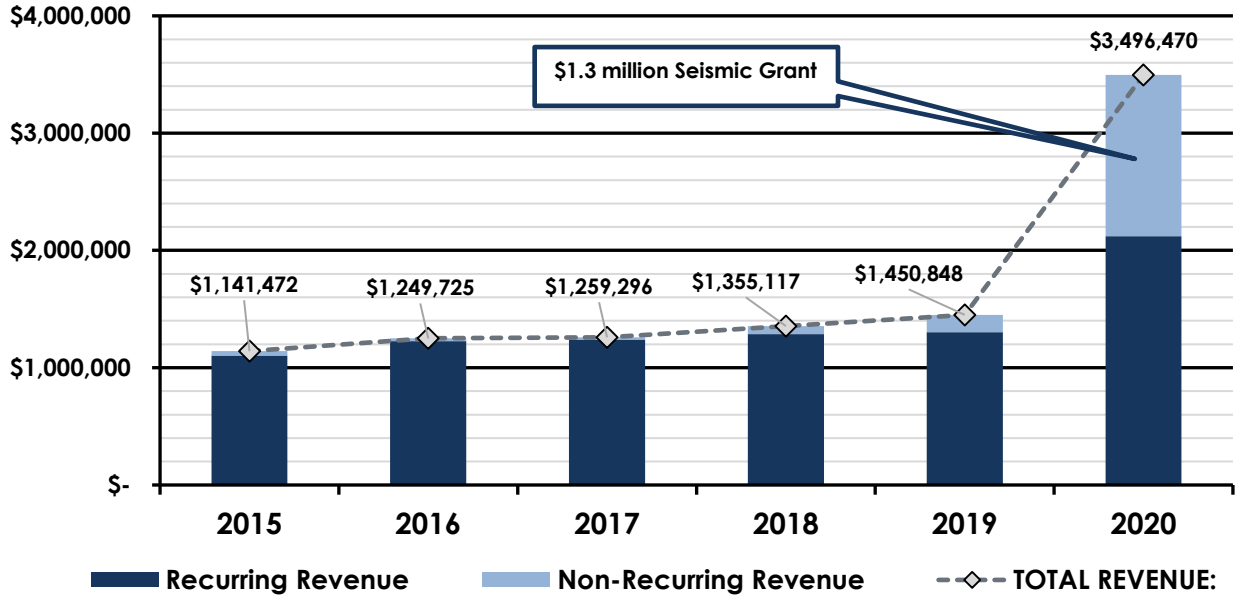
The following figure summarizes actual Sheridan Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary sources of District revenues are property taxes and ambulance user fees through FY 2019, after which the District entered into the IGA, which provides approximately 37.5% of its recurring revenue stream.

Figure 163: Sheridan Fire District Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Property Taxes	552,884	586,350	609,350	622,304	670,440	673,000
Interest/Earnings	7,184	13,807	12,781	21,657	34,415	0
User Fees	543,919	625,814	617,548	642,966	598,847	650,000
Contractual	0	0	0	0	0	797,000
Recurring Revenue	**1,103,987**	**1,225,971**	**1,239,679**	**1,286,927**	**1,303,702**	**2,120,000**
Loan Proceeds	0	0	0	3,678	0	0
Grants	0	12,322	10,000	0	5,046	1,310,470
Reimburs/Conflag	9,522	0	0	51,041	122,807	0
Miscellaneous	27,963	11,432	9,617	13,471	19,293	66,000
Non-Recurring Rev	**37,485**	**23,754**	**19,617**	**68,190**	**147,146**	**1,376,470**
TOTAL REVENUE:	**$1,141,472**	**$1,249,725**	**$1,259,296**	**$1,355,117**	**$1,450,848**	**$3,496,470**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Clearly, recurring revenues make up most of the District's annual revenue, despite the spike in non-recurring revenue in the adopted FY 2020 budget due to the $1.3 million Seismic Grant. The District's overall revenue has grown each year from FY 2015 through FY 2019 actual with overall revenue increasing from $1.14 million in FY 2015 to $1.45 million in FY 2019 or 27%. This represents an average annual increase of 6.2% and is driven by both increases in tax revenue and ambulance fees, which have increased at average annual rates of 4.9% and 2.4%, respectively. Interest has also increased significantly from $7,000 in FY 2015 to $34,000 in FY 2019. The IGA has added an additional almost $800,000 in recurring revenue in FY 2020.

Figure 164: Sheridan Fire District Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



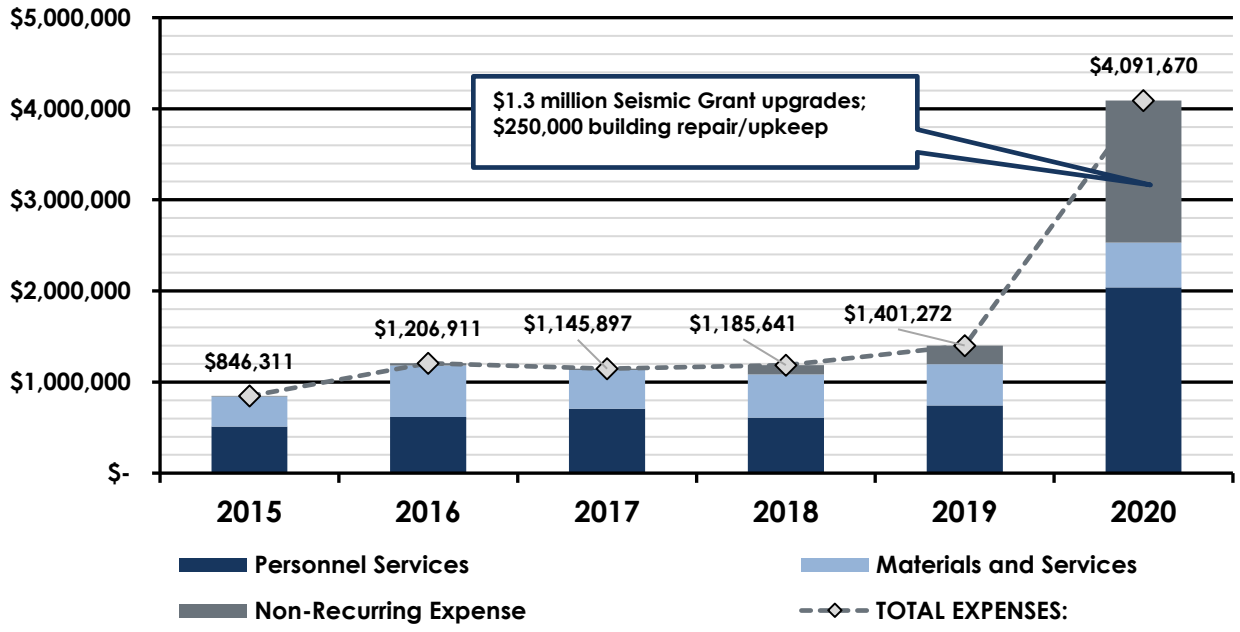
The following figure shows Sheridan Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have increased from $4,000 in FY 2015 to just over $200,000 in FY 2019, with a large increase in FY 2020 expected and related to a $1.3 million grant for facility seismic upgrades. Expenses have been for equipment prior to the adopted FY 2020 budget.

Figure 165: Sheridan Fire District Expense FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Adopted
Personnel Services	512,135	617,205	708,361	610,909	743,066	2,037,500
Materials/Services	330,176	564,706	422,536	471,627	451,555	493,700
Debt Service	0	0	0	0	0	0
Recurring Expense	**842,311**	**1,181,911**	**1,130,897**	**1,082,536**	**1,194,621**	**2,531,200**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	0	1,560,470
Equipment	4,000	25,000	15,000	103,105	206,651	0
Apparatus	0	0	0	0	0	0
Non-Recurring Expense	**4,000**	**25,000**	**15,000**	**103,105**	**206,651**	**1,560,470**
TOTAL EXPENSES:	**$846,311**	**$1,206,911**	**$1,145,897**	**$1,185,641**	**$1,401,272**	**$4,091,670**

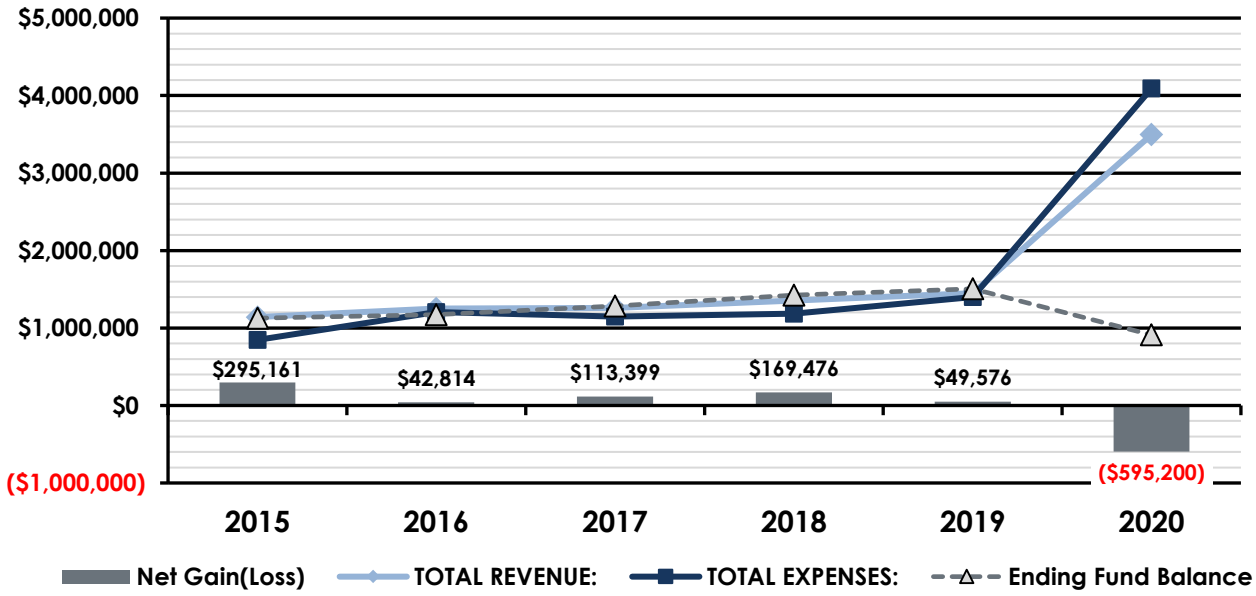
The following figure shows District expense by major category and illustrates the impact of the seismic hardening and other facility upgrades/repairs in FY 2020 on overall expense. Total District expense has generally increased by 65.6% or 13.4% per year from FY 2015 through FY 2019. This trend has been driven by an increase in recurring expense of approximately 9.1% per year and an increase in equipment expenses beginning in FY 2018. Materials & Services costs have remained relatively static, averaging $448,000 annually, while Personnel Services costs have risen at an average of 9.7% annually between FY 2015 and FY 2019. The District has historically had no debt service.

Figure 166: Sheridan Fire District Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The following figure summarizes the historical financial trajectory of the District with a comparison of total revenue, total expense, and the difference between the two, whether positive or negative and how that difference impacts the annual ending fund balance of the District. From FY 2015 through FY 2019, the District had more total revenue than it expended in both recurring and non-recurring categories, which resulted in an annual increase in ending fund balance. Between FY 2015 and FY 2019, the ending fund balance grew from $1.1 million to $1.5 million, an increase of almost $377,000 or 33%. This represents an average annual increase in total fund balance of 7.5%. More importantly, District recurring revenue exceeded recurring expense by an average of $146,000 every year from FY 2015 to FY 2019. This represents sound financial practice and has resulted in a positive impact on ending fund balance each year. In the FY 2020 adopted budget, however, recurring expense exceeds recurring revenue by $411,000, which may simply be the result of adjustments in the first year of the IGA rather than a long-term trend. In any case, this will need to be closely monitored in the next budget.

Figure 167: Sheridan Fire District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted



Southwestern Polk

Southwestern Polk is a rural fire protection district authorized under the provisions of Oregon Statute Chapter 478 in 1947. It is a municipal corporation governed by an elected board and operates on a July 1 to June 30 fiscal year and uses a modified cash basis for fund accounting with a current financial resources measurement focus. As shown in the following figure, the District maintains a General Fund permanent millage rate of $0.8612/$1,000 taxable value and a bonded debt millage rate of approximately 0.6229 mills as of FY 2019. The Series 2017 Bond will be paid off in FY 2033. As of the FY 2020 adopted budget, the District maintains four separate funds, of which the General Fund is its primary operating fund. Other funds include the Trust and Agency Fund (otherwise known as the ST 130 Spending Authority), the Special Fund (otherwise known as the GO Bond Capital Projects Fund), and the Bonded Debt Fund. The following analysis combines all funds and respective fund balances. Interfund transfers result in net zero and are not shown.

Figure 168: Southwestern Polk Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$634,082,176
Operating Budget	$1,104,840
Millage (Perm plus Debt Levy)	0.8612 + 0.6229 = 1.4841 Mills

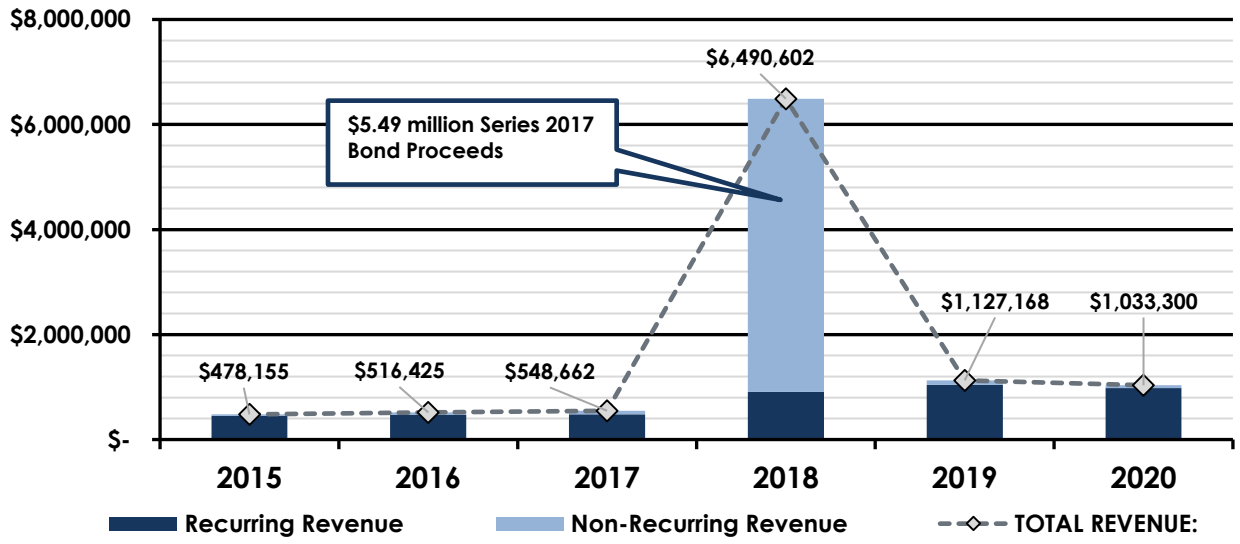
The following figure summarizes actual Southwestern Polk Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary source of District revenues is property taxes.

Figure 169: Southwestern Polk Fire District Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Adopted	2020 Adopted
Property Taxes	448,306	470,666	478,746	887,725	910,406	878,300
Interest/Earnings	1,177	874	2,618	18,004	131,182	100,000
Recurring Revenue	**449,483**	**471,540**	**481,364**	**905,729**	**1,041,588**	**978,300**
Bond Proceeds	0	0	0	5,488,980	-35,000	0
Grants	13,000	0	18,419	0	0	0
Miscellaneous	15,672	44,885	48,879	95,893	120,580	55,000
Non-Recurring Revenue	**28,672**	**44,885**	**67,298**	**5,584,873**	**85,580**	**55,000**
TOTAL REVENUE:	**$478,155**	**$516,425**	**$548,662**	**$6,490,602**	**$1,127,168**	**$1,033,300**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Recurring revenues make up most of the District's annual revenue, except for the spike in non-recurring revenue in the FY 2018 budget due to the $5.49 million in bond proceeds from the Series 2017 bond issued in June 2018. The District's overall revenue grew slightly (14.8%) from FY 2015 through FY 2017, driven by an annual 3.5% increase in tax revenue, prior to the implementation of the debt service levy, which increased recurring revenues from $481,364 to $905,729 between FY 2017 and FY 2018.

Figure 170: Southwestern Polk Fire District Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



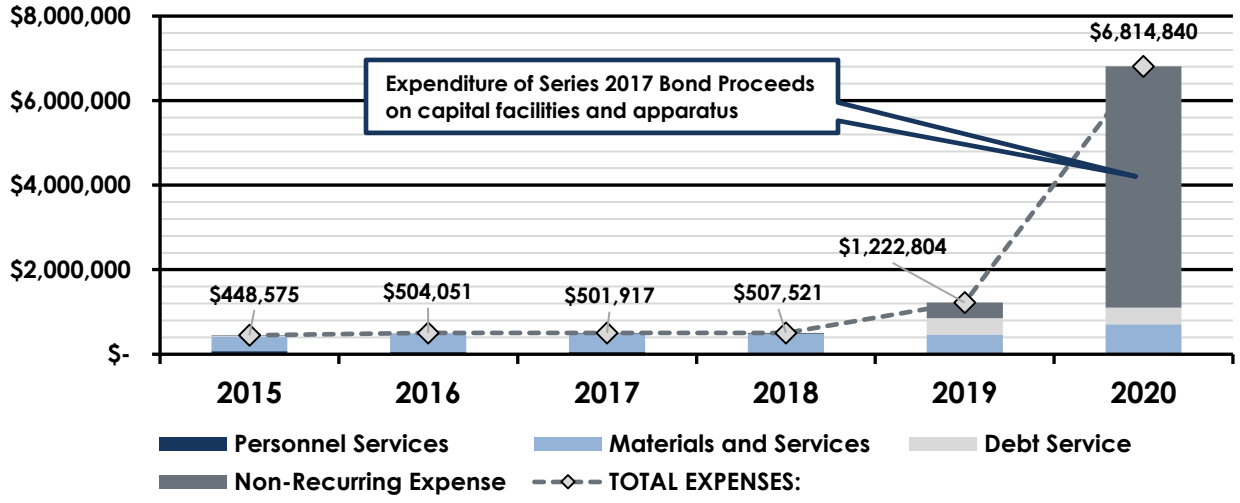
The following figure shows Southwestern Polk Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and increased significantly in FY 2019 with the infusion of bond proceeds. These bond proceeds are being used to purchase replacement capital apparatus and provide funding for station construction projects.

Figure 171: Southwestern Polk Fire District Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Adopted	2020 Adopted
Personnel Services	72,335	50,280	52,975	18,599	4,044	5,000
Materials & Services	349,857	430,220	425,253	457,993	465,856	704,840
Debt Service	13,383	13,383	5,270	0	382,055	395,000
Recurring Expense	**435,575**	**493,883**	**483,498**	**476,592**	**851,955**	**1,104,840**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	115,173	3,259,000
Equipment	13,000	10,168	18,419	30,929	255,676	100,000
Apparatus	0	0	0	0	0	2,351,000
Non-Recurring Expense	**13,000**	**10,168**	**18,419**	**30,929**	**370,849**	**5,710,000**
TOTAL EXPENSES:	**$448,575**	**$504,051**	**$501,917**	**$507,521**	**$1,222,804**	**$6,814,840**

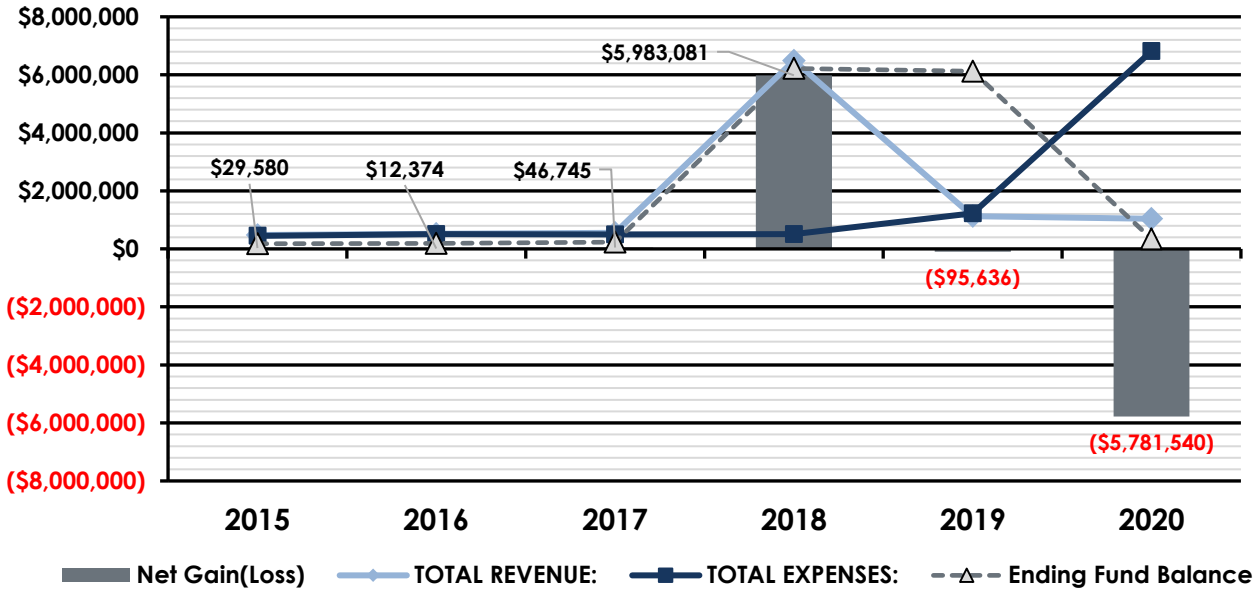
The following figure shows District expense by major category and illustrates the impact of the bond spending on apparatus and facilities beginning in FY 2019. Total District expense remained relatively flat between FY 2015 and FY 2018, averaging approximately $490,000 annually, of which the bulk was for Materials & Services. The jump in recurring expenses between FY 2018 and FY 2019 is driven by the addition of debt service on the Series 2017 bond and an increase in Materials & Services driven by both an increase in the service agreement and expenses under the volunteer appreciation program. Service Agreement costs rose from $356,000 in FY 2018 to an FY 2020 adopted $472,000 and are proposed at $525,000 in FY 2021. Volunteer appreciation expenses increased from approximately $20,000 in FY 2018 to $57,000 in FY 2020.

Figure 172: Southwestern Polk Fire District Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The following figure summarizes the historical financial trajectory of the District with a comparison of total revenue, total expense, and the difference between the two, whether positive or negative, and how that difference impacts the annual ending fund balance of the District. From FY 2015 through FY 2017, the District earned slightly more total revenue than it expended in both recurring and non-recurring categories, which resulted in a slight increase in ending fund balance, which averaged $200,000 between all funds. Between FY 2018 and FY 2020, the major fluctuation in ending fund balance resulted from the addition of bond proceeds in FY 2018 followed by their subsequent expenditure on non-recurring capital projects in FY 2020 with ending fund balance returning to a more normal level, albeit slightly higher than the preceding average ($342,000). From FY 2015–19, the District's recurring revenue has exceeded recurring expense by an average of $122,000.

Figure 173: Southwestern Polk Fire District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance FY 2015 Actual–FY 2020 Adopted



West Valley

West Valley is a rural fire protection district authorized under the provisions of Oregon Statute Chapter 478. It is a municipal corporation governed by an elected board and operates on a July 1 to June 30 fiscal year and uses a modified cash basis for fund accounting with a current financial resources measurement focus. As shown in the following figure, the District maintains a General Fund permanent millage rate of $0.8936/$1,000 taxable value and, as of FY 2021, has adopted an additional local option millage rate of $1.06/$1,000 taxable value for a total FY 2021 rate of 1.9536 mills. As of the FY 2020 adopted budget, the District closed two of three separate major funds with the retirement of its bonded debt; the Bonded Debt Service Fund (last tax revenues in FY 2019) and the Equipment Reserve Fund. The sole remaining fund is the General Fund, which is its primary operating fund. The following historical analysis combines all prior funds and respective fund balances. Interfund transfers resulted in net zero and are not shown.

Figure 174: West Valley Fire District Budget and Finance Overview

Component	Description
Fiscal Year	July 1–June 30
Assessed Property Value (FY 2020)	$303,586,183
Operating Budget	$1,735,000
Millage	0.8936 Mills

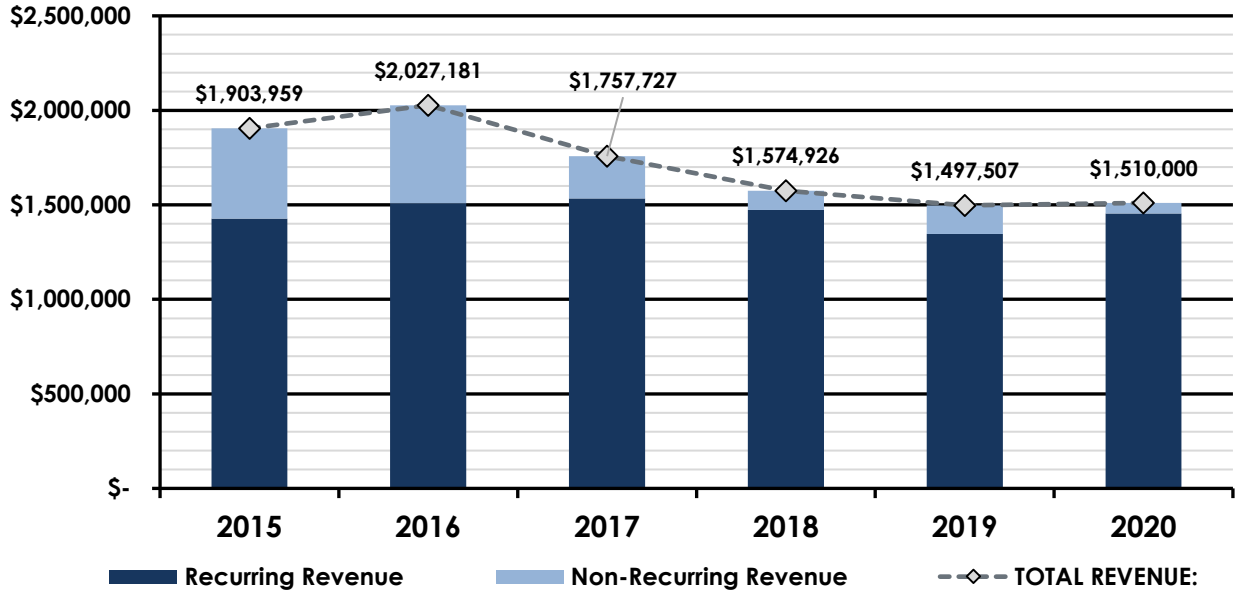
The following figure summarizes actual West Valley Fire District revenues for the period FY 2015–19 (Debt Service Fund tax revenues are estimated from adopted budget as actual FY 2019 for this fund was not available) and adopted revenues for FY 2020. The primary sources of District revenue are service and contractual fees and property taxes.

Figure 175: West Valley Fire District Revenue, FY 2015 Actual–FY 2020 Adopted

Revenue	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Adopted	2020 Adopted
Property Taxes	382,497	395,766	386,884	355,184	349,315	255,000
Amb Fees/FireMed	565,692	620,856	636,812	591,693	598,822	650,000
Contract Services	477,950	489,889	504,634	519,669	398,636	550,000
Interest/Earnings	1,213	2,621	5,414	6,326	0	0
Recurring Revenue	**1,427,352**	**1,509,132**	**1,533,744**	**1,472,872**	**1,346,773**	**1,455,000**
Conflagration Reimb.	341,392	397,303	21,443	82,557	0	0
Comm-Based EMS	77,700	54,550	193,880	8,000	0	0
Grants	5,426	3,092	984	5,000	0	0
Miscellaneous	52,089	63,104	7,676	6,497	150,734	55,000
Non-Rec Revenue	**476,607**	**518,049**	**223,983**	**102,054**	**150,734**	**55,000**
TOTAL REVENUE:	**$1,903,959**	**$2,027,181**	**$1,757,727**	**$1,574,926**	**$1,497,507**	**$1,510,000**

The following figure compares the District's recurring and non-recurring revenue to total revenue. Recurring revenues make up most of the District's annual revenue. The District's overall revenue has declined from an average of $1.95 million in FY 2015–16 to an average of $1.5 million by FY 2019–20. This trend was driven by a reduction and subsequent loss of Fire Fees (a non-recurring revenue source received from the State for response to wildfires which should be categorized as Conflagration Reimbursement as is the case with other agencies in the study area) from a high of near $400,000 in FY 2016 to between $21,000 and $83,000 for FY 2017 and FY 2018; respectively. Community-Based EMS revenues are non-recurring and include various revenues, such as grants for emergency medical purposes. The final debt service levy occurred in FY 2019 with the retirement of the bonded debt.

Figure 176: West Valley Fire District Recurring vs. Non-Recurring Revenue, FY 2015 Actual–FY 2020 Adopted



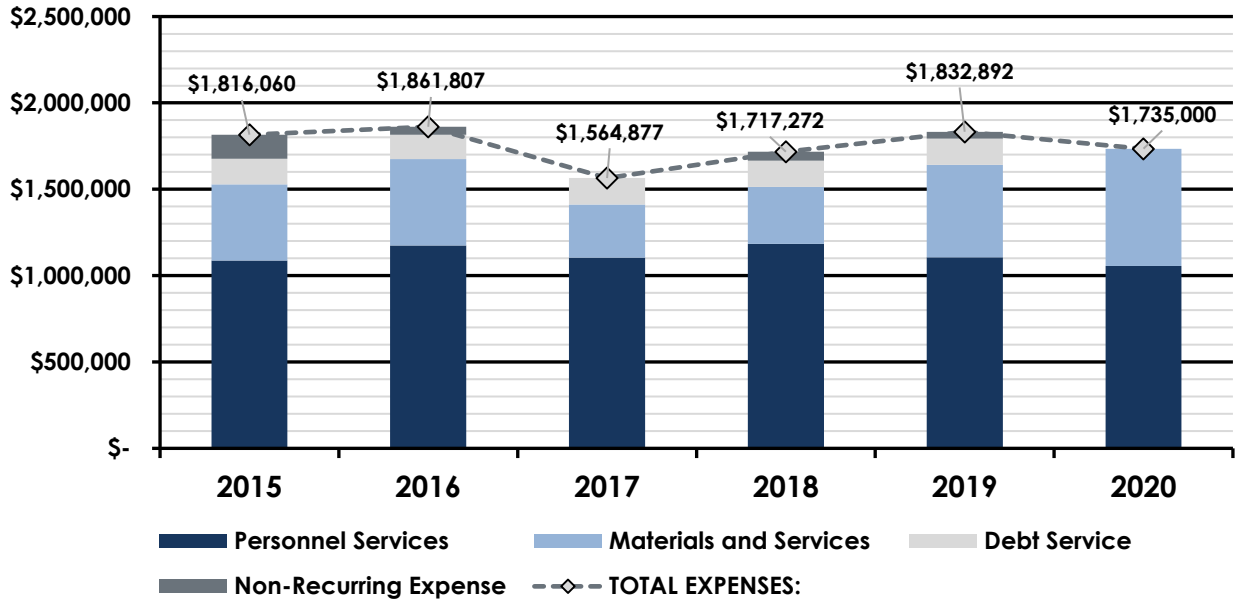
The following figure shows West Valley Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have been generally low, averaging between $0 and $50,000 annually. Capital expenditures have been solely for equipment.

Figure 177: West Valley Fire District Expense, FY 2015 Actual–FY 2020 Adopted

Expense	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Adopted	2020 Adopted
Personnel Services	1,086,924	1,174,335	1,103,302	1,183,846	1,106,559	1,056,000
Materials & Services	440,861	500,574	309,025	329,989	535,330	679,000
Debt Service	148,975	141,425	152,550	152,150	150,800	0
Recurring Expense	**1,676,760**	**1,816,334**	**1,564,877**	**1,665,985**	**1,792,689**	**1,735,000**
Land	0	0	0	0	0	0
Buildings	0	0	0	0	0	0
Equipment	139,300	45,473	0	51,287	40,203	0
Apparatus	0	0	0	0	0	0
Non-Recur Expense	**139,300**	**45,473**	**0**	**51,287**	**40,203**	**0**
TOTAL EXPENSES:	**$1,816,060**	**$1,861,807**	**$1,564,877**	**$1,717,272**	**$1,832,892**	**$1,735,000**

The following figure shows District expense by major category with overall fluctuations driven by both personnel and materials and services budgetary variation. Total District expense has fluctuated between a high of $1.86 million in FY 2016 and a low of $1.56 million in FY 2017. Personnel Services costs have remained relatively stable, fluctuating narrowly between just under $1.1 million and $1.2 million. Materials & Services has shown the widest fluctuation over time, varying between a low of $310,000 in FY 2017 and highs averaging $515,000 in FY 2016 and FY 2019. The final bonded debt service payment was made in FY 2019.

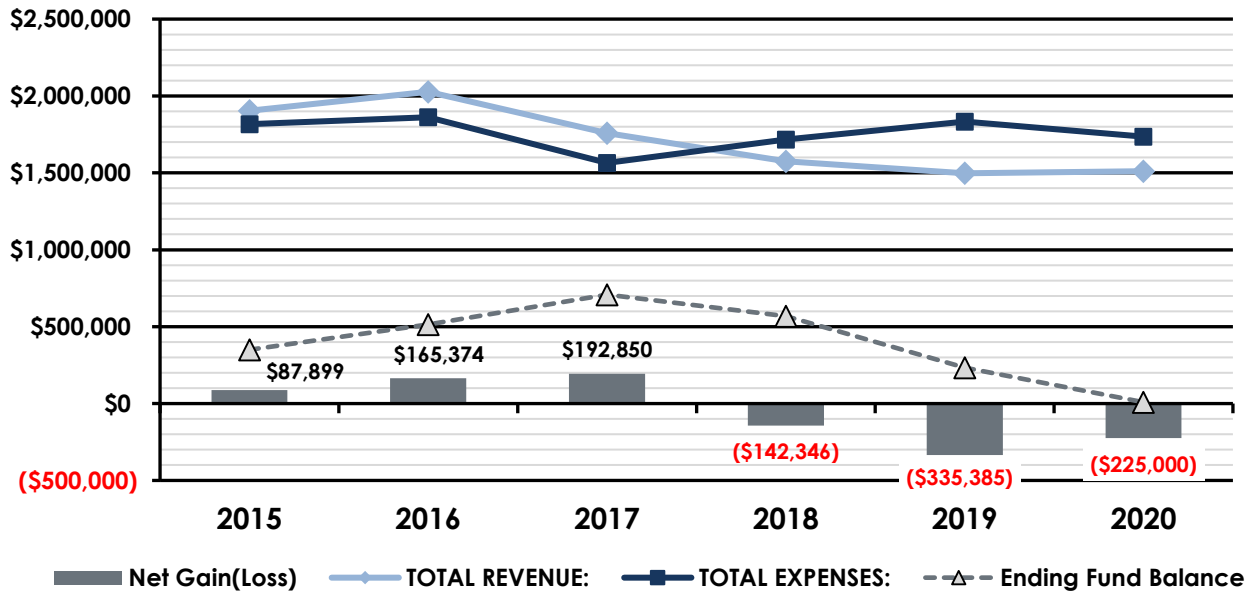
Figure 178: West Valley Fire District Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



The following figure summarizes the historical financial trajectory of the District with a comparison of total revenue, total expense, and the difference between the two, whether positive or negative and how that difference impacts the annual ending fund balance of the District. From FY 2015 through FY 2017, the District earned from $90–200,000 more total revenue than it expended each year in both recurring and non-recurring categories, which resulted in an increase in ending fund balance between all funds from $350,000 in FY 2015 to a high of $710,000 in FY 2017. Between FY 2018 and FY 2020, this trend reversed, and the District had to use fund balance to meet its expenditure obligations, the bulk of which were recurring in nature. Since recurring expense exceeded recurring revenue by more than $100,000 in FY 2018 and $446,000 in FY 2019 with a continued projection of the same trend in FY 2020, this caused the projected total fund balance to be reduced to near $0 by the end of FY 2020. The District was aware of this trend and is implementing an optional tax levy beginning with FY 2021, which should help to correct this trend and rebuild the fund balance.

It should be noted that there was a discrepancy in the ending and beginning fund balances from FY 2017 to FY 2018 of $3,399, as reported in the District's annual financial audit documents. However, this discrepancy is minor and does not materially affect the analysis or resulting conclusions.

Figure 179: West Valley Fire District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted



APPENDIX E: CAPITAL FACILITIES & APPARATUS

Typically, there are three basic resources required to successfully carry out the mission of a fire department: fire stations, trained personnel, and firefighting equipment. No matter how competent or numerous the firefighters, if adequate capital equipment is unavailable for use by responders, it would be impossible for any of the fire departments in this study to deliver services effectively. The most essential capital assets for use in emergency operations are facilities (fire stations) and apparatus (response vehicles). Of course, each fire department's financing ability will determine the level of capital equipment it can acquire and make available for use by emergency personnel. This section of the report assesses the respective capital facilities, vehicles, and apparatus of the nine agencies participating in this study.

Fire Stations & Other Facilities

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

Consideration should be given to a fire station's ability to support the fire department's mission as it exists currently and into the future. The activities that take place within a fire station should be closely examined to ensure the structure is adequate in both size and function. Examples of these functions may include at least the following:

- 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, offices, etc.)
- Training, classroom, and library areas
- Firefighter fitness area
- Public meeting space

In gathering information from the fire departments participating in this study, ESCI asked each to rate the condition of its fire stations using the criteria in the following figure.

Figure 180: Criteria Utilized to Determine Fire Station Condition

Excellent	Like new condition. No visible structural defects. The facility is clean and well maintained. Interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. No significant defect history. Design and construction match the building's purposes. 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. Design and construction match the building's purposes. Age is typically less than 20 years.
Fair	The building appears structurally sound with a weathered appearance and minor to moderate non-structural defects. The interior condition shows normal wear and tear, but flows effectively to the apparatus bay or offices. Mechanical systems are in working order. Building design and construction may not match the building's purposes well. Showing increasing age-related maintenance, but with no critical defects. Age is typically 30 years or more.
Poor	The building appears to be cosmetically weathered and worn, potentially with structural defects, although not imminently dangerous or unsafe. Large, multiple full-thickness cracks and crumbling of concrete on 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. May not be well suited to its intended purpose. Age is typically greater than 40 years.

ESCI toured each of the stations operated by the nine study participants and combined with the information provided, produced the observations listed in the following sections.

Amity Fire District

The following figures list the features of the Amity Fire District's fire station and substation.

Figure 181: AFD Station 5 (Main)

Address/Physical Location:	700 S. Trade Street, Amity, OR 97101
	**General Description:** Office use only.

Structure						
Construction Type	Wood Frame					
Date of Construction	2010					
Seismic Protection	Minimum					
Auxiliary Power	Yes					
General Condition	Good					
Number of Apparatus Bays	4	Drive-through bays			2	Back-in bays
Special Considerations (ADA, etc.)	ADA-compliant					
Square Footage	14,256					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	Volunteer					
Exercise/Workout Facilities	No					
Kitchen Facilities	Yes					
Individual Lockers/Storage	Yes (3)					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	No					
Security	Camera and doors					
Apparatus Exhaust System	Yes					

Figure 182: AFD Station 50 (Perrydale Substation)

Address/Physical Location:	10820 Bethel Road, Perrydale, OR 97338

General Description:
Office use only.

Structure						
Construction Type	Metal building					
Date of Construction	2010					
Seismic Protection	Minimal					
Auxiliary Power	Yes					
General Condition	Good					
Number of Apparatus Bays	0	Drive-through bays			4	Back-in bays
Special Considerations (ADA, etc.)	First-floor only					
Square Footage	3,440					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	Volunteer					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	No					
Individual Lockers/Storage Assigned	No					
Shower Facilities	Yes					
Training/Meeting Rooms	No					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	No					
Security	No					
Apparatus Exhaust System	Yes					

Dayton Fire District

The following figures list the features of the Dayton Fire District's three fire stations.

Figure 183: DFD Station 6

Address/Physical Location:	500 7th Street, Dayton, OR 97114
	**General Description:** Office use only.

Structure						
Construction Type	Wood frame in office; steel in bays					
Date of Construction	2006					
Seismic Protection	Yes					
Auxiliary Power	Yes					
General Condition	Good					
Number of Apparatus Bays	4	Drive-through	3	Back-in bays		
Special Considerations (ADA, etc.)	Elevator to second floor					
Square Footage	15,450					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	0					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage	*Not reported*					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	No					
Security	Yes					
Apparatus Exhaust System	Yes					

Figure 184: DFD Station 62 (Grand Island)

Address/Physical Location:	17580 SE Wallace Road, Dayton, OR 97114

General Description:
Office use only.

Structure						
Construction Type	Wood frame/metal siding					
Date of Construction	1975					
Seismic Protection	No					
Auxiliary Power	No					
General Condition	Poor					
Number of Apparatus Bays	0	Drive-through bays	2	Back-in bays		
Special Considerations (ADA, etc.)	*Not reported*					
Square Footage	1,000					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	0					
Exercise/Workout Facilities	No					
Kitchen Facilities	No					
Individual Lockers/Storage	No					
Shower Facilities	No					
Training/Meeting Rooms	No					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	No					
Decontamination/Bio. Disposal	No					
Security	No					
Apparatus Exhaust System	No					

Figure 185: DFD Station 63 (Hopewell)

Address/Physical Location:	22430 Hopewell Road NW, Salem, OR 97304

General Description:
Office use only.

Structure						
Construction Type	Wood frame/metal siding					
Date of Construction	2001					
Seismic Protection	No					
Auxiliary Power	No					
General Condition	Fair					
Number of Apparatus Bays	0	Drive-through bays	2	Back-in bays		
Special Considerations (ADA, etc.)	*Not reported*					
Square Footage	750					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	0					
Exercise/Workout Facilities	No					
Kitchen Facilities	No					
Individual Lockers/Storage	No					
Shower Facilities	No					
Training/Meeting Rooms	No					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	No					
Decontamination/Bio. Disposal	No					
Security	No					
Apparatus Exhaust System	No					

Dundee Fire District

The following figure lists the features of the Dundee Fire District's single station.

Figure 186: DDF Fire Station 3

Address/Physical Location:	801 N. OR-99W, Dundee, OR 97115

General Description:
Office use only.

Structure						
Construction Type	SIP					
Date of Construction	2014					
Seismic Protection	Yes					
Auxiliary Power	Yes					
General Condition	Excellent					
Number of Apparatus Bays	4	Drive-through bays	8	Back-in bays		
Special Considerations (ADA, etc.)	Yes					
Square Footage	17,500					
Facilities Available						
Separate Rooms/Dormitory/Other	4	Bedrooms	4	Beds	0	Dorm Beds
Maximum Station Staffing	4					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	Three rooms					
Washer/Dryer	Two of each					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security	Yes					
Apparatus Exhaust System	Yes					

Lafayette Fire Department

The following figure lists the features of the Lafayette fire station.

Figure 187: LFD Fire Station 10

Address/Physical Location:	486 3rd Street, Lafayette, OR 97127
	**General Description:** Office use only.

Structure						
Construction Type	CME Concrete and wood frame					
Date of Construction	Unknown					
Seismic Protection	None					
Auxiliary Power	No					
General Condition	Poor					
Number of Apparatus Bays	1	Drive-through bays	1	Back-in bays		
Special Considerations (ADA, etc.)	No					
Square Footage	1,700					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	1					
Exercise/Workout Facilities	No					
Kitchen Facilities	No					
Individual Lockers/Storage	No					
Shower Facilities	No					
Training/Meeting Rooms	No					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	No					
Security	Yes					
Apparatus Exhaust System	No					

McMinnville Fire Department

The following figure lists the features of MFD's primary fire station.

Figure 188: MFD Fire Station 1

Address/Physical Location:	175 SE 1st Street, McMinnville, OR 97128					
	**General Description:** Office use only.					
Structure						
Construction Type	VN (Type 3) CMU/masonry; internal stick frame					
Date of Construction	1987					
Seismic Protection	None					
Auxiliary Power	Diesel Generator (Onan 150 KW)					
General Condition	Fair					
Number of Apparatus Bays	0	Drive-through bays		10	Back-in bays	
Special Considerations	Non-ADA compliant with current standards.					
Square Footage	25,184					
Facilities Available						
Separate Rooms/Dormitory/Other	13	Bedrooms	13	Beds	0	Dormitory Beds
Maximum Station Staffing	13					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Two at ground level; 1 at top story.					
Individual Lockers/Storage	Yes					
Shower Facilities	Facilities at ground level & top story					
Training/Meeting Rooms	Large meeting room; one conference room					
Washer/Dryer	Washer/dryer & turnout gear extractor & dryer					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security	Door lock. Front office daily with no security.					
Apparatus Exhaust System	Yes					

MFD Station 12

MFD leases a single-family residence in a suburban neighborhood on the north end of the City on Northwest Baker Creek Road. The Department only staffs a 24-hour ALS medic unit at this location, and does not deploy other fire apparatus.

The building is a 1970s-era 1,000-square foot wood-frame structure with sufficient sleeping quarters for three personnel. It has a typical residential kitchen with a single bathroom/shower. The station contains a washer/dryer and light decontamination capabilities and biohazard disposal.

New Carlton Fire District

The following figures list the features of NCFD's fire station and substation.

Figure 189: NCFD Fire Station

Address/Physical Location:	343 W Roosevelt Street, Carlton, OR 97111
	**General Description:** Office use only.

Structure						
Construction Type	Wood and metal frame					
Date of Construction	2008					
Seismic Protection	Yes					
Auxiliary Power	Yes					
General Condition	Excellent					
Number of Apparatus Bays	2	Drive-through bays	2	Back-in bays		
Special Considerations (ADA, etc.)	Does meet ADA standards					
Square Footage	Approximately 7,000					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing Capability	Potentially 8–5 employees					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage Assigned	No					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security	Yes					
Apparatus Exhaust System	Yes					

The following substation is a shared facility with *the Oregon Department of Forestry* (ODF).

Figure 190: NCFD Panther Creek Substation

Address/Physical Location:	15199 NW Panther Creek Rd, Carlton, OR 97111
	**General Description:** Office use only.

Structure						
Construction Type	Wood frame					
Date of Construction	2010					
Seismic Protection	Yes					
Auxiliary Power	No					
General Condition	Excellent					
Number of Apparatus Bays	0	Drive-through bays	2	Back-in bays		
Special Considerations (ADA, etc.)	Does meet ADA standards					
Square Footage	Approximately 2,500					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	Potentially 8–5 employees					
Exercise/Workout Facilities	No					
Kitchen Facilities	No					
Individual Lockers/Storage	No					
Shower Facilities	Yes					
Training/Meeting Rooms	No					
Washer/Dryer	No					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	No					
Security	No					
Apparatus Exhaust System	No					

Sheridan Fire District

The following figures list the features of the Sheridan Fire District's fire stations.

Figure 191: SFD Fire Station

Address/Physical Location:	230 SW Mill Street, Sheridan, OR 97378

General Description:
Office use only.

Structure						
Construction Type	Joisted masonry					
Date of Construction	1983					
Seismic Protection	No					
Auxiliary Power	Yes					
General Condition	Good					
Number of Apparatus Bays	0	Drive-through bays	9	Back-in bays		
Special Considerations (ADA, etc.)	ADA					
Square Footage	14,401					
Facilities Available						
Separate Rooms/Dormitory/Other	8	Bedrooms	8	Beds	0	Dorm Beds
Maximum Station Staffing	8					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Battery smoke detectors					
Decontamination/Bio. Disposal	Yes					
Security	Punch code access					
Apparatus Exhaust System	No					

Figure 192: SFD Ballston Fire Station

Address/Physical Location:	De Jong Rd, Sheridan, OR 97378

General Description:
Office use only.

Structure						
Construction Type	Frame					
Date of Construction	1978					
Seismic Protection	No					
Auxiliary Power	Portable generator on trailer					
General Condition	Poor					
Number of Apparatus Bays	0	Drive-through bays	2	Back-in bays		
Special Considerations (ADA, etc.)	No					
Square Footage	2,000					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	Volunteer response only					
Exercise/Workout Facilities	No					
Kitchen Facilities	No					
Individual Lockers/Storage	No					
Shower Facilities	No					
Training/Meeting Rooms	No					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	No					
Decontamination/Bio. Disposal	No					
Security	Punch code entry					
Apparatus Exhaust System	No					

Figure 193: SFD Buell Station

Address/Physical Location:	5945 Mill Creek Rd, Sheridan, OR 97378

General Description:
Office use only.

Structure						
Construction Type	Frame					
Date of Construction	1983					
Seismic Protection	No					
Auxiliary Power	No					
General Condition	Good					
Number of Apparatus Bays	0	Drive-through bays	3	Back-in bays		
Special Considerations (ADA, etc.)	No					
Square Footage	2,480					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	Volunteer response; day staff					
Exercise/Workout Facilities	No					
Kitchen Facilities	No					
Individual Lockers/Storage	No					
Shower Facilities	No					
Training/Meeting Rooms	Yes					
Washer/Dryer	No					
Safety & Security						
Sprinklers	No					
Smoke Detection	Battery smoke detector					
Decontamination/Bio. Disposal	No					
Security	Punch code entry					
Apparatus Exhaust System	No					

Southwestern Polk Rural Fire Protection District

The following figure lists the features of Southwestern Polk RFPD's fire station.

Figure 194: SWP Station 130

Address/Physical Location:	275 Main Street, Rickreall, OR 97371					
	General Description: Office use only.					
Structure						
Construction Type	Frame					
Date of Construction	1970					
Seismic Protection	No					
Auxiliary Power	Small portable generator					
General Condition	Fair					
Number of Apparatus Bays	0	Drive-through bays	4	Back-in bays		
Special Considerations (ADA, etc.)	No					
Square Footage	2,400					
Facilities Available						
Separate Rooms/Dormitory/Other	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Station Staffing	Day staff and volunteers					
Exercise/Workout Facilities	No					
Kitchen Facilities	Yes					
Individual Lockers/Storage	No					
Shower Facilities	Minimal					
Training/Meeting Rooms	Yes					
Washer/Dryer	Yes					
Safety & Security						
Sprinklers	No					
Smoke Detection	Battery smoke detector					
Decontamination/Bio. Disposal	No					
Security	Individual door codes					
Apparatus Exhaust System	No					

West Valley Fire District

The following figures list the features of West Valley Fire District's two fire stations.

Figure 195: WVFD Station 8

Address/Physical Location:	825 NE Main Street, Willamina, OR 97396					
	**General Description:** Office use only.					
Structure						
Construction Type	Joisted masonry					
Date of Construction	2001					
Seismic Protection	Yes					
Auxiliary Power	Diesel Generator					
General Condition	*Not reported*					
Number of Apparatus Bays	5	Drive-through bays	2	Back-in bays		
Special Considerations	ADA					
Square Footage	20,025					
Facilities Available						
Separate Rooms/Dormitory/Other	6	Bedrooms	8	Beds		Dorm Beds
Maximum Station Staffing	6–8					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers/Storage	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Turnout washer					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security	Some cameras, punch code entry					
Apparatus Exhaust System	No					

Figure 196: Station 82 (Grand Ronde)

Address/Physical Location:	28480 McPherson Road, Grand Ronde, OR 97347

General Description:
Office use only.

Structure						
Construction Type	Frame					
Date of Construction	2005					
Seismic Protection	Yes					
Auxiliary Power	Yes, Diesel Generator					
General Condition	Good					
Number of Apparatus Bays	4	Drive-through bays	0	Back-in bays		
Special Considerations (ADA, etc.)	ADA compliant					
Square Footage	4,800					
Facilities Available						
Separate Rooms/Dormitory/Other	3	Bedrooms	6	Beds		Dorm Beds
Maximum Station Staffing	6					
Exercise/Workout Facilities	No					
Kitchen Facilities	Yes					
Individual Lockers/Storage	Yes					
Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	Clothing only (no washer/dryer for turnouts)					
Safety & Security						
Sprinklers	Yes					
Smoke Detection	Yes					
Decontamination/Bio. Disposal	Yes					
Security	Door code entry; 24-hour live video surveillance					
Apparatus Exhaust System	Yes					

Apparatus & Vehicles Inventory

Fire apparatus, command vehicles, special operations vehicles, and medic units (ambulances) are unique and expensive pieces of equipment customized to operate for a specific community and defined mission. Other than its firefighters, officers, and support staff, the next most important resources in a fire department are likely its apparatus and other emergency response vehicles.

Apparatus must be sufficiently reliable to transport firefighters and equipment rapidly and safely to an incident scene. Such vehicles must be equipped properly and function appropriately to ensure that the delivery of emergency services is not compromised. For this reason, they are very expensive and offer little flexibility in use and reassignment to other missions.

Modern ambulances are complex and sophisticated vehicles that must be sufficiently maintained to ensure firefighters and EMS providers arrive promptly, as well as being maintained in a condition to ensure patients are transported safely to the hospital or clinical facility.

Amity Fire District

The following figure lists the Amity Fire District's frontline inventory of engines, water tenders, wildland units (brush trucks), and other vehicles.

Figure 197: AFD Frontline Apparatus Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 5	Type 1	H & W	2001	Fair	Station 5
Engine 51	Type 1	H & W	1994	Poor	Station 5
Engine 53	Type 1	Spartan	1991	Fair	Station 50
Wildland					
Brush 5	Type 3	Ford/CFE	2018	Good	Station 5
Brush 56	Type 6	Wildfire	1997	Fair	Station 5
Brush 57	Type 6	Wildfire	1997	Fair	Station 50
Heavy Brush 54	Type 3	Pierce	2002	Fair	Station 5
Heavy Brush 58	Type 3	International	2009	Fair	Station 5
Heavy Brush 59	Type 3	GMC	1981	Fair	Station 50
Tenders/Others					
Tender 5	W. Tender	W. States	1988	Poor	Station 5
Tender 53	W. Tender	Freightliner	1999	Good	Station 50
Rescue 5	EMS	Ford/BME	2000	Fair	Station 5
DC-12	Staff	Suburban	2007	Good	Station 5
DC-5	Command	Suburban	2007	Good	Station 5
Utility 5	Utility	GMC	1989	Poor	Station 5

As shown in the preceding figure, the majority (53%) of AFD's total fleet were rated as "Fair," while 20% were considered "Poor." All of the District's engines were rated as either "Fair" or "Poor," with only one brush truck and one water tender rated "Good."

Dayton Fire District

The following figure lists the current frontline fleet inventory of the Dayton Fire District. DFD maintains a frontline fleet of four Type 1 engines, two water tenders, two brush trucks, and an assortment of other command vehicles and specialty units. Dayton also maintains 1986 Western States water tender (Tender 68) and 2001 brush truck in reserve.

Figure 198: DFD Frontline Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 6	Type 1	HME	2019	Excellent	Station 6
Engine 61	Type 1	HME	2003	Good	Station 6
Engine 62	Type 1	Western States	1992	Good	Station 62
Engine 63	Type 1	Freightliner	1997	Excellent	Station 63
Tenders & Wildland					
Tender 67	Tender	International	2007	Excellent	Station 6
Tender 68	Tender	Western States	1986	Fair	Station 6
Tender 69	Tender	Western States	1986	Fair	Station 62
Brush 6	Brush Unit	Ford	2011	Excellent	Station 6
Brush 63	Brush Unit	Ford	2008	Excellent	Station 63
Other Units & Command Vehicles					
Rescue 6	Rescue	Ford	2014	Excellent	Station 6
Air 6	Air Support	Ford	1996	Fair	Station 6
Car 6	Command	Tahoe	2017	Excellent	Fire Chief
Car 61	Command	Ford	2008	Excellent	Duty Officer

As shown, two of DFD's engines are considered to be in "Excellent" condition, and two in "Good" condition. One water tender and both brush units are in "Excellent" condition. None of DFD's apparatus were considered to be in "Poor" condition.

Dundee Fire District

The following figure lists the current frontline fleet inventory of the Dundee Fire District.

Figure 199: DDF Frontline Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 31	Engine	E-One	2003	Good	Station 3
Engine 32	Engine	E-One	1996	Good	Station 3
Engine 30	Engine	E-One	2007	Good	Station 3
Tenders/Wildland/Staff Vehicles					
Water Tender 3	Tender	E-One	1989	Good	Station 3
Brush 37	Brush Rig	Ford F550	2008	Good	Station 3
Brush 39	Brush Rig	Ford F350	2016	Good	Station 3
Car 3	Command	Ford	2016	Good	Station 3
Utility 3	Utility	Ford F250	2006	Good	Station 3

As shown in the preceding figure, the Dundee Fire District's engines, tenders, and wildland apparatus are listed in "Good" condition.

Lafayette Fire Department

The following figure lists the frontline fleet inventory of the Lafayette Fire Department.

Figure 200: LFD Frontline Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 10	Engine	HME	2015	Excellent	Station 10
Engine 101	Engine	Pierce	1999	Good	Station 10
Wildland					
Brush 101	Brush Truck	Pacific Utility	1999	Good	Station 10

As shown, LFD maintains two engines and a brush truck. Engine 10 is about five years old and in "Excellent" condition.

McMinnville Fire Department

The following figure lists the McMinnville Fire Department's frontline inventory of engines, aerials, medic units, water tenders, wildland units (brush trucks), and a heavy rescue unit.

As of 2020, MFD's frontline engines ranged in age from 5–24 years, with a combined average of 15 years. Medic units ranged in age from 1–15 years, with a combined average of 7 years. In addition to its frontline engines, MFD maintains Engine 15 is a reserve, which is a 1994 Spartan considered to be in "fair" condition. Of the apparatus listed in the following figure, eight (50%) were described as in "fair" condition, one in "poor" condition, and the remainder in "good" condition.

Figure 201: MFD Frontline Apparatus Inventory (Engines, Medics, Others)

Apparatus	Type	Make	Year	Condition	Location
Engines/Aerials					
Engine 1	Engine	Pierce	2015	Good	Station 1
Engine 14	Engine	Spartan	2003	Fair	Station 1
Engine 16	Engine	BME	1996	Fair	Station 1
Truck 1	Aerial	Arrow/Pierce	2015	Good	Station 1
Medics					
Medic 101	Ambulance	Ford	2019	Good	Station 1
Medic 102	Ambulance	Ford	2005	Fair	Station 1
Medic 103	Ambulance	Chevrolet	2015	Good	Station 1
Medic 104	Ambulance	Ford	2005	Fair	Station 1
Medic 105	Ambulance	Chevrolet	2012	Fair	Station 1
Medic 107	Ambulance	Ford	2016	Good	Station 1
Medic 108	Ambulance	Ford	2018	Good	Station 1
Tenders/Wildland/Other					
Brush 1	Wildland	Pierce	2010	Good	Station 1
Brush 11	Wildland	Dodge	1995	Fair	Station 1
Tender 1	Water Tender	Osco	2005	Fair	Station 1
Tender 10	Water Tender	Western States	1985	Poor	Station 1
Squad 1	Heavy Rescue	Spartan	2000	Fair	Station 1

The next figure lists the McMinnville's inventory of command and staff vehicles.

Figure 202: MFD Command & Staff Vehicles Inventory (2020)

Vehicle	Assigned To	Make	Year	Condition
C1	Fire Chief	Chevrolet Tahoe	2013	Good
C12	Operations Chief	Chevrolet Tahoe	2003	Fair
DC1	Battalion Chief	Chevrolet Tahoe	2015	Good
FM1	Fire Marshal	Chevrolet	2019	Good
FM12	Deputy Fire Marshal	Ford F-150	2006	Fair
Car 16	Staff/Reserve	Ford E-350 Van	1995	Poor
Car 15	Staff/Reserve	Ford Explorer	1999	Fair
Car 17	Staff/Reserve	Chevrolet Tahoe	2003	Fair

Excluding the three staff/reserve vehicles, "Command" vehicles ranged in age from 1–17 years, with a combined average age of 9 years. The vehicles assigned to the Operations Chief and Deputy Fire Marshal were considered to be in a "fair" condition, and are 17 and 14-years-old respectively. These may need to be replaced in the near future.

New Carlton Fire District

The following figure lists the New Carlton Fire District's current fleet inventory.

Figure 203: NCFD Current Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 7	Engine	Spartan	2016	Excellent	Main Station
Engine 74	Engine	W. States	1994	Fair	Main Station
Engine 77	Engine	W. States	1993	Good	Sub-Station
Tenders/Wildland/Command					
Tender 76	Water Tender	International	1987	Fair	Main Station
Brush 7	Wildland	Ford	1997	Good	Sub-Station
Brush 71	Wildland	Ford	2004	Good	Main Station
HBR 7	Wildland	International	2002	Good	Main Station
BD 7	Command	Ford	2007	Good	Take home

As shown in the preceding figure, NCFD's newest engine is about four years old, with the other two 26 and 27 years of age, respectively. The District's only tender is 33 years old. NCFD also maintains a 2006 air trailer in "Good" condition.

It is important to note that SFD, SWP, and WVFD function as a single organization. However, the following figures will list the frontline apparatus inventories of each district separately.

Sheridan Fire District

The following figure lists the Sheridan Fire District's current frontline fleet inventory.

Figure 204: SFD Frontline Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 191	Engine	E-One	2007	Good	Station 190
Engine 197	Engine	H & W	1989	Poor	Station 197
Engine 198	Engine	H & W	1997	Fair	Station 198
Wildland					
Brush 191	Brush	Ford	2008	Fair	Station 190
Brush 197	Brush	Ford	1997	Poor	Station 197
Brush 198	Brush	Ford	2019	Excellent	Station 198
Water Tenders					
Tender 191	Tender	Volvo	1998	Fair	Station 190
Tender 197	Tender	Ford	1986	Poor	Station 197
Tender 198	Tender	Ranco	1987	Poor	Station 198
Medic Units & Others					
Medic 191	ALS Medic	Ford/Arrow	2018	Good	Station 190
Medic 193	ALS Medic	Ford	2012	Fair	Station 130
Rescue 191	Rescue	H&W	1999	Fair	Station 190
Q-190	QRU	Ford	2004	Poor	Station 190
CH-190	Chaplain	GMC	1999	Poor	Station 190
C-190	Command	Ford	2013	Good	Take home

The condition of SFD's apparatus vary from "Good" to "Poor" condition. Of its three engines and two medic units, one each is in "Good" condition. Two of its three water tenders are listed as "Poor."

Of its three engines, only one was rated in "Good" condition. Brush 198 is new, but the other two are rated as "Fair" and "Poor." Two of the water tenders are rated in "Poor" condition, with the third being "Fair." Medic 191 is fairly new and rated as "Good." In addition to the frontline apparatus, SFD maintains one engine and one medic unit in reserve, and a 20-foot Multiple Casualty Incident (MCI) trailer.

Southwestern Polk Rural Fire Protection District

The following figure lists the Sheridan Fire District's current frontline fleet inventory.

Figure 205: SWP Frontline Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines					
Engine 137	Engine	H&W	2001	Fair	Station 130
Engine 141	Engine	H&W	2001	Fair	Station 140
Engine 151	Engine	H&W	2001	Fair	Station 197
Tenders/Wildland/Command					
Tender 136	Water Tender	H&W	2001	Fair	Station 130
Tender 142	Water Tender	H&W	2001	Fair	Station 140
Brush 135	Brush	Cascade	2013	Good	Station 130
D138	Command	Ford	2019	Excellent	Station 130

The preceding figure shows that all of Southwestern Polk RFPD's engines and water tenders are listed as in a "Fair" condition. In addition to its frontline apparatus, Southwestern Polk also maintains one tender and one command vehicle in reserve.

West Valley Fire District

The following figure lists the current West Valley Fire District fleet inventory.

Figure 206: WVFD Current Frontline Fleet Inventory (2020)

Apparatus	Type	Make	Year	Condition	Location
Engines & Aerials					
Engine181	Engine	Pierce	2012	Fair	Station 180
Engine 182	Engine	KME	1999	Fair	Station 182
Engine 183	Engine	H&W	1991	Poor	Station 180
Ladder 182	Ladder	KME	1997	Fair	Station 182
Water Tenders & Wildland					
Brush 181	Brush	Ford	2005	Fair	Station 180
Brush 182	Brush	Ford	2001	Poor	Station 182
Brush 183	Brush	Ford	2013	Good	Station 190
Tender 183	Water Tender	Ranco	2001	Fair	Station 180
Medic Units & Staff Cars					
Medic 181	Medic	Braun NW	2011	Fair	Station 180
Medic 182	Medic	Medtec	2007	Fair	Station 182
Chief 191	Command	Ford	2007	Poor	Take home
Q-180	Staff	Ford	1999	Poor	Station 180

WVFD maintains two 2004 Wheeled Coach medic units in "Poor" condition in reserve, along with a 1994 water tender also in "Poor" condition. Of its four engines, three were in "Fair" condition, with the fourth considered "Poor." Only one of its brush trucks was in "Good" condition. Both medic units were rated a "Fair."

Combined Apparatus Inventory

The next figure lists the collective fleet inventories of the study participants.

Figure 207: Combined Frontline Inventories of the Fire Districts (2020)

Department/District	Engines	Medics	Aerials	Tenders	Wildland
Amity Fire District	3	0	0	2	6
Dayton Fire District	4	0	0	3	3
Dundee Fire District	3	0	0	1	2
Lafayette Fire Department	2	0	0	0	1
McMinnville Fire Department	3	7	1	2	2
New Carlton Fire District	3	0	0	1	3
Sheridan Fire District	3	2	0	3	3
Southwestern Polk RFPD	3	0	0	2	1
West Valley Fire District	3	2	1	1	3
Totals:	**27**	**11**	**2**	**15**	**24**
Combined Average Age:	**19 years**	**7 years**	**14 years**	**26 years**	**15 years**

The combined average ages of the engines and tenders are relatively old when considering the life-cycle standard used by many departments. The average age of the two aerials is somewhat misleading as one is five years of age and the other 23 years.

Collective Summary of Apparatus Conditions

The next figure is a collective summary of the current conditions of the various frontline apparatus and medic units of the study participants. Reserve apparatus were excluded.

Figure 208: Collective Summary of Apparatus & Medic Unit Conditions (2020)

Apparatus	Engines	Aerials	Tenders	Wildland	Medics
Excellent	14%	50%	7%	10%	0%
Good	31%	50%	20%	38%	45%
Fair	48%	0%	47%	45%	55%
Poor	7%	0%	27%	7%	0%

As shown, the majority of engines, tenders, wildland units, and medic units had a condition rating of "Fair." When combined, about 45% of the engines were either in "Good" or "Excellent" condition. The two aerial apparatus were considered as either "Excellent" or "Good." The Medic Units had a relatively large (55%) percentage of "Fair" ratings.

Future Apparatus Serviceability

An important consideration when evaluating the feasibility of consolidating fire departments into a combined organization is the cost associated with the future replacement of major equipment. Apparatus service lives can be readily predicted based on factors including vehicle type, call volume, age, and maintenance considerations.

NFPA 1901: *Standard for Automotive Fire Apparatus* recommends that fire apparatus 15 years of age or older be placed into reserve status, and apparatus 25 years or older should be replaced.[3] This is a general guideline, and the standard recommends using the following objective criteria in evaluating fire apparatus lifespan:

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

It is important to note that age is *not* the only factor for evaluating serviceability and replacement. Vehicle mileage and pump hours on engines must also be considered. A two-year-old engine with 250,000 miles may need replacement sooner than a 10-year-old one with 2,500 miles. The following figure represents a relatively simple example that the departments can use for determining the condition of fire apparatus and vehicles.

[3] NFPA 1901: Standard for Automotive Fire Apparatus; Section D.3.

Figure 209: Example Criteria & Method for Determining Apparatus Replacement

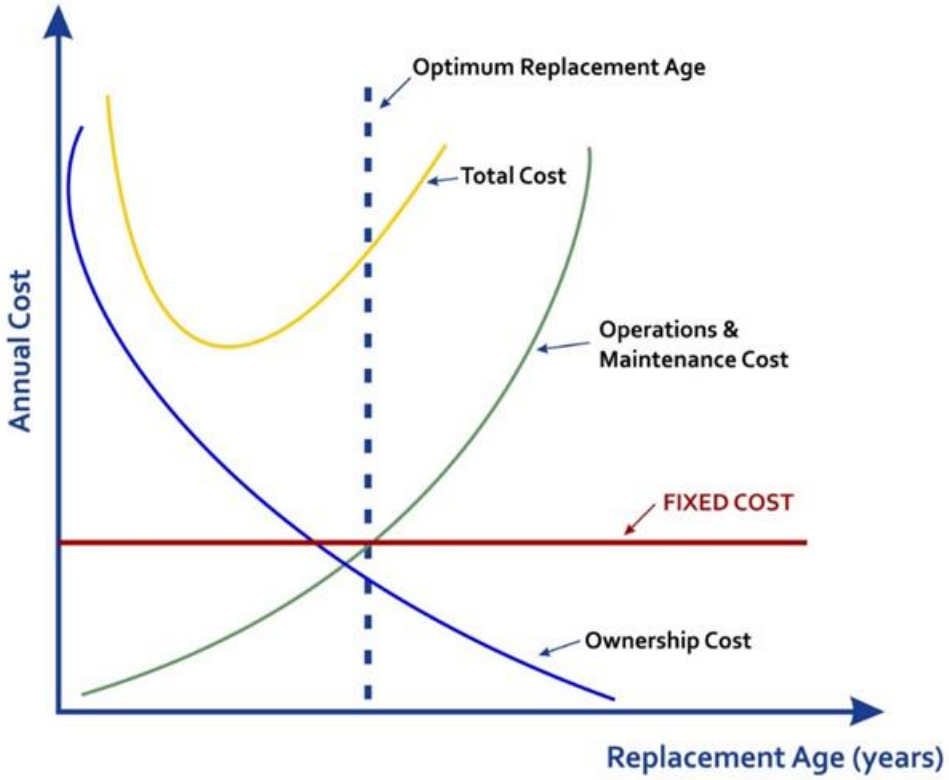
Evaluation Components	Points Assignment Criteria
Age:	One point for every year of chronological age, based on in-service date.
Miles/Hours:	One point for each 10,000 miles or 1,000 hours
Service:	1, 3, or 5 points are assigned based on service-type received (e.g., a pumper would be given a 5 since it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

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

Economic Theory of Apparatus Replacement

Another method is the conceptual model utilized by some fire departments and called 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 of time. The following figure illustrates the *Economic Theory of Vehicle Replacement*.

Figure 210: Economic Theory of Vehicle Replacement



Shortening the replacement cycle to this window allows an apparatus to be replaced at optimal savings to the fire department. If an agency 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. Fire officials, who assume that deferring replacement purchases is a good tactic for balancing the budget, need to understand two possible outcomes that may occur because of that decision:

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

Fleet Maintenance

Fleet maintenance and repair services vary among the nine study participants. Some outsource services, others use internal fleet maintenance departments, while others utilize a combination of the two. Fleet maintenance and repair services is one area where consolidation can result in greater efficiencies and potential cost-savings.

The following lists each jurisdiction's sources for fleet maintenance:

- **Amity**: Amity Truck & Tractor Repair
- **Dayton**: Amity Truck & Tractor Repair, Benton County Public Works, in-house
- **Dundee**: Forest Glen Auto Repairs, in-house staff
- **Lafayette**: Hofrichter Repair and True North Emergency Equipment
- **McMinnville**: Benton County Public Works, Forest Glen Auto Repairs, Performance Air
- **New Carlton**: Carlton Truck Shop, Advance Diesel Repair
- **Sheridan**: City of Dallas Fleet Division, in-house staff, Amity Truck & Tractor Repair
- **Southwestern Polk**: City of Dallas Fleet Division, True North Emergency Equipment, Peterson Trucks
- **West Valley**: City of Dallas Fleet Division, in-house staff, various other vendors

As shown, while some agencies share the same fleet maintenance facility (e.g., City of Dallas Fleet Division, Amity Truck & Tractor Repair, Forest Glen Auto Repairs, etc.), most utilize different vendors and facilities to maintain their apparatus and vehicles. In a potential consolidation, this presents an opportunity for a single fire department to negotiate all fleet maintenance at a lower cost.

Those vendors and fire department staff responsible for managing and maintaining the fleet should be concerned about aging apparatus and vehicles, and ensure that a funded replacement schedule is in place. As frontline units age, fleet costs will naturally be higher and more downtime associated with necessary repairs and routine maintenance.

Other Capital Equipment

Medical Equipment

Since calls for EMS represent the highest demand for service among the study participants, ESCI elected to list their respective capital medical equipment inventories. Acquiring cardiac monitor/defibrillators and Automated External Defibrillators (AED) is a substantial financial investment, and a critical piece of equipment for use in emergency medical calls.

The fire agencies in this study provide medical first-response, ambulance transport, or both. Therefore, in a potential consolidation, medical equipment compatibility can be an important issue. The following figure lists the study participant's cardiac monitor and AED inventories.

Figure 211: Combined Inventories of Cardiac Monitors & AEDs (2020)

Model	Manufacturer	Qty.	Purchase Year
Amity			
HeartStart® FR3 AED	Philips	1	2016
HeartStart® FRx AED	Philips	2	2016
Dayton			
Lifepak® 15 Monitor/Defibrillator	Physio-Control	1	Not reported
Lifepak® 1000 AED	Physio-Control	1	Not reported
HeartStart® AED	Philips	4	2017
Dundee			
HeartStart® MRx Monitor/Defibrillator	Philips	2	2018 (used)
M Series® Monitor/Defibrillator	Zoll	1	2008
AED Plus®	Zoll	3	*Not reported*
Lafayette			
None reported	N/A	N/A	N/A
McMinnville			
HeartStart® MRx Monitor/Defibrillator	Philips	7	2008–2017
New Carlton			
Lifepak® 1000 AED	Physio-Control	3	2006
HeartStart® FRx AED	Philips	1	2018
Sheridan			
X Series® Monitor/Defibrillator	Zoll	2	2015
Southwestern Polk			
None in inventory	N/A	N/A	N/A
West Valley			
X Series® Monitor/Defibrillator	Zoll	4	2014

As shown in the preceding figure, the fire agencies utilize a variety of AED and monitor/defibrillator models and manufacturers. Devices manufactured by *Philips® North America Corporation* and *ZOLL® Medical Corporation* are predominant among the study participants. Two of the districts providing ALS transport use the Zoll X Series cardiac monitor/defibrillator, and one uses the Philips HeartStart® MRx monitor/defibrillator.

Another significant capital expense for fire departments providing patient transport, regardless of the level of service provided, are ambulance cots (also referred to as "stretchers"). The following figure lists the ambulance cots and stair chairs utilized by each department. As shown, the PowerPro XT and MX Pro (Stryker Corporation®) are the ambulance cots used most frequently among the study participants.

Figure 212: Combined Inventories of Ambulance Cots & Patient Movement Equipment

Model	Manufacturer	Qty.	Description
McMinnville			
Power Pro XT	Stryker®	7	Ambulance cot
MTS Power Loader	Stryker®	2	Powered cot loader
Stair-PRO	Stryker®	6	Stair chair
Sheridan			
Power Pro XT	Stryker®	2	Ambulance cot
Stair-PRO	Stryker®	2	Stair chair
West Valley			
PowerPro XT	Stryker®	2	Ambulance cot
MX Pro	Stryker®	2	Ambulance cot
Stair-PRO	Stryker®	2	Stair chair
MX Pro	Stryker®	1	Bariatric cot

In the event of a consolidation, it will be important for those fire agencies providing transport to standardize the ambulance cots. This is important not only for patient safety, but also for the safety of the firefighters assigned to those units. All three transport providers utilize Stryker® ambulance cots and stair chairs.

Extrication Equipment

An inventory of the fire agencies indicated sufficient equipment resources necessary for vehicle extrication and other light to medium rescue incidents. Several of the fire departments maintain airbag systems, powered extrication tools with spreaders, cutters, rams, and other accessories.

Capital Improvement & Replacement Planning

The following figures show each agency's capital planning and improvement processes.

Figure 213: Capital Improvement Planning by the Study Participants (Part A)

Description	AFD	DFD	DDF	LFD	MFD
Facilities CIP	No	Yes	No	Yes	Yes
Apparatus CIP	No	Yes	Yes	No	Yes
Funding Identified	N/A	Yes	Yes	N/A	Yes
Equipment CIP	No	No	Yes	No	Yes
Funding Identified	N/A	No	Yes	N/A	Yes

Figure 214: Capital Improvement Planning by the Study Participants (Part B)

Description	NCFD	SFD	SWP	WVFD
Facilities CIP	No	No	Yes	No
Apparatus CIP	No	Yes	Yes	Yes
Funding Identified	N/A	Yes	Yes	Yes
Equipment CIP	No	No	No	Yes
Funding Identified	N/A	N/A	N/A	Yes

Regardless of its net effect on current apparatus costs, the deferral of replacement purchases unquestionably increases future replacement spending needs and may impact operational capabilities and safe and efficient use of the apparatus.

APPENDIX F: TABLE OF FIGURES