



Kent Taylor Civic Hall
200 NE Second Street
McMinnville, OR 97128

City Council Meeting Agenda
Tuesday, December 08, 2020
5:30 p.m. – Work Session
7:00 p.m. – Regular Council Meeting
REVISED 12/07/2020

*Welcome! The public is welcome to attend, however if you are not feeling well, please stay home and take care of yourself. In accordance with Governor Kate Brown's Executive Order we are limiting the amount of people at Civic Hall and if we meet capacity we may ask you to leave. **With new face covering mandate all who wish to attend public meetings must wear a face mask or some kind of face covering is required.***

The public is strongly encouraged to relay concerns and comments to the Council in one of three ways:

- *Email at any time up to 12 p.m. the day of the meeting to Claudia.Cisneros@mcminnvilleoregon.gov;*
- *If appearing via telephone only please sign up prior to the meeting by emailing the City Recorder at Claudia.Cisneros@mcminnvilleoregon.gov as the chat function is not available when calling in zoom;*
- *Join the zoom meeting; send a chat directly to City Recorder, Claudia Cisneros, to request to speak and use the raise hand feature in zoom to request to speak, once your turn is up we will announce your name and unmute your mic.*

*You can live broadcasts the City Council Meeting on cable channels Xfinity 11 and 331, Frontier 29 or webstream here:
www.mcm11.org/live*

CITY COUNCIL WORK SESSION & REGULAR MEETING:

You may join online via Zoom Meeting:

<https://mcminnvilleoregon.zoom.us/j/93196505387?pwd=OVLzb01zbUpHTEhSYmJWk9mQVppdz09>

Zoom ID: 931-9650-5387

Zoom Password: 174420

Or you can call in and listen via zoom: 1-253- 215- 8782

ID: 931-9650-5387

5:30 PM – COUNCIL WORK SESSION – VIA ZOOM & COUNCIL CHAMBERS

1. CALL TO ORDER
2. FEASIBILITY STUDY UPDATE
3. ADJOURNMENT

7:00 PM – REGULAR COUNCIL MEETING – VIA ZOOM & COUNCIL CHAMBERS

1. CALL TO ORDER & ROLL CALL
2. INVITATION TO CITIZENS FOR PUBLIC COMMENT – *The Mayor will announce that any interested audience members are invited to provide comments. Anyone may speak on any topic other than: a matter in litigation, a quasi-judicial land use matter; or a matter scheduled for public hearing at some future date. The Mayor may limit comments to 3 minutes per person for a total of 30 minutes. The Mayor will read comments emailed to City Recorder and then any citizen participating via Zoom.*

3. ADVICE/ INFORMATION ITEMS

- a. Reports from Councilors on Committee & Board Assignments
- b. Department Head Reports

4. CONSENT AGENDA

- a. Consider request from Evensong Winery located at 2803 NE Orchard Ave for an OLCC Winery 1st Location Liquor License.
- b. Consider request from Chipotle Mexican Grill, Inc. located at 2696 N Hwy 99W for an OLCC Limited On-Premises Liquor License.
- c. Consider Resolution No. **2020-68**: A Resolution approving the issuance of the certificate for the canvass of the returns of the votes cast at the General Election conducted on November 3, 2020, electing of three City Councilors and Mayor.
- d. Consider Resolution No. **2020-69**: A Resolution of the City of McMinnville Approving a Personal Services Contract with Erskine Law Practice, LLC to Provide City Prosecutorial Services.

5. RESOLUTION

- a. Consider **Resolution No. 2020-66**: A Resolution initiating the proceedings and setting a date and time for a public hearing to vacate SE Chandler Avenue east of SE Davis Street (RV 1-20).
- b. Consider **Resolution No. 2020-67**: A Resolution Adopting the City of McMinnville Representation in the Updates to the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan.
- c. Consider **Resolution No. 2020-70**: A Resolution appointing and re-appointing members to the various Boards, Committees, and Commissions **(Added 12/7/2020)**

6. ORDINANCE

- a. Second reading of **Ordinance No. 5098**: An Ordinance Adopting Certain Amendments to the McMinnville Comprehensive Plan Map, Comprehensive Plan and McMinnville Municipal Code (Chapter 17), Approving the McMinnville Growth Management and Urbanization Plan and Its Appendices, And Adding Land Supply to McMinnville's Urban Growth Boundary. **(Revised 12/7/2020)**

7. ADJOURNMENT



Yamhill & Polk Counties Fire Departments & Districts

McMinnville, Oregon

December 2020

Fire District & Departments Consolidation Feasibility Study

An Evaluation of the Potential for Consolidation

ESCI Emergency Services
Consulting International

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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
Operations 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:

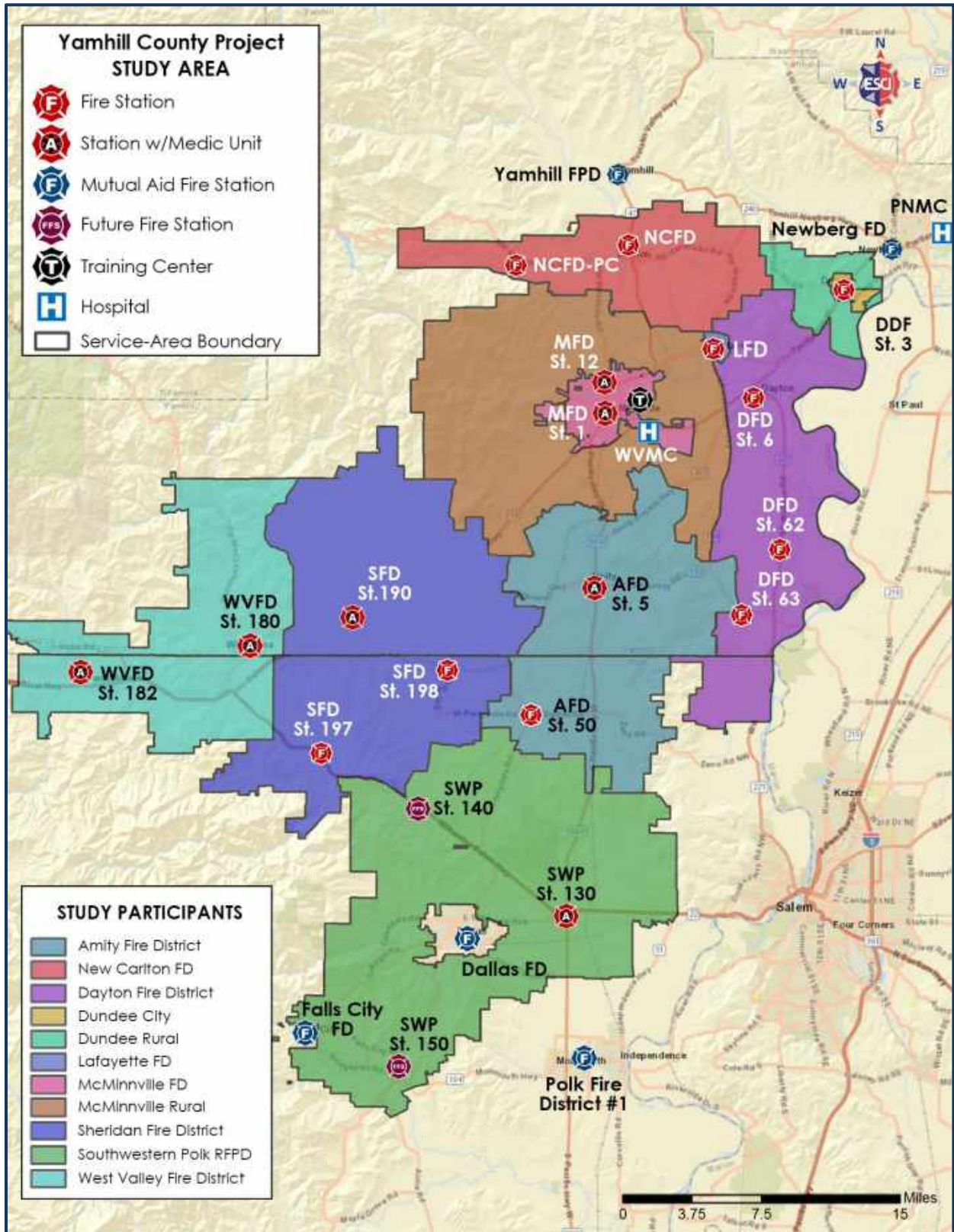
- Amity Fire District (AFD)
- Dayton Fire District (DFD)
- Dundee Fire District (DDF)
- Layfayette Fire Department (LFD)
- McMinnville Fire Department (MFD)
- New Carlton Fire District (NCFD)
- Sheridan/SW Polk/West Valley Fire Districts (SFD/SWP/WVFD or the Collective Fire Districts)

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



OVERVIEW OF THE COUNTIES

The following section represents a general demographic overview of Yamhill County and Polk County. It is not intended to provide a detailed demographic perspective of each fire district and city, but a basic viewpoint of the two counties.

Yamhill County

Yamhill County is the fifth-smallest county in Oregon by area, and is located about 15 miles southwest of the City of Portland. It is comprised of approximately 718 square miles, of which 716 square miles consist of land, and 2.5 square miles of water.¹ The Willamette River represents the County's eastern boundary. One-third of the County is covered with commercial timber.² The City of McMinnville serves as the county seat.

Figure 2: Yamhill & Polk Counties



Population Characteristics

The County's 2018 population estimate was 107,002 persons.³ As of 2017, just over 12% of the County's population was 9 years of age or less, with approximately 22% aged 60 years and older, and a median age of 38.2 years. The majority of the population was comprised of white persons, followed by Hispanics at nearly 16%.⁴

Interestingly, the population was evenly split between males and females. Overall, 13.7% of the population was below the poverty level, with nearly 12% of males and 16% of females considered below the poverty level.⁵

Housing

As of 2017, the U.S. Census Bureau estimated that there were 38,286 housing units in Yamhill County, of which 2,334 (6%) were vacant. About 68% are owner-occupied and 32% renter-occupied.⁶ The majority (70%) of homes were built between 1970 and 2009. Just over 27% of residential units were built prior to 1969.

¹ U.S. Census Bureau.

² Yamhill County, Oregon website.

³ Ibid.

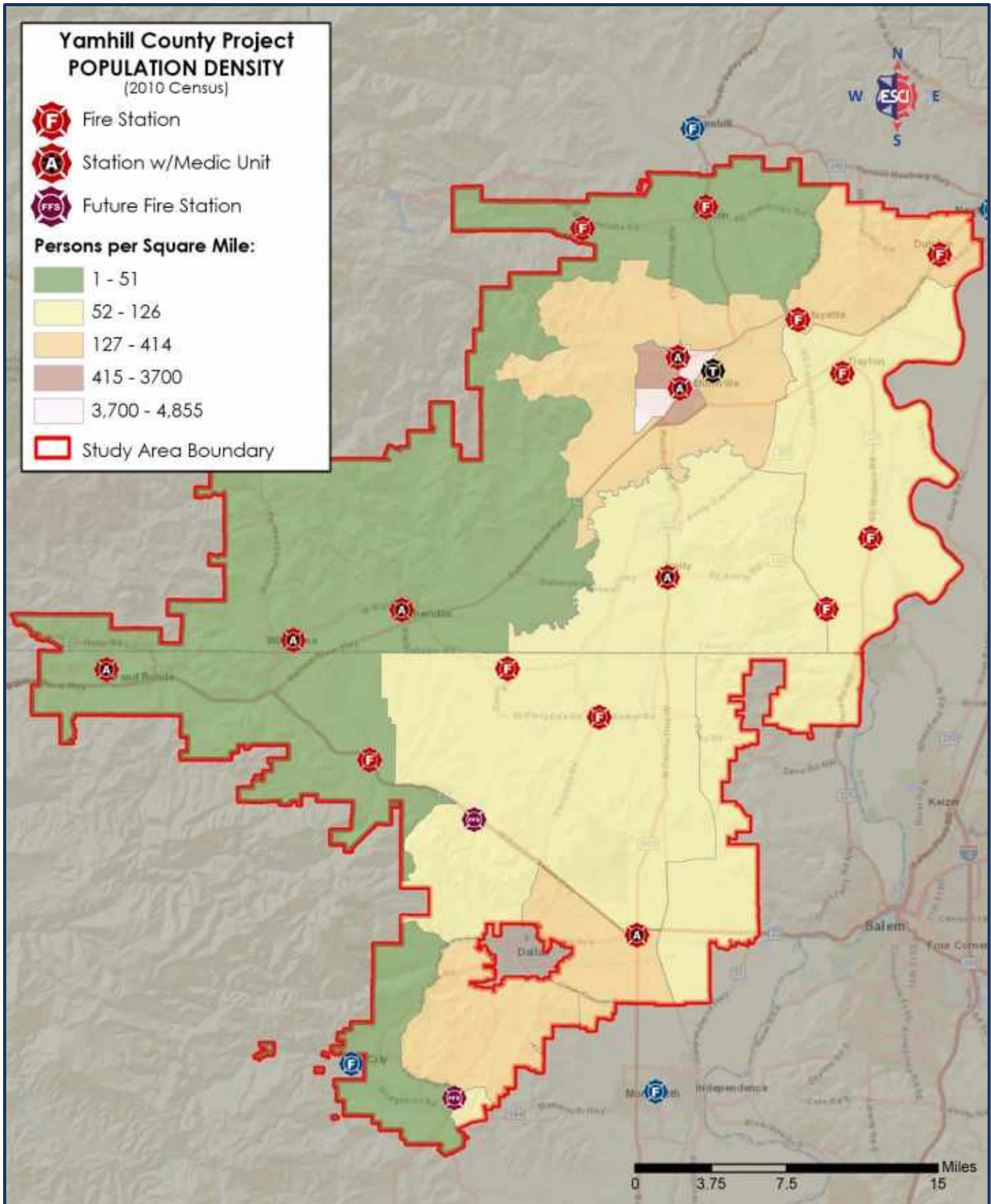
⁴ American Community Survey, U.S. Census Bureau.

⁵ Ibid.

⁶ American Community Survey, U.S. Census Bureau.

Figure 3: Study Area Population Density

Source: 2010 U.S. Census Bureau



Polk County

Polk County is contiguous with the southern boundary of Yamhill County. It is comprised of approximately 744 square miles, of which 741 square miles consist of land, and 3.1 square miles of water.⁷ About two-thirds of the County, in the western portion, consists of forest. The county seat is the City of Dallas.

Population Characteristics

Polk County's 2018 population estimate was 85,234 persons. As of 2017, nearly 13% of the County's population was 9 years of age or less, with just over 23% aged 60 years and older, and a median age of 37.3 years. The majority of the population was comprised of white persons, followed by Hispanics at just over 13%.⁸

Nearly 49% of the population consisted of males, and just over 51% females. Overall, 13.7% of the population was below the poverty level, with 14.5% of males and just over 16% of females considered below the poverty level.

Estimated Population of the Fire Department Service Areas

The following figure lists the *estimated* populations of the service areas of each agency, which do not include the transient population estimates. It is important to emphasize that these figures are estimates based on the latest available data.

Figure 4: Estimated Service Area Populations of the Fire Agencies (2018)

Department/District	Population Estimate
Amity Fire District	3,000
Dayton Fire District	6,000
Dundee Fire District	5,499
Lafayette Fire Department	4,309
McMinnville Fire Department	39,896
New Carlton Fire District	2,183
Sheridan Fire District	8,345
Southwestern Polk RFPD	7,237
West Valley Fire District	5,367
Estimated Total:	81,836

⁷ U.S. Census Bureau.

⁸ American Community Survey, U.S. Census Bureau.

Housing

As of 2017, the U.S. Census Bureau estimated that there were 31,403 housing units in Polk County, of which 2,275 (7%) were vacant. About 65% are owner-occupied and 35% renter-occupied.⁹ The majority (68%) of homes were built between 1970 and 2009. Nearly 29% of residential units were built prior to 1969.

⁹ American Community Survey, U.S. Census Bureau.

Section I: BASELINE AGENCY EVALUATIONS

ORGANIZATIONS OVERVIEW

The next section entails a general overview of each of the fire districts and fire departments participating in this study.

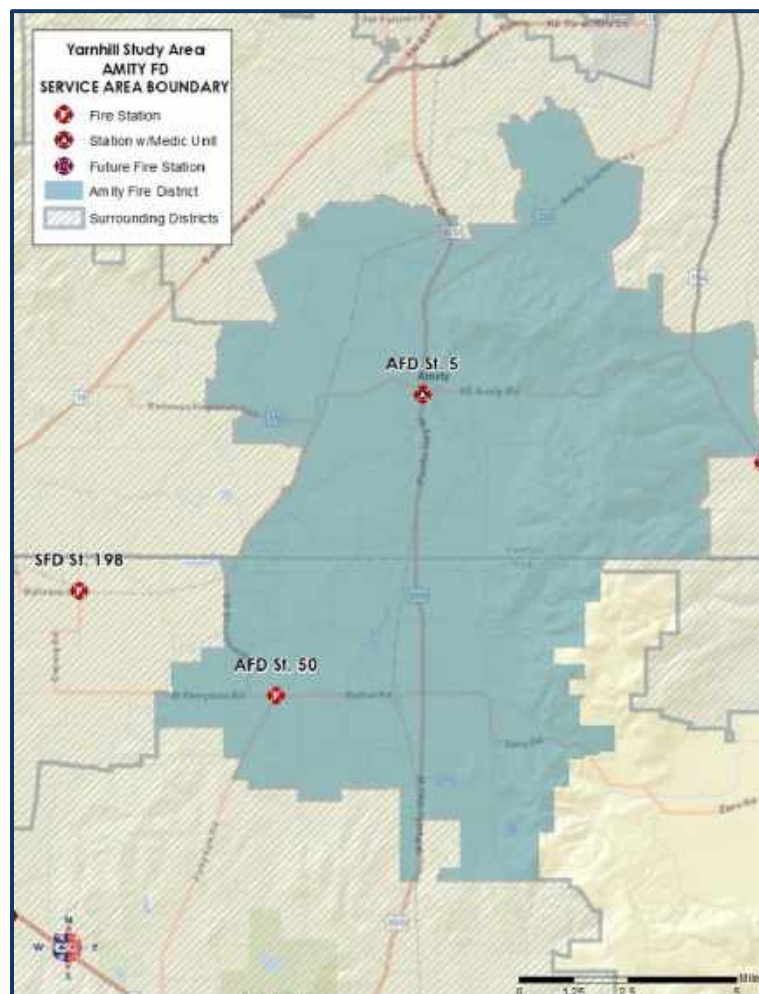
Amity Fire District

AFD is a rural fire protection district located in the Northwestern Willamette Valley with a history dating back to 1895. The District estimates that it has a predominantly rural population of approximately 3,000 permanent residents, which includes the City of Amity with a 2018 estimated population of 1,782 persons.¹⁰

AFD Service Area

The following figure illustrates the Amity Fire District boundaries and service area.

Figure 5: AFD Service Area Map

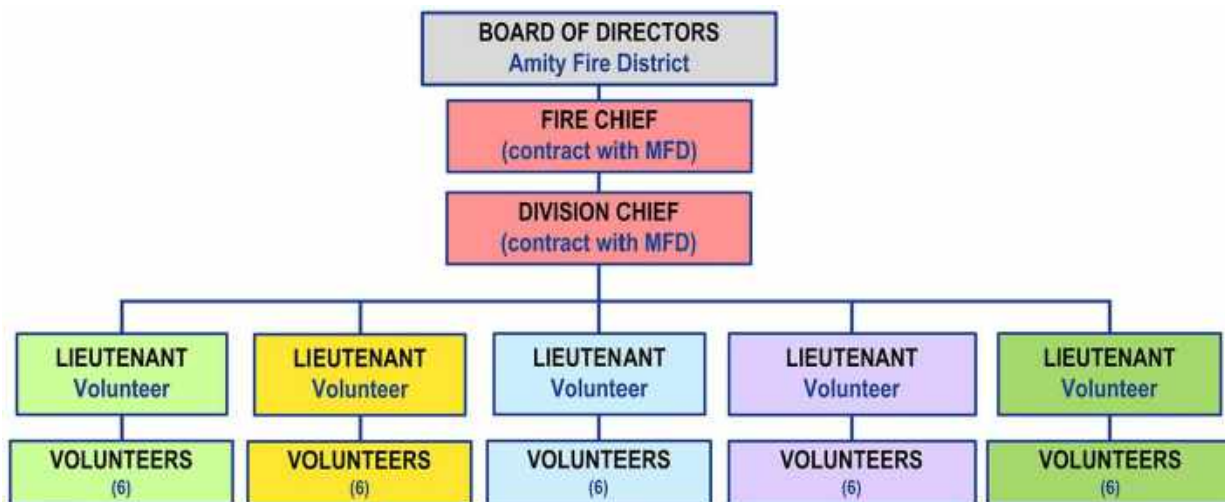


¹⁰ American Community Survey, U.S. Census Bureau.

AFD Organizational Structure

The following figure illustrates the current organizational structure of the Amity Fire District. An elected 5-member Board of Directors oversees the District.

Figure 6: Amity Fire District Organizational Chart (2020)



Through an interlocal agreement with the District, the McMinnville Fire Department provides its Fire Chief and Division Chief to oversee, administer, and support AFD and its personnel. AFD employs one part-time District Clerk, with the remaining personnel being volunteers, five of whom have the rank of Lieutenant.

AFD Operations & Deployment Overview

The Amity Fire District provides traditional fire protection services along with medical first response (MFR) at the Basic Life Support (BLS) and Advanced Life Support (ALS) levels. The District does not provide special operations, but does train its volunteers to the Hazardous Materials Operations level. In addition, AFD provides fire inspections, plans review, fire and arson investigation, and public education and prevention programs.

Operating from two fire stations, the Amity Fire District deploys its apparatus utilizing a combination of volunteer officers and volunteer firefighters. Through an intergovernmental agreement, the McMinnville Fire District provides an ALS medic unit Monday through Friday, 40 hours weekly.

The District has an *Insurance Services Office (ISO) Public Protection Classification (PPC®)* score of 4/10 (4 within a 10-mile radius and 10 beyond that).

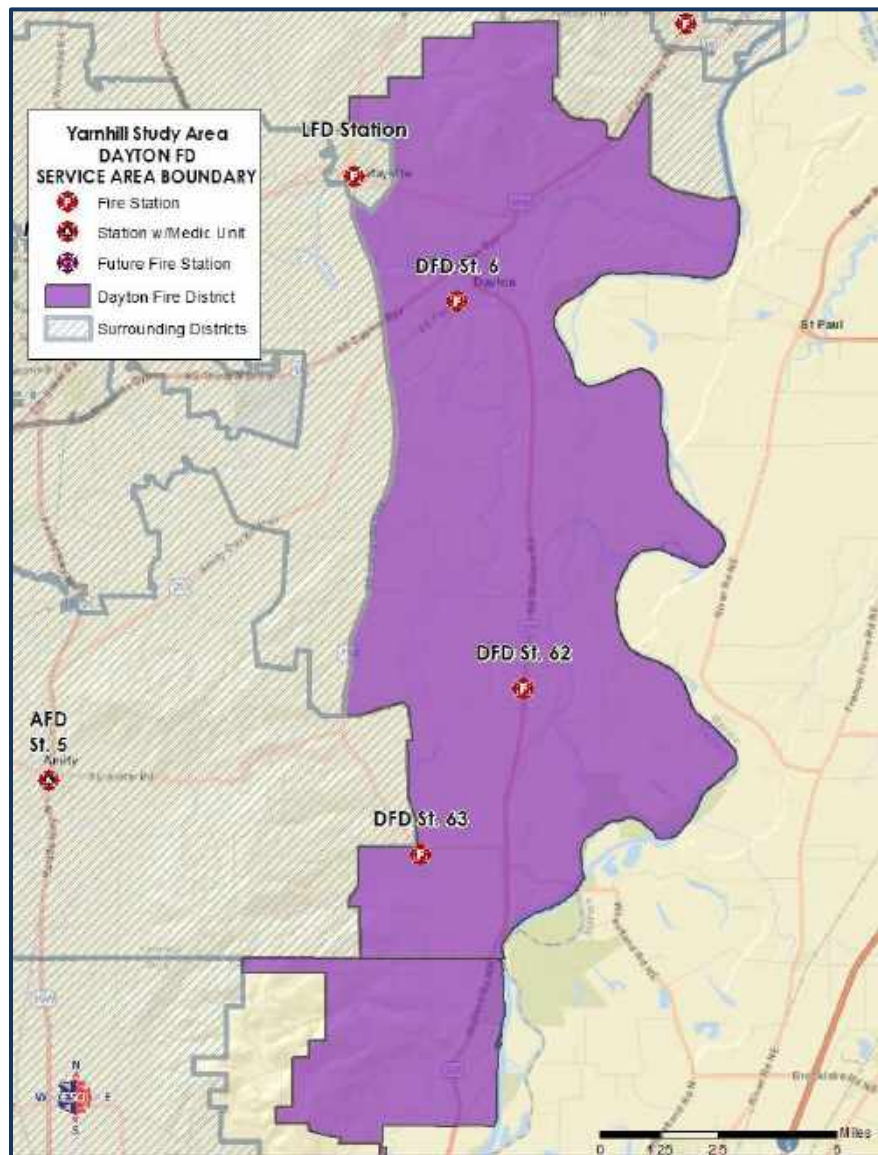
Dayton Fire District

Originally formed in 1898, DFD is a rural fire protection district based out of the City of Dayton with a service area of approximately 80 square miles. An elected Board of Directors oversees DFD. The District estimates that it provides service to a total of nearly 6,000 permanent residents. The 2018 estimated population of Dayton was 2,643 persons.¹¹

DFD Service Area

The following figure illustrates the Dayton Fire District boundaries and service area.

Figure 7: DFD Service Area Map



¹¹ American Community Survey, U.S. Census Bureau.

DFD Operations & Deployment Overview

The Dayton Fire District is an all-volunteer agency that provides traditional fire protection services along with MFR from its main fire station and two substations. EMS is provided by approximately 31 volunteers, of which 29 are certified at the BLS level, and two are certified Paramedics. The main station is located in the center of the City of Dayton. In 2019, DFD received a PPC® score of 5 from ISO.

Dundee Fire District

For the purposes of this study, ESCI will use the title, "Dundee Fire District" in reference to Dundee Fire/Rescue or the Dundee Fire Department. Dundee is a municipal, combination fire department that was originally established in 1935. DDF is overseen by the Fire Chief, who answers to the Dundee City Administrator and an elected seven-member Dundee City Council.

The Dundee Fire District has a service area comprised of the City limits of nearly 1.4 square miles. In addition, through a contractual arrangement, DDF provides service to the Dundee Rural Fire Protection District (DRFPD), which comprises the rural areas surrounding the City. Combined, the City and DRFPD consist of approximately 14 square miles.

Dundee Rural Fire Protection District

DRFPD is overseen by a five-member elected Board of Directors, one of whom is appointed President, and two others as Secretary and Treasurer. The District does not maintain its own assets for fire protection and EMS, but instead relies on DDF. Funding for the agreement comes from property taxes.

The estimated 2018 population of the City of Dundee was 3,299 permanent residents.¹² The is in contracts to the Department estimates an approximate population in DRFPD of over 2,200 persons in the last ESCI report from 2006.¹³ In addition, DDF estimates that approximately 30,000 non-residents commute to and from Dundee daily.¹⁴

¹² American Community Survey, U.S. Census Bureau.

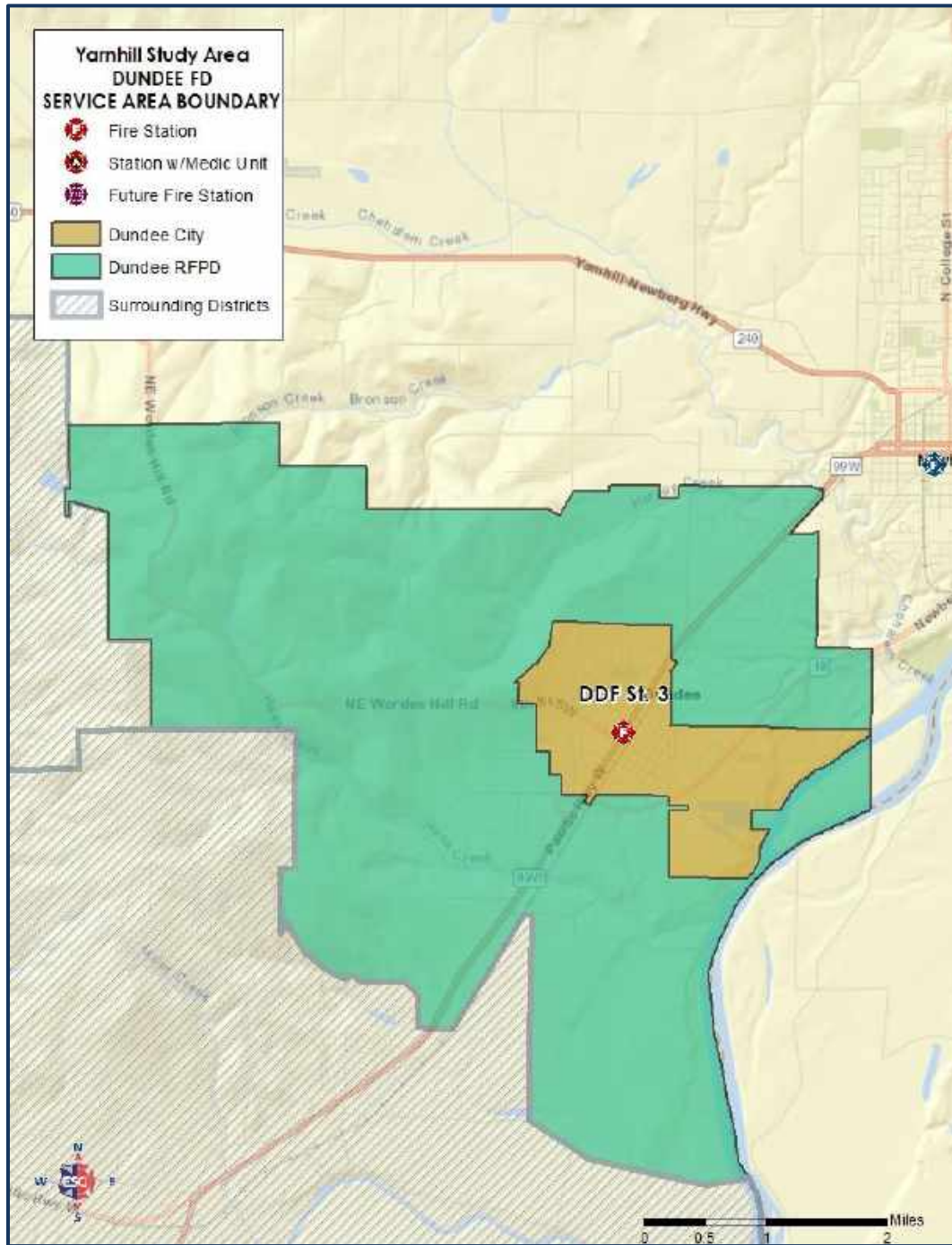
¹³ Dundee Fire Department Evaluation, ESCI (2006).

¹⁴ City of Dundee, Oregon; Dundee Fire Department website.

DDF Service Area

The following image shows the overall service area of DDF, which includes the boundaries of the City of Dundee and the Dundee Rural Fire Protection District.

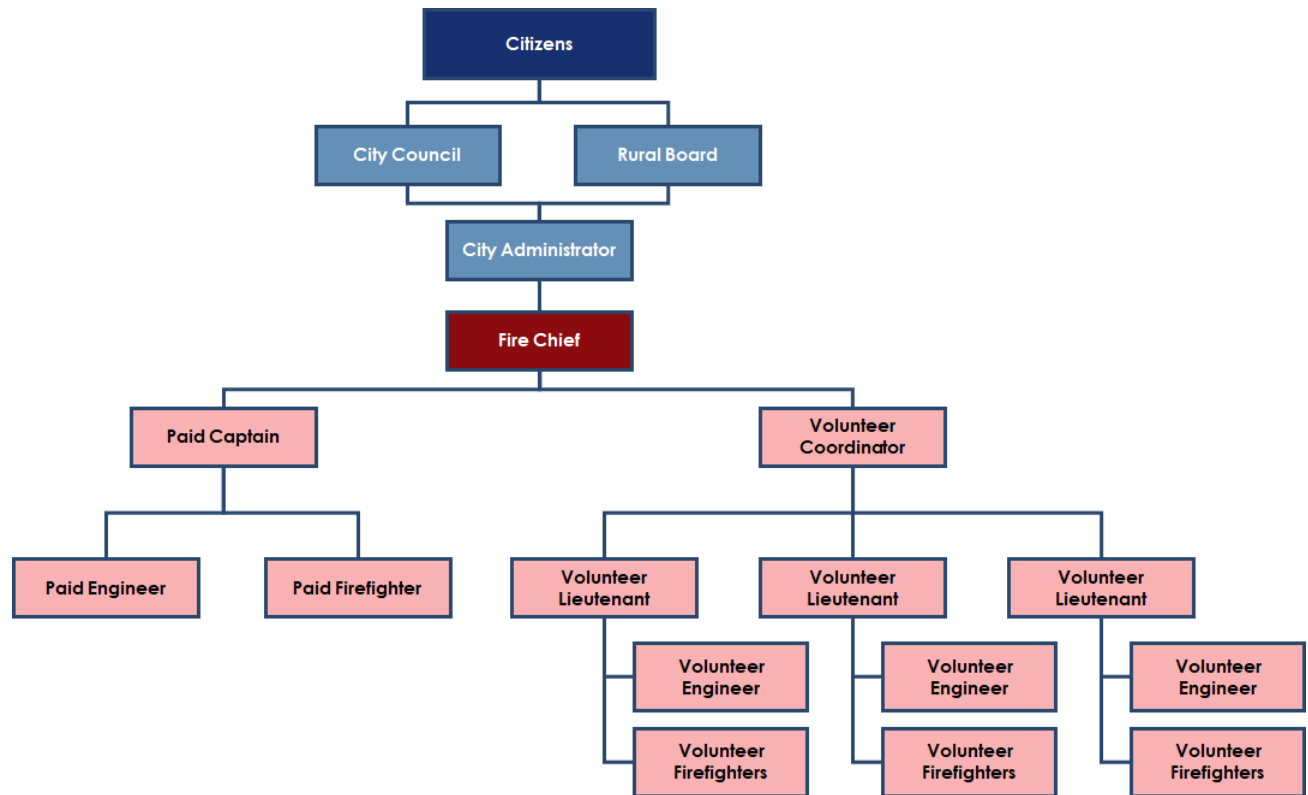
Figure 8: DDF Services Area Map



Dundee Fire District Organizational Structure

The next figure illustrates the current DDF organizational structure.

Figure 9: Dundee Fire/Rescue Organizational Chart (2020)



As shown, the Fire Chief supervises the career staff of Lieutenants, Engineers, Drivers, and firefighters, and volunteer personnel. One Lieutenant each is assigned the responsibility of Emergency Medical Services or Training. Two Lieutenant positions are currently unfilled. While the Fire Chief answers directly to the City Administrator, the DRFPD Board of Directors provides direction concerning services provided to the rural area.

The Department provides basic fire inspections, plan reviews, fire and arson investigations, and various public education and prevention activities.

DDF Operations & Deployment Overview

Dundee provides traditional fire protection services along with medical first-response at the BLS level. ALS transport is provided by Tualatin Valley Fire & Rescue (TVF&R). Apparatus and personnel are deployed from its main fire station located in the City of Dundee. The last ISO rating of DDF was in 2000, which was assigned a PPC® score of 4/4Y/9. DDF's communications center is in Newberg along with the new P25 compliant radio tower that operates on the WCCCA system along with radio infrastructure.

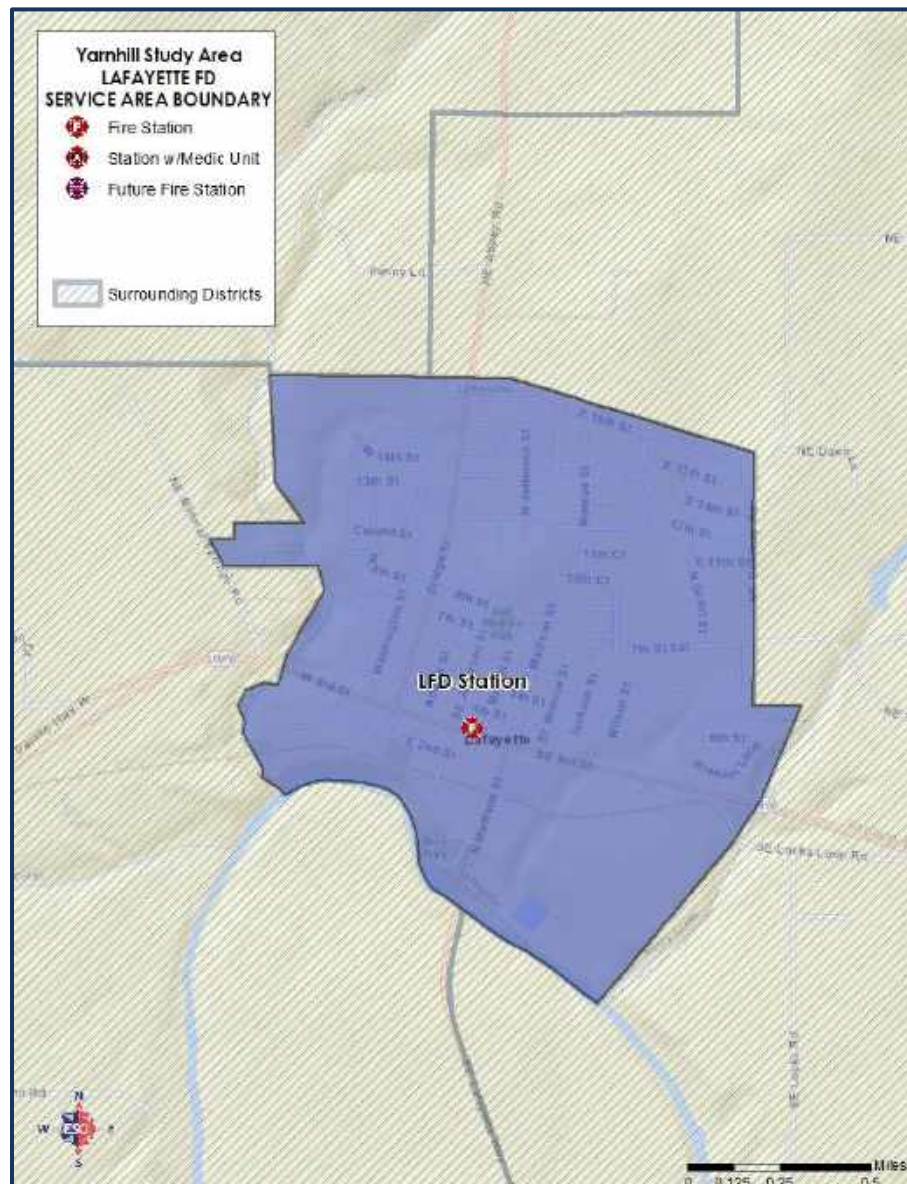
Lafayette Fire Department

The Lafayette Fire Department is a municipal organization overseen by an elected seven-member Lafayette City Council. The Fire Chief reports directly to the City Administrator. LFD's service area is comprised of approximately 0.89 square miles consisting of an estimated 2018 population of 4,309 persons.¹⁵

LFD Service Area

LFD's service area is predominantly urban. The following figure illustrates LFD's service area.

Figure 10: LFD Service Area Map



¹⁵ American Community Survey, U.S. Census Bureau.

Lafayette Fire Department Organizational Structure

The following figure is an illustration of the current Lafayette Fire Department organizational structure as of 2020.

Figure 11: LFD Organizational Chart (2020)



Being a municipal agency, the Lafayette Fire Chief (who also serves as the New Carlton Fire Chief) reports to the Lafayette City Administrator. As shown, the Fire Chief oversees the volunteer firefighters and one seasonal firefighter.

LFD Operations & Deployment Overview

LFD deploys its apparatus and volunteer firefighters from its single station. The Department provides traditional fire protection services and medical first-response primarily at the BLS level. LFD does not provide special operations services such as technical rescue. The latest ISO rating was completed in March 2019, which resulted in a PPC® score of 3.

The Department provides limited fire inspections, fire and arson investigations, public education and prevention programs, and no plan reviews.

McMinnville Fire Department

MFD is a municipal fire department founded prior to 1900. The Department is overseen by an appointed Fire Chief who answers to the McMinnville City Manager and elected seven-member City Council.

MFD's service area is comprised of approximately 7 square miles within the City limits, as well as another 97.9 square miles that comprise the McMinnville Rural Fire Protection District (MRFPD). The Department provides emergency medical transport services according to an Ambulance Service Area Plan assigned and approved by the State of Oregon.¹⁶ The estimated 2019 City population is 34,617, while the MRFPD's population estimate was 5,279—for a total of 39,896.¹⁷

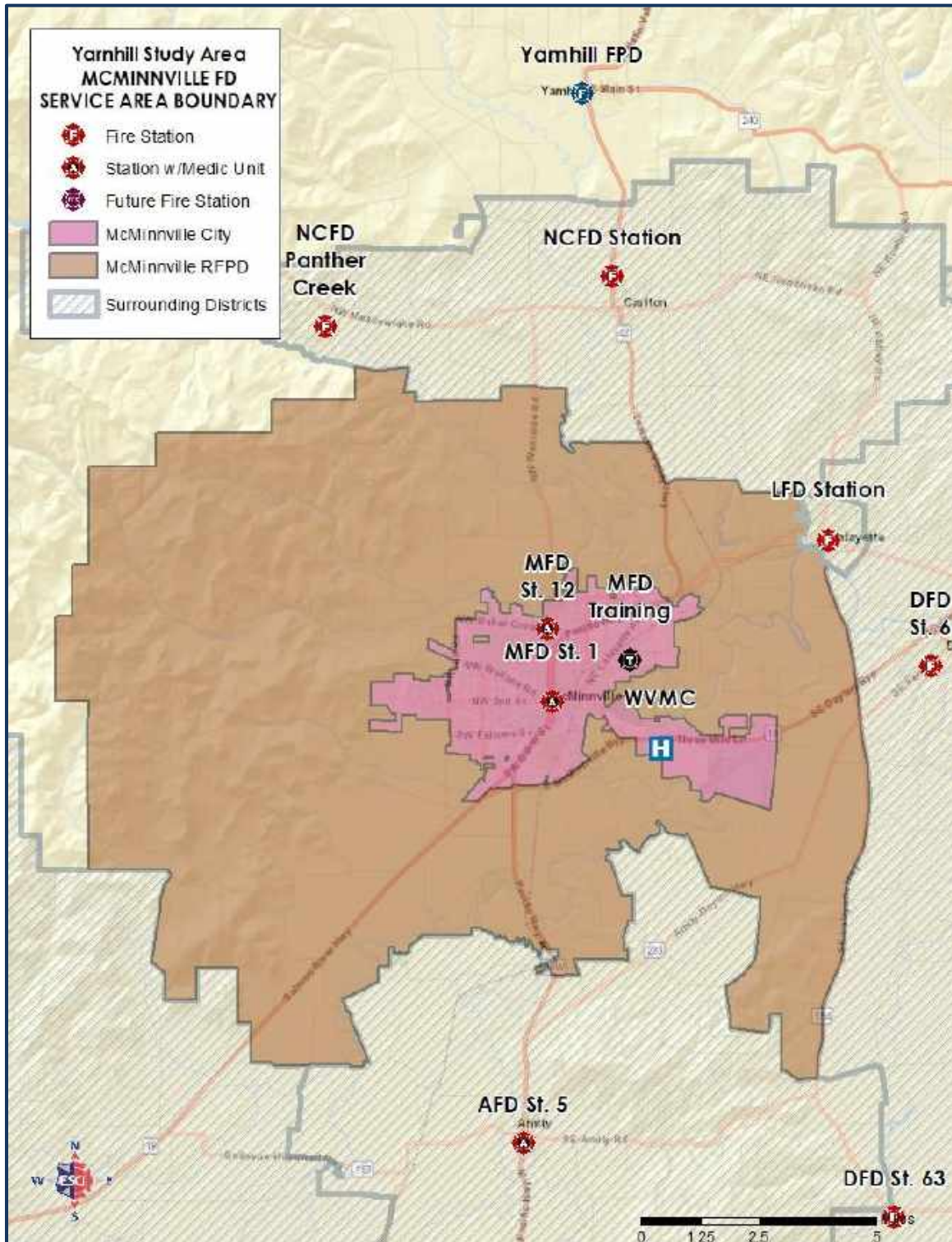
McMinnville Service Area

The following figure shows the service area boundaries of the McMinnville Fire Department, including the boundaries of the McMinnville Rural Fire Protection District.

¹⁶ Ambulance Service Areas are defined as a geographic area which is served by one ambulance service provider, and may include all or a portion of a county, or all or portions of two or more contiguous counties.

¹⁷ 2019 Population Estimates, U.S. Census Bureau.

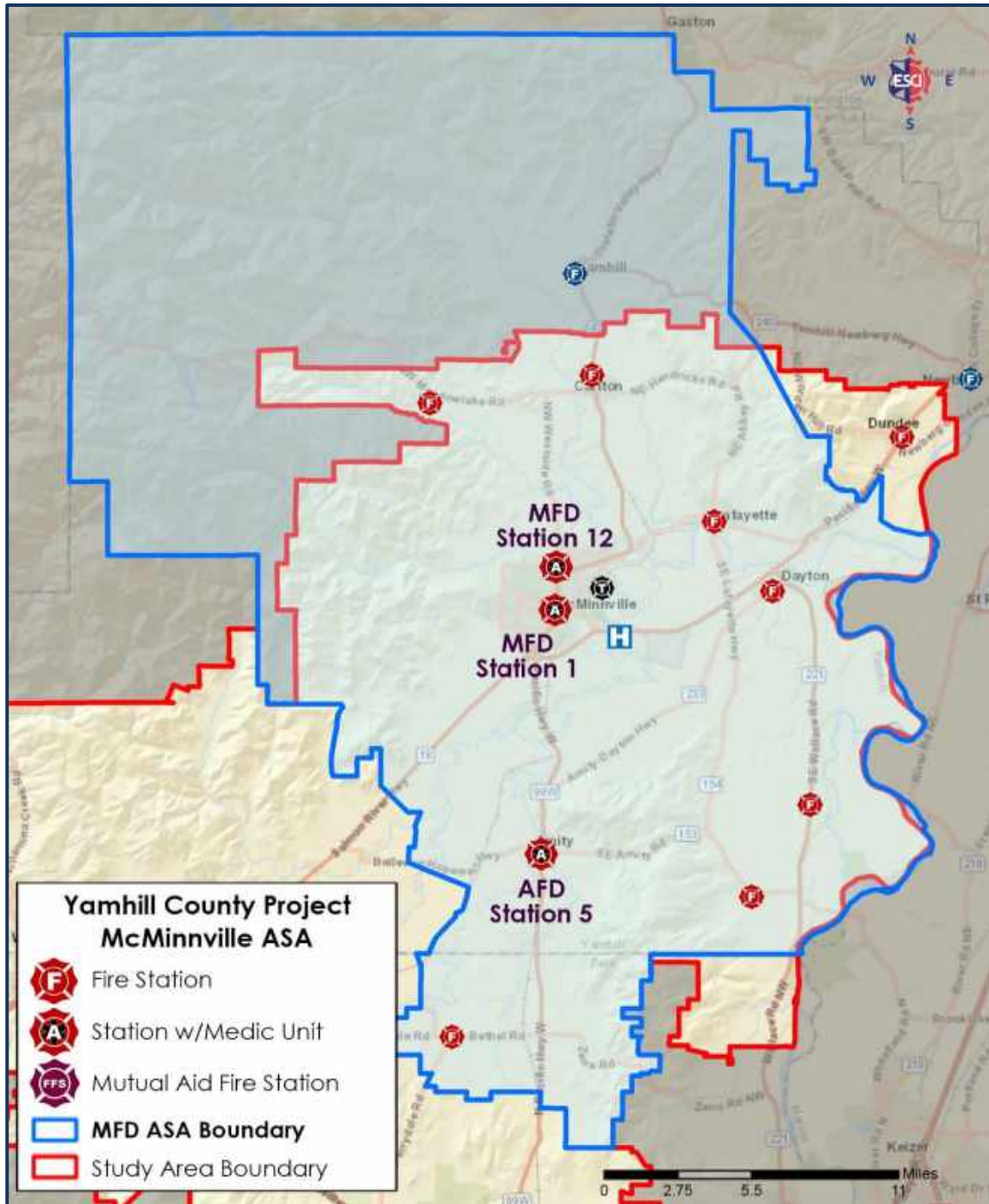
Figure 12: McMinnville Service Area Map



McMinnville Ambulance Service Area

The next figure shows the McMinnville Fire Department's designated Ambulance Service Area (ASA) boundary and the fire stations in the ASA from which ALS Medic Units are deployed.

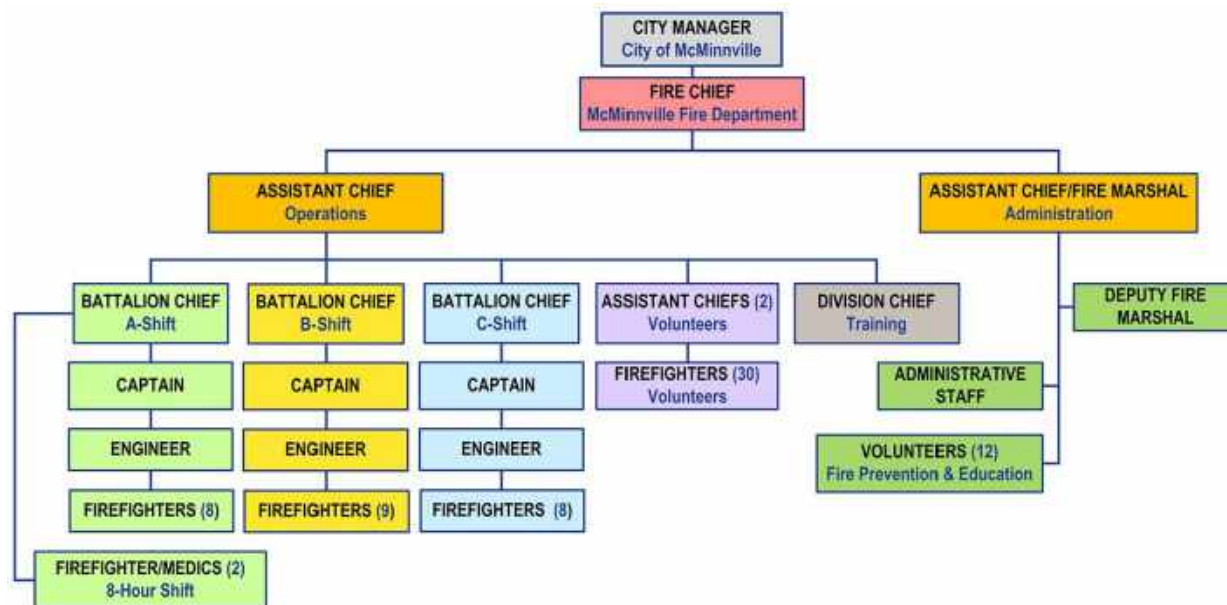
Figure 13: McMinnville Fire Department Ambulance Service Area



McMinnville Fire Department Organizational Structure

The following figure is an illustration of the current MFD organizational structure as of 2020.

Figure 14: McMinnville Fire Department Organizational Chart (2020)



As shown in the preceding figure, MFD employs two Assistant Chiefs subordinate to the Fire Chief. The Assistant Chief/Fire Marshal is responsible for Fire Prevention and Education activities and Administration. The Assistant Chief of Operations oversees a Division Chief of Training, two volunteer Assistant Chiefs, the volunteer program division, and career personnel assigned to Operations.

Career personnel are assigned to a three-platoon schedule, with a Battalion Chief assigned to each shift, who oversees one Captain, one Engineer, and 8–9 firefighters assigned to each shift. In addition, two Firefighter/Paramedics work an 8-hour shift.

The Fire Marshal and Deputy Fire Marshal conduct fire inspections, code enforcement, plan reviews, and fire and arson investigations. Volunteers conduct public education and prevention programs.

MFD Operations & Deployment Overview

The McMinnville Fire Department deploys its apparatus, career staff, and volunteers primarily from a single fire station. However, it does staff an ALS Medic Unit only at a substation. MFD provides traditional fire protection services, medical first-response, and ambulance service at the ALS level. In addition, the Department provides hazmat response at the Operations level and Technical Rope Rescue. In 2010, MFD and MRFPD were given an ISO PPC score of 3/8B/10.

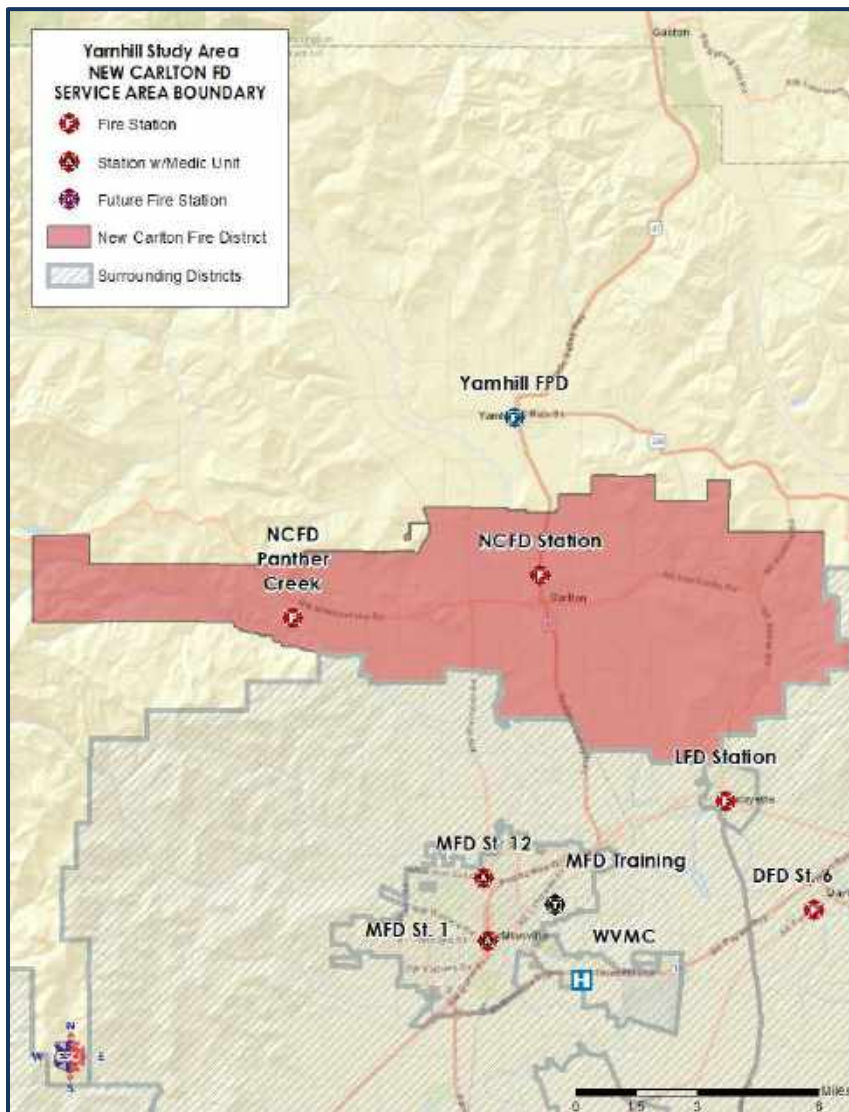
New Carlton Fire District

The New Carlton Fire District was formally organized in 2006 and is overseen by an elected five-member Board of Directors. The Fire Chief reports directly to the Board. The primary service area (about 85%) of NCFD consists of the City of Carlton, which had a 2018 estimated population of 2,183 persons.¹⁸ The District is comprised of approximately 39 square miles.

NCFD Service Area

The following figure shows the service area boundaries of NCFD.

Figure 15: NCFD Service Area Map

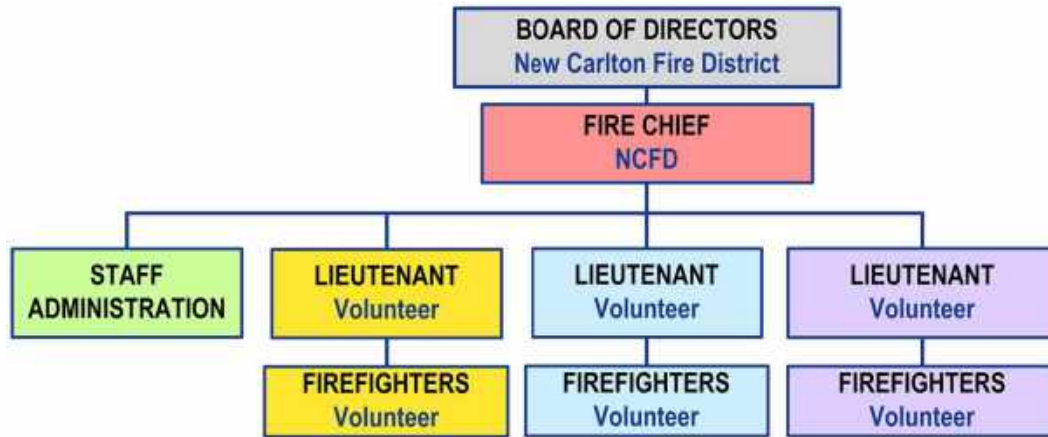


¹⁸ American FactFinder, U.S. Census Bureau.

New Carlton Fire District Organizational Structure

The following figure is an illustration of the current New Carlton Fire District organizational structure as of 2020.

Figure 16: NCFD Organizational Chart (2020)



As shown in the preceding figure, the New Carlton Fire District and Fire Chief are overseen by an elected Board of Directors. The Chief manages one administrative support person and three volunteer Lieutenants, each supervising a group of Volunteers.

NCFD Operations & Deployment Overview

The District deploys its apparatus and volunteer firefighters from its two fire stations, and provides traditional fire protection and MFR primarily at the BLS level. NCFD does not provide special operations, although personnel are trained at the Operations level for hazardous materials response.

NCFD provides fire inspections and public education when requested, as well as fire and arson investigations. In addition, the District provides driveway inspections and address signs (for a fee).

Sheridan FD/Southwestern Polk RFPD/West Valley FD

Through intergovernmental agreements (IGA), the Sheridan Fire District, Southwestern Polk RFPD, and the West Valley Fire Districts function as a single fire department. The IGAs provide administrative support and management services, management of operations and deployment, and financial management.

The three districts function primarily as a single agency, although each remains as a single legal jurisdiction with a five-member Board of Directors. The combined Boards (15 members) meet regularly as a group to develop policies and address budgetary issues. For the purpose of this study, the three districts will be referred to as the *Collective Fire Districts*.

Sheridan Fire District

The Sheridan Fire District was originally organized in 1979. SFD is overseen by an elected five-member Board of Directors that work with the Boards of the Collective Fire Districts in setting and establishing policies and budgets. As mentioned, one Fire Chief administers the Collective Fire Districts. The heart of the District and highest population resides in the City of Sheridan.

Southwestern Polk Rural Fire Protection District

Southwestern Polk RFPD was originally formed in 1947. The District is 123 square miles, and overseen by an elected five-member Board of Directors that work with the Boards of the other two districts to set policies and budgets. As mentioned, one Fire Chief administers SWP and the other two fire districts.

West Valley Fire District

WVFD is a fire protection district that was formally organized in 2004 as a result of the consolidation of the Willamina Fire District and Willamina Ambulance Service under the direction of one Fire Chief. Both of these organizations date back to the late 1940s. The District is comprised of approximately 62 square miles, with an ASA of about 264 square miles.

The District provides service to the unincorporated area of Grande Ronde, the City of Willamina, and the Confederated Tribes of Grande Ronde. WVFD estimates that its service area has an approximate permanent population exceeding 5,300 persons, with a daily transient population of 9,500 people because of the *Spirit Mountain Casino*.

Collective Fire Districts Service Area

The following figure lists the features and demographics of the three fire districts.

Figure 17: Service Areas & Populations of the Collective Fire Districts

District	Service Area	Population	ASA
Sheridan Fire District	101 square miles	8,345	147 square miles
Southwestern Polk RFPD	123 square miles	7,237	N/A
West Valley Fire District	62 square miles	5,367	264 square miles
Totals:	286 square miles	20,949	411 square miles

Sources: As reported by the Districts in the ESCI Survey Tables.

As shown in the preceding figure, the combined service areas comprise a resident population of nearly 21,000 persons in 286 square miles. The assigned Ambulance Service Areas (SFD and WVFD) consist of 411 square miles. The following figures display each fire districts' service area.

Figure 18: SFD Fire Service Area Map

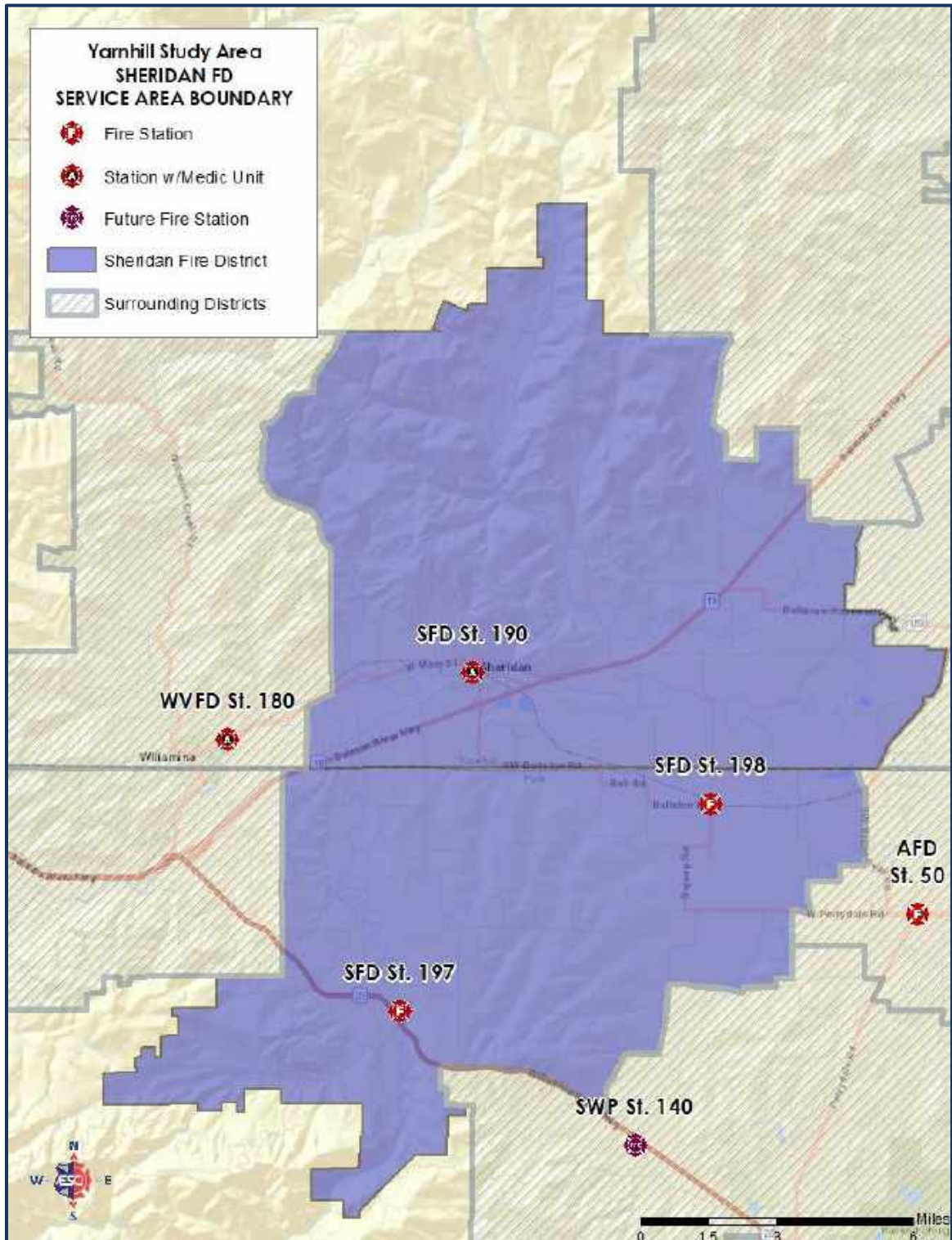


Figure 19: SWP Fire Service Area Map

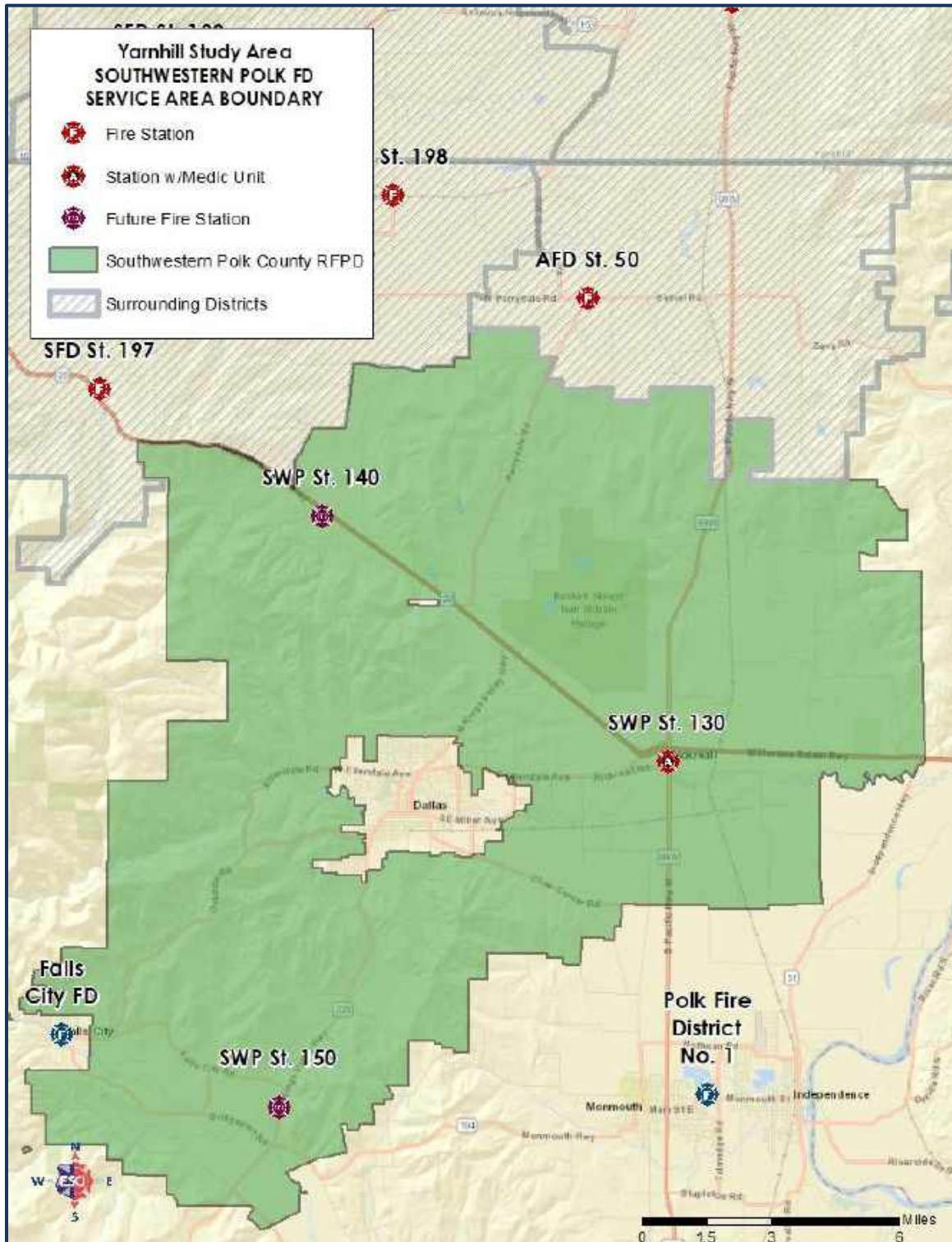
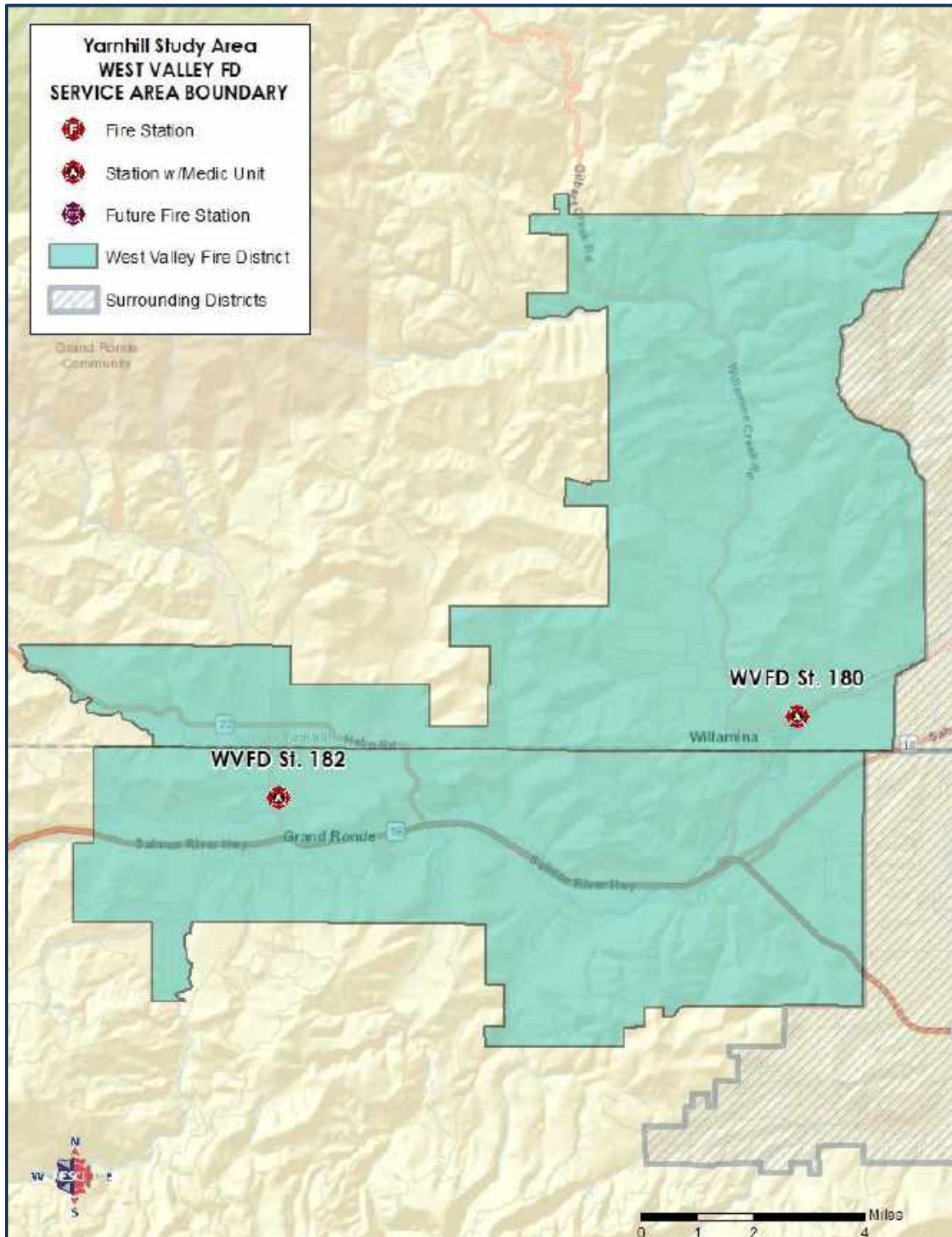


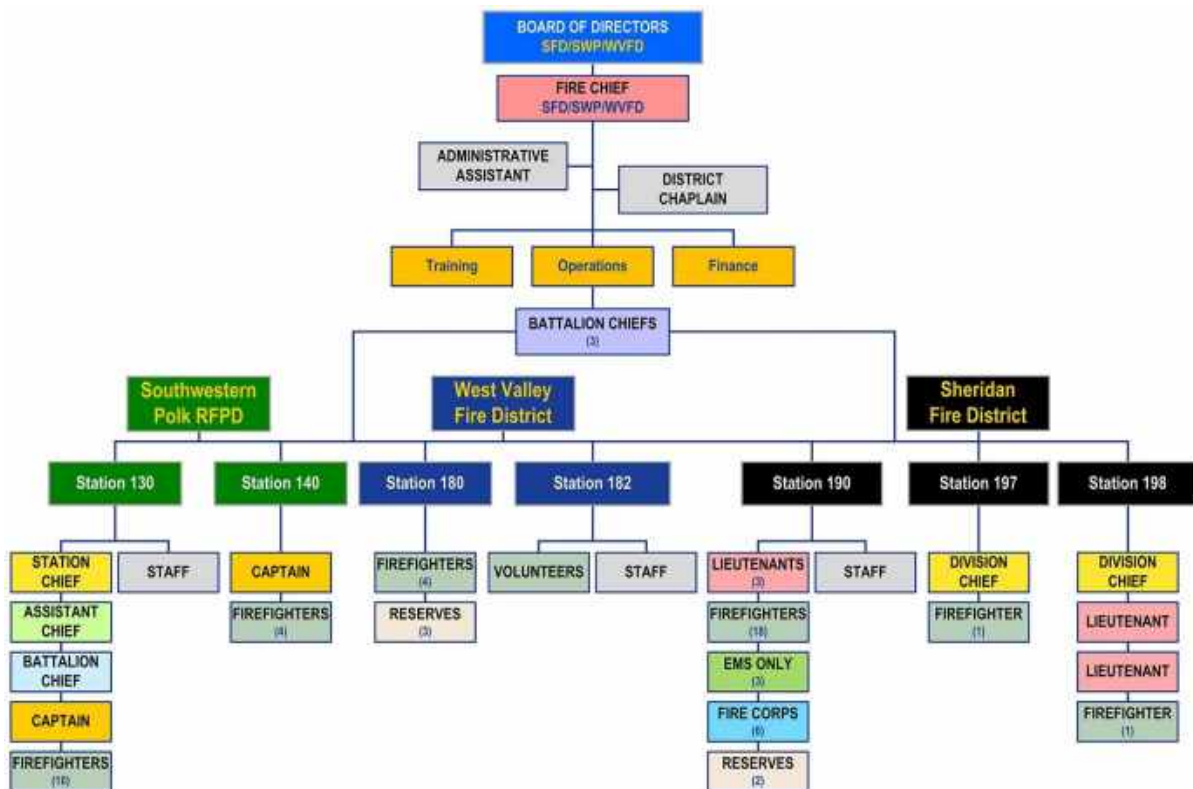
Figure 20: WVFD Ambulance Service Area Map



Collective Fire Districts Organizational Structure

The following figure represents the combined organizational structure of the three fire districts. As shown, the Fire Chief oversees the combined organization, with three shift Battalion Chiefs that manage the operations of the districts.

Figure 21: Organizational Structure of the Collective Fire Districts (2020)



The organizational chart shows two fire stations in SWP, two in WVFD, and three in SFD. Because of the bond measure passed in SWP, Fire Stations 130, 140, and 150 are new, and one additional new fire station (160) will be built in the near future.

Collective Fire Districts Operations & Deployment Overview

Currently, the Collective Fire Districts deploy apparatus and career and volunteer personnel (depending on the particular station) from seven fire stations. Collectively, the districts provide traditional fire protection and medical first-response at both the BLS and ALS levels. In addition, they provide hazardous materials response at the Operations level, some degree of special operations, and vehicle extrication.

The Districts provide a minimal amount of fire inspections and code enforcement. Plans reviews and fire and arson investigations are conducted in conjunction with the Oregon State Fire Marshal's Office (OSFM). Together, the districts provide varying types of public education and prevention programs. The following figure lists the current PPC® scores of each fire district.

Figure 22: ISO Public Protection Classification Scores of the Collective Districts

District	PPC® Score	Year
Sheridan Fire District	4/10	2017
Southwestern Polk RFPD	5/10	2015
West Valley Fire District	3/10	2019

Ambulance Transport Services

The Sheridan and West Valley fire districts provide ambulance transport services utilizing Firefighter/Paramedics at the ALS level. SFD maintains one 24-hour ALS Medic Unit (Medic 191) and one 12-hour peak-demand unit (Medic 193). WVFD maintains two 24-hour ALS Medic Units (Medic 181 out of Willamina and Medic 182 out of Grand Ronde).

Minimum Medic Unit staffing consists of one EMT-Basic and one Paramedic. In some fire-related incidents, a Medic Unit crew may transfer to a particular fire-suppression apparatus necessary to mitigate the incident.

Ambulance Service Area

The next figures show the Ambulance Service Areas of the Sheridan Fire District and West Valley Fire District.

Figure 23: Sheridan Ambulance Service Area

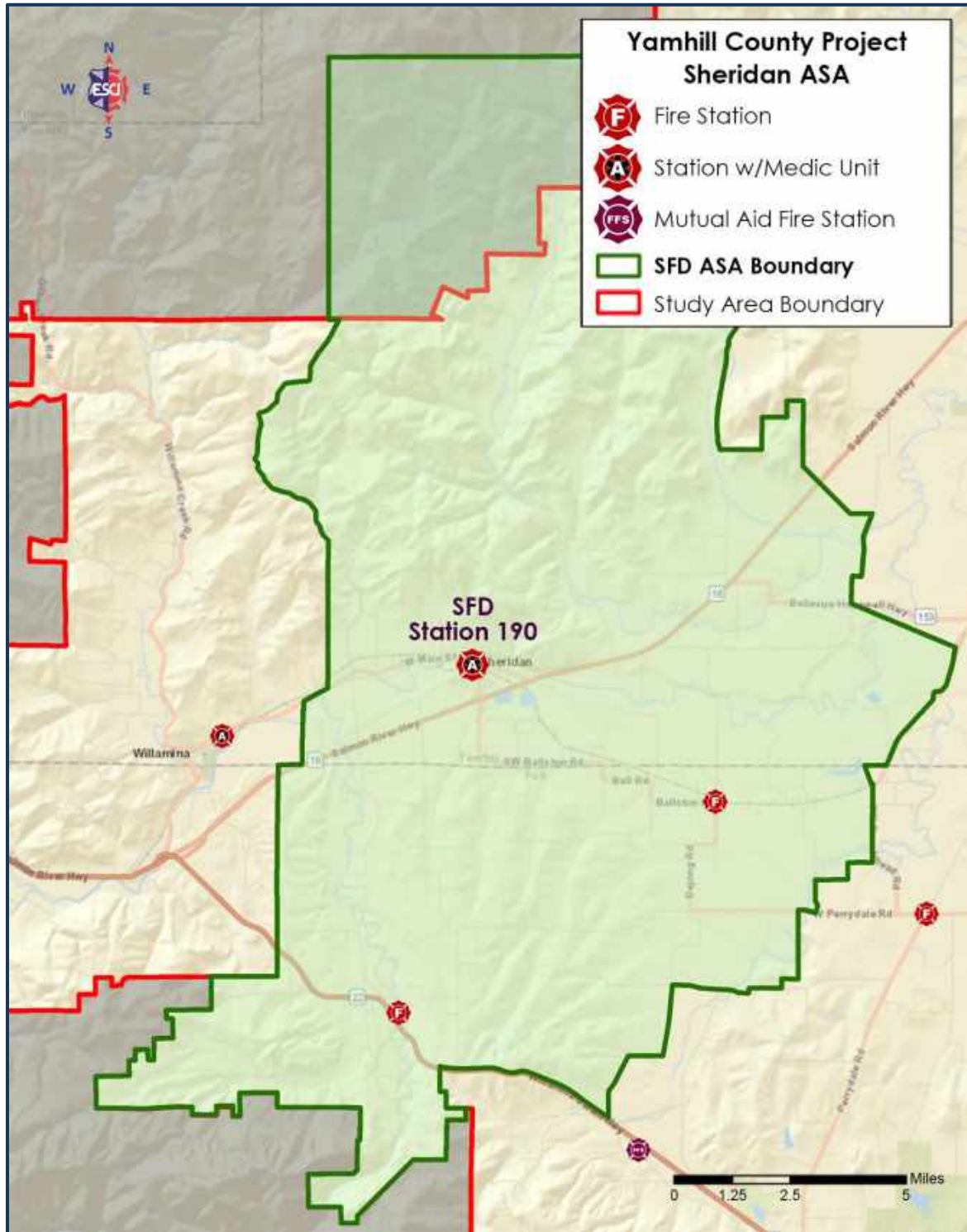
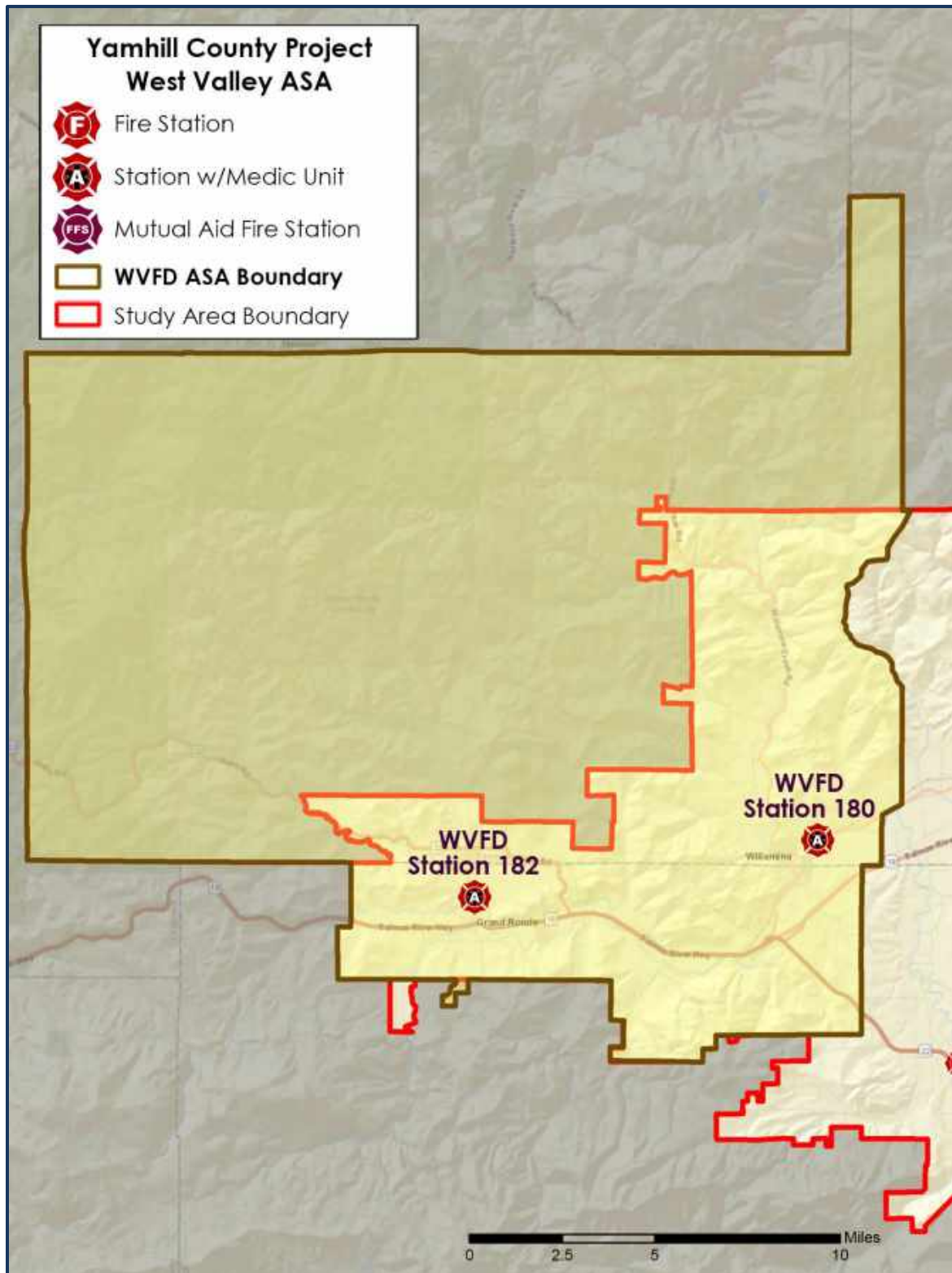


Figure 24: West Valley Ambulance Service Area



OTHER COMPONENTS OF THE EMERGENCY SERVICES SYSTEM

There are other elements of the system that are necessary to ensure functional and effective emergency services throughout the communities.

Emergency Communications

Each of the fire agencies participating in this study receives emergency communications services from one of four separate 911 communications centers.

Yamhill Communications Agency

Based in McMinnville, the *Yamhill Communications Agency* (YCOM) is the largest primary 911 Public Safety Answering Point (PSAP) in Yamhill County, and serves an area encompassing approximately 735 square miles that includes portions of Polk County.

YCOM provides both emergency and non-emergency communications to five law enforcement agencies, eight fire departments/districts, and three Ambulance Service Areas. YCOM dispatchers are trained and Oregon-certified as Telecommunicators, as well as in Emergency Medical Dispatching. Except for the DDF and SWP, all the fire agencies in this study are dispatched by YCOM.

Willamette Valley Communications Center

The *Willamette Valley Communications Center* (WVCC) is based in Salem and provides dispatch and communication services to emergency services organizations in three Oregon counties, including Southwestern Polk RFPD.

All of WVCC's call-takers and dispatchers have been trained in Emergency Medical Dispatch, and are certified as Telecommunicators by the State of Oregon. When indicated, they provide pre-arrival instructions to callers in a medical emergency.

Newberg-Dundee 911 Communications Center

The *Newberg-Dundee 911 Communications Center* operates as a primary 911 PSAP for the cities of Newberg, Dundee, and eastern Yamhill County, and functions primarily as a law enforcement dispatch center. Fire and EMS calls for the Dundee Fire District are transferred to the *Washington County Consolidated Communications Agency* (WCCCA). WCCCA's dispatchers are trained and Oregon-certified as Telecommunicators, as well as in Emergency Medical Dispatching.

Mutual Aid & Emergency Assistance Agreement

In 2012, the *Yamhill Fire Defense Board* (YFDB) developed the "Intra-County Mutual Aid & Emergency Assistance Agreement." The purpose was to combine the resources of local fire and EMS provider agencies in cases of large incidents that could exceed the capacity of any community to effectively mitigate the incident.

A total of 12 fire departments and districts signed the agreement. With the exception of the Southwestern Polk RFPD, all of the study participants are signatories to the mutual aid agreement.

In 2014, the Polk County Fire Defense Board (PFDB) developed a similar "Intra-County Mutual/Automatic Aide & Emergency Assistance Agreement." The intent of this agreement was to combine the resources of local fire and EMS provider agencies in cases of large incidents that could exceed the capacity of any community to effectively mitigate the incident, similar to the Yamhill County agreement. All fire agencies in Polk County were included in the agreement.

Polk and Yamhill County Fire Defense Board have entered an inter-county mutual/automatic aid agreement, thus connecting all agencies between the two counties. In addition to these individual county agreements, Polk, Lincoln, Tillamook, and Yamhill County Fire Defense Board Chiefs meet quarterly to develop relations and processed for collaborating during Oregon Emergency Mobilizations.

MANAGEMENT COMPONENTS

Effectively managing a fire department is a complex task, often impacted by financial constraints, political pressures, and demanding community expectations. Today's fire department must address these complexities by ensuring an efficient and flexible organizational structure, adequacy of response, maintenance of competencies, a qualified workforce, and financial sustainability.

The development of baseline management components in fire service organizations enables them to move forward in an organized and efficient manner. In the absence of foundational management elements, organizations can flounder—lost in ineffective leadership and divergent views of purpose and vision. This is especially true when organizations are attempting to more formally consolidate and/or merge.

A well-organized and efficiently administered organization has appropriate documentation, policies and procedures, and effectively addresses internal and external issues. Processes must also be established to address the flow of information and communications within each department, as well as with their respective constituents. In an effort to identify potential opportunities and barriers in consolidating departments, ESCI examined each department's current efforts in organizational planning and management.

Mission, Vision, & Values

The management of a fire department needs to be grounded in the acceptance and adoption of a strong mission statement along with an organizational vision and values. These fundamental foundation blocks are necessary to ensure everyone in the organization and community understands why the organization exists, the level of services provided, the vision for the department over the next three to five years, and the goals and objectives to get there. A successful strategic planning process enables organizational improvements related to the creation and maintenance of policies and procedures, enhancement of internal and external communications practices, improved operational deployment, recordkeeping, and sustainable financial practices.

To be most effective, mission, vision, and value statements must be part of a “living” process, consciously evolving as the department changes and grows. This is often accomplished through a strategic planning process. The following figure compares the status of strategic planning among the nine agencies.

Figure 25: Mission, Vision, & Strategic Planning Efforts of the Study Departments

Department Mission & Goals	AFD	DFD	DDF	LFD	MFD	NCFD	SFD*	SWP*	WVFD*
Mission Statement Adopted	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
The Vision Established/ Communicated	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Values Statement Adopted	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Agency Goals and Objectives Adopted	Yes	Yes	Yes	No	Yes	No	No	No	No

* The Collective Fire Districts maintain three separate Mission, Vision, Values but are collaborating on creating a new version.

If consolidation is pursued by some or all of the departments, a visioning and strategic planning process should be considered a critical first step in building a common vision, goals, and, most importantly—momentum—in enabling significant change.

Regardless of the outcome of potential consolidation, creating or updating a strategic plan should be a high priority for each department, empowering employees to move together in a positive direction, and enabling efficient change for improving the organization and service to the community.

Critical Issues

As a part of this study, each department was asked to list the top four critical issues facing its organization. ESCI evaluated the responses, looking for commonalities, which could lead to more cohesive planning in the future. The next figure summarizes the issues facing each department.

Figure 26: Critical Issues Identified by the Fire Chiefs (Part 1)

No.	AFD	DFD	DDF	LFD
1	Funding	Station 63	After Hours Officers	Staffing
2	Facility Plan	Staffing	Maintenance Officer	Fire Inspections
3	Capital Plan	Funding	Training Officer	Funding
4	Retention	Retention	EMS Officer	Retention

Figure 27: Critical Issues Identified by the Fire Chiefs (Part 2)

No.	MFD	NCFD	SFD	SWP	WVFD
1	Performance Standards	Funding	Funding	Financial	Financial
2	High Turnover	Staffing	Retention	Retention	Retention
3	Capital Plan	N/A	Leadership	Leadership	Leadership
4	Funding	N/A	Training	Training	Training

The critical issues are mostly different, but each may be helped or resolved by the consolidation process. The majority of organizational issues focused on financial limitations, staffing retention, and increased training needs. Consolidation can be the opportunity to put personnel systems in place to increase compensation and set up a better ability to recruit and retain personnel. Consolidation is an excellent time to create a professional development/succession planning process in order to have a plan for individuals who want to prepare for their future in a way that benefits the organization and those it serves. The larger organization should be able to position itself to deal with growth and ensure sustainability for the future.

Internal & External Communications

In today’s “hyper-speed” world of communication, the public expects strategic, frequent, responsive, and transparent communication from government agencies. Likewise, employees expect the same when disseminating internal messages. Without it, public and employee confidence in the organization can be severely damaged, and informal communication channels may be created to spread false and misleading information throughout the community and organization. Each department uses basic tools to communicate internally and externally. The following figure compares the various internal and external communication tools used by each department.

Figure 28: Communications Methods Used by Departments

Communication Method	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Regularly Scheduled Staff Meetings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Agency Intranet	No	Yes	Yes	N/A	Yes	No	No	No	No
Written Memos	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internal Newsletters	No	No	No	No	City	No	No	No	No
All Hands Meetings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Community Newsletter	No	No	Yes	City	No	No	Yes	Yes	Yes
Department Website	Yes	No	No	City	Yes	No	Yes	Yes	Yes
Social Media Accounts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Community Surveys	No	No	Yes	No	EMS	No	No	No	No

Specific to internal communications, ESCI noted each department holds regular meetings with administrative and operational staff. Each department distributes meeting minutes differently. Information is disseminated to employees through Battalion Chiefs, company officers, and/or posted on bulletin boards. None of the departments publish internal or external newsletters.

Only DDF documented the solicitation of feedback through community surveys. Community newsletters, media coverage, social media, and websites are the means most commonly employed by organizations to communicate with the public. A combined organization would benefit from a single website, early in the process for the dissemination of public information. Many emergency response agencies are using interactive social media tools like Twitter®, Facebook®, Instagram®, and more. All nine departments have utilized Facebook® or Twitter® social media accounts.

A larger organization has the ability to dedicate a Community Relations/PIO person to keep the social media sites updated in order to communicate with more citizens and typically has a greater amount of material to disseminate. Several of these mediums lend themselves to effective two-way communications with the public if monitored daily. Since members of the public maintain multiple accounts and/or monitor several mediums, some departments devote their website to more business-related items that citizens may want to find (board minutes, planning, information on fire prevention, paying ambulance bills, etc.); Facebook and Instagram for interesting activities in which the district is participating; Twitter for emergency response notifications (monitored by news media as well); and Nextdoor for communicating with communities within the department.

Establishing clear expectations of how department members should conduct themselves on social media—on and off the job—is critical to ensuring the community holds the department and its members in high regard. Over the past few years, public employees and their agencies have been criticized for inappropriate social media posts. Examples include, but are not limited to the sharing of confidential patient information, derogatory racial slurs, discriminatory or slanderous statements, or crude and inappropriate jokes. In many cases, employees have received significant discipline—including termination—and the fire department's reputation needlessly damaged.

To address these issues, many departments have adopted and enforced social media policies prohibiting public statements by employees that:

- Are defamatory, obscene, discriminatory, slanderous, or unlawful; and/or
- Tends to compromise administration of agency discipline; and/or
- Damages or impugns the reputation and/or efficiency of the department or member.

An employee's *First Amendment* rights must be taken into consideration when drafting a social media policy. However, there are many available examples of policies that legally balance First Amendment rights with fire department requirements and responsibilities. Consult with the agencies' legal counsels to develop the best policy.

Life-safety messages and upcoming political or fiscal issues can be addressed in detail and distributed via newsletters and can be effective in gaining citizen support—especially if a functional consolidation effort is pursued.

Depending on the number and types of issues that invariably surface during significant organizational change, consistent community engagement and dialogue will be critical to gaining and maintaining support for this effort.

Regulatory Documents & Recordkeeping

Government agencies depend on written policies, standard operating guidelines (SOGs), and reports as components of effective management and legal compliance. Each of the departments uses these methods in different ways towards achieving its mission. The following figure summarizes the various policies and how they are used.

Figure 29: Regulatory Documents

Regulatory Documents	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Rules available for review	No	N/A	No	Yes	Yes	No	Yes	Yes	Yes
SOGs available for review	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
<i>SOGs Regularly updated</i>	No	No	No	No	Yes	No	Yes	Yes	Yes
SOGs used in training evolutions	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Department policies available for review	Yes	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
<i>Internally reviewed for consistency</i>	No	N/A	No	No	Yes	Yes	Yes	Yes	Yes
<i>Internally reviewed for legal mandates</i>	No	N/A	No	No	Yes	Yes	Yes	Yes	Yes
<i>Training on policies provided</i>	No	N/A	No	No	Yes	Yes	Yes	Yes	Yes

All nine departments have baseline department policies and rules, standard operating guidelines related to their various administrative and operational tasks and evolutions. Five of the nine departments' policies are reviewed for legal compliance. Additionally, five of the nine have routine training on department policies. Some of these, such as those related to employment, need to have a regular, documented review. ESCI recommends that new policies and SOGs be created for the combined entity and that all of them are reviewed for legal compliance, used in training as required, and regularly reviewed for changes. It is suggested that a committee be formed for reviewing one-third of the policies annually or SOGs each year, allowing for every document to be reviewed over a three-year period.

Documentation & Compliance Testing

Proper recordkeeping and secure record archiving are essential to meet legal, regulatory, and business best practices for government agencies. Secure document archiving can also assist in addressing legal and/or other administrative actions confronting a fire department. Each department's recordkeeping is summarized in the next two figures.

Figure 30: Reports & Records (Part 1)

Reports & Records	AFD	DFD	DDF	LFD
Electronic Reports	Yes	Yes	Yes	Yes
Software used–Fire	Image Trend	N/A	Image Trend	Image Trend
Software used–EMS	N/A	N/A	Image Trend	Image Trend
Financial Reports	Yes	Yes	Yes	Yes
Management Reports	Yes	Yes	No	Yes
Operational Reports	Yes	Yes	No	Yes
Annual Report Produced	No	No	Yes	No
Incident Reports	Yes	Yes	Yes	Yes
Patient Care Reports	Yes	Yes	Yes	Yes
Exposure Records	Yes	Yes	Yes	Yes
SCBA Testing	Contracted	Contracted	Contracted	Contracted
Hose Testing	Contracted	Contracted	Contracted	Contracted
Ladder Testing	Contracted	Contracted	Contracted	Contracted
Pump Testing	Contracted	Contracted	Contracted	Contracted
Atmospheric Monitors	MFD	MES	Quantum	BAS
Vehicle Maintenance Records	Division Chief	Yes	Yes	Yes

Figure 31: Reports & Records (Part 2)

Reports & Records	MFD	NCFD	SFD	SWP	WVFD
Electronic Reports	Yes	Yes	Yes	Yes	Yes
Software used–Fire	ESO	??	ESO	ESO	ESO
Software used–EMS	ESO	??	ESO	ESO	ESO
Financial Reports	Yes	Yes	Yes	Yes	Yes
Management Reports	Yes	Yes	Yes	Yes	Yes
Operational Reports	Yes	Yes	Yes	Yes	Yes
Annual Report Produced	N/A	No	No	No	No
Incident Reports	Yes	Yes	Yes	Yes	Yes
Patient Care Reports	Yes	Yes	Yes	Yes	Yes
Exposure Records	Yes	Yes	Yes	Yes	Yes
SCBA Testing	Contracted	Contracted	Contracted	Contracted	Contracted
Hose Testing	Contracted	Contracted	Contracted	Contracted	Contracted
Ladder Testing	Contracted	Contracted	Contracted	Contracted	Contracted
Pump Testing	Contracted	Contracted	Contracted	Contracted	Contracted
Atmospheric Monitors	XZAM	MFD	Exam Labs	Exam Labs	Exam Labs
Vehicle Maintenance Records	Yes	Contracted	Yes	Yes	Yes

All nine departments contract out for equipment testing. An opportunity may exist to re-negotiate existing contracts or bring some of the testing internal. ESCI noted that several of the departments do not issue an annual report on department activities. Annual performance analysis and reporting of activities can be extremely useful in educating the public, elected officials, and employees about the department's capabilities, effectiveness, and performance.

Station and records security among the departments is primarily accomplished through a combination of door-key locks, locked file cabinets (for hard copy document storage), and password-protected computer systems. All departments have a backup for vital computer records. Storage and security of records appear to be adequate and appropriately maintained.

STAFFING AND PERSONNEL

Contemporary emergency services organizations consider employees as their most valuable asset. Managing personnel to achieve maximum efficiency, professionalism, and personal satisfaction is an art as much as a science. Consistency, fairness, safety, and opportunities for personal and professional growth are key values to a healthy management culture. These values are even more important when the organization relies on the participation and support of a “volunteer” workforce. Volunteer personnel may leave if they do not feel valued or experience personal satisfaction from their participation. The same can be applied to career personnel.

Several national organizations recommend standards to address staffing issues. The *Occupational Health & Safety Administration (OSHA) Respiratory Protection Standard* and *National Fire Protection Association Standard 1710 (or 1720; whichever is applicable)* are frequently cited as authoritative documents.^{19,20,21} In addition, the *Center for Public Safety Excellence (CPSE)* publishes benchmarks on the number of personnel recommended on the emergency scene for various levels of risk.

Compared to operational resources and service levels, an appropriate balance of administrative and support staff is an important consideration to achieving organizational success. It is important to remember that key administrative and logistical support positions are critical in maintaining an efficient and effective fire department. Comparing these positions across the nine fire agencies in this study may reveal opportunities for sharing or combining positions to improve overall efficiencies.

ESCI evaluated the job descriptions, work schedules, compensation packages, and the use of personnel in each fire department to identify areas of excellence, areas for improved efficiency in personnel management, and opportunities to share resources. All of the fire departments are considered combination organizations as defined by the criteria listed in NFPA 1720, as compared to NFPA 1710, which applies only to career departments.

¹⁹ Respiratory Protection Standard 29 CFR 1910.134; Occupational Health & Safety Administration.

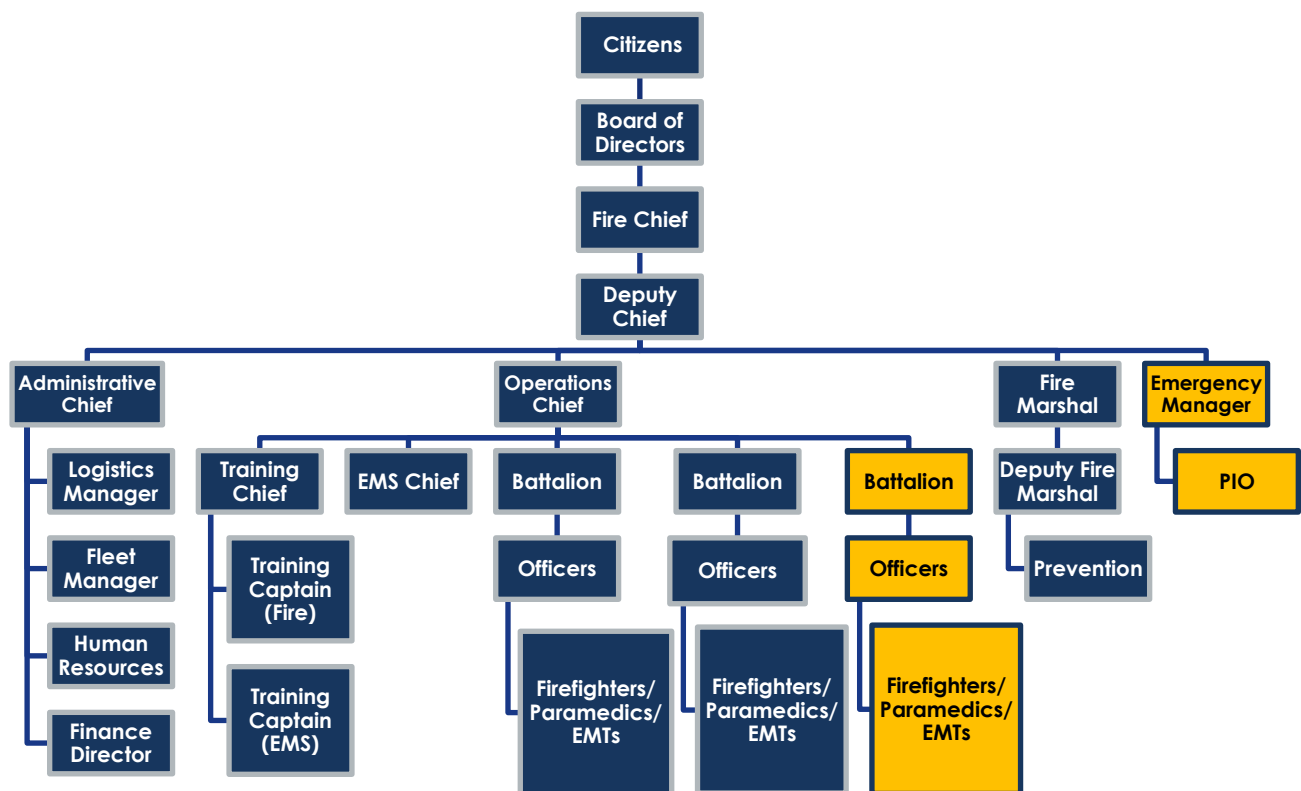
²⁰ NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, to the Public by Career Fire Departments*; National Fire Protection Association.

²¹ 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*.

ESCI also noted that SFD, SWP, and WVFD have intergovernmental agreements created in 2019, which enabled the sharing of Sheridan administrative personnel between the three departments, and the sharing of SFD operations personnel with SWP.

A combined organizational structure would provide numerous benefits, including balanced resources, cost efficiency, and improved overall service delivery. The following figure is a sample organizational structure that can be developed during the consolidation process. The positions in blue should be considered during the initial consolidation and the positions in yellow would be for future expansion.

Figure 32: Sample Organizational Chart



During the consolidation process, the focus should be on identifying the most efficient organizational structure, then selecting the individuals who would be most effective in each position.

Personnel Policies & Processes

Each of the fire departments was surveyed to determine the administrative components used in managing its employees. SFD, SWP, and WVFD use the Lexipol® web-based policy management service to create and maintain district-specific policies. The other fire departments manage their policies internally. All of the departments provide training on these policies to new employees, and archive copies of outdated policies. All nine fire agencies maintain and securely archive personnel records, including injury and accident reports and medical/exposure records.

Ensuring the health and safety of employees should be a high priority in any business or government organization. In an attempt to prevent illness and injuries, many fire service organizations offer proactive health and wellness programs designed to promote and support healthy lifestyles. Many of these programs also support mental health, which has recently begun receiving significant attention in the fire service.

Hiring, Testing, & Safety

Recruiting, selecting, and retaining firefighters takes a considerable investment of time, effort, and money to ensure high-quality individuals are employed and retained within the organization. While becoming a firefighter is one of the most sought-after careers in the nation, selecting candidates that fit best within the department and its culture requires a deliberate and comprehensive evaluation. The following figure summarizes the hiring or onboarding components used by the fire departments participating in this study.

Figure 33: Hiring Process Components

Hiring Process Components	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Recruitment Program	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Qualifications Check	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Reference Check	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Background Check	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Physical Standards Established	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
Knowledge Testing	No	No	No	No	Yes	No	Yes	Yes	Yes
Interview	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Medical Exam Required	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Psychological Exam Required	No	No	No	No	Yes	No	No	No	No

Hiring Process Discussion

Over the past few years, the hiring practices in fire departments across the country have been challenged by allegations of bias and discrimination. For example, the new-hire testing practices of the New York City Fire Department and Los Angeles Fire Department were questioned, which resulted in the suspension of the hiring process and revocation of some conditional job offers. Outside experts were asked to analyze historical hiring outcomes and current hiring procedures, and make recommendations for improvement.²² As a result, significant changes were made, at great expense, to ensure a fair and impartial hiring process.

A 10-year review (1994–2004) of firefighter line-of-duty death (LODD) statistics revealed that 45% were the result of heart disease.²³ In 2010, the *National Institute for Occupational Safety & Health* (NIOSH) conducted a study of the prevalence of cancer in 30,000 firefighters.²⁴ The study concluded that firefighters have a 14% greater risk of contracting cancer compared to the general population. Lastly, NFPA 1582 defines the necessary components of an occupational medical program to ensure the safety and health of firefighters.²⁵

Ensuring all firefighters—career, part-time, and volunteer—are physically and medically able and cleared to perform rigorous fireground tasks, along with identifying any pre-existing medical conditions which may place an employee in jeopardy, is an important screening component in the hiring process and beyond. In addition, federal law requires a medical assessment and clearance by a physician before allowing personnel to wear a respirator.²⁶

²² Recommendations for Improving the Recruiting and Hiring of Los Angeles Firefighters, Rand Corporation, 2015.

²³ Emergency Duties and Deaths from Heart Disease among Firefighters in the United States, *New England Journal of Medicine*, March 2007; 356:1207–1215.

²⁴ Findings from a study of cancer among U.S. Firefighters, National Institute of Occupational Safety & Health, July 2016.

²⁵ NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments*.

²⁶ Respiratory Protection Standard 29 CFR 1910.134; Occupational Health & Safety Administration.

Safety Compliance

The fire service functions in an inherently hazardous environment. The organization needs to take all reasonable precautions to limit exposure and provide a process of consistent medical monitoring. Wellness programs include education on healthy lifestyles, mental health support, illness and injury prevention, and, most recently, an emphasis on cancer prevention. Over the past 15 years, evidence supports that firefighters have a “14% increase in cancer-related deaths compared to the general public.”²⁷ Approximately 34% of local industries that the fire districts/departments serve most likely produce environments with cancer-causing chemicals. According to information from DataUSA, employment in Yamhill County includes:²⁸

- 15.6%—Manufacturing
- 6.05%—Construction
- 4.8%—Professional Scientific and Technical Services
- 3%—Transportation and Warehouse

The nine departments have varying programs relating to cancer prevention. ESCI recommends that all of the departments develop a program that includes:

- Issuing each line personnel two sets of bunker gear.
- Gross decontamination in all stations.
- Extractors for cleaning bunker gear.

One area for improvement would be developing policies and procedures specific to the utilization of the above processes, and verbiage limiting cross-contamination of equipment and uniforms in the living quarters of each station. The following figure summarizes the survey results relating to health and fitness.

²⁷ Firefighters and Cancer (2018), <https://www.nfpa.org/News-and-Research/Resources/Emergency-Responders/Health-and-Wellness/Firefighters-and-cancer>.

²⁸ <https://datausa.io/profile/geo/yamhill-county-or#economy>.

Figure 34: Health, Safety, & Counseling Services

Health Services	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Medical Standards	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Medical Exam Frequency	N/A	N/A	N/A	Year	Year	Year	Year	Year	Year
Safety Committee	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Critical Incident Debriefing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee Assistance Program	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes

Labor Agreements

Operations personnel from MFD are represented by the *International Association of Firefighters* (IAFF) Local 3099, and SFD operations personnel are represented by IAFF Local 4861. The SFD firefighters recently unionized under West Valley Professional Firefighters Local 4861 and are currently negotiating their first contract. All three bargaining units are in the Seventh District of the IAFF.

The current MFD collective bargaining agreement (CBA) expires June 30, 2021, and the SFD/WVFD bargaining agreement expired June 30, 2020. Provisions in the MFD CBA allows for automatic annual renewal of the agreement unless either party notifies the other in writing not later than January 15 of the year of expiration that it wishes to bargain.²⁹

Union Agreement Discussion

The success of any form of consolidation will hinge, in large part, on Union participation, compromise, and agreement. The variation in work schedules, benefits, and other conditions currently outlined in the bargaining-unit agreements of the union affiliates will need to be carefully addressed and homogenized for an effective and efficient consolidation. This can take the form of one affiliate absorbing the membership and obligations of other affiliates, commonly called a “merger,” or by legally dissolving the current IAFF affiliates, and forming an entirely new bargaining unit—commonly called an “amalgamation.”

²⁹ Collective Bargaining Agreement-International Association of Firefighters Local 3099 and the City of McMinnville, July 2018.

A merger or amalgamation of local union affiliates is encouraged by the IAFF where it makes sense. In 2012, the IAFF Legal Department published a manual to guide union leaders in merger/amalgamation efforts. The manual reviews the applicable sections in the IAFF *Constitution & Bylaws*, and defines the reporting requirements, legal requirements, and specific duties of merged and amalgamated affiliates. In the manual, it states:

The Executive Board recommends that when the consolidation, unification, or merger of two or more counties, cities, or townships is anticipated, all locals involved should merge as soon as possible. If a merger of locals is not immediately possible, a joint committee should be established to work with the department administration to negotiate the benefits for all members. Every effort should be made to conclude the bargaining prior to the merger.

Given the number of significant labor implications related to a potential new consolidated fire agency—including internal union governance issues—the involved local affiliates would likely benefit from the participation of the IAFF District 7 Vice President and other legal resources available through the IAFF national organization. Also, given the complexity and variation of wages and benefits between the affiliates, if consolidation is actively pursued, they should engage in internal planning as soon as practical to reach an agreement on how the affiliates will be organized in the new organization.

Administrative Support Staffing

Each of the departments has varying levels of administrative support positions—due primarily to their size, and because city fire departments rely on other city departments for administrative support services (e.g., information technology, human resources, finance, etc.), which are not typically available to fire districts. The following figure illustrates the various non-uniformed administrative positions. The green highlighted positions indicate paid positions.

Figure 35: Non-Uniformed Support Staff Positions

Position	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Office Manager	0	0	0	0	1	0	0	0	0
IT Technicians	0	0	0	0	0	0	0	0	0
Exec. Assistants	0	0	0	0	0	0	0	0	0
Administrator	0	0	0	0	0	0	0	0	0
Admin. Assistants	0	0	0	0	0	1	1	→	
Logistics	0	0	0	0	1	0	0	0	0
Fleet Manager	0	0	0	0	0	0	0	0	0
Fleet Staff	0	0	0	0	0	0	0	0	0
Health & Wellness	0	0	0	0	0	0	0	0	0
EMS Coordinator	0	0	0	0	0	0	0	0	0
Finance Director	0	0	0	0	0	0	0	0	0
Finance Staff	0	0	0	0	1	0	1	→	
HR Director	0	0	0	0	0	0	0	0	0
HR Staff	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0
Total Positions:	0	0	0	0	3	1	2	→	

Administrative Staffing Discussion

Based on the information, there does not appear to be duplication of support staff, and based on the workload for a combined department, the current support FTEs would be required.

None of the departments currently have a specific Wellness position. Based on operational staffing of over 200 career and volunteer firefighters, a defined Wellness program and Wellness Director would be an essential component of the organization. HR is another area that may require additional personnel for a combined department. A report published by the Society for Human Resource Management (SHRM) supports the necessity for 1 HR Specialist per 100 FTEs.³⁰ Based on a total organization of over 200, additional HR positions to cover benefits and Workers' Compensation may be necessary.

³⁰ How Organizational Staff Size Influences HR Metrics, Society for Human Resource Management, (2015).

Emergency Operations Staffing

ESCI evaluated the type and number of operations staff positions. The following figure summarizes the number of operations positions in each department. The green highlighted fields represent paid positions. Volunteer firefighters fill all other positions.

Figure 36: Operations Staff Positions

Operations Positions	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Operations Chief	0	0	1	0	1	0	1		
Battalion Chief	0	0	0	0	3	0	1		
Captain	0	1	1	0	3	0	0	2	0
Lieutenant	5	4	2	2	0	3	4	0	0
Engineer	0	0	0	0	3	0	0	0	0
Firefighter/Paramedic	2	2	0	0	20	1	3	2	6
Firefighter/EMT	23	3	2	0	5	2	3	2	6
Firefighter	0	24	13	15	25	12	10	14	4
Firefighters—Part-Time	0	0	0	0	0	0	0	0	0
Other Ops Positions	0	0	0	0	2	0	2	3	0
Total Ops Positions:	30	34	19	17	37	18	24	25	18
% Operations Officers to Firefighters/Engineers:	20%	17%	27%	13%	23%	20%	33%	19%	13%

ESCI also calculated the theoretical number of employees required to meet the various average leave hours used by employees in 2020 in each department and compared the results to the current number of operations employees assigned to 24-hour staffed units. ESCI then multiplied the number of personnel needed to cover a single position 24 hours per day with the relief factor, to determine the number of employees required to meet daily minimum staffing.

Figure 37: Theoretical Relief Factor Calculation

Relief Factor	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Total Relief Factor:	N/A	N/A	1.08	N/A	1.23	N/A	1.14	N/A	N/A

The total leave factors were multiplied by the number of personnel needed to cover one 24-hour position. The following figure compares the theoretical number of positions needed with the current number of employees assigned to the work schedules.

Figure 38: Calculated Operational Staff Shortage/Overage

Department	No. Positions Required 24/7 or 8 hour	Total No. Operations Staff	Theoretical No. of Staff Required Based on 1.14 Relief Factor	Shortage or Overage
AFD	N/A	N/A	N/A	N/A
DFD	N/A	N/A	N/A	N/A
DDF	3	3	5	-2
LFD	N/A	N/A	N/A	N/A
MFD	10	37	40	-3
NCFD	N/A	N/A	N/A	N/A
SFD/SWP/WVFD	9	25	29	-4
Total:	22	65	74	-9

Career Employee Work Schedules

MFD and SFD full-time employees assigned to operations are scheduled and deployed differently. The following figure summarizes these differences.

Figure 39: Operations Work Schedule Components

Department	FLSA Work Period	Shift Rotation	Average Workweek Hours	Average Annual Hours
DDF	10 days	8-hour shift	40	1,040
MFD	27 days	A/B/C	49.1	2,557
SFD/SWP/WVFD	28 days	A/B/C	56	2,912

Almost all MFD operations employees work a 24-hours-on, 48-hours-off rotating schedule. This schedule results in an average 56-hour workweek, or 2,912 annual average hours worked. However, the CBA identifies 2,557 annual average hours worked, or 49.1 hours per week. Employees receive 12 hours of overtime pay per 27-day work period to make up the difference. The District employs two full-time firefighter/paramedics who staff a peak-time paramedic unit 40 hours per week, Monday through Friday. Hourly pay, benefits, and benefit accruals are the same as the 24-hour shift assigned employees.

Staff working at SFD and WVFD stations work a 48-hours-on, 96-hours-off rotating schedule. This schedule results in an average 56-hour workweek, or 2,912 annual average hours worked. Staff working at SW Polk stations work 12-hour days on a modified 2/2/3 schedule, resulting in an average 45-hour workweek. Hourly pay, benefits, and benefit accruals are the same as the 24-hour shift assigned employees.

Methodology for Incident Staffing

Adequate numbers of properly trained emergency responders are required in order to put the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at the incident scene decreases the effectiveness of the response and increases the risk of injury for all those involved. The industry term for adequate staffing in the fire service is *Effective Response Force (ERF)*. The definition for ERF is “the minimum numbers of staffing and equipment that must reach a specific emergency zone location within a maximum prescribed travel or driving time.”³¹ Staffing numbers will be discussed in reference to NFPA 1720, the response objectives from the standard are displayed in the next figure. NFPA 1720 is used for departments with large areas that are not urban as the standard reflects differences in staffing and response times based on population densities. Response times will be discussed further later in the report. Staffing in urban areas is relatively the same for a moderate risk in urban areas in both 1710 and 1720 standards, but the response time for assembling the personnel is different. Every effort should be made to try to assemble the urban staffing in the rural areas even though it may take longer.

Figure 40: NFPA 1720 Response Objectives

Demand Zone ^a	Demographics	Minimum Staff to Respond ^b	Response Time ^c (minutes)	Meets Objective (%)
Urban Area	> 1,000 people/mi ²	15	9	90
Suburban Area	500–1,000 people/mi ²	10	10	80
Rural Area	< 500 people/mi ²	6	14	80
Remote Area	Travel distance ≥ 8 mi	4	Directly dependent of travel distance	90
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

^a A jurisdiction can have more than one demand zone.

^b Minimum staffing includes members responding from AHJ's department and automatic aid.

^c Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.

Federal *Occupational Safety & Health Administration (OSHA)* safety regulations (CFR 1910.120) require that personnel entering a building involved in fire must do so in groups of two.³² Before personnel can enter a building to extinguish a fire, at least two firefighters must be on-scene and assigned to conduct search and rescue in case the fire attack crew becomes trapped. This is referred to as the “two-in, two-out” rule.

³¹ *Fire & Emergency Service Self-Assessment Manual, 8th Edition*; Commission on Fire Accreditation International.

³² OSHA CFR 1910.120, Two-In/Two-Out Regulation.

Emergency Operations Staffing Discussion

When evaluating each department individually, the ratio of shift operations officers to firefighters does not appear to be excessive. There is a cooperative agreement already in place between MFD and AFD sharing a Training Division Chief. Additionally, SFD, SWP, and WVFD have a cooperative agreement to share a Fire Chief position. An opportunity for improvement relates to the availability of a Battalion Chief (BC) throughout the study area. There are only two BC positions on duty each day for the entire district. A combined organization should consider increasing the capacity by at least one BC position to improve overall incident command.

Summary of Staffing

The following three figures break down the number of individuals/titles for Uniformed Administration, Non-uniformed Administration, and Operations Staff.

Figure 41: Total Number of Uniformed Administration

Uniform Administrative	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Fire Chief	Shared	1	1	1	1	1	1		
Deputy Chief	0	1	0	0	0	0	1		
Division Chief	0	0	0	0	0	0	0	0	0
Administration Chief	0	0	0	0	0	0	0	0	0
Division Training	Shared	0	0	0	1	0	1		
Assistant Chief	0	0	0	0	0	0	0	0	0
Fire Marshal*	0	0	0	0	1	0	0	0	0
Asst. Fire Marshal	0	0	0	0	1	0	0	0	0
Fire Prevention	0	0	0	0	0	0	0	0	0
Plan Review	0	0	0	0	0	0	0	0	0
Fire Inspector	0	0	0	0	0	0	0	0	0
Public Educators	0	0	0	0	0	0	0	0	0
PIO Officer	0	0	0	0	0	0	0	0	0
Admin. Captain	0	0	0	0	0	0	0	0	0
Admin. Lieutenant	0	0	0	0	0	0	0	0	0
Subtotal	1	2	1	1	4	1	3		

Figure 42: Total Non-Uniformed Administration

Non-Uniformed Administration	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Office Manager	0	0	0	0	1	0	0	0	0
IT Technicians	0	0	0	0	0	0	0	0	0
Asst. Admin.	0	0	0	0	0	0	1	→	
Executive Assistants	0	0	0	0	0	0	0	0	0
Administrator	0	0	0	0	0	0	0	0	0
Admin. Assistants	1	0	0	0	0	1	0	0	0
Billing Specialist	0	0	0	0	1	0	1	→	
Fleet Manager	0	0	0	0	0	0	0	0	0
Logistics	0	0	0	0	1	0	0	0	0
Health and Wellness	0	0	0	0	0	0	0	0	0
Subtotal:	1	0	0	0	3	1	2	→	

Figure 43: Total Operations Staff

Operations Staff	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Asst. Chief Ops.	0	0	0	0	1	0	0	0	0
Battalion Chief	0	0	0	0	3	0	3	→	
Captain	0	0	1	0	3	0	0	2	0
Lieutenant	5	4	0	2	0	3	4	0	0
Engineer	0	0	0	0	3	0	0	0	0
FF/Paramedic	2	2	0	0	20	1	7	0	6
Firefighter/EMT	23	3	2	0	5	2	3	0	2
Firefighter	0	24	0	15	0	12	14	9	2
Volunteer FF	0	0	22	0	25	0	0	0	0
Firefighters—Other	0	0	0	0	2	0	0	0	0
Subtotal	30	33	25	17	62	18	31	14	13

Overall Staffing Discussion

The data supports that the primary response for a combined department will be EMS-related calls. All nine departments have demonstrated an excellent pre-hospital response program, including quality equipment, training, medical control, and documentation. Following is a breakdown of current EMS, fire, and special team staffing.

Figure 44: Overview of Station Staffing

Department	Station	EMS Staffing	Fire Staffing	Command	Min. Staffing	Special Team Staffing
AFD	5	0	4	0	Volunteer	0
	50	0	2	0	Volunteer	0
DFD	6	0	3	0	Volunteer	0
	62	0	0	0	Volunteer	0
DDF	3	0	3	0	Volunteer	0
LFD	10	0	2	0	Volunteer	0
MFD	1	4	4	1	7	0
	12	2	0	0	2	0
NCFD	Main	0	4	0	Volunteer	0
	Panther	0	0	0	Volunteer	0
SFD	190	0	2	1	3	0
	197	0	2	0	Volunteer	0
	198	0	2	0	Volunteer	0
SWP	130	0	2 (12 hrs./day)	0	Volunteer	0
	140	0	2 (Vol)	0	Volunteer	0
	150	0	2 (Vol)	0	Volunteer	0
WVFD	180	0	4	0	2	0
	182	0	4	0	2	0

Future staffing discussions should evaluate the need for an additional ambulance/crew throughout the combined district. An agreement has been made between MFD and LFD to place additional staffing at the new LFD Station. Similar agreements would be beneficial regardless of an overall consolidation of departments. Based on the requirements for an effective response force (ERF) discussed in the *Service Delivery* section, ESCI recommends that all of the positions be cross-staffed as firefighters.

Current Wages & Benefits

One of the major challenges associated with any consolidation effort is to identify the significant differences in benefit packages and wages for administrative and operational positions. ESCI analyzed the various positions in order to help ascertain the variances between departments.

For the purpose of comparison, each organization provided a base pay rate for each position. A combined organization would have to establish a compensation philosophy that identified step increases for the completion of tasks or time in grade. There is also a disparity between specific titles and associated responsibilities. For example, MFD utilizes an Assistant Chief position, whereas SFD uses the title of Deputy Chief. Both positions appear to have similar responsibilities. The following figure provides a general overview of the current wages for administrative and operations employees.

Figure 45: Uniformed/Non-Uniformed Staff Average Salary Comparisons, 2019

Positions	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Fire Chief	N/A	N/A	\$61,936	N/A	\$136,152	N/A	\$118,000	N/A	N/A
Exec. Assistant	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Deputy Chief	N/A	N/A	N/A	N/A	N/A	N/A	\$108,150	N/A	N/A
Assistant Chief	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Division Chief	N/A	N/A	N/A	N/A	\$83,324	N/A	\$97,850	N/A	N/A
Admin. Chief	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Administrator	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asst. Admin.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fire Marshal	N/A	N/A	N/A	N/A	\$117,408	N/A	N/A	N/A	N/A
Assist. Fire Marshal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fire Inspector	N/A	N/A	N/A	N/A	\$85,056	N/A	N/A	N/A	N/A
Ops. Chief	N/A	N/A	N/A	N/A	\$101,420	N/A	N/A	N/A	N/A
Battalion Chiefs	N/A	N/A	N/A	N/A	\$96,570	N/A	\$80,000	N/A	N/A
Captains/EMT	N/A	N/A	N/A	N/A	\$86,626	N/A	N/A	N/A	N/A
Lieutenants	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Engineer	N/A	N/A	N/A	N/A	\$81,912	N/A	N/A	N/A	N/A
FF/Paramedics	N/A	N/A	N/A	N/A	\$86,016	N/A	\$60,000	N/A	N/A
FF/EMT III	N/A	N/A	\$43,385	N/A	\$70,864	N/A	\$55,000	N/A	N/A
Office Manager	N/A	N/A	N/A	N/A	\$61,800	N/A	N/A	N/A	N/A
IT Manager	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HR Manager	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HR Staff	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Finance Dir.	N/A	N/A	N/A	N/A	N/A	N/A	\$56,000	N/A	N/A
Finance Acct.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acct. Clerk	N/A	N/A	N/A	N/A	\$53,826	N/A	N/A	N/A	N/A
Admin. Assist.	\$8,565	N/A	N/A	N/A	N/A	N/A	\$38,000	N/A	N/A
Logistics	N/A	N/A	N/A	N/A	\$50,781	N/A	N/A	N/A	N/A

None of the salaries of the operations positions listed in the preceding figure include regularly scheduled *Fair Labor Standards Act* (FLSA) overtime pay. The wage disparity is greatest at Firefighter/EMT. As previously mentioned, some of the administration titles have a significant difference in roles and responsibilities, limiting the ability to make an accurate comparison.

The next topic for analysis relates to the various benefits provided by each department. With minimal exceptions, all departments offer similar benefits and a retirement pension through the Oregon State Public Employment Retirement System (PERS) or a locally managed 401K type program. Following is a summary of the benefits provided through each organization.

Figure 46: Employee Benefits Provided by Department

Benefits Provided	AFD	DFD	DDF	LFD	MFD	NCFD	SFD	SWP	WVFD
Uniform Allowance	N/A	N/A	N/A	N/A	Yes	N/A	N/A*	N/A*	N/A*
Educational Incentives	N/A	N/A	N/A	N/A	Yes	N/A	Yes		
Social Security	N/A	N/A	N/A	N/A	No	N/A	Yes		
Workers' Comp.	N/A	N/A	Yes	N/A	Yes	N/A	Yes		
Pension	N/A	N/A	Yes	N/A	Yes	N/A	Yes		
Deferred Comp.	N/A	N/A	Yes	N/A	Yes	N/A	Yes		
Medical	N/A	N/A	Yes	N/A	Yes	N/A	Yes		
Dental	N/A	N/A	Yes	N/A	Yes	N/A	Yes		
Short-term Disability	N/A	N/A	Yes	N/A	Yes	N/A	Yes	N/A	N/A
Vision	N/A	N/A	Yes	N/A	No	N/A	Yes		
Life Insurance	N/A	N/A	Yes	N/A	Yes	N/A	Yes		
Survivor Income Benefit	N/A	N/A	No	N/A	No	N/A	Yes		
Add'l Life Insurance	N/A	N/A	No	N/A	No	N/A	No	N/A	N/A

*The Collective District purchases all uniforms.

The accrual of vacation and sick time is consistent between the career departments. The overall amount of vacation and sick time is about 24% higher at MFD. The combined organization will need to address the disparity in overall hours and the financial impact of a new process.

Figure 47: Vacation and Sick Time Accrual Comparison

Department	Vacation Monthly Accrual	Total Annual Vacation	Sick Time Monthly Accrual	Total Annual Sick Time
AFD	N/A	N/A	N/A	N/A
DFD	N/A	N/A	N/A	N/A
DDF	10	120	8	96
LFD	N/A	N/A	N/A	N/A
MFD	10	120	14	168
NCFD	N/A	N/A	N/A	N/A
SFD	10	120	8	96
SWP	↓	↓	↓	↓
WVFD	↓	↓	↓	↓

Staff Survey Results

At the beginning of this study, ESCI created a web-based survey to be distributed to the employees and volunteers of each of the fire agencies involved in this study, along with any appointed or elected officials and other key stakeholders affiliated with the respective organizations. The survey was designed to be confidential, and neither ESCI nor any of the agencies were aware of the respondents' names.

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 some of the survey results (complete results will be found in Appendix B).

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)."*

Figure 48: Fire Agency Affiliations of the Survey Respondents

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%

¹Rounded to the nearest integer.

As shown in the preceding figure, the majority of respondents were affiliated with the McMinnville Fire Department, Amity Fire District, and Sheridan Fire District, respectively.

Question #2: “My current position with one of the fire districts/departments involved in this study is...”

Figure 49: Job Positions of the Survey Respondents

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%

¹Rounded to the nearest integer.

Of those completing the survey, the majority were assigned to emergency operations within their respective fire agencies. Of those, the combined Volunteers (which included all below the rank of Fire Chief) represented 50% of the respondents, while all the combined career Firefighters below the rank of Fire Chief represented 27% of the total.

The next figure illustrates the results of the respondents' opinions concerning whether they were in favor of or against a potential consolidation. The answers to the question included a caveat: “...depending on how it is configured and how it impacts my position.” There were 151 responses to this question.

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...”

Figure 50: Respondent Opinions on a Potential Consolidation

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.

As shown in the preceding figure, most of the respondents (78%) were in support of a potential consolidation, depending upon how it would be configured and affect their positions within the organization.

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

CAPITAL FACILITIES & APPARATUS

Collective Summary of the Fire Stations

The following figure is a collective summary of the fire stations owned and operated by the fire agencies participating in this study. It is intended to show the combined facilities' capacity of the fire departments/districts.

Figure 51: Collective Summary of Fire Stations in the Study Area

Fire District	No. of Stations	Staffing Capacity	Apparatus Bays	Total Square Footage
Amity Fire District	2	0	10	17,696
Dayton Fire District	3	0	11	17,200
Dundee Fire District	1	4	12	17,500
Lafayette Fire Department	1	1	2	1,700
McMinnville Fire Department ^A	2	15	11	26,184
New Carlton Fire District	2	7	6	9,500
Sheridan Fire District	3	8	14	18,881
Southwestern Polk	1	0	4	2,400
West Valley Fire District	2	12	11	24,825
Totals:	17	47	81	135,886

^AIncludes the residential location with a single Medic Unit.

The preceding figure shows that the combined fire agencies maintain about 17 fire stations with a total staffing capacity of approximately 47 personnel, 81 apparatus bays, and approximately 135,886 total square feet.

ESCI utilized the condition criteria as documented by the study participants on their respective fire stations. The conditions of some of the fire stations were not reported, however, the majority were rated. Combined, the fire stations were rated as follows:

- Excellent: 19%
- Good: 38%
- Fair: 25%
- Poor: 19%

As shown, 57% of the fire stations were rated as "Excellent" or "Good," while 44% were rated as "Fair" or "Poor."

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 52: 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.³³ 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.

³³ NFPA 1901: *Standard for Automotive Fire Apparatus*; Section D.3.

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 replaced sooner than a 10-year-old one with 2,500 miles. The following figure represents a relatively simple example that the districts can use for determining the condition of fire apparatus and vehicles.

Figure 53: 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)

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
- **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.

FINANCIAL REVIEW

This section of the study provides a summary of the historical and current financial condition of the Amity Fire District, Dayton Fire District, Dundee Fire Department and Dundee Fire District, Lafayette Fire Department, McMinnville Fire Department and McMinnville Fire District, New Carlton Fire District, and the Sheridan FD/Southwestern Polk RFPD/West Valley FD IGA.

To provide an understanding of the variability found in 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 2020–2025, given various potential new district configurations.

This comparative snapshot summarizing 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. A more detailed financial analysis of each respective participating agency can be found in Appendix D. 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 monetary policy and practices used by each agency 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

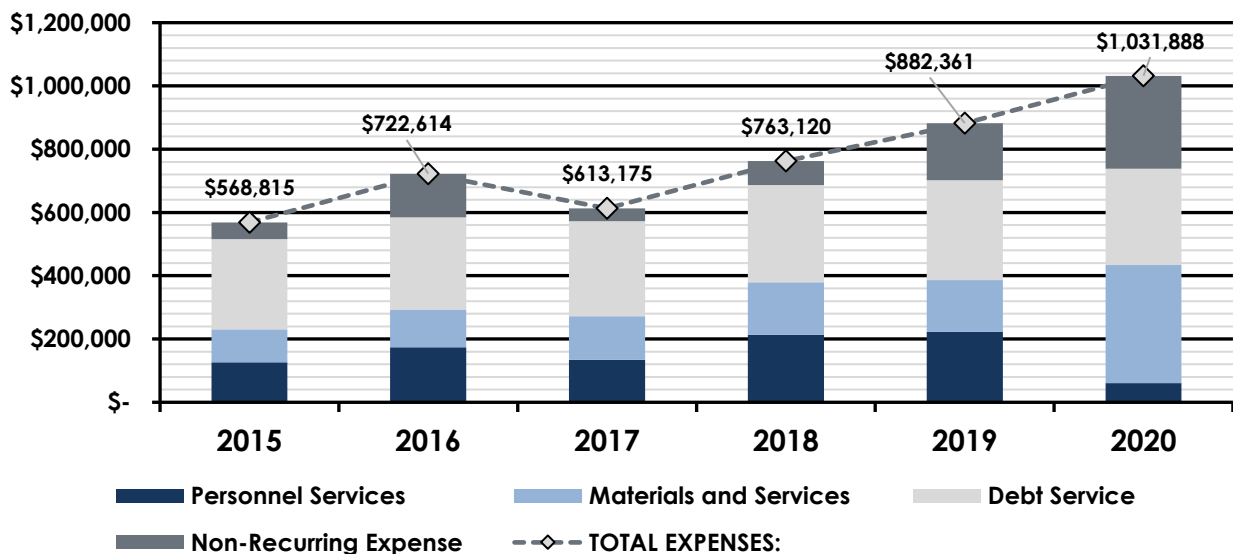
The following discussion presents historical revenue and expense for each agency. A brief summary of each agency is provided along with a comparative millage rate. Each department has different and diverse revenue streams with different categories of expenses. Therefore, descriptions and analyses in each section may differ slightly from one another. *A complete detailed financial analysis for each jurisdiction is included in the report addendum, Appendix D.*

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. While allowed by Oregon law, this methodology 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. 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.

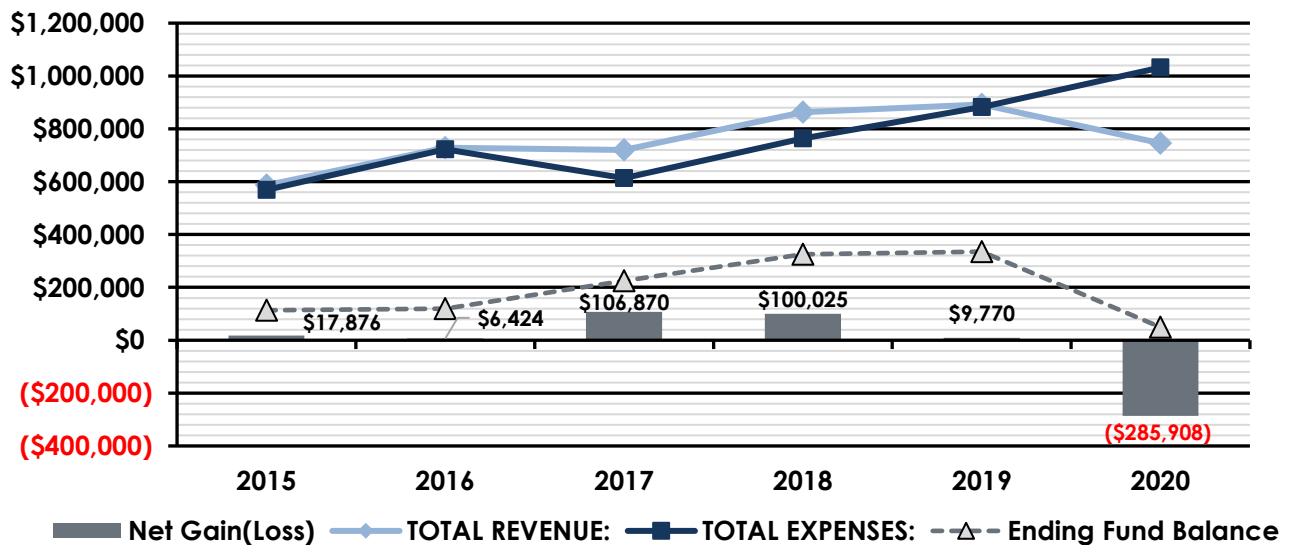
The following figure shows District expense by major category and illustrates the variable impact of capital expenditures on overall expense. Total District expense has generally increased by 11.6% per year from FY 2015 through FY 2019. This trend has been driven by an increase in recurring expense of 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 54: Amity 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 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 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 the expenditure of reserve funds that lower fund balance. The FY 2020 budget also shows an increase in recurring expenses over recurring revenue, which is a longer-term issue that must be addressed to maintain sound financial footing for the District.

Figure 55: Amity Fire District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted

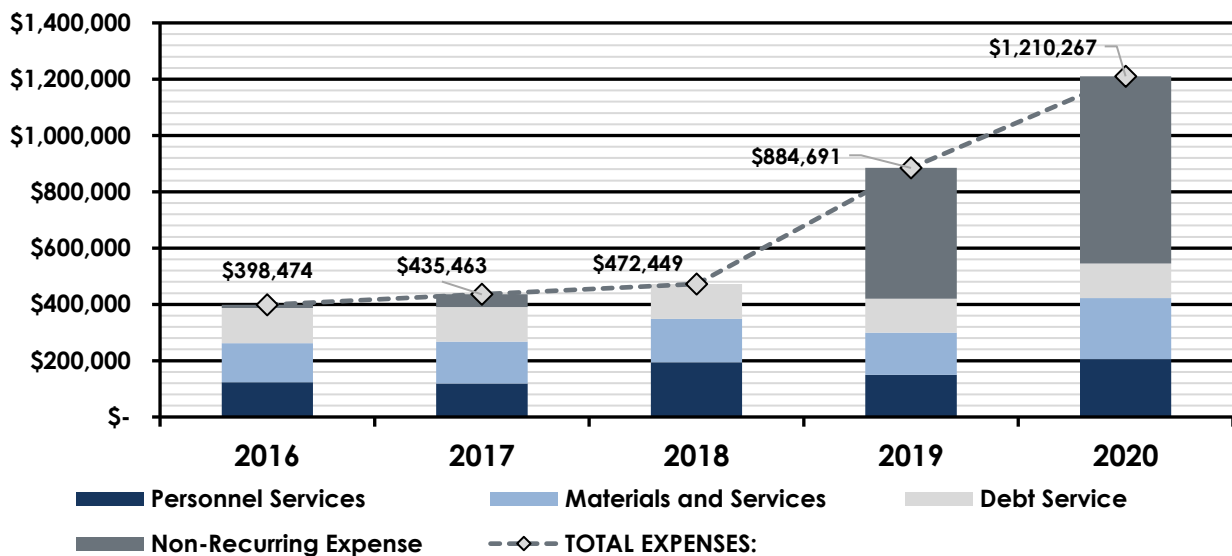


Dayton Fire District

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. 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.

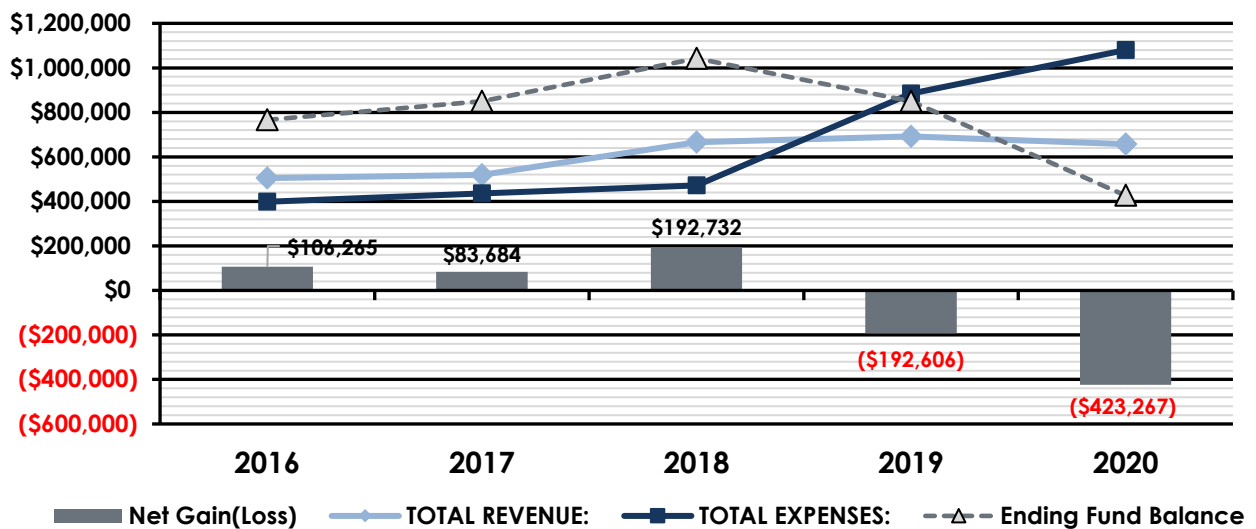
The following figure shows District expense by major category and illustrates the variable impact of capital expenditures, particularly apparatus replacement, on overall expense. Excluding the large capital apparatus purchases in FY 2019 and estimated in FY 2020, total District expense has generally 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 56: Dayton Fire District Expense by Major Category, FY 2016 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 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. 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 lowers 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 57: 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

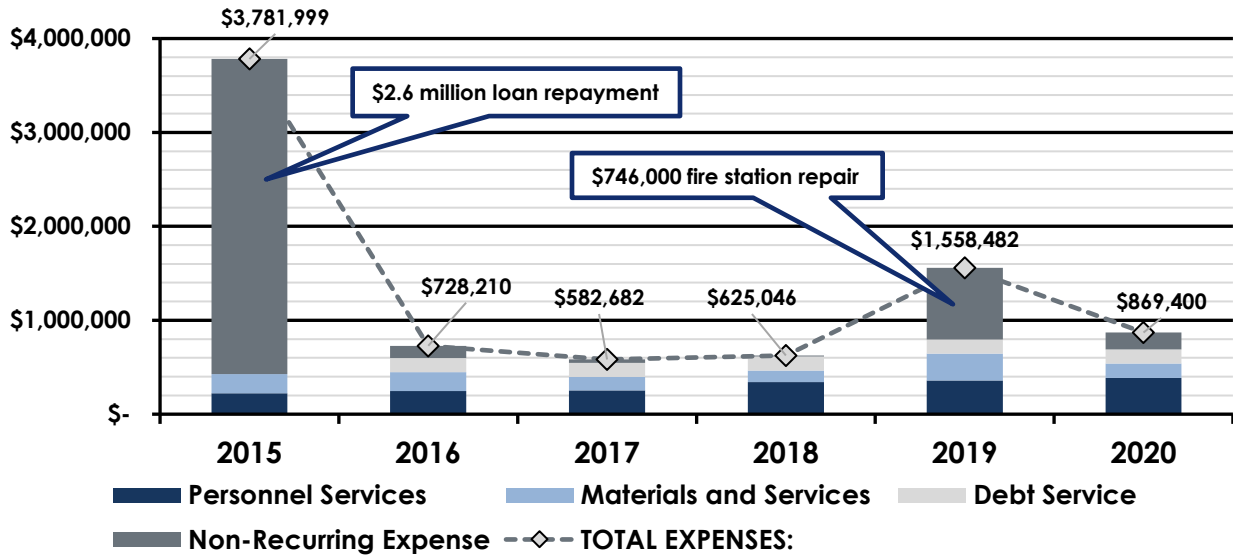
The City of Dundee Fire Department (DFD) is one of several external service departments of the City General Fund (GF). DFD also provides fire protection services to the Dundee Rural Fire Protection District (District) on a contractual basis. Under the current agreement, the District pays 85% of its permanent 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).

The City operates on a July 1 to June 30 fiscal year and uses a modified cash basis for its fund accounting. The DFD 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. 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.

A proportionate share, or equivalent millage, of the City GF millage, is needed to fund the fire department's Personnel Services and Materials & Services expenditures, after accounting for specific fire department revenues. The equivalent GF millage of 1.4522 mills/\$1,000 taxable value does not include the debt service millage of 0.5078 mills required to fund the annual fire station bonded debt payment. The total equivalent millage necessary to fund the fire department in FY 2020 after fire department related revenues (such as the District contract fee) are subtracted is 1.96 mills.

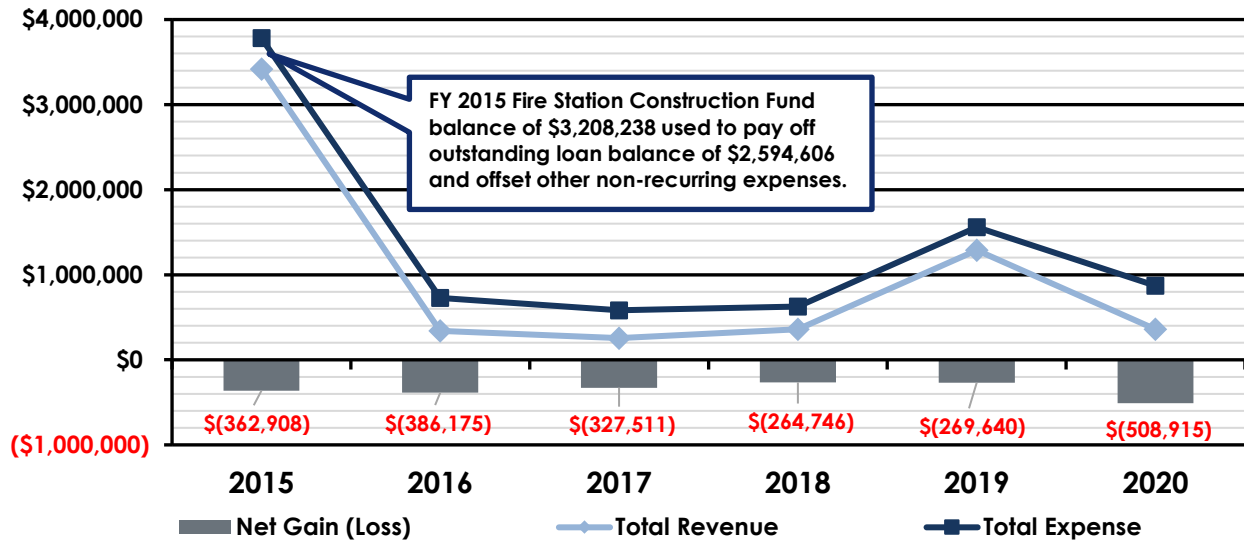
The following figure shows DFD expense by major category. Major spikes in total expenditures are caused by repayment of a construction loan (\$2.6 million) and capital construction costs of \$670,000 in FY 2015, and fire station repair costs of \$746,000 in FY 2019. Equipment/Apparatus costs have generally 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 58: Dundee Fire Department Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



Since the DFD budget lies within the City GF, it is instructive to examine the estimated net financial impact on the City GF 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.

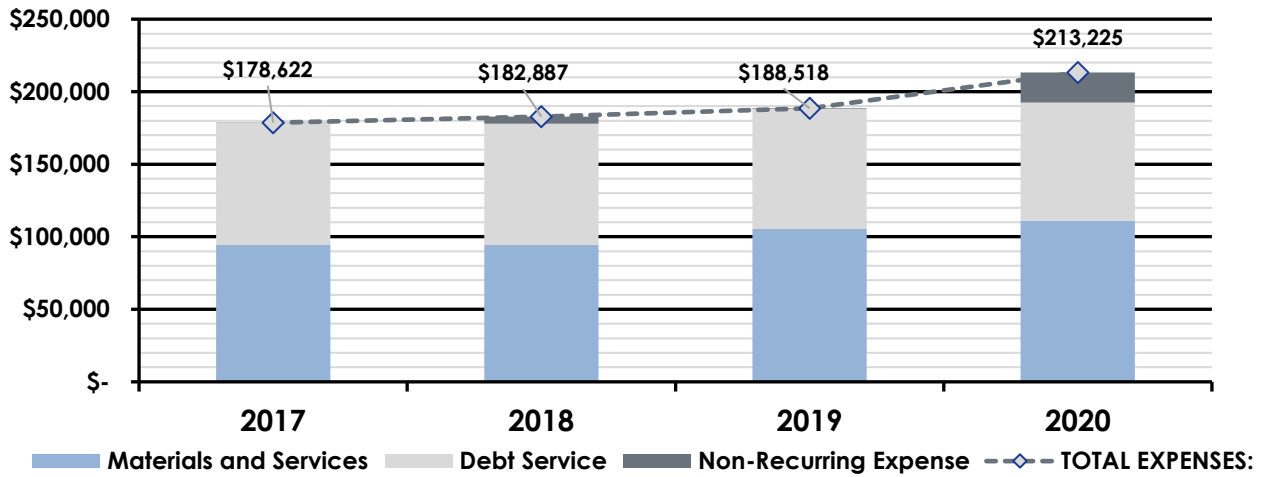
Figure 59: Dundee Fire Department Total Expense, Revenue, and Estimated Net Impact to City General Fund, FY 2015 Actual–FY 2020 Amended



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. 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.

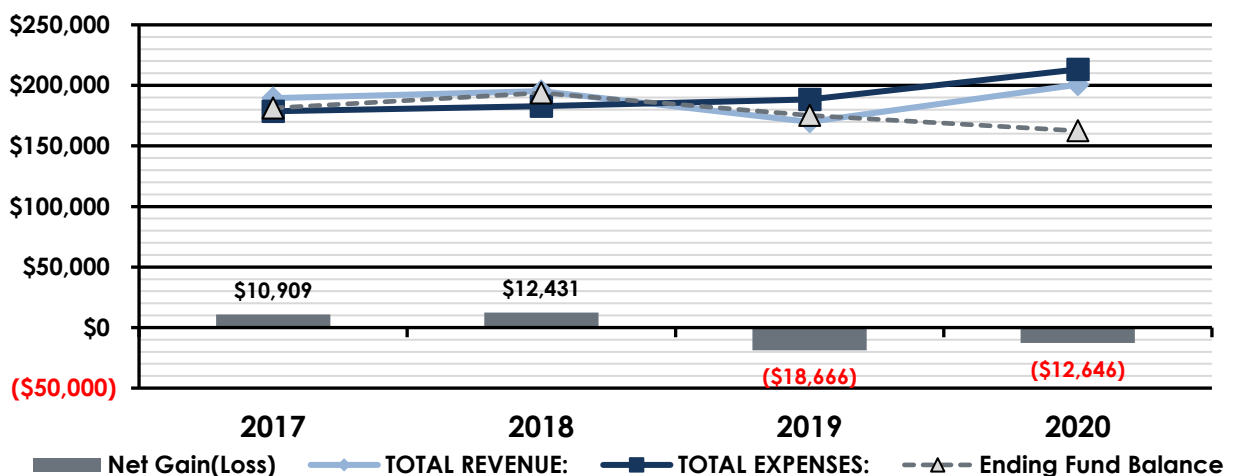
The following figure shows the Dundee Rural Fire Protection District expense by major category. Actual, total District expenses increased by 2.4% between FY 2017 and FY 2018. When compared to FY 2020 adopted, the average annual increase could be as high as 6.1%. This trend has been driven by an increase 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 60: 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. 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 61: Dundee Fire District Total Expense, Revenue, Net Change and Impact of Ending Fund Balance FY 2017 Actual–FY 2020 Adopted



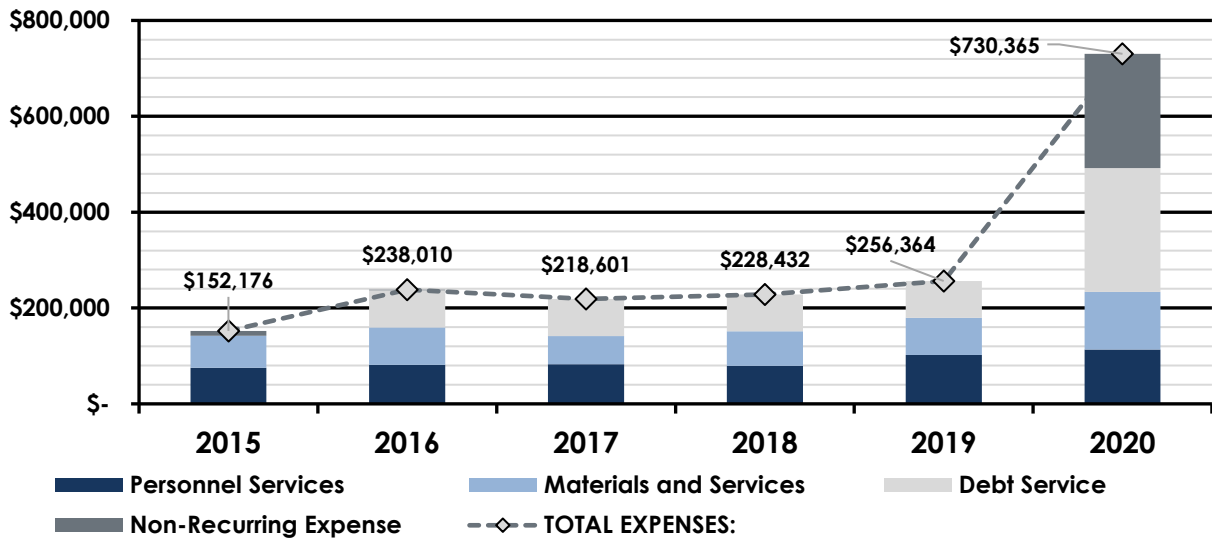
Lafayette Fire Department

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 approximately 12.3% 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.

The City operates on a July 1 to June 30 fiscal year and uses a modified cash basis for accounting. The department is reliant upon general revenues and a debt service mill levy 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 to offset fire station construction costs, 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. A proportionate share, or equivalent millage, of the City GF millage, is needed to fund the fire department's Personnel Services and Materials & Services expenditures. The equivalent GF millage of 0.9983 mills/\$1,000 taxable value does not include the debt service millage of 0.777 mills required to fund the annual construction bond debt service. The total equivalent millage necessary to fund the fire department in FY 2020 is 1.7753 mills.

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



McMinnville Fire Department

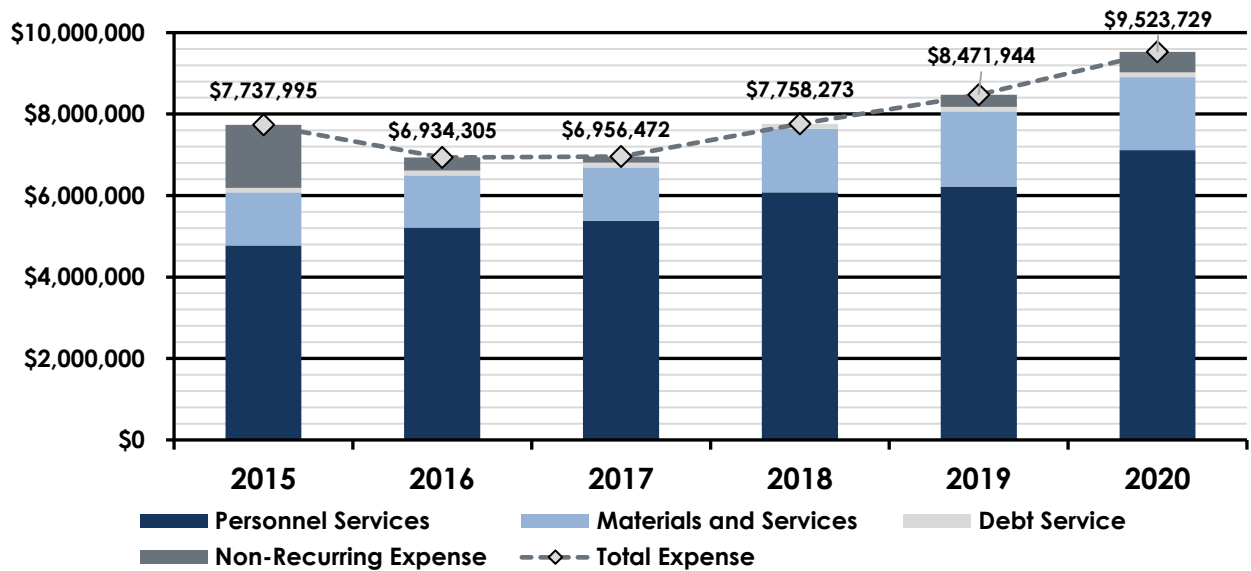
The McMinnville Fire Department is one of several City of McMinnville external service departments housed within the City General Fund or GF (Fund 01). Program-specific revenues and both operating and capital expenses associated with traditional fire, rescue, and prevention activities are budgeted within 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 the 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. A proportionate share, or equivalent millage, of the City GF millage is needed to fund the fire department's Personnel Services and Materials & Services expenditures, after accounting for specific fire department revenues. The equivalent GF millage of 1.5285 mills/\$1,000 taxable value 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 service into the GF.

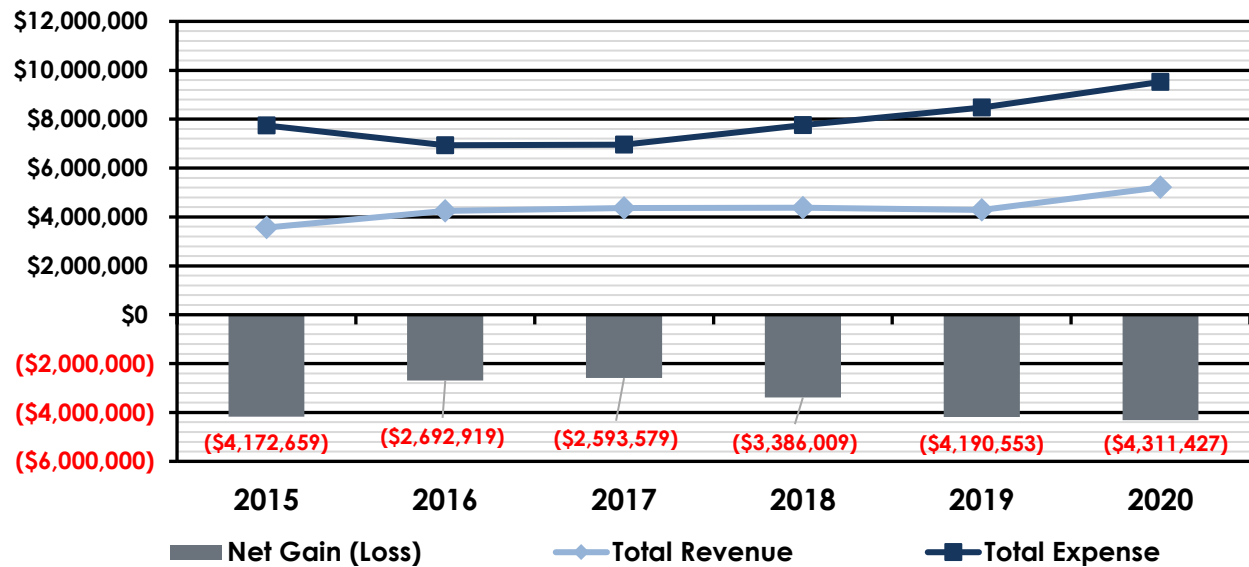
The following figure shows the combined fire department expense by major category. Actual total department operating expenses (less debt service and capital costs) have increased by 32% between FY 2015 and FY 2019 for an average annual increase of approximately 7.5%. When compared to FY 2020 amended, 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 63: 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.

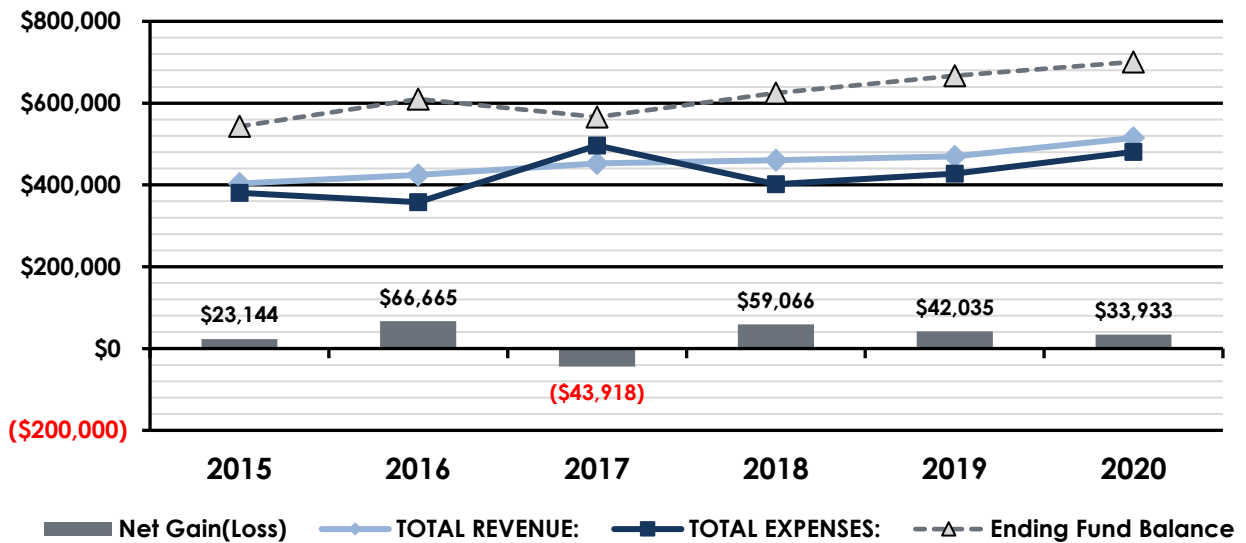
Figure 64: McMinnville Fire Department Total Expense, Revenue, and Estimated Net Impact of City General Fund, FY 2015 Actual–FY 2020 Amended



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 FY 2020 operating budget is based upon the adopted mill rate of 0.9576 mills.

The following figure shows District 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 65: McMinnville Rural Fire Protection District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance, FY 2017 Actual-FY 2020 Adopted

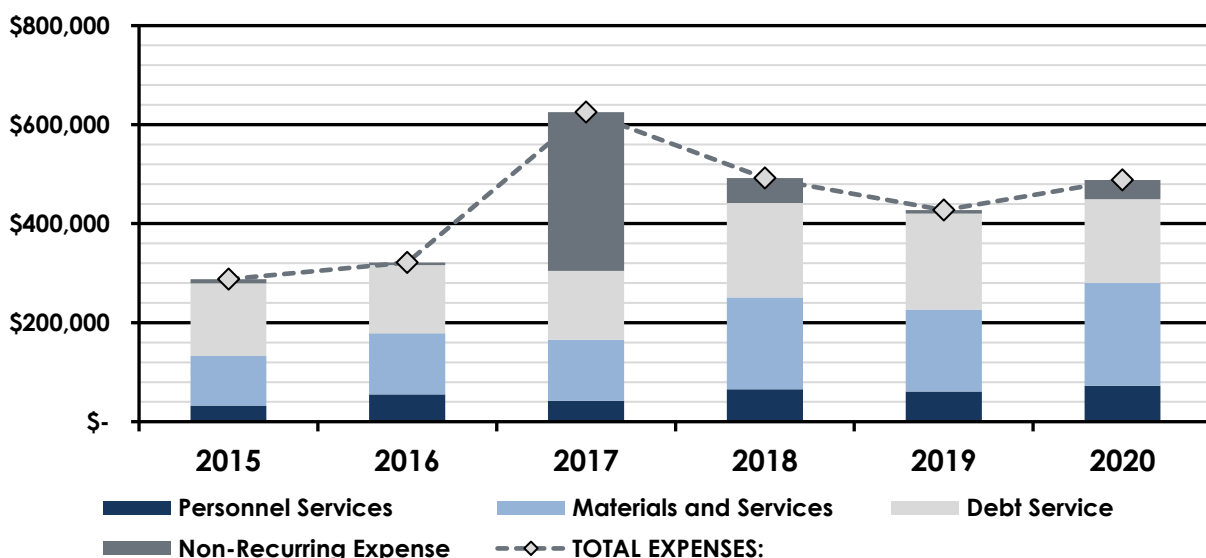


New Carlton Fire District

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. 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.

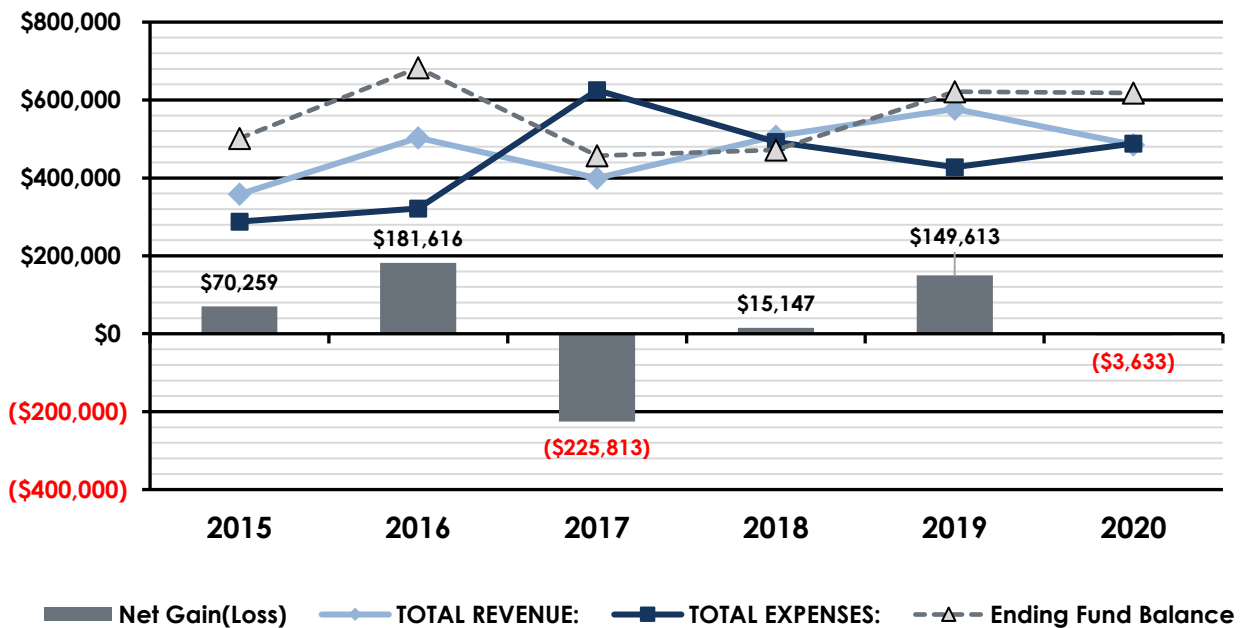
The following figure shows District expense by major category and illustrates the impact of the capital apparatus purchase in FY 2017 on overall expense. Excluding the non-recurring expenditure spike in FY 2017, total District expense has generally increased by 48.5% or 10.4% per year from FY 2015 through 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 66: 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. The one-time purchase of capital apparatus in FY 2017 required the use of fund balance since overall expense exceeded 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 67: 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

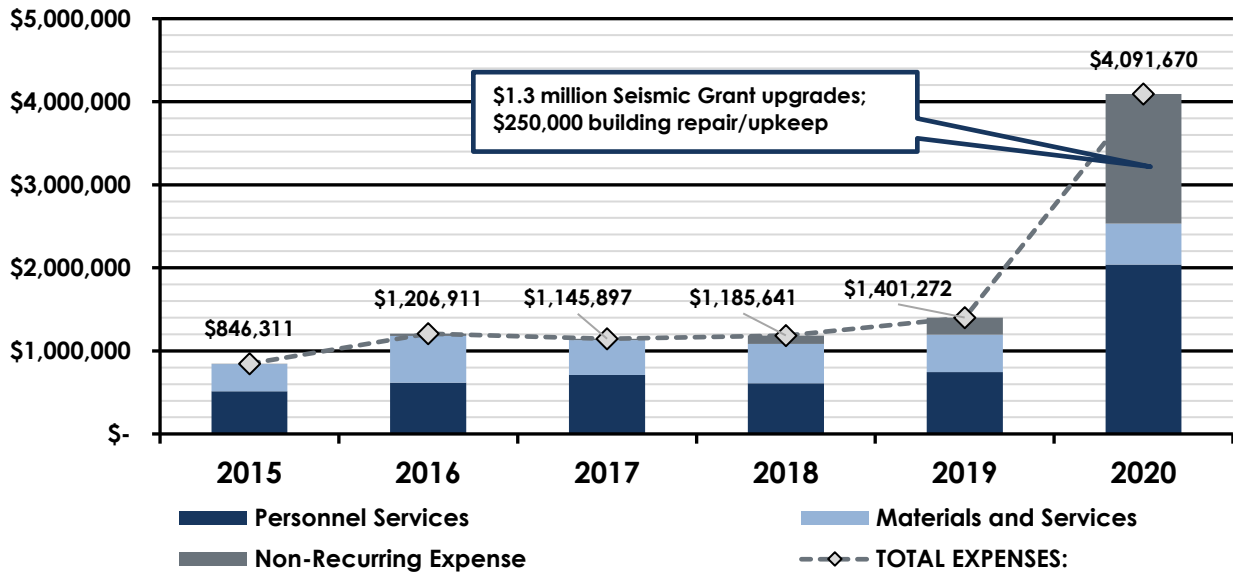
In FY 2020, the Sheridan, Southwestern Polk, and West Valley Fire Protection Districts entered into an Intergovernmental Agreement (IGA) for cooperative services in the areas of administration, operations, and finance under one Fire Chief. For the purposes of historical analysis, each district's finances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

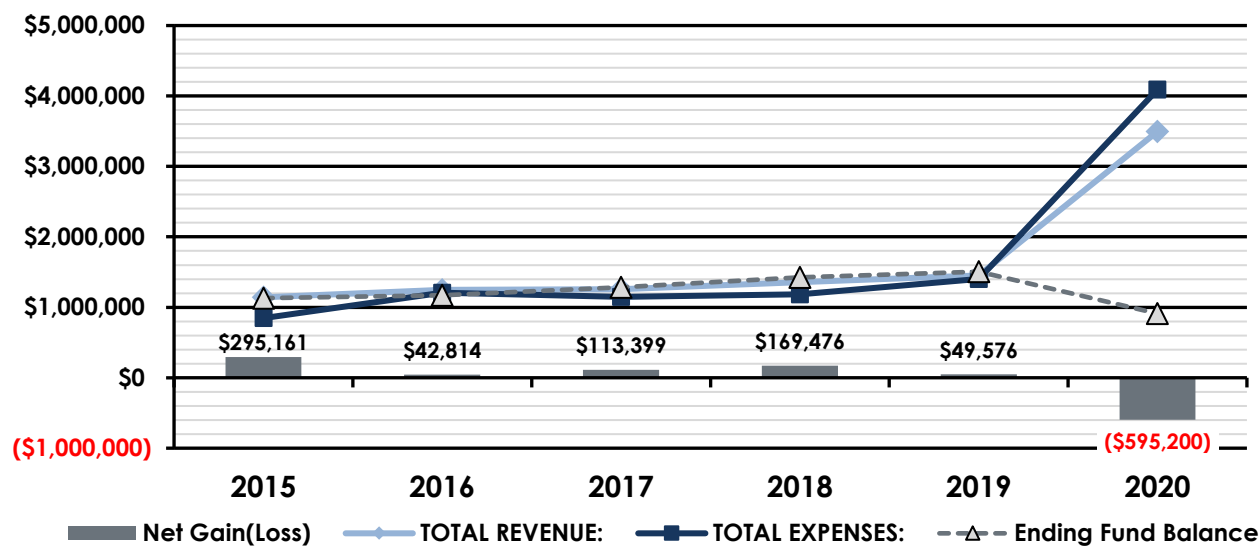
The following figure shows District expense by major category and illustrates the impact of the seismic hardening and other facility upgrades/repairs in FY 2020 on overall expense. Total District expense has generally increased by 65.6% or 13.4% per year from FY 2015 through FY 2019. This trend has been driven by an increase in recurring expenses 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 68: Sheridan 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 had total revenue higher 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 69: Sheridan Fire District Total Expense, Revenue, Net Change, and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted

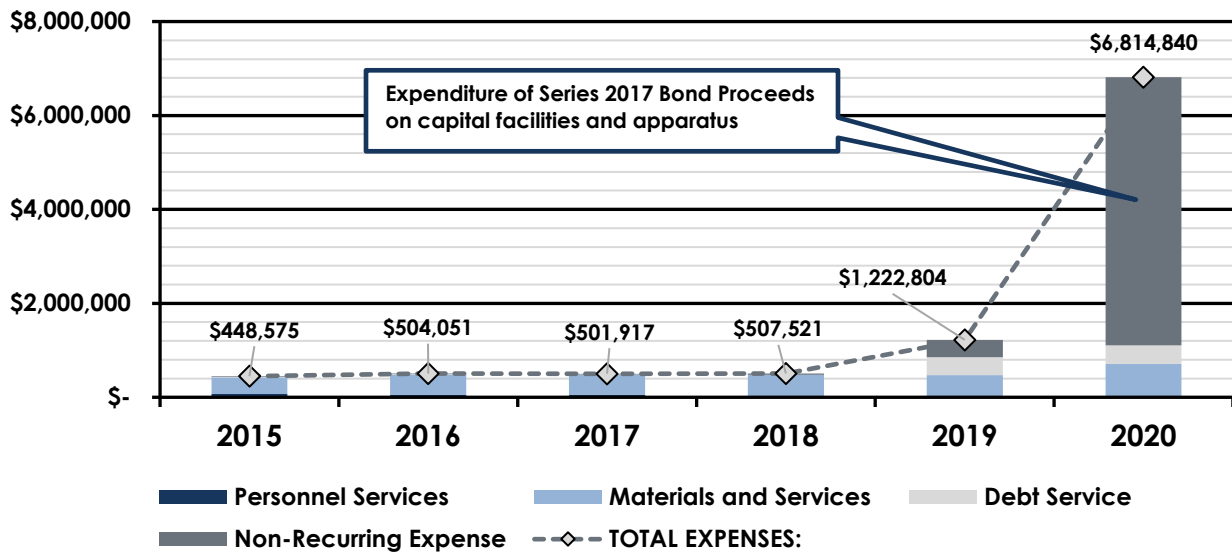


Southwestern Polk

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. 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.

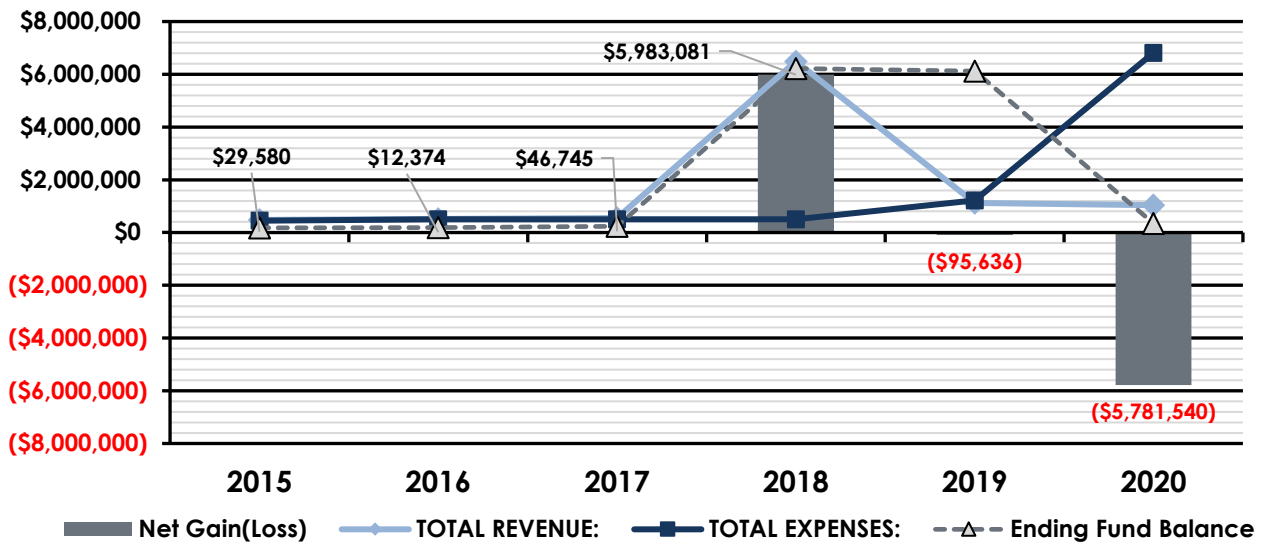
The following figure shows District expense by major category and illustrates the impact of the bond spending on apparatus and facilities beginning in FY 2019. Total District expense remained relatively flat between FY 2015 and FY 2018, averaging approximately \$490,000 annually, of which the bulk was 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 70: 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 the ending fund balance returning to a more normal level, albeit slightly higher than the preceding average (\$342,000). From FY 2015–19, District recurring revenue has exceeded recurring expense by an average of \$122,000. This represents sound financial practice and has resulted in a positive impact on ending fund balance.

Figure 71: Southwestern Polk Fire District Total Expense, Revenue, Net Change and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted



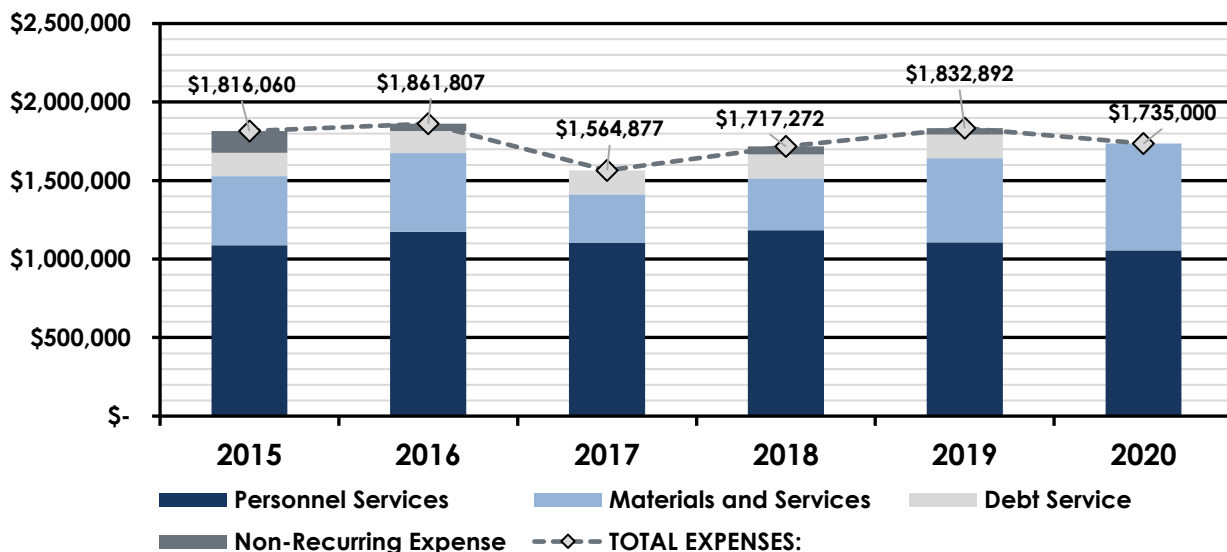
West Valley

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. 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 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.

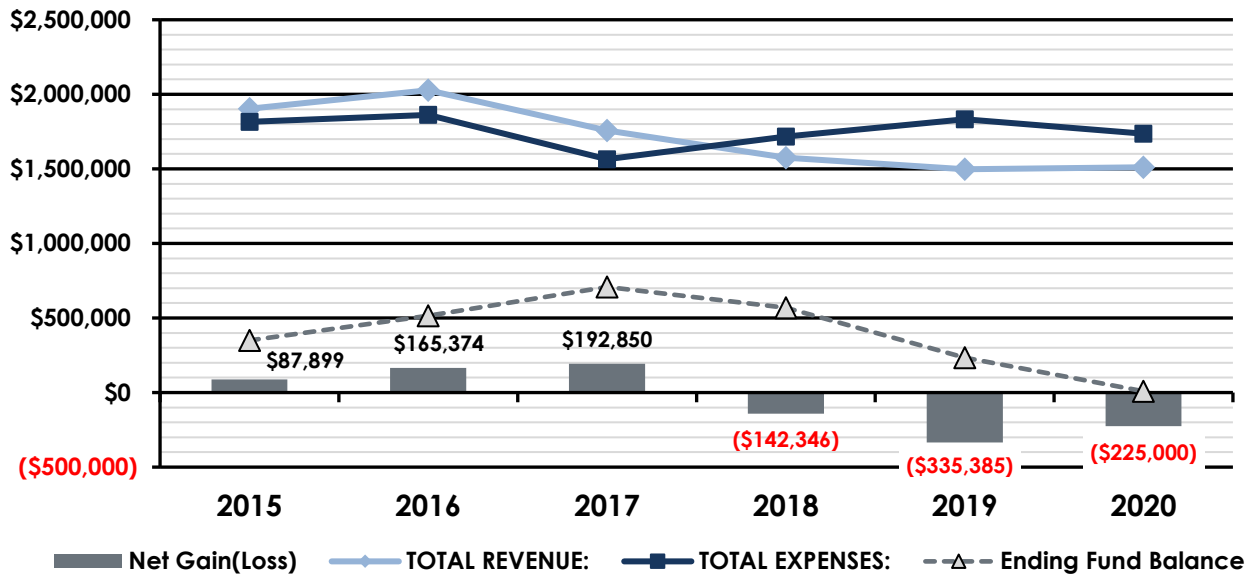
Figure 72: West Valley Fire District Expense by Major Category, FY 2015 Actual–FY 2020 Adopted



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 increased the 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 the 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 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 73: West Valley Fire District Total Expense, Revenue, Net Change and Impact of Ending Fund Balance, FY 2015 Actual–FY 2020 Adopted



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 97.

Figure 74: 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

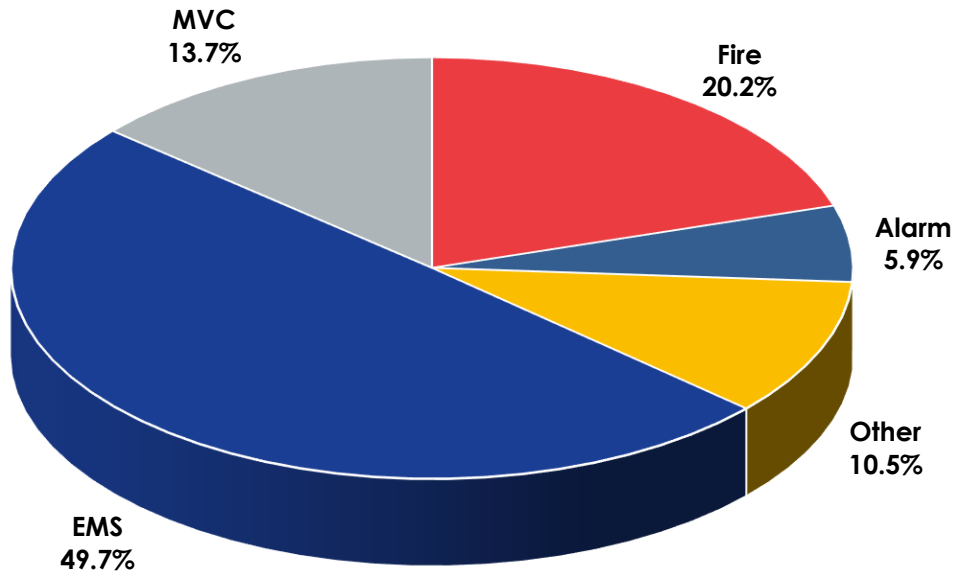
This section provides an abbreviated report and displays on individual agencies' service delivery and performance components. Detailed analyses and breakdowns are available for review in the report addendum, Appendix C.

Incidents by NFIRS Incident Type—Percentage

It is 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.

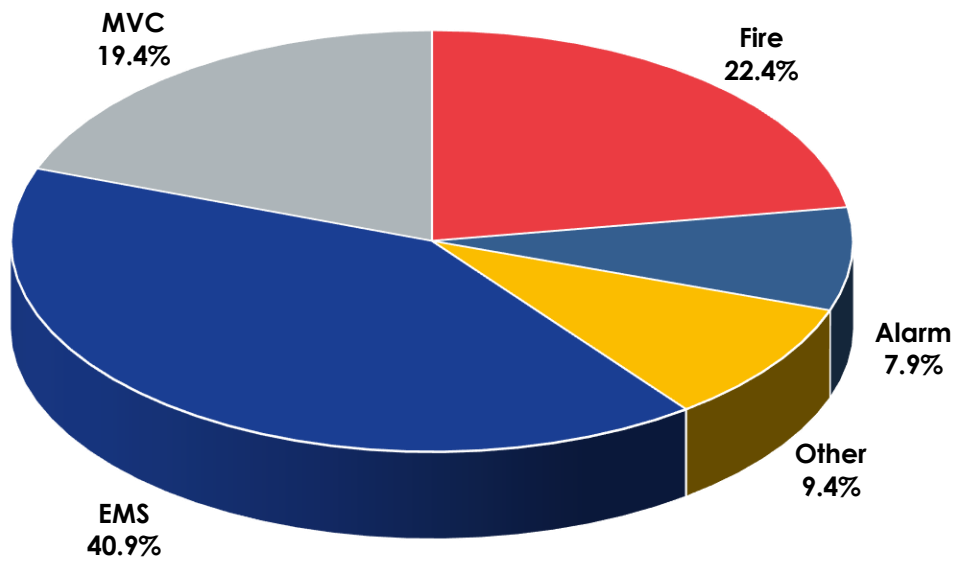
Amity Fire District

Figure 75: AFD Incidents by NFIRS Type, 2015–2018



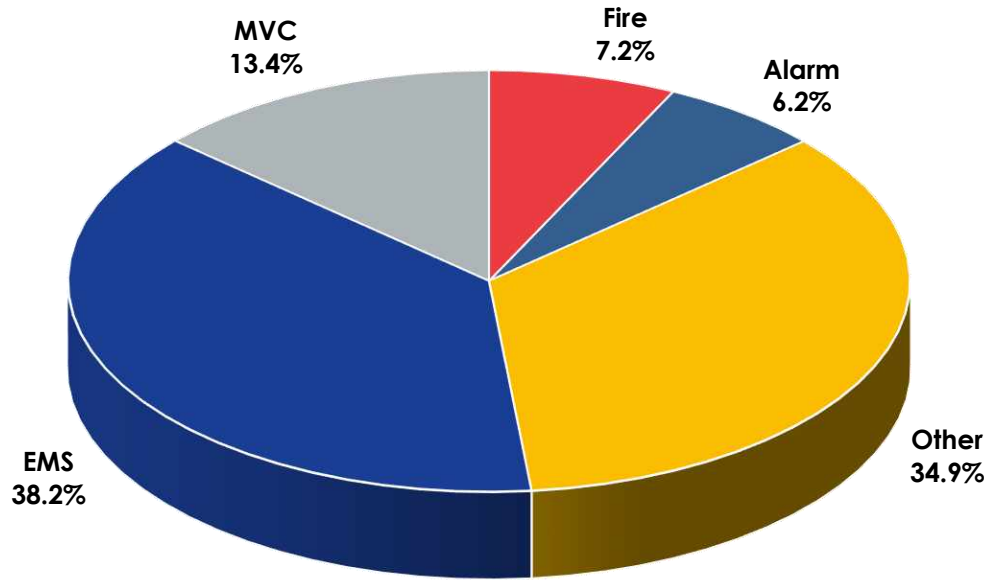
Dayton Fire District

Figure 76: DFD Incidents by NFIRS Type, 2015–2018



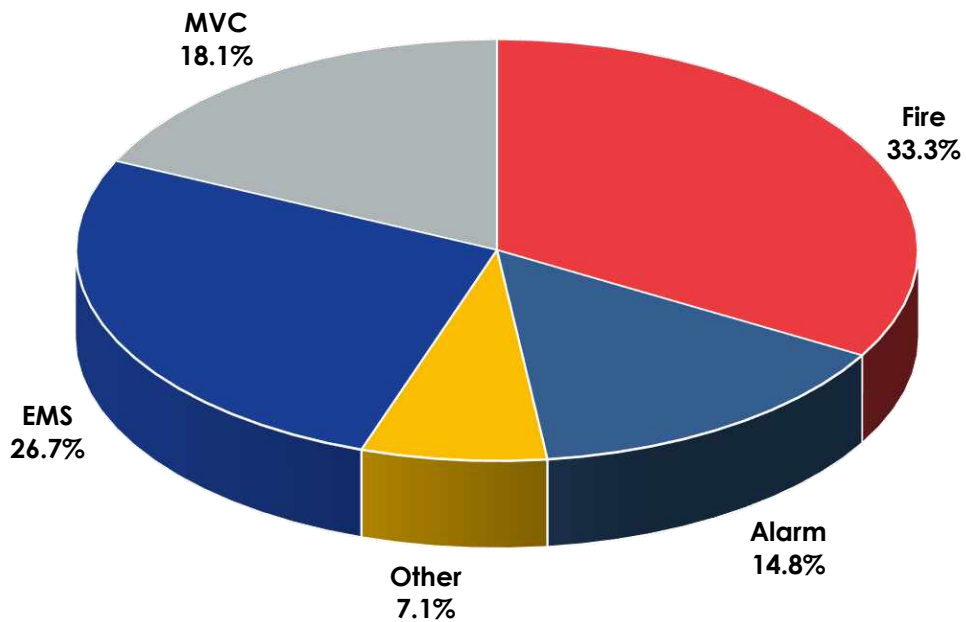
Dundee Fire District

Figure 77: DDF Incidents by NFIRS Type, 2015–2018



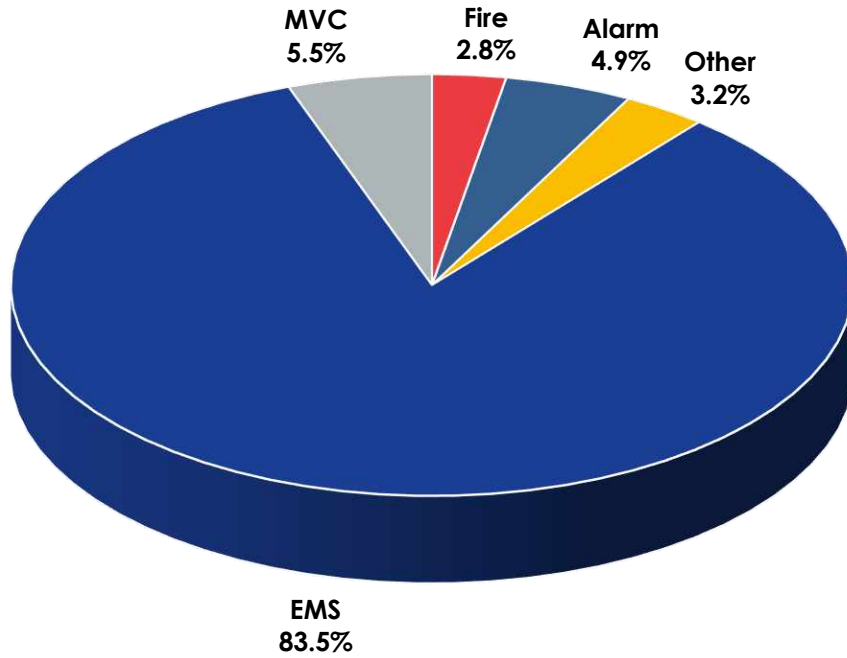
Lafayette Fire Department

Figure 78: Lafayette Incidents by NFIRS Type, 2015–2018



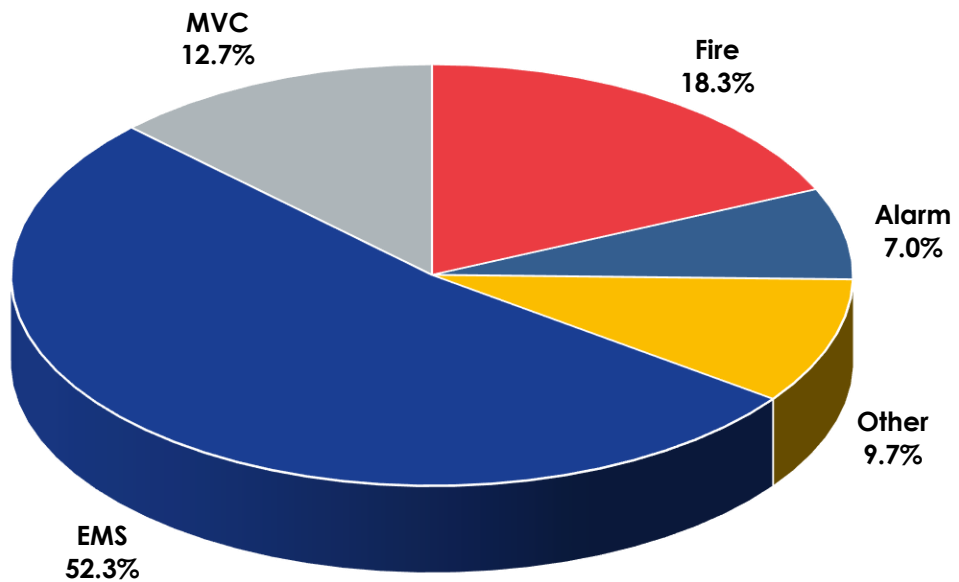
McMinnville Fire Department

Figure 79: MFD Incidents by NFIRS Type, 2015–2018



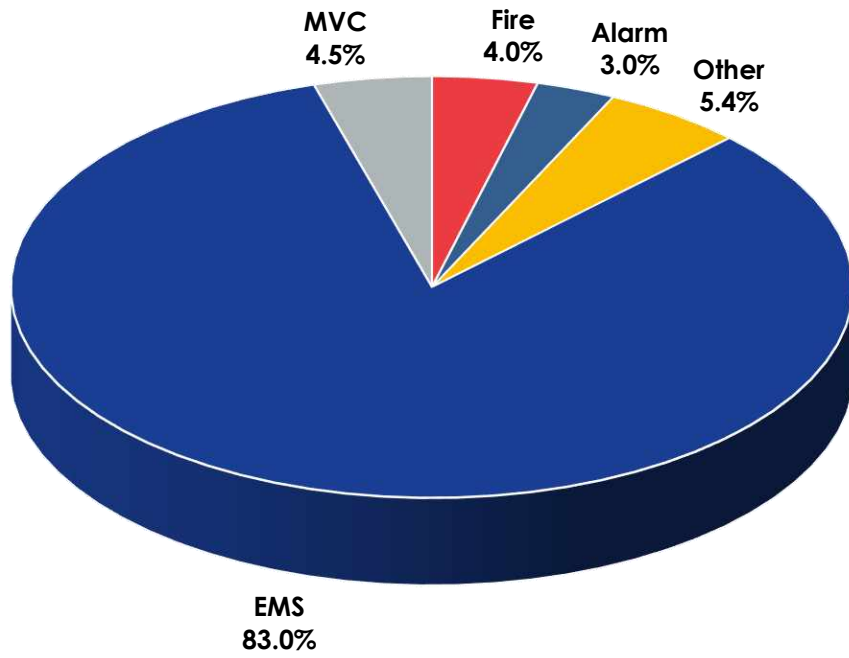
New Carlton Fire District

Figure 80: NCFD Incidents by NFIRS Type, 2015–2018



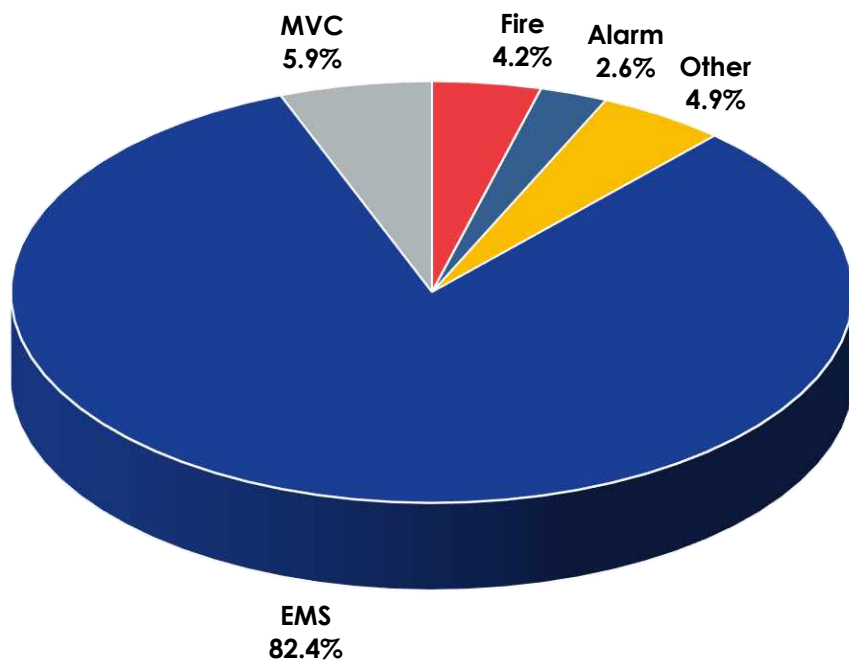
Sheridan Fire District

Figure 81: SFD Incidents by NFIRS Type, 2015–2018



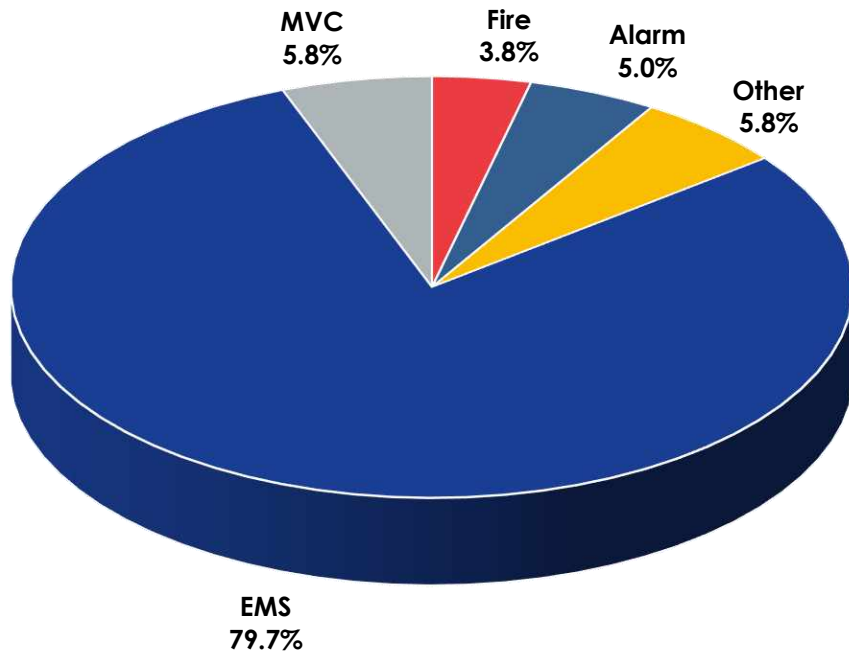
West Valley Fire District

Figure 82: WVFD Incidents by NFIRS Type, 2015–2018



Yamhill County

Figure 83: Yamhill County Incidents by NFIRS Type, 2015–2018



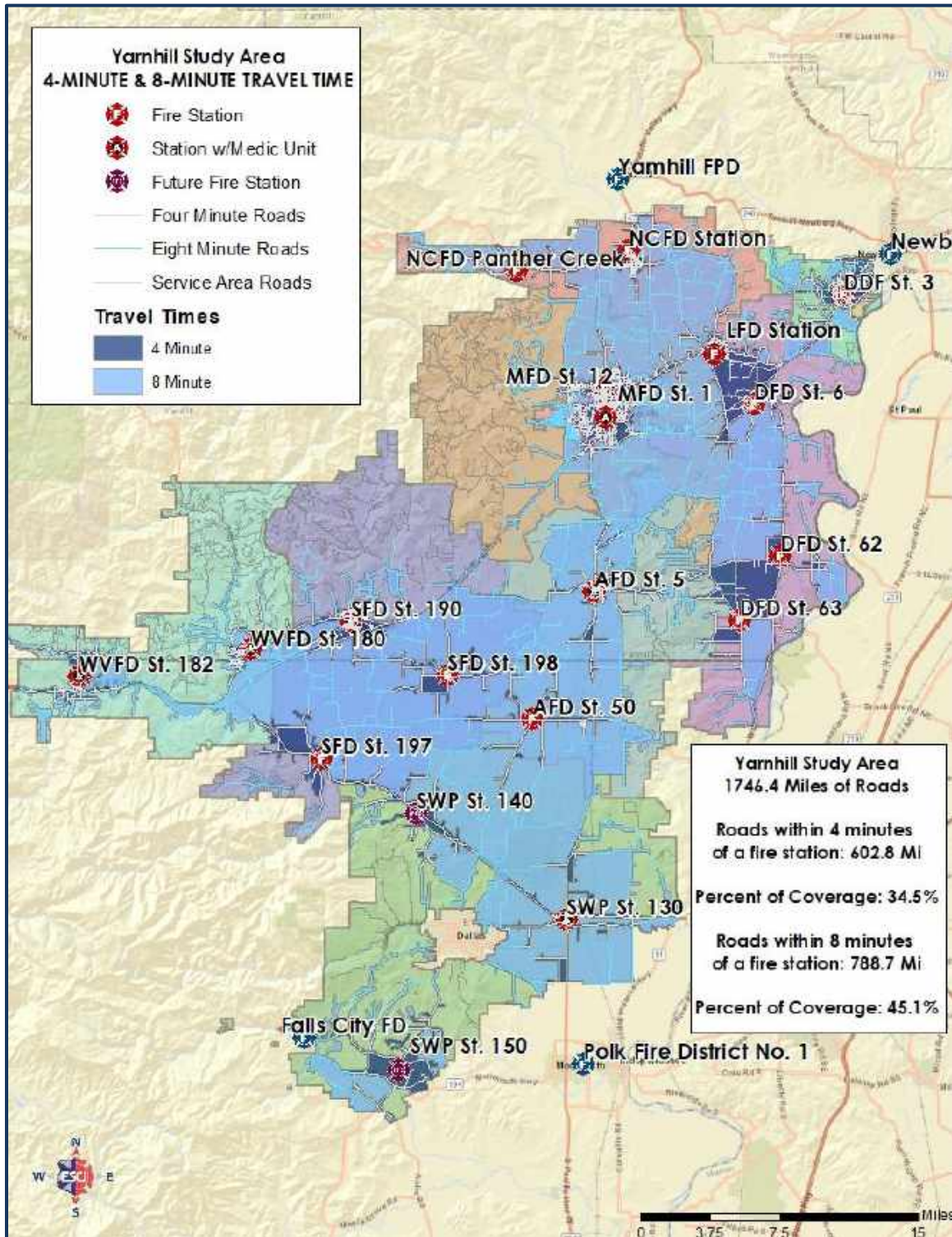
Resource Distribution Analysis

The second component of service delivery is to analyze the geographic distribution of resources related to fire service standards and actual service demand. ESCI uses geographical information systems software (GIS) to analyze resource distribution and 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).

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



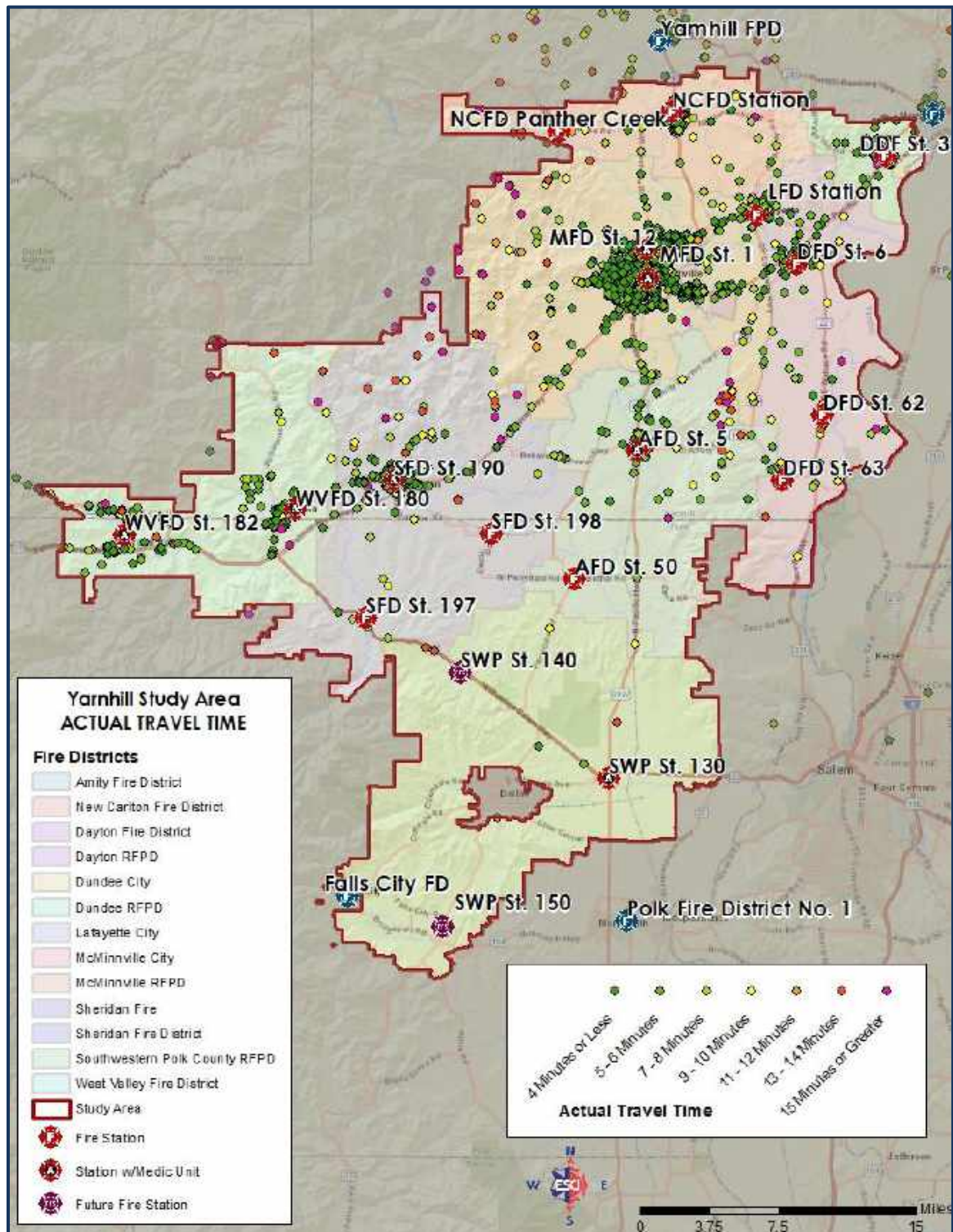
The following list illustrates the percentage of coverage within 4 minutes and 8 minutes for each agency.

Figure 85: 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. Figure 87 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 86: Yamhill Actual Travel Time, 2018



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

Figure 87: 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.³⁴ 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.

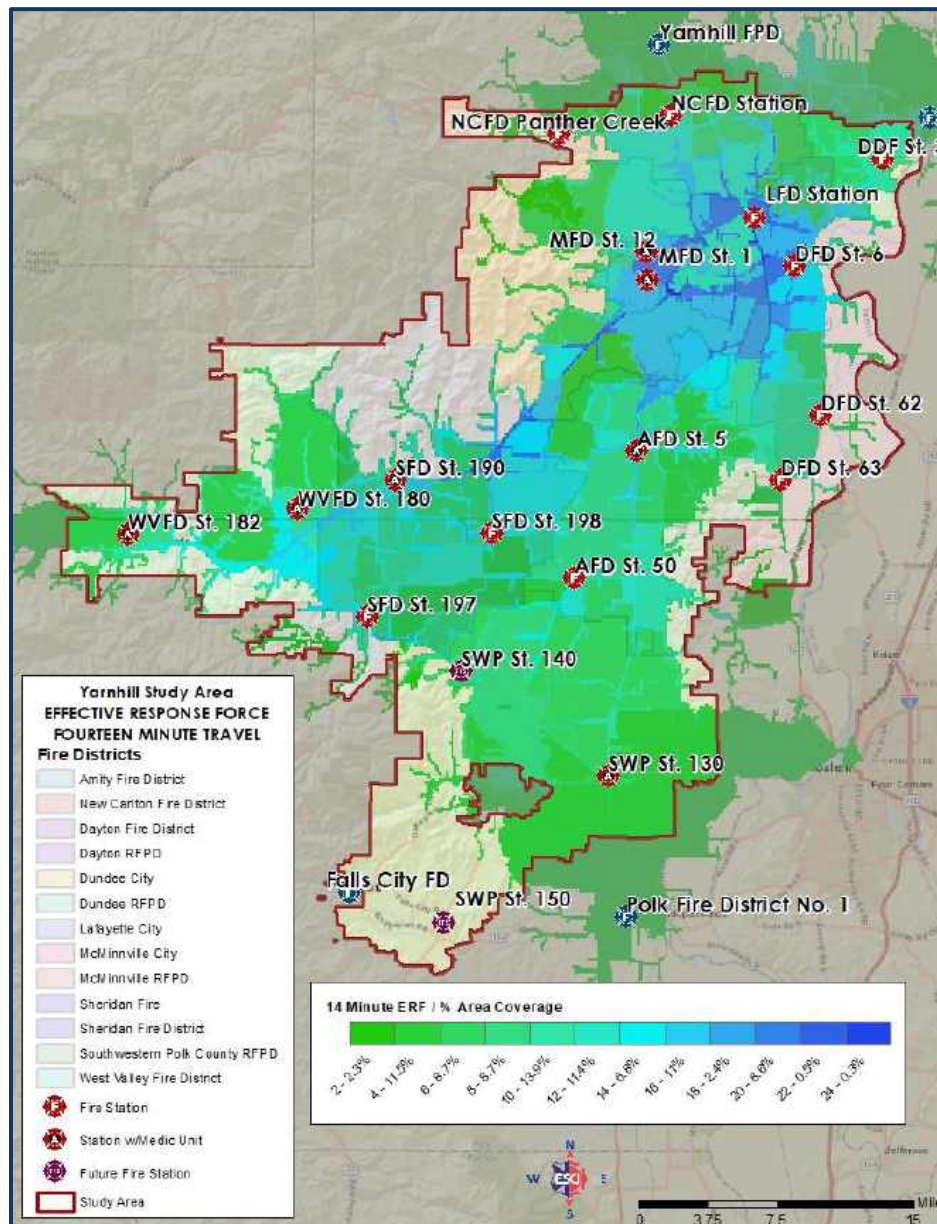
**Figure 88: Initial Full Alarm Assignment
2,000 ft² Residential Structure Fire**

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)

³⁴ 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.*

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 89 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.

Figure 89: Yamhill Consolidated District Effective Response Force



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

Figure 90: 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%

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.

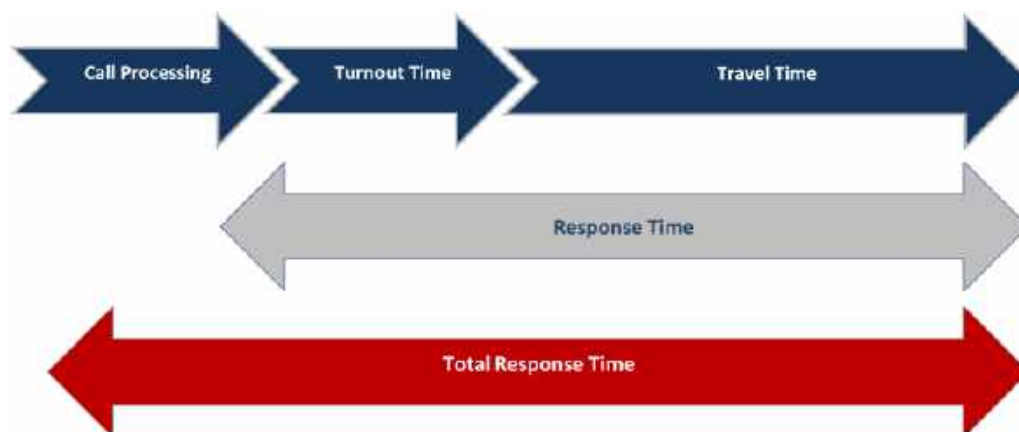
Percentile measurements are a better measure of performance because they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 10% of the values are greater than the value stated, and all other data are at or below this level. This can be compared 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 91: 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.

Total Response Time Performance

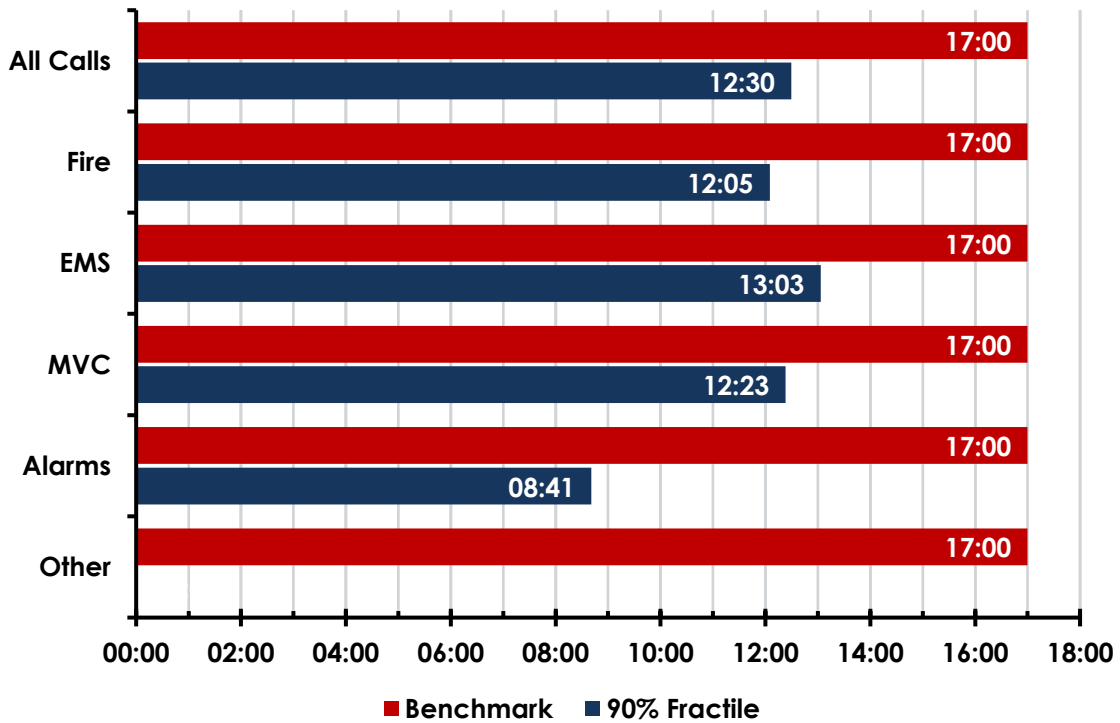
Total response time combines all the measures into a single measurement and reflects the measure of time from when the 911 call is initiated until the first unit arrives on the scene of the incident. The data provided to ESCI did not contain the timestamp of the 911 call, and thus the following figures 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 figure below, 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 0 seconds for other incidents to 13 minutes, 3 seconds for emergency medical incidents.

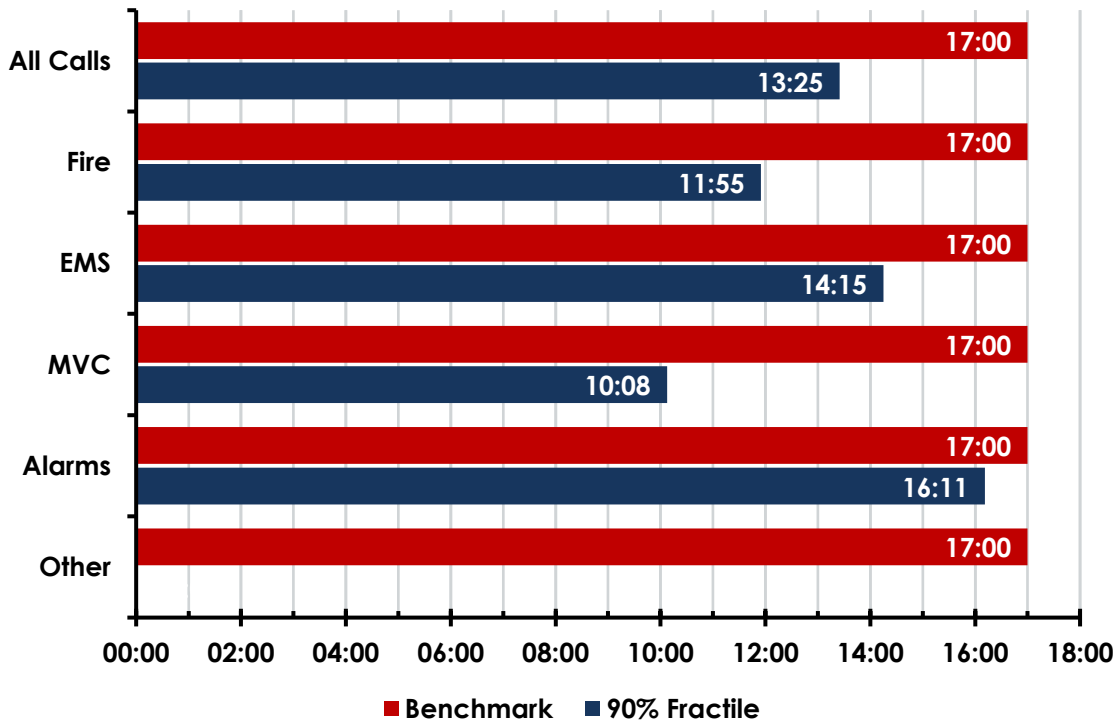
Figure 92: AFD Total Response Time Performance, 2015–2018



Dayton Fire District

As illustrated in the figure below, 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.

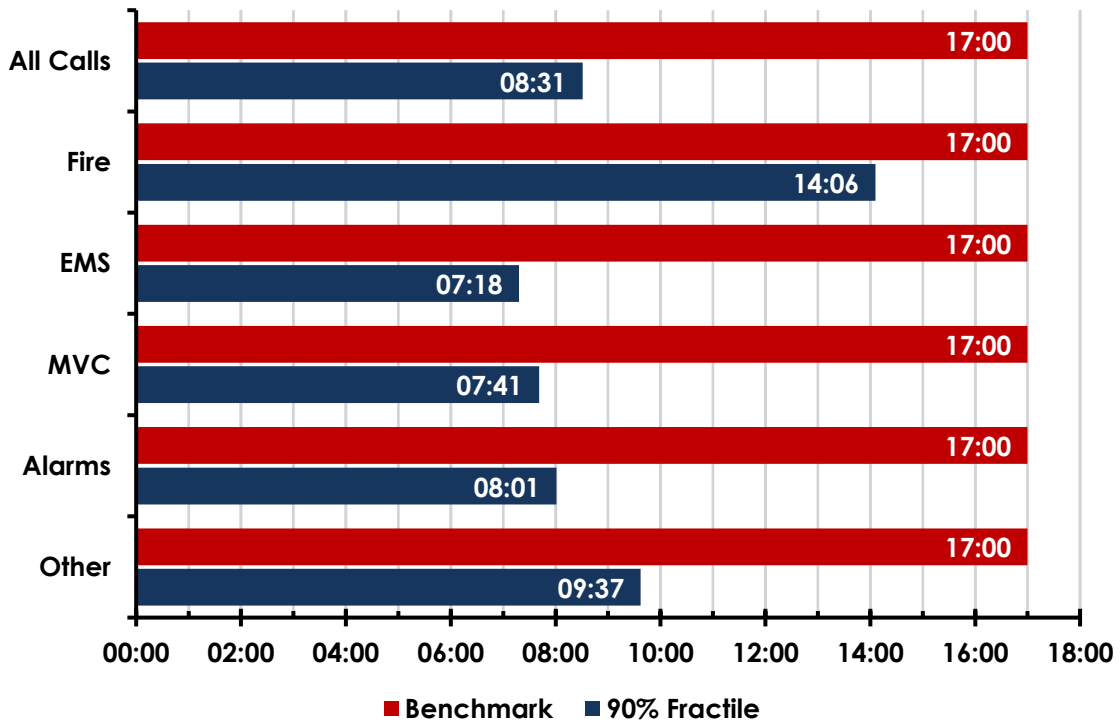
Figure 93: DFD Total Response Time Performance, 2015–2018



Dundee Fire District

As illustrated in the figure below, 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.

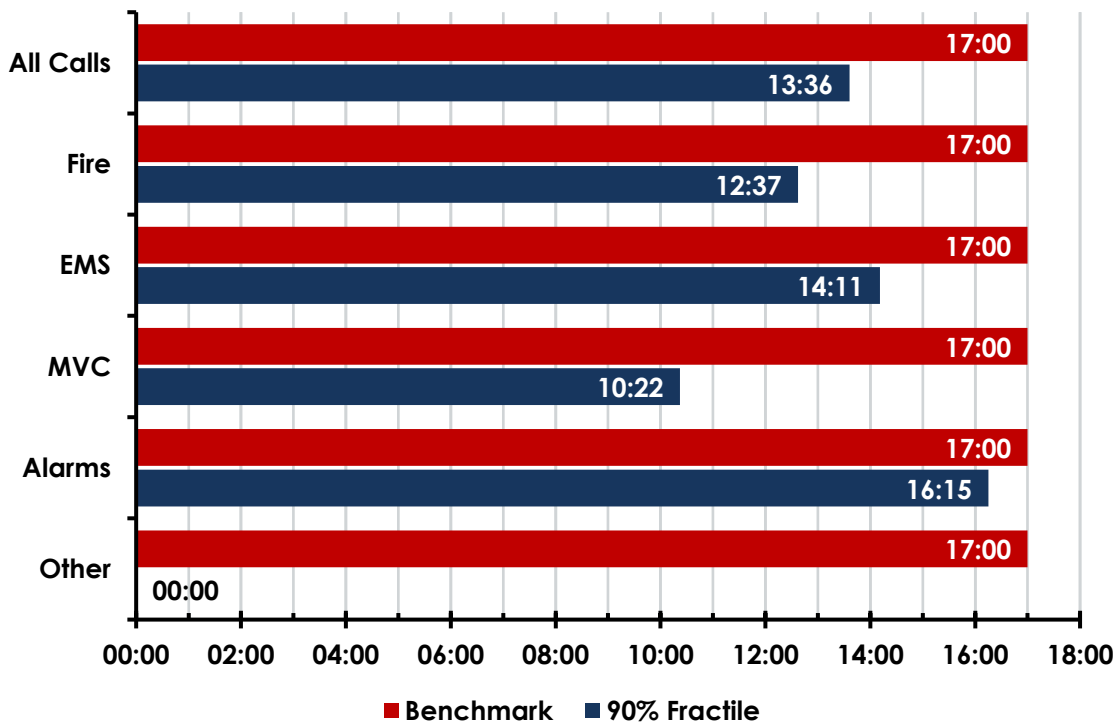
Figure 94: DDF Total Response Time Performance, 2015–2018



Lafayette Fire Department

As illustrated in the figure below, 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.

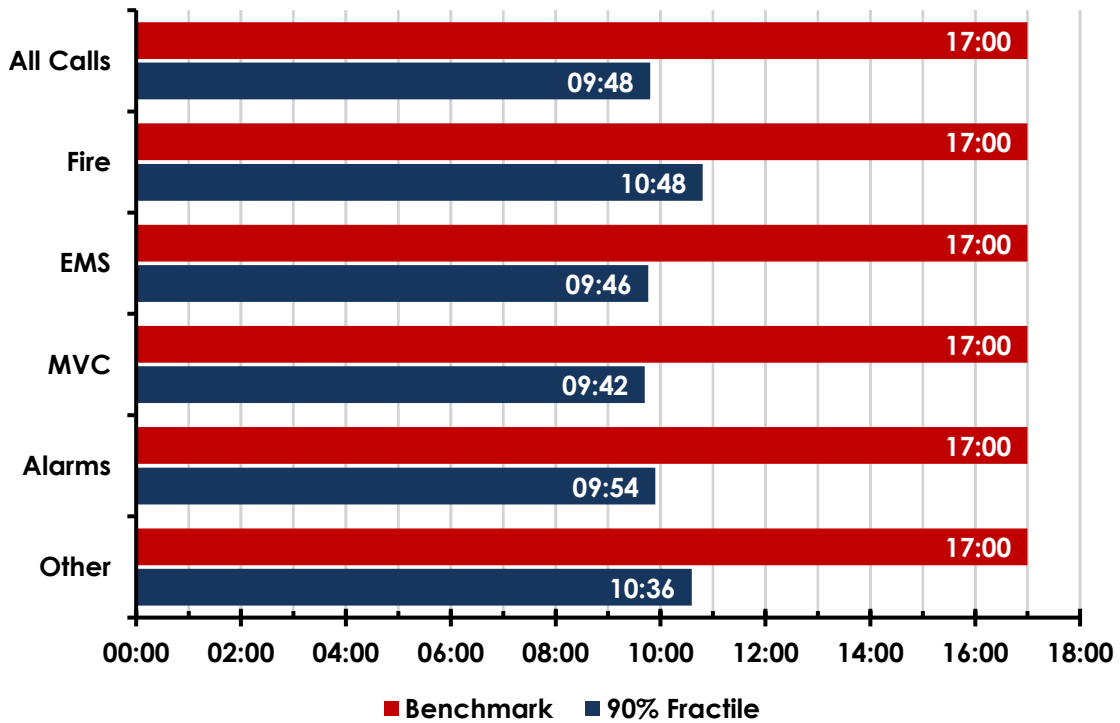
Figure 95: LFD Total Response Time Performance 2015–2018



McMinnville Fire Department

As illustrated in the figure below, 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.

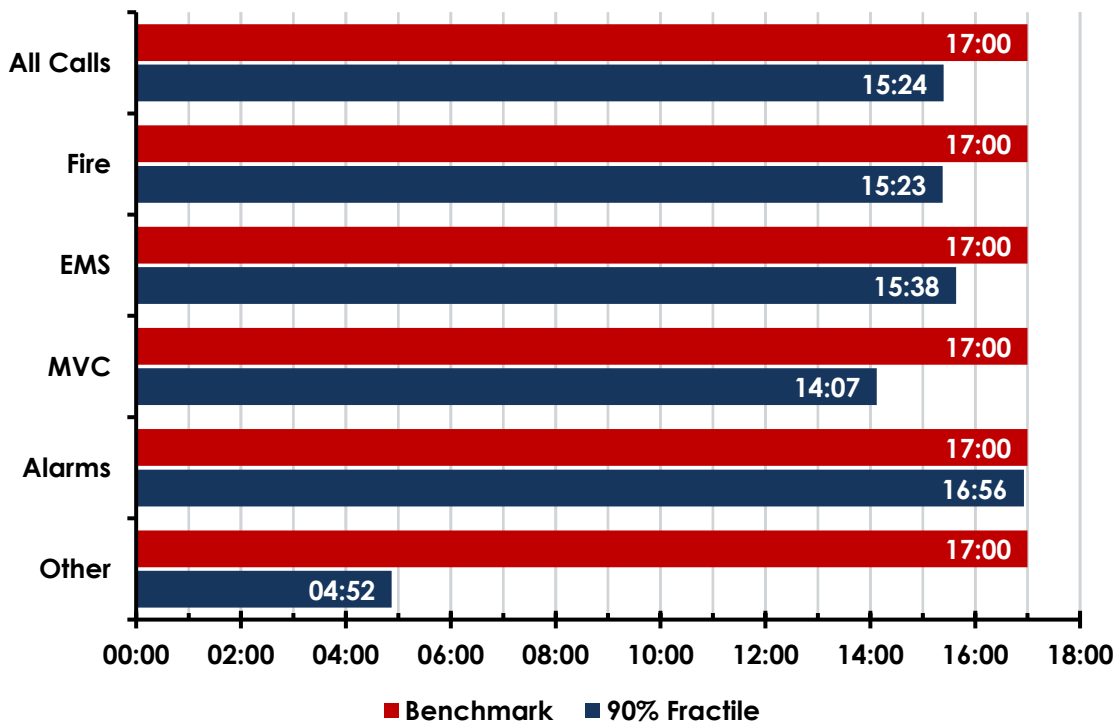
Figure 96: MFD Total Response Time Performance, 2015–2018



New Carlton Fire District

As illustrated in the figure below, 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.

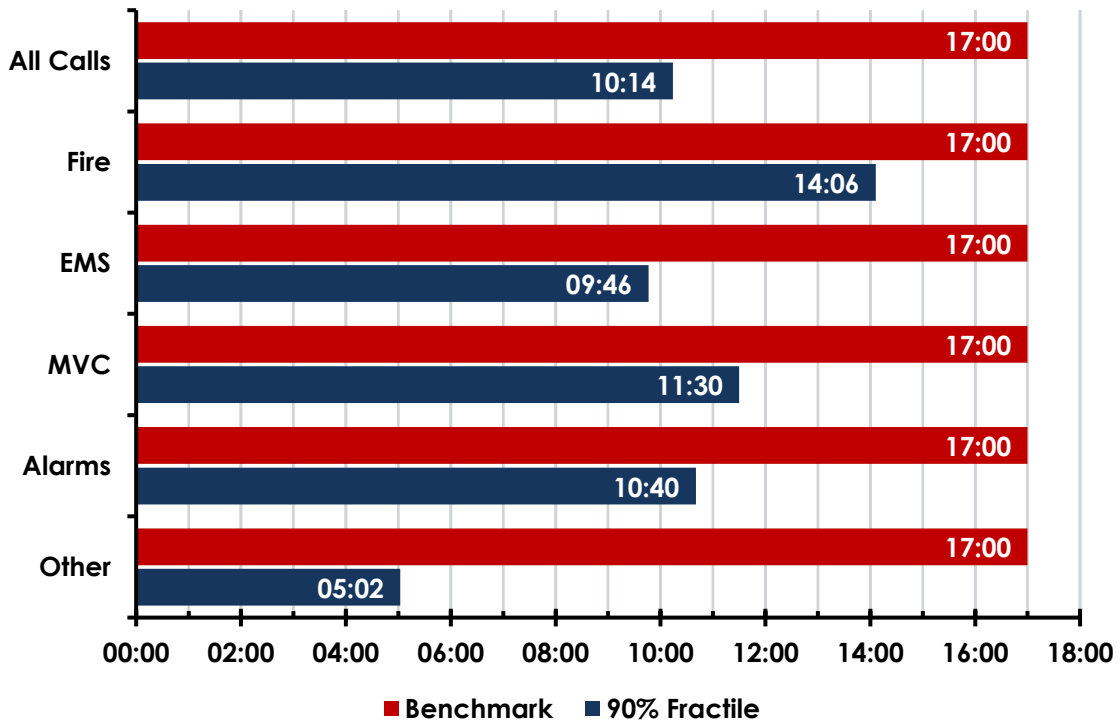
Figure 97: NCFD Total Response Time Performance, 2015–2018



Sheridan Fire District

As illustrated in the figure below, 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.

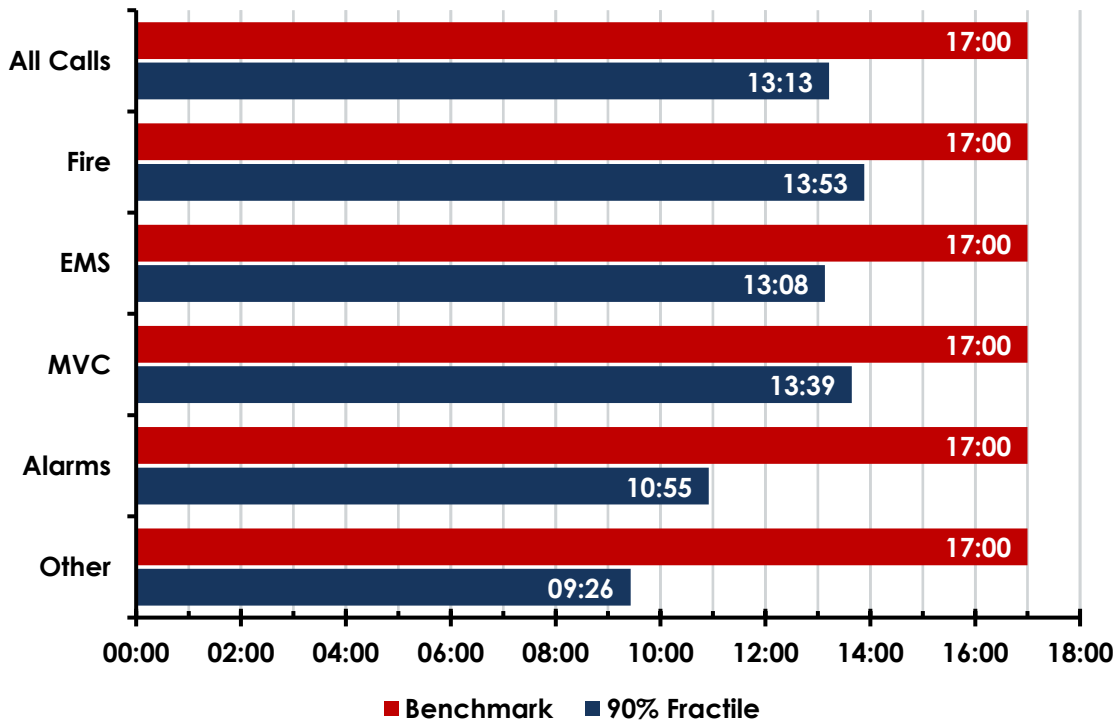
Figure 98: SFD Total Response Time Performance, 2015–2018



West Valley Fire District

As illustrated in the figure below, 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.

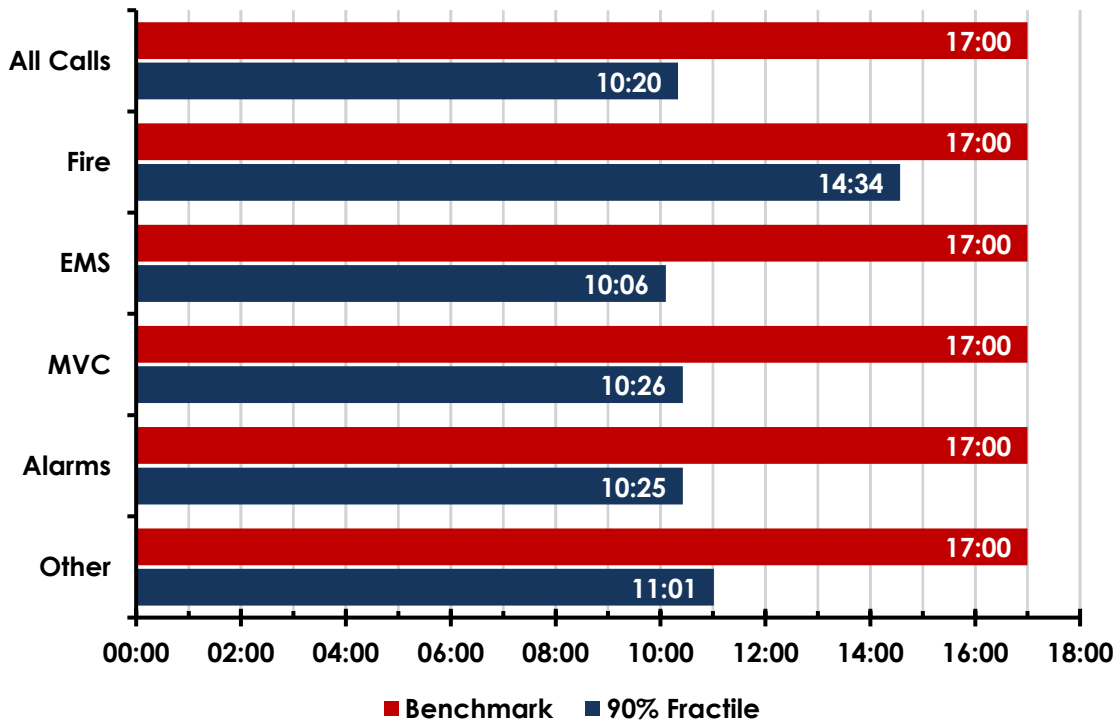
Figure 99: WVFD Total Response Time Performance, 2015–2018



Yamhill County

As illustrated in the figure below, 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 100: Yamhill County Total Response Time Performance, 2015–2018



SUPPORT PROGRAMS

Training & Continuing Education Programs

Delivering safe and effective fire and emergency services requires a well-trained workforce. Initial, ongoing, and high-quality training and education are critical for agency effectiveness and safety of its personnel. Without them, the community may experience significant losses or injuries or death of emergency personnel.

Initial training of newly hired firefighters is essential, requiring a structured recruit training and testing process—after which regular ongoing verifiable training must be conducted to ensure skill and knowledge retention and competency. Delivering high-quality training requires dedicating significant internal training resources or contractual arrangements with outside agencies and providers for such services. Providing exceptional training also requires written specific objectives, lesson plans, and methods to verify knowledge comprehension and retention.

In the following section, ESCI reviewed each fire department's fire, EMS, and specialized training programs; resource allocation; schedules; and training documents and practices. ESCI then compared these support programs to national standards and best practices.

As previously mentioned, SFD, SWP, and WVFD administrative functions, including training support, is provided by the Sheridan Fire District. Administrative support for AFD is provided under contract by the McMinnville Fire Department's administrative staff.

Training Resources & Methodology

Delivering adequate training to fire and EMS personnel requires providing instructors with specific tools and facilities. All of the departments in this study utilize NFPA Level 1 or the *Oregon Department of Public Safety Standards & Training's* (DPSST) Level I-IV Instructors to conduct live training and drills. Adequate training space, audiovisual, computer equipment, props, and training equipment are vital to ensuring safe and effective emergency operations.

Training Facilities & Equipment

MFD has the region's largest training facility, which is used by several of the districts. The facility includes a water supply, a pre-fabricated three-story drill tower with sprinklers and standpipe, roof and attic props, and a Class A burn room. SFD has a small training tower consisting of stairs only.

Each district has adequate meeting spaces that are used for group training, and assorted dedicated EMS training equipment and mannequins.

General Training Competencies

Along with the necessary training tools, props, and facilities, standardized training is another critical component in ensuring high-quality emergency services training and learning retention throughout the organization. This training should be based on established standards, best practices, and a validated curriculum. There are a variety of national training standards for fire and EMS organizations. All of the departments reference the NFPA, IFSAC, DPSST, and *International Fire Service Training Association (IFSTA)* curriculums, and comply with applicable federal OSHA regulations and standards. They also follow the Oregon EMS & Trauma Systems Program requirements for EMS providers.

Training Schedules

It is not surprising that the methodology and scheduling of training vary among the nine departments. ESCI noted commonality in the methodology, topics, and training schedule among the nine departments, which is summarized in the following figures.

Figure 101: Training Methodologies & Frequency (Part 1)

Methods/Frequency	AFD	DFD	DDF	LFD	MFD
Web-Based Training	Yes	Yes	Yes	Yes	Yes
Skills Practice Frequency	Monthly	Monthly (3)	Weekly	Weekly	Ongoing
Skills Evaluated	Yes	Yes	Yes	Yes	Yes
Formal Lesson Plans	No	Varies	Yes	No	Varies
Multi-Company Drills	Weekly	Quarterly	Weekly	Weekly	Varies ¹
Disaster Drills	Infrequent	Infrequent	No	Yes	Infrequent
Pre-Plans Training	No	No	No	Yes	Infrequent

¹Volunteers bi-weekly; career personnel infrequently.

Figure 102: Training Methodologies & Frequency (Part 2)

Methods/Frequency	NCFD	SFD	SWP	WVFD
Web-Based Training	Yes		Yes	
Skills Practice Frequency	Weekly		Monthly	
Skills Evaluated	Yes		Yearly	
Formal Lesson Plans	No		Yes	
Multi-Company Drills	Weekly		Weekly	
Disaster Drills	Yes		Yes	
Pre-Plans Training	Yes		Yes	

New Personnel Training

Comprehensive and robust training of new emergency services personnel is critical to ensuring their safety and effectiveness before being authorized to respond to emergency incidents. Specific knowledge and skills for basic fireground, EMS, incident command, and other emergency operations must be taught effectively and retained by new employees and volunteers.

New MFD and SFD full-time firefighter recruits must be Firefighter I certified prior to employment. A two-week fire operations orientation program is delivered before new employees are assigned to an operations assignment, after which they are required to complete monthly performance and knowledge objectives until the end of their one-year probationary period.

Volunteers in the other fire districts must either have Firefighter I certification or complete a recruit fire academy administered and delivered by a consortium of local fire districts. The consortium conducts two academies per year. Upon completion, each district conducts an internal orientation to ensure new firefighters are familiar with their apparatus, equipment, policies, and procedures.

Incumbent & Specialized Training Hours

After new firefighters complete their recruit training or probationary period, they participate in varying types of training activities—almost all of which are facilitated by company/station officers, designated training officers, or subject matter experts. The following figure is a summary of the training hours accomplished in each district during 2019.

Figure 103: Training Hours Delivered, 2019 (Part 1)

General Training Topics	AFD	DFD	DDF ²	LFD	MFD
Fire Related	8,400	3,792	—	912	4,158
Emergency Medical Services	3,175	1,116	—	456	1,207
Other Miscellaneous Topics ¹	—	—	—	380	2,197
Total Training Hours:	11,575	4,908	1,872	1,748	7,562
Average Hours/Trained Employee:	463	280	72	92	160

¹ Topics include: Assorted technical rescue classes, hazmat, extrication, etc.

² Training topics not tracked separately. A rough estimate of 72 hours per member.

Figure 104: Training Hours Delivered, 2019 (Part 2)

General Training Topics	NCFD	SFD	SWP	WVFD
Fire Related	884	2,980	2,000	2,980
Emergency Medical Services	408	1,931	800	1,931
Other Miscellaneous Topics ¹	340	N/A	N/A	N/A
Total Training Hours:	1,632	4,911	2,800	4,911
Average Hours/Trained Employee:	96	126	215	289

¹ Topics include: Assorted technical rescue classes, hazmat, extrication, etc.

Training Programs & Administration

Training programs must be closely monitored, supported, and funded. Administrative program support is important, along with program guidance in the form of planning, goals, and defined objectives. The next figure reviews the training programs' administration and management practices in the fire departments participating in this study.

Figure 105: Training Program Administration & Management (Part 1)

Training Components	AFD	DFD	DDF	LFD	MFD
Goals & Objectives Identified	Yes	Yes	Yes	No	Yes
Certified Instructors Used	Yes	Yes	Occasionally	Yes	Yes
Annual Training Report	No	No	Yes	No	Yes
Management Prioritizes Training	Yes	Yes	Yes	Yes	Yes
Budget Allocated to Training	\$8,000	\$4,000	\$2,000	\$4,500	\$46,000 ¹
Training Facilities Condition	Fair ²	Good ²	Excellent	Poor ²	Fair
Adequate Office Space/Supplies	Yes	Yes	Yes	No	Yes
Clerical Staff for Training	No	No	Yes	No	Yes

¹ Includes \$25,000 for EMS Training.

² Uses MFD's training ground/facilities.

Figure 106: Training Program Administration & Management (Part 2)

Training Components	NCFD	SFD	SWP	WVFD
Goals & Objectives Identified	Yes	Yes	Yes	Yes
Certified Instructors Used	Yes	Yes	Yes	Yes
Annual Training Report	No	Yes	Yes	Yes
Management Prioritizes Training	Yes	Yes	Yes	Yes
Budget Allocated to Training	\$5,000	\$25,000	\$4,000	\$15,000
Training Facilities Condition	Fair ²	Good	Good	Good
Adequate Office Space/Supplies	Yes	Yes	Yes	Yes
Clerical Staff for Training	No	No	No	No

² Uses MFD's training ground/facilities.

Training Program Discussion

Ensuring competent, expert, and consistent training is critical to safe and effective mitigation of dynamic emergency situations. In evaluating the impacts of various consolidation opportunities, identifying and integrating various training methodologies and delivery systems can help smooth organizational transitions and may help affect positive integration of different department cultures.

Fire Prevention & Life-Safety Services

Proactive fire prevention and life-safety education and code enforcement are key components in maintaining safety in a community, and is a much more cost-effective approach than reactively responding and mitigating structure fires and other emergencies. It is also a fire department's best opportunity to minimize human suffering and financial loss in the community.

The National Fire Protection Association recommends a multifaceted, coordinated risk-reduction process at the community level to address local risks. This requires engaging all segments of the community, identifying the highest priority risks, and then developing and implementing strategies designed to mitigate the risks.

A fire department needs to understand and embrace the role of fire prevention, public education, and fire-code enforcement in a community's planning efforts. The fundamental components of an effective fire prevention program are listed in the following figure, accompanied by the elements needed to address each component.

Figure 107: Fire Prevention Program Components

Program Components	Elements Required to Address Components
Fire Code Enforcement	<ul style="list-style-type: none"> • Proposed construction and plans review • New construction inspections • Existing structure/occupancy inspections • Internal protection systems design review • Storage and handling of hazardous materials
Public Education	<ul style="list-style-type: none"> • Public education • Specialized education • Juvenile fire setter intervention • Prevention information dissemination
Fire Cause Investigation	<ul style="list-style-type: none"> • Fire cause and origin determination • Fire death investigation • Arson investigation and prosecution

Fire & Life-Safety Code Enforcement

Preventing or minimizing the impact of fires by requiring specific fire protection features in buildings is much more effective than relying on the availability and capabilities of a fire department response when a fire begins. A strong fire-code enforcement program, bolstered by local adoption of current state, national, and international codes, is critical to improving fire safety in a community.

Figure 108: Fire Code Enforcement (Part 1)

Fire Codes	AFD	DFD	DDF	LFD	MFD
Fire Codes Adopted	Yes	Yes	Yes	Yes	Yes
2019 Oregon Fire Code Used	Yes	Yes	Yes	Yes	Yes
Local Codes/Ordinances; Amendments	No	No	No	Yes	No
Sprinkler Ordinance in Place	No	No	No	No	No

Figure 109: Fire Code Enforcement (Part 2)

Fire Codes	NCFD	SFD	SWP	WVFD
Fire Codes Adopted	Yes		No	
2019 Oregon Fire Code Used	Yes		Yes	
Local Codes/Ordinances; Amendments	Yes		No	
Sprinkler Ordinance in Place	No		No	

New Construction Plan Review & Inspection

Plan reviews of new construction and development are the foundation of an effective fire-code enforcement program. Once a building or development is completed, the fire department assumes responsibility for protecting them. Each department has a fundamental interest and duty to ensure all buildings and developments within their respective jurisdictions are properly constructed and protected. The following figures summarize each department's fire-code activities.

Figure 110: Code Enforcement Activities (Part 1)

Code Enforcement Activity	AFD	DFD	DDF	LFD	MFD
Consulted on New Construction	Yes	Yes	Yes	Yes	Yes
Perform Plan Reviews	Yes	Yes	No	No	Yes
Sign-Off on New Construction	No	Yes	Yes	Yes	Yes
Fees for Inspections or Reviews	Yes	No	No	No	Yes
Perform Occupancy Inspections	Few	Yes	No	Yes ¹	Yes
Special Risk Inspections	No	Yes	No	Yes ¹	Yes ¹
Storage Tank Inspections	No	No	No	No	Yes
Key-Box Entry Program	Knox	Knox	Knox	Knox	Knox
Hydrant Flow Records Maintained	No	No	Yes	Yes	No

¹As needed or when requested.

Figure 111: Code Enforcement Activities (Part 2)

Code Enforcement Activity	NCFD	SFD	SWP	WVFD
Consulted on New Construction	Yes		Yes	
Perform Plan Reviews	No		No	
Sign-Off on New Construction	No		Yes	
Fees for Inspections or Reviews	No		Yes	
Perform Occupancy Inspections	No		No	
Special Risk Inspections	No		Yes	
Storage Tank Inspections	No		No	
Key-Box Entry Program	Knox		Knox	
Hydrant Flow Records Maintained	Yes		No	

Plan Reviews & Inspections Discussion

It appears that most of the fire departments rely on Yamhill County and the State of Oregon for development and construction reviews and occupancy inspections within their respective jurisdictions. This is most likely due to a lack of resources, expertise, and staff needed to apply the Oregon Fire Code competently. The McMinnville Fire Department is the only agency with dedicated personnel and resources to adequately address fire code issues within its jurisdiction.

Existing Occupancy Inspection Program

Existing occupancy inspections to find and eliminate potential life-hazards are essential parts of the overall fire protection services provided in a community. These efforts are most effective when completed by individuals having the proper combination of training and experience, coupled with periodic inspections based on occupancy risk and hazards.

Utilizing adequately trained fire suppression personnel to conduct basic fire inspections is an effective practice in many jurisdictions, as it has the benefit of increasing a fire department's inspection capability and frequency. Furthermore, it provides excellent opportunities for firefighters to become familiar with buildings in their service area, while at the same time conducting pre-incident planning.

Fire Prevention & Life-Safety Public Education Programs

Providing fire and life-safety education to the public to minimize the number of emergencies, while training the community to take appropriate actions when an emergency occurs, is essential to a successful program. Fire and injury prevention programs and life-safety education provide the best chance to minimize the effects of fires and sudden illnesses and injuries. The following figures summarize the fire and life-safety prevention programs provided through the fire departments participating in this study.

Figure 112: Public Education Programs (Part 1)

Education Program	AFD	DFD	DDF	LFD	MFD
Calling 9-1-1	Yes	Yes	Yes	Yes	Yes
EDITH (exit drills in the home)	Yes	Yes	Yes	Yes	Yes
Smoke alarm installations	Yes	Yes	Yes	Yes	Yes
Carbon Monoxide Alarm installations	No	No	Yes	No	Yes
Fire safety	No	No	Yes	Yes	Yes
Injury prevention	No	No	Yes	No	Yes
Fire extinguisher use	No	Yes	Yes	No	Yes
Fire brigade training	No	No	No	No	No
Elder care and safety	No	Yes	No	No	Yes
Curriculum used in schools	No	No	Yes	Yes	Yes
Babysitting safety classes	No	No	No	No	No
CPR courses, BP checks	No	BP only	BP only	No	Yes
Publications available to the public	Yes	Yes	Yes	Yes	Yes
Bilingual info available	No	Yes	Yes	Yes	Yes
Annual fire prevention report distributed	No	No	No	No	No
Juvenile fire-setter program offered	Yes	Yes	No	No	Yes
Wildland interface education offered	No	No	No	No	Yes

Figure 113: Public Education Programs (Part 2)

Education Program	NCFD	SFD	SWP	WVFD
Calling 9-1-1	Yes		No	
EDITH (exit drills in the home)	Yes		No	
Smoke alarm installations	No		No	
Carbon Monoxide Alarm installations	No		No	
Fire safety	No		No	
Injury prevention	No		No	
Fire extinguisher use	No		No	
Fire brigade training	No		No	
Elder care and safety	No		No	
Curriculum used in schools	Yes		No	
Babysitting safety classes	No		No	
CPR courses, BP checks	No		Yes	
Publications available to the public	Yes		Yes	
Bilingual info available	Yes		Yes	
Annual fire prevention report distributed	No		No	
Juvenile fire-setter program offered	No		No	
Wildland interface education offered	No		No	

Public Education Discussion

The Dundee and McMinnville fire departments are the only two agencies with personnel who have been assigned public education responsibilities. Not surprisingly, MFD appears to have the most robust public education program, offering a wide variety of public safety education topics.

Dedicating limited resources and funds to fire and life-safety education programs can be challenging when facing limited funding and staff resources, especially for volunteer agencies. However, the importance of developing, delivering, and sustaining public education programs in a community cannot be overstated. These programs make communities safer, increase the department's visibility in the community, and directly and indirectly result in increased tangible support for the department's mission—including support for its funding and staffing initiatives.

There are many examples of robust and effective public education initiatives and programs across the country being delivered by small and large volunteer fire departments, and many of these programs are funded by available federal grants or donations or other grants from private corporations.

Fire Cause & Origin Investigation

Accurately determining the cause of a fire is an essential element of a fire prevention program. When fires are set intentionally, identifying and prosecuting those responsible is critical in preventing additional fires and a potential loss of life. Further, identifying the cause and possible trends enables the fire department to provide specific public information and fire-prevention education to minimize potential future fires.

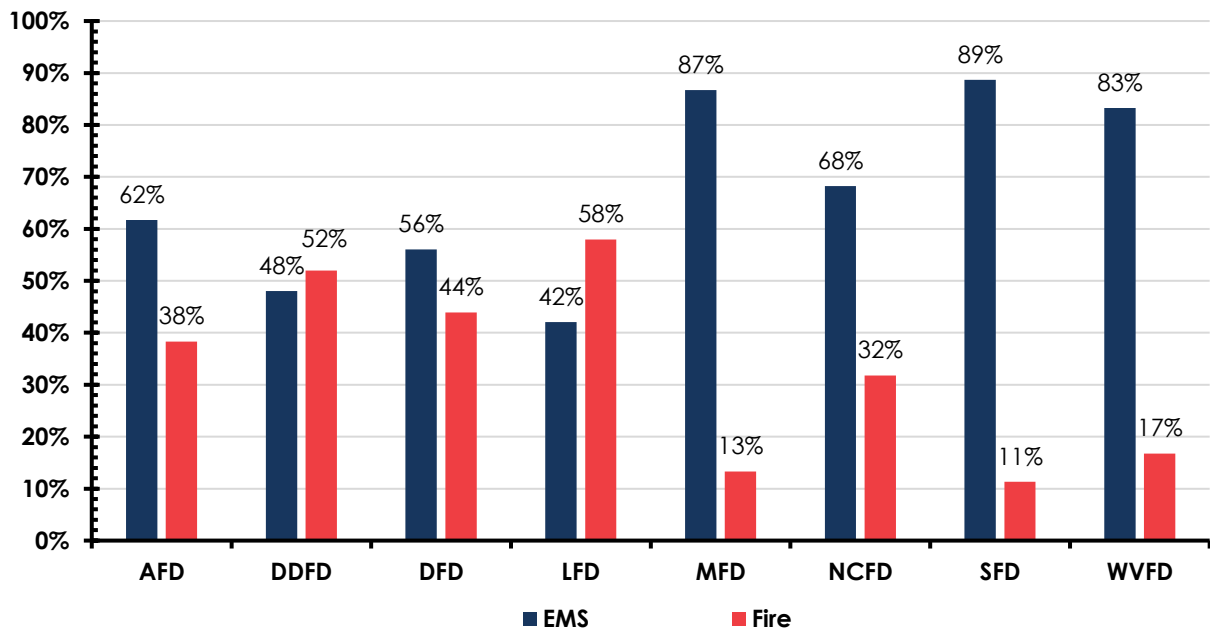
All of the fire departments in this study participate in the *Yamhill County Fire Investigation Team*. This team is comprised of specially trained personnel from ten fire districts and two law enforcement agencies. The Team conducts fire investigations where the cause and origin are not obvious, or serious injury or death has occurred as a result of a fire-related incident.

EMERGENCY MEDICAL SERVICES

The *Emergency Medical Services* section summarizes the combined District's services relating to pre-hospital medical care. ESCI used focused interviews with internal and external stakeholders combined with information from the combined district to develop a comprehensive perspective of current and future EMS needs throughout the region. The purpose of this section is to evaluate the current level of pre-hospital care and future needs based on projected call volume and available resources. ESCI will identify challenges relating to the EMS program and make recommendations with projected outcomes.

The fire service has been providing EMS for over 40 years. In fact, 90% of the 31,000 departments in the United States provide some form of pre-hospital medical care.³⁵ Since 1980, residential and commercial structure fires nationwide have dropped 52%. In contrast, EMS responses have continued to climb nationally.³⁶ Based on data from the *Service Delivery* section of this report, the following figure shows a comparison of EMS calls (NFRS 300 codes) to fire-related calls (all NFRS codes except 300 codes) for 2018.

Figure 114: Percentage of Fire and EMS Calls (2018)



³⁵ Compton, D. (2006). *Fire Department-Based EMS: A Proud Tradition*.

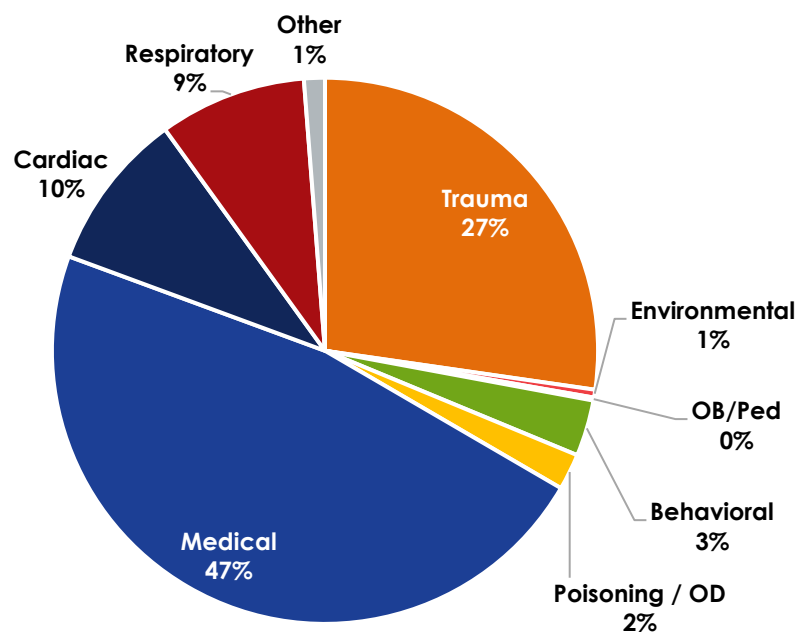
³⁶ Haynes, H. J. (September 2017). National Fire Protection Agency. Retrieved from NFPA.org.

Data from the combined district is consistent with national trends where the majority of emergency responses are EMS related. The overall breakdown was 81% EMS compared to 19% fire for service demand. However, individual departments demonstrated significant differences in the requirements for service delivery in their respective response areas. A combined organization would need to balance resources to accommodate the specific needs of a jurisdiction.

EMS Service Demand

The combined total for EMS service within the study area was approximately 8,338 incidents in 2018. The following figure shows a breakdown of the medical emergency incidents based on the 2018 data.

Figure 115: Yamhill Study Area EMS Service Demand (2018)



The criticality shown in the above figure supports the development of advanced life support (ALS) response in the departments with basic life support (BLS). Currently, MFD, SFD, and SWP have ALS first response. There is an agreement between MFD and LFD to place a paramedic ambulance in the area following the completion of the new LFD station. Based on the data provided, NCFD should be considered for additional EMS capabilities as resources become available.

The following figure shows an abbreviated summary of the EMS system for each department in the study area.

Figure 116: Study Area EMS System Comparison

Department	Transport Agency	ALS/BLS	QA Program	EMS Budget	PCR Program	Public Education
Amity FD	MFD	BLS	No	Yes	None	No
Dayton FD	MFD/Falck	BLS	No	Yes	None	No
Dundee FD	TVF&R	BLS	No	No	None	No
Lafayette FD	MFD	BLS	No	No	None	No
McMinnville FD	MFD	ALS	Yes	Yes	ESO	Yes
New Carlton FD	MFD	BLS	No	No	None	No
Sheridan FD	SFD	ALS	No	No	ESO	Yes
Southwestern Polk FD	Dallas FD	BLS	No	No	None	Yes
West Valley FD	WVFD	ALS	No	No	ESO	Yes

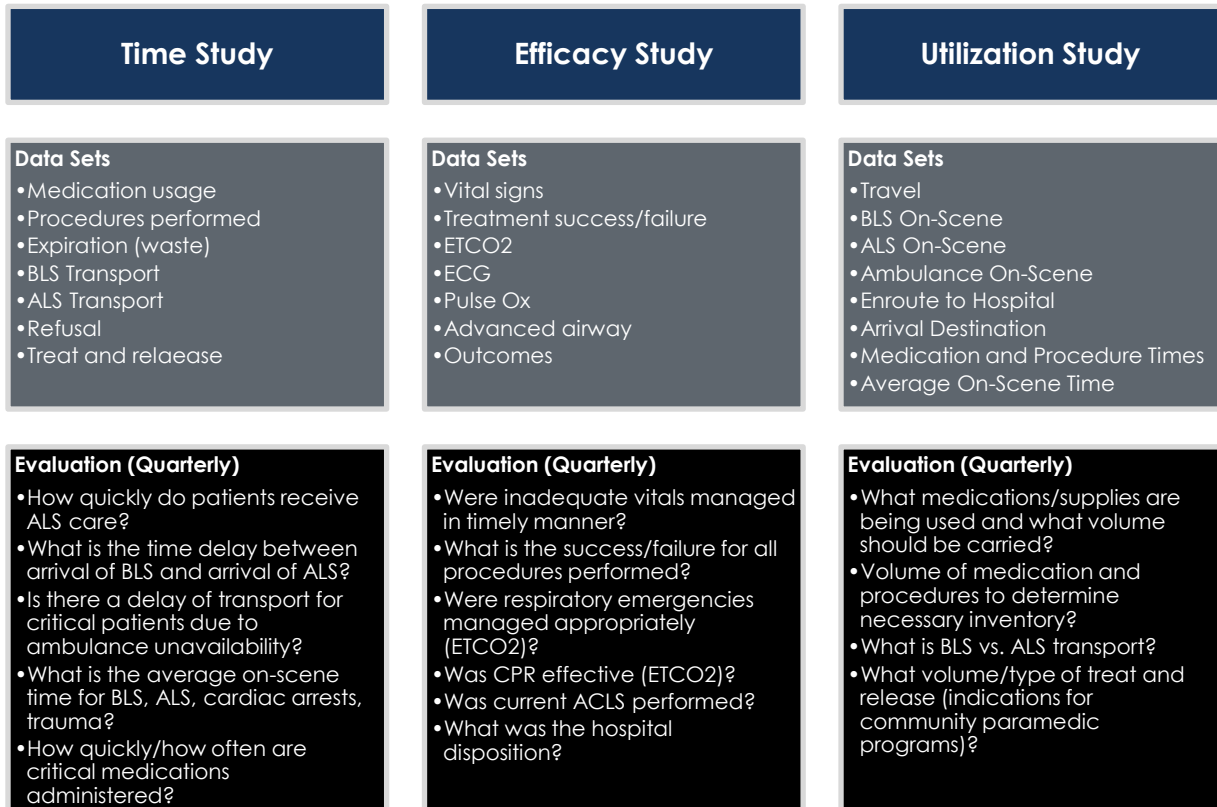
Based on the above information, a combined organization would need to develop a comprehensive QA program. Only one of the nine departments has an established QA program with several departments stating that a process is developing. The development of a QA program is discussed later in this section. A combined organization should also consider the progression of EMS transport to be provided by agencies within the organization. This can help improve pre-hospital care consistency and the availability of improved patient care data to be applied to evidence-based medicine.

Quality Management

As previously discussed, the study area organizations respond to a high percentage of EMS service demand. Considering the potential for increased pre-hospital services, ESCI recommends placing emphasis on gathering appropriate patient care documentation. A challenge currently facing many EMS agencies is the lack of objective data to support the high-quality care provided. Evidence-based data can provide objective information regarding the level of care provided.

Additionally, the data can support program expansion and budgetary increases. The ESCI evaluation process indicated an opportunity exists for improvement regarding data collection and analysis. Six of the nine departments currently do not have a system to capture patient care reports. ESCI recommends that a combined district document all EMS calls internally, utilizing a patient care reporting (PCR) system. This system would provide complete and accurate data collection and support the Quality Improvement (QI) program. Most PCR systems will export data to an Excel format, and the data can be easily interrogated to provide various evaluations. The following figure shows a minimal data set and potential evaluation criteria that would be beneficial in making objective decisions.

Figure 117: Data Set and Quality Assurance Criteria



EMS Training

At the time of this evaluation, there was limited documentation regarding EMS Continuing Education (CE). An essential component of a quality EMS Program is accurate training documentation supporting the specific needs of the community and for the purpose of certification.

Figure 118: EMS Training Hours for Each Department (2018)

Department	EMS Training Hours
Amity FD	127
Dayton FD	36
Dundee FD	253.5
Lafayette FD	24
McMinnville FD	1,207
New Carlton FD	408
Sheridan FD	1,930
Southwestern Polk FD	800
West Valley FD	1,930

Medical Control and Oversight

A single EMS Medical Director serves many of the fire agencies participating in this study. Dr. Heiser is a board-certified Emergency Physician who is under contract by the EMS agencies for \$15,000 annually. He meets with EMS personnel at least monthly, and does occasional ride-alongs. On-line Medical Control is provided primarily by the on-duty emergency physicians at the Willamette Valley Medical Center.

The EMS Medical Director is a member (along with EMS provider representatives) of the *Tri-County Protocol Development Committee* (PDC). The PDC is a large committee of local EMS Medical Directors and EMS providers from the Portland Metropolitan area that develop prehospital care protocols for adoption by local agencies. These protocols are utilized in Yamhill County, with some modifications made to address conditions unique to the local agencies.

Air Medical Service

When indicated, rotor-wing (helicopter) scene-response and transport by air are provided by the *Life Flight Network*[®] (LFN). The nearest LFN helicopter base is located in Aurora, Oregon, which is approximately 25 miles from McMinnville. At an approximate distance of 30 miles, the next closest helicopter is located in Portland at Oregon Health Science University.

Life Flight staffs its helicopters with Flight Nurses and Flight Paramedics with additional training in critical care and patient-care on an aircraft. LFN has helicopter bases throughout the Northwest and also operates fixed-wing aircraft.

Hospitals & Tertiary Care Facilities

In Yamhill County, the primary hospitals are the *Willamette Valley Medical Center* (WVMC) located in McMinnville and *Providence Newberg Medical Center* (PNMC) located in Newberg—both of whom operate 24-hour emergency departments.

Tertiary care facilities are located in Portland, and include *Oregon Health Science University* (OHSU) and *Legacy Emanuel Medical Center* (LEMC)—both of whom are designated Level I Trauma Centers and Stroke Centers. Each is equipped with state-of-the-art facilities and staff. *Providence St. Vincent Medical Center* (PSVMC) is another hospital offering advanced cardiovascular treat through its Heart Institute.

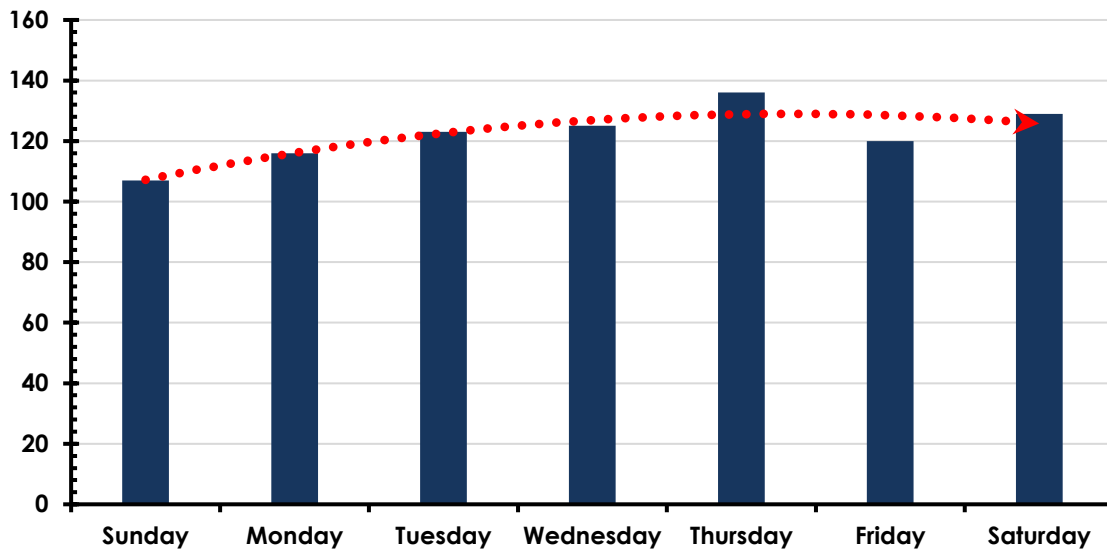
Logistical Support

As previously mentioned, a routine utilization study would help identify opportunities for improved inventory control. All organizations have a functioning system to track equipment; daily checks, repair, and partial inventory. The majority of the systems require manual data entry. Due to the size of a combined organization, ESCI recommends implementing a partially automated inventory control system. There are various systems available that have proven to be cost-effective in the long run, especially in reducing expiration waste and lost supplies. An efficient inventory control system can become cost-effective, which then can channel funding to other aspects of the program, including new staffing, training, and response. The systems can provide current inventories that assist crews in familiarizing themselves with the location of equipment and supplies. Examples of these systems include Bar Code Scanning, QR Readers, and Radio Frequency ID (RFID). Specific to EMS supplies and equipment, there are very few significant differences in EMS equipment and supplies. This analysis identified two logistical issues that will need to be addressed. The combined organization will need to select one type of cardiac monitor/defibrillator in order to minimize the overall cost of supplies. Currently, Life-Pac 15, Phillips, and Zoll cardiac monitors are in service. The cardiac monitors and advanced airway equipment need to be consistent for training purposes and to minimize medical errors.

Medical Mutual and Auto-Aid

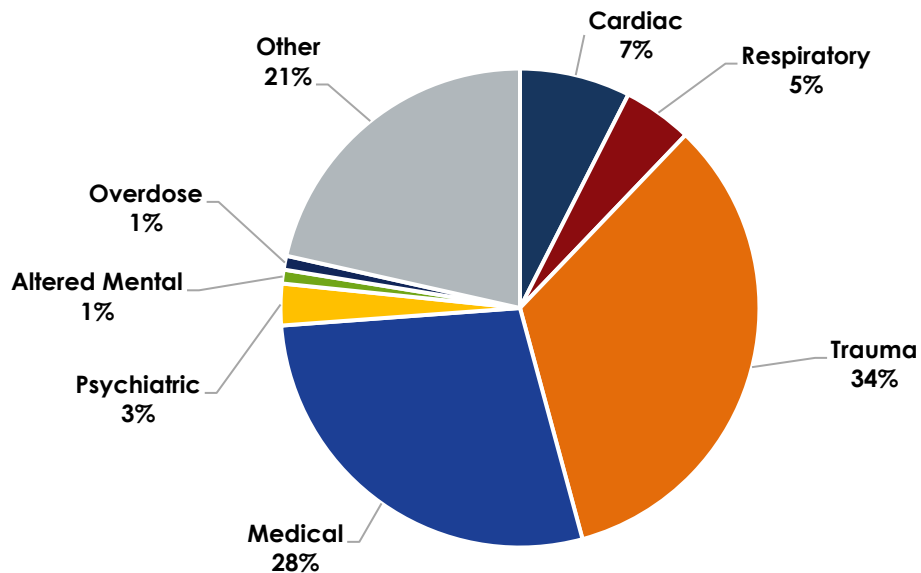
A challenge identified during the site visit related to the high number of move-ups and mutual aid required into the study area. The highest concentration comes from Tualatin Valley Fire & Rescue (TVF&R) in the north-east corner of study area. Focusing on EMS demand, the following figure shows the total number of mover-ups and mutual aid provided by TVF&R.

Figure 119: TVF&R Medical Mutual Aid and Move Up, 2017–2018

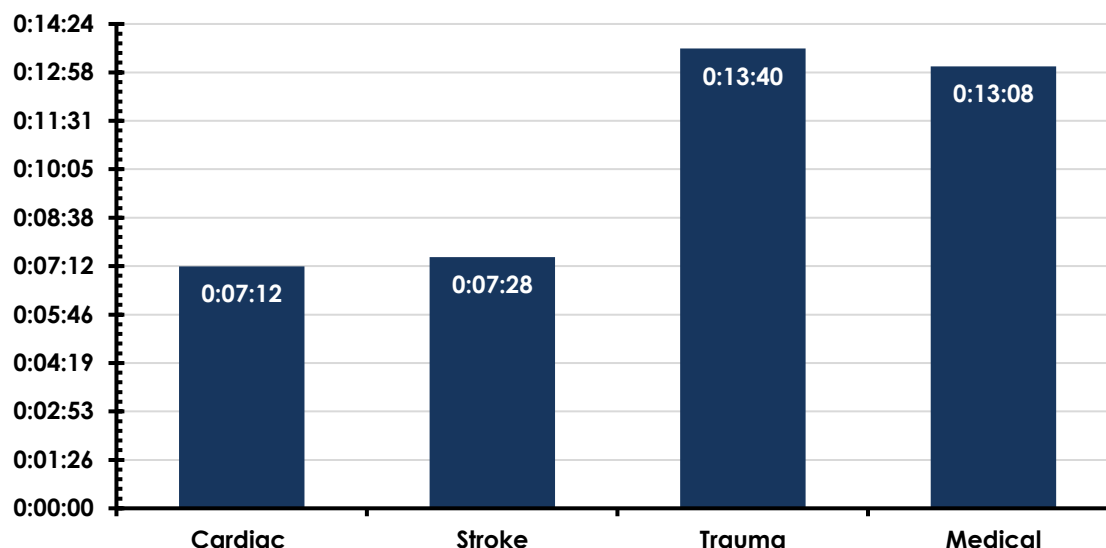


The average for the above period was 428 responses per year. The demand for service was consistent throughout the week, with a slight increase on Thursday. Of the 428 responses, an average of 242 requests for service translated to actual demand for medical assistance. The following figure shows a breakdown of the types of medical emergencies of which TVF&R was required to provide service within the study area.

Figure 120: TVF&R Medical Response Category, 2017–2018



The next figure focuses on the response time for TVF&R into the study area for specific high acuity medical events.

Figure 121: TVF&R Response Time to High Acuity EMS, 2017–2018

A combined organization should consider alternate resource distribution based on the high demand for move-up and mutual aid services from TVF&R, combined with a delay in response to high acuity medical calls. There are a number of solutions for consideration:

1. During the short term, relocate Ambulance 12 from McMinnville into Lafayette then consider the relocation of Ambulance 12 into Carlton when facilities can accommodate 24-hour staffing.
2. During the formation of a consolidated organization and based on available funding, consider increasing staffing in the Amity Station to 24-hour coverage.
3. Based on geographic limitations and proximity of TVF&R to the northern area of ASA 2, consider requesting TVF&R to increase their ASA to cover the Yamhill County Fire response area. This would improve the utilization of ambulances in ASA areas 2, 3, and 4.

Another consideration relates to the high volume of transfers required by MFD from McMinnville to hospitals in the Portland area. This directly correlates to the number of move-ups and mutual aid required by TVF&R. A temporary solution for consideration would be to allow West Valley ambulances to take a portion of the transfers. This would provide some supplemental income to West Valley Fire, decrease service demand for MFD, and promote future consolidations discussed later in this document.

Section II: FUTURE OPPORTUNITIES FOR COOPERATIVE EFFORTS

GENERAL PARTNERING STRATEGIES

Options for Cooperative Services

The following discussion identifies and explains the multiple approaches to sharing services or partnering in the delivery of services between neighboring agencies that may be accessed in the State of Oregon. To adequately discuss the partnering continuum, terminology, and statutory provisions that are available to decision-makers must be understood. The following partnering strategies, while not necessarily described in detail by statute, differentiate between various approaches to partnering.

Relevant Oregon Law

Intergovernmental Agreement (IGA)

In Oregon, it is a contract for services between agencies as provided for by Oregon Revised Statute (ORS) Chapter 190 and is commonly referred to as a "190 Agreement."

ORS 190 is written with the intent of being liberally construed and states, in part, that:

"A unit of local government may enter into a written agreement with any other unit or units of local government for the performance of any or all functions and activities that a party to the agreement, its officers or agencies, have authority to perform."

The agreement may provide for the performance of a function or activity:

- (1) By a consolidated department;
- (2) By jointly providing for administrative officers;
- (3) By means of facilities or equipment jointly constructed, owned, leased, or operated;
- (4) By one of the parties for any other party;
- (5) By an intergovernmental entity [such as a fire district] created by the agreement and governed by a board or commission appointed by, responsible to and acting on behalf of the units of local government that are parties to the agreement; or
- (6) By a combination of the methods described in this section. [Amended by 1953 c.161 §2; 1963 c.189 §1; 1967 c.550 §4; 1991 c.583 §1]

Collaborative approaches under ORS 190 can include shared or contracted programmatic services, often referred to as *functional unification* or *functional consolidation*. Approaches may include shared administrative services, training programs, fire prevention outreach, and/or numerous other functional collaborative strategies.

When two or more agencies enter a collaborative relationship, typically through an ORS 190 IGA, they enter a contractual relationship for a specified time frame with no permanent organizational commitment and all decision-making power remaining with each individual organization. This form of interagency collaboration can take many forms and may include shared administrative and support functions, combined operational practices, the participation of fire agencies in activities such as local fire management associations (such as fire defense boards), mutual aid agreements, and interagency disaster planning exercises. As a rule, most modern fire agencies consistently operate in a very collaborative mode, having learned long ago the value of the practice. Many times, close collaboration between two or more organizations will subsequently lead to legal integration.

Oregon State law declares intergovernmental cooperation as a matter of statewide concern and grants cities and special districts broad power to contract with other governmental entities for any function or activity the agencies have authority to perform. Oregon grants local governments the power to contract for a broad range of purposes.³⁷ Specifically, ORS 190.007 declares that intergovernmental cooperation is "...in the interest of furthering economy and efficiency in local government, intergovernmental cooperation is declared a matter of *statewide concern* (emphasis added)."

Legal Integration

This means combining two or more existing organizations into a single, unified agency. Doing so includes all aspects of the organization's policies, administration, governance, financing, functions, and operations.

Legal integration in Oregon can be achieved via one of three forms: merger, consolidation, or annexation.

- **Merger:** A form of legal integration under which an agency(s) ceases to exist and is absorbed into a fire district, referred to as the "surviving" district.
- **Consolidation:** A form of legal integration where two or more agencies form an entirely new, successor agency.
- **Annexation:** A form of legal integration where an agency extends its boundaries outside of its previous limits. While the law allows one agency to expand its boundaries to annex another agency into its service area, it may only do so if the involved agencies are formed under differing statutory authority, and in the cases of a city, takes on all required statutory service provisions beyond fire protection, for the annexed area, or an agency dissolves, rendering it available for annexation.

³⁷ ORS Chapter 190, *Cooperation of Governmental Units*, 2011 Ed.

Study Findings

The following section describes a recommended process for moving forward with the potential implementation of a cooperative service delivery effort. The word *potential* is used here because a key part of this process requires policy decisions necessary to determine, based on the results of the study, whether or not there is sufficient desire among the political bodies of the organizations involved to continue with the process.

Implementation begins with that important initial step. Based on the analysis completed by ESCI during this process, it is apparent that the study fire departments have historically worked well together and continue to do so today. While a spirit of cooperative efforts currently exists, opportunities exist for further improvement and increased efficiency. It would make sense that these organizations continue efforts to work more closely together. Any of the methods discussed previously can accomplish this. Which method is ultimately chosen is a policy decision placed squarely in the hands of the elected officials within each community.

Using the information developed, ESCI draws certain conclusions regarding the participating municipalities and fire districts and the opportunities for collaboration. A summary of those findings follows.

All Nine Agencies are Interdependent

The fire departments depend upon each other and surrounding neighbors for mutual aid and automatic aid assistance during emergency incidents. As stand-alone agencies, each would be challenged to effectively combat a significant, multiple alarm fire, or other major incidents, without assistance.

Each Agency Values Customer Service

During the work leading to this report, each fire department consistently focused on serving those who live, work, and play in the area. Each agency is proud of its community and works hard to care for it.

Each Agency Strives to Meet the Expectations of its Customers

The departments each display considerable efforts to ensure that they provide acceptable levels of service to their communities.

Each Agency Needs Operational and Administrative Improvements

Although the need varies between the nine agencies, important gaps were identified in each organization. Those needs are identified in the *Evaluation of Current Conditions* section of the report. Many of the improvements identified in this report are easily achievable by combining effort in some manner with the other agencies.

Cultural Differences Exist

Organizational culture is one of the most important factors impacting the success or failure of a cooperative effort. Without question, it is also the most difficult aspect to evaluate, and it is challenging to predict the effect that different internal cultures will have on collaborative strategies. However, these nine organizations demonstrate more similarity than differences from a cultural standpoint. Some differences do exist, none of which prohibit collaboration, but they will need to be considered and addressed in future cooperative efforts.

Communication Among Agencies is Effective

As a result of the close collaboration on numerous operational issues, the dialogue is effective between all nine agencies. The current level of communication must be maintained and further enhanced in the future.

Multiple Functional Cooperative Efforts Phases are Feasible

ESCI has identified four phases for functional cooperation in this report. These undertakings can be accomplished while the organizations participate in the existing IGA model, from a governance standpoint, the only requirement to move forward with them is an agreement to do so. At a minimum, it is recommended that as many of the identified functional strategies be evaluated and implemented as possible.

All Agencies Share a Common Fiscal Year

All nine agencies, including other districts served through contractual arrangements, share a common fiscal year, July 1 through June 30. Budget development and adoption procedures are closely aligned, and most use identical or similar accounting procedures. This facilitates cooperative efforts.

Debt Service and Additional Voter-Approved Tax Levies

Several of the entities have varying levels of long-term debt that need to be considered in any cooperative effort. Further, some of the entities have separate voter-approved debt service or other tax levies beyond the permanent levy, which would need to be considered.

District Fund Balance Variability

While municipal departments are typically part of a city general fund whose fund balance would not be a factor in future cooperative efforts, fire districts do carry fund balances that need to be considered. Several of the districts are in a strong financial position with healthy fund balances, and with permanent and/or additional voter-approved tax levies will more than sustain current operations. On the other hand, several of the districts are less able to sustain future operations with their current tax rates and shrinking fund balances. This is an issue that will require further consideration.

Value of Capital Assets

Each entity maintains its own inventory of fixed and mobile assets, including fire stations, training and maintenance facilities, apparatus, and capital equipment. Some of these assets may be the subject of short or long-term debt. The condition, age, and the residual value of all of these assets is an issue for negotiation between the parties in any cooperative effort.

Combining All Nine Agencies is Feasible

Given the above findings, all strategies presented in this report are feasible. Each presented strategy moves across the spectrum of partnership options from maintaining the status quo at the low end of the scale, to enhanced contracted service options in the middle, to full integration via fire district merger/annexation or a full consolidation through the formation of a new fire district.

Available Options

The following describes potential options applicable and available to the Yamhill County and Polk County fire departments and fire protection districts participating in this study.

Maintain Status Quo

This option maintains the current status of all of the organizations with changes. Each of the fire districts and municipal fire departments could simply continue to do business as usual, with no change to governance, staffing, or deployment of resources.

This approach has the advantage of being the easiest to accomplish while maintaining the independence of all organizations. What it lacks is a *joint* long-term commitment to work together cooperatively. It also tends to preclude the increased efficiency, effectiveness, ability to add additional services, and *possible* cost-savings that may be realized in a long-term integrated environment.

ESCI's Recommendations

It is recognized that Phase I: Expansion of the Existing Intergovernmental Agreement (IGA) to include all nine participating agencies is achievable with reasonable modifications to current IGA agreements. It is important to appreciate that one or more of the nine entities involved in this study may not wish to participate in any one or all of the four recommended phases. However, since each was a study participant, they are all included in the various analyses that follow for discussion purposes.

This model has proven to be an effective first step in the regionalization and is under consideration by all the participating agencies at varying levels. This current model is a good "test phase" and should be developed further to identify the benefits and limitations of the model. Once it is established that there is a desire to consider an enhanced and more integrated service delivery system, Phases II, III, and IV should be evaluated to determine if they are fiscally and operationally beneficial. The four transitional phases are briefly described as follows:

Phase I: Expansion of existing intergovernmental agreements to include all nine participating jurisdictions. **Followed by;**

Phase II: Establishment of North Willamette Valley and Mid-Willamette Valley Fire Protection Districts. **Followed by;**

Phase III: Operational unification through the establishment of a contract for services Regional Fire Authority (RFA) between the North Willamette Valley and Mid-Willamette Valley Fire Districts. **Followed by;**

Phase IV: Legal Integration of the North Willamette Valley and Mid-Willamette Valley Fire Districts into the Willamette Valley Regional Fire Protection District.

This phased approach for an integrated regional fire protection system should result in the greatest efficiency and service capabilities available among the study participants.

ESCI sees this phased approach as the preferred integrated service delivery model that will ultimately result in a fully integrated service delivery system inclusive of the study area districts and municipalities. This option will provide a completely autonomous and integrated service delivery model and remove all governance, service delivery, and authority for fire services from the existing fire district boards and city councils. The ultimate governing board should include a proportional and representative board membership to ensure all communities and their unique and specific needs and desires are considered.

A key focus with this model should be collective bargaining and the establishment of a consolidated pay and benefits package that aligns or integrates existing and desired benefit package elements of the existing providers who have career personnel. Another area for consideration is the long-term management of tax rates, debt, the current capital and financial assets, and service delivery elements relating to the perceived fairness of costs and assessed values within the different communities. The fire district will need to provide an accounting of the service levels and locally generated tax dollars and how those dollars or equivalent service value is returned to the community. ESCI sees this option as plausible and beneficial if the desire is for a truly integrated service delivery system with autonomy and single source tax and revenue authority.

Phase I: Establishment and Expansion of Existing Intergovernmental Agreements

As an expanded form of cooperative efforts, existing IGA concepts could be expanded. Two or more agencies in the study area could implement the same or similar approaches currently used in the other agencies. Those approaches may be limited to administrative and support functions and other functional unification strategies, or may be inclusive of most, or all, operational elements based on the needs and desires of the participating agencies.

All the agencies collaborate today, in varying ways and degrees of cooperative interaction. Additional areas of functional and operational unification could include:

- Shared rules, regulations, and operating procedures (functional unification)
- Joint/Entry-level testing (functional unification)
- Human Resources management/administrative services (functional unification)
- Collaborative Duty Officer coverage (operational unification)
- Joint Fire Prevention services (functional unification)
- Shared Emergency Management services (functional unification)
- GIS mapping; Pre-planning services; Mobile Data Computer program (functional unification)
- Commonly managed volunteer programs (functional unification)
- Support Services (functional unification)
- Dispatch and communication

Potential IGA amendments could more closely unify the agencies that are involved in this study. The factor of autonomy is often viewed positively by agencies because it retains the governmental entity's ability to retain local control and decision-making. This methodology also includes the ability to withdraw from the arrangement in the future, if a party is dissatisfied with the result. However, the disadvantage of the autonomous approach is that it lacks long-term organizational commitment and the advantages that could be gained in terms of increased efficiency that are realized in a fully integrated long-term service delivery environment.

Phase II: Forming the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts

NOTE: North and Mid-Willamette Valley Fire Protection Districts are names used by ESCI and does not imply the future names of these districts.

During this phase, it is recommended that all participating jurisdictions work together to coordinate and time the events leading up to the formation of two regional districts. Again, while it is understood that one or more of the nine jurisdictions may decide not to participate, the analyses that follow are based upon all partners participating since they are all parties to this study. Removal of one or more would affect the financial analyses to greater or lesser degrees that are unknown at this time. This effort should take place in a coordinated and simultaneous manner between all the jurisdictions, to ensure consistent and maximum information flow, messaging, and minimized confusion to the communities served. ESCI recommends these efforts begin as soon as possible with a target date for voter approval of the two districts in November 2021.

ESCI recommends that the City of McMinnville Fire Department (MFD), Amity Fire District (AFD), Dundee Fire District (DDF), Dayton Fire District (DFD), Lafayette Fire District (LFD), and the New Carlton Fire District (NCFD) form the **“North Willamette Valley Fire Protection District.”**

ESCI recommends that the Sheridan Fire District (SFD), Southwestern Polk RFPD (SWP), and West Valley Fire District (WVFD) form the **“Mid-Willamette Valley Fire Protection District.”**

Differing from a merger, the development of a district occurs when two or more fire districts are dissolved to form an entirely new fire district. Like a merger, employees and volunteers become members of the newly formed fire district. A newly elected Board of Directors for the newly created district replaces existing elected positions from the dissolving districts. New foundational documents, such as policies, ordinances, and resolutions must be created, requiring additional administrative work.

Municipal involvement is similar between the merger and consolidation scenarios, with an important exception. In Oregon, fire protection districts can be established to include municipalities. In many cases, the district provides fire protection throughout the district service area, which includes the city(s). In other instances, the municipality operates the fire department and provides contractual services to the district, which is the case between the City of McMinnville and the McMinnville Rural Fire Protection District.

As with a merger, the development of a new fire district requires the approval of both the municipal and district electorate. The process, in a study area of this size with multiple existing jurisdictions involved, is complex and requires significant planning and coordination.

Phase III: Operational unification through the establishment of a Regional Fire Authority (RFA) service contract between the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts.

The operational unification strategy in Phase III takes the next step in the continuum of increased collaboration. Functional and operational collaboration move beyond shared service delivery and the two district formation initiatives discussed previously, in that the participating agencies respond to emergencies as one under a single host agency. Dispatch protocols are modified, equipment and personnel may be deployed differently, and municipal/district boundaries are erased to achieve the fastest and most efficient incident response from the closest station, without regard to jurisdictional boundaries.

In this instance, the operational response is largely unified under a single organizational structure. The fire departments remain independent in terms of governance and funding mechanisms, but from a service delivery perspective, they operate as one. An operational unification like this one is often viewed as a segue toward complete integration.

This concept could be expanded to include all the participating agencies. However, the process of doing so should include careful assessment of operational command staff capacity to address the expanded workload and would likely necessitate the inclusion of several current agency's command staff into the deployment and response composition. It is also important to note that the level of trust required to implement operational unification is very high since independence and autonomy in core mission activities (emergency operations) have been subordinated in favor of the preferred future state of complete integration.

Phase IV: Legal Integration of the North Willamette Valley and Mid-Willamette Valley Fire Districts into the “Willamette Regional Fire Protection District.”

Oregon Law provides for the complete integration of agencies as described previously. All three forms of integration (merger, consolidation or annexation) require an affirmative vote of the electorate of the affected jurisdictions. The outcome of the three approaches is essentially the same, resulting in one legal entity (in this case, a fire district) where once there were many. The law addresses the apportionment of existing debt and the makeup of the resulting governing board. Of all options for shared service, legal integration requires exacting legal processes.

The integration of fire protection services involves a change in the governance of one or more entities; the process is guided by ORS 190, ORS 198, and ORS 478. Single-purpose governmental units (such as fire districts) typically have the power to merge and consolidate with other service providers much more freely. Cities frequently may annex neighboring fire districts to take advantage of economies of scale and more effectively plan for the orderly expansion of the city within its urban growth boundary.

In the State of Oregon, complete integration of fire districts can be accommodated in one of two ways by statute: merger or consolidation.^{38,39}

As mentioned above, a merger is the complete integration of two or more districts into one. One is absorbed into and becomes part of another agency. For two or more fire districts to merge, one or more ceases to exist (merging agency), and the other becomes the surviving entity (merger agency). The employees and volunteers of the merging agency are transferred to the merger agency, and the elected positions are either eliminated from the merging district or brought into the merger district through an agreement to re-configure the composition of the Board of Directors.

A merger between the study districts would require agreement about which agency will be the surviving agency and which agency will dissolve into the surviving agency. The merger is subject to the approval of the respective boards and the communities' voters.

³⁸ Oregon Revised Statute 198.705(14).

³⁹ Oregon Revised Statute 198.705(5).

Analysis of Shared Services Options

In the following section, the strategies for shared services that were identified above are further detailed, and their feasibility is evaluated.

The decision to establish a single regional agency can be a daunting task, whether attempted in one step or in a phased approach as recommended here. When the participating agencies include multiple fire districts and municipalities, the process becomes even more complex and challenging. ESCI identified two key considerations that serve as a litmus test for determining the feasibility of a given strategy.

Sustainability

The first factor to consider in evaluating the strategies is containing costs and/or reducing them. Any partnership should be evaluated by its positive or negative impact on the projected fiscal condition by avoiding future costs, improving efficiency, and/or eliminating redundancies. These criteria should be evaluated not just in the short term, where some transition costs may spike initially, but when viewed into the foreseeable future.

It must be emphasized that mergers or consolidations should not be undertaken solely with the goal of reducing costs. While this may be a benefit, reduced costs may not be immediately apparent and may only result from avoidance of future increased costs incurred were the participating entities maintained as stand-alone departments. This leads to the second and no less important factor when considering shared services in any form.

Service Delivery

The second factor which must be included in the evaluation is the service level the participating agencies currently provide compared to any service level enhancement opportunities gained through a partnership. Typically, this is viewed as the emergency response delivery system. However, other services such as training, maintenance, and specialty functions may also fall under service delivery. In fact, many entities fail to consider service delivery of "back office" or other support functions such as budget and finance, human resource management, information technology, legal and risk management.

Fire stations need to be located strategically so that equipment and personnel can respond in their jurisdiction within an acceptable time frame. Stations should also be sited in a manner that provides adequate coverage overlap while avoiding excessive redundancy. Each respective study agency's fire stations are located to provide an acceptable level of service to their existing service area. However, their current location does not account for potential response available from non-participating agencies. Along with station location, staffing configuration at the respective facilities will impact response performance and reliability.

With the above in mind, the following regional strategies are analyzed for their impact on sustainability and/or service delivery while identifying opportunities for increased efficiency wherever possible. ESCI recognizes that service delivery and its future sustainability must be viewed with equal importance.

ESCI has provided a phased regional service delivery and governance implementation approach that will provide enhanced service levels within the available financial and operational resources. The following discussion provides details and a template for implementing each of the four proposed service delivery phases.

Phase I: Expansion of Existing Shared Services

The initial phase builds upon the existing IGA agreement between the participating agencies. Figure 122 displays the current IGA functions that are currently in place. These IGAs have been previously established and deemed fair and equitable by the participating agencies.

Figure 122: Current Cooperative Agreements

Cooperative Agreements	AFD	MFD	DFD	DDF	LFD	NCFD	SFD	SWP	WVFD
Administration	→						→		
Support Services							→		
Medical Director	→								
Dispatch Services	→			→			→	→	
Fire Prevention	→						→		
Fire Investigation	→								
Training Academy	→								

Phase I would expand these existing contractual services to include Support Services, Dispatch, and Fire Prevention for all the participating agencies. Figure 123 shows the integrated services upon completion of Phase I. This model will serve as a transitional step to allow the participating agencies to refine and build upon the existing service delivery platform to work toward the Phase II, III, and IV service delivery models that result in a more integrated and fully consolidated regional fire protection model. This model would fully integrate Support Services, Medical Direction, Dispatch Services, Fire Prevention, Fire Investigation, and Training through IGAs between all the participating agencies.

Figure 123: Phase I Cooperative Agreements

Cooperative Agreements	AFD	MFD	DFD	DDF	LFD	NCFD	SFD	SWP	WVFD
Administration	→						→		
Support Services	→								
Medical Director	→								
Dispatch Services	→								
Fire Prevention	→								
Fire Investigation	→								
Training Academy	→								

Level of Cooperation

The current level of cooperation between the participating agencies is expected to continue with increased participation from all agencies in every category except administration and governance. The expanded IGA will result in enhanced, seamless response, resource availability and efficiency, as well as enhanced sharing of dispatch, training, and other support service resources. This option will serve as a good opportunity to establish the relationships, regional efficiencies, and policy initiatives needed to evaluate the feasibility and desire for a future, fully integrated consolidation option described in the Phase II Models.

Estimated Timeline for Completion

Implementation is immediate for the current agencies sharing resources. Once the decision is made to expand the regional model, a timeline for the agencies willing to participate in a unified IGA service model for the designated categories will need to be developed. Some services can be implemented immediately with some, such as dispatch and communications, taking more time. These recommended, enhanced IGA agreements can be reasonably established within 180 days, with the exception of dispatch and communications, which may take additional time to implement (up to 1-year depending on contract negotiations, system setup, policy changes, and system integration capabilities). The issues identified below for this strategy will need to be addressed and build seamlessly upon the existing regional and IGA cooperative agreements.

Affected Stakeholders

All nine agencies' members and their constituencies will have either maintained regional service delivery benefits or enhanced capabilities and efficiencies at some level. Any agency choosing not to participate in the regional IGAs will have missed efficiency and effectiveness opportunities with potential negative impacts on their long-term financial, administrative, and operational capabilities and sustainability.

Summary/Objective of Strategy

With a decision to build upon the existing IGA agreements and regional delivery system, the agencies will have proactively decided to maintain and build upon the value derived from existing shared services, which are considerable in these study agencies. There will be a service and capability enhancement as all nine participating agencies become part of a regional service delivery system that provides shared and integrated Support Services, Medical Direction, Dispatch Services, Fire Prevention, Fire Investigation, and Training services.

ESCI Guidance

Elected officials and administrative staffs should ensure that discussions and decisions related to this strategy focus on the desired outcomes and best interests of the communities served. A decision to maintain and expand the existing IGA service delivery model does not necessarily mean future collaborative efforts are off the table. On the contrary, this can serve as a beneficial transitional step in establishing an efficient and high-performance regional fire service delivery system. Increased efficiency and enhancement of service capabilities should continue to drive decision-making. These benefits and enhanced capabilities can be expanded upon further with the Phase II service delivery models.

Based on ESCI's evaluation of the current shared services by the participating jurisdictions, ESCI recommends the following agencies provide the recommended regional services:

Figure 124: Agencies to Provide Regional Services

Service	Agency
Support Services	McMinnville Fire Department
Medical Director	Dr. Heiser, Board Certified Emergency Physician
Dispatch Services	Yamhill Communications Agency (YCOM)
Fire Prevention	McMinnville Fire Department
Fire Investigation	McMinnville Fire Department
Training Academy	McMinnville Fire Department

Special Considerations

This strategy continues to afford the elected officials with a high level of control. However, as described in the previous section, key decisions must be made by each of the agencies if this strategy is adopted.

The expansion of the current agreement to include all nine agencies will require a commitment by the fire districts and the municipalities to participate in the existing regional model. A committee representing all participating entities should identify and agree on which agency will host the recommended service categories and what cost allocation methodology will be utilized.

There should also be an educational initiative undertaken and a future Phase II options committee established to discuss the desired outcomes of the Phase I regional system expansion, and what regional aspects and metrics, if any, should be evaluated for future Phase II model option consideration.

Needs and key recommendations identified in the *Current Conditions* section of this report lists areas in which the study agencies can, and should, make improvements. Those areas should be carefully evaluated as part of determining future needs under this approach.

Policy Actions

The existing system participants will need to support the expansion of the service delivery model. All nine jurisdictions will need to authorize their respective Fire Chief or authorized representative to negotiate and initiate a contract for service with the identified hosting agencies for the identified regional service delivery elements. Contracts for recommended services will need to be approved by the authorizing boards or councils and coordinated to ensure consistency in adoption and implementation.

Fiscal Considerations

Financial analysis for this phase should build upon the existing jurisdictional IGA agreements and cost-sharing methodology. The total to be paid by each participating jurisdiction under the IGA will be in accordance with existing cost allocation strategies being utilized or as amended and agreed to by all participating agencies. The agencies should evaluate the potential for cost savings and then compare to existing costs for each agency. Savings should be shared across all agencies proportionate to their share of the current total cost.

The following figure provides a template for the agencies to examine how the existing costs could be collected and then compared to Phase I costs for the same services. Support services would be defined and include all personnel (full or fractional FTE providing that service) and associated materials and services costs. The support services area could be further broken down into specific areas such as administrative support, budget & finance, IT, HR, Legal, Audit, facility and apparatus maintenance, and others as needed. The degree to which the template is expanded or contracted would be based upon the level to which the agencies agreed to share services. The percent contribution from each agency to the total cost of the service identified would be decided using one of the factors discussed later in this section or a composite of several of those factors such as population, service area, call volume, resources, etc.

Figure 125: Template for Shared Services IGA Financial Analysis

Fiscal Year 20–21	Fire District #1		Fire District #2		City #1		City #2		TOTAL	
	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE
% CONTRIBUTION										
Support Services										
<i>Administrative</i>										
<i>Budget/Finance</i>										
<i>IT</i>										
<i>HR</i>										
<i>Facilities</i>										
<i>Fleet</i>										
Medical Director										
Dispatch Services										
Fire Prevention										
Fire Investigation										
Training										
Current Total										
Phase I Total										
Cost Savings/Increase										

Issues & Impacts

Implementation of this strategy creates no additional issues or impacts of any significance for existing participating agencies. For this phase, the districts and cities will need to establish an implementation committee to address the administrative, financial, operational, and community-specific needs. Participating in a regional service delivery model while maintaining local and cultural identity is of the utmost importance to all the participating agencies. Careful and deliberate attention needs to be paid to a smooth transition that builds upon the foundational elements of each city and district, and which may result in a net reduction of cost and/or enhanced services to the communities served.

Phase II: Creation of the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts

ESCI recommends the creation of a North and Mid-Willamette Valley Fire Protection District in this phase. As described and analyzed in the following, the formation of this district with the six Northern and three Mid-Valley participating agencies is feasible and will create operational and financial opportunities that would benefit the communities and regions served. As described previously, ESCI recommends a coordinated effort with Phase II and recommends all participating agencies work together on the formation and public elections to establish the North and Mid-Willamette Valley Fire Protection Districts. The following is a sample organizational chart, followed by a detailed financial analysis and models.

Figure 126: Notional Organizational Structure for the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts

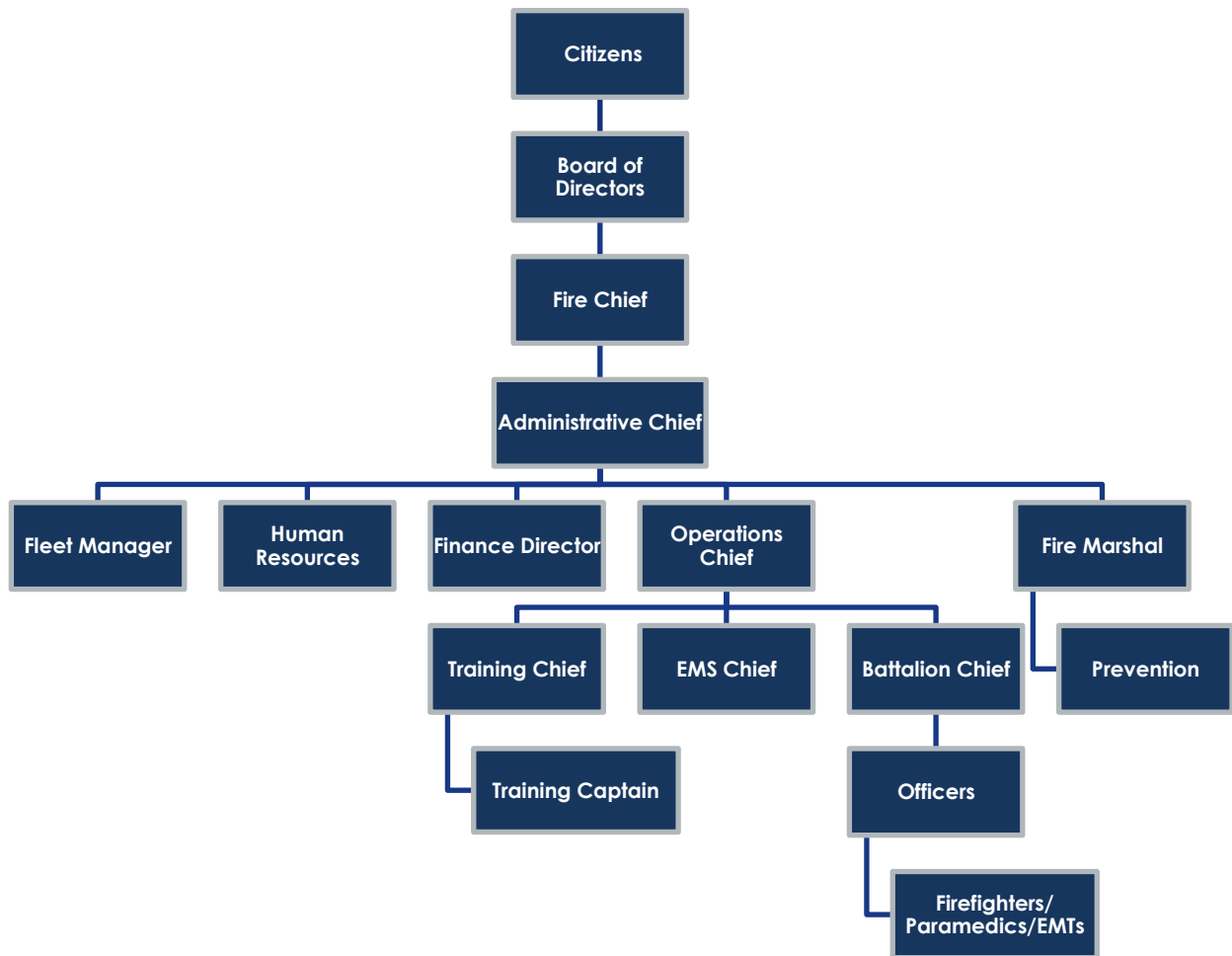


Figure 127: Notional Service Area Map for the North Willamette Valley Fire Protection District

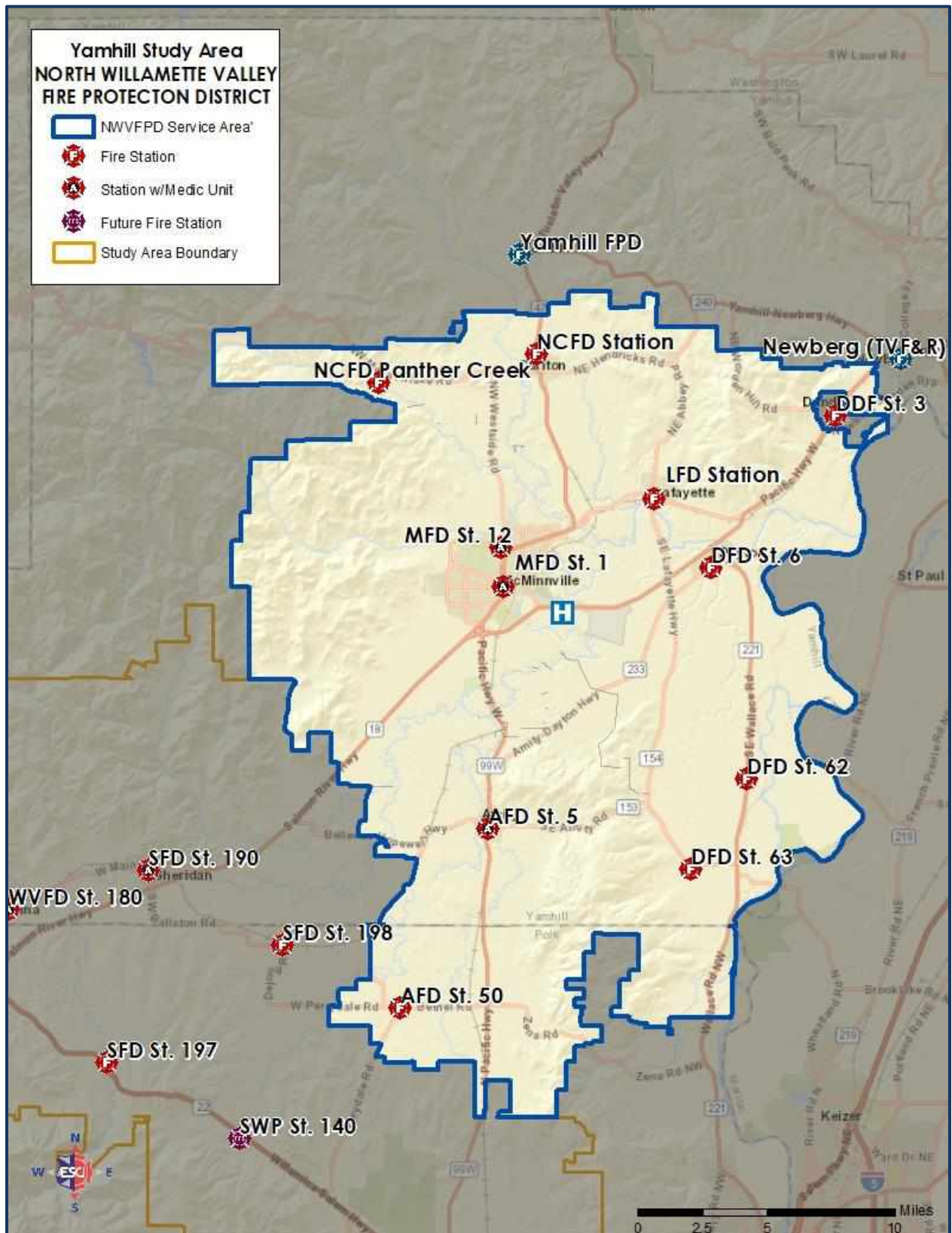
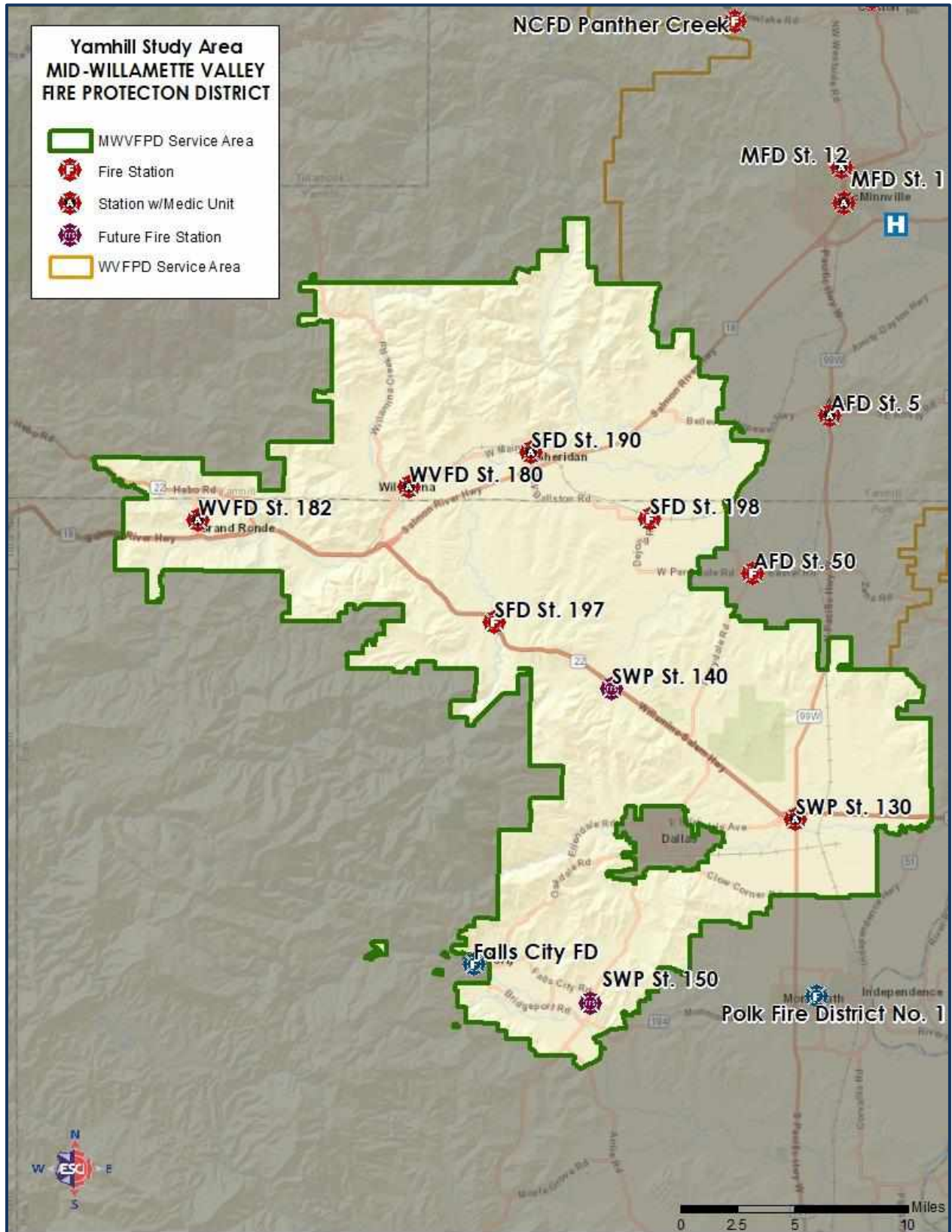


Figure 128: Notional Service Area Map for the Mid-Willamette Valley Fire Protection District



Level of Cooperation

This strategy requires the highest degree of cooperation between agencies of any of the integration options. Pursuant to ORS 198.800, a petition filed with the county board of the principal county may initiate the formation of a special district. If the proposed district includes territory within a city, a certified copy of the resolution of the city's governing body approving the petition must be filed with the petition. The State Fire Marshal's Office is required by law to assist in the formation of fire protection districts and can be an excellent resource. In addition, the insurance industry and others who have gone through this process can be of significant assistance.

It is best to start this process with the formation of a planning committee. ESCI recommends a joint planning committee to coordinate formation efforts and timing for participants in both the proposed North Willamette Valley and Mid-Willamette Valley Fire Protection Districts.

ESCI recommends that the planning committee include elected representatives from each of the participating agencies as well as qualified community members, fire department executive staff, a legal representative, and other appropriate subject matter experts. The planning committee is responsible for creating a petition that is filed with the county board of the principal county. The fire district petition serves as the basis for the charter of the newly formed entity and outlines the services, service level standards, budget, funding mechanism(s), governance, and any other specific considerations as required in ORS 198.705 to 198.755. It becomes the plan that voters are asked to approve when voting on the formation of the fire district.

Estimated Timeline for Completion

It is likely that the formation of a fire district planning committee, the development of a fire district petition, educating the constituents of the affected agencies, holding an election, and transitioning from the current governance structure to the new governance structure will take at least eighteen months to two years.

Affected Stakeholders

As in the merger/annexation scenario, the citizens of each agency are affected by this strategy, since the agency currently providing service will give way to the new fire district.

The elected officials from both cities and the existing four fire districts in the study area will be significantly impacted. Since the governing statutes do not require a specific number of governing board members to serve on a district board, the district petition can call for as many, or as few, board members and how they will be selected or elected, as the planning committee deems appropriate. While conventional wisdom calls for an uneven number of governing board members to make up the governing board to avoid tie votes, ESCI is aware of some districts with an even number of members, although it is not recommended. The existing city councils will no longer have authority or responsibility to provide fire protection, and the former fire district boards will be disbanded.

Personnel from all the study area agencies are likely impacted since the fire districts will likely be redesigned to take advantage of efficiencies, develop a more effective deployment model, and pooled resources are likely to modify the dynamics each of the nine agencies are used to operating within.

Summary/Objective of Strategy

This strategy combines all nine agencies into one of two new fire districts. From an operational standpoint, the new fire districts will serve the entire nine-agency region under study. From a governance standpoint, the governing board make-up will change with representation from each participating agency as determined by the planning committee and submitted in the approved petitions and, subsequently, the fire district charters.

ESCI Guidance

Informal discussion between the participating agencies is necessary to determine the level of interest in considering this strategy. Assuming the parties agree to pursue this strategy, it would be wise to gain perspective from other city and fire districts that have formed a consolidated fire district and review other fire district petitions that have been successfully adopted. It would also be prudent to obtain legal counsel as the planning committee meets, and the fire district petition is formulated before submitting the finished product to the required boards and, subsequently, the voters. It will also be necessary to communicate with existing constituencies, both internal and external, on the value and benefits of pursuing this option.

Transfer of personnel from existing fire districts and cities to a new fire district is outlined in statute and detailed in the approved petition. Under a new fire district configuration, personnel from the agencies joining forces in the new fire district become employees and members of the new organization, including career and volunteer personnel. Unless an agreement for different terms of transfer is reached between the collective bargaining representatives of the transferring employees and the participating fire protection jurisdictions, effort should be made for existing employees to retain the rights, benefits, and privileges they had under their pre-existing collective bargaining agreements. While silent in the same statute, this practice should also pertain to non-represented employees.

Special Considerations

It is important to establish a fire district petition and economic feasibility report for each new district, which addresses all the various services, service levels, governance, funding mechanisms, asset transfers, debt liabilities, and structure. The difficulty is adopting a petition and economic feasibility report, which makes clear the intent of the parties without tying the hands of future elected officials. If circumstances change that necessitates significant modification to the fire district petition for sustainability or effectiveness and those modifications are regarding the substance of the petition, it may require voter approval to make the changes.

Another consideration in forming a new fire district is to address employee retirement plans in existence with cities and districts and how they can be grandfathered or changed to meet the needs of the new fire district without unnecessarily negatively impacting the current employees transferring to the new fire district. Also, given the desire for local identity and influence by the participating agencies, consideration should be given on how to maintain a local identity and opportunity for community and city council input on decisions of importance and significant financial impacts to the communities. A fire advisory committee that reports to the fire chief and district board for each of the new fire districts may be an important measure to ensure the new fire district staff and board stay in touch and remain responsive to the communities they serve.

Policy Actions

ESCI's review and discussion of Oregon's State Law on this topic have been necessarily brief, only sufficient to ensure that basic provisions for the formation of a new fire district exist. As always, we emphasize that we are not qualified to give legal advice. We recommend that study agencies consult with legal counsel experienced in such matters before undertaking this strategy.

The following steps are general guidelines to follow for the formation of both new fire districts and are important initial steps to form a fire protection district. Although the law does not require the following steps, they are recommended as a good basis for creating interest and support in the merger and annexation into a merged fire district.

Form a Stakeholder Committee

Proportional representation from each participating agency, including senior fire administration and budget and finance personnel, should be prioritized. Even in this earliest stage, the committee would find the assistance of an attorney familiar with special district formation and election law invaluable.

The committee should establish the sources of financial support and responsibility for initiating the formation as early as possible. Costs will include, but may not be limited to, obtaining a bond to accompany the formation petition, possible election costs, and printing. These costs are refundable only if the district is formed. Whoever provides the money must carry the loss if the district is not formed.

Develop a Fire District Formation Petition

In developing the petition for formation, the committee should determine the following:

- The probable area to be served (rough boundaries should be established).
- The estimated assessed valuation of the area to be served.
- The estimated potential revenue that could be derived from a tax rate.
- The enhanced level of protection that will be provided by a reasonable tax.
- The possibility of a merger and or annexation to an existing district.
- A plan of how to fund the established districts (operational and capital costs).

ORS 198.749 requires that an economic feasibility study be conducted by those people designated as chief petitioners/planning committee (professional help is suggested).

Economic Feasibility Statement

In developing the economic feasibility statement, the committee should consider the following:

- A description of the services and functions to be performed or provided.
- An analysis of the relationships between those functions or services and existing or needed services.
- A proposed first-year line-item operating budget and a projected third-year line-item operating budget that demonstrates the feasibility of the proposed permanent tax rate required under ORS 198.750(1).

This statement shall form the basis for the proposed permanent tax rate limit for operating taxes. It is difficult to pass an operating tax levy as such votes are limited to biennial primary elections (at which the 50/50 requirements must be met) and general elections. Although the 50/50 requirements do not apply to general elections, the competition for approval is steep, as voters will probably also be asked to approve many other formations and local option levies at that time.

Develop Promotional Materials and Standardized Presentations

Promotional materials, such as handouts and standardized presentations, and talking points should be developed and distributed as widely as possible. Special attention should be paid to making all property owners within the proposed districts and annexed cities aware of the proposal. The material should:

- Discuss the proposal.
- Outline the proposed boundaries of the district.
- Briefly describe the benefits and announce the time and place of a public meeting held to discuss the proposal.

Conduct Community Outreach for Each Participating Community

At public meetings and local civic and community groups, the committee should gauge and evaluate community interest. It should also:

- Present its recommendations.
- Present and review the district formation proposal utilizing knowledgeable speakers, such as an attorney or a representative of the participating fire departments and/or fire districts or other subject matter experts, as needed.
- Review the estimates for initial outlay and continuing costs for the proposed level of protection.
- Present local city or district fire officials from the participating jurisdictions to voice their support and benefits of the new fire district.
- After the time has been given to answer questions from the attendees, those attending should be polled to determine if there is enough support to petition the county board on the matter of formation. With sufficient interest in the measure, the committee should begin the process of performing the next steps of district formation.

Fiscal Analysis

The financial elements of district formation and consolidation are different. The estimates and analysis presented are dependent on the outlined assumptions and subject to change depending on actual factors that influence revenue and expense. Key assumptions used in the assessment are followed by high-level estimates of revenue, expense, and the net impact on fund balance over the five-year period FY 2022 through FY 2026. This section concludes with a notional summary of financial considerations associated with the consolidation strategy. The figures shown in the summary may vary considerably given different assumptions as the process moves forward and is only intended as a rough indicator of how district formation may affect estimated millage rates for the participating parties over time. Operational millage rates in the forecast beginning with FY 2021 are calculated rates and may not reflect actual current permanent or voter-approved levy rates.

The fiscal analysis begins with a comparison of FY 2021 adopted or estimated financial resources and expenses of the six partner agencies recommended for the North Willamette Valley Fire District and the three partner agencies recommended for the Mid-Willamette Valley Fire District, assuming all study partners choose to participate. For comparison purposes, the Dundee and McMinnville Rural Fire Protection Districts are broken out even though services are provided to them via contract from the City of Dundee and the City of McMinnville, respectively.

The following figures provide summaries of recurring and non-recurring revenue sources as well as any fund balance, if applicable. Those departments that are part of a municipal general fund (Dundee, Lafayette, and McMinnville) do not show a fund balance that might be available as part of the new district's resources except where they have capital resources maintained in funds separate from the GF. Tax revenues for those city departments represent a portion of undesignated city general revenues (assumed to be taxes for purposes of this analysis) necessary to fully fund the departments beyond fire department-specific revenues and operational mill levies are calculated as if these departments were funded separately from the respective city general funds.

Charges for Services include ambulance billing, prevention activities, etc. As mentioned, the columns for Dundee and McMinnville do include the Dundee and McMinnville rural fire protection districts to which they provide services under contract, which are shown separately. The analysis here does not include either the expenditure by the district or the revenue for the municipality derived from the service contracts as these are net zero. Other recurring revenues include FireMed revenue where applicable and the Reimbursement/Conflagration line includes GEMT reimbursements, where applicable. The final column shows total revenues and fund balances for all agencies combined, as estimated for FY 2021. This column is used as a starting point to examine projected revenues and expenses for each of the potential new districts.

Figure 129: FY 2021 Adopted/Estimated Revenue and Expense for North Willamette Valley Fire District Partners

Resources	Agency								
	AFD	DFD	DDF ³	DRFPD ³	LFD	MFD ⁴	MRFPD ⁴	NCFD	Total
Taxes—Current Year ¹	695,423	595,908	543,524	187,541	517,222	4,590,175	504,939	413,145	8,047,878
Taxes—Prior Year	15,000	20,000	0	8,000	0	-	23,936	13,000	79,936
Interest/Earnings	4,000	20,000	0	500	13,500	15,200	15,000	9,300	77,500
Charges for Services ²	0	0	0	0	0	3,668,000	0	100,000	3,768,000
Other ⁵	0	0	150,000	0	0	228,000	0	0	378,000
Recurring Revenue	714,423	635,908	693,524	196,041	530,722	8,501,375	543,875	535,445	12,351,314
Grants	5,000	0	0	0	0	0	0	0	5,000
Sale of Surplus	500	0	0	0	0	0	0	0	500
Reimb/Conflag ⁶	68,500	48,200	0	0	0	252,000	0	0	368,700
Miscellaneous	1,000	5,000	535,600	500	0	116,202	0	5,000	663,302
Non-Recurring Revenue	75,000	53,200	535,600	500	0	368,202	0	5,000	1,037,502
Beginning Fund Balance	49,096	241,668	0	162,450	5,496,500	0	700,876	618,016	7,268,606
TOTAL RESOURCES:	838,519	930,776	1,229,124	358,991	6,027,222	8,869,577	1,244,751	1,158,461	20,657,422

¹For municipal departments, this includes non-specified general revenues required beyond fire service-specific revenues to meet expenses.

²Includes ambulance billing and collections revenue for transporting agencies.

³City of Dundee contract revenue and Dundee RFPD contract expense excluded since they are net zero.

⁴City of McMinnville contract revenue and McMinnville RFPD contract expense excluded since they are net zero.

⁵Includes revenue from FireMed.

⁶Includes GEMT reimbursements and Conflagration/wildfire reimbursement from state and other sources.

Expense	Agency								Total
	AFD ¹	DFD ¹	DDF ²	DRFPD ²	LFD	MFD ³	MRFPD ³	NCFD	
Personnel Services	30,780	211,059	540,200	0	179,584	7,235,621	0	117,120	8,314,364
Materials & Services	386,387	218,700	107,300	12,797	154,500	1,459,057	83,208	211,500	2,633,449
Debt Service	312,212	123,650	150,200	80,498	183,138	115,291	0	113,325	1,078,314
Recurring Expense	729,379	553,409	797,700	93,295	517,222	8,809,969	83,208	441,945	12,026,128
Land	0	0	0	0	0	0	0	0	0
Buildings	109,140	0	5,000	0	2,614,000	0	0	5,000	2,733,140
Equipment	0	0	22,800	1,000	626,500	413,100	42,000	165,000	1,270,400
Apparatus	0	377,367	535,600	0	0	45,000	0	0	957,967
Non-Recurring Expense	109,140	377,367	563,400	1,000	3,240,500	458,100	42,000	170,000	4,961,507
TOTAL EXPENSES:	838,519	930,776	1,361,100	94,295	3,757,722	9,268,069	125,208	611,945	16,987,635

¹Adopted FY 2021 expenditure budget reduced to provide for a balanced budget.

²City of Dundee contract revenue and Dundee RFPD contract expense excluded since they are net zero.

³City of McMinnville contract revenue and McMinnville RFPD contract expense excluded since they are net zero.

Figure 130: FY 2021 Adopted/Estimated Revenue and Expense for Mid-Willamette Valley Fire District Partners

Resources	Agency			
	SFD ^{4,5}	SWP ⁶	WCFD ²	Total
Taxes—Current Year	710,000	895,000	600,000	2,205,000
Taxes—Prior Year	0	0	0	0
Interest/Earnings	0	102,000	0	102,000
Charges for Services ^{1,2}	650,000	0	1,150,000	1,800,000
Recurring Revenue	1,360,000	997,000	1,750,000	4,107,000
Grants	0	0	0	0
Sale of Surplus	0	0	0	0
Reimb/Conflagration	0	0	0	0
Miscellaneous ⁵	2,176,000	433,000	85,000	2,694,000
Non-Recurring Revenue	2,176,000	433,000	85,000	2,694,000
Beginning Fund Balance^{3,6}	1,359,320	5,672,000	110,000	7,141,320
TOTAL RESOURCES:	4,895,320	7,102,000	1,945,000	13,942,320

¹ Includes revenue from ambulance user fees, collections, GEMT reimbursements, and FireMed.

² Includes revenue from contractual services provided to other agencies.

³ Fund balance force matched to adopted FY 2021.

⁴ Contractual revenue from SW Polk, West Valley excluded to match exclusion from respective expenditures.

⁵ Reflects \$2.1 million seismic grant.

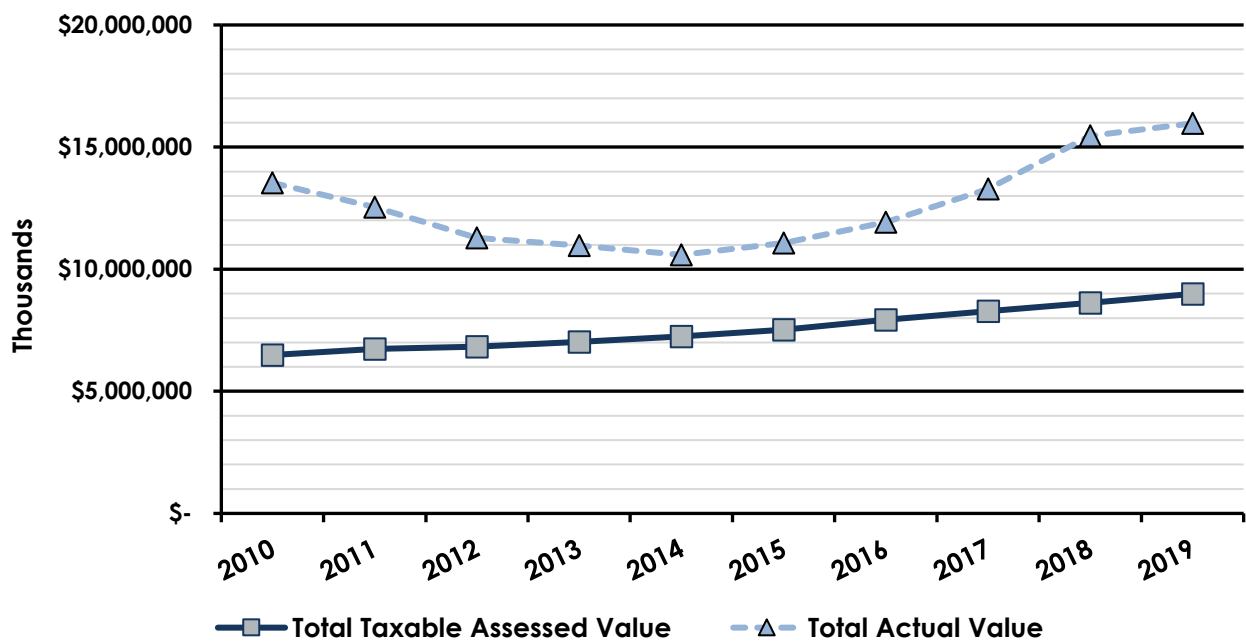
⁶ Fund balance reflects remainder of \$5.5 million bond revenues.

Expense	Agency			
	SFD	SWP ¹	WCFD ¹	Total
Personnel Services	2,195,000	0	1,090,000	3,285,000
Materials & Services ¹	505,393	635,000	397,000	1,537,393
Debt Service	0	412,000	0	412,000
Recurring Expense	2,700,393	1,047,000	1,487,000	5,234,393
Land	0	0	0	0
Buildings	2,365,000	3,500,000	0	5,865,000
Equipment	0	0	0	0
Apparatus	380,000	1,500,000	50,000	1,930,000
Non-Recurring Expense	2,745,000	5,000,000	50,000	7,795,000
TOTAL EXPENSES:	5,445,393	6,047,000	1,537,000	13,029,393

¹ Contractual payment to Sheridan subtracted from Materials & Services budget.

Yamhill County is the county to which the petition to form the new districts would most likely be addressed and it is useful to examine the historical trajectory of total taxable assessed value versus total actual value for property within the service area to determine an average rate of increase that might be applied to future properties within the new districts. Figure 131 shows the historical trend of increasing taxable assessed value for the county from 2010 through 2019.⁴⁰ Total taxable assessed value, less exemptions, has increased from almost \$6.5 billion in 2010 to just under \$9 billion in 2019, an increase of 38.6%. Although fluctuating somewhat, the average annual rate of increase in value has been 4.2%.

Figure 131: Yamhill County Total Taxable Assessed Value versus Total Actual Value, 2010–2019



⁴⁰ Yamhill County Department of Assessment and Taxation in; Yamhill County Comprehensive Annual Financial Report 2019.

Applying the average annual increase in total assessed taxable value of 4.2% to the FY 2020 total taxable assessed values for each respective partner jurisdiction yields the amounts shown on the second row of the following figure for the North Willamette Valley Fire District. Using the FY 2021 debt service amounts for each agency (plus contracted districts as applicable) yields an equivalent debt service millage rate (DS Mill Rate). Operating expense funding requirements (after subtracting any fire department-specific revenues in the case of general fund municipal departments) yields an equivalent operating millage rate (Op Mill Rate). The equivalent millage rates are calculated rates and may not match the actual rates since they are based on adopted revenue and expense budgets.

Combined totals for all partner entities are shown in the final column on the right with a calculated equivalent millage rate for both operating and debt service needs. For example, and assuming no changes for FY 2021, the North Willamette Valley Fire District totals would yield a debt service millage rate of 0.1969, which assumes the debt is spread over all district rate payers. Likewise, an equivalent district operating millage rate of 1.2724 mills would be needed to fund operating expenses spread across all taxpayers in the new district.

It is important to note that the combined millage rate shown here is only applicable to FY 2021 and is not indicative of the permanent millage rate that would need to be adopted to sustain the new district over the next five years should the parties proceed. Sustainable millage rates for each potential new district through FY 2026 and assuming district creation in FY 2022 are shown later in this section.

The rows shown as Operating Millage Change and Debt Service Millage Change indicate either a reduction or an increase over the FY 2021 estimated equivalent millage rates as calculated for the separate entities if they were to combine as the North Willamette Valley Fire District in FY 2021. For example, the Amity Fire District estimated equivalent operating and debt service millage rates for FY 2021 are 0.8767 and 0.7442 mills, respectively. In the FY 2021 single district case, the equivalent operating millage rate for taxpayers within the current Amity Fire District jurisdictional limits would increase by 0.3957 mills while the debt service millage rate would decrease by 0.5474 mills for a total net reduction of 0.1517 mills.

Figure 132: FY 2020 Taxable and FY 2021 Estimated Taxable Assessed Values for the North Willamette Valley Fire District Partners vs. Combined Values and Rates

Item	Agency								
	AFD	DFD	DDF	DRFPD	LFD	MFD	MRFPD	NCFD	Total
FY 2020 Taxable Value	419,503,634	462,000,000	302,314,048	199,429,857	233,722,857	2,820,653,990	496,980,994	322,171,380	5,256,776,760
FY 2021 Estimated TV	437,122,787	481,404,000	315,011,238	207,805,911	243,539,217	2,939,121,458	517,854,196	335,702,578	5,477,561,384
Operating Support	383,211	472,258	393,324	107,043	334,084	4,474,884	504,939	299,820	6,969,563
Operating Millage	0.8767	0.9810	1.2486	0.5151	1.3718	1.5225	0.9751	0.8931	1.2724
Oper Millage Change	0.3957	0.2914	0.0238	0.7573	(0.0994)	(0.2501)	0.2973	0.3793	-
Debt Service Support	312,212	123,650	150,200	80,498	183,138	115,291	0	113,325	1,078,314
Debt Service Millage	0.7442	0.2676	0.4968	0.4036	0.7836	0.0409	-	0.3518	0.1969
DS Millage Change	(0.5474)	(0.0708)	(0.3000)	(0.2068)	(0.5867)	0.1560	0.1969	(0.1549)	-

The following figure shows the same analysis for the proposed Mid-Willamette Valley Fire District and its three partners, the Sheridan, Southwest Polk, and West Valley Fire Protection Districts. As shown above, the equivalent millage rates are calculated rates and may not match the actual rates since they are based on FY 2021 adopted revenue and expense budgets. The estimated total taxable value is from the adopted FY 2021 budgets for each partner. The average change from the FY 2020 amounts is 4.6% and varied from a low of 2% for Southwest Polk to a high of 6.4% for West Valley. The FY 2021 values were used in this case since they were all available and vary only slightly from the application of the 10-year 4.2% average Yamhill County increase applied to all the North Willamette Valley Fire District partners above (not all of whom had available FY 2021 tax data).

Figure 133: FY 2020 Taxable and FY 2021 Estimated Taxable Assessed Values for Mid-Willamette Valley Fire District Partners vs. Combined Values and Rates

Item	Agency			
	SFD ¹	SWP ¹	WCFD ¹	Total
FY 2020 Taxable Value	473,517,609	634,082,176	303,586,183	1,411,185,968
FY 2021 Estimated TV ¹	499,628,933	646,461,348	323,049,098	1,469,139,379
Operating Support	710,000	483,000	600,000	1,793,000
Operating Mill Rate	1.4211	0.7471	1.8573	1.2204
Op Millage vs. District	(0.2006)	0.4733	(0.6369)	
Debt Service Support	0	412,000	0	412,000
Debt Service Mill Rate	-	0.6373	-	0.2804
DS Millage vs. District	0.2804	(0.3569)	0.2804	

¹Total Assessed Taxable revenue from FY 2021 budget document estimates.

Key Assumptions—Revenue:

Key assumptions used in developing the revenue estimates under the consolidation strategy are similar for other strategies. Property taxes represent the largest and primary source of revenue for the combined operations and debt service of the potential partners. Property tax revenue assumptions specific to the merger/annexation strategy include:

- The permanent tax rate estimated for each respective consolidated district in a base case is equivalent to a rate that produces the amount of revenue necessary to provide personnel, materials and services, capital equipment and apparatus replacement, as well as average annual building capital costs based upon the expenditure assumptions that follow. Further, this rate supports a 20% beginning fund balance based upon total annual expenditures as forecast. This rate may or may not be sufficient to provide for service level increases that the potential new districts and participating agencies may need. Therefore, the final proposed permanent millage rates may be higher than those assumed for the base case.

The assumed effective, permanent levy rate in the base case for the North Willamette Valley Fire District model is 1.5 mills per 1,000 AV for the forecast period FY 2022–26. That for the Mid-Willamette Valley Fire District is 1.98 mills per 1,000 AV for the same forecast period.

- The forecast assumes that the total assessed taxable value for both districts will increase annually at the same historical rate of 4.2% observed for all of Yamhill County. Further, it is assumed that prior year taxes will increase at the same rate using the FY 2021 total amount as the base.
- The debt service tax rate is based upon the amount of revenue necessary each year to fund the combined debt service, which is assumed to be spread across all taxpayers for each newly created district for the purposes of this forecast. The mill rate is only sufficient to generate enough revenue to service each year's debt in the model. It is understood that the assumption to spread total debt across all agencies will be the subject of negotiations and may not ultimately be adopted by the parties. Deleting the debt service and the necessary debt service millage would not impact the model as these changes are net zero. The same operating millage rates would still need to be applied.
- Interest earnings are forecast to increase at 1% annually using the FY 2021 total as the base amount.
- Charges for services, the bulk of which represent ambulance billing, have historically not increased significantly, and are forecast to rise at 1% annually.
- Other revenues include FireMed and are forecast to increase at 1.2% annually based upon historical trends.

- Non-recurring revenues in each category represent a historical average for all partners and are not forecast to increase.
- Under the consolidation, a beginning balance of \$7.27 million in FY 2021 is used as both a 20% operating reserve and to cover the difference between revenue and expense since there is a net operating loss in FY 2021 for the North Willamette Valley Fire District.
- Beginning fund balance in FY 2021 for the Mid-Willamette Valley Fire District is \$7.14 million but is largely comprised of restricted bond fund and seismic grant reserves, which places significant pressure on the new entity to significantly raise its permanent levy to generate sufficient excess funds to build its unrestricted operating reserve to the recommended level. The remaining unrestricted fund balance, if applicable, could be utilized for expenses incurred to dissolve current districts and pay down debt as well as fund capital replacement needs.

Key Assumptions—Expenses:

Key assumptions used in developing the expenditure estimates under the consolidation model are similar to other strategies. Personnel, Materials & Services represent the largest and primary source of recurring expenditures for the potential partners. Since the non-recurring capital facilities and equipment/apparatus replacement amounts for the individual agencies have been averaged historically and combined, they can actually be considered recurring in nature, realizing that the actual amounts may be higher or lower year-to-year. Expenditure assumptions specific to the consolidation strategy include:

- The average annual increase in Personnel Services costs has historically varied significantly from agency to agency. Averages for the North Willamette Valley Fire District partners have varied from a low of 6.5% for Dayton to highs of 16–17% for Amity, McMinnville, and New Carlton. For Mid-Willamette Valley District partners, average annual rates have varied from a low near 1% for West Valley to a high of 9.8% for Sheridan. This category of expenditure has the highest impact on expenses and the required forecast permanent millage rate for district financial sustainability.

- It is anticipated that there will be some economies of scale for Personnel Services, and future rates for the North Willamette Valley Fire District will not be as high as 16–17% nor as high as 10% for the Mid-Willamette Valley Fire District. The base forecast assumes an average annual increase of 6% throughout the forecast period for the North Willamette Valley District and 3% for the Mid-Willamette Valley District. This provides for an estimated 3% annual growth in total compensation for both districts and will still allow an additional 3% for some limited growth in staffing and improvements in service level for the North Willamette Valley District, while not requiring unrealistic permanent millage rates. However, this more conservative trend in Personnel Services increases still significantly impacts the permanent millage rate required for sustainment. The benefits of additional staff for North Willamette Valley will need to be weighed against the impact of raising the permanent millage rate from an estimated district-wide rate of 1.2724 mills (the composite needed to fund the FY 2021 adopted budget) to 1.5 mills. And, although there is not room for expanding staffing in the Mid-Willamette Valley model, the estimated permanent rate would still need to increase from 1.2204 mills to 1.98 mills (an increase of 0.7596 mills) in the base case.
- In order to test the impact of adding additional personnel, a need expressed by potential partners in the North Willamette Valley District, an analysis was done using 2.0 mills for the permanent rate and examining how many operations personnel might be added each year while still providing for at least 3% growth in total compensation. That analysis is presented along with the base case projection that follows.
- Based on ESCI experience with other consolidation efforts, it is reasonable to expect a reduction in Materials & Services expenses for the first year followed by reasonable materials growth starting in year two. Historical average annual increases for the North Willamette Valley Fire District partners have ranged from a low of approximately 5% for Amity and Dundee to highs of 15% for McMinnville and New Carlton. For the Mid-Willamette Valley Fire District partners, these annual cost increases have ranged from 5% for West Valley to 8.1% for Sheridan. To keep the permanent millage rates as low as possible for the projections, these two forecast models assume no growth in FY 2022, followed by a 3% per year growth rate.

- From FY 2023 onward, growth in Materials & Services is projected to track with the annual inflation rate, which is projected to increase by 3% annually based upon a three-year average for the Western Region CPI-U, prior to the onset of the COVID-19 pandemic, as reported by the U.S. Bureau of Labor Statistics.⁴¹ It is anticipated that this rate of inflation will continue once the nation recovers from the pandemic and the economy returns to pre-pandemic conditions.
- The forecast does not envision any expenditures for land, which may change if the committee decides to relocate existing or build new stations based upon the analysis of service demand.
- Capital expenditures for buildings in the forecast are based upon the historical average for all partners in each respective new district. This assumption may be high or low depending upon the degree to which major renovation and repair may be required for existing fire stations. Further, this annual average has been increased each year of the forecast period by 4.5% based upon a study of construction industry costs. According to Zarenski (2019), non-residential construction costs are estimated to have increased at 4–5% over the past five years and are expected to continue increasing at that rate.⁴² Construction costs can be as high as three times the Consumer Price Index and are heavily dependent upon labor and material costs as well as construction demand and backlog. Import tariffs on building materials such as steel and other commodities may have an increasing impact as well.
- Equipment and Apparatus replacement costs in the forecast are also based upon the composite historical average annual expenditure of the partners. An annual inflation factor of 3% is applied to equipment, and 4% is applied to apparatus. The apparatus factor is based upon ESCI experience with the fire apparatus industry.

⁴¹ <https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category.htm>.

⁴² Zarenski, Ed (2019); Construction Cost Inflation-Commentary 2019, in Construction Analytics Economics Behind the Headlines; see <https://edzarenski.com/2018/02/15/inflation-in-construction-2019-what-should-you-carry/>.

Forecast Results

Summaries of the consolidation strategy revenue and expense projections for the North Willamette Valley Fire District and the Mid-Willamette Valley Fire District are shown in the following figures. The FY 2021 figures represent the composite of the respective partners as discussed previously with FY 2022 being the first year of each new district's financial forecast.

Beginning in FY 2022 for the North Willamette Valley Fire District, property tax revenue represents approximately 69.8% of total operating revenue, including non-recurring sources, with a net working capital/beginning fund balance of \$3.58 million. Between FY 2022 and FY 2026, total operating revenue increases at an average annual rate of approximately 2.6%, reflecting a conservative growth in revenues.

Figure 134: North Willamette Valley Fire District Resource Forecast, FY 2022–26

Resources	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Taxes—Current Year	8,047,878	10,781,917	11,229,560	11,676,775	12,280,583	12,239,662
Taxes—Prior Year	79,936	83,293	86,792	90,437	94,235	98,193
Interest/Earnings	77,500	78,275	79,058	79,848	80,647	81,453
Charges for Services ¹	3,677,000	3,713,770	3,750,908	3,788,417	3,826,301	3,864,564
Other ²	378,000	382,536	387,126	391,772	396,473	401,231
Recurring Revenue	12,260,314	15,039,791	15,533,444	16,027,249	16,678,239	16,685,103
Grants	5,000	32,611	32,600	32,600	32,600	32,600
Sale of Surplus	500	12,441	12,400	12,400	12,400	12,400
Reimb/Conflagration ³	368,700	290,189	290,000	290,000	290,000	290,000
Miscellaneous	663,302	79,484	80,000	80,000	80,000	80,000
Non-Recurring Revenue	1,037,502	414,724	415,000	415,000	415,000	415,000
Beginning Fund Balance	7,268,606	3,580,536	4,485,526	4,754,046	4,515,016	3,943,739
TOTAL RESOURCES:	20,566,422	19,035,051	20,433,970	21,196,295	21,608,255	21,043,842

¹ Includes ambulance billing and collections revenue.

² Includes revenue from FireMed.

³ Includes GEMT reimbursements and Conflagration/wildfire reimbursement from state and other sources.

The following figure compares the FY 2021 composite revenue figures and millage rates for the potential district partners and the estimated equivalent levy amounts and rates needed to support the new district starting in FY 2022, given the revenue and expenditure assumptions discussed previously for the five-year forecast period.

Figure 135: North Willamette Valley Fire District Forecast Levy Amounts and Rates, FY 2022–26

Item	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Estimated Taxable Value	5,477,561,384	5,707,618,962	5,947,338,958	6,197,127,195	6,457,406,537	6,728,617,611
Permanent Levy Amount	6,969,763	8,561,428	8,921,008	9,295,691	9,686,110	10,092,926
Permanent Levy Rate	1.2724	1.5000	1.5000	1.5000	1.5000	1.5000
Debt Levy Amount	1,078,114	964,812	1,000,137	1,017,716	1,173,844	666,440
Debt Levy Rate	0.1968	0.1690	0.1682	0.1642	0.1818	0.0990
Total Levy Amount	8,047,878	9,526,240	9,921,146	10,313,407	10,859,953	10,759,366
Total Millage	1.4692	1.6690	1.6682	1.6642	1.6818	1.5990

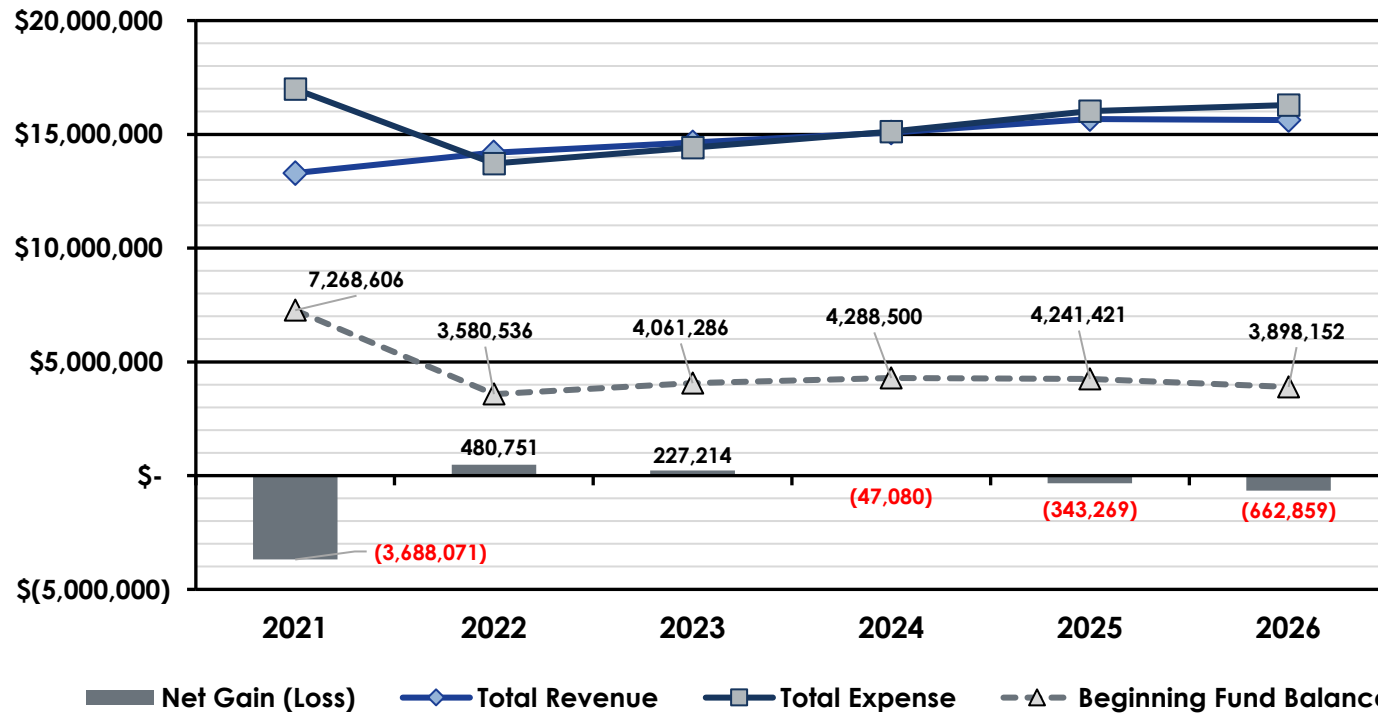
As shown in Figure 136, the annual growth rate in operating expense for the North Willamette Valley Fire District is expected to be relatively conservative due to reductions in redundancy and economies of scale. Personnel Services costs could expect to grow at 6% (a minimum of 3% for total compensation increases and 3% for some, limited additional growth) year over year, while Materials & Services grow at a rate of 3%, as discussed in the forecast assumptions. Using historical average costs for various capital line items allows the districts to better estimate the required permanent tax levy while providing the necessary funding for equipment and apparatus replacement realizing that actual expense may vary year-to-year based upon capital replacement plans.

Figure 136: North Willamette Valley Fire District Expenditure Forecast, FY 2022–26

Expense	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Personnel Services	8,314,364	9,644,662	10,609,128	11,457,859	12,145,330	12,874,050
Materials & Services	2,631,901	2,631,901	2,710,858	2,792,184	2,875,949	2,962,228
Debt Service	1,078,114	964,812	1,000,137	1,017,716	1,173,844	666,440
Recurring Expense	12,024,380	13,241,375	14,320,124	15,267,759	16,195,123	16,502,718
Land	0	0	0	0	0	0
Buildings	2,733,140	303,942	317,619	331,912	346,848	362,456
Equipment	1,270,400	219,443	226,027	232,807	239,792	246,985
Apparatus	957,967	784,764	816,155	848,801	882,753	918,063
Non-Recurring Expense	4,961,507	1,308,149	1,359,800	1,413,520	1,469,393	1,527,505
TOTAL EXPENSES:	16,985,887	14,549,524	15,679,924	16,681,279	17,664,516	18,030,222

The following figure shows total district revenue, expense, and the net effect on beginning fund balance. When expense in any one year exceeds available revenue, there is a net operating loss that must be made up by the use of the fund balance, thus reducing available beginning fund balance the following year. Setting the permanent mill levy rate at 1.5 mills provides for a net gain in fund balance in FY 2022–24, after which expense begins to increasingly exceed revenues, causing a reduction in fund balance.

Figure 137: North Willamette Valley Fire District Revenue, Expense, and Fund Balance Forecast, FY 2022–26

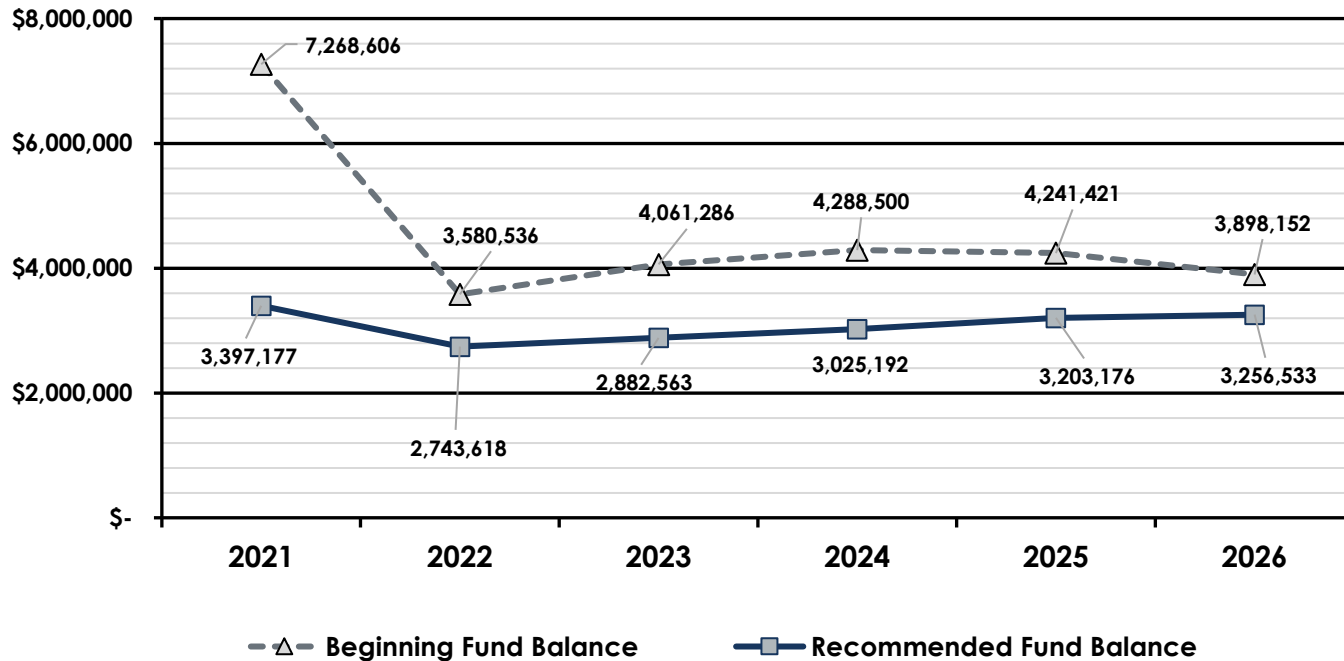


The Government Financial Officers Association (GFOA) provides guidance on how to account for fund balance and how much is recommended for various purposes.⁴³ Specifically, GFOA recommends that governments maintain at least two months or just under 17% of operating revenues or expenditures at a minimum depending upon fiscal year and timing of tax revenue collection and cash flow. A slightly more conservative 20% is recommended as the target for each new district. Figure 138 shows the impact of the forecast permanent millage rate on the North Willamette Valley Fire District beginning fund balance versus the 20% recommended beginning fund balance.

⁴³ <http://www.gfoa.org/fund-balance-guidelines-general-fund>.

As shown in Figure 138, the North Willamette Valley Fire District beginning fund balance is maintained above the recommended amount in each of the five years of the forecast and rises in years two and three, after which the increase in expenses begins to outpace the rise in revenue and fund balance must make up the difference. This reduces subsequent beginning fund balance, which still does not drop below the recommended amount. However, this trend suggests that either future expenses would need to be reduced or the district would need to consider an optional adopted millage presented for a vote of district taxpayers. The leadership of the new district would need to monitor the actual trajectory of all these factors to ensure that the new district remains on sound financial footing.

Figure 138: North Willamette Valley Fire District Forecast versus Recommended Beginning Fund Balance, FY 2022–26



The above analysis for the North Willamette Valley Fire District can be considered the base case for comparison purposes. In order to test the ability to add additional operations staff, a model was prepared using the base case permanent mill rate of 1.5 mills and a higher millage rate of 2.0 mills per \$1,000 taxable assessed value.

ESCI has identified the need to add 5 to 7 additional positions for the recommended relief factor for the North Willamette Fire Protection District. In addition, ESCI has recommended the consideration of an additional third Battalion Chief and additional ambulance upon the consolidation of the North and Mid-Willamette Fire Protection Districts into the Willamette Valley Fire Protection District. To account for these increased resources and long-term financial sustainability for this service level, the 2.0 mills per \$1,000.00 taxable income/value should be considered.

The following figure shows the estimated potential additional full-time equivalent (FTE) operational positions that could be added under the base case as outlined above (a 1.5 mill permanent levy) and shown here as Option #2 and under Option #3 which provides for a permanent levy of 2.0 mills.

To develop this table, an estimated average total compensation cost for an operational position was developed. Based on the salary and benefits data provided earlier and a review of the potential partners, an average total compensation cost for a uniformed position in FY 2021 is estimated at \$128,750. This is a composite of all uniformed positions through Battalion Chief and is not necessarily reflective of a specific position. This is merely used as a sensitivity indicator. This FY 2021 cost for an FTE is escalated at 3% per year in line two of the table. Line three of the table is the total Personnel Services cost for the North Willamette District in FY 2021, while the FY 2022 amount is the first-year cost of Personnel Services for the new district if total compensation is increased by 3% only. Option #2 is the case outlined above with a 6% annual increase in Personnel Services costs (3% for total compensation increases and 3% for other growth). Line five of the table shows the difference between the 3% compensation increase (Option #1) and the 3% plus growth or base case (Option #2) increase of 6%. The difference is the amount of recurring expense that could be used to hire additional staff. Based upon the annual total compensation in line two, the next line shows the total number of staff that could, theoretically, be hired each year of the forecast at 1.5 mills. The incremental cost is the cost that year of hiring the positions while the incremental cost escalates the prior year costs by 3% and adds the new positions.

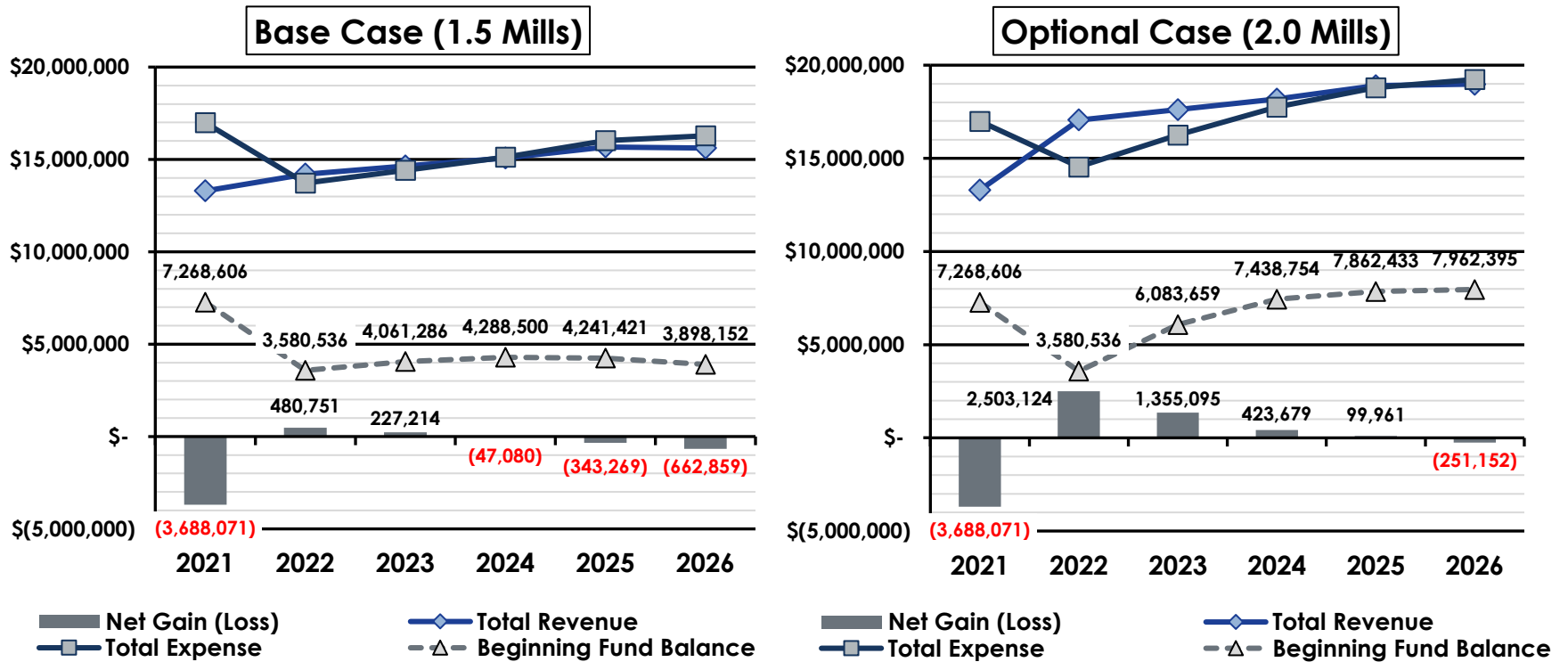
For comparison, the permanent millage rate was increased to 2.0 mills and the same analysis was performed. In the base case with a 1.5 mill permanent levy with a 6% annual growth rate in Personnel Services, the district could hire approximately 2 FTE per year through FY 2026 for a total of approximately 10 new positions over the period and still provide for an annual 3% growth in total compensation. In the 2.0 mill permanent levy case, the number of personnel that could potentially be hired increases to approximately 8 FTE per year through FY 2024, dropping to 3 FTE and then 2 FTE for the following two years, respectively. This envisions annual growth rates in Personnel Services of 16% for FY 2022–23, 12% for FY 2024, and 6% for FY 2025–26. While there are many assumptions that went into this model, it does give an indication that the district could achieve a desired goal of significantly increasing staffing while living within a 2 mill permanent levy and still provide for a 3% annual growth in total compensation.

Figure 139: North Willamette Valley Fire District Forecast Under Alternative Mill Levy and Personnel Services Growth Options, FY 2022–26

Expense	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Estimated PS Total Comp Increase	1.03	1.03	1.03	1.03	1.03	1.03
Average Line Position Total Comp	128,750	132,613	136,591	140,689	144,909	149,257
PS Option #1 (3%, 1.5 mills)	8,314,364	8,563,795	8,820,709	9,085,330	9,357,890	9,638,627
PS Option #2 Base Case (6%, 1.5 mills)	8,314,364	8,813,226	9,342,019	9,902,541	10,496,693	11,126,495
Excess over Base Recurring	0	249,431	521,311	817,211	1,138,803	1,487,868
Potential Additional FTE	0	1.8	2.0	2.0	2.0	2.0
Incremental Cost	0	238,703	273,182	281,377	289,819	298,513
Cumulative Cost	0	238,703	519,045	815,994	1,130,292	1,462,714
PS Option #3 (Variable, 2.0 mills)	8,314,364	9,644,662	11,187,808	12,530,345	13,282,166	14,079,096
Excess over Base Recurring	0	1,080,867	2,367,099	3,445,015	3,924,276	4,440,469
Potential Additional FTE	0	8.0	8.0	8.0	3.0	2.0
Incremental Cost	0	1,060,900	1,092,727	1,125,509	434,728	298,513
Cumulative Cost	0	1,060,900	2,185,454	3,376,526	3,912,550	4,328,440

The following figure is a comparison of the forecast revenue, expense, and fund balance for the two options; the base case (on the left) with Personnel Services increasing at 6% each year and a permanent millage rate of 1.5 mills and an optional case (on the right) with Personnel Services increasing at 16% for FY 2022–23, 12% for FY 2024, and 6% for FY 2025–26 with a permanent millage rate of 2.0 mills. The models behave similarly except that fund balance grows at a much higher rate in the second model (2.0 mill optional case) and, at \$7.96 million, is almost double the \$3.9 million seen in the base model (1.5 mill case). By FY 2026, the ending fund balance is on a downward trajectory and will continue to fall at an increasing rate. However, during the forecast period, the fund balance, in either case, is well above the industry-accepted standard of 17–20% of expenditures.

Figure 140: Comparison of North Willamette Valley Fire District Revenue, Expense, and Fund Balance Forecast Under Alternative Mill Levy and Personnel Services Growth Options, FY 2022–26



The following figures represent the same analysis as shown above but refer to the Mid-Willamette Valley Fire District. Beginning in FY 2022 for the Mid-Willamette Valley Fire District, property tax revenue represents approximately 61.5% of total operating revenue, including non-recurring sources, with a net working capital/beginning fund balance of \$0.9 million. Between FY 2022 and FY 2026, total operating revenue increases at an average annual rate of approximately 2.85%, reflecting a conservative growth in revenues.

Figure 141: Mid-Willamette Valley Fire District Resource Forecast, FY 2022–26

Resources	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Taxes—Current Year	2,205,000	3,453,070	3,590,375	3,764,026	3,902,249	4,046,278
Taxes—Prior Year	0	0	0	0	0	0
Interest/Earnings	102,000	103,020	104,050	105,091	106,142	107,203
Charges for Services	1,800,000	1,818,000	1,836,180	1,854,542	1,873,087	1,891,818
Recurring Revenue	4,107,000	5,374,090	5,530,605	5,723,659	5,881,478	6,045,299
Grants	0	14,658	14,700	14,700	14,700	14,700
Sale of Surplus	0	0	0	0	0	0
Reimb/Conflagration	0	205,213	205,000	205,000	205,000	205,000
Miscellaneous	2,694,000	137,557	137,600	137,600	137,600	137,600
Non-Recurring Revenue	2,694,000	357,428	357,300	357,300	357,300	357,300
Beginning Fund Balance	7,141,320	912,927	1,080,039	1,238,905	1,390,536	1,535,903
TOTAL RESOURCES:	13,942,320	6,644,444	6,967,944	7,319,863	7,629,314	7,938,502

The following figure compares the FY 2021 composite revenue figures and millage rates for the potential district partners and the estimated equivalent levy amounts and rates needed to support the new district starting in FY 2022, given the revenue and expenditure assumptions discussed above for the five-year forecast period.

Figure 142: Mid-Willamette Valley Fire District Forecast Levy Amounts and Rates, FY 2022–26

Item	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Estimated Taxable Value	1,469,139,379	1,530,843,233	1,595,138,649	1,662,134,472	1,731,944,120	1,804,685,773
Permanent Levy Amount	1,793,000	3,031,070	3,158,375	3,291,026	3,429,249	3,573,278
Permanent Levy Rate	1.2204	1.9800	1.9800	1.9800	1.9800	1.9800
Debt Levy Amount	412,000	422,000	432,000	473,000	473,000	473,000
Debt Levy Rate	0.2804	0.2757	0.2708	0.2846	0.2731	0.2621
Total Levy Amount	2,205,000	3,453,070	3,590,375	3,764,026	3,902,249	4,046,278
Total Millage	1.5009	2.2557	2.2508	2.2646	2.2531	2.2421

As shown below, the annual growth rate in operating expense for the Mid-Willamette Valley Fire District is expected to be relatively conservative due to reductions in redundancy and economies of scale. Personnel Services costs could expect to grow at 3% year over year, while Materials & Services grow at a rate of 3%, as discussed in the forecast assumptions. Using historical average costs for various capital line items allows the districts to better estimate the required permanent tax levy while providing the necessary funding for equipment and apparatus replacement, realizing that actual expense may vary year-to-year based upon capital replacement plans.

Figure 143: Mid-Willamette Valley Fire District Expenditure Forecast, FY 2022–26

Expense	2021 Adopted	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Personnel Services ¹	3,285,000	3,383,550	3,485,057	3,589,608	3,697,296	3,808,215
Materials and Services ²	1,537,393	1,537,393	1,583,515	1,631,020	1,679,951	1,730,349
Debt Service	412,000	422,000	432,000	473,000	473,000	473,000
Recurring Expense	5,234,393	5,342,943	5,500,571	5,693,628	5,850,247	6,011,565
Land	0	0	0	0	0	0
Buildings	5,865,000	24,071	25,154	26,286	27,469	28,705
Equipment	0	197,391	203,313	209,413	215,695	222,166
Apparatus	1,930,000	0	0	0	0	0
Non-Recurring Expense³	7,795,000	221,463	228,468	235,699	243,164	250,871
TOTAL EXPENSES:	13,029,393	5,564,406	5,729,039	5,929,327	6,093,411	6,262,436

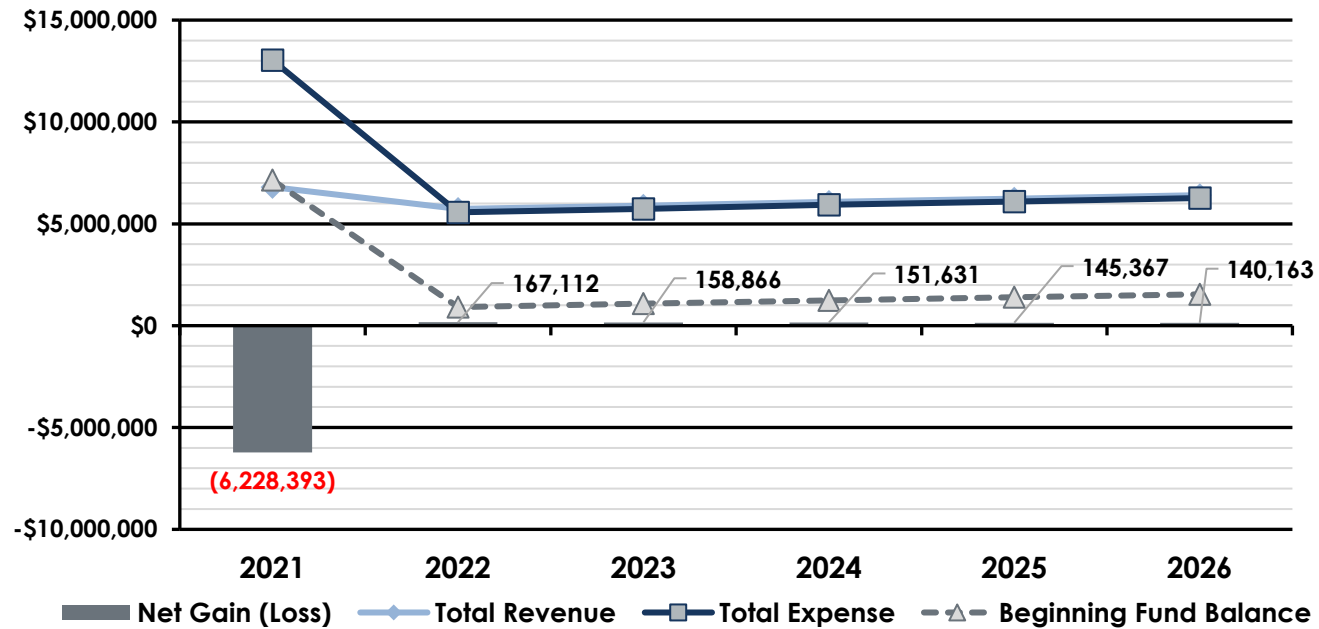
¹PS average annual increase has varied from a low near 1% for West Valley to a high of 9.8% for Sheridan.

²M & S average annual increases have ranged from have ranged from 5% for West Valley to 8.1% for Sheridan.

³Buildings, Equipment, and Apparatus are each the sum of historical average expenditures of the departments; inflation at 4.5%, 3%, and 4%, respectively.

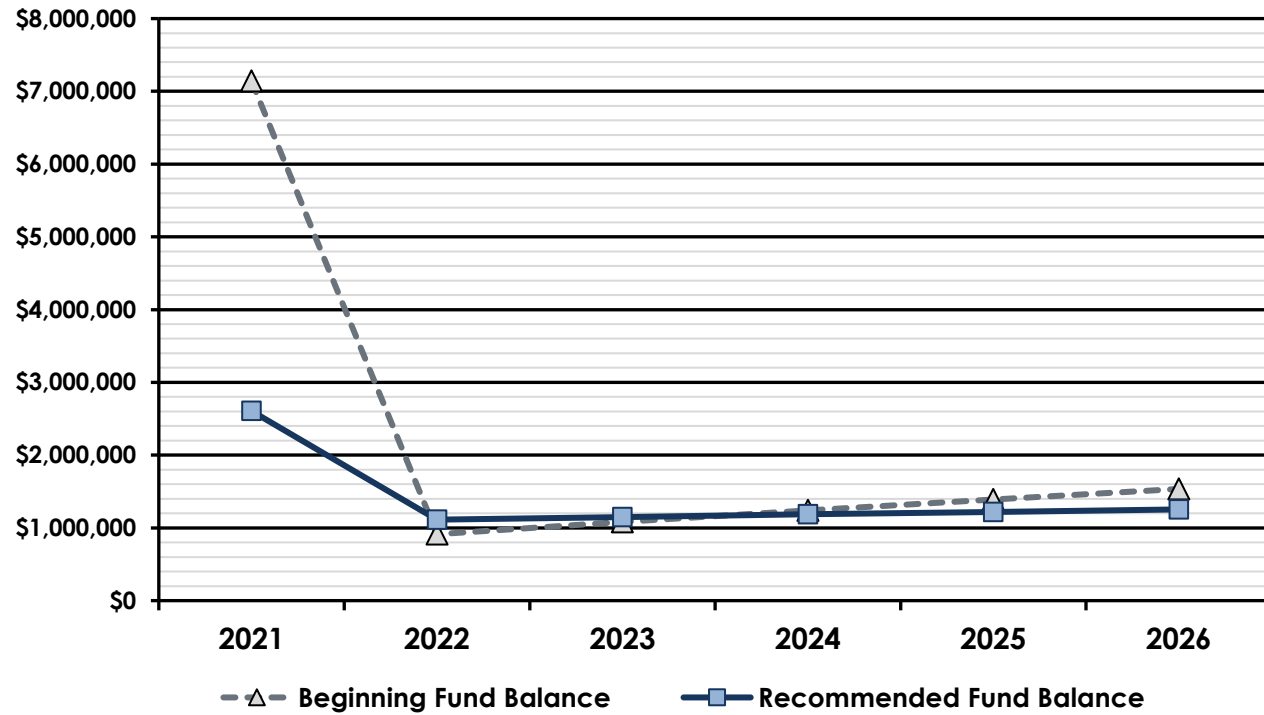
The following figure shows total district revenue, expense, and the net effect on beginning fund balance. When expense in any one year exceeds available revenue, there is a net operating loss that must be made up by the use of the fund balance, thus reducing available beginning fund balance the following year. Unlike the North Willamette Valley Fire District, the Mid-Willamette Valley Fire District starts with a minimal unrestricted fund balance that is well below prudent levels for sustainment. Reduction of the large \$7.14 million fund balance shown in the composite FY 2021 budget is due in large part to non-recurring expenditures exceeding non-recurring revenues by approximately \$5.1 million and recurring expenditures exceeding recurring revenues by approximately \$1.1 million. This will be driven by the Southwest Polk Fire District expending the remaining restricted bond funds (approximately \$4.9 million of the fund balance) on facilities, apparatus, and equipment, and the Sheridan Fire District's seismic hardening of facilities in excess of its \$2.1 million seismic grant as well as purchasing replacement fire apparatus. Setting the permanent mill levy rate at 1.98 mills provides for a slight net gain in fund balance each year from FY 2022–26.

Figure 144: North Willamette Valley Fire District Revenue, Expense, and Fund Balance Forecast, FY 2022–26



As shown in Figure 145, the Mid-Willamette Valley Fire District beginning fund balance is slightly less than the recommended amount in the first two years of the forecast, after which the fund balance begins to increase slightly above the minimum recommended level. The required permanent millage rate of 1.98 mills to achieve the recommended beginning cash balance is a significant increase over the FY 2021 equivalent millage rate of 1.2204 mills even with relatively conservative forecast increases in Personnel Services, Materials & Services, and Capital replacement. The partners will need to review the financial information in significantly more detail and weigh the benefits of pursuing this option versus the financial burden it will place on taxpayers. This forecast trend suggests that either future expenses would need to be significantly reduced in order to adopt a lower permanent millage rate, or the district would need to consider adopting a lower permanent millage and a future optional adopted millage presented for a vote of district taxpayers. The leadership of the new district would need to monitor the actual trajectory of all these factors to ensure that the new district remains on sound financial footing.

Figure 145: Mid-Willamette Valley Fire District Forecast versus Recommended Beginning Fund Balance, FY 2022–26



Issues & Impacts

The territory to be included in the newly formed fire districts must meet the following requirements:

- It cannot include any territory within a city, unless the governing body of the city adopts a resolution approving the inclusion of that territory.⁴⁴
- It cannot include the territory in another fire protection district, unless the withdrawal of that territory is simultaneous and approved by both districts.⁴⁵
- If any territory to be included in the district is within the boundaries of a forest protection district, the Forestry Department must be consulted before determining what land should or should not be included.
- The territory included must practically be able to receive fire protection from the district.⁴⁶
- It cannot include territory that is within a water supply district authorized to supply its own fire protection.⁴⁷
- It cannot include land within forest protection districts and railroad right-of-ways, unless by consent of owner, or include ocean shore lands.⁴⁸
- Legal analysis and review prior to implementation is highly advised.

⁴⁴ ORS 198.720(1) and ORS 478.010(2)(a).

⁴⁵ ORS 198.720(2).

⁴⁶ ORS 198.720(3).

⁴⁷ ORS 478.010(2)(b).

⁴⁸ Defined by ORS 390.605(2) and ORS 478.010(2)(c d). See ORS 478.010(2) and ORS 478.120 for exceptions concerning forestlands.

Phase III: Establishment of a Contract for Service (IGA) “Willamette Valley Regional Fire Authority” Between the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts.

A “Fire Authority” under a contracted services approach is most often applicable when agencies want to work more closely together but are either not ready or are unable to unify or merge entirely. In Oregon, there is no enabling statute to create a fire authority as a stand-alone governmental agency. This strategy under a contract for service with a “single host agency” framework may hold particular value as a progressive interim phase based on the desire for a fully integrated service delivery model with the preservation of each jurisdiction’s policy board/council authority, local identity, and fiduciary and budgetary authority.

This enhanced agreement results in an Operational Consolidation (ORS 190 agreement) with a “single host agency” under the title of a contractually formed Regional Fire Authority. This type of organization gives each city and district the opportunity to work as essentially one organization yet retain their individual tax rates and capital assets (and liabilities) and determine their desired service levels through a contract for service. If this model is chosen, it is common for an “oversight committee or commission” with proportional representation by each respective Fire District Director to oversee the operation of the combined organization, while each respective Board maintains their ultimate authority to make decisions on behalf of their respective districts.

Figure 146: Phase III Contract for Service Fire Authority

Contract Services	AFD	MFD	DFD	DDF	LFD	NCFD	SFD	SWP	WVFD
Administration	[Arrow]								
Support Services	[Arrow]								
Medical Director	[Arrow]								
Dispatch Services	[Arrow]								
Fire Prevention	[Arrow]								
Fire Investigation	[Arrow]								
Training Academy	[Arrow]								
Operations	[Arrow]								

Under this model, the single host agency will be the employer of record for all paid employees and provide and support an appropriate volunteer workforce to serve all the participating agencies. The host agency will manage, train, equip, and provide all services in accordance with the established contract provisions. See the following figure for a proposed organization chart for the Willamette Valley Regional Fire Authority.

Figure 147: Proposed Willamette Valley Regional Fire Authority Organizational Structure

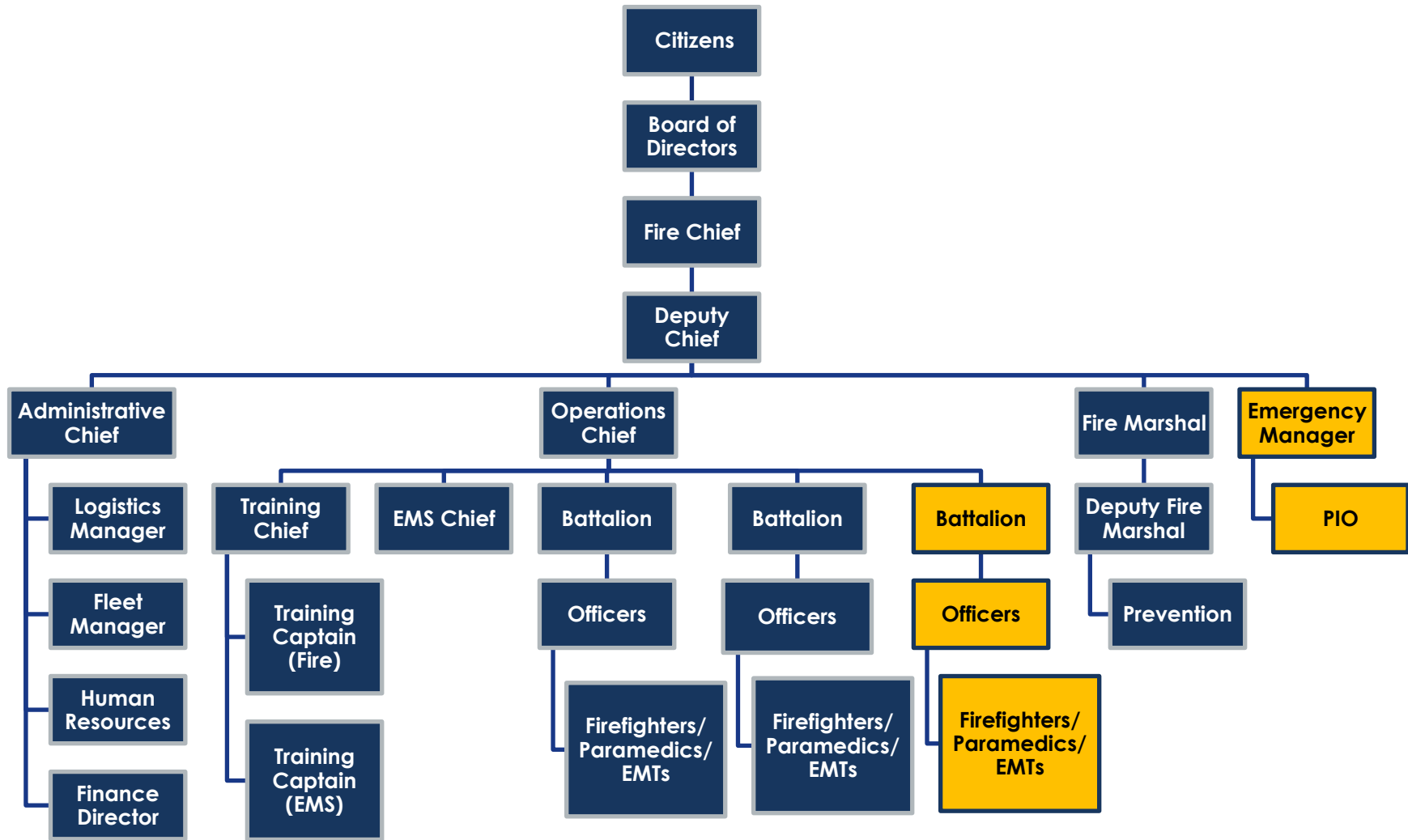
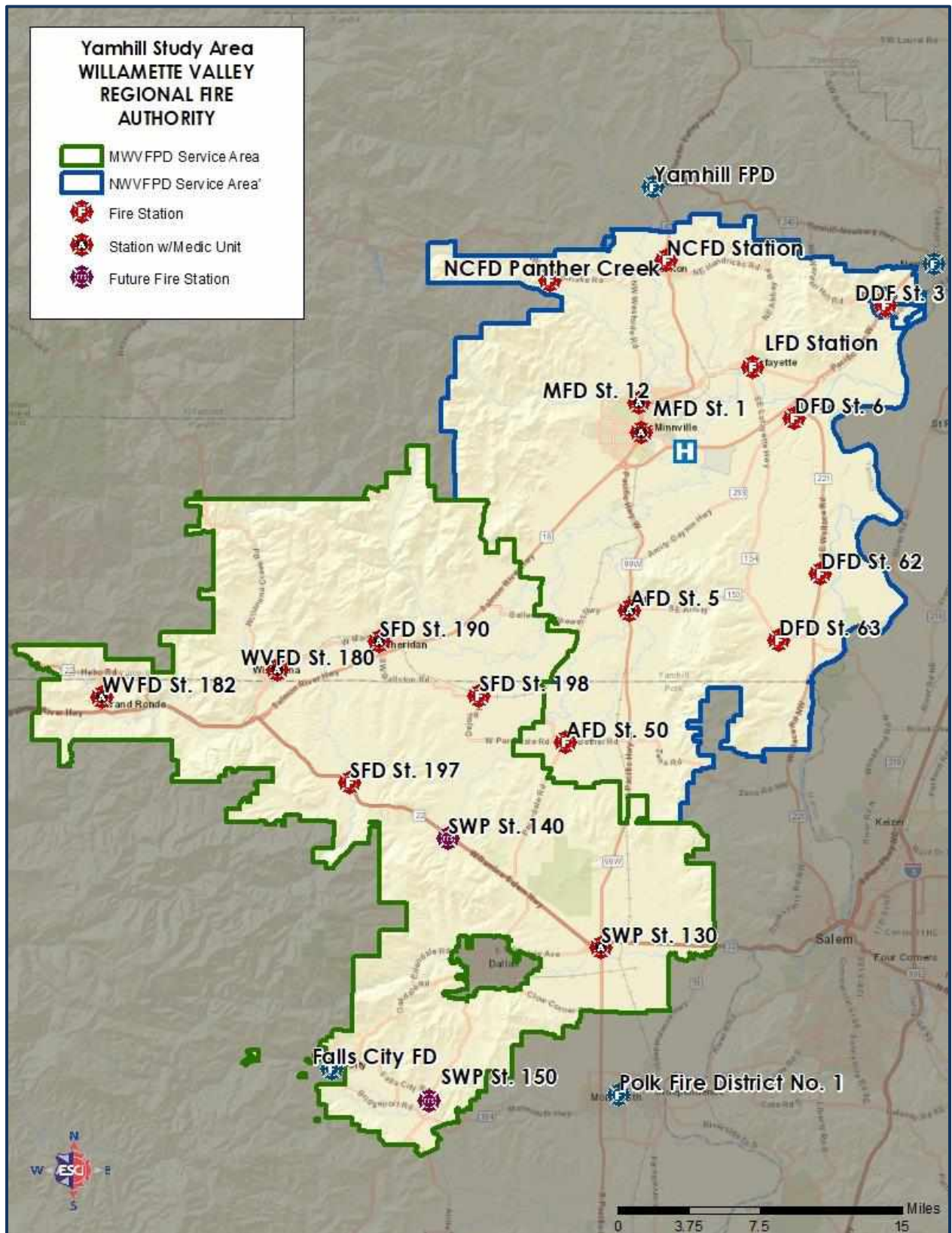


Figure 148: Proposed Willamette Valley Regional Fire Authority Service Area Map



ESCI recommends that each jurisdiction maintain ownership and responsibility for purchasing, replacing, and maintaining fire stations and capital equipment. The single host agency should maintain, operate, and manage the capital assets under the terms and conditions of the established contract for service. Under this arrangement, any agency choosing to withdraw from the fire authority would have its capital assets available to reconstitute local fire protection in a timely manner with minimal service disruption.

The success of this type of model is based on a number of factors; 1) an essential trust relationship between the partner agencies, 2) the thoroughness of the contract agreement, 3) a collaborative approach to the management of the program(s), and 4) community understanding and support. Since the agencies already have a great deal of collaboration history, the foundation has been established.

The approach requires in-depth, multi-level, and multi-functional planning, review, external and internal discussions, collaboration, and agreement among the city councils, district boards, and the administrative staff members of all nine agencies. This strategy does not require public approval at the ballot box but is negotiated between the agencies.

ESCI notes that existing governing bodies are preserved, although the level of unilateral control is decreased. Also, the Fire Chief and management team of the single host agency should report to the oversight committee and regularly update and interact with the individual board and councils on the performance of this new agreement.

Cost Apportionment for a Contract for Service (IGA) Fire Authority

Local governments provide services (such as fire protection) based on an assumption of public interest rather than the need for profitability, as in the private sector. Consequently, the limiting market forces of supply, demand, and price are not typically found at the forefront of policy decisions concerning fire protection. While elected officials may spend significant time and effort debating the overall cost of fire protection, it is very unusual that the point of service price is considered. In this light, it is not surprising that local governments find it difficult to establish a fair market price for essential services when entering into partnerships.

Usually, when a single local government provides fire protection to its residents, that community bears the entire financial burden because of the presumption that everyone benefits from the service. In the case of municipalities, the full cost of the service may not be easily determined because administrative and support expenses are frequently borne by other municipal departments and not documented in the fire department's budget. It all works because individual users of the service are not charged; therefore, the real price of that service is never an issue. On the other hand, when two or more communities share in providing fire protection, elected officials must ensure that each community assumes only its fair *pro rata* share of the cost, thereby fulfilling an obligation to act as stewards to the best interest of their respective constituencies.

However, while purely economic considerations may suggest that those who benefit from a service should pay in direct proportion to the level of benefit (the "benefits received" principle), social and political concerns may also enter into the price-setting process.

Cost Allocation Options

What follows is a listing of system variables that can be used (singly or in combination) to allocate cost between allied fire departments. Each option is summarized by the concept, its advantages and disadvantages, and other factors that should be considered.

Regardless of the option(s) chosen to share the cost of fire protection, the resulting intergovernmental cost sharing agreement needs to address the issues of full cost versus marginal cost and should be clear about the inclusion of administrative or overhead cost. In addition, service contracts often must reconcile the exchange of in-kind services between the participating agencies.

Area

The cost of emergency service can be apportioned based on the geographic area served relative to the whole. For instance, the jurisdictional boundaries of the nine agencies represent about 1,492 square miles. The following figure displays the service area in square miles and the percentage for each jurisdiction.

Figure 149: Cost Allocation by Service Area, 2020

Jurisdiction	Service Area in Square Miles	Percentage of Total
NWVFPD	1,206 Sq Miles	81%
MWVFPF	286 Sq Miles	19%
Total	1,492 Sq Miles	100.00%

Apportionment founded on service area alone may work best in areas that are geographically and developmentally homogeneous.

Pro: Service area is easily calculable from a variety of sources. The size of the service area generally remains constant with few, if any, changes.

Con: Service area does not necessarily equate to greater risk or to greater workload.

Consider: Service area may be combined with other variables (such as assessed value and number of emergencies) to express a compound variable (such as assessed value per square mile and emergencies per square mile).

Assessed Value

The assessed value (AV) of agencies is established by County tax assessors under the laws of the state. Usually, higher-valued structures and complexes carry a greater risk to the community from loss by fire. Consequently, assessed value also tends to approximate the property at risk within an area. Fire departments are charged with being sufficiently prepared to prevent property loss by fire. Therefore, the cost of contracted fire protection may be apportioned relative to the assessed value of the allied jurisdictions. Typically, AV is used to apportion the cost of shared service by applying the percentage of each partner's AV to the whole. The following figure illustrates the allocation of cost by the assessed value of the nine agencies.

Figure 150: Cost Allocation by Assessed Value, FY 2021

Jurisdiction	Assessed Valuation (per \$1,000 AV)	Percentage of Total
NWVFPD	5,477,561,384	79%
MWVFPD	1,469,139,379	21%
Total	6,946,700,763	100%

Pro: AV is updated regularly, helping to ensure that adjustments for changes relative to new construction, annexation, and inflation are included. Because a third party (the assessor) establishes AV in accordance with state law, it is generally viewed as an impartial and fair measurement for cost apportionment. Fire protection is typically considered a property-related service; thus, an apportionment tied directly to property value has merit.

Con: AV may not reflect the property risk associated with certain exempt properties, such as schools, universities, government facilities, churches, and institutions. AV may not always represent the life risk of certain properties, such as nursing homes or places of assembly, which might dictate more significant use of resources. In addition, some large facilities may seek economic development incentives through AV exemptions or reductions. Adjustments may need to be made to AV if such large tracts of exempt property in one jurisdiction cause an imbalance in the calculation. Last, AV typically includes the value of land, which is not usually at risk of loss by fire.

Consider: Discounted AV depending on the class of property (commercial or residential), which may skew the overall proportion of those properties compared to risk. As an additional consideration, assessors usually establish the AV in accord with the property tax cycle, which can lag somewhat behind the budget cycle.

Deployment

The cost of services is based on the cost of meeting specific deployment goals. Deployment goals may be tied to the physical location of fire stations, equipment, and personnel (strategic deployment) or by stating the desired outcome of deployment (standards of cover). A strategic goal could specify the location of two stations, two engines, and four on-duty firefighters. A standard of cover might state the desired outcome as two engine companies and four emergency workers on the scene of all structure fire emergencies within 8 minutes, 90% of the time. While both strategic and outcome goals can be used effectively to assist in allocating cost, ESCI views outcome goals to be more dynamically linked to the quality of service and, therefore, preferable to strategic goals. This alternative is highly variable due to the independent desires of each community in regard to outcome goals.

A weighted scoring system uses a critical task analysis. This type of scoring system for each agency allows the ranking of each area based on the assigned risk as well as the apparatus, required workforce, and Needed Fire Flow (NFF).

The following figure illustrates the allocation of cost by the number of resources deployed to serve each jurisdiction, including fire stations, frontline engines, and ladder trucks.

Figure 151: Cost Allocation by Resource Deployment, 2020

Jurisdiction	Facilities	Engines & Aerials	Total	Percentage of Total
NWVFPD	11	19	30	65%
MWVFPD	6	10	16	35%
Total	17	29	46	100.00%

Pro: Deployment is intuitively linked to the level of service. The outcome of deployment based on a standard of cover can be monitored continuously to ensure compliance. Such deployment can be adjusted if standards are not met. This ensures the continuous quality of emergency response throughout the life of a service contract.

Con: Strategic deployment may not equate to better service because such goals are prone to manipulation wherein resources may be sited more for political reasons and less for quality of service reasons. Outcome goals require common reporting points and the automatic time capture of dispatch and response activities to ensure accuracy. Record keeping needs to be meticulous to ensure the accurate interpretation of emergency response outcomes.

Consider: Contracts for deployment-based fire protection should address the inclusion of administrative or overhead cost, as well as capital asset cost, depreciation, rent, and liability insurance.

Service Demand

Service demand may be used as an expression of the workload of a fire department or geographical area. Cost allocation based on emergencies would consider the total emergency response of the service area and apportion system cost relative to the percentage of emergencies occurring in the jurisdictions.

Figure 152: Cost Allocation by Service Demand

Jurisdiction	2019 Service Demand	Percentage of Total
NWVFPD	9,947	76%
MWVFPD	3,176	24%
Total	13,123	100.00%

Pro: Easily expressed and understood. Changes in the workload over the long term tend to mirror the amount of human activity (such as commerce, transportation, and recreation) in the corresponding area.

Con: Emergency response fluctuates from year to year depending on environmental and other factors not directly related to risk, which can cause the dependent allocation to fluctuate as well. Further, the number of alarms may not be representative of actual workload, for example, one large emergency event requiring many emergency workers and lasting many hours or days versus another response lasting only minutes and resulting in no actual work. Last, emergency response is open to (intentional and/or unintentional) manipulation by selectively downgrading minor responses, by responding off the air, or by the use of mutual aid. Unintentional skewing of response is most often found in fire systems where dispatch and radio procedures are imprecisely followed. Further, service demand does not follow a predetermined ratio to land area. As such, the service demand per square mile ratios may produce large variations.

Consider: Using a rolling average of alarms over several years can help to suppress the normal tendency for the year-to-year fluctuation of emergencies. Combining the number of emergencies with the number of emergency units and/or personnel required may help to align alarms with the actual workload more closely. However, doing so adds to the complexity of documentation. In a similar manner (and if accurate documentation is maintained), the agencies could consider using the total time required on emergencies as an aid to establish the comparative workload represented by each jurisdictional area.

Estimated Timeline for Completion

The completion timeline for this strategy is reduced due to the familiarity each agency has with the other and the collaborative working relationships that are already in place. As the participating agencies continue to operate under the expanded Phase I IGAs, they can implement a planning process and work on integrating operations, administration, policies, procedures, and identifying local and system needs that will need to be addressed under a contract for service fire authority. However, new issues may arise from the planning process, so the planning should not be cut short due to presumed familiarity. If trust is high and conflicts minimal, this strategy could be accomplished in as little as 6 months.

Affected Functions

Administration (including HR, Legal, and Finance), Fire Prevention, Training, and Operations.

Affected Stakeholders

While all agency members are affected in some manner, the fire district board members, council members, and agency staff members within the affected sections will realize the most significant impacts.

Summary/Objective of Strategy

The objective should be a seamless integration of all administrative and operations across the nine jurisdictions by means of an Intergovernmental Cooperation Agreement, as provided for under ORS 190.

ESCI Guidance

The nine organizations face similar challenges, given the current conditions. While the listed areas for unification are duplicative in many instances, how those areas operate in each agency may vary significantly with the other agencies due to differing demographics, geography, and organizational and community culture.

In preparation for such a direction, the current Fire Chiefs must establish and conduct regular joint meetings for the purpose of establishing the parameters of the functional unification. This includes a workload analysis to ensure the greatest effectiveness while maintaining proper balance. ESCI recommends that the Fire Chiefs convene an ad hoc steering committee for the purpose of developing proposed common policies, performance standards, and functional plans.

As the existing contracted services expand into all functional and operational areas, the degree of collaboration between the chiefs is escalated substantially. Operational guidelines, dispatch procedures, and many additional factors will need to be compared and brought under a single, fully integrated operational strategy and implementation plan.

Based on ESCI's evaluation of current conditions, administrative and operational capabilities, it is recommended that the North Willamette Valley Fire Protection District serve as the host contracting agency for this IGA Fire Authority.

Policy Actions

The fire district boards and city councils will need to identify a "single host agency" and authorize the development of an Intergovernmental Agreement, approve the agreement, and provide the resources to implement the comprehensive fire authority cooperative agreement.

Fiscal Analysis

Financial analysis for Phase III should be modeled after the Phase I jurisdictional IGA agreement and cost-sharing methodology. The total to be paid by each participating fire district under the IGA will be in accordance with a cost allocation strategy adopted and utilizing one or more of the approaches discussed above. The methodology should be developed by a study committee and agreed upon by the boards of both districts. The districts should evaluate the potential for cost savings and then compare to existing costs for each district. Savings should be shared across the districts, proportionate to their share of the current total cost based upon the allocation methodology ultimately agreed upon.

The following figure provides a template, similar to the Phase I template, for the North Willamette Valley and Mid-Willamette Valley fire districts to use which will examine how the existing costs could be collected and then compared against Phase II costs for the same services at whatever point in the Phase II timeline the districts wish to study this option.

Support services would be defined and could include all Personnel Services (full or fractional FTE providing that service) and associated Materials & Services costs. The support services area could be further broken down into specific areas such as Administrative Support, Budget & Finance, IT, HR, Legal, Audit, Facility & Apparatus Maintenance, and others as needed. The degree to which the template is expanded or contracted would be based upon the level to which the districts agreed to share services. The % Contribution from each agency to the total cost of the service identified would be decided using one of the factors discussed previously in this section, or a composite of several of those factors such as population, service area, call volume, resources, etc.

Figure 153: Financial Analysis Template for Shared Services IGA

Fiscal Year 2020–21	North Willamette Valley Fire District		Mid-Willamette Valley Fire District		TOTAL	
	Cost	FTE	Cost	FTE	Cost	FTE
% CONTRIBUTION						
Support Services						
<i>Administrative</i>						
<i>Budget/Finance</i>						
<i>IT</i>						
<i>HR</i>						
<i>Facilities</i>						
<i>Fleet</i>						
Medical Director						
Dispatch Services						
Fire Prevention						
Fire Investigation						
Training						
Current Total						
Phase I Total						
Cost Savings/Increase						

Issues & Impacts

- No permanent organizational restructuring commitment is made since this is a contract.
- All final decision-making power relating to capital equipment, tax rates, revenue, liabilities, and service levels remains with individual fire districts.
- Requires a collaborative approach to the management of the program(s) between the two fire district policy boards.
- Does not require public approval at the ballot box.
- The two existing governing boards and their separate authority are preserved.
- Administrative leaders can be pulled in multiple directions serving multiple masters.
- No new FTEs are required, and the process may free up existing FTEs for reassignment.
- Requires blending rules, regulations, and operating procedures.
- Efficiency in administration is gained by eliminating duplication or reassigning duplicate resources.
- Efficiencies gained in fleet maintenance, fire prevention, and training.

Phase IV: Legal Integration of the North Willamette Valley and Mid-Willamette Valley Fire Districts into the Willamette Valley Regional Fire Protection District.

As stated previously in this report, under Oregon law (ORS 190, 198, and 478), a fire district may take proactive measures to merge multiple fire districts into one common existing fire district. In addition, an existing fire district, through the process of annexation, may overlay its boundaries over another district or incorporated city for the purposes of providing fire protection. This must be accomplished by first identifying a surviving district (merger agency) that will serve as the fire district of record after necessary voter approval.

Figure 154: Phase IV Merger of North Willamette Valley and Mid-Willamette Valley Fire Protection Districts into the Willamette Valley Regional Fire Protection District









Consolidated FPD	Willamette Valley Regional Fire Protection District
Administration	
Support Services	
Medical Director	
Dispatch Services	
Fire Prevention	
Fire Investigation	
Training Academy	
Operations	

Figure 155: Proposed Willamette Valley Regional Fire Protection District Organizational Structure

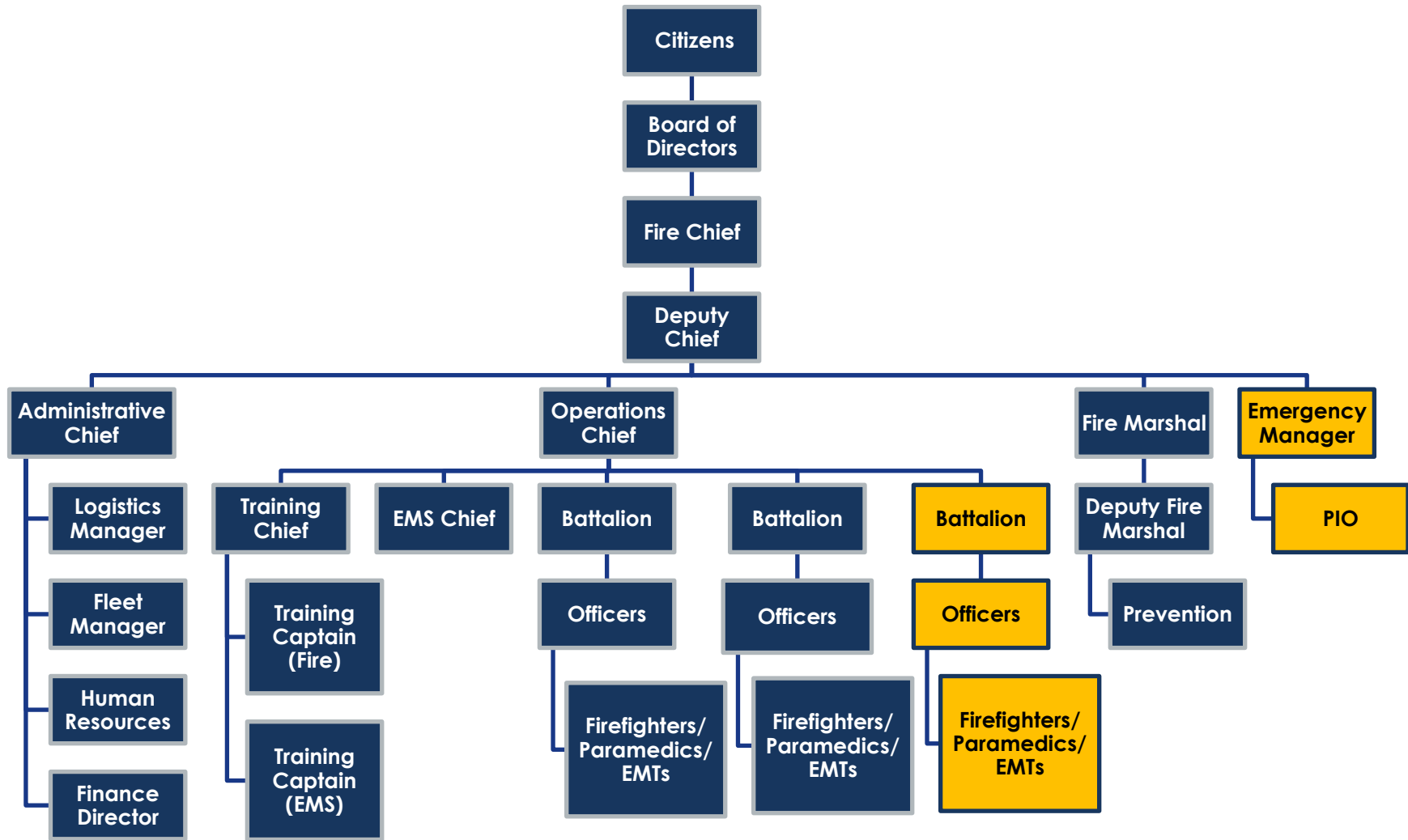
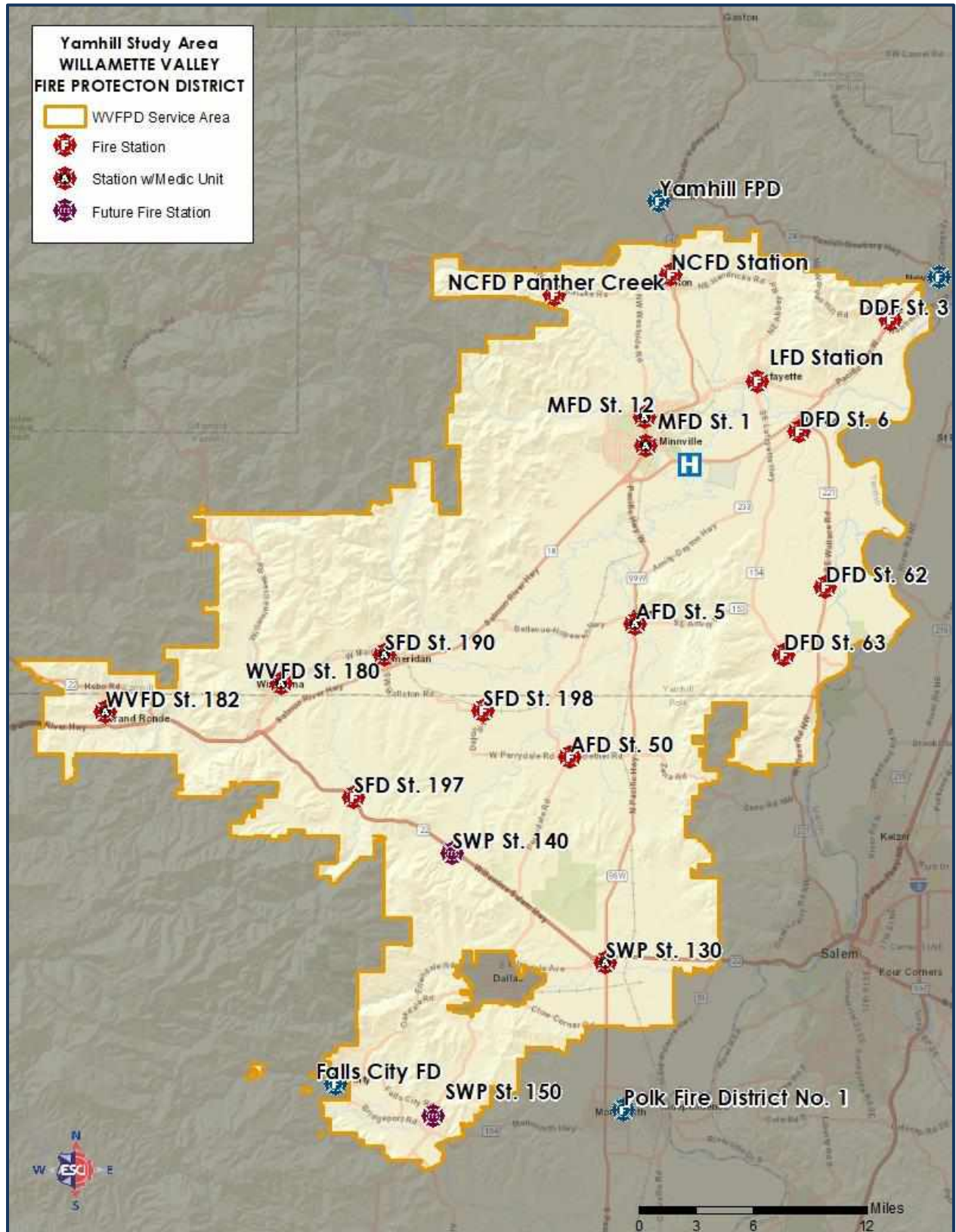


Figure 156: Proposed Willamette Valley Regional Fire Protection District Service Area Map



Level of Cooperation

Merging and annexing the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts into one fire district is essentially a permanent integration between those agencies. From the time a merger/annexation is approved, the surviving fire district will have permanent responsibility for the provision of fire and EMS services to the fire district service areas served by the North Willamette Valley and Mid-Willamette Valley Fire Protection Districts. Merging/annexing the North Willamette Valley and Mid-Willamette Valley FPD's will require separate elections in each jurisdiction, that can run concurrently, to join the surviving district or newly named fire district. In the case of the existing fire districts, the vote to merge would dissolve their existing district and merge into the surviving fire district. The cities must vote to be annexed into the surviving fire district. For each action of dissolving and or joining the surviving fire district, each jurisdiction must pass the fire district merger/annexation initiative with a simple majority as required by state statute.

By contrast, contractual consolidations, while providing a great deal of flexibility, can be terminated or reversed by the joint action of the parties, by the expiration of the term of the contract, or by the unilateral action of one of the parties to the contract if the contract so provides.⁴⁹

Mergers/annexations must be coordinated between all the participating agencies and begins with the city councils and the merging districts' boards approving of an ordinance or policy directive recognizing the petition of the agencies to merge with or annex into the surviving district. The issue then goes through the annexation process for the cities and merger proceedings for districts and then to the county elections office for inclusion in a planned or special election ballot as determined by the participating agencies.

Once the merger is approved by the voters, and upon implementation of the ballot measure, all issues related to the provision of providing fire services are the responsibility of the surviving fire district. The existing city councils and former fire district boards have no control or authority over the fiduciary management, administration, or operation of the host fire district. The district's elected board members will assume fiduciary and policy level control for the provision of fire services in the surviving fire district service area.

⁴⁹ *Fire Service Consolidations*, page 11. Snure Seminars Handbook, Brian K. Snure, author. Snure Law Office, PSC 612 S. 227th St. Des Moines, WA 98198-6836. Copyright © 2011.

Estimated Timeline for Completion

The timeline for this process varies depending upon the initiation of the process in relation to special election cycles. However, this process can be completed in two to three years.

Affected Stakeholders

The citizens of each existing fire protection district are affected by this strategy. Perhaps the least impacted are the residents within the existing boundary within the surviving fire district.

Summary/Objective of Strategy

This strategy combines the North Willamette Valley and Mid-Willamette Valley FPD's into a designated survivor fire district. The remaining fire district will dissolve (merging district) and merge with the surviving fire district (merger district). From an operational standpoint, the surviving (merger) district serves the entire jurisdiction. From a governance standpoint, the board make-up may change if the board expands its membership to provide the opportunity for the merging district to have representation on the (merger) surviving district board. The (merger) surviving fire district board will function in accordance with Oregon fire district law to provide oversight, policy development, and fiduciary functions.

ESCI Guidance

Informal discussion between the two fire districts is necessary to determine the level of willingness to consider the implementation of this strategy. Assuming the parties agree to pursue this strategy, it would be wise to obtain legal counsel to develop an annexation and district merger checklist of actions and activities needed to bring the issue of annexation and fire district merger before the voters. It will also be necessary to communicate with existing constituencies, both internal and external, on the value and benefits of pursuing this option.

Transfer of personnel from the existing district to the new district is outlined in statute. These statutory provisions should be reviewed in detail by both districts and respective labor organizations prior to the initiation of annexation proceedings to ensure that the rights of all parties will be protected. Buy-in by employees (whether compensated or volunteer) regarding the transfers, wages, benefits, and working conditions is critical to successful integration, whether statutorily required or not. This can be a key element to obtaining support from the larger communities in the case of annexation and fire district mergers.

Policy Actions

ESCI's review and discussion of Oregon's State Law on this topic have been necessarily brief, only sufficient to ensure that basic provisions for the annexation/merger to a (merged) survivor fire district exist. As always, we emphasize that we are not qualified to give legal advice. We recommend that two districts consult with legal counsel experienced in such matters before undertaking this strategy.

The following steps are general guidelines provided by the State of Oregon to follow in the initial attempt to form a fire protection district through the merger and annexation process.⁵⁰ Although the law does not require the following steps in this section, they are recommended as a good basis for creating interest and support in the merger and annexation into a merged fire district.

Formation of a Stakeholder Committee

Include proportional representation from each participating district, including senior fire administration and budget and finance personnel. Even in this earliest stage, the committee would find the assistance of an attorney familiar with special district formation and election law invaluable.

The committee should establish the sources of financial support and responsibility for initiating the formation as early as possible. Costs will include, but may not be limited to, obtaining a bond to accompany the formation petition, possible election costs, and printing. These costs are refundable only if the district is ultimately formed. Whoever provides the money must carry the loss if the district is not merged/annexed.

Develop a Fire District Formation Petition

In developing the petition for formation, the committee should determine the following:

- The probable area to be served (rough boundaries should be established).
- The estimated assessed valuation of the area to be served.
- The estimated potential revenue that could be derived from an identified tax rate.
- The enhanced level of protection that will be provided by a reasonable tax.
- The possibility of merger and or annexation to an existing district.
- A plan of how to fund the surviving (merged) district (both operational and capital costs).

⁵⁰ Oregon Department of Revenue, *Boundary Change Information*, pamphlet 150-504-405, 12/10.

Economic Feasibility Statement

ORS 198.749 requires that an economic feasibility study be conducted by those people designated as chief petitioners/planning committee (professional help is suggested). It must include:

- A description of the services and functions to be performed or provided.
- An analysis of the relationships between those functions or services and existing or needed services.
- A proposed first-year line-item operating budget and a projected third-year line-item operating budget that demonstrate the feasibility of the proposed permanent tax rate required under ORS 198.750(1).

This statement shall form the basis for the proposed permanent tax rate limit for operating taxes. It is difficult to pass an operating tax levy, as such votes are limited to biennial primary elections (at which the 50/50 requirements must be met) and general elections. Although the 50/50 requirements do not apply to general elections, the competition for approval is steep, as voters will probably also be asked to approve many other formations and local option levies at that time.

Develop Promotional Materials and Standardized Presentations

Promotional materials, such as handouts and standardized presentations and talking points, should be developed and distributed as widely as possible. Special attention should be paid to making all property owners within the proposed districts and annexed cities aware of the proposal. The material should:

- Discuss the proposal.
- Outline the proposed boundaries of the district.
- Briefly describe the benefits and announce the time and place of a public meeting held to discuss the proposal.

Conduct Community Outreach to Each Participating Community

At public meetings and local civic and community groups, the committee should gauge and evaluate community interest. It should also:

- Present its recommendations.
- Present and review the merger annexation proposal utilizing knowledgeable people, such as an attorney, or a representative of the fire districts, or another subject matter expert.
- Review the estimates for initial outlay and continuing costs for the proposed level of protection.
- Present local municipal or fire district officials from within the merging and annexing jurisdictions to voice their support and benefits of the merged fire districts.
- After the time has been given to answer questions from the attendees, those attending should be polled to determine if there is enough support to petition the county board on the matter of formation. With sufficient interest in the measure, the committee should begin the process of performing the next steps to conduct a merger and annexation into the (merged), surviving fire district.

Fiscal Analysis

The purpose of this financial analysis is to provide a very high-level assessment of the financial feasibility of strategy Phase IV: Merger of North Willamette Valley and Mid-Willamette Valley Fire Districts into One Fire District. The estimates and analysis presented are dependent on the outlined assumptions, similar to those used in Phase II, which are subject to change depending on actual factors that influence revenue and expense. Key assumptions used in the assessment are followed by high-level estimates of revenue, expense and the impact of net gain or loss on beginning fund balance over a five-year period.

It is anticipated that this phase will follow Phase II and Phase III and will thus build on the earlier financial forecasts for the North Willamette Valley and Mid-Willamette Valley Fire Districts outlined previously in Phase II. Since assumptions beyond five years are highly likely to change significantly, it is assumed for this forecast that the parties enter Phase IV in FY 2024. Therefore, the FY 2024 figures used in the two-district forecast found previously in Phase II serve as the basis for this five-year forecast for internal consistency. This forecast should be used with a great deal of caution since assumptions may change considerably over the next five years. This section concludes with a summary of the financial considerations associated with the merger/annexation strategy.

As in Phase II, the Phase IV fiscal analysis begins with a comparison of financial resources and expenses of the North Willamette Valley and Mid-Willamette Valley Fire Districts and starts with the FY 2024 forecast of the respective districts. The Phase IV model which follows uses the projected 1.5 mill permanent rate for the North Willamette Valley District. The following figure compares estimates for each district from the FY 2024 forecast in the first two columns and then shows what a combined district would look like in FY 2024 in the final column. The respective operating millage rates are the recommended five-year permanent millage rates for the two new districts as if they were enacted in FY 2022, while debt service millage rates are shown in a subsequent row of the figure. The permanent rate for North Willamette Valley is 1.5 mills, and the debt service rate is 0.1642 mills for a total millage rate of 1.6642. Rates for Mid-Willamette are 1.98 mills and 0.2846 mills, respectively, for a total millage rate of 2.2646.

If the districts were combined in FY 2024 and assuming no changes, the equivalent operating millage rate would be 1.6015 mills, while the combined debt service rate would be 0.1897 mills. The rows shown as “Millage Change” indicate either a reduction (shown in parentheses) or an increase over the FY 2024 forecast equivalent millage rates for the separate districts if they were to combine as one district in FY 2024. The forecast total millage rate for the North Willamette Valley taxpayers would increase from 1.6642 to 1.8166 or 0.1523 mills, while the Mid-Willamette Valley taxpayers would see a decrease of 0.4734 mills from 2.2646 down to 1.7912.

Figure 157: Forecast Taxable Assessed Values for North Willamette Valley and Mid-Willamette Valley Fire Districts vs. Combined Values and Rates, FY 2024

Item	District Protection District		
	North Willamette Valley	Mid-Willamette Valley	Total
FY 2024 Estimated TV	6,197,127,195	1,662,134,472	7,859,261,667
Operating Support	9,295,691	3,291,026	12,586,717
Operating Millage	1.5000	1.9800	1.6015
Oper Millage Change	0.1015	(0.3785)	-
Debt Service Support	1,017,716	473,000	1,490,716
Debt Service Millage	0.1642	0.2846	0.1897
DS Millage Change	0.0255	(0.0949)	-

Key Assumptions—Revenue

Key assumptions used in developing the revenue estimates under the single district consolidation strategy of Phase IV are the same as those for Phase II and include:

- A single district permanent tax rate that produces the amount of revenue necessary to provide personnel, materials and services, capital equipment, and apparatus replacement as well as average annual building capital costs and a 20% beginning fund balance (or as close as possible) based upon total annual expenditures.
- The forecast assumes that the district's total assessed taxable value will increase annually at the same historical rate of 4.2% observed for all of Yamhill County. Further, it is assumed that prior year taxes will increase at the same rate using the FY 2024 total amount as the base.
- The debt service tax rate is based upon the amount of revenue necessary each year to fund the combined debt service, which is assumed to be spread across all taxpayers for the newly created district. The millage rate is only sufficient to generate enough revenue to service each year's debt in the model. The known debt service amounts through FY 2026 are continued through at the same amount to FY 2029 in the model. It is understood that the assumption to spread total debt across all agencies will be the subject of negotiations and may not ultimately be adopted by the parties.
- Interest earnings are forecast to increase at 1% annually using the FY 2024 total as the base amount.
- Charges for services are forecast to rise at 1% annually.
- Other revenues are forecast to increase at 1.2% annually.
- Non-recurring revenues in each category represent a historical average for all partners in the two districts and are not forecast to increase.
- Under the consolidation, a beginning balance of \$5.5 million in FY 2024 is used as both a 20% operating reserve and to cover the difference between revenue and expense. The remaining unrestricted fund balance, if applicable, could be utilized for expenses incurred to dissolve the two current districts and pay down debt as well as fund capital replacement needs.

Key Assumptions—Expenses

Key assumptions used in developing the expenditure estimates under the Phase IV consolidation model are also the same as those used for Phase II. Personnel and Materials & Services represent the largest and primary sources of recurring expenditures for the two districts. Since the non-recurring capital facilities and equipment/apparatus replacement amounts have been averaged historically and combined, they are considered recurring in nature, realizing that the actual amounts may be higher or lower year-to-year. Expenditure assumptions include:

- While it is anticipated that there will be some economies of scale for Personnel Services, the forecast assumes an average annual increase of 6% throughout the forecast period. This will allow some limited growth in staffing and improvements in service level but does still significantly impact the permanent millage rate required for sustainment. The benefits of additional staff will need to be weighed against the impact of raising the permanent millage rate.
- This forecast also assumes a reduction in Materials & Services expenses for the first year followed by a reasonable materials growth rate of 3% annually starting in year two, which is anticipated to track the Western Region CPI-U.
- The forecast does not envision any expenditures for land, which may change if the committee decides to relocate existing or build new stations based upon the analysis of service demand.
- Capital expenditures for buildings in the forecast are based upon the historical average for all partners in each respective Phase II district. This assumption may be high or low depending upon the degree to which major renovation and repair may be required for existing fire stations. Further, this annual average has been increased each year of the forecast period by 4.5% based upon a study of construction industry costs, as previously discussed.
- Equipment and Apparatus replacement costs in the forecast are also based upon the composite historical average annual expenditure of the partners in Phase II. An annual inflation factor of 3% is applied to equipment, and 4% is applied to apparatus.

Forecast Results

Summaries of the Phase IV single district revenue and expense projections are shown in the following figures. The FY 2024 figures represent the composite of the respective partners, as discussed previously, with FY 2025 being the first year of the new district's financial forecast. Beginning in FY 2025, property tax revenue represents approximately 68.8% of total operating revenue, including non-recurring sources, with a net working capital/beginning fund balance of \$5.63 million. Between FY 2025 and FY 2029, total operating revenue increases at an average annual rate of approximately 2.3%, reflecting a conservative growth in revenues.

Figure 158: Willamette Valley Regional Fire Authority Resource Forecast, FY 2024–29

Resources	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast
Taxes—Current Year ¹	14,077,433	15,978,207	16,072,721	16,699,918	17,353,459	18,034,447
Taxes—Prior Year	90,437	94,235	98,193	102,317	106,615	111,092
Interest/Earnings	184,939	186,788	188,656	190,543	192,448	194,373
Charges for Services ²	5,642,959	5,699,388	5,756,382	5,813,946	5,872,085	5,930,806
Other ⁵	391,772	396,473	401,231	406,046	410,918	415,849
Recurring Revenue	20,387,540	22,355,092	22,517,183	23,212,770	23,935,525	24,686,568
Grants	47,300	47,300	47,300	47,300	47,300	47,300
Sale of Surplus	12,400	12,400	12,400	12,400	12,400	12,400
Reimb/Conflagration ⁶	495,000	495,000	495,000	495,000	495,000	495,000
Miscellaneous	217,600	217,600	217,600	217,600	217,600	217,600
Non-Recurring Revenue	772,300	772,300	772,300	772,300	772,300	772,300
Beginning Fund Balance	5,527,205	5,631,757	6,674,867	7,330,856	7,567,769	7,351,415
TOTAL RESOURCES:	26,687,045	28,759,149	29,964,350	31,315,926	32,275,594	32,810,283

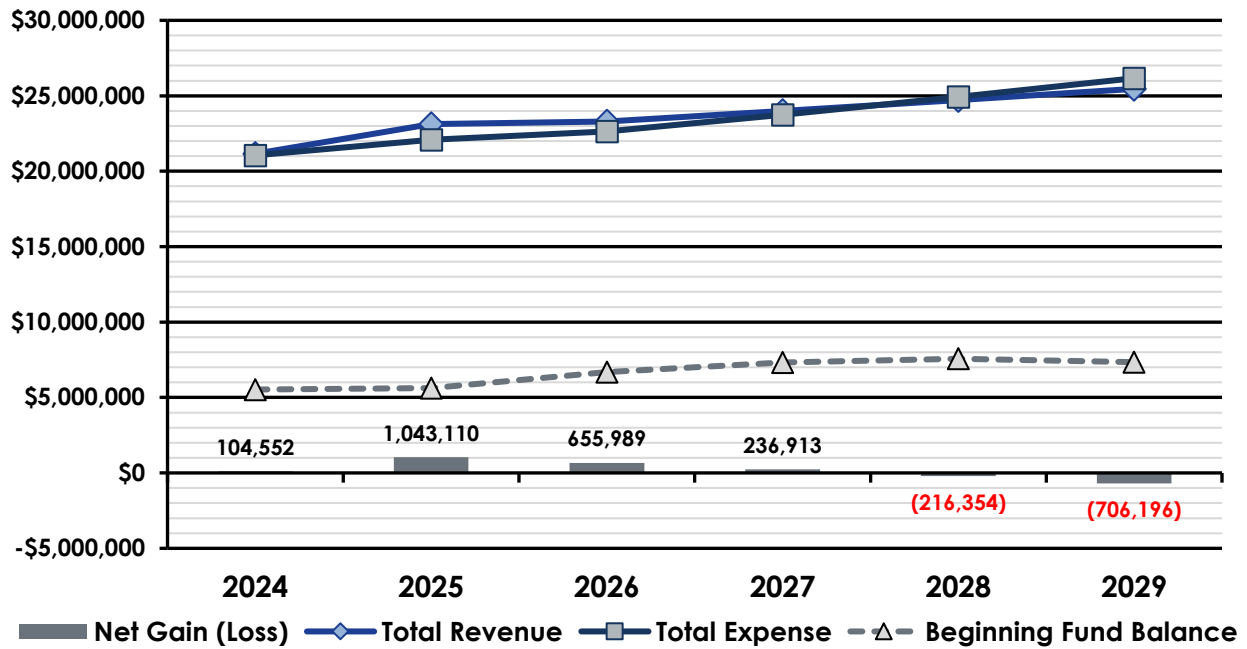
Figure 159: Willamette Valley Regional Fire Authority Expenditure Forecast, FY 2024–29

Expense	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast
Personnel Services	13,492,149	14,301,678	15,159,778	16,069,365	17,033,527	18,055,539
Materials & Services	4,423,204	4,423,204	4,555,900	4,692,577	4,833,355	4,978,355
Debt Service	1,490,716	1,646,844	1,139,440	1,139,440	1,139,440	1,139,440
Recurring Expense	19,406,069	20,371,725	20,855,118	21,901,382	23,006,321	24,173,333
Land	0	0	0	0	0	0
Buildings	358,198	374,317	391,162	408,764	427,158	446,380
Equipment	442,220	455,487	469,151	483,226	497,723	512,654
Apparatus	848,801	882,753	918,063	954,785	992,977	1,032,696
Non-Recur. Expense	1,649,219	1,712,557	1,778,376	1,846,775	1,917,858	1,991,730
TOTAL EXPENSES:	21,055,288	22,084,282	22,633,494	23,748,157	24,924,179	26,165,064

As shown above, the annual growth rate in operating expenses for the fire authority is expected to be relatively conservative due to reductions in redundancy and economies of scale. Personnel Services costs could expect to grow at 6% year over year, while Materials & Services grow at a rate of 3%, as discussed in the forecast assumptions. Using historical average costs for various capital line items allows the districts to better estimate the required permanent tax levy while providing the necessary funding for equipment and apparatus replacement, realizing that actual expenses may vary year-to-year based upon capital replacement plans.

The following figure shows total revenue, expense, and the net effect on the new fire authority's beginning fund balance. When expense in any one year exceeds available revenue, there is a net operating loss that must be made up using the fund balance, thus reducing available beginning fund balance the following year. Setting the permanent mill levy rate at 1.75 mills provides for a net gain in fund balance through FY 2027, after which expense increasingly begins to exceed revenues causing a reduction in fund balance, which is still significantly above the recommended minimum by \$6.8 million in FY 2029.

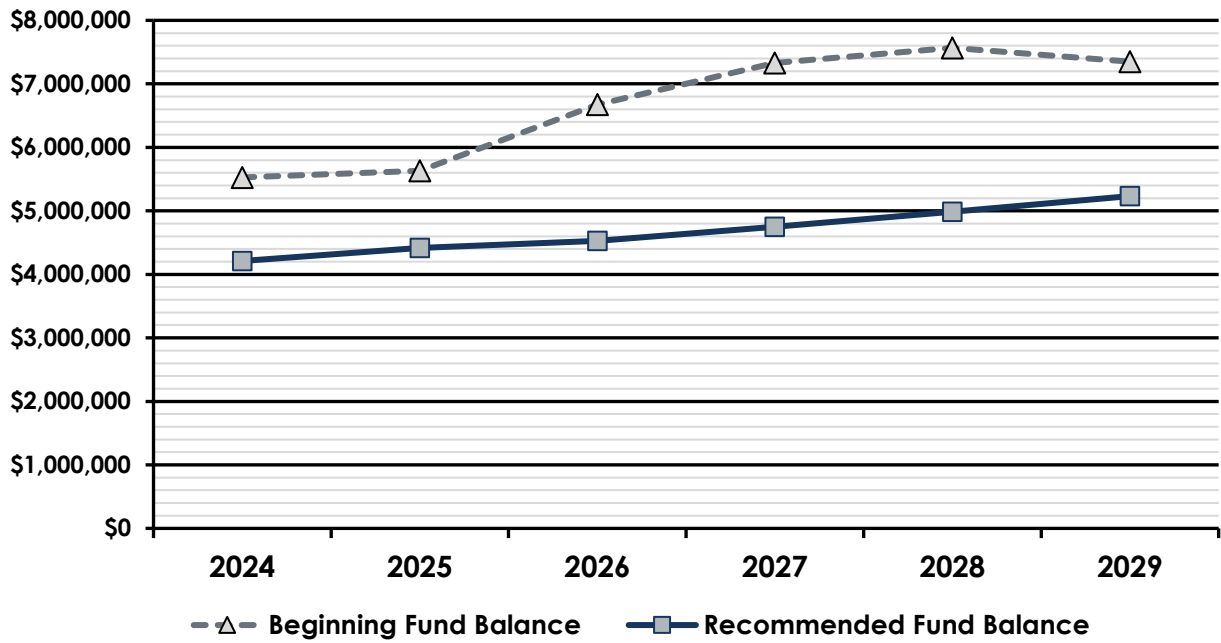
Figure 160: Willamette Valley Regional Fire Authority Revenue, Expense, and Fund Balance Forecast, FY 2024–29



As discussed in Phase II, the Government Financial Officers Association (GFOA) recommends that governments maintain at least two months or just under 17% of operating revenues or expenditures at a minimum depending upon fiscal year and timing of tax revenue collection and cash flow. A slightly more conservative 20% is recommended as the target for the fire authority. The following figure shows the impact of the forecast permanent millage rate on the Willamette Valley Regional Fire Authority beginning fund balance versus the 20% recommended beginning fund balance.

As shown in Figure 161, the Willamette Valley Regional Fire Authority beginning fund balance is maintained above the recommended amount throughout the forecast. However, fund balance begins to fall in FY 2029 as expenses outpace the rise in revenue and fund balance must make up the difference. This trend suggests that either future expenses would need to be reduced or the authority would need to consider an optional adopted millage presented for a vote of district taxpayers. The leadership of the new authority would need to monitor the actual trajectory of all these factors to ensure that the new, single district remains on sound financial footing.

Figure 161: Willamette Valley Regional Fire Authority Forecast versus Recommended Beginning Fund Balance, FY 2024–29



Issues & Impacts

The territory to be included in the merged/annexed district must meet the following requirements:

- It cannot include any territory within a city unless the governing body of the city adopts a resolution approving the inclusion of that territory.⁵¹
- It cannot include the territory in another fire protection district unless the withdrawal of that territory is simultaneous and approved by both districts.⁵²
- If any territory to be included in the district is within the boundaries of a forest protection district, the Forestry Department must be consulted before determining what land should or should not be included.
- The territory included must practically be able to receive fire protection from the district.⁵³
- It cannot include territory that is within a water supply district authorized to supply its own fire protection.⁵⁴
- It cannot include land within forest protection districts and railroad rights-of-ways, unless by consent of owner, or include ocean shore lands.⁵⁵

⁵¹ ORS 198.720(1) and ORS 478.010(2)(a).

⁵² ORS 198.720(2).

⁵³ ORS 198.720(3).

⁵⁴ ORS 478.010(2)(b).

⁵⁵ ORS 390.605(2) and ORS 478.010(2)(c d). See ORS 478.010(2) and ORS 478.120 for exceptions concerning forestlands.

IMPLEMENTATION PLANNING

Many studies and reports have been published and presented to clients over the years by ESCI. Often, clients are overwhelmed with information and options. It takes time to digest the report and then figure out what to do next. ESCI finds it useful to offer a plan to help our clients break down the process into smaller segments. Those smaller pieces allow policy-makers, fire chiefs, and communities to examine details and have discussions about what is possible. The following is offered as a framework to consider in the initial stages of evaluation. It is a strategic planning approach to partnerships.

The first decision is whether the nine organizations are to do anything at all, or continue on a status quo basis. Once a decision is made to consider an enhanced regional service delivery model, ESCI offers the following steps as a systematic and manageable process.

Conduct Vision Session(s) with Policymakers

The initial stage of implementation begins with the most elementary decision: "Do we want to move forward or not?" It is extremely important that, at this stage of the process, it is clearly recognized that this is a public policy decision on the part of the governing entities involved. A decision to consider altering the way in which a critical public safety service is provided, in some cases even permanently altering the governance of those services, is clearly in the purview of the elected bodies. While senior management input should be considered, the final decision should not rest at any level lower in the organization than those who are elected to represent the customers.

For this reason, it is recommended that the elected representatives of the cities and fire districts meet together for the initial discussion of the feasibility study and its projected operational and fiscal outcomes. Depending on the number of elected officials, the policymakers can decide whether to include all elected officials or a representative group assigned to represent each governing entity. During this policy stage, involvement by additional staff should be somewhat limited, perhaps at the senior management level, and then for the sole purpose of providing technical support. It is important to limit the ability for the process to be "hijacked" at this point by strenuous arguments for or against the idea from those operations level personnel whose opinions may be influenced by turf, power, or control issues. Stakeholder input is important, but plentiful opportunity can be provided for this once the policy bodies have determined what is in the best interest of their citizens as a matter of public policy.

It is equally important that the policy bodies recognize exactly what decision is being considered in the initial vision meetings. The purpose is to weigh the strategies, operational advantages, fiscal outcomes, and potential impediments of the feasibility to determine whether to commit local resources to move the process forward. The decision is not, at this point, a final decision to “flip the switch.” The final commitment to take legal actions necessary to finalize the implementation of any given strategy will come much further into the process.

This initial vision meeting can be likened to the court process known as a probable cause hearing. The purpose of such a hearing is for a judge or grand jury to determine if sufficient evidence exists to warrant an arrest and a trial. The probable cause hearing does not determine the final verdict or sentence. That occurs after the much more thorough process and deliberation of the trial. Likewise, the vision meetings are for the policymakers to judge whether sufficient evidence exists to warrant moving forward. The final verdict on whether to take legal or contractual actions to implement will come after weeks, months, or even years of additional detailed planning work involving stakeholders, operations staff, legal counsel, finance personnel, and others. As this actual implementation planning work moves forward, there may be several points at which new information or significant obstacles arise that cause one or more communities to decide not to finalize and implement the plan.

The term “vision session” is used here because the policymakers will be determining their joint decision on a future vision toward which the additional work of implementation will be directed. In many cases, several legal, operational, or functional strategies are presented as being feasible in the study. These may involve various options for governance, finance, and organizational structure. Which one or ones should the entities pursue, if any? This will become the joint vision of the policymakers.

One of the best methods for initiating this visioning process is to begin with policymakers sharing an open discussion of critical issues. Each entity's representatives can present a short description of those critical issues, service gaps, or service redundancies that might be concerning them relative to their provision of public safety services. As each entity takes their turn presenting these issues, a picture typically emerges of those shared critical issues that two or more of the entities have in common. This assists in focusing the discussion on which of the feasible options from the study best address those critical common issues and how.

As the discussion focuses on those feasible options with the greatest opportunity to positively impact shared critical issues, the discussion can expand to the strengths and weaknesses of the strategies relative to the conditions, financial abilities, and cultural attitudes of the communities involved. There should be a concerted effort to remain at a policy level without becoming overly embroiled in operational discussions of implementation details. Those will be addressed once a common vision has been established for a future strategy that is in the best interest of all the communities involved.

This is also the time that participants may decide to opt-out of further involvement. This may occur for a number of reasons. There may be a legitimate concern that an individual community does not truly share an adequate number of common critical issues with the other communities. There may also be a legitimate concern that the feasible strategies do not do enough to benefit a given community and would leave it with too many remaining critical issues. And, of course, there is always the possibility that a given community will not feel that the projected financial outcome is within their ability or provides a cost-benefit that is better than their current situation. Any such decisions by one or more communities should not be considered a discouraging factor, for that is the very purpose of the vision sessions. In many cases, other remaining entities continue moving forward with a shared vision for cooperative service delivery even after one or more communities determine not to.

The goal of the vision session(s) is to come out with a decision by the policy bodies on whether to continue with the next steps and, if so, what direction those steps should take. The vision should be sufficiently decisive as to be actionable by senior appointed officials and staff. While there will be many, many details to work out in the implementation process, the vision should clearly articulate the intention of the agreeing policy bodies on the desired outcome from the specified cooperative service strategy or strategies. Once this occurs, the real work begins.

After setting the joint vision, this policymaker group should meet together at set intervals, or as needed, to hear the progress of the Implementation Committee and its Working Groups and refine direction when necessary. The appropriate interval will depend on the situation and the complexity and length of the process itself, but a quarterly meeting is often sufficient.

Establish a Joint Implementation Committee

The next step in the process is to establish a Joint Implementation Committee that will be given the overall responsibility with leadership and management of the planning and implementation process. This will be the “nuts and bolts” group that works through the details, overcomes the challenges, reacts to new information, and makes many of the actual decisions on the implementation plan. This group should have a much wider representation from stakeholders both inside and outside of the individual organizations involved. Membership in the Joint Implementation Committee may include senior management personnel and, where appropriate, labor representatives. The following is an example of a Joint Implementation Committee:

- City Manager or Board Chair (or equivalent) from each organization
- Fire Chief
- Finance Director from each organization
- Labor representatives from each agency
- Volunteer representatives from each volunteer organization involved

The Joint Implementation Committee should select a chair or co-chairs to function as organizers and facilitators for the committee meetings. In addition, their first order of business should be to determine the rules and procedures of this committee. This should include such items as:

- How often does this group meet (monthly is typical)?
- How are absences handled (assigned alternates are recommended)?
- How does communication (occasionally secure) within this committee take place?
- How will meetings be conducted? Are there “rules of conduct” for the meetings?
- Under what circumstances will the meetings be opened to attendance by non-members?
- How will the group pursue consensus? When voting is necessary, how will that occur?

Develop an Implementation Strategic Plan

Once the ground rules have been set, the Joint Implementation Committee should schedule a strategic planning process. The strategic planning process should be held in a neutral setting away from the daily activities and noise of the usual office environment. It need not be an expensive retreat, but it should be organized to focus energy and attention exclusively to the planning process for its duration.

The purpose of the initial strategic planning session should be as follows:

- To further articulate and refine the joint vision set by the policy bodies.
- To identify critical issues that will be met as the implementation process unfolds
- To identify potential impediments to implementation from:
 - Organizational culture
 - Availability of data and information
 - Lack of sufficient staff to carry through implementation processes
 - Outside influences and time demands
- To set the specific goals and objectives of the implementation process and the timelines for accomplishment
- To establish the necessary Implementation Working Groups

This process should result in the preparation of an implementation-planning document that can be shared with the policy body, stakeholders, and others who will be involved in or affected by the implementation process. The document should provide the joint vision, describe the cooperative service strategy or strategies being pursued, the desired outcome, the goals that must be met in order for implementation to be achieved, and the individual objectives, tasks, and timelines for accomplishment. When fully and adequately prepared, this document will serve as the master “road map” for the process and will help guide the next steps of developing working groups and assigning responsibilities.

Establish Implementation Working Groups

As part of the implementation strategic planning process, various Implementation Working Groups should be established that would be charged with responsibility for performing the necessary detailed work involved in analyzing, weighing, and deciding on specific processes. Membership for these Implementation Working Groups should be roughly identified as part of that process as well.

The number and titles of the working groups will vary, depending on the type and complexity of the strategies being pursued. However, the following list provides some typical working groups used in most consolidation processes and a description of some of their primary assigned functions and responsibilities.

Governance Working Group

This group will be assigned to examine and evaluate various governance options for the cooperative service effort. A recommendation and process steps will be provided back to the Joint Implementation Committee and the Policymaker Group. Once approved, this working 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 city/district and agency management.

Finance Working Group

This group will be assigned to review the financial projections contained in the feasibility 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. Where revenue is to be determined by formula rather than a property tax rate, such as in a contractual cooperative venture, this group will evaluate various formula components and model the outcomes, resulting in recommendations for a final funding methodology and cost distribution formula. The membership of this group typically involves senior financial managers and staff analysts, and may also include representatives from the agencies' administrative staffs.

Legal Working Group

Working in partnership with the Governance Working Group, this group will identify all of the legal aspects of the selected strategy and will identify steps to ensure the process meets all legal obligations of process and law. Where necessary, this group will oversee the preparation and presentation of policy actions such as ordinances, joint resolutions, petitions, dissolutions, and enabling legislation. The group will also be responsible for working with other elected bodies, such as State Legislatures, the State Fire Marshal, and the insurance industry, when necessary, to accomplish the establishment of local selected governance. The membership of this group typically involves legal counsel from the various entities involved and may also include senior city/district management staff.

Operations Working Group

This group will be responsible for an extensive amount of work and may need to establish multiple sub-groups to accommodate its workload. The group will work out all of the details of the necessary operational changes required by the strategy. 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 Support Services and Logistics Working Group, if established. The membership of this group typically involves senior agency management, mid-level officers, training staff, and volunteer representatives. This list often expands with the complexity of the services being provided by the agencies.

Support Services and Logistics Working Group (Optional)

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 staffs. Where involved, support divisions such as Maintenance, Fire Prevention, etc., will also be represented.

Communications Working Group

Perhaps one of the most important, 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 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 particular 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 what they do not clearly understand. A well-informed workforce and public will reduce conflict. The membership of the group typically involves public information officers and senior city or agency management.

Meet, Identify, Challenge, Refine, and Overcome

Once the working groups are established, meeting, and completing their various responsibilities and assignments, it will be important to maintain organized communication up and down the chain. The working group chairs should regularly report to the Joint Implementation Committee. When new challenges, issues, impediments, or opportunities are identified by the working groups, these issues need to be communicated to the Joint Implementation Committee so 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 precipitate a refinement of the original joint vision.

The process is continuous as the objectives of the strategic plan are accomplished one by one. When sufficient objectives have been met, the Joint Implementation Committee can declare various goals as having been fully met until the point comes when the actual implementation approval or petitioning for a district formation/vote needs to be sought from the policy bodies. This formal "flipping of the switch" will mark the point at which implementation ends and integration of the agencies begins.

APPENDIX A: EXAMPLE TRANSITION PLAN

Implementing changes in the delivery of fire/EMS services is never a simple task. Much work is required to ensure the seamless transition of service from [AGENCY] to the [AGENCY] and [AGENCY]. The primary focus of this effort must be to effectively manage the transition so that there is no interruption of service to the community.

This Transition Plan describes in detail the actions that are necessary to accomplish the transfer of operational responsibility. The Plan is divided into eight functional areas:

1. Organization and Operations
2. Capital Assets and Equipment
3. Human Resources
4. Finance
5. Risk Management
6. Legal
7. Technology
8. External Relationships

Each functional area begins with a summary description of the work effort required to ensure all needs of that function have been properly addressed prior to transition. Following the summary is a comprehensive and detailed list of tasks to be completed, the outcomes intended by each task, and the person(s) or department(s) responsible for completing each task.

The transition of service will add workload to the [AGENCY] organization. Establishing clear authority and effective communications systems during the transition will be important. The use of interdisciplinary teams focused on developing collaborative solutions should produce efficient support systems for [AGENCY].

Finally, keeping an open line of communications with the public will be imperative. They will need assurance that their fire and emergency services will continue unimpaired through the transition from [AGENCY] to the [AGENCY] and beyond.

Implementation of this Plan should provide for a smooth transition of service in keeping with the core goal of providing seamless and uninterrupted delivery of fire and emergency services to the community.

Organization and Operations

The [AGENCY] has never directly provided fire and emergency services to the community, rather it has been provided by the [AGENCY]. [AGENCY] will need to develop and staff an operating organization, including administrative command and control, support and logistics, and operational emergency staff. Additionally, it will need to build the organizational systems necessary to support the delivery of services.

[AGENCY] has been the direct service provider to [AGENCY] for a number of years. As such, it has systems and procedures in place that can be adapted to the consolidated organization.

A variety of activities are necessary. Clearly defined service delivery standards of performance must be established to lay the foundation for the acquisition of resources needed to deliver that service level. Policies, procedures, and guidelines must be developed to define operational practices. Staffing plans, training systems, response assignments, and other organizational systems must be developed and implemented.

The most pressing need is the recruitment and retention of a Chief Executive Officer (Fire Chief) for the [AGENCY]. This person will lead the organization pre and post-transition and must be intimately involved in its establishment. [AGENCY] should seek a dynamic, modern-thinking leader with the energy and capability to develop the organization into a robust, efficient, and effective service delivery system.

A staffing plan will need to be developed and implemented, listing all of the human resources needed to deliver the defined level of service within budgetary limitations. Some of these staff may transition from [AGENCY/AGENCIES] to [AGENCY], but it is not certain how many, or what rank and experience levels staff may migrate. However, it is not expected that all positions will be filled in this manner. The Fire Chief will need to work closely with the [AGENCY] Human Resources Department to recruit quality staff for the [AGENCY] (specific tasks are listed in the Human Resources section of this Plan).

It is likely that individual [AGENCY] city departments can absorb and provide a variety of support functions to the [AGENCY] system (i.e., Human Resources, Finance, Facilities, and Equipment Services). It will be very important to establish clear lines of communication and accountability between the City and [AGENCY] to ensure quality interactions and to minimize new workloads.

Organization and Operations Tasks	Estimated Hours	Responsibility
1. Establish a transition team made up of key stakeholders from the [AGENCY] and [AGENCY]. Implement a regular meeting schedule and update process. Outcome: Transition activities are well coordinated, and all parties are invested in the result.	80	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep
2. Clearly define the level of service expected to be provided by [AGENCY]: <ul style="list-style-type: none"> a. Fire suppression b. EMS c. Fire prevention d. Hazardous materials e. Technical rescue Outcome: Level of service is defined allowing [AGENCY] resources and systems to be developed and acquired to provide that level of service.	80	[AGENCY] Fire Services Coordinator
3. Create and regularly distribute public information about the transition. Emphasize that service continuity will be preserved. Create and distribute the message jointly with the [AGENCY] and the [AGENCY]. Outcome: The public is fully informed of transition activities and its impact on them.	60	[AGENCY] Fire Services Coordinator [AGENCY] Community Relations [AGENCY] Human Resources
4. Create and regularly distribute information about the transition to [AGENCY] Fire Department, [AGENCY], and regional departments. Create and distribute the message jointly with the [AGENCY] Fire Chief and [AGENCY] Fire Chief. Outcome: [AGENCY] staff are fully informed of transition activities and its impact on them.	90	[AGENCY] Fire Services Coordinator [AGENCY] Community Relations [AGENCY] Fire Chief [AGENCY] Human Resources
5. Establish the position of [AGENCY] Fire Chief. Develop the classification specification, reporting relationships, pay, and benefits. Recruit and retain a Fire Chief for [AGENCY]. Outcome: A Fire Chief is hired and ready to assist with transition implementation.	150	[AGENCY] Fire Services Coordinator Assistant City Manager [AGENCY] Community Relations [AGENCY] Human Resources
6. Prepare, refine, and finalize the staffing plan and position list for all operations and support positions. Establish all positions, including classification specifications. Outcome: A comprehensive staffing plan has been developed that fully supports [AGENCY]'s defined level of service.	60	[AGENCY] Fire Services Coordinator [AGENCY] Human Resources

Organization and Operations Tasks	Estimated Hours	Responsibility
7. Work with Human Resources to produce and publish notifications to hire firefighters and staff members fulfilling required staffing as indicated by staffing templates. Set deadlines well in advance of transition for receiving applications, interviews, background checks, and all testing processes. Outcome: All requires staff members have been appointed, and are in place prior to transition.	100	[AGENCY] Fire Services Coordinator [AGENCY] Human Resources
8. Review and evaluate available options for emergency dispatch services and select the most appropriate dispatch provider. Develop and execute agreements as needed. Outcome: The most appropriate provider supporting both cost efficiency and response effectiveness in place prior to transition.	40	[AGENCY] Fire Services Coordinator
9. Develop and establish clear lines of communication and accountability between the [AGENCY] Fire Chief and city support functions. Outcome: Expectations between the parties are clearly defined, resulting in more efficient delivery of support services.	10	[AGENCY] Fire Services Coordinator City Manager [AGENCY] Department Heads
10. Evaluate existing apparatus owned by [AGENCY] for suitability to the [AGENCY] service area. Develop apparatus specifications for appropriate [AGENCY] apparatus and develop an apparatus replacement plan. Outcome: The most appropriate apparatus type and configuration for [AGENCY] operations have been defined.	Detail in Capital Asset Section Task 1.	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep [AGENCY] Fleet Services Manager
11. Identify if co-location of [AGENCY] fire prevention personnel conducting new construction activities in the Building and Safety Department is feasible. If so, arrange for space and furnishings. Outcome: Co-location, if practical, promotes strong interaction between [AGENCY] and the Building and Safety Department.	10	[AGENCY] Fire Services Coordinator Building and Safety Facilities Manager
12. Develop a procedure for a joint review of new development proposals for building projects. Outcome: Developers experience a seamless transition of services between [AGENCY] and [AGENCY].	16	[AGENCY] Fire Services Coordinator Building and Safety
13. Establish a detailed matrix for the construction code elements that are reviewed by the Building and Safety Department and those that will be reviewed by [AGENCY] fire prevention staff. Outcome: Division of authority and responsibility between the Building and Safety Department and [AGENCY] is clearly defined.	40	[AGENCY] Fire Services Coordinator Building and Safety

Organization and Operations Tasks	Estimated Hours	Responsibility
14. Develop [AGENCY] policies, procedures, and standard operating guidelines. Review current [AGENCY] policies, procedures, and standard operating guidelines for use as a base. Outcome: [AGENCY] policies, procedures, and guidelines are comprehensive and appropriate to achieved defined levels of service.	210	[AGENCY] Fire Services Coordinator Human Resources
15. Identify alternative revenue opportunities to support [AGENCY] operations. Propose revenue opportunities for implementation as appropriate. Outcome: [AGENCY] is capturing all appropriate revenue to support the delivery of services.	40	[AGENCY] Fire Services Coordinator Finance Manager
16. Establish workflow procedures for the plans review and site inspection process. Outcome: Workflow expectations between [AGENCY] and the Building and Safety Department are clearly defined.	24	[AGENCY] Fire Services Coordinator Building and Safety
17. Determine the most appropriate source of medical director services and execute agreements to provide that service. Consider using the current [AGENCY] medical director. Outcome: Medical director services are available on the transition date.	24	[AGENCY] Fire Services Coordinator EMS Director
18. Identify records maintained by [AGENCY] that should be transferred to [AGENCY]. Identify the most appropriate method for transferring the records to [AGENCY] and address record transfer costs. Outcome: All records maintained by the [AGENCY] that are needed by [AGENCY] have been identified and transferred.	20	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep
19. Determine whether [AGENCY] can continue to use the [AGENCY] Knox Box keys or whether [AGENCY] area boxes will need to be re-keyed. Outcome: [AGENCY] has access to Knox Boxes installed in its service area.	10	[AGENCY] Fire Services Coordinator Building and Safety
20. Develop effective response forces, response assignments, and station order tables for the computer-aided dispatch (CAD) system. Provide assignments and station order tables to the dispatch provider for implementation. This data may be available from [AGENCY]. Outcome: Dispatch protocols are developed and in place by the transition date, ensuring seamless service delivery to the community.	60	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep

Organization and Operations Tasks	Estimated Hours	Responsibility
21. Develop desk manuals containing all policies and procedures for administrative functions to be performed by [AGENCY]. Outcome: [AGENCY] support staff members have the tools to assist them in performing their work.	64	[AGENCY] Fire Services Coordinator
22. Determine the exact date and time for the transition of service delivery from the [AGENCY] to [AGENCY]. Develop a transfer of service process and notify all cooperating and area agencies of the details. Outcome: The transfer of service responsibility occurs with no impact on the delivery of fire and emergency services.	20	[AGENCY] Fire Services Coordinator
23. Acquire occupancy and inspection records for [AGENCY] businesses from [AGENCY]. Outcome: [AGENCY] fire prevention staff has any historic inspection information to use for their work.	16	[AGENCY] Fire Services Coordinator
24. Complete a skills, knowledge, and certification inventory for all [AGENCY] employees. Outcome: The current level of knowledge and capability of all [AGENCY] employees is known.	80	[AGENCY] Fire Services Coordinator Human Resources [AGENCY] Training Chief
25. Based on the skills, knowledge, and certification inventory, defined job requirements, and skills needed that are unique to each service area, develop a training plan that maintains required personnel capability and develops personnel for succession purposes. Outcome: A comprehensive training program is in place and ready to be delivered on the transition date.	80	[AGENCY] Fire Services Coordinator Human Resources [AGENCY] Training Chief
26. Quantify existing firefighting, EMS, etc., supplies inventory that will be transferred from [AGENCY] to [AGENCY]. Identify and acquire supplies that need to be in-stock. Outcome: Supplies are available on the date of transition.	45	[AGENCY] Fire Services Coordinator Fleet Services Manager Facilities Manager
27. Develop a radio communication and frequency utilization plan and procedure in conjunction with [COMM CENTER]. Outcome: A radio communication and frequency use Plan and procedure are in place by the transition date.	64	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep

Organization and Operations Tasks	Estimated Hours	Responsibility
28. Determine the mapping system that will be used for [AGENCY] mapping mobile data computers and map books. Produce new map systems for all [AGENCY] apparatus. Outcome: Map systems using a common system are available by the date of transition.	120	[AGENCY] Fire Services Coordinator [AGENCY] GIS
29. Revise the station and apparatus numbering system for the [AGENCY]. Use the [AGENCY] regional numbering system. Outcome: The numbering system is established and all stations and apparatus are properly marked by the date of transition.	10	[AGENCY] Fire Services Coordinator Fleet Manager
30. Develop and deliver training for [AGENCY] personnel on geography, risks, and target hazards in the service area. Outcome: [AGENCY] personnel are familiar with the service area.	100	[AGENCY] Fire Services Coordinator [AGENCY] Training Chief
31. Apply and receive a state emergency medical services advanced life support (ALS) license. Outcome: The state license is properly in place so that ALS delivery can continue during transition.	20	[AGENCY] Fire Services Coordinator EMS Coordinator
32. Purchase new firefighting and EMS equipment to be used by [AGENCY]. <ul style="list-style-type: none"> a. Personal Protective Equipment-for all firefighting, EMS activities b. Uniforms, badges, etc. c. Helmets d. Footwear e. Medical Equipment Outcome: Equipment consistency is provided to ensure effective operations and minimize training requirements.	120	[AGENCY] Fire Services Coordinator [AGENCY] Training Chief
33. Develop a list of community fire prevention programs delivered by [AGENCY]. Determine which of these will be delivered to the [AGENCY]. Outcome: The type and level of fire prevention services to be delivered are determined.	20	[AGENCY] Fire Services Coordinator
34. Implement State and County EMS protocols for all levels of EMS service to be provided. Gain approval by the [AGENCY] medical director. Outcome: EMS protocols are developed so that appropriate levels of EMS service can be delivered.	30	[AGENCY] Fire Services Coordinator EMS Coordinator

Capital Assets and Equipment

The effective delivery of fire and emergency services requires the use of facilities, apparatus, equipment, and supplies. [AGENCY] owns many of these assets that are currently operating in the [AGENCY].

These assets will need to be converted for use by [AGENCY]. During the course of the transition, a variety of tasks will be required. Facilities, apparatus, and equipment owned by [AGENCY] will need to be inventoried, and agreements reached on the timing for the transition. The current condition of each asset will need to be identified, and any required repairs completed prior to the transition.

Systems to provide ongoing repair and maintenance for [AGENCY] facilities, apparatus, and equipment will need to be developed and resources to conduct that work acquired. Contracts for service and repair vendors will need to be negotiated and executed. Utility services must be notified of the transition so that billings are routed correctly.

The suitability of apparatus for the [AGENCY] service area should be evaluated. If apparatus type changes are needed, the acquisition process should begin early in the transition process.

A supplies inventory will need to be identified and sufficient quantities of supplies acquired. This includes office supplies, station operation and maintenance supplies, and more.

Agreements must be reached with [AGENCY] for specific timing of conversion of assets and inventory. The [AGENCY] will be the service provider until the actual date and time of transition. Developing a plan for the seamless transition of service and the hand-off of the assets necessary to conduct that service will be critical.

Capital Assets and Equipment Tasks	Estimated Hours	Responsibility
<p>1. Develop a Fleet Master Plan. Meet with [AGENCY] to establish a mutually agreeable fleet transition plan. Evaluate assigned fleet resources for condition and serviceability. Obtain guidance from [AGENCY] Public Works Director on the process. Determine minimum standards for fleet acceptance. Evaluate the fleet to determine if surplus apparatus/vehicles exist and if sufficient numbers of apparatus by type are available. Surplus or acquire apparatus/vehicles as needed based on the evaluation.</p> <p>Outcome: A Fleet Master Plan listing [AGENCY] apparatus fleet reflecting the most appropriate quantity and type of front line and reserve equipment.</p>	<p>160</p>	<p>[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep [AGENCY] Fleet Services Manager</p>
<p>2. Review workload of new Facilities Management staff and determine if additional staffing and other resources are needed.</p> <p>Outcome: Adequate staffing and resources are available to conduct facilities maintenance for [AGENCY].</p>	<p>20</p>	<p>[AGENCY] Fleet Manager</p>
<p>3. Perform a space needs assessment study to identify and acquire building space for [AGENCY] administration based on, but not limited to, the following criteria:</p> <ul style="list-style-type: none"> a. Employee count b. Functional needs c. Connectivity (telephone, computer, radio) d. Parking e. Power f. Growth Planning <p>Outcome: Suitable building space is available for [AGENCY] administrative personnel.</p>	<p>60</p>	<p>[AGENCY] Fire Services Coordinator [AGENCY] Facilities Manager</p>
<p>4. Evaluate the fleet to determine if surplus apparatus/vehicles exist and if sufficient numbers of apparatus by type are available. Surplus or acquire apparatus/vehicles as needed based on the evaluation.</p> <p>Outcome: The [AGENCY] apparatus fleet reflects the most appropriate quantity and type of equipment.</p>	<p>45</p>	<p>[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep [AGENCY] Fleet Services Manager</p>

Capital Assets and Equipment Tasks	Estimated Hours	Responsibility
5. Complete a current condition assessment of the [AGENCY] stations: <ul style="list-style-type: none"> a. Conduct inspection b. Identify maintenance and repair needs c. Determine responsibility for repairs required prior to the transfer of operations. Outcome: Facilities staff has a thorough understanding of the current condition of [AGENCY] stations and any repair work required prior to the transition.	20	[AGENCY] Facilities Manager
6. Review deeds of [AGENCY] fire station/land to determine appropriate measures for the transition to [AGENCY]. Outcome: Deeds properly reflect [AGENCY] ownership prior to transition	40	[AGENCY] Fire Services Coordinator [AGENCY] Facilities Manager [AGENCY] Transition Rep
7. Acquire maintenance and repair records for [AGENCY] apparatus. Retain an outside contractor and complete an evaluation of the condition of the [AGENCY] apparatus/vehicles. Outcome: Equipment Services fully understands the condition of the fleet, can anticipate ongoing maintenance costs, and all repairs required prior to transition have been completed.	80	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager [AGENCY] Transition Rep
8. Determine the number of garage spaces available for fire apparatus. Identify available space to house apparatus for which no garage space currently exists or develop a plan to fund and construct new space. Outcome: Suitable indoor apparatus storage is available for those vehicles that need it.	16	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager
9. Develop an accurate inventory of all [AGENCY] owned equipment, radios, station inventory, and other assets currently in [AGENCY]'s possession. Reach an agreement with [AGENCY] on inventory transfer to [AGENCY]. Outcome: [AGENCY] owned assets have been converted by the date of transition.	45	[AGENCY] Fire Services Coordinator

Capital Assets and Equipment Tasks	Estimated Hours	Responsibility
10. Identify station maintenance that will be provided by [AGENCY] and the staffing/budget needed by Facilities to support that service. Include appropriate costs in future [AGENCY] Facilities budgets: a. [#] staffed fire stations Outcome: The impact of the additional work is identified and resources are available to maintain facilities.	40	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager [AGENCY] Transition Rep
11. Identify outside contracts that will be needed for station equipment and services such as communication/tech services, generator maintenance, alarm system maintenance, appliance maintenance, landscaping, etc. Outcome: All outside contracts are in place on the date of transition.	45	[AGENCY] Fire Services Coordinator [AGENCY] Facilities Manager
12. Decide if the fleet costs will be charged as a monthly rental or on time/materials basis with [AGENCY] responsible for replacement planning. Outcome: The most appropriate method for charging fleet costs has been determined.	30	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager
13. Set up apparatus and vehicles in a fleet records management system. Outcome: Apparatus and vehicle maintenance and repair can be accurately tracked in a fleet records system.	25	[AGENCY] Fleet Manager
14. Establish preventative maintenance schedules for each apparatus and vehicle. Outcome: Schedules are in place on the date of transition.	20	[AGENCY] Fleet Manager
15. Identify any [AGENCY] owned shop equipment, parts, and supplies that are devoted to [AGENCY] operations. Outcome: [AGENCY] owned shop equipment, parts, and supplies devoted to [AGENCY] operations have been identified	10	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager [AGENCY] Transition Rep
16. Identify the annual cost of fleet maintenance and repair for a future [AGENCY] budget. Outcome: [AGENCY] has budgeted sufficient funds for fleet repair and maintenance.	20	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager Finance Manager
17. Identify parts that should be in stock for [AGENCY] apparatus. Purchase and/or identify a ready source for the parts. Outcome: Parts are readily available to ensure a minimum of apparatus down-time.	30	[AGENCY] Fleet Manager

Capital Assets and Equipment Tasks	Estimated Hours	Responsibility
18. Acquire fuel cards for apparatus that will need them. Consider the use of an independent system. Outcome: The source of fuel for [AGENCY] apparatus has been determined and made available.	10	[AGENCY] Fleet Manager
19. Notify utilities and garbage services of the new billing address for [AGENCY] stations. Outcome: Notification has been made to ensure the continuation of service.	10	[AGENCY] Facilities Manager
20. Re-key all facilities. Outcome: The security of fire stations has been maintained.	10	[AGENCY] Facilities Manager
21. Recruit, hire, and train new Equipment Services employees. Outcome: New staff is employed and ready to begin service on the date of transition.	20	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager Human Resources
22. Transition the fleet to [AGENCY] maintenance. Outcome: Apparatus are transitioned to [AGENCY] maintenance.	10	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager
23. Complete the transition of legal ownership of buildings and land of all [AGENCY] fire stations in [AGENCY]. Outcome: All stations and properties are under [AGENCY] legal ownership	20	[AGENCY] Fire Services Coordinator [AGENCY] Fleet Manager Finance Manager

Human Resources

The delivery of fire and emergency services is a human resources intensive function. [AGENCY] will need to hire, equip, and train over 200 personnel and have them ready to provide service by the date of transition. Much work is involved in accomplishing this.

Human resources rules will need to be established for [AGENCY]. Ideally, the existing [AGENCY] rules, with minor modifications, can be used for [AGENCY].

Some employees may be former [AGENCY] employees. A lateral entry process should be developed that would allow [AGENCY] firefighters who may be laid-off as a result of the transition an opportunity to be considered for [AGENCY] positions. Others will be recruited and hired from outside the organization.

Wages, benefits, and other considerations must be determined. Insurance plans will need to be established, the status of health plans for [AGENCY] retirees determined, and benefits coordinated between insurance plans.

Records systems need to be established and relevant information entered into these systems. Labor representation will need to be determined and any agreements developed as necessary. Outside agencies, such as PERS, will need to be notified.

A significant recruitment, testing, and hiring process will be required. This is a time-intensive activity and should begin as quickly as possible. All [AGENCY] employees will require orientation and training in advance of the date of transition. This training includes required compliance training (EEO, substance abuse, workplace, etc.) and job-specific training so that personnel are able to provide effective service on the date of transition.

The use of interdisciplinary teams for this transition activity will be important. Systems and considerations established for [AGENCY] employees will impact a variety of support departments. Coordination is important in order to develop ongoing support capability that has the least impact on workload.

Human Resources Tasks	Estimated Hours	Responsibility
1. Review potential new Human Resources workload and determine the staffing needed to effectively manage the workload. Outcome: Human Resources workload is quantified and resources required to support that workload have been identified for pay administration, records, employee relations, benefits administration, labor relations, legal, and training.	30	[AGENCY] Fire Services Coordinator Human Resources
2. Determine the number of former [AGENCY] employees who may elect to seek [AGENCY] employment. Outcome: The number and names of potential employees have been identified.	10	[AGENCY] Fire Services Coordinator Human Resources
3. Obtain personnel files from any former [AGENCY] employees to determine former class, hire date, promotion dates, certifications, etc. Outcome: Information has been gathered regarding former [AGENCY] employees.	20	Human Resources
4. Develop classification specifications for all [AGENCY] positions. Outcome: Classification specifications are available for all positions.	80	[AGENCY] Fire Services Coordinator Human Resources Labor Consultants
5. Identify wages, benefits, and other considerations for newly hired [AGENCY] employees. Outcome: The wage and benefit packages have been identified.	40	[AGENCY] Fire Services Coordinator Human Resources Labor Consultants

Human Resources Tasks	Estimated Hours	Responsibility
<p>6. Recruit, select, and hire employees as needed:</p> <ul style="list-style-type: none"> a. Fire Chief b. Division Chiefs c. Battalion Chiefs d. Captains e. Engineers f. Firefighters g. Paramedics h. Office Staff i. Mechanics j. Fire Marshal k. Fire Inspectors l. Others as needed <p>Outcome: All positions are filled with qualified employees in time to conduct required training prior to the date of transition.</p>	240	[AGENCY] Fire Services Coordinator Human Resources
<p>7. Develop curriculum and deliver orientation training to all new [AGENCY] personnel.</p> <p>Outcome: All [AGENCY] employees have received quality orientation training.</p>	80	[AGENCY] Fire Services Coordinator Human Resources
<p>8. Identify personnel file information that will be maintained by [AGENCY] and information to be maintained by Human Resources. Establish procedures to ensure information is routed correctly.</p> <p>Outcome: Complete personnel files are maintained.</p>	40	[AGENCY] Fire Services Coordinator Human Resources
<p>9. Develop a plan to format labor representation for [AGENCY]:</p> <ul style="list-style-type: none"> a. Line Staff b. Management c. Administrative staff <p>Outcome: Labor representation concepts have been identified, described, and implemented.</p>	80	[AGENCY] Fire Services Coordinator Human Resources Labor Consultants Legal
<p>10. Review [AGENCY] human resources rules to determine their suitability for [AGENCY]. Add or modify rules as appropriate to accommodate [AGENCY] human resources activities.</p> <p>Outcome: Fully developed human resources rules have been established and are in place in the [AGENCY] prior to transition.</p>	40	[AGENCY] Fire Services Coordinator Human Resources Labor Consultants

Human Resources Tasks	Estimated Hours	Responsibility
11. Add lateral entry provisions to the [AGENCY] human resources recruitment rules to support efficient appointments to open fire positions for experienced personnel. Outcome: Qualified and experienced personnel can be hired by [AGENCY].	32	Human Resources
12. Develop a program for [AGENCY] employees to be included in [AGENCY] insurance programs. If applicable, develop an orientation plan for the new health benefit programs. Outcome: [AGENCY] employee eligibility for health insurance programs has been determined.	45	Human Resources
13. Develop a website for [AGENCY] that will support recruitment activities and employee information. Outcome: The website is developed and is a useful source of information for potential employees.	60	[AGENCY] Fire Services Coordinator Technology Services
14. Examine legal method of obtaining full personnel files for any employees hired from [AGENCY]. Outcome: Personnel files have been acquired.	10	Human Resources
15. Provide notice to PERS that [AGENCY] is an active employer with both safety and non-safety personnel working. Outcome: Proper notice has been provided to PERS.	10	Human Resources
16. Establish clear pathways and coordination for the relationship between [AGENCY] and Human Resources functions: <ul style="list-style-type: none"> a. Employee complaints b. Disciplinary investigations c. Classification process Outcome: Responsibilities, authorities, and processes have been defined and acknowledged by all.	20	[AGENCY] Fire Services Coordinator Human Resources
17. Deliver compliance training to all [AGENCY] employees (EEO, workplace harassment, substance abuse, etc.) Outcome: All [AGENCY] employees have received quality compliance training prior to the transition date.	60	[AGENCY] Fire Services Coordinator Human Resources
18. Establish a process and vendor to conduct and monitor elective or mandatory annual medical exams. (Policy decision) Outcome: Employees are provided the required annual medical exams.	20	[AGENCY] Fire Services Coordinator Human Resources

Human Resources Tasks	Estimated Hours	Responsibility
19. Identify the source of health benefits and deferred compensation programs for [AGENCY] employees. Align these as closely as possible to plans offered to existing [AGENCY] employees. Outcome: Plans offered to the consolidated organization employees are in place and as consistent as possible.	30	Human Resources Labor Relations

Finance

Like any organization, the [AGENCY] will need a wide range of budget and accounting services. Establishing highly efficient systems will be a very important consideration during the transition.

Initially, a transition budget must be developed and adopted along with the necessary appropriation of funds. The transition will incur a variety of costs, including the appointment of new fire department employees in advance of the actual date of transition.

A budget for [AGENCY] must be developed and adopted. Accounting systems must be established to manage district funds. Use of the [AGENCY's] financial system will be the base of accounting efficiency, and will require programming the system to support that activity.

Purchase agreements and open purchase orders need to be established. An asset tracking system will need to be developed to ensure [AGENCY] assets are accurately recorded. A five-year capital improvement plan will need to be developed and adopted.

Accounting and purchasing procedures will need to be developed and [AGENCY] personnel trained in their use. Decisions will need to be made regarding the level of financial analysis capability that will exist within the [AGENCY] organization and qualified personnel retained to perform those functions.

This is an area where the use of interdisciplinary teams will be very important. Agreements reached by one area of the organization will impact the workload of the Finance function. Developing highly efficient systems must be a critical consideration.

Finance Tasks	Estimated Hours	Responsibility
1. Identify and appropriate funding for [AGENCY] transition costs. Outcome: Sufficient funds are available to complete transition activities.	80	[AGENCY] Fire Services Coordinator Assistant City Manager Finance Manager
2. Establish and implement a process to ensure active coordination between Finance, Human Resources, and Technology Services as records systems, processes, and labor agreements are being developed and implemented to ensure [AGENCY] internal systems can support changes. Outcome: All related financial systems support the [AGENCY] operations.	80	[AGENCY] Fire Services Coordinator Finance Manager Technology Services Human Resources
3. Identify the type and level of financial administration capability that should exist within the [AGENCY] administrative staff. Determine if that capability is best provided by contracted services or full-time staff. If full-time staff, ensure that position(s) is included in the [AGENCY] staffing plan: <ul style="list-style-type: none"> a. Budget development and reporting b. Annual audit preparation c. Other accounting activities d. Coordination with [AGENCY] Finance Department Outcome: Fiscal administration capability has been defined and the source of that capability identified.	16	[AGENCY] Fire Services Coordinator Finance Manager Technology Services Human Resources
4. Conduct analysis to determine the value of all fire/EMS/ancillary services provided by [AGENCY] to the [LOCATION]. Consider an annual contract for services to be presented to the [LOCATION] for services rendered. Outcome: Understand the dollar value of fire/EMS services to UC [AGENCY] Campus has been quantified and secure an appropriate contract.	40	[AGENCY] Fire Services Coordinator Finance Manager
5. Coordinate labor agreements regarding employee compensation with Finance to ensure financial systems and payroll can accommodate accounting requirements. Outcome: Financial systems can efficiently support employee compensation processing.	30	[AGENCY] Fire Services Coordinator Finance Manager Technology Services Human Resources

Finance Tasks	Estimated Hours	Responsibility
6. Determine if the current internal finance department staffing levels can manage the anticipated new workload associated with [AGENCY]. Identify and quantify staff and other resources that will be needed. Outcome: Finance Department's workload is quantified, and the resources required to support the new workload have been identified.	40	[AGENCY] Fire Services Coordinator Finance Manager Human Resources
7. Establish cost centers within the financial accounting system so that costs can be appropriately attributed to functional activities. Outcome: Cost centers are established that provide detailed functional area cost accounting information.	20	[AGENCY] Fire Services Coordinator Finance Manager Technology Services Human Resources
8. Develop a five-year capital improvement plan for the [AGENCY]. Outcome: The five-year capital improvement plan has been developed and adopted.	40	[AGENCY] Fire Services Coordinator Finance Manager Human Resources
9. Negotiate and enter into a heavy equipment vendor contract. Outcome: Heavy equipment is available to support [AGENCY] response by the date of transition.	30	[AGENCY] Fire Services Coordinator Finance Manager
10. Confirm that [AGENCY] assets are accurately recorded in an asset management system. Update the system as needed for missing assets. Outcome: A complete and accurate list of [AGENCY] assets is available.	40	[AGENCY] Fire Services Coordinator Finance Manager
11. Identify and establish open purchase orders needed to support [AGENCY] operations. Outcome: Open purchase orders are in place to support [AGENCY] activities.	45	[AGENCY] Fire Services Coordinator Finance Manager
12. Identify the number of purchasing cards that will be needed for [AGENCY] operations. Establish a policy and procedure for the use of purchasing cards. Outcome: Purchasing cards are provided to appropriate [AGENCY] employees, procedures are in place for their use, and training on the procedures has been provided.	20	[AGENCY] Fire Services Coordinator Finance Manager
13. Develop and adopt [AGENCY] one-year and five-year budgets for FY TBA at the time of transition. Outcome: [AGENCY] has adopted budgets by the date of transition.	80	[AGENCY] Fire Services Coordinator Assistant City Manager Finance Manager

Risk Management

Risk management services include health and safety services as well as insurance programs. A variety of activities must be completed prior to the date of transition.

All [AGENCY] fire stations will need to be evaluated for safety and compliance concerns and corrections made prior to transition.

Insurance policies will need to be updated to reflect the return of direct service delivery. Workers' compensation coverage will need to be obtained and coordinated with employee health insurance programs.

Databases and other records systems will need to be established and updated to properly track claims activity. Employee wellness/fitness programs will need to be established.

Decisions will need to be made regarding the provider of risk management services and any third party administration. Predicted new workload and the current capability of [AGENCY] resources will be key considerations in this process.

Risk Management Tasks	Estimated Hours	Responsibility
1. Work with Technology Services to develop a property and liability claims database for [AGENCY]. Outcome: A property and liability claims database is in place.	30	[AGENCY] Fire Services Coordinator Human Resources Technology Services Risk Management
2. Identify sources and costs for contracted EAP and wellness/fitness programs for [AGENCY] employees. Establish vendor relationships as appropriate. Outcome: Wellness/fitness programs are available to [AGENCY] employees.	35	[AGENCY] Fire Services Coordinator Human Resources Risk Management
3. Conduct inspections of facilities to identify any potential risk issues, such as code compliance, OSHA, etc., that may be present (in conjunction with Facilities). Outcome: All risk issues have been identified and resolved by the date of transition.	50	[AGENCY] Fire Services Coordinator Risk Management Facilities Manager
4. Coordinate health benefits coverage with workers' compensation coverage provided to [AGENCY] employees. Outcome: Health insurance and workers' compensation benefits coverage have been coordinated.	26	Risk Management Human Resources
5. Provide [AGENCY] employee count and payroll information to Risk Management for insurance application updates. Outcome: Information is provided that allows insurance applications to be updated.	16	[AGENCY] Fire Services Coordinator Human Resources Management Services
6. Develop workers' compensation coverage to support [AGENCY] staff members. Identify any alternative coverage for [AGENCY] as appropriate. Outcome: An administrator has been identified with the capacity to support [AGENCY] workers' compensation processes.	20	[AGENCY] Fire Services Coordinator Human Resources Risk Management
7. Explore methods to legally obtain and review copies of workers' compensation claim files for any [AGENCY] employees appointed to the [AGENCY]. Outcome: Information about active workers' compensation claims has been obtained.	20	[AGENCY] Fire Services Coordinator Human Resources Risk Management Legal

Risk Management Tasks	Estimated Hours	Responsibility
8. Set up [AGENCY] employees in a workers' compensation database. Outcome: All [AGENCY] employees are entered into the workers' compensation database.	20	Human Resources Risk Management
9. Determine if current staffing levels can manage the anticipated new workload associated with [AGENCY]. Identify staff and other resources that will be needed. Outcome: Risk Management workload is quantified and resources required to support that workload have been identified.	30	[AGENCY] Fire Services Coordinator Human Resources Risk Management
10. Work with insurance broker/carriers to update all applicable insurance applications: <ul style="list-style-type: none"> a. Workers' compensation, adding new full-time workers b. Property and equipment c. Motor vehicles d. General liability Outcome: Insurance is in effect, providing coverage when needed.	60	Human Resources Risk Management

Legal

Legal services will be required throughout the process of transition. [AGENCY] will need to review, renegotiate, and execute a long list of agreements with other agencies and entities. These include cooperative service agreements (hazardous materials response), mutual and automatic aid agreements, purchase of services agreements (heavy equipment, dispatch), and more. A legal review of these documents will be required.

As transition discussions progress, legal services will be needed to interpret these various agreements and contained provisions to ensure a smooth, legal transition.

There will likely be disagreements between various parties about how the transition should occur and details regarding assets, employees, and the like. It will be very valuable to have an effective dispute resolution process in place so these disagreements can be resolved quickly.

Legal Tasks	Estimated Hours	Responsibility
1. Identify and implement a dispute resolution process to address disagreements regarding transition issues, costs, and activities. Outcome: A dispute resolution process has been implemented and disagreements are resolved through this process.	40	[AGENCY] Fire Services Coordinator Human Resources Legal Counsel [AGENCY] Transition Rep
2. Finalize and execute the transfer of all fleet and facility resources from [AGENCY] to [AGENCY]. Outcome: All fleet resources, facilities, and land are the sole ownership of [AGENCY].	30	[AGENCY] Fire Services Coordinator Legal Counsel [AGENCY] Transition Rep Facilities Manager Fleet Manager
3. Develop and adopt an agreement to allow [AGENCY] to enforce all Federal, State, County, and City Fire Codes. Outcome: [AGENCY] has the authority to enforce the Fire Code.	24	[AGENCY] Fire Services Coordinator
4. Identify and modify all applicable contracts and agreements as required to reflect the transition to [AGENCY] operational service delivery: <ul style="list-style-type: none"> a. Dispatch b. Radio Frequency Use—[COMM CENTER] c. Medical Director d. Regional Training Centers Outcome: All contracts and agreements have been modified and re-executed by the date of transition.	60	[AGENCY] Fire Services Coordinator
5. Negotiate and execute automatic and mutual aid agreements: <ul style="list-style-type: none"> a. [AGENCY] b. [LIST MUTUAL AID PARTNERS] c. Coordinated Communications System Outcome: All automatic and mutual aid agreements have been modified and re-executed by the date of transition.	40	[AGENCY] Fire Services Coordinator Legal Counsel [AGENCY] Transition Rep
6. Monitor transition activities for legal concerns. Review all agreements between [AGENCY] and various agencies and entities. Outcome: Potential legal risk has been identified and resolved.	60	[AGENCY] Fire Services Coordinator Legal Counsel

Technology

The use of technology is essential to the delivery of services and provides an opportunity to maximize the effectiveness of those services. [AGENCY] will need to ensure that various technologies are available for its use before the transition. These include telecommunications equipment, computer software and hardware, radios, and computer networks.

A comprehensive inventory of existing [AGENCY] systems must be completed. This will provide a baseline for needed acquisitions and for the transition of systems from [AGENCY] to [AGENCY].

A thorough technology needs assessment must be prepared to ensure that technology acquisitions support the [AGENCY] mission. Service improvement opportunities through technology should be identified at this stage so that acquisitions provide maximum value to the organization.

Appropriate technology must be available to [AGENCY] prior to and especially on the date of transition. System "cut-over" agreements must be reached with the [AGENCY] to ensure uninterrupted service.

Technology Tasks	Estimated Hours	Responsibility
1. Conduct a walk-through of each station to review existing network, computer, and telecom equipment and systems. Outcome: A full and accurate inventory of existing IT systems has been developed.	28	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep Facilities Manager Fleet Manager Technology Services
2. Work with [AGENCY] Technology Department personnel to identify computer hardware, software, and other system components that need to be installed in [AGENCY] facilities and apparatus. Outcome: A full and accurate inventory of existing system components has been developed.	80	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep Technology Services
3. Confirm the type and make of the telephone system used in the fire stations, what phone equipment is in place, and who owns the equipment. Outcome: A full and accurate inventory of telecommunications equipment and its ownership has been developed.	30	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep Technology Services
4. Evaluate existing network connectivity and performance. Identify the ideal pathway and configuration options to transition to [AGENCY] network systems. Outcome: The best solution for network configuration that provides high performance has been identified.	40	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep Technology Services
5. Complete a technology assessment and plan to determine and quantify hardware and software requirements to fully support [AGENCY] operations: <ul style="list-style-type: none"> a. Office use systems b. Communications equipment (cell, radios, tablets, electronic patient care reporting systems—EPCR) c. Mobile systems (MCT, mobile laptops for operations, etc.) Outcome: Technology needs have been thoroughly assessed and a plan for implementation developed.	80	[AGENCY] Fire Services Coordinator Facilities Manager Fleet Manager Technology Services

Technology Tasks	Estimated Hours	Responsibility
6. Determine if current staffing levels can manage the anticipated new workload associated with [AGENCY]. Identify and quantify staff and other resources that will be needed. Outcome: Technology Services workload is quantified and resources required to support that workload have been identified.	20	[AGENCY] Fire Services Coordinator Technology Services
7. Acquire and implement a staff scheduling software system. Outcome: A staff scheduling software system has been acquired and installed prior to the date of transition that communicates with the accounting and payroll system.	20	[AGENCY] Fire Services Coordinator Technology Services Human Resources
8. Based on the inventories and needs assessment, purchase and install new technology equipment, network connectivity, telephone systems, etc., as needed. Outcome: Technology systems and equipment have been acquired and installed as of the date of transition.	40	[AGENCY] Fire Services Coordinator Technology Services
9. Evaluate available fire records management systems (RMS). Acquire, implement, and install suitable software. Develop policies and procedures for system use. Outcome: A fire records management system has been acquired and installed prior to the date of transition.	100	[AGENCY] Fire Services Coordinator Technology Services
10. Meet with geographic information systems (GIS) staff to determine the capacity of GIS use in [AGENCY] for administrative and field use. Determine levels of GIS use in [AGENCY], acquire and implement needed hardware and software equipment. Outcome: Geographic information systems software has been explored, acquired, and installed prior to the date of transition.	60	[AGENCY] Fire Services Coordinator Technology Services
11. Develop curriculum and deliver training to [AGENCY] employees on the use of computer systems, telephone systems, and other technology. Outcome: All [AGENCY] employees have received training on the technology systems they will use during the course of their employment.	120	[AGENCY] Fire Services Coordinator Technology Services

External Relationships

No single agency can provide effective delivery of service without the cooperation of other regional service providers. [AGENCY] will need to develop new relationships and identify new opportunities for regional cooperation.

Partnerships for the delivery of specialized services will need to be identified and agreements set in place. This includes fire/EMS service delivery, hazardous materials response, technical rescue services, and fire prevention programs.

Developing cooperative programs with [MA AGENCY], [MA AGENCY], and [MA AGENCY] could provide [AGENCY] residents significant benefit by sharing resources. In turn, [AGENCY] could also offer services outside to neighboring agencies in a reciprocal manner. Training, quality improvement, and EMS supply partnerships should be evaluated and entered, as appropriate.

Establishing effective regional partnerships now will enhance the overall quality of service provided to the community.

External Relationship Tasks	Estimated Hours	Responsibility
1. Develop or revise and execute an agreement for a regional hazardous materials response team. Outcome: The agreement for the three-party regional hazardous materials response team is in effect as of the date of transition.	24	[AGENCY] Fire Services Coordinator Finance Manager [AGENCY] Transition Rep Legal Counsel
2. Identify alternatives for technical rescue services. Negotiate and implement agreements as appropriate for services delivered by other regional departments or through cooperative ventures until [AGENCY] staff can be fully trained and operational: <ul style="list-style-type: none"> a. Confined space rescue b. High angle rescue c. Water rescue Outcome: The source of technical rescue services has been identified, and agreements are in place as of the date of transition.	10	[AGENCY] Fire Services Coordinator [AGENCY] Transition Rep Legal Counsel
3. Identify regional efforts in which [AGENCY] should be a participant, such as regional arson investigation programs, and regional juvenile fire-setter education programs. Determine [AGENCY]'s appropriate participation level and the resources needed. Outcome: The regional initiatives [AGENCY] will participate in have been identified, and resources are assigned.	20	[AGENCY] Fire Services Coordinator
4. Create an agreement and set up procedures to accomplish EMS supply exchange between an appropriate local hospital (EXAMPLE), or vendors, and the [AGENCY] Fire Department. Explore the ability to re-supply at the EMT-Intermediate level 24X7. Outcome: EMS re-supply agreements and procedures are in place at the agreed-upon EMT level by the date of transition.	36	[AGENCY] Fire Services Coordinator EMS Director Legal Counsel
5. Develop automatic and mutual aid agreements between [AGENCY], [MA AGENCY], [MA AGENCY], [MA AGENCY], and other regional departments for improved service delivery to [AGENCY]. Negotiate and execute agreements as appropriate. Outcome: Signed agreements are in place prior to transition.	30	[AGENCY] Fire Services Coordinator [AGENCY] Legal

External Relationship Tasks	Estimated Hours	Responsibility
6. Evaluate opportunities for sharing services between [AGENCY], [AGENCY], [MA AGENCY], [MA AGENCY], and other regional departments for services such as fire prevention services and Battalion Chief coverage. Outcome: Service-sharing opportunities are identified and evaluated.	64	[AGENCY] Fire Services Coordinator
7. Establish a task force including [AGENCY] and staff from [AGENCY] (to assist) to develop response protocols and point of dispatch procedures for emergency medical response. Determine EMS incidents by priority level that are appropriate for [AGENCY] response. Continue to focus on the use of tiered dispatch procedures. Outcome: Point of dispatch and response protocols have been developed that provide the most effective level of service to the community.	90	[AGENCY] Fire Services Coordinator EMS Director
8. Identify EMS training that can be provided to [AGENCY] by regional departments along with the costs and logistics associated with that training. Integrate appropriate training opportunities into the [AGENCY] training plan. Outcome: EMS training to be provided by [AGENCY] has been identified and agreements are in place to implement the training.	20	[AGENCY] Fire Services Coordinator EMS Director
9. Develop an internal CQI program to measure [AGENCY] EMS effectiveness and quality. Outcome: The manner in which the [AGENCY] will conduct CQI programs has been identified and implemented by the date of transition.	20	[AGENCY] Fire Services Coordinator EMS Director

Implementation

This transition plan describes the work to be accomplished to effect the transition of service delivery from the [AGENCY] to the [AGENCY] Fire Department. There is a great deal to be done in a relatively short time frame. Key considerations to ensure success include:

1. Establishing clear lines of authority and accountability.
2. Ensuring constant and comprehensive communication between the various [AGENCY] staff, the new [AGENCY] staff, and other internal and external interests.
3. Detailing each task into an action plan to fully define the work effort involved.
4. Keeping the public and employees fully informed of activities and progress.

Authority and Accountability

There needs to be one person to whom responsibility clearly rests for the accomplishment of this Plan. This person needs to have the organizational placement required to ensure his or her authority regarding this transition plan is respected.

All who have the responsibility to accomplish tasks outlined in this Plan need to be held accountable. Reporting systems must be in place to identify the level of progress on the Plan at key milestones.

Communication

Many tasks outlined in this Plan involve more than one agency or interest. Developing systems to ensure constant and productive communication between the various stakeholders will be important to success.

Multi-disciplinary teams should be established to ensure the work of one department or interest does not adversely affect the work of another. These teams should also ensure that work is not duplicated.

Regular progress meetings should be conducted so that all stakeholders understand the progress and challenges of others. Further, these meetings will help coordinate efforts to avoid duplication or progress along different paths.

Documenting progress in written form will also provide value. Written progress reports provide a ready reference to all stakeholders as to the status of the transition effort, challenges being encountered, and a listing of tasks completed.

Action Plans

This Transition Plan provides a comprehensive and detailed list of tasks to be accomplished. Detailing each task into a written action plan will help to define potential roadblocks, describe special resources that may be required, identify unexpected inter-relationships, and define critical milestones.

The following page provides an example action plan form that could be used for this effort. These plans should be shared with other stakeholders, particularly those who are involved in task accomplishment.

Public Information

Providing frequent information to the public will be important to the transition's success. The public will be understandably concerned about the future of their fire and emergency services as a result of the termination of the services currently provided by the [AGENCY].

Information should be provided on a regular basis identifying progress on the Transition Plan. Details about how service will be delivered by the newly reconstituted [AGENCY] should be included. As early as possible, contact information for [AGENCY] should be provided so members of the public with concerns or special needs post-transition can begin to share those directly with [AGENCY] staff.

Transition Action Plan				
Task:				
Start Date:			End Date:	
Task Lead:			Assisting:	
Action Steps	Start Date	End Date	Person Assigned	Resources Required
Desired Outcome:				
Special Considerations:				
Results:				

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Yamhill & Polk Counties Fire Departments & Districts

McMinnville, Oregon

December 2020

Fire District & Departments Agency Analysis Addendum

An Evaluation of the Potential for Consolidation

ESCI Emergency Services
Consulting International

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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
Operations 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:

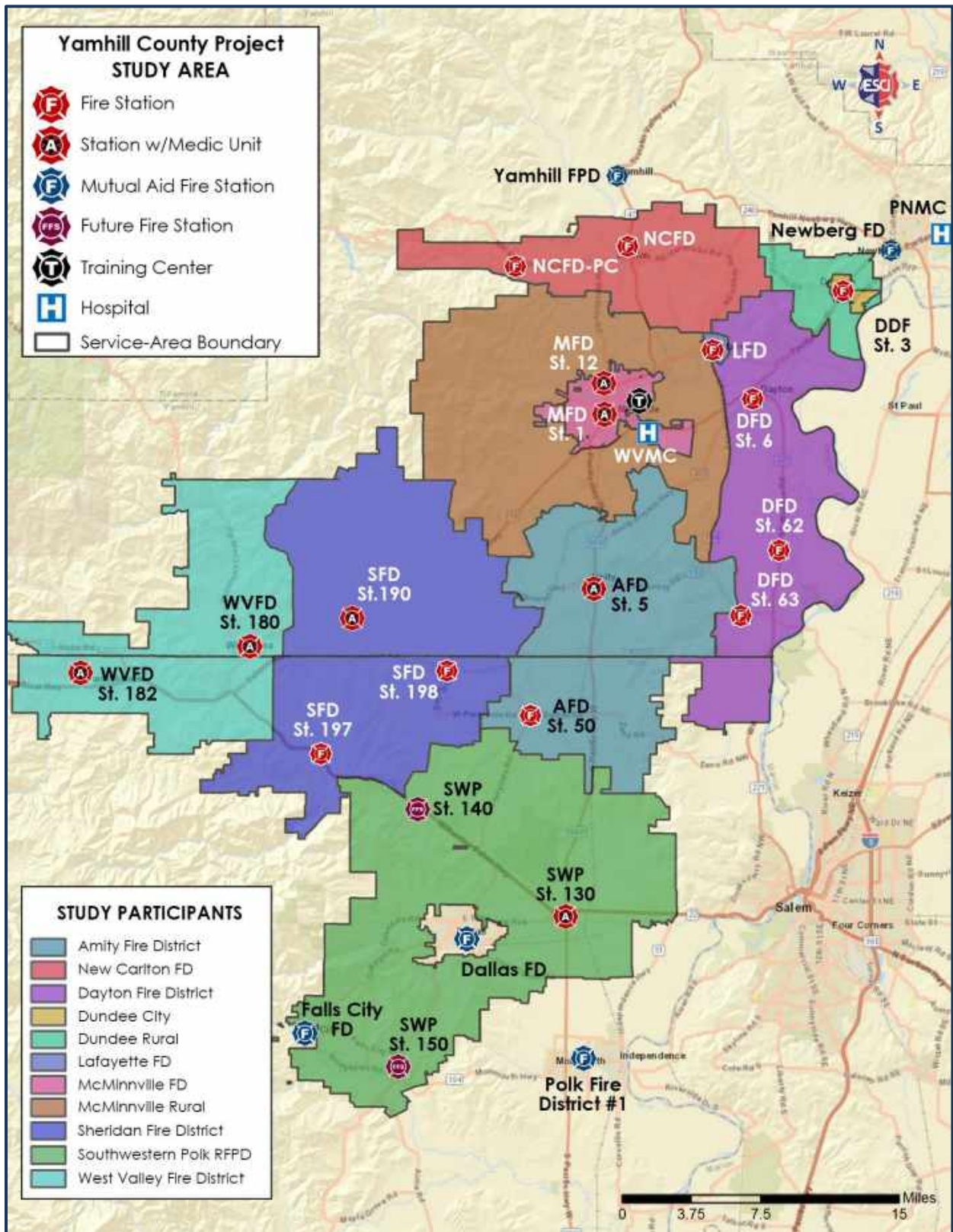
- Amity Fire District (AFD)
- Dayton Fire District (DFD)
- Dundee Fire District (DDF)
- Layfayette Fire Department (LFD)
- McMinnville Fire Department (MFD)
- New Carlton Fire District (NCFD)
- Sheridan/SW Polk/West Valley Fire Districts (SFD/SWP/WVFD or the Collective Fire Districts)

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%
McMinville 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%

¹Rounded 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%

¹Rounded 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

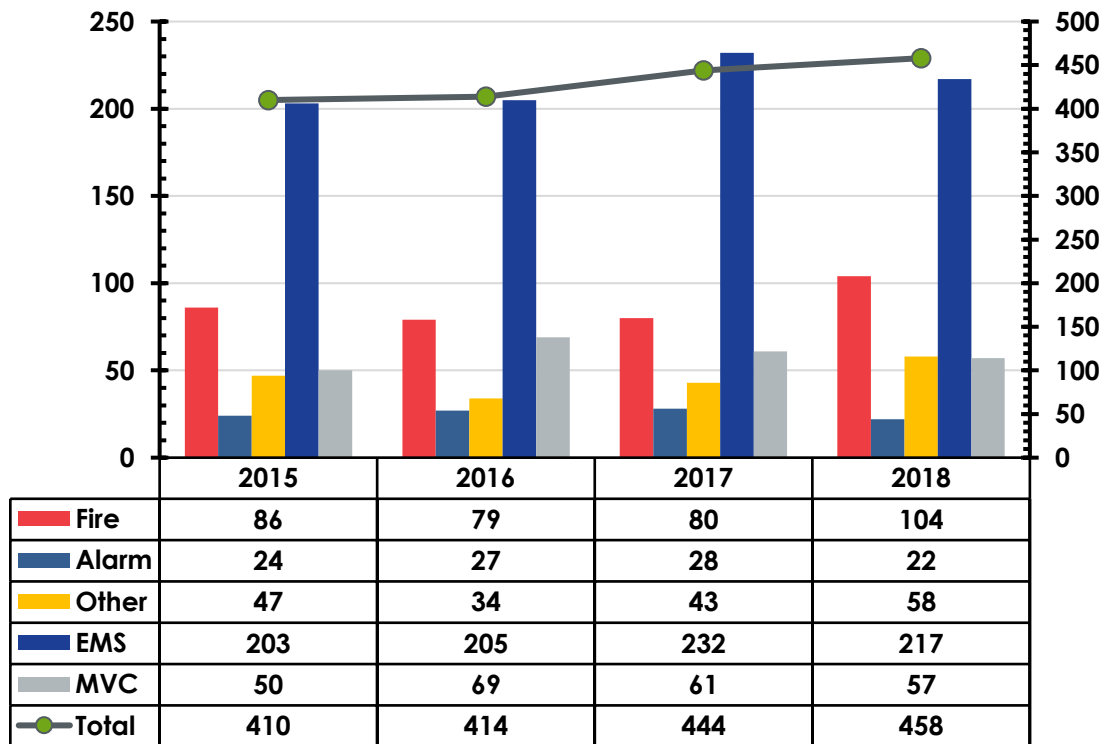
Incidents by NFIRS Incident Type—Linear

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.

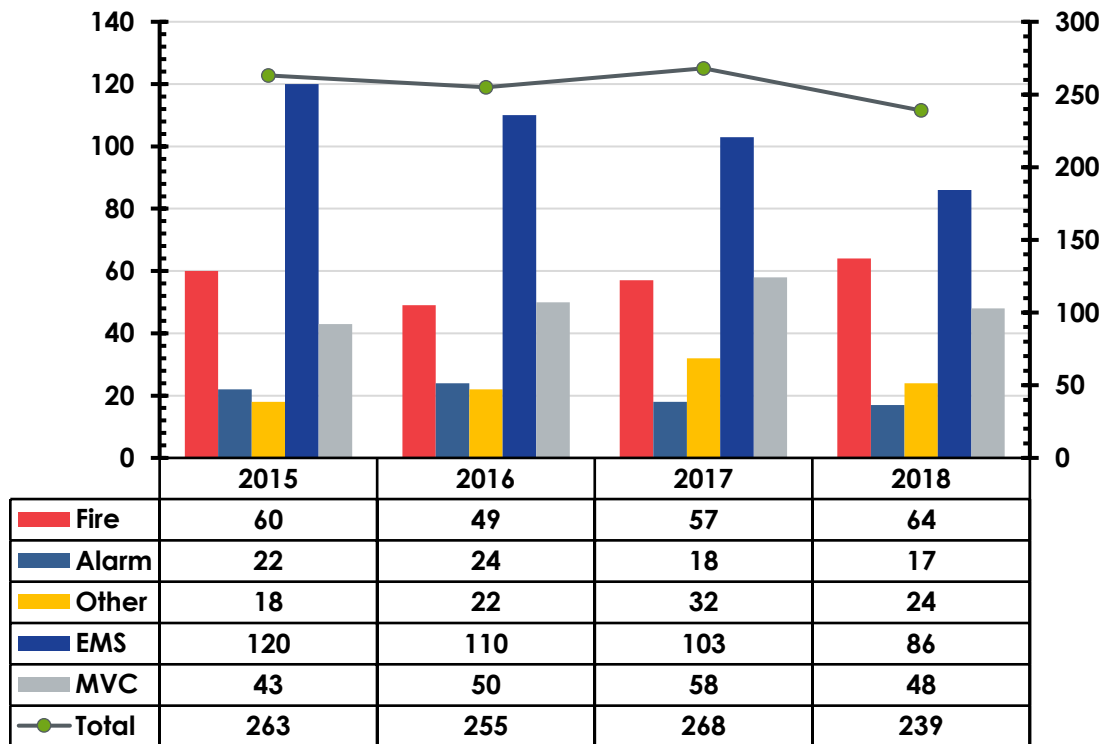
Figure 3: AFD Incidents by NFIRS Type, 2015–2018



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.

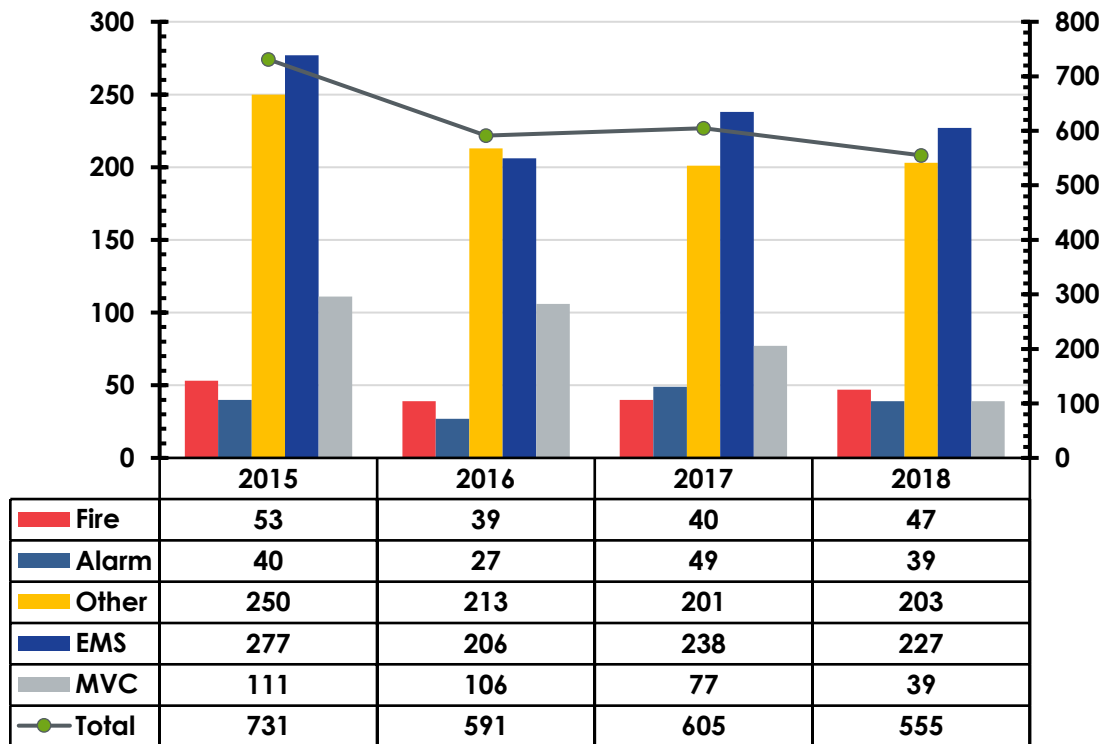
Figure 4: DFD Incidents by NFIRS Type, 2015–2018



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.

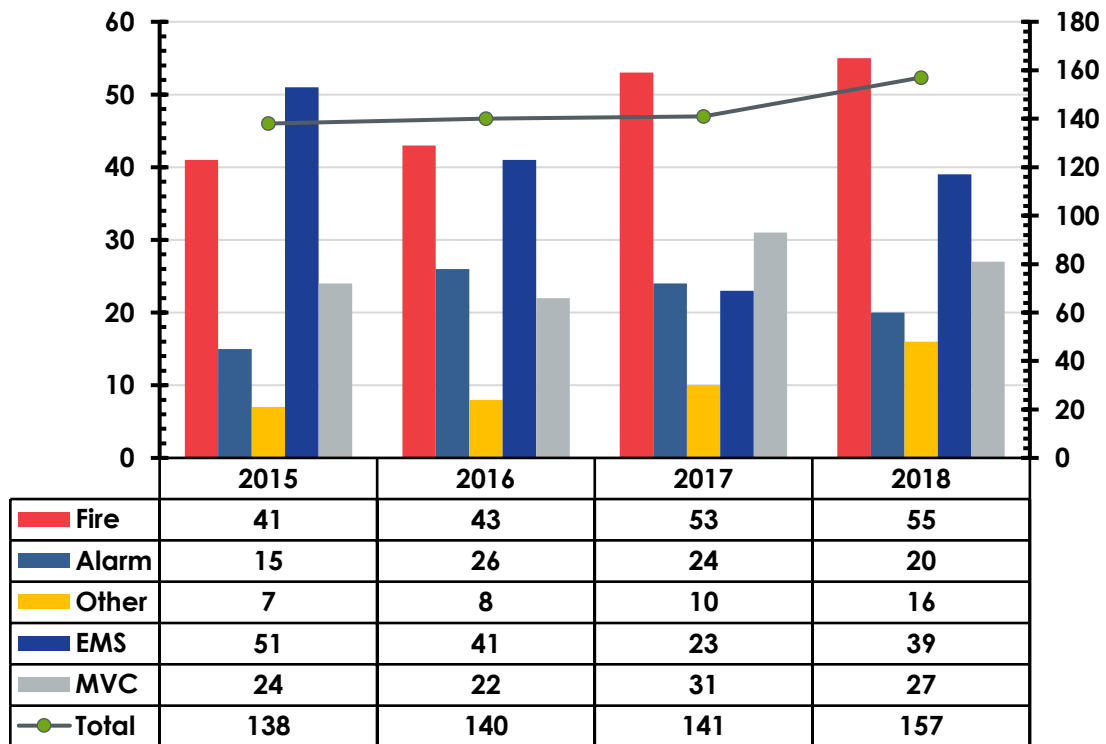
Figure 5: DDF Incidents by NFIRS Type, 2015–2018



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.

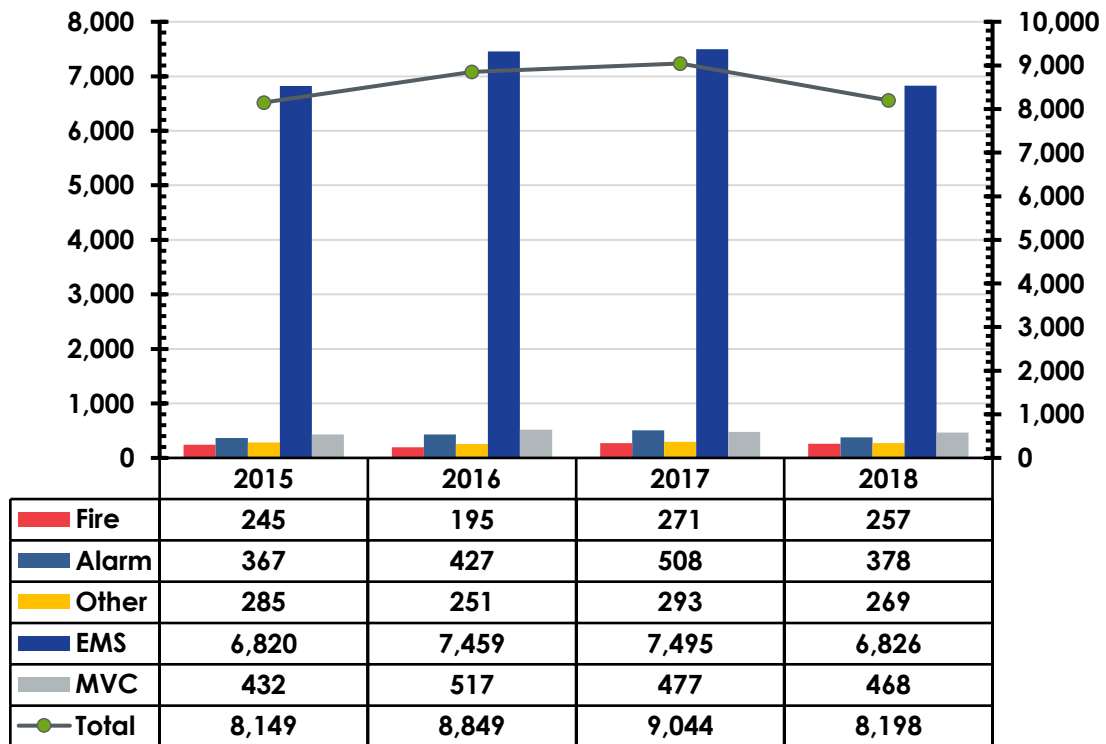
Figure 6: LFD Incidents by NFIRS Type, 2015–2018



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.

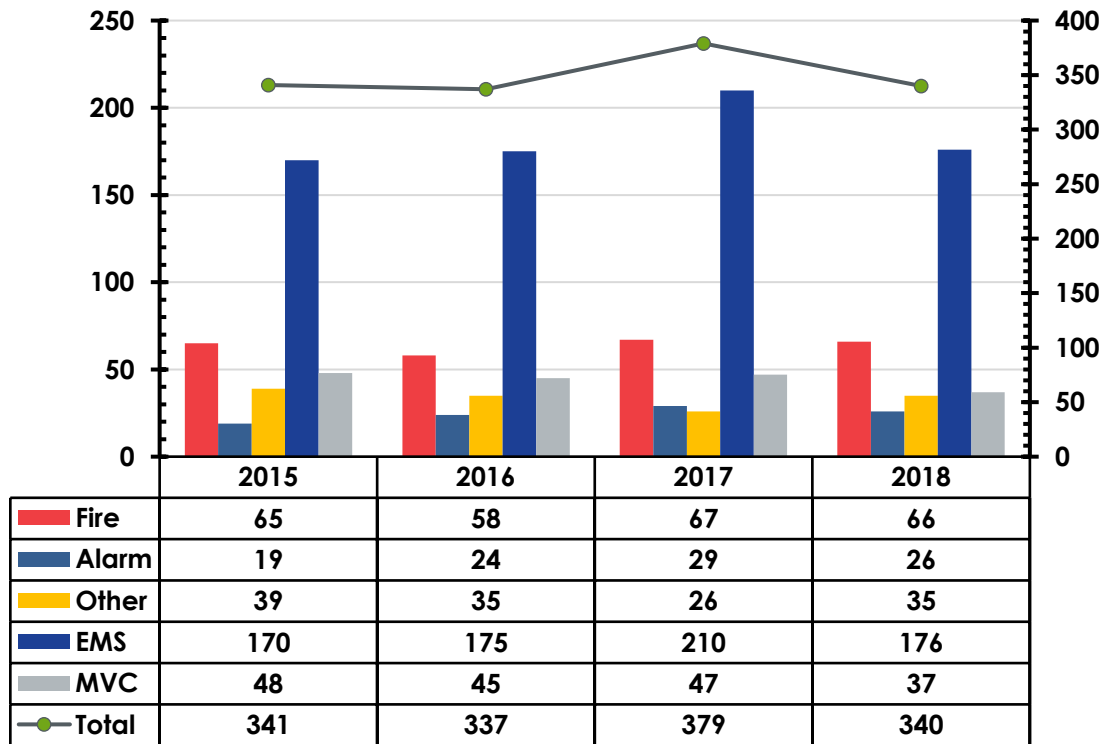
Figure 7: MFD Incidents by NFIRS Type, 2015–2018



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.

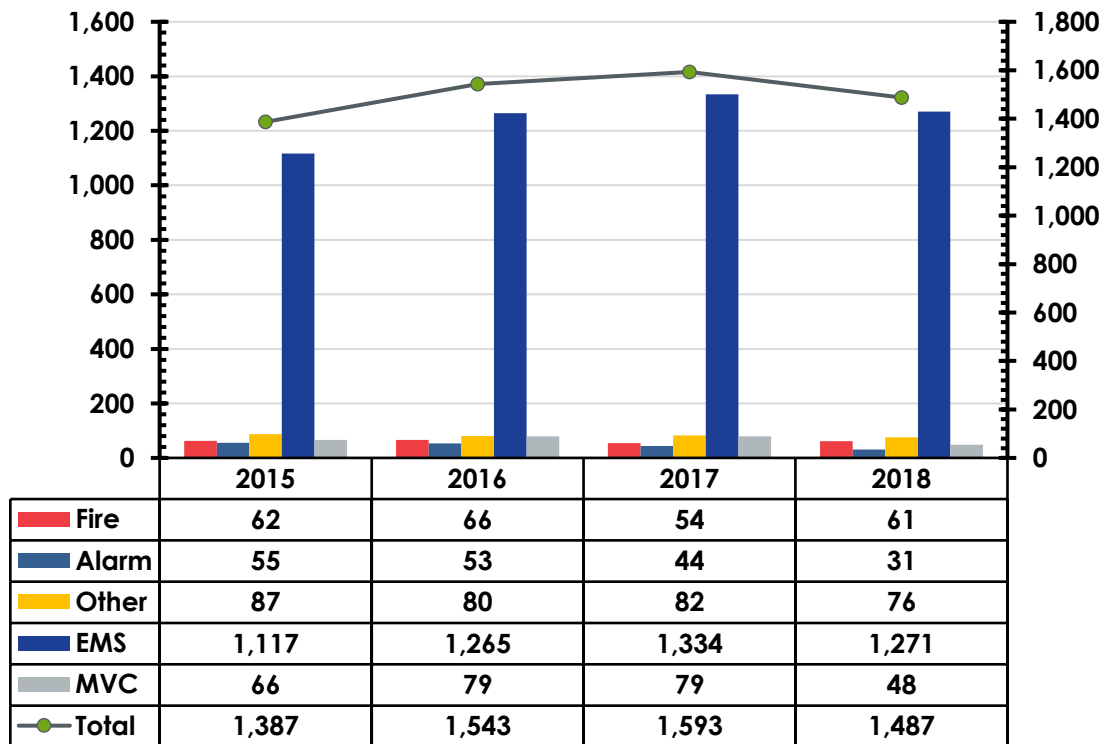
Figure 8: NCFD Incidents by NFIRS Type, 2015–2018



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.

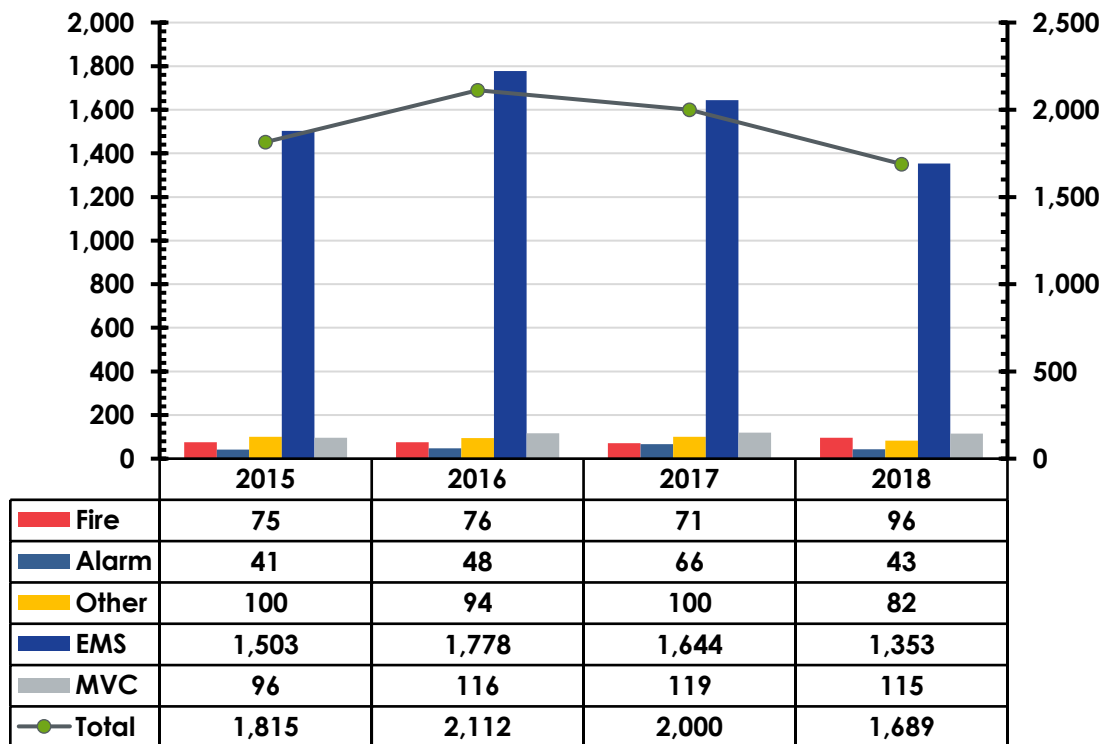
Figure 9: SFD Incidents by NFIRS Type, 2015–2018



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.

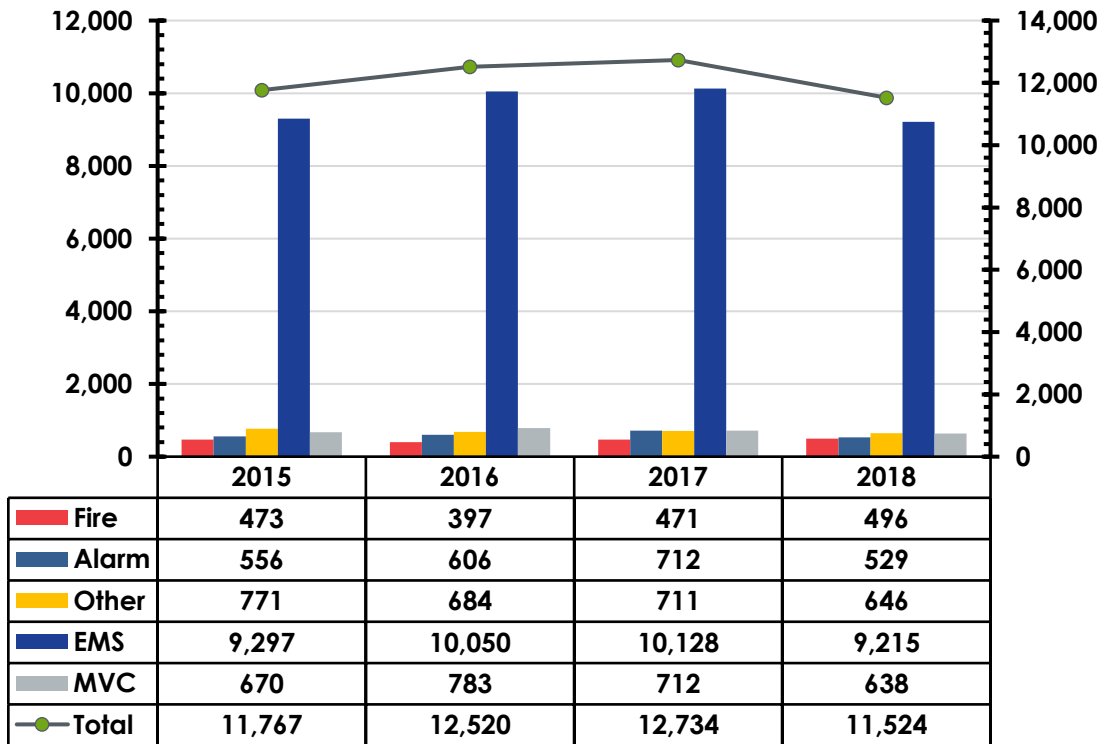
Figure 10: WVFD Incidents by NFIRS Type, 2015–2018



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

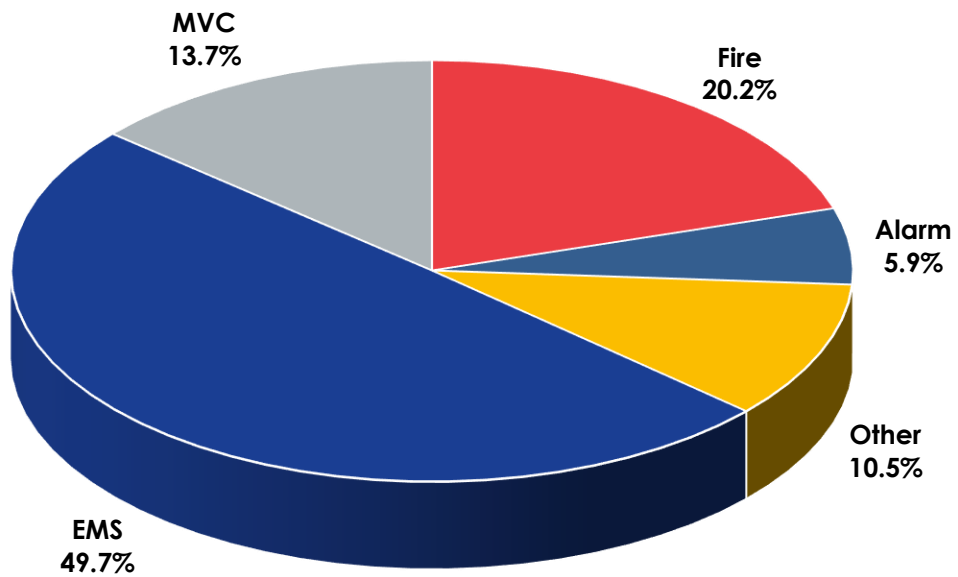


Incidents by NFIRS Incident Type—Percentage

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.

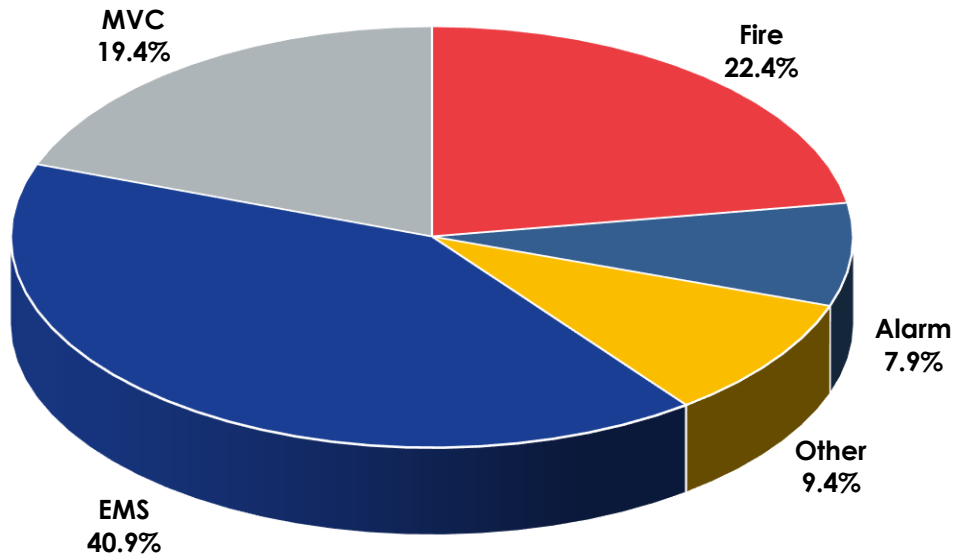
Amity Fire District

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



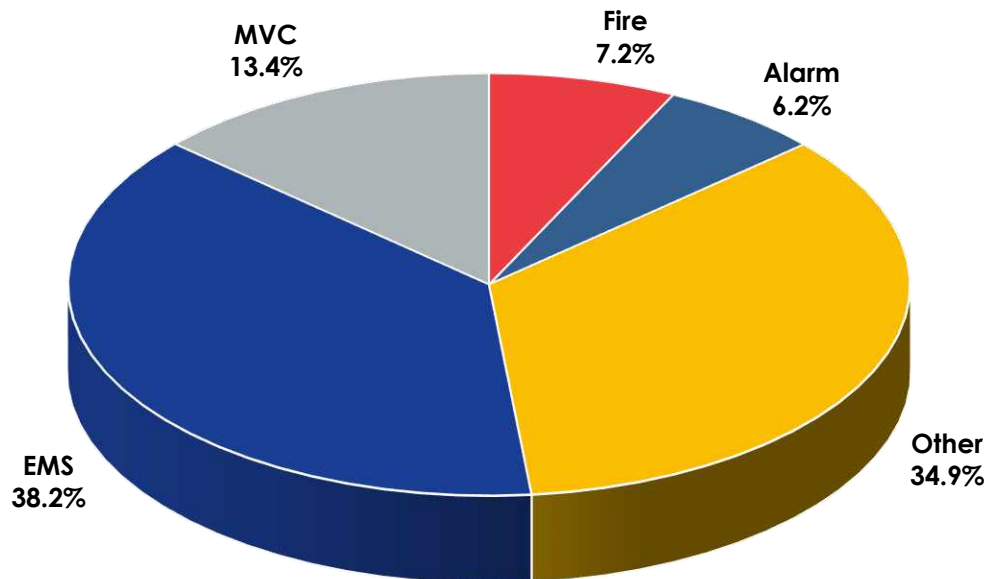
Dayton Fire District

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



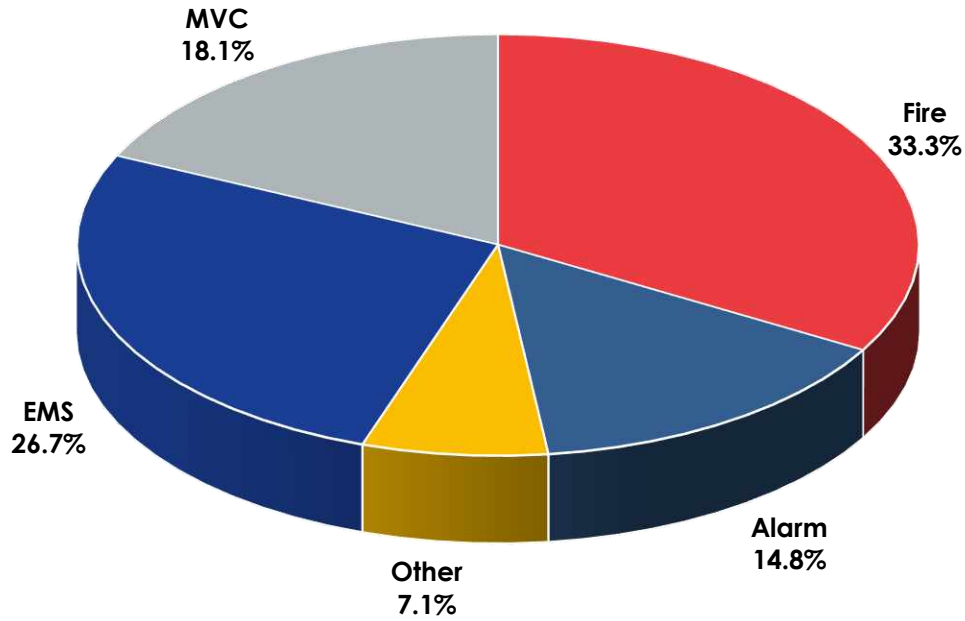
Dundee Fire District

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



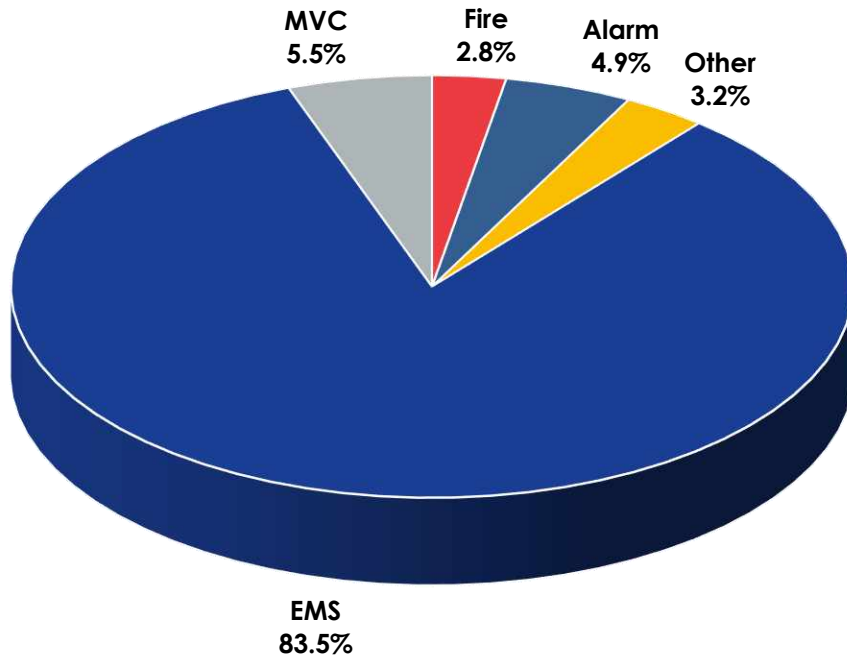
Lafayette Fire Department

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



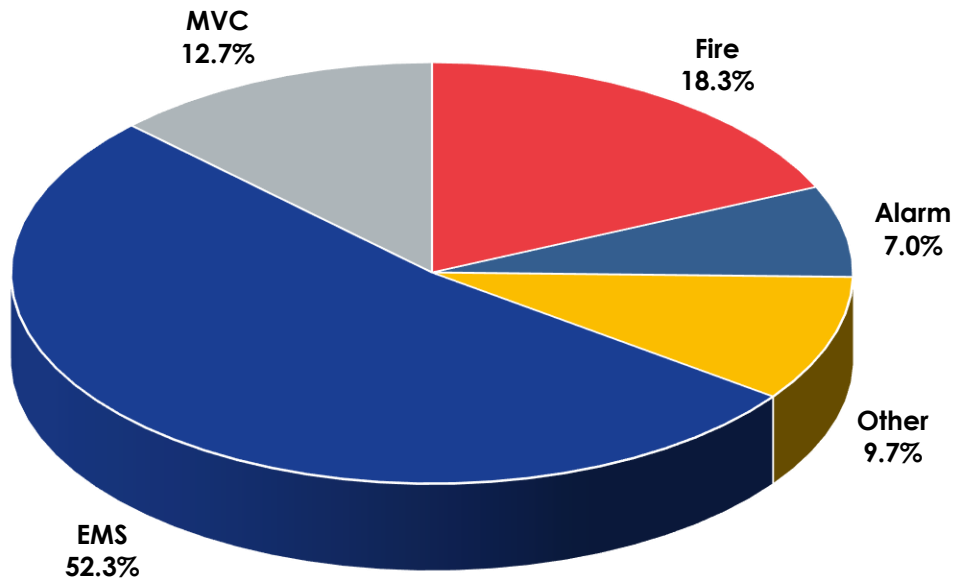
McMinnville Fire Department

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



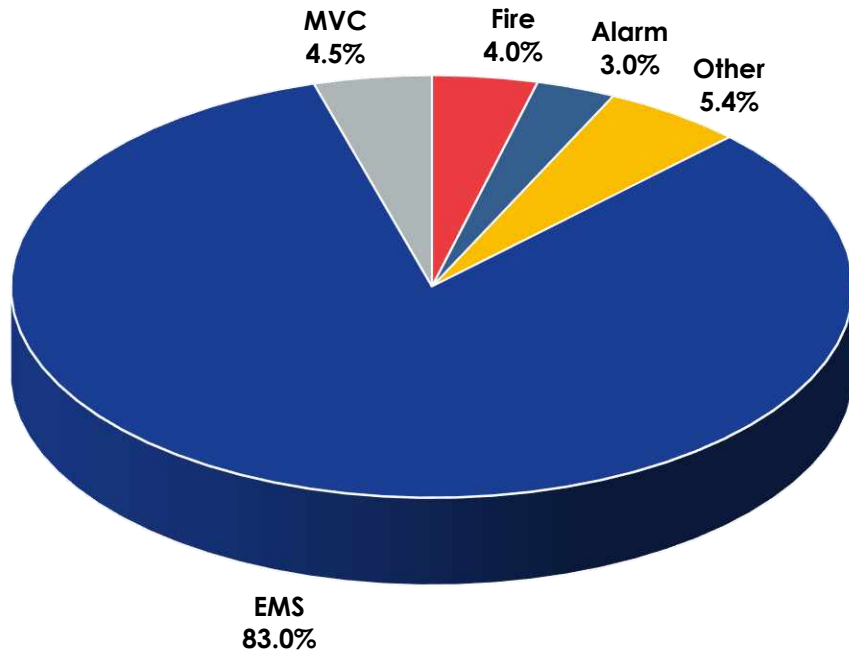
New Carlton Fire District

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



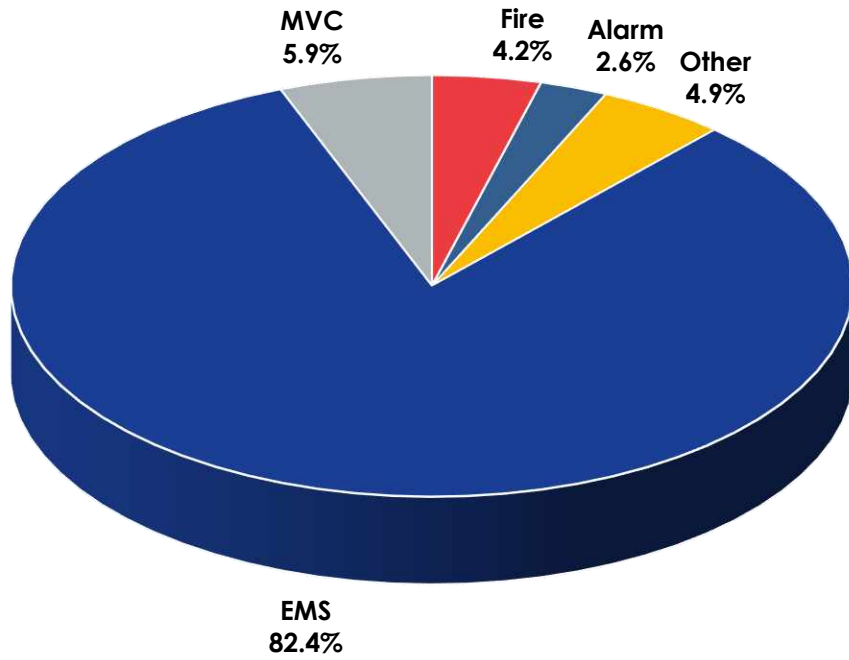
Sheridan Fire District

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



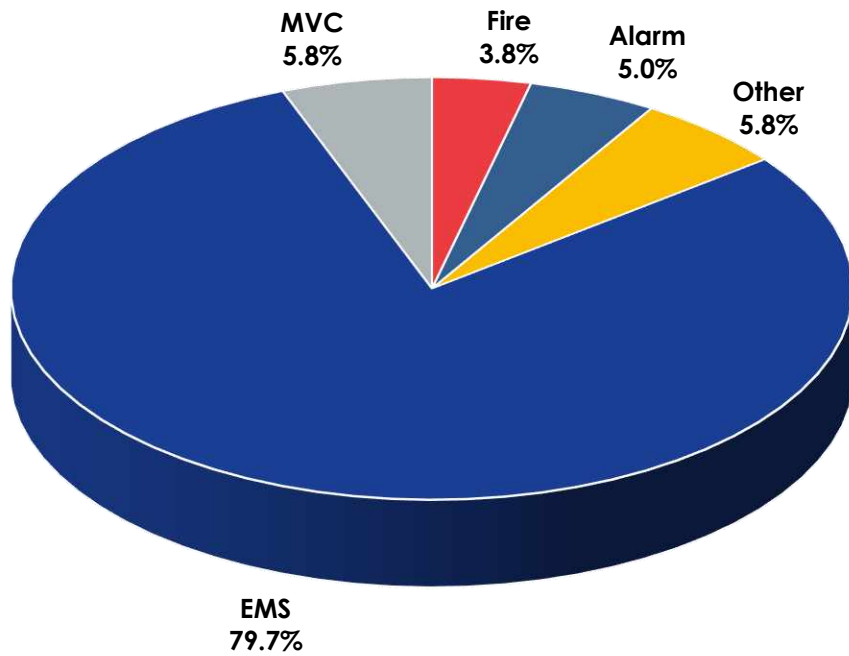
West Valley Fire District

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.

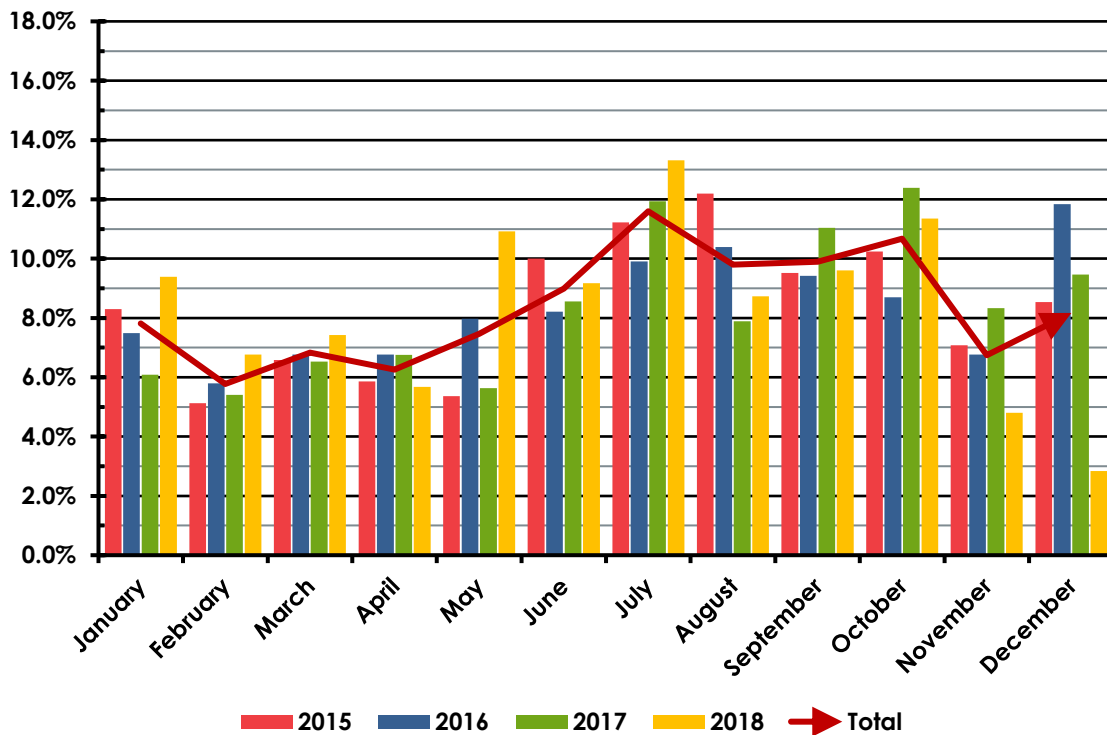
Temporal Analysis by Month

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.

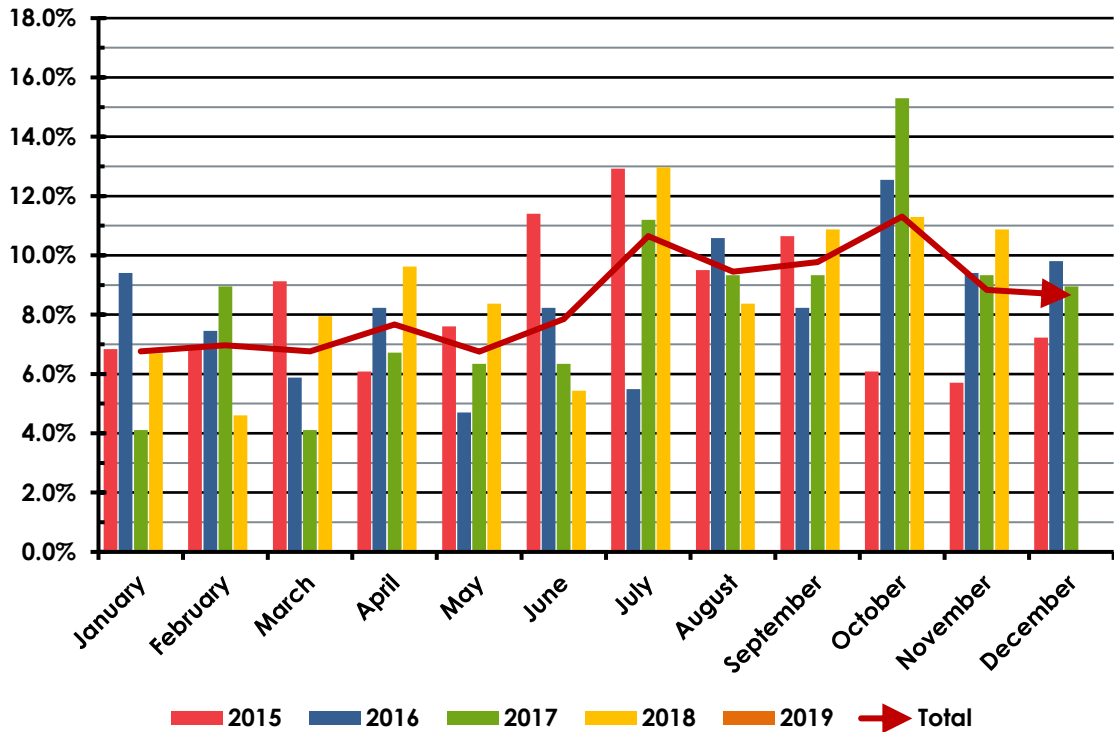
Figure 21: AFD Temporal Analysis by Month, 2015–2018



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.

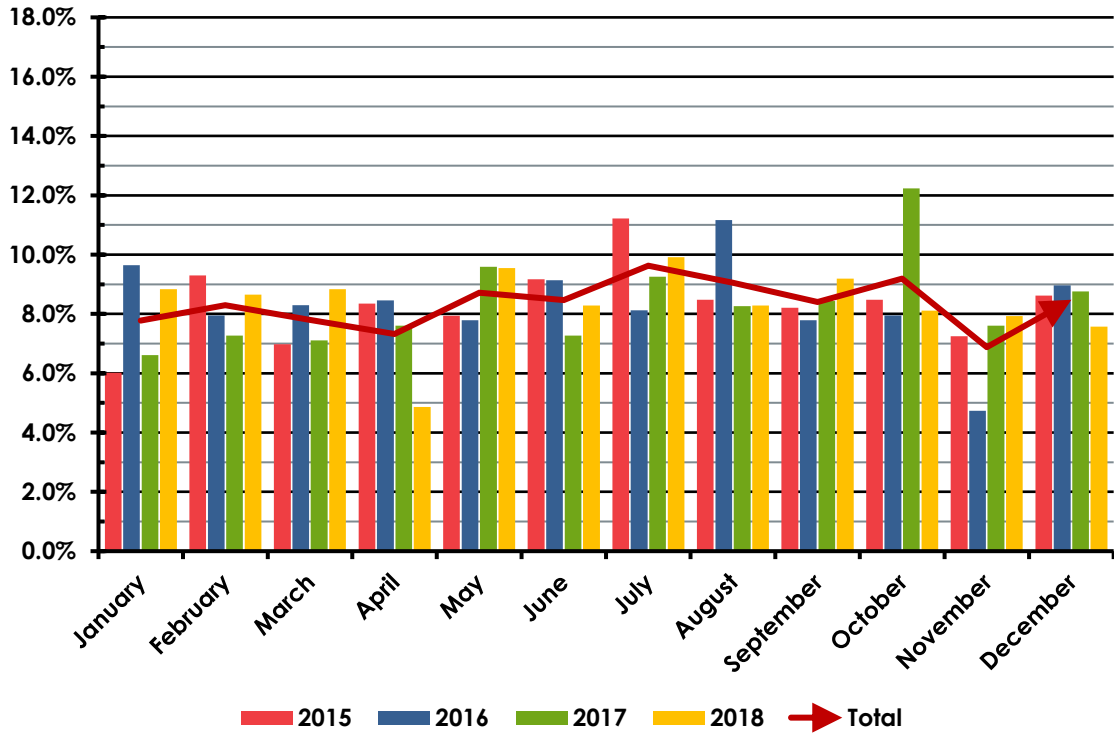
Figure 22: DFD Temporal Analysis by Month, 2015–2018



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.

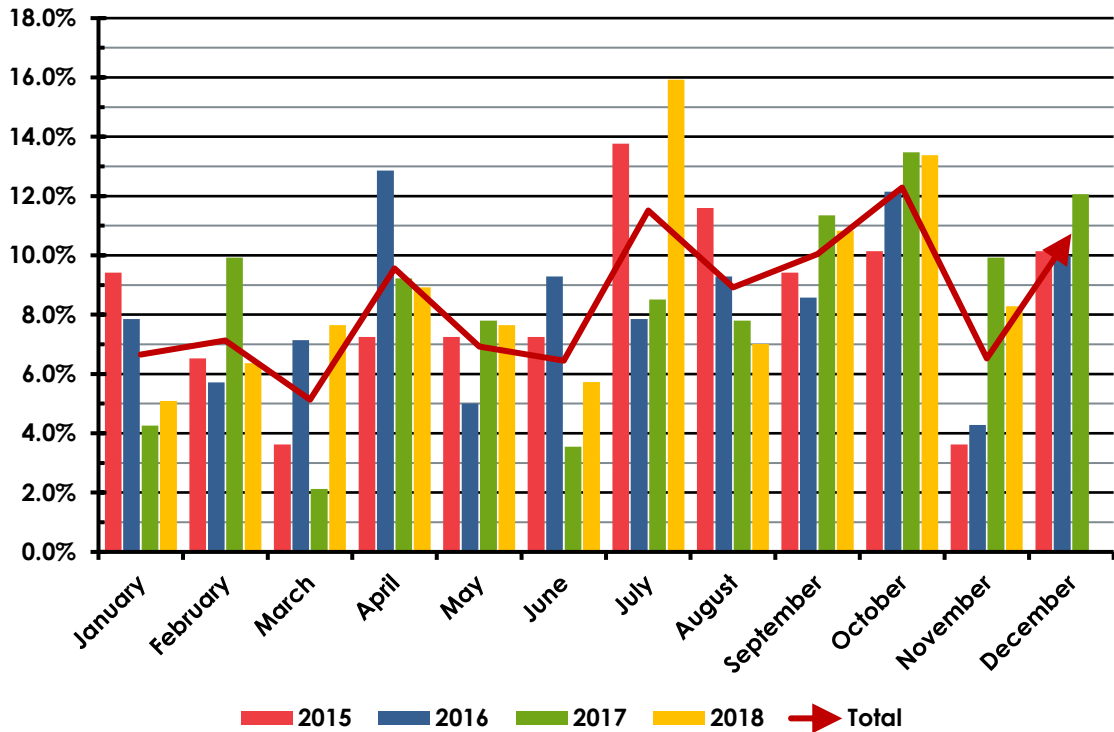
Figure 23: DDF Temporal Analysis by Month, 2015–2018



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.

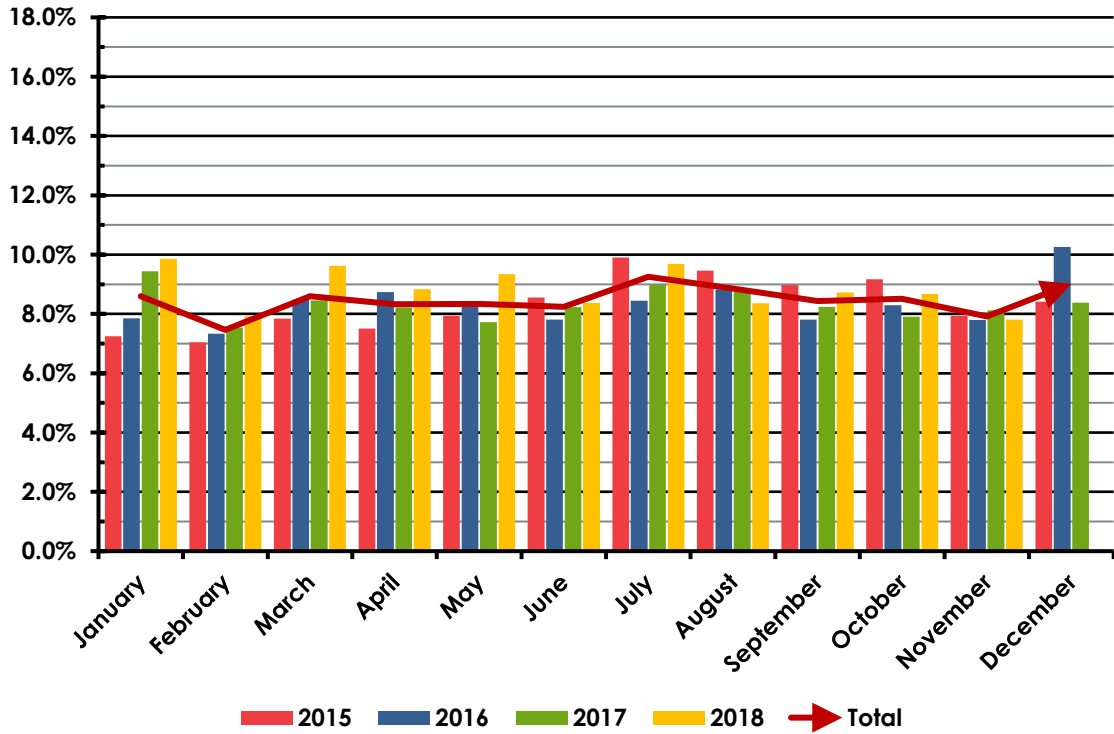
Figure 24: LFD Temporal Analysis by Month, 2015–2018



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.

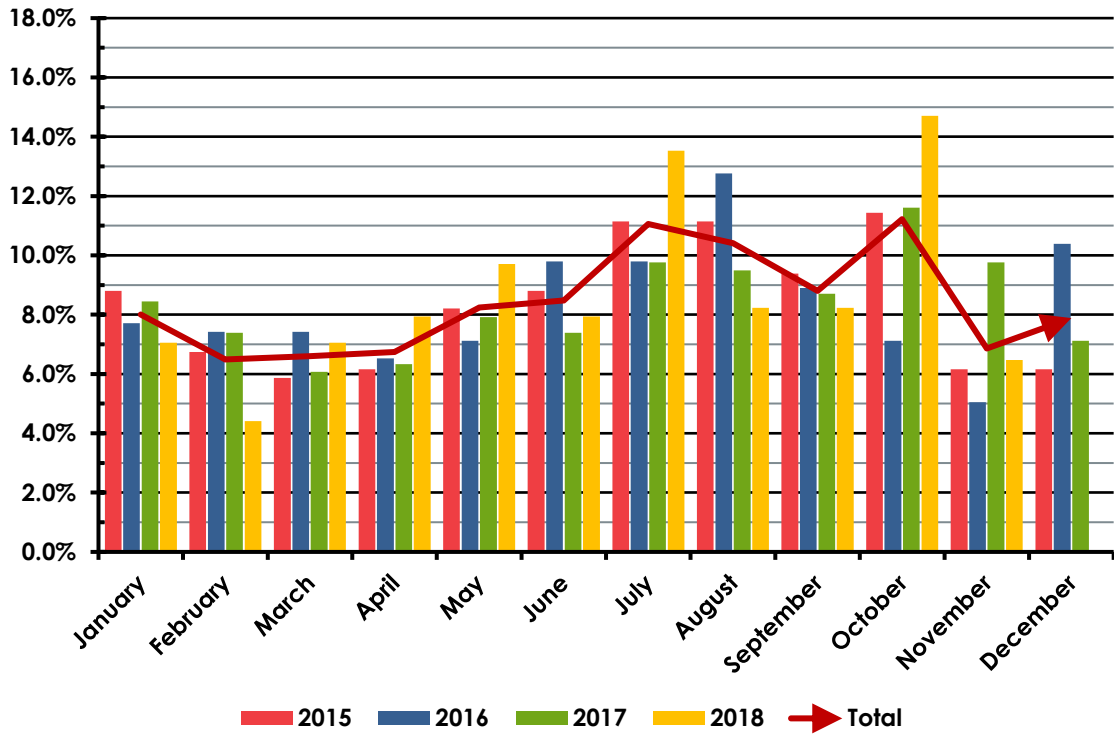
Figure 25: MFD Temporal Analysis by Month, 2015–2018



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.

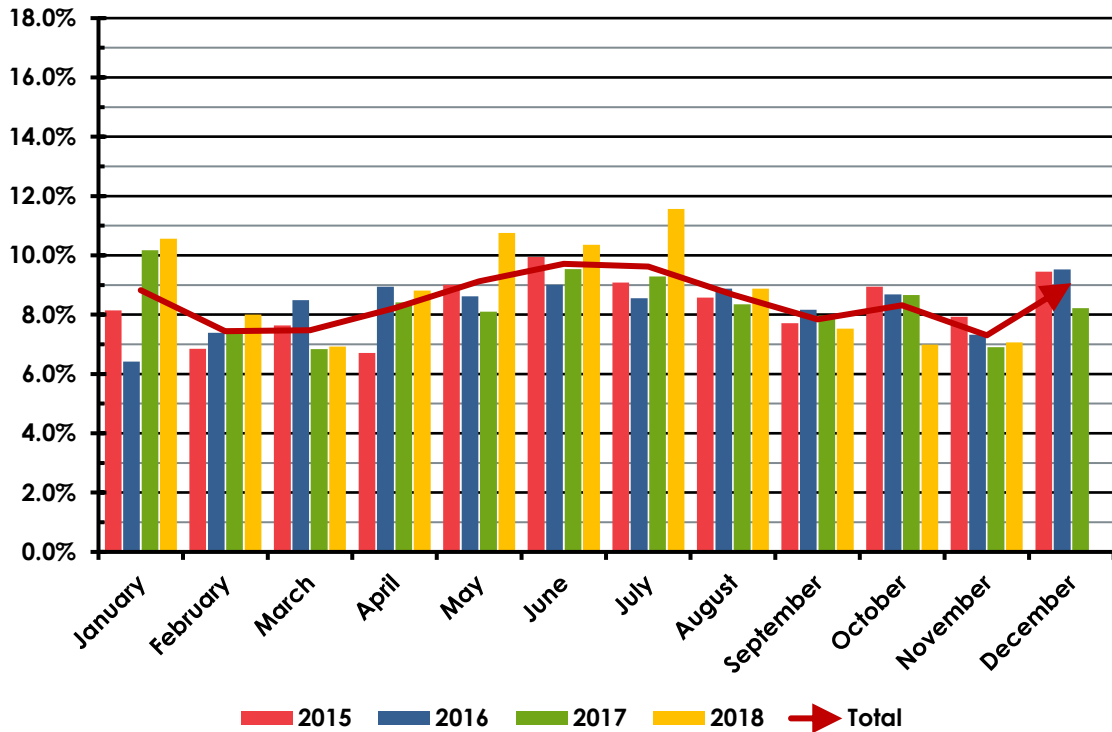
Figure 26: NCFD Temporal Analysis by Month, 2015–2018



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.

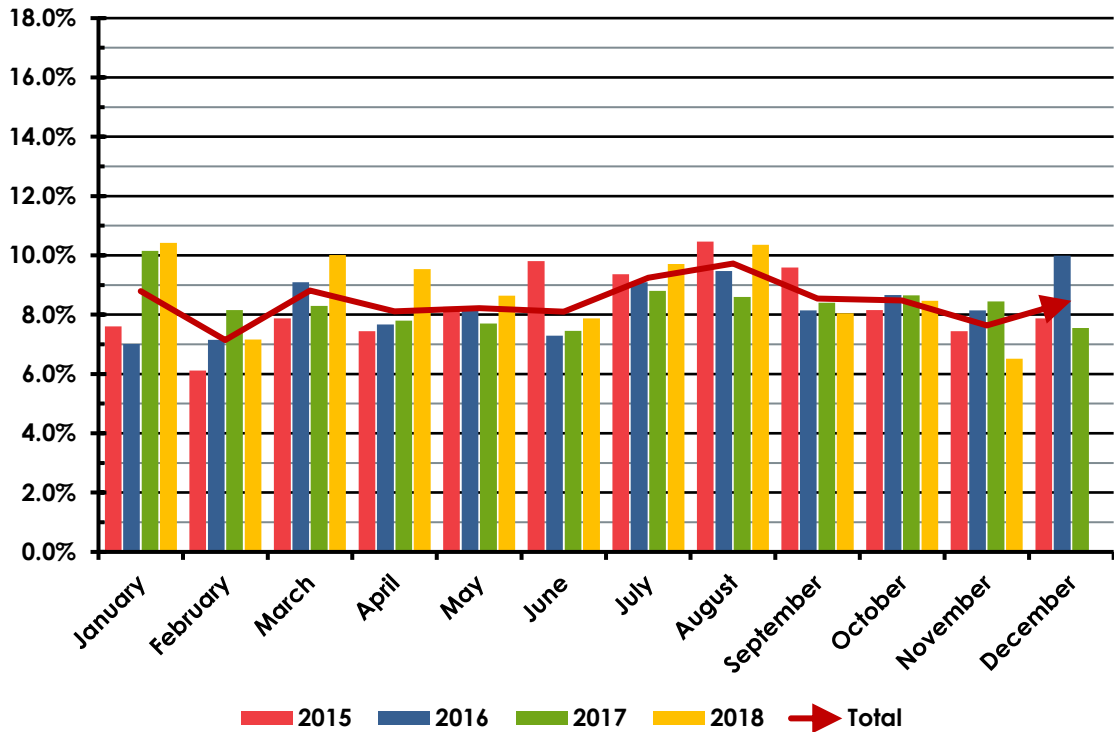
Figure 27: SFD Temporal Analysis by Month, 2015–2018



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.

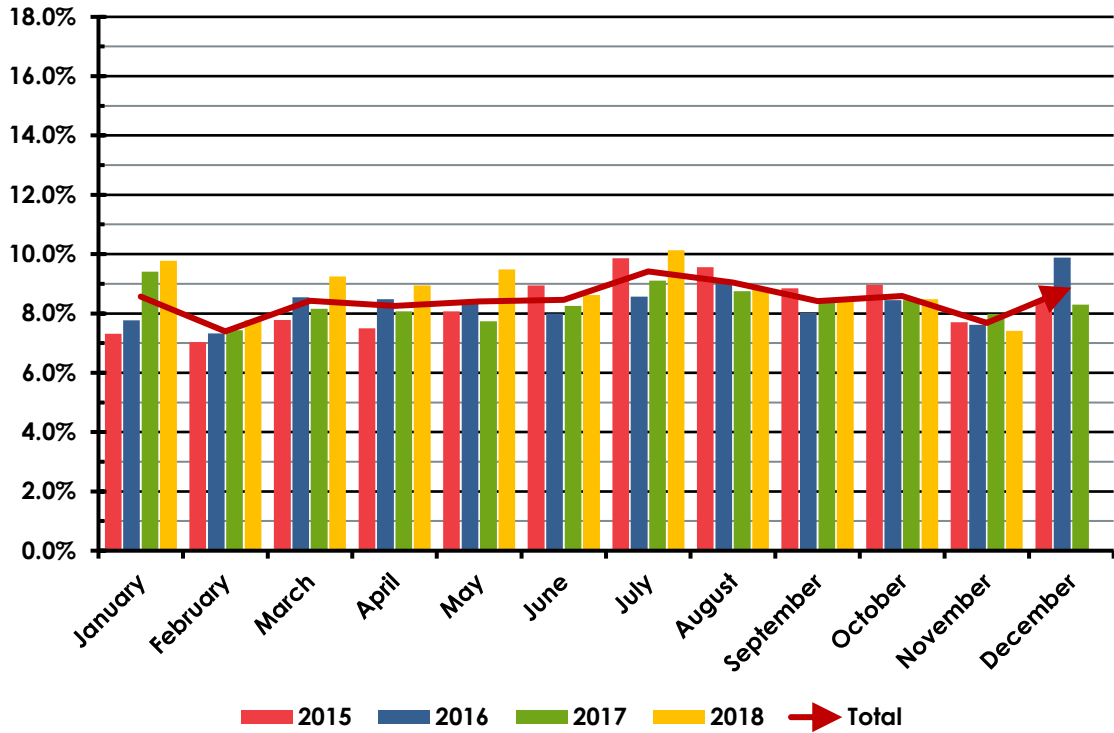
Figure 28: WVFD Temporal Analysis by Month, 2015–2018



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



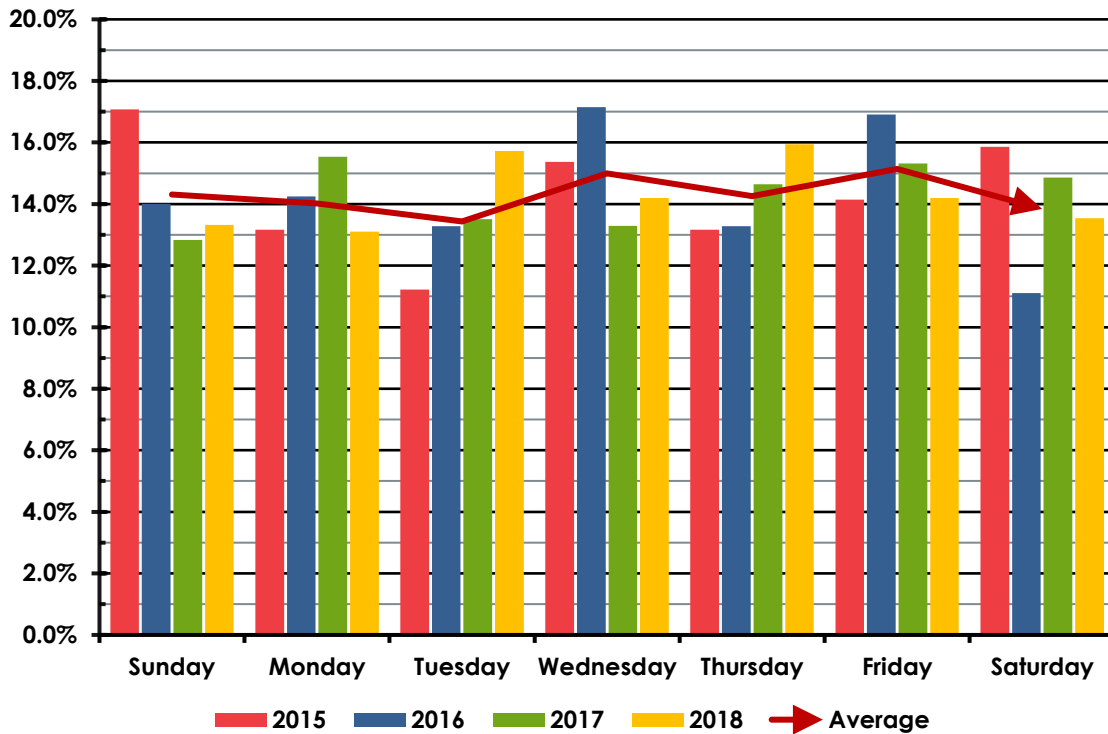
Temporal Analysis by Day of Week

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.

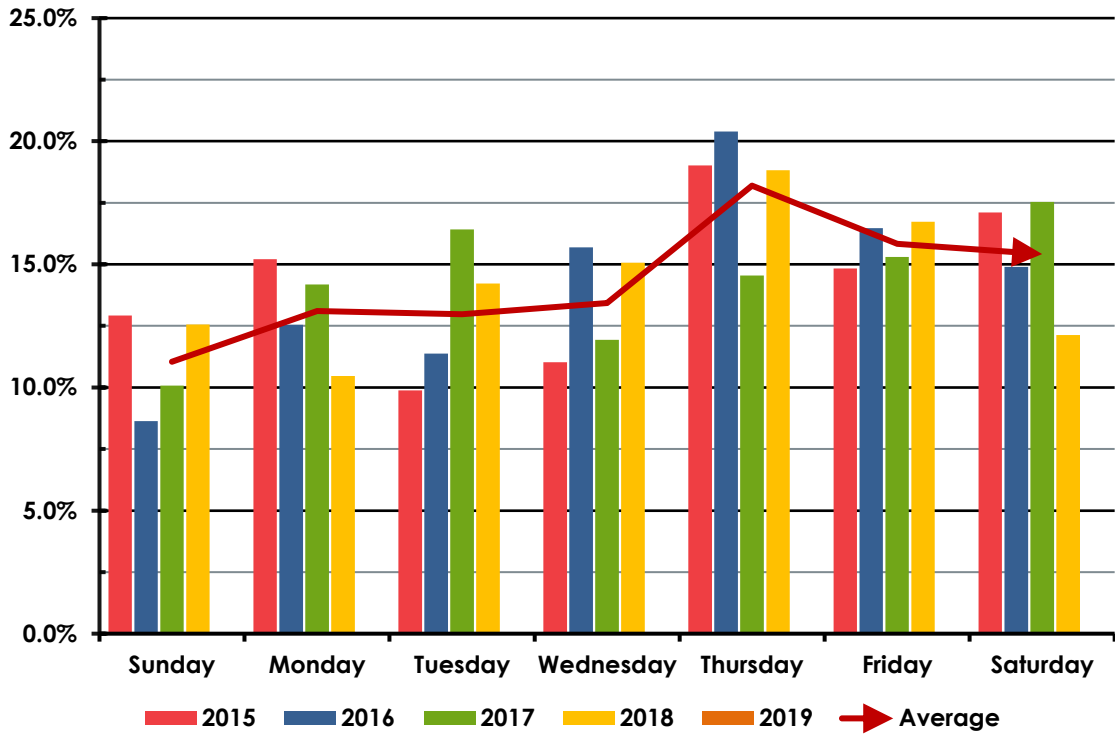
Figure 30: AFD Temporal Analysis by Day of Week, 2015–2018



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.

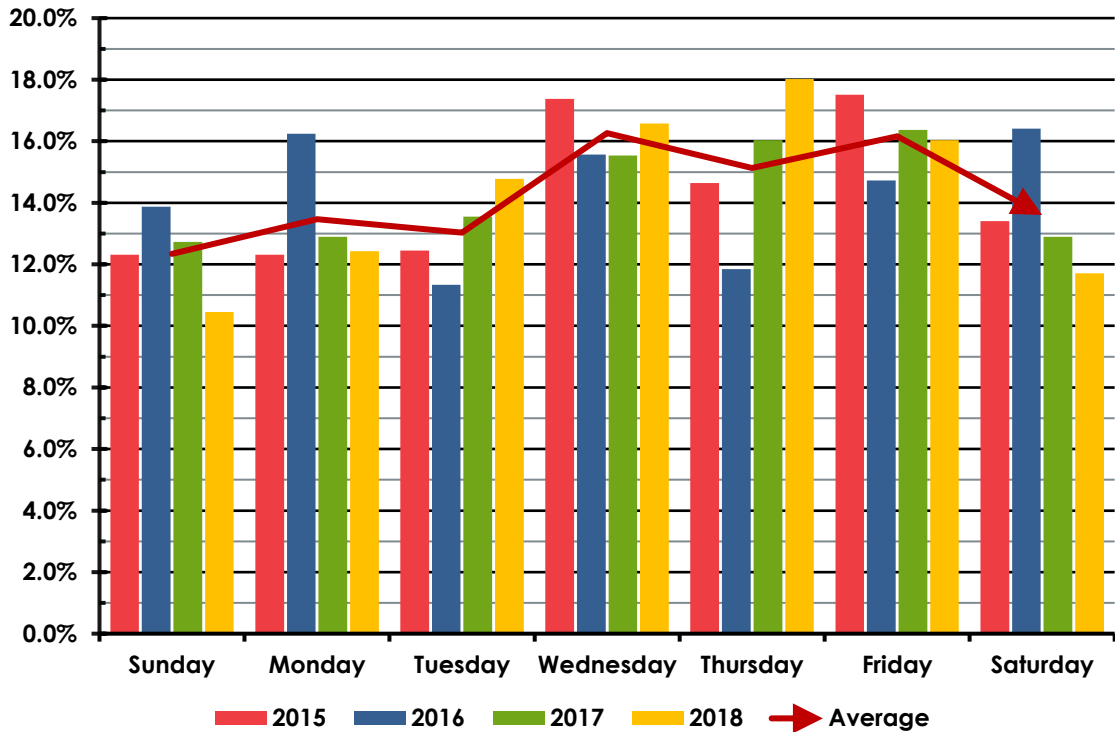
Figure 31: DFD Temporal Analysis by Day of Week, 2015–2018



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.

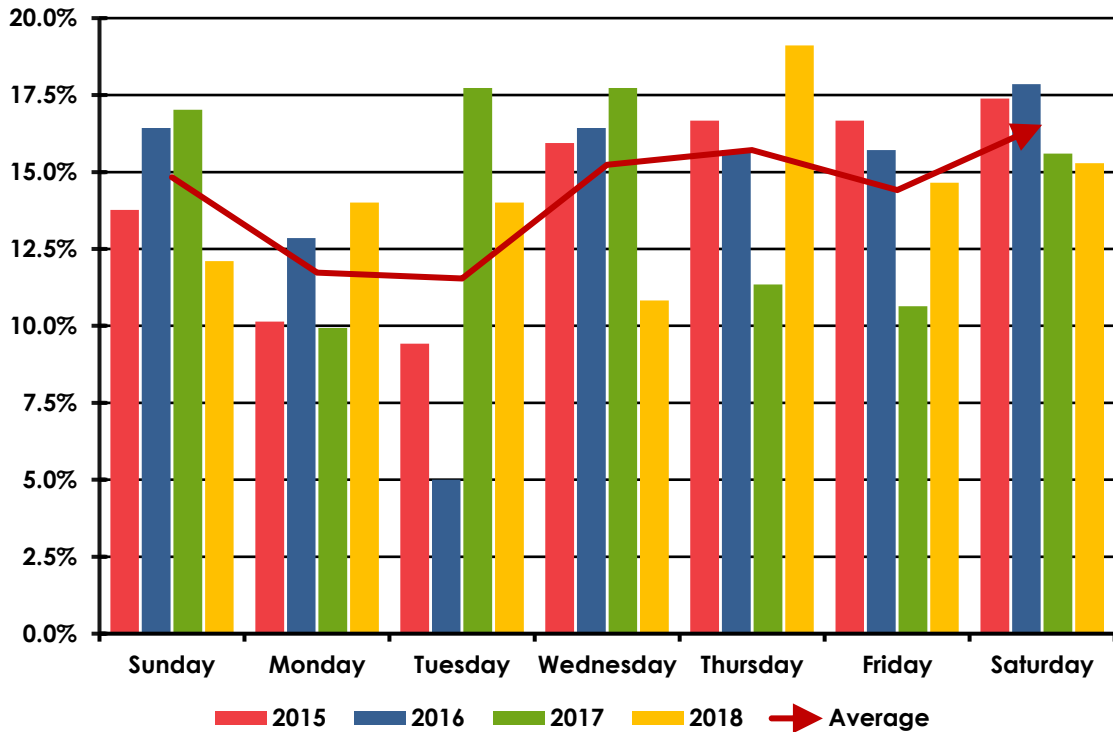
Figure 32: DDF Temporal Analysis by Day of Week, 2015–2018



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.

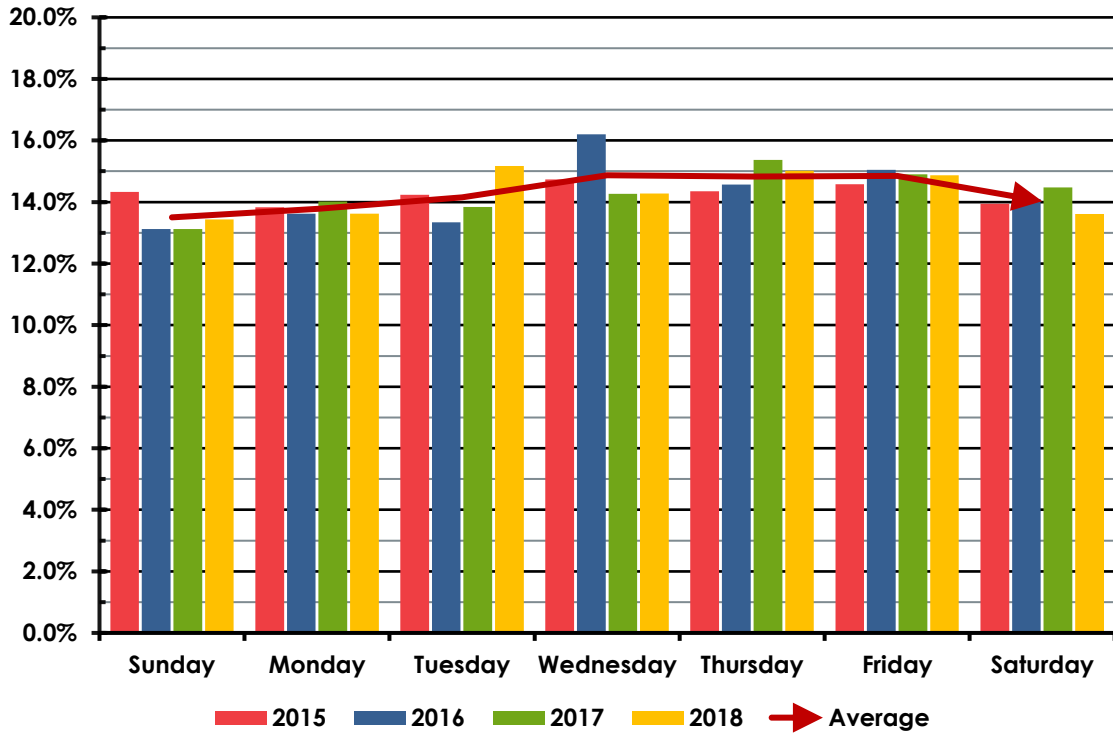
Figure 33: LFD Temporal Analysis by Day of Week, 2015–2018



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.

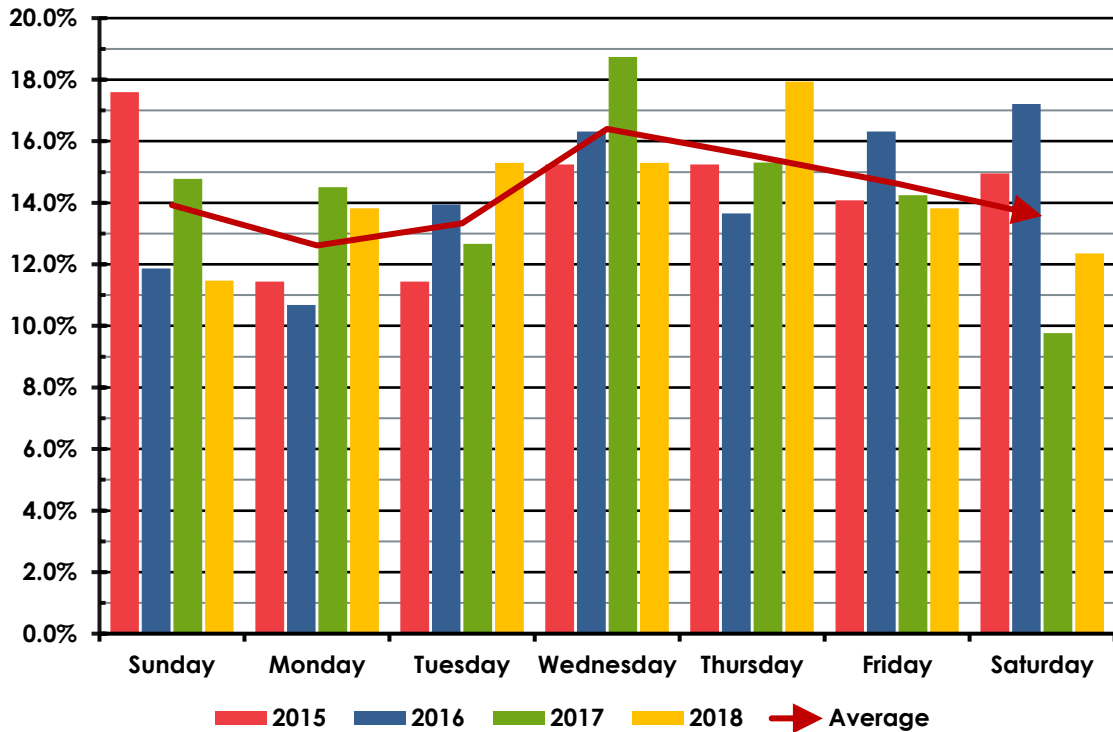
Figure 34: MFD Temporal Analysis by Day of Week, 2015–2018



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.

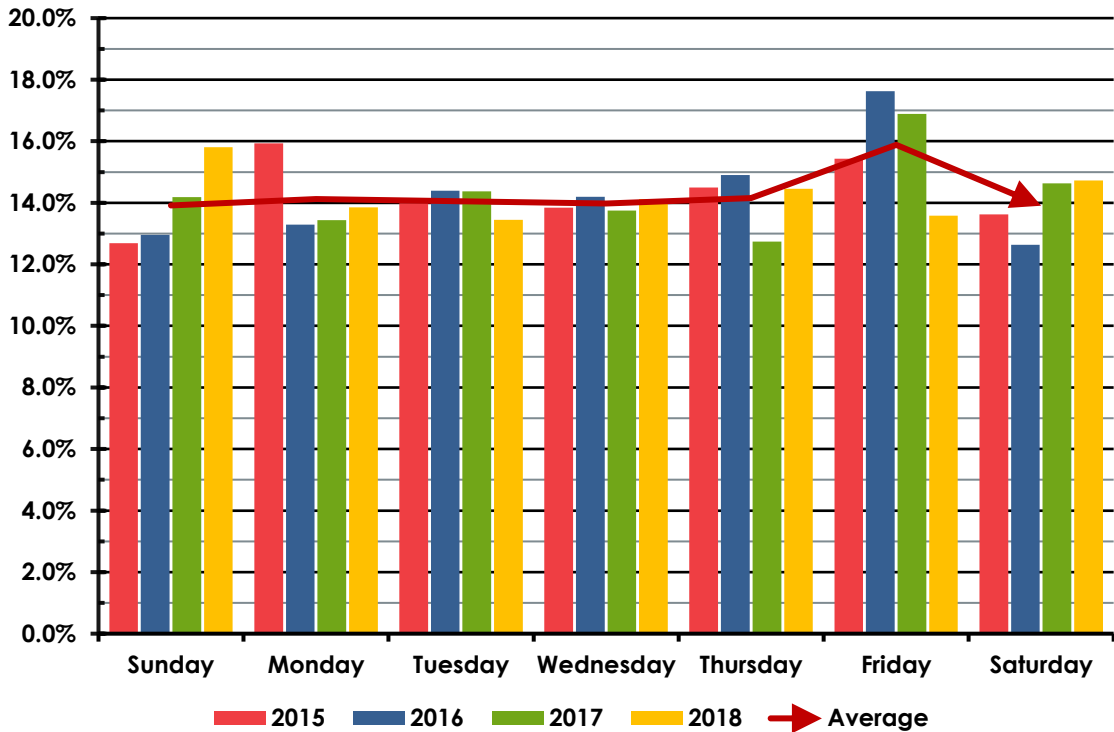
Figure 35: NCFD Temporal Analysis by Day of Week, 2015–2018



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.

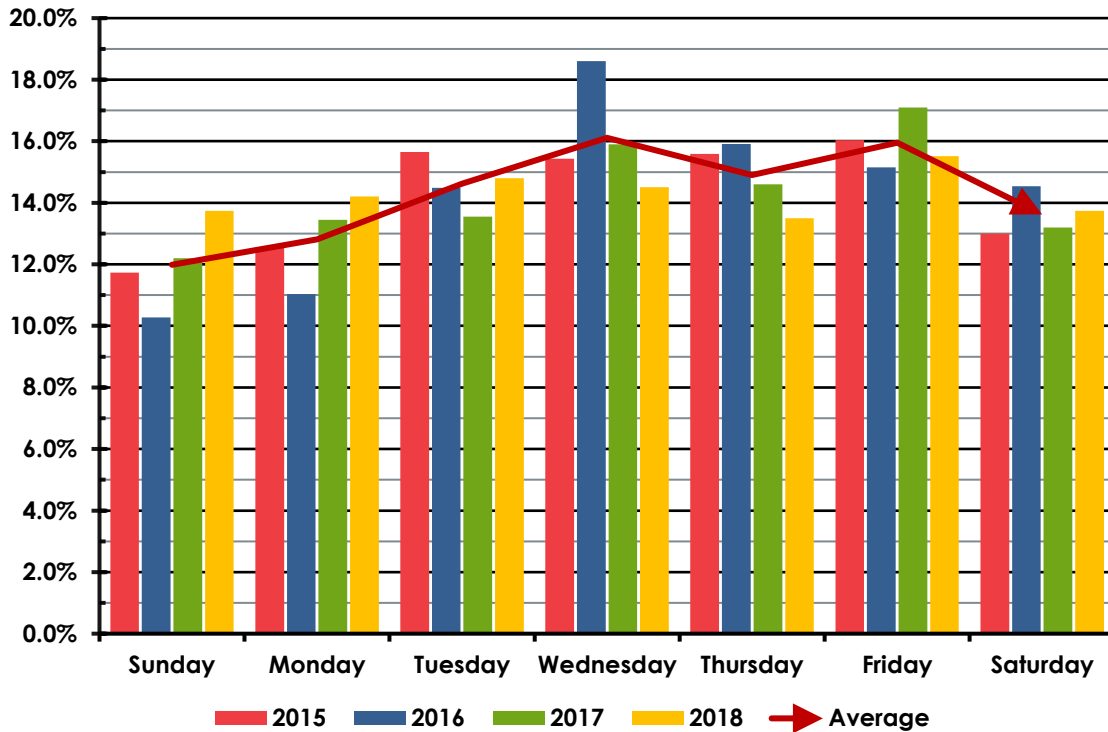
Figure 36: SFD Temporal Analysis by Day of Week, 2015–2018



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.

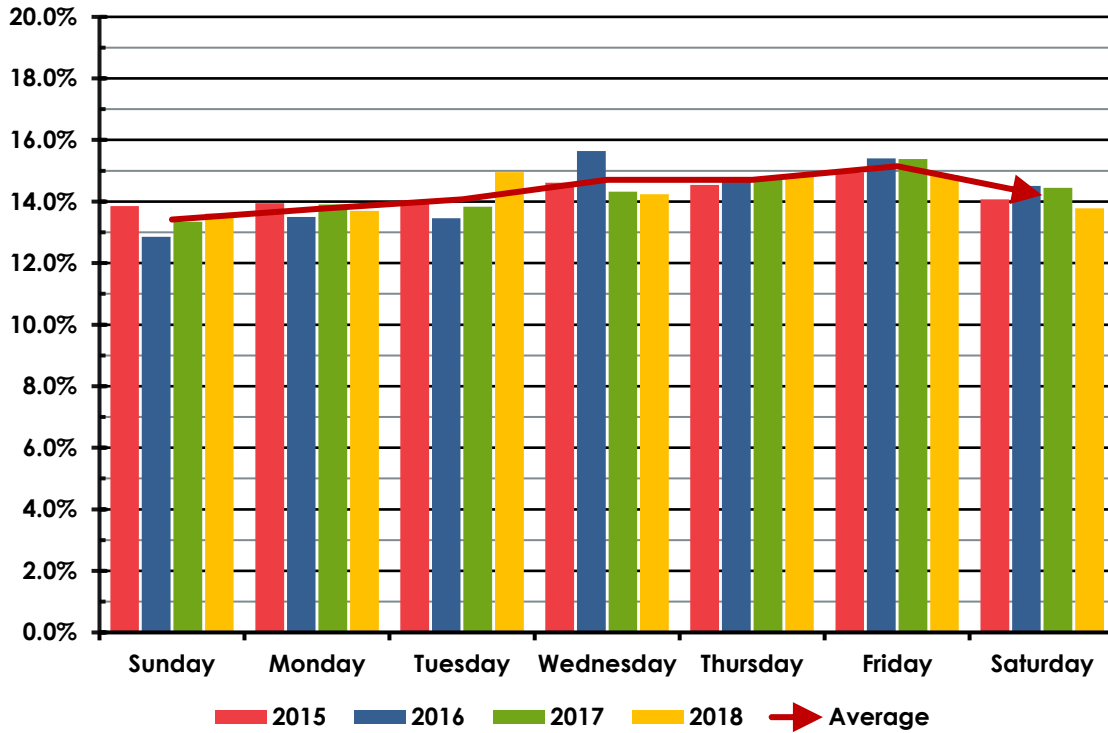
Figure 37: WVFD Temporal Analysis by Day of Week, 2015–2018



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



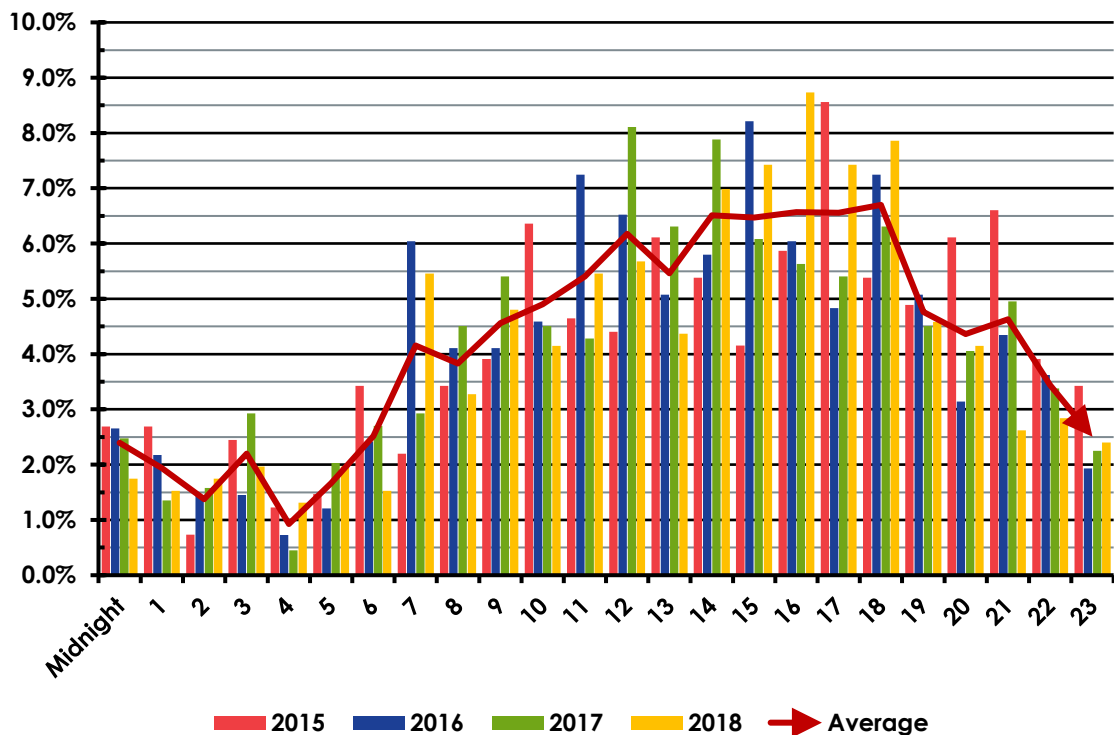
Temporal Analysis by Time of Day

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.

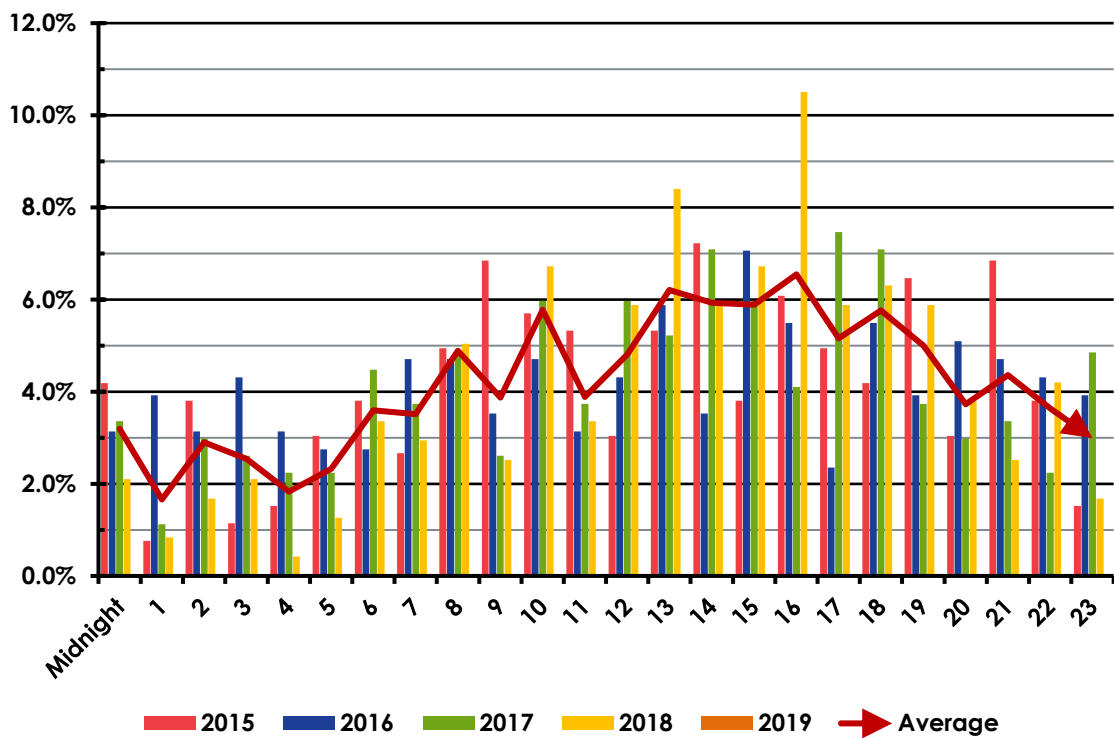
Figure 39: AFD Temporal Analysis by Time of Day, 2015–2018



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.

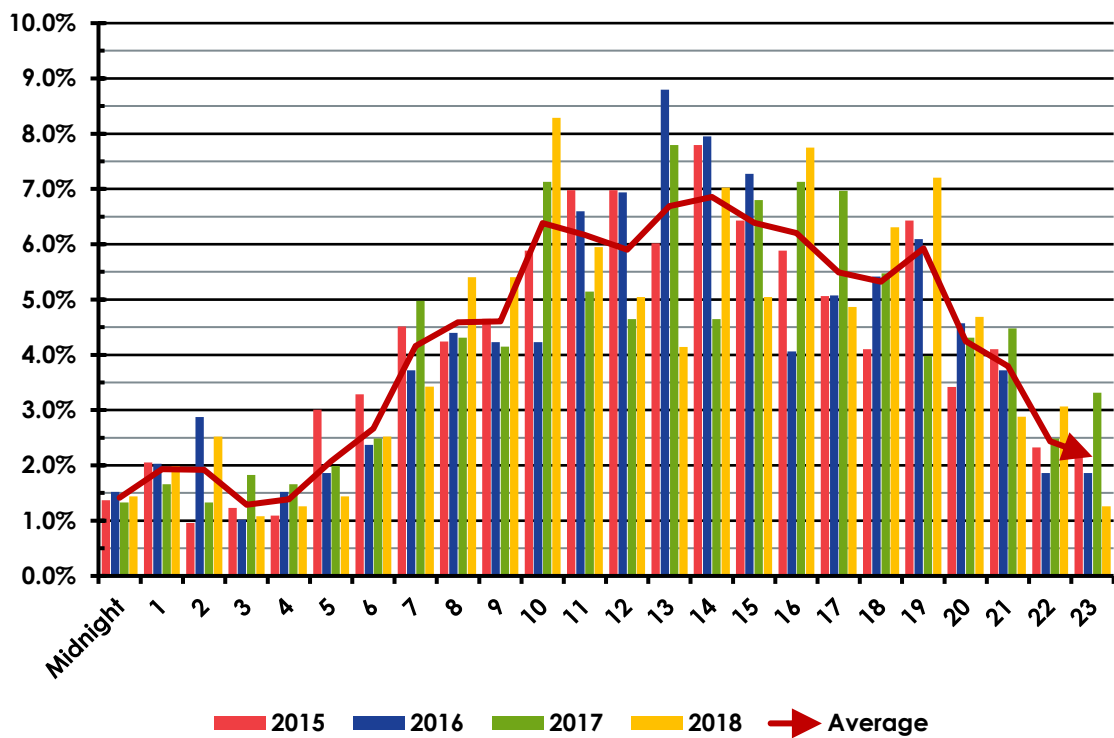
Figure 40: DFD Temporal Analysis by Time of Day, 2015–2018



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.

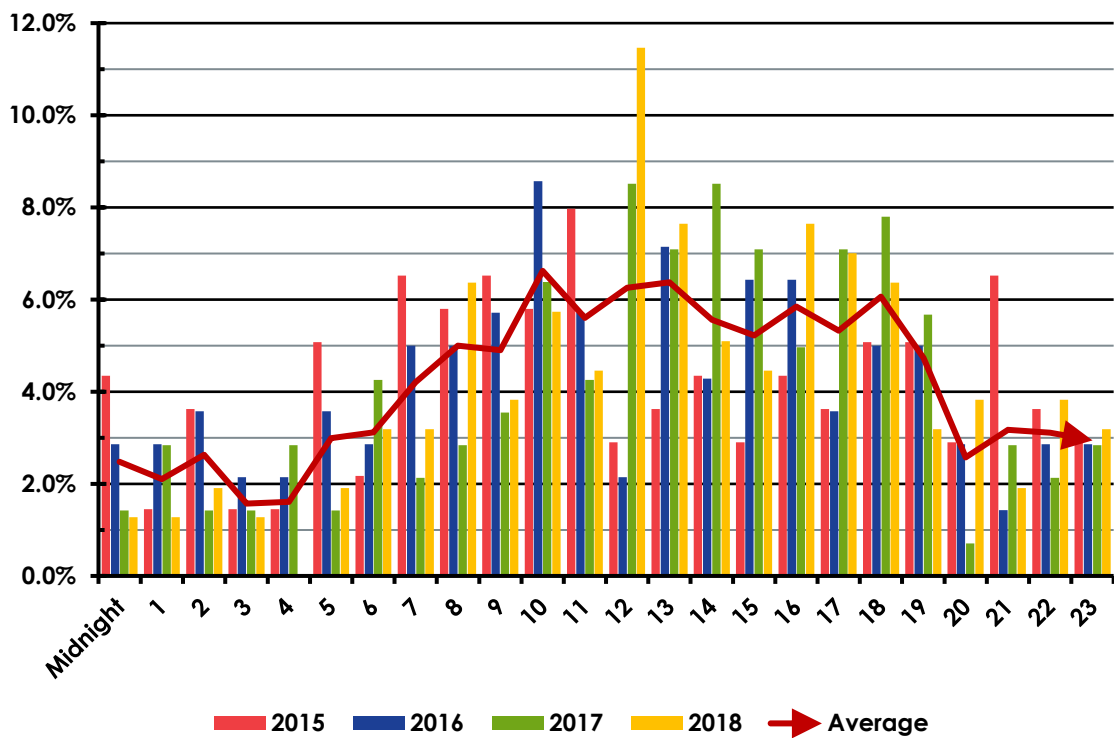
Figure 41: DDF Temporal Analysis by Time of Day, 2015–2018



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.

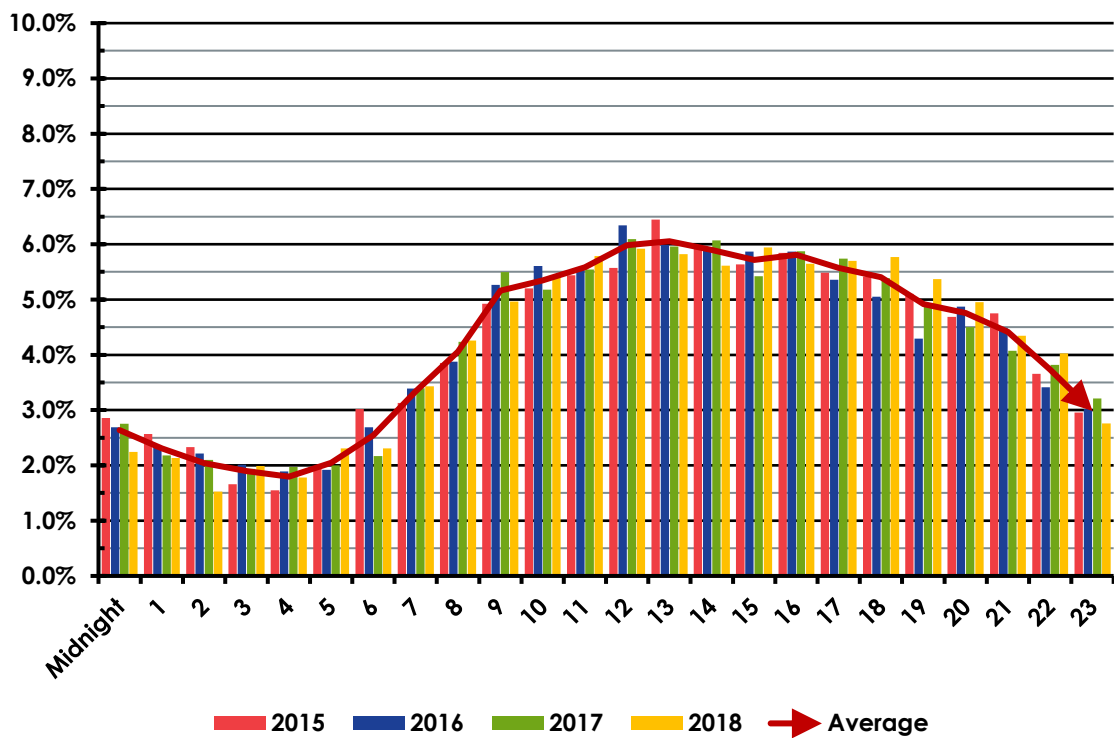
Figure 42: LFD Temporal Analysis by Time of Day, 2015–2018



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.

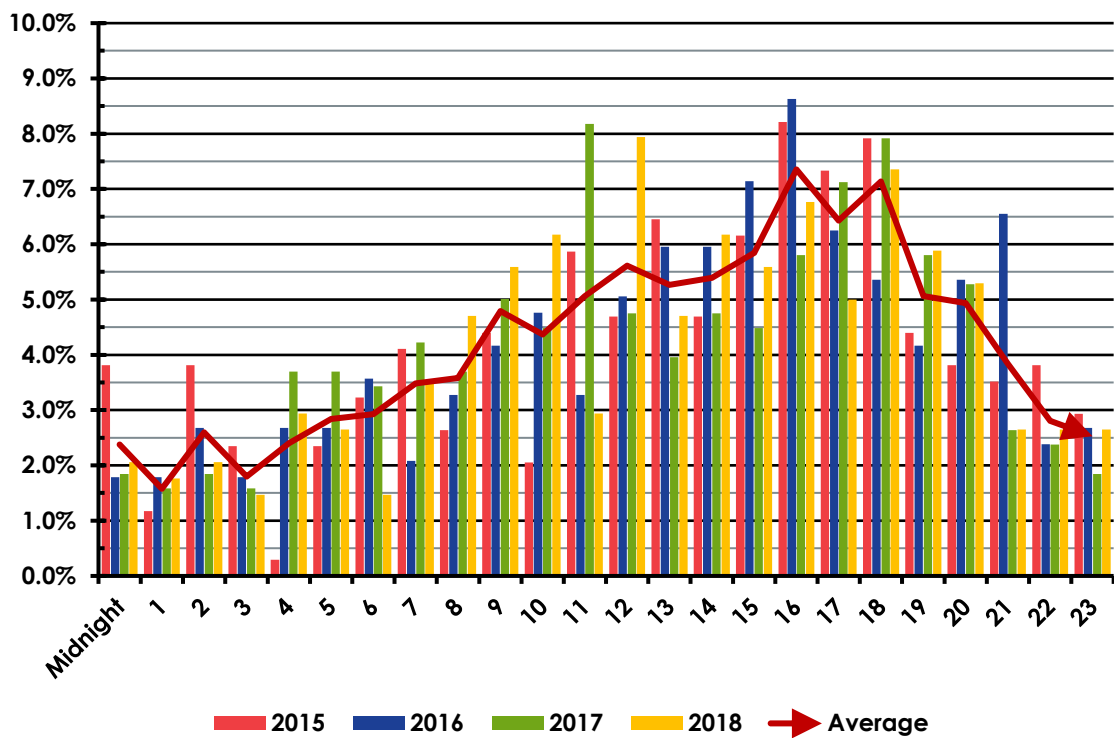
Figure 43: MFD Temporal Analysis by Time of Day, 2015–2018



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.

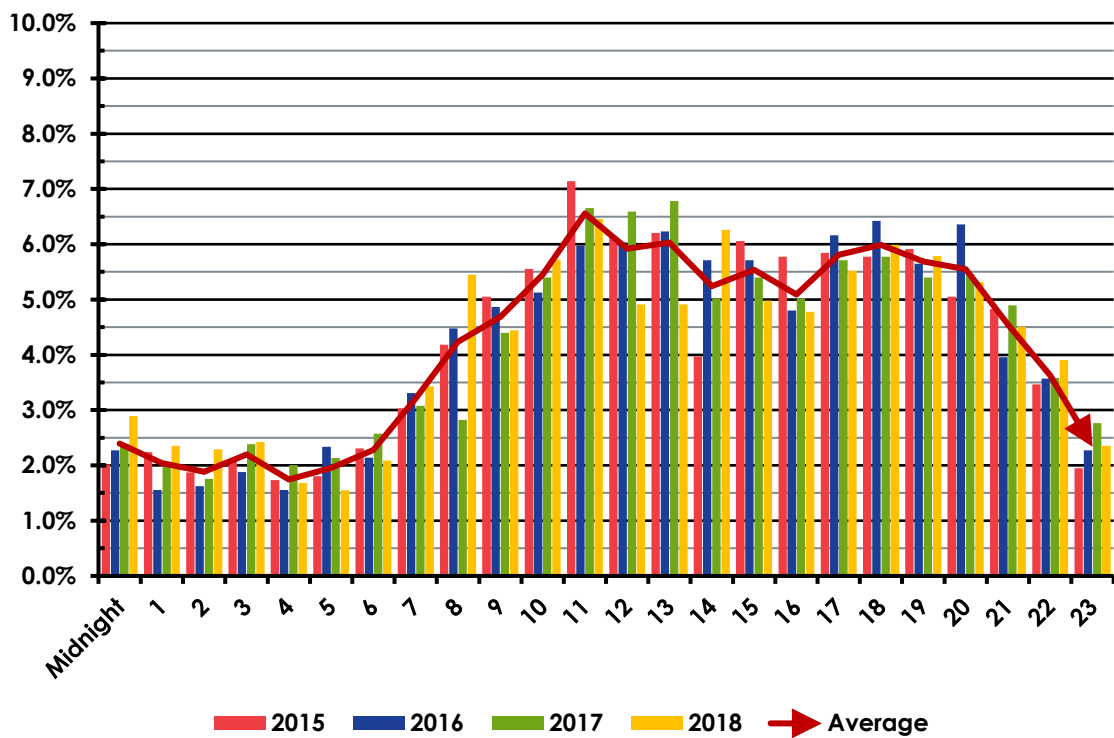
Figure 44: NCFD Temporal Analysis by Time of Day, 2015–2018



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.

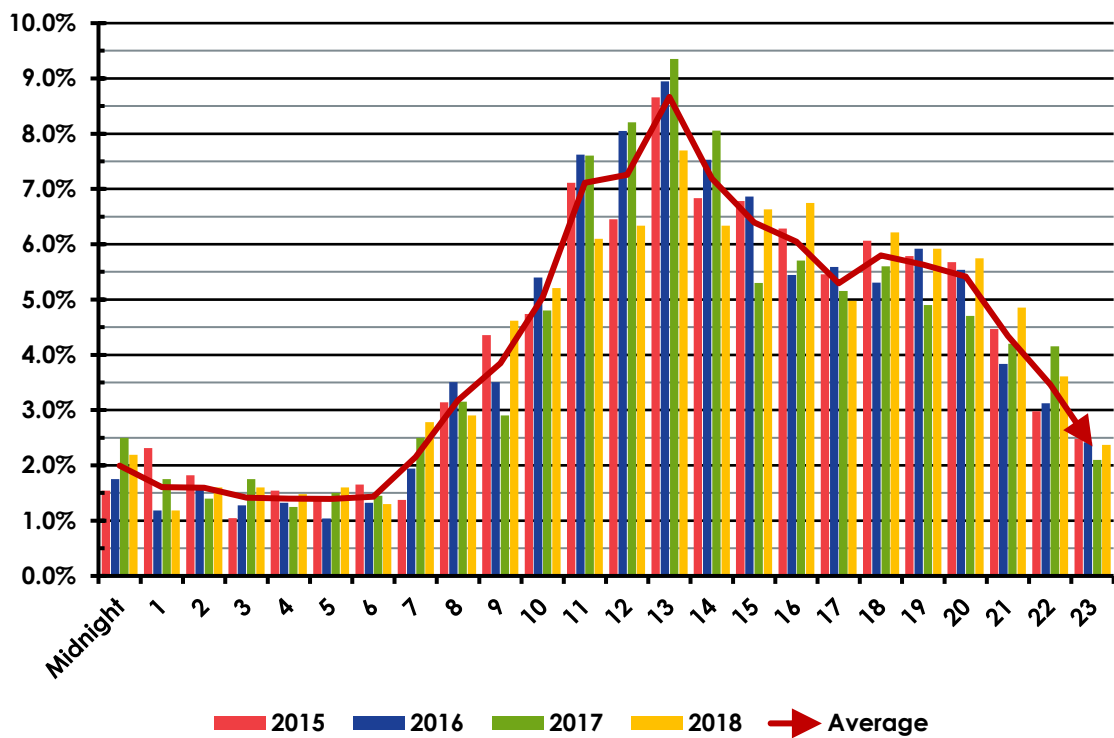
Figure 45: SFD Temporal Analysis by Time of Day, 2015–2018



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.

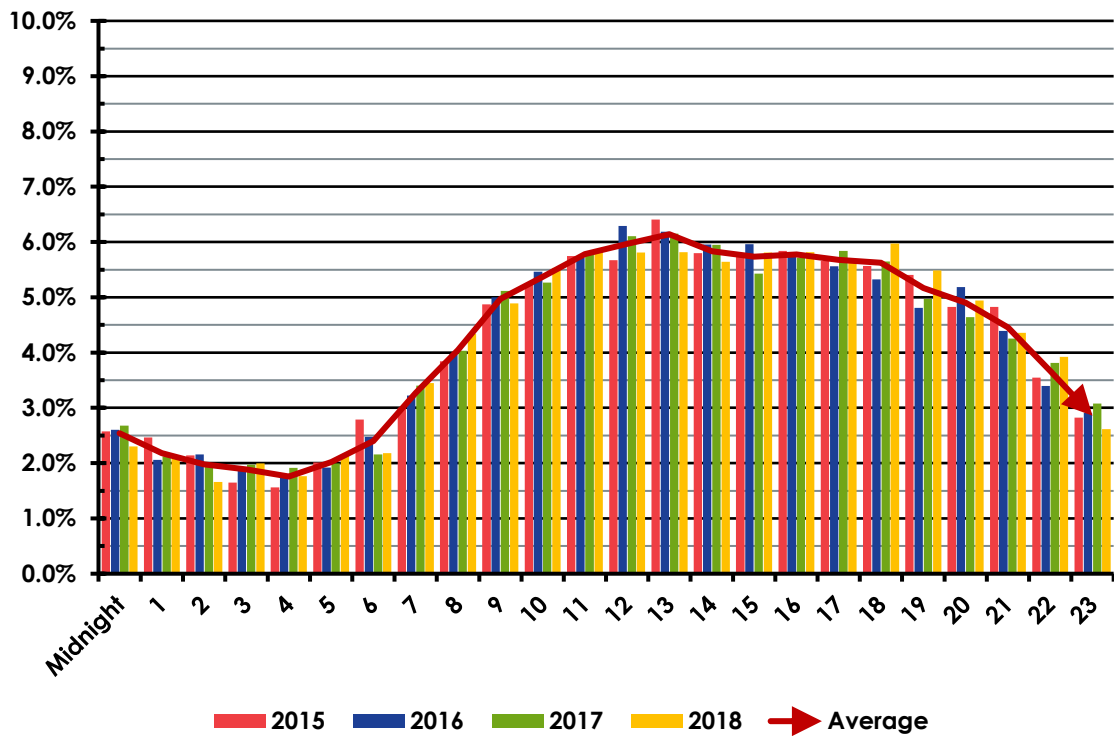
Figure 46: WVFD Temporal Analysis by Time of Day, 2015–2018



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

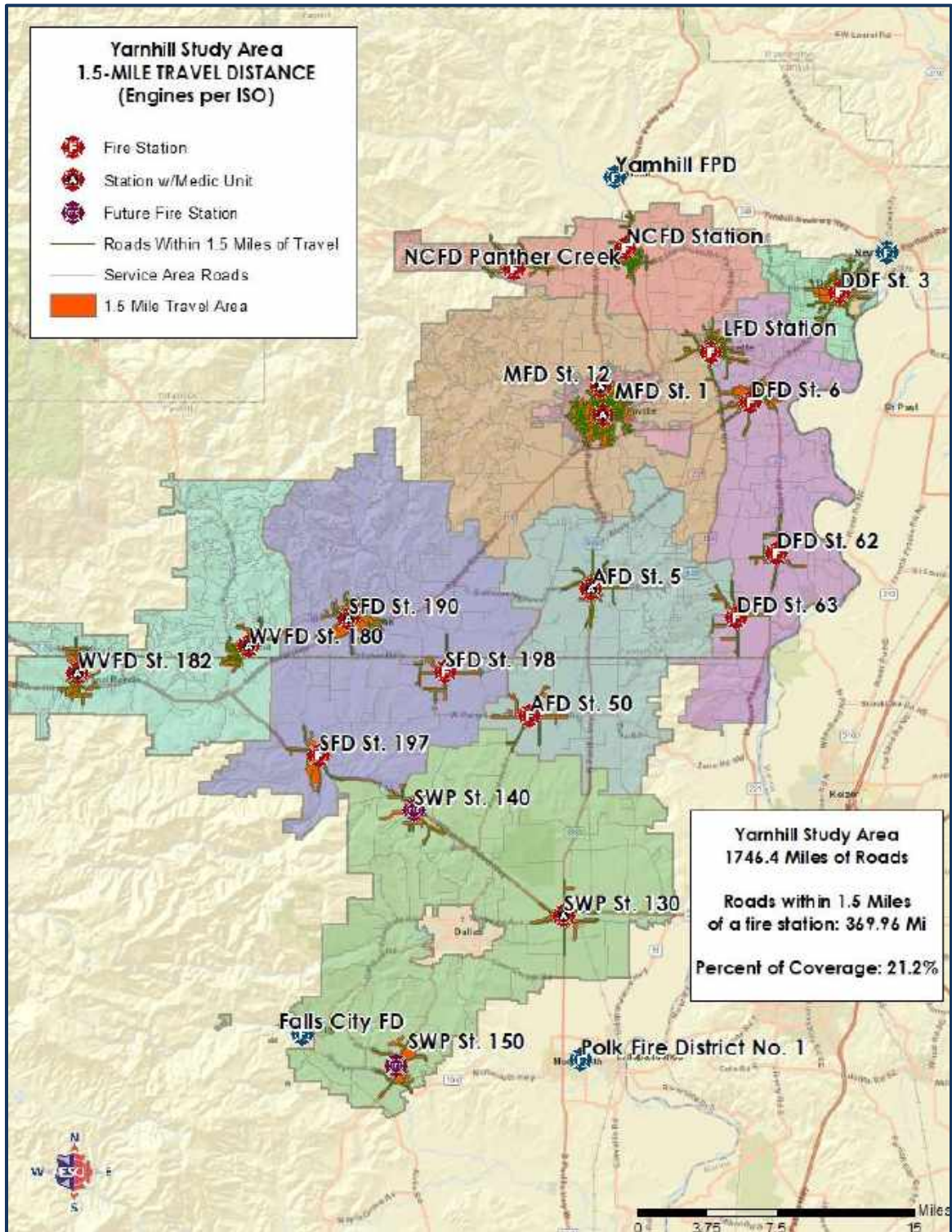
The Insurance Services Office (ISO) is a national insurance industry organization that evaluates fire protection for communities across the country. ISO assesses all areas of fire protection as broken down into four major categories, including emergency communications, fire department, water supply,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



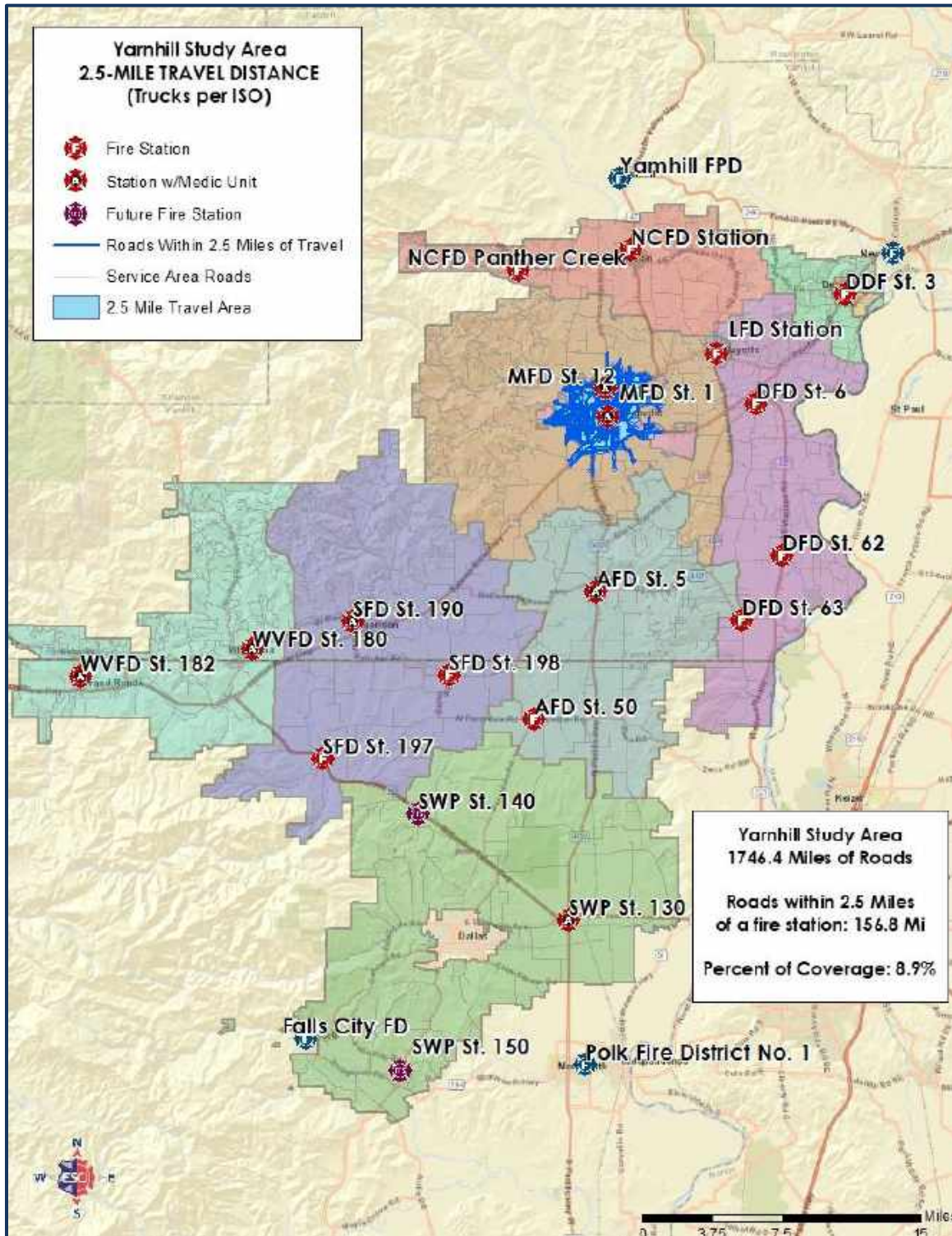
The following figure lists the percentage of coverage for each agency.

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



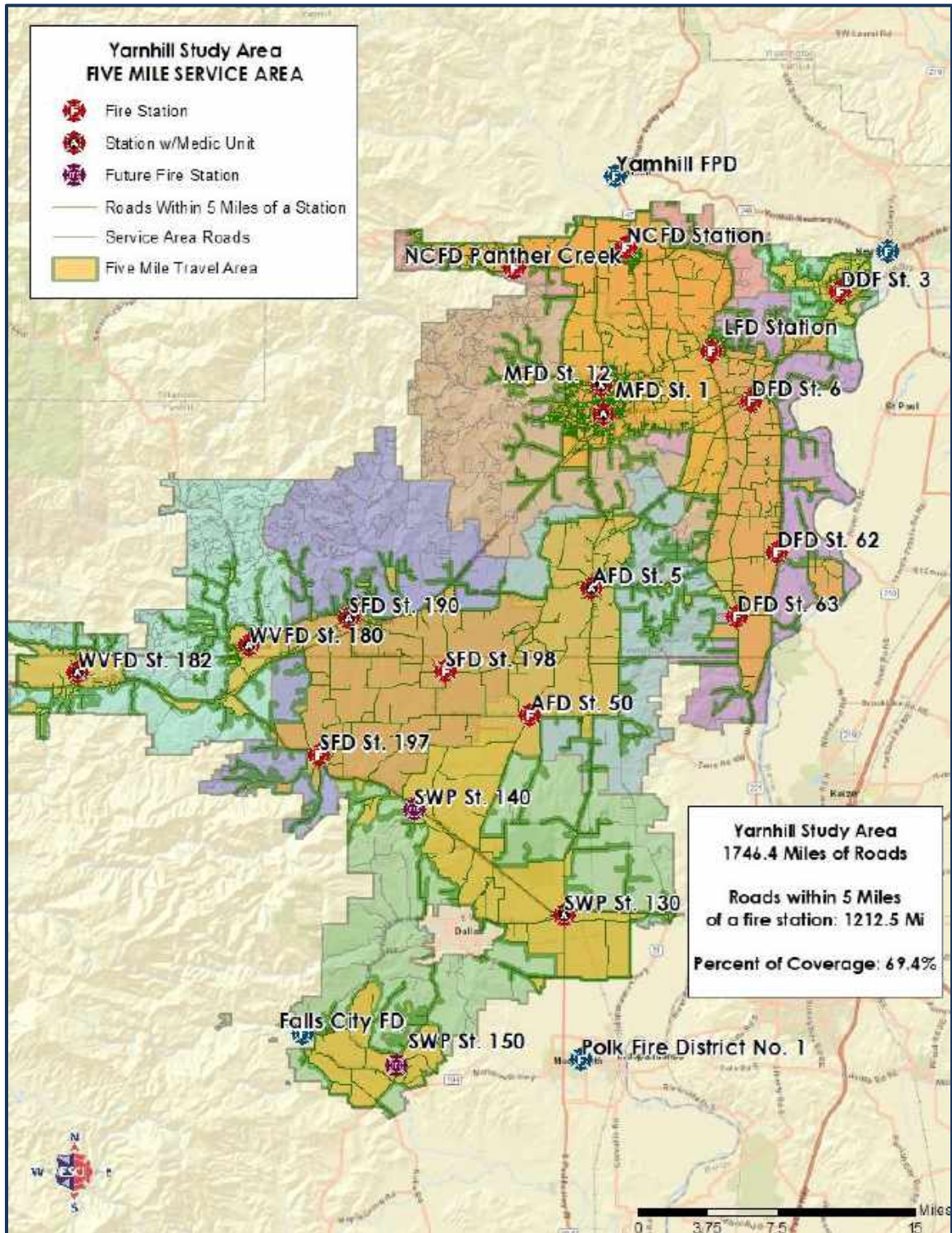
The following figure lists the percentage of coverage for each agency.

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.

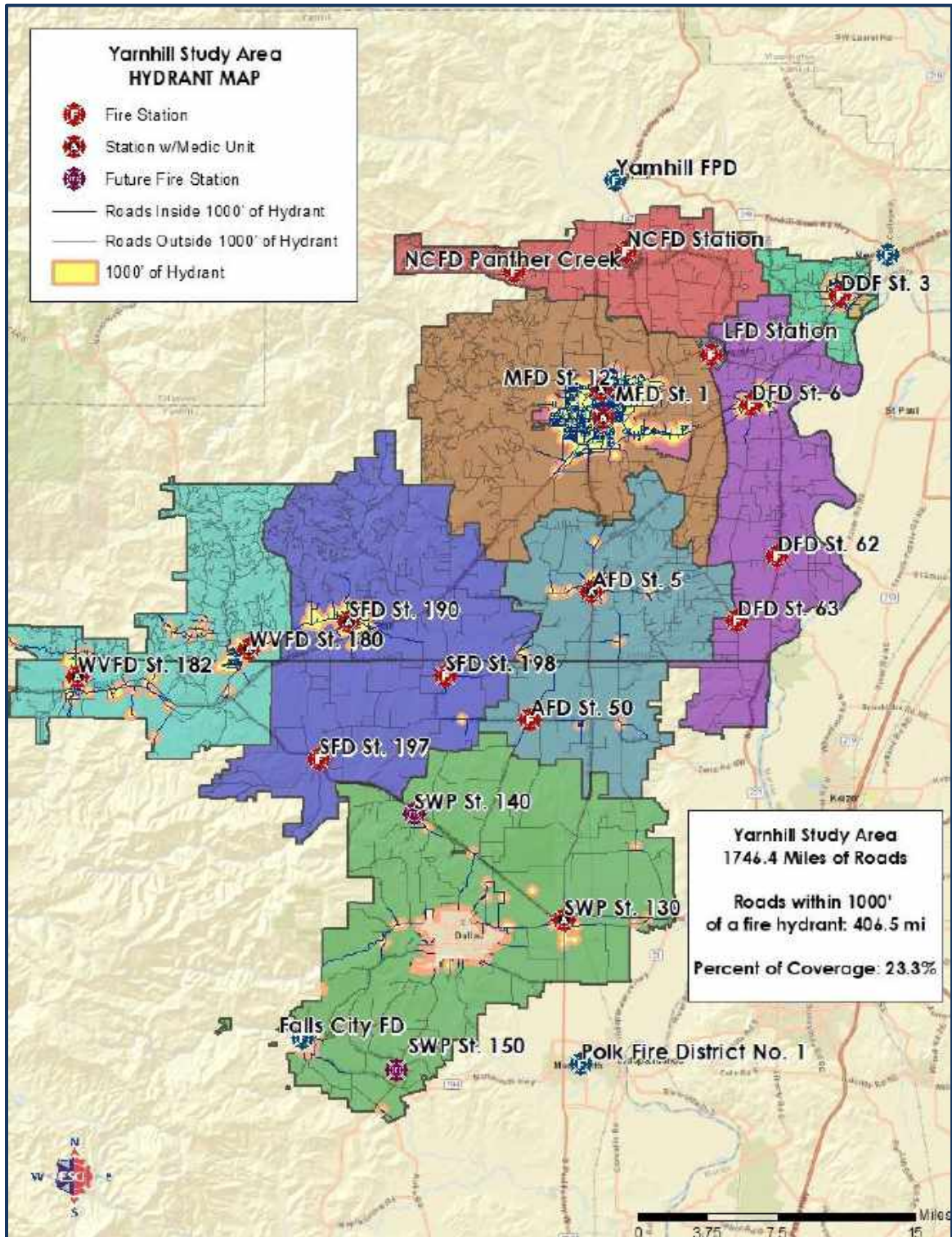
Figure 53: 5-Mile Coverage by Agency

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.

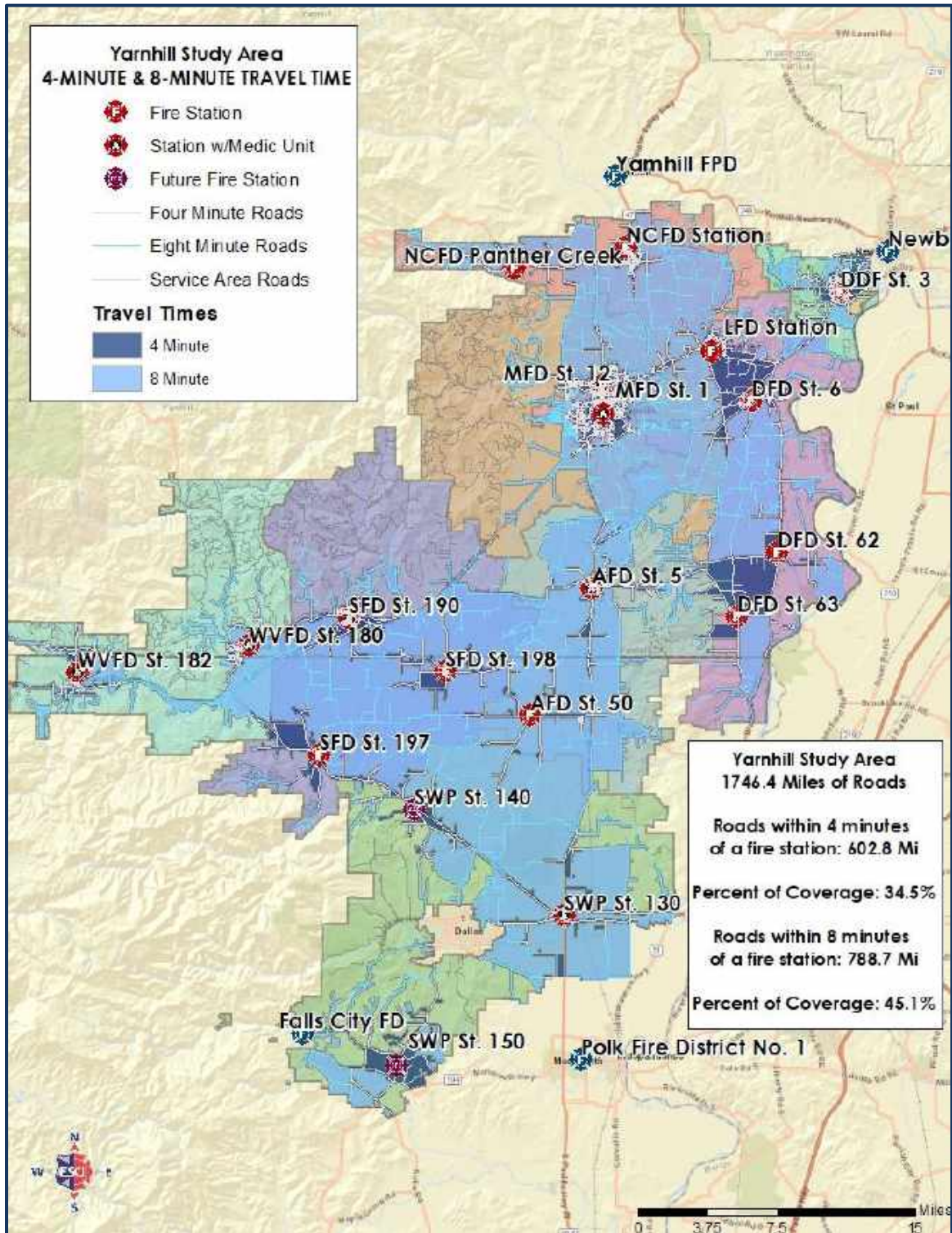
Figure 55: Hydrant Coverage by Agency

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



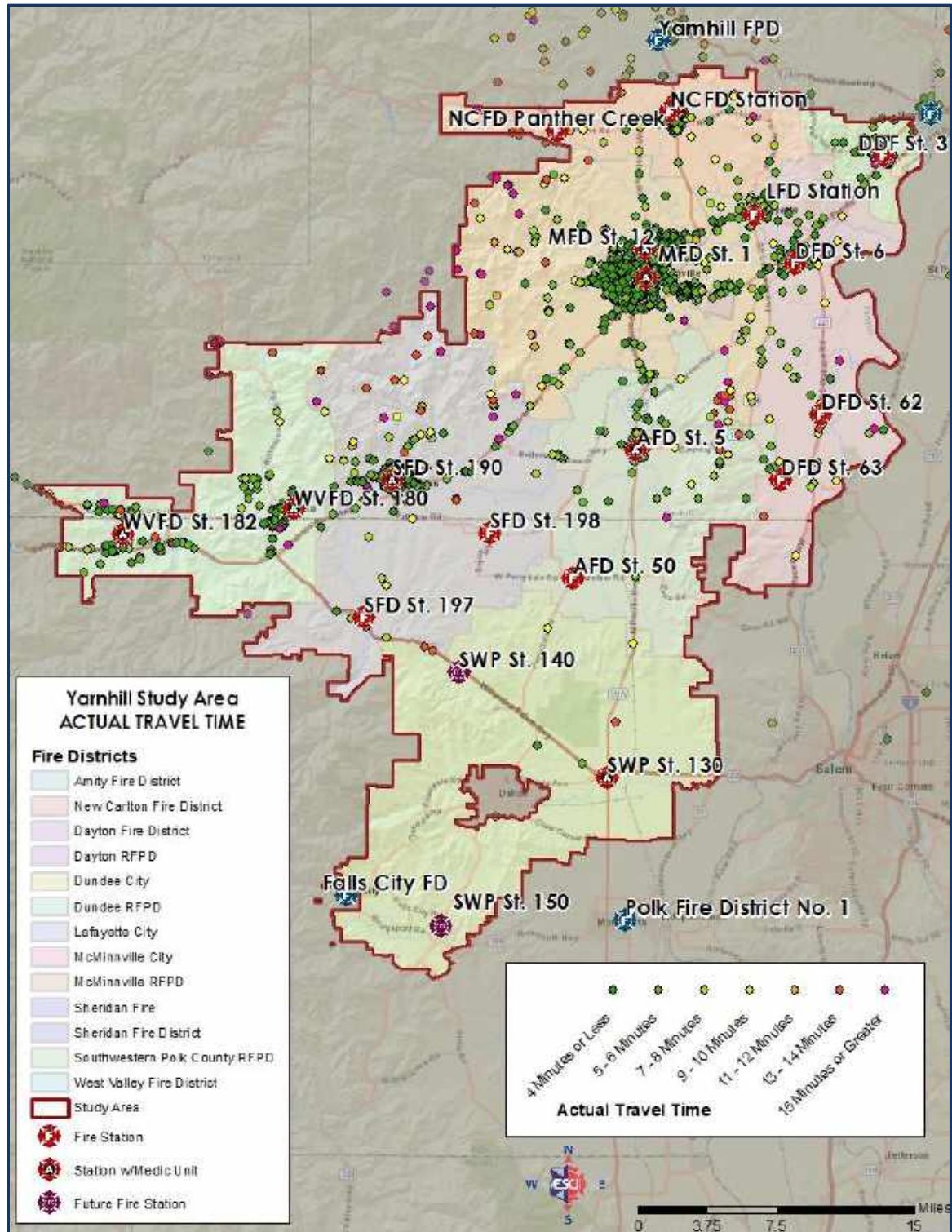
The following list illustrates the percentage of coverage within 4 minutes and 8 minutes for each agency.

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.

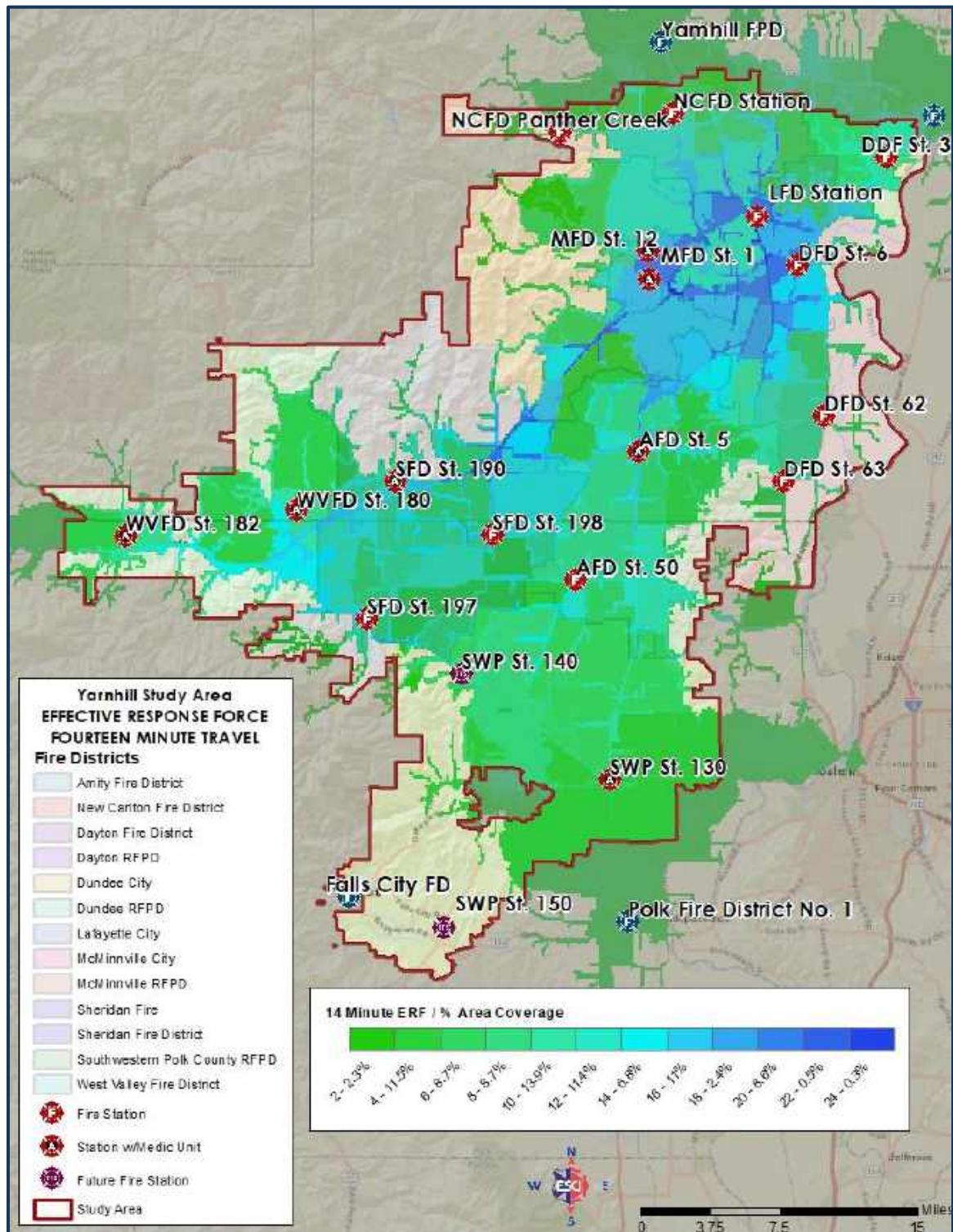
**Figure 60: Initial Full Alarm Assignment
2,000 ft² Residential Structure Fire**

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.

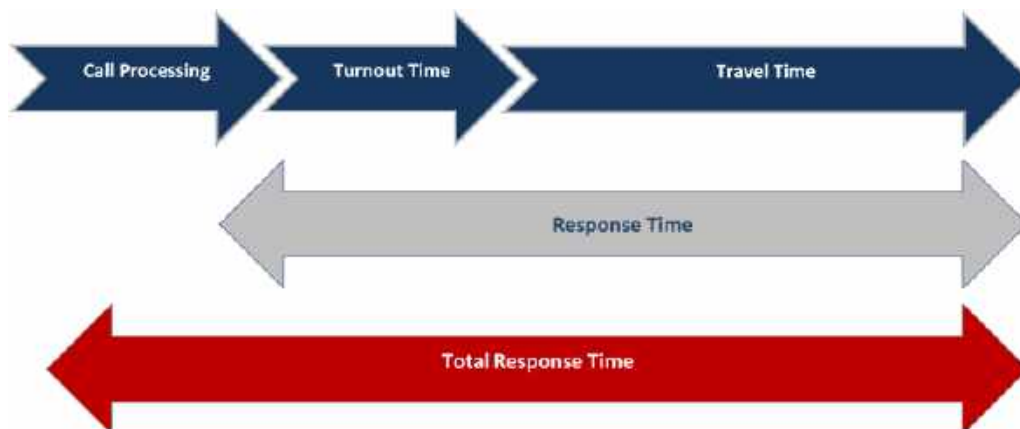
Percentile measurements are a better measure of performance because they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 10% of the values are greater than the value stated, and all other data are at or below this level. This can be compared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

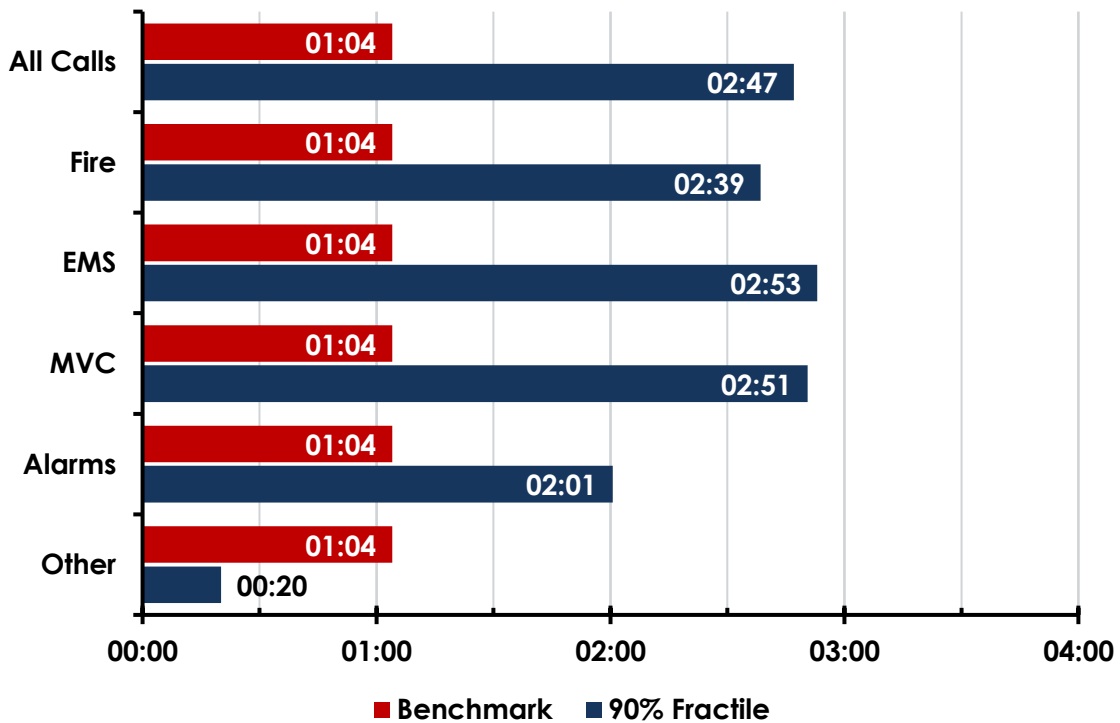
Call Processing Time Performance

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.

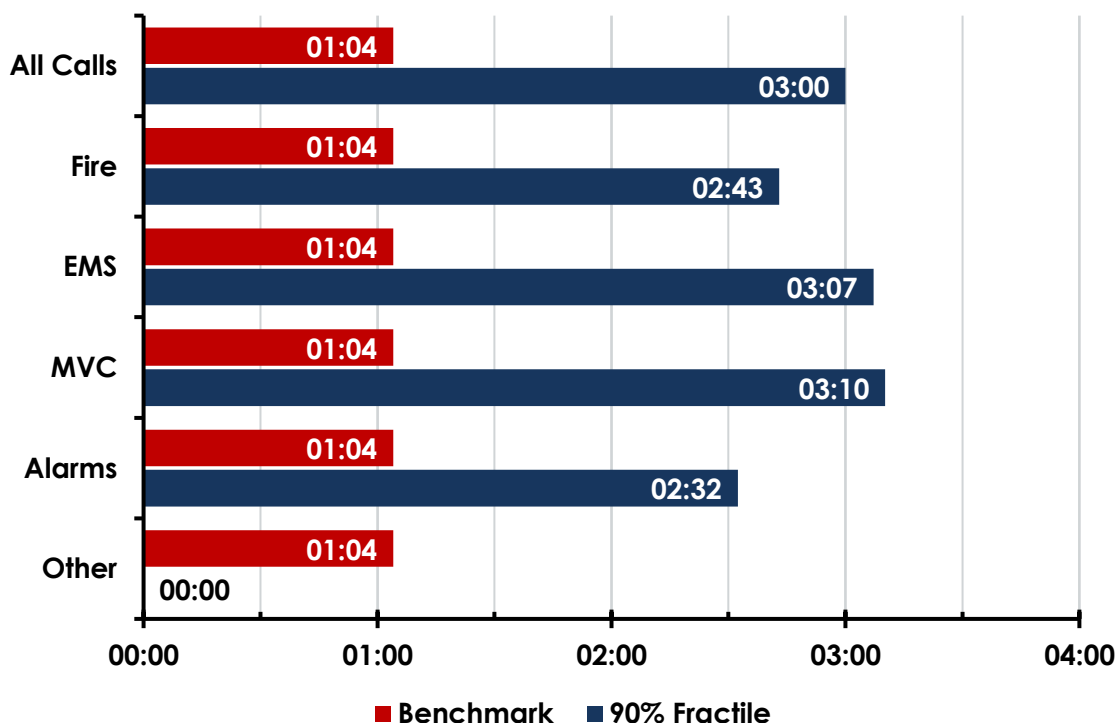
Figure 73: AFD Call Processing Time Performance, 2015–2018



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



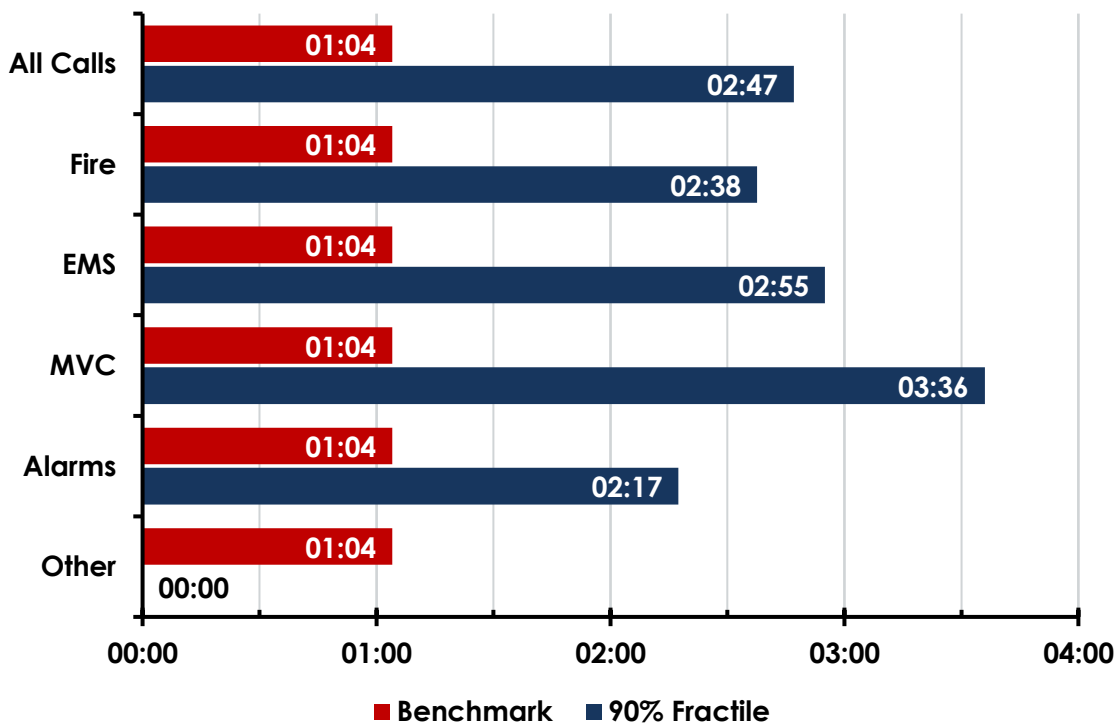
Dundee Fire District

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.

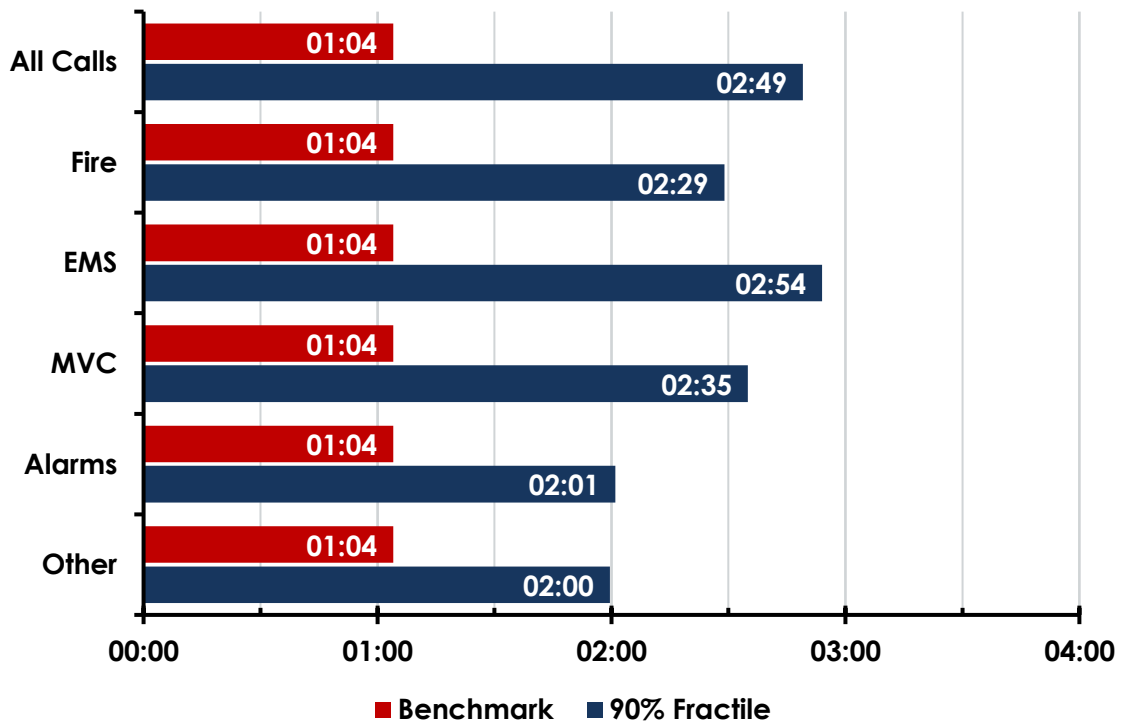
Figure 75: LFD Call Processing Time Performance, 2015–2018



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.

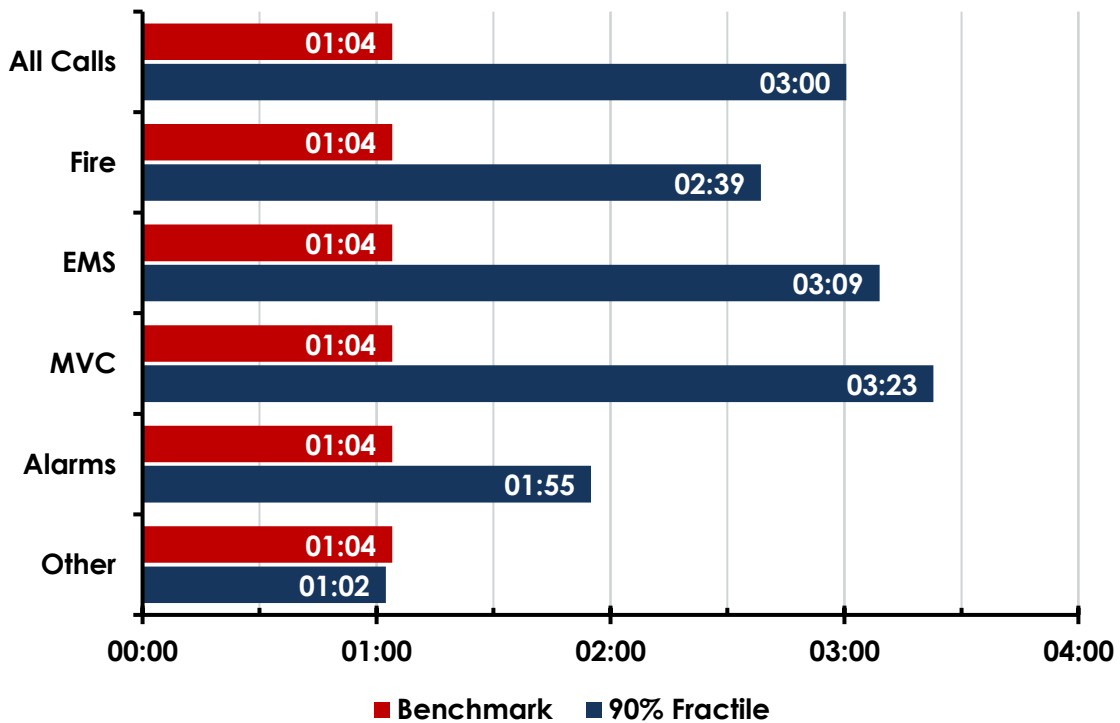
Figure 76: MFD Call Processing Time Performance, 2015–2018



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.

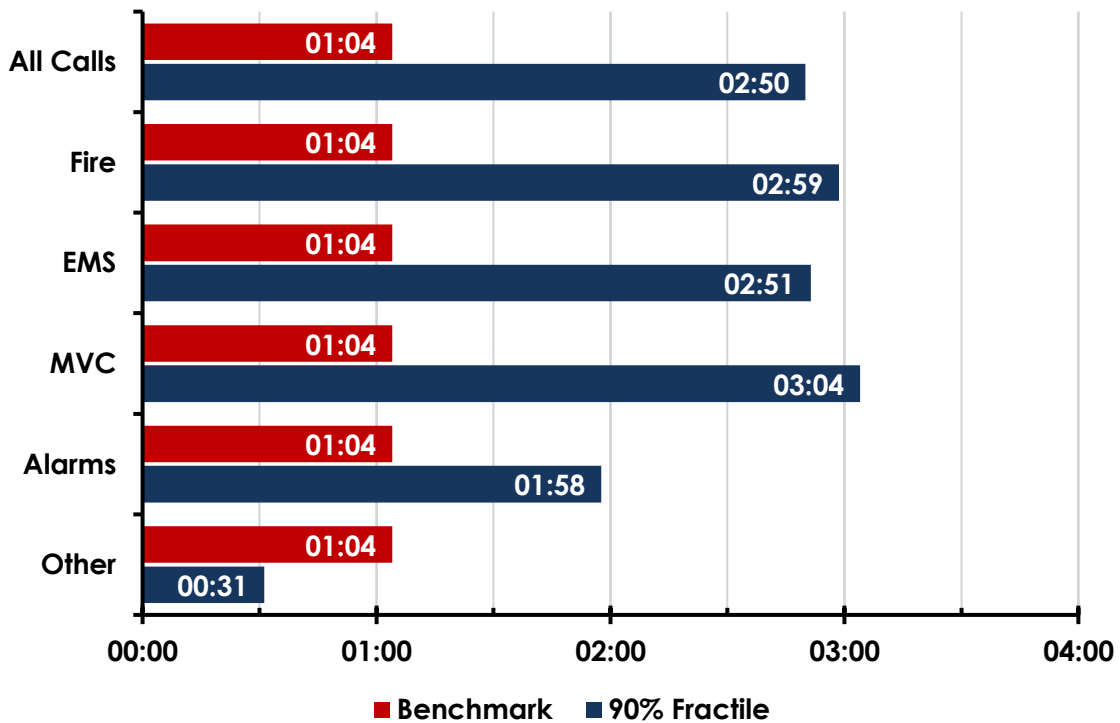
Figure 77: NCFD Call Processing Time Performance, 2015–2018



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.

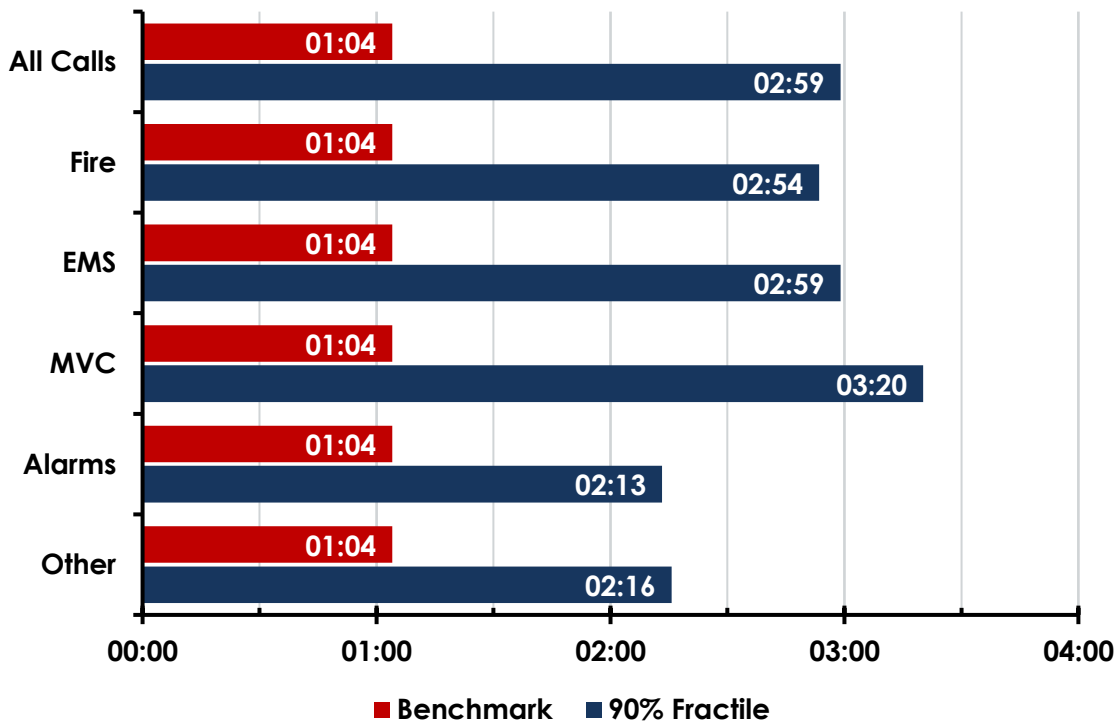
Figure 78: SFD Call Processing Time Performance, 2015–2018



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.

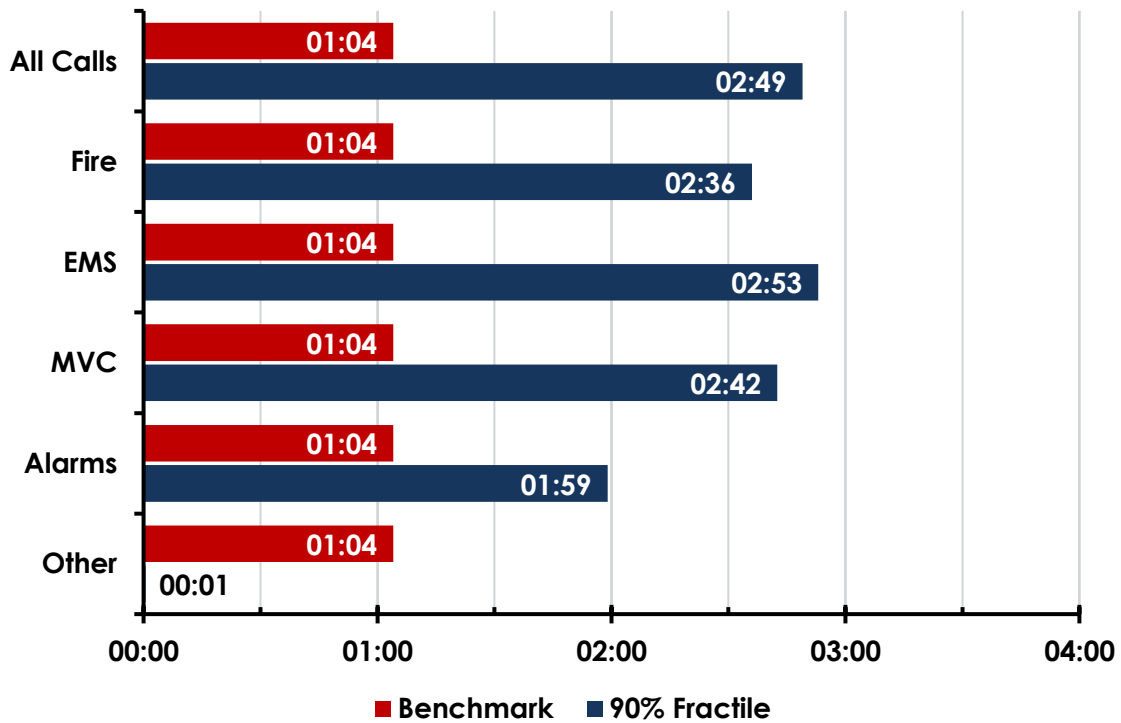
Figure 79: WVFD Call Processing Time Performance, 2015–2018



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.

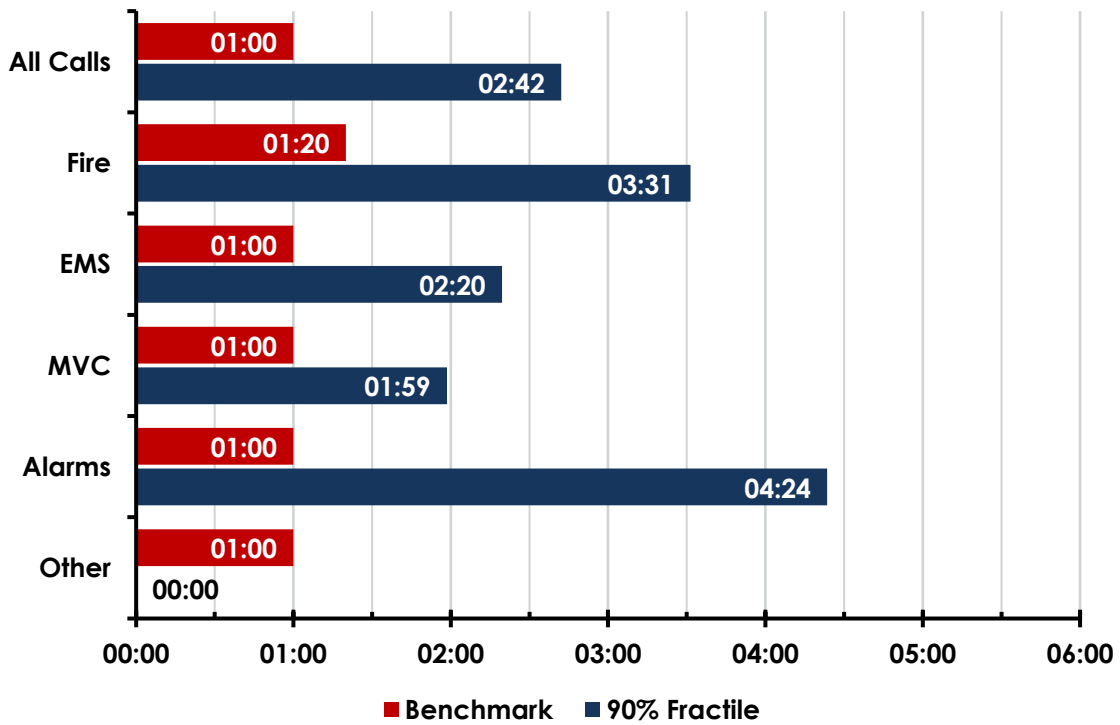
For non-staffed stations, areas that may be impacting performance could include:

- 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.

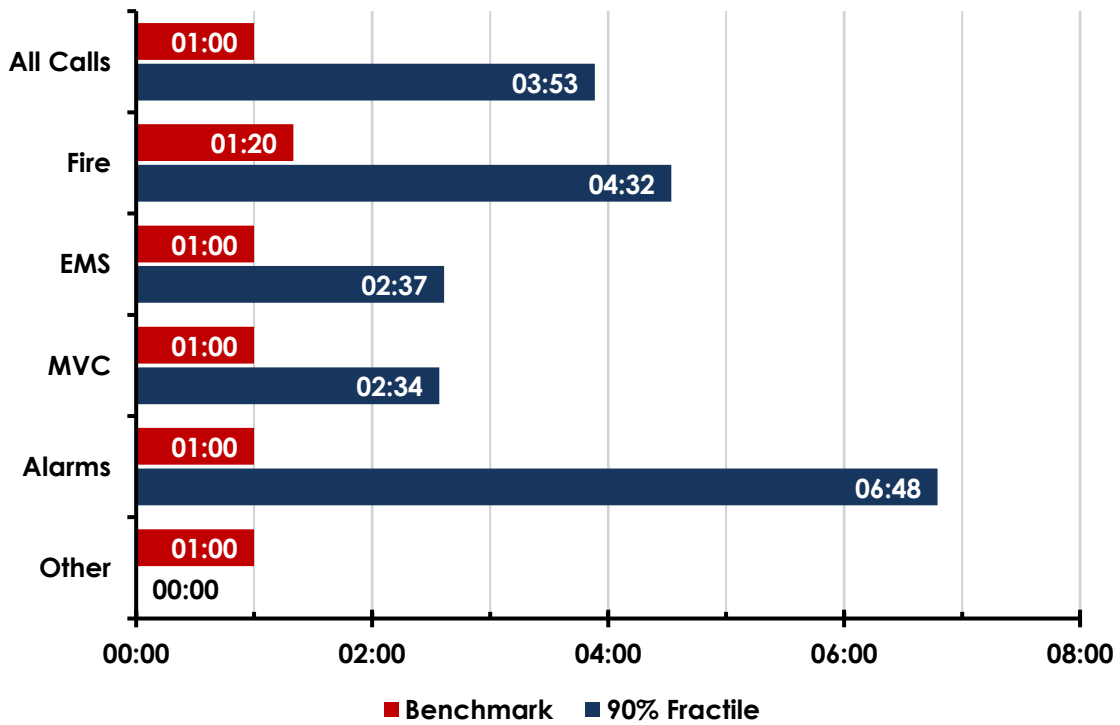
Figure 81: AFD Turnout Time Performance, 2015–2018



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.

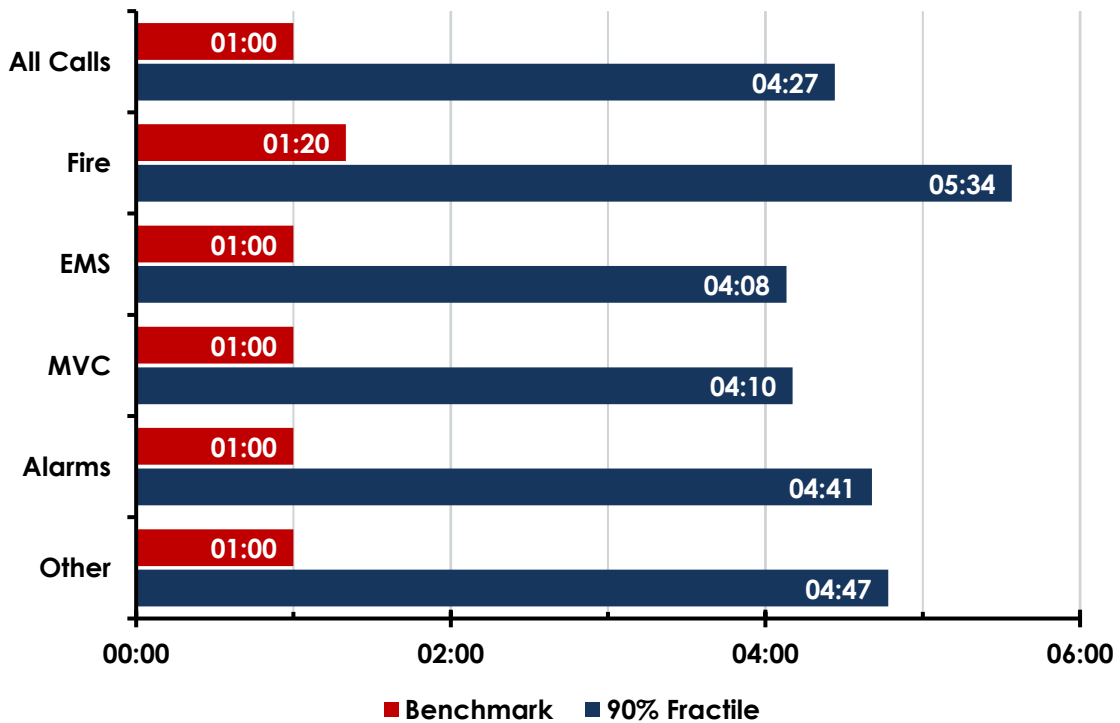
Figure 82: DFD Turnout Time Performance, 2015–2018



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.

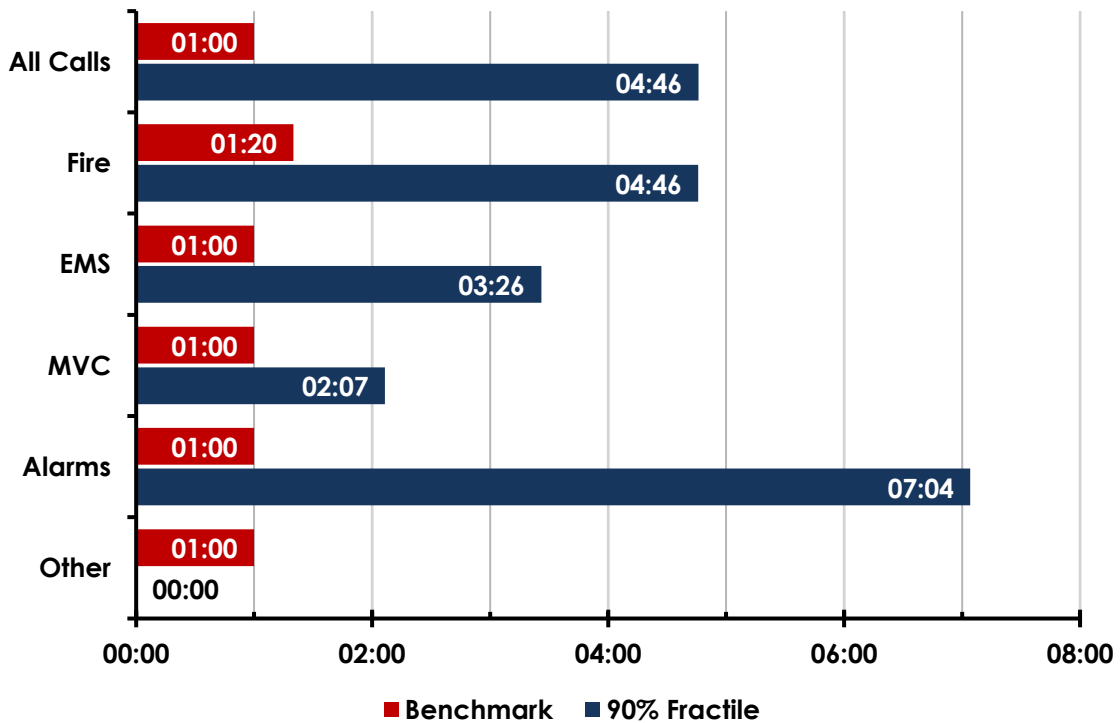
Figure 83: DDF Turnout Time Performance, 2015–2018



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.

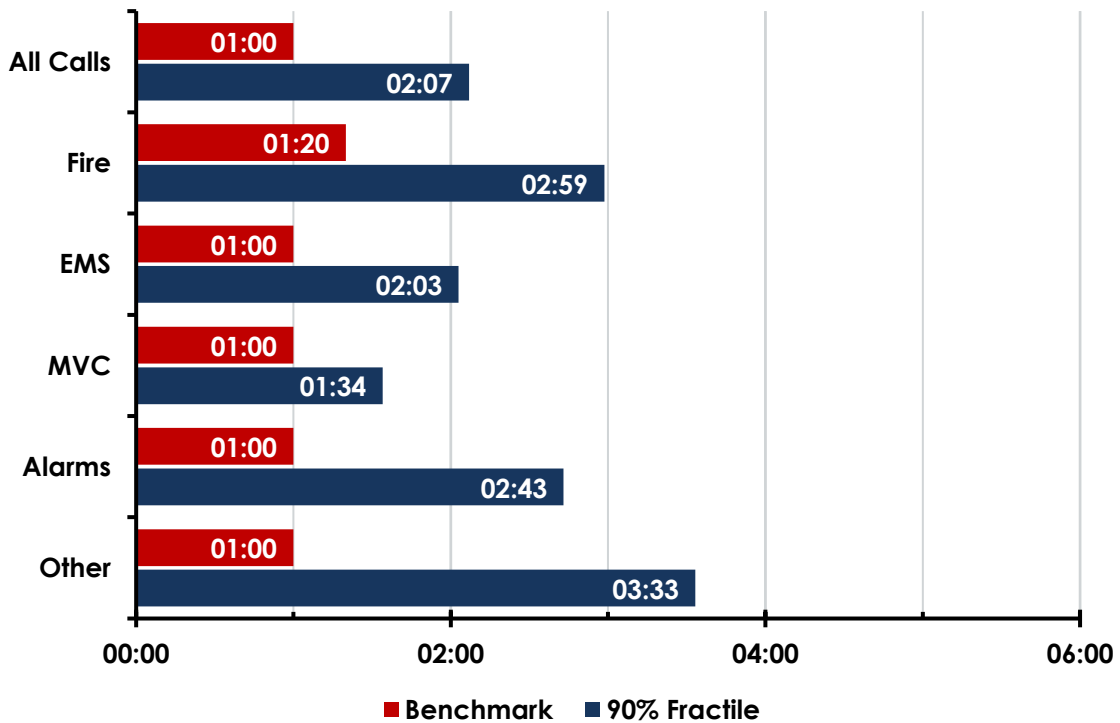
Figure 84: LFD Turnout Time Performance, 2015–2018



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.

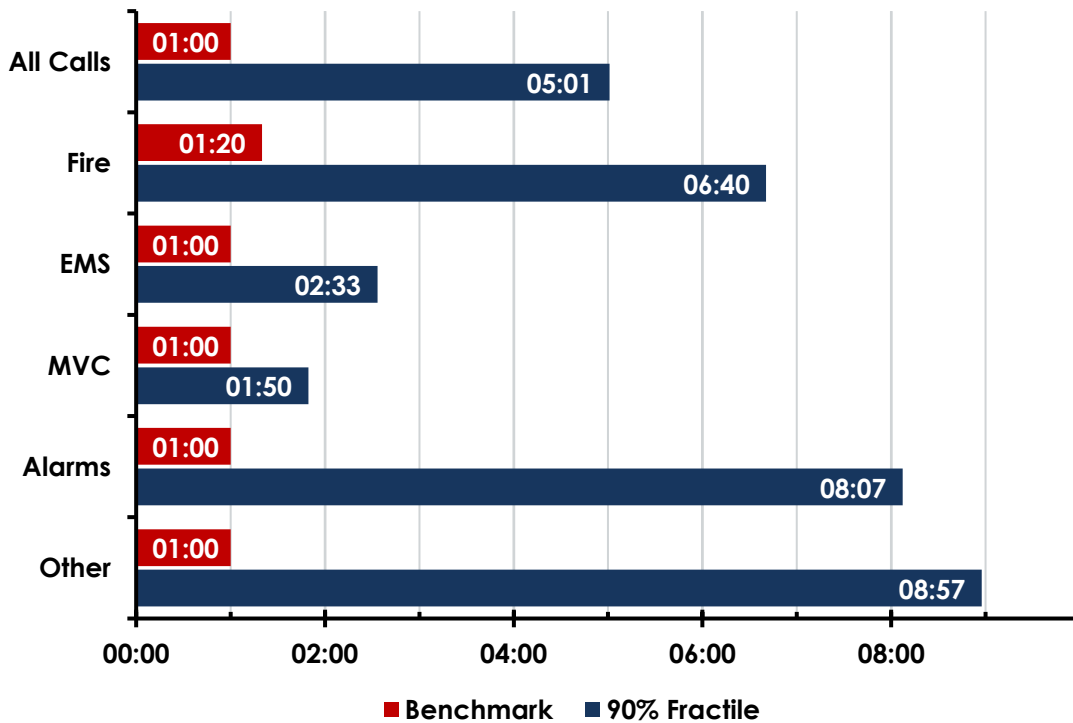
Figure 85: MFD Turnout Time Performance, 2015–2018



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.

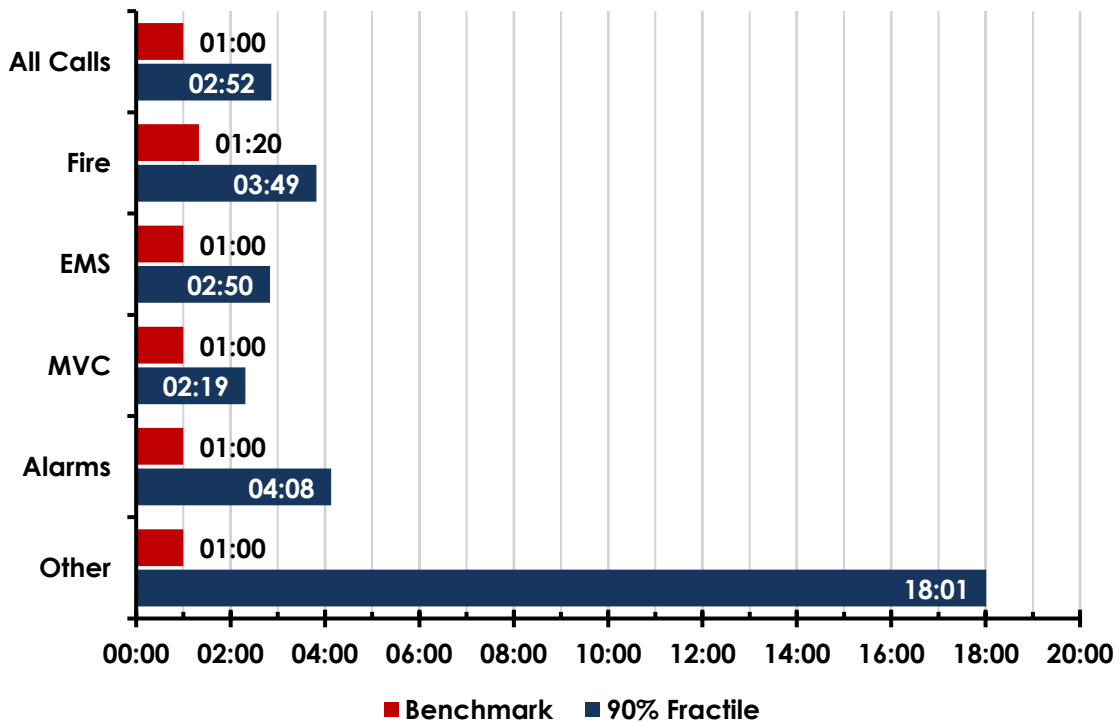
Figure 86: NCFD Turnout Time Performance, 2015–2018



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.

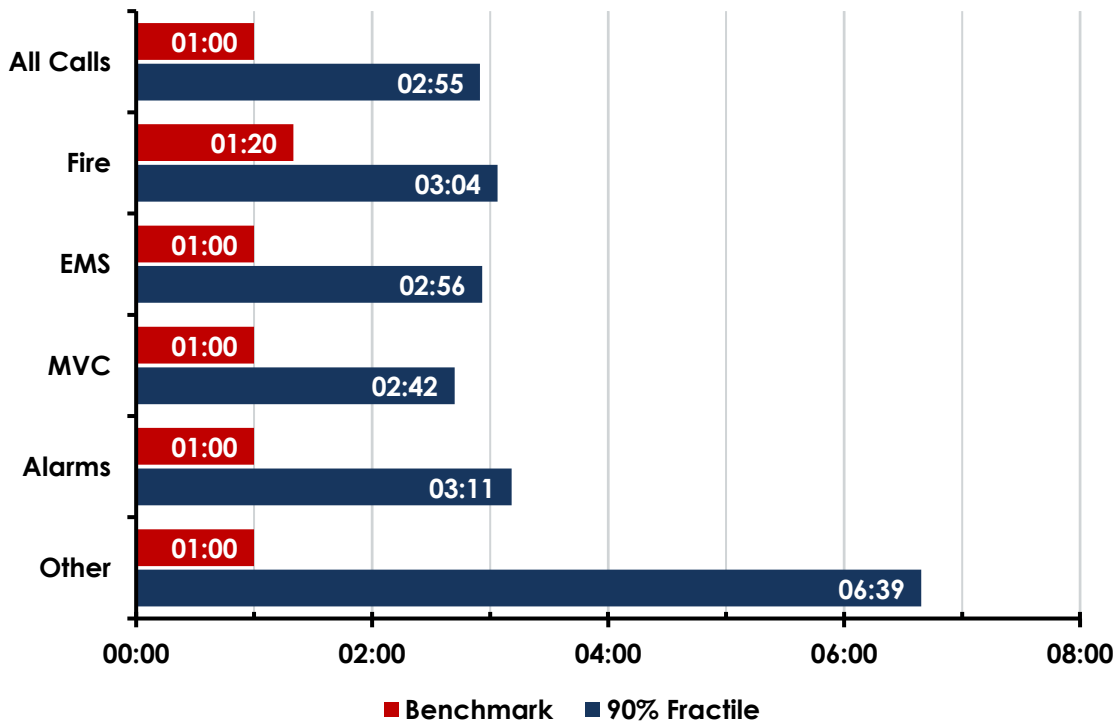
Figure 87: SFD Turnout Time Performance, 2015–2018



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.

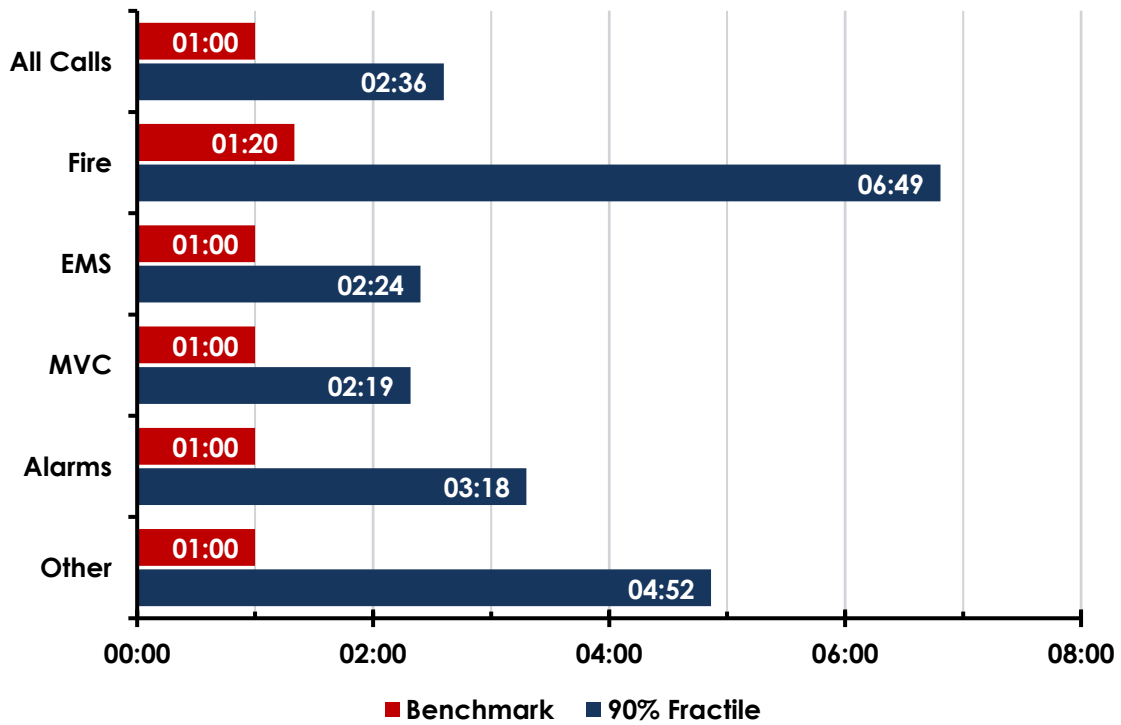
Figure 88: WVFD Turnout Time Performance, 2015–2018



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

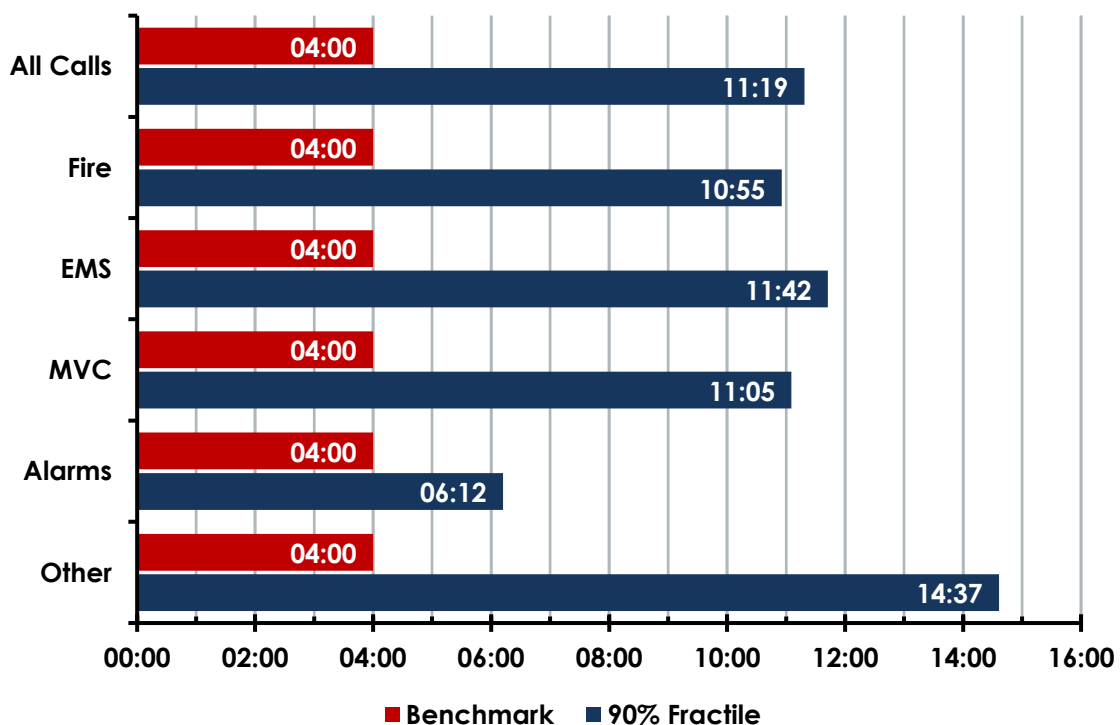
Travel time is often the key contributor to overall response time as the distance between the fire station and the incident may be greater than the target of four minutes. For example, with only 34.5% of the study area within the 4-minute travel time, it is reasonable that travel time performance at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

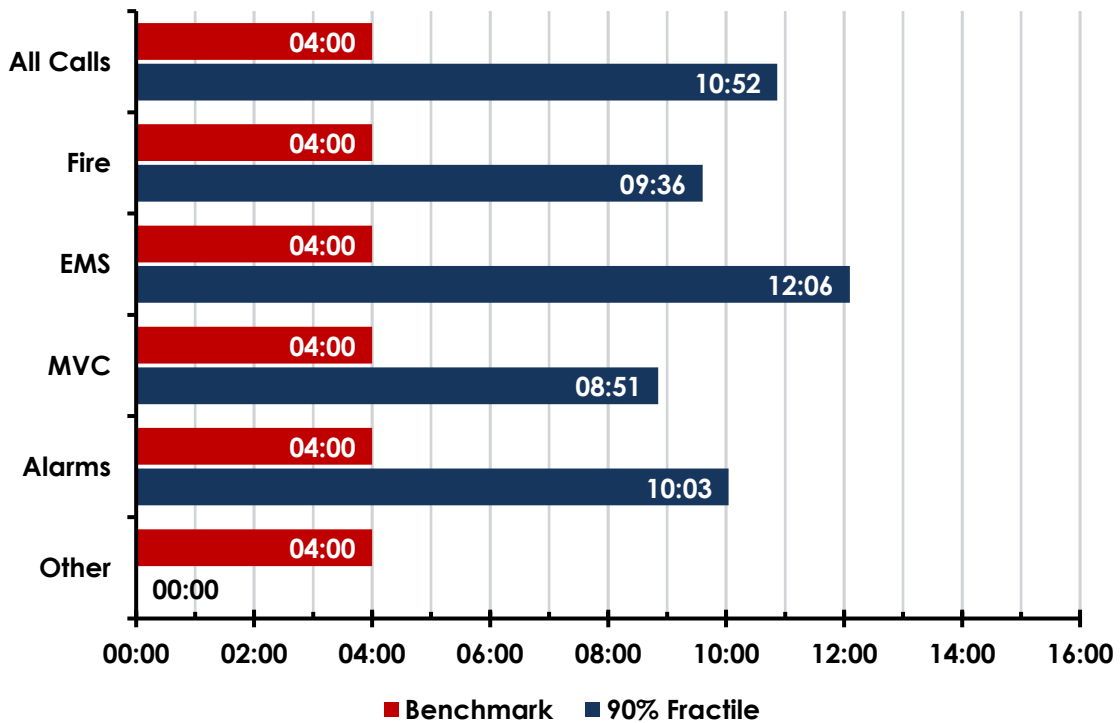
Figure 90: AFD Travel Time Performance, 2015–2018



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.

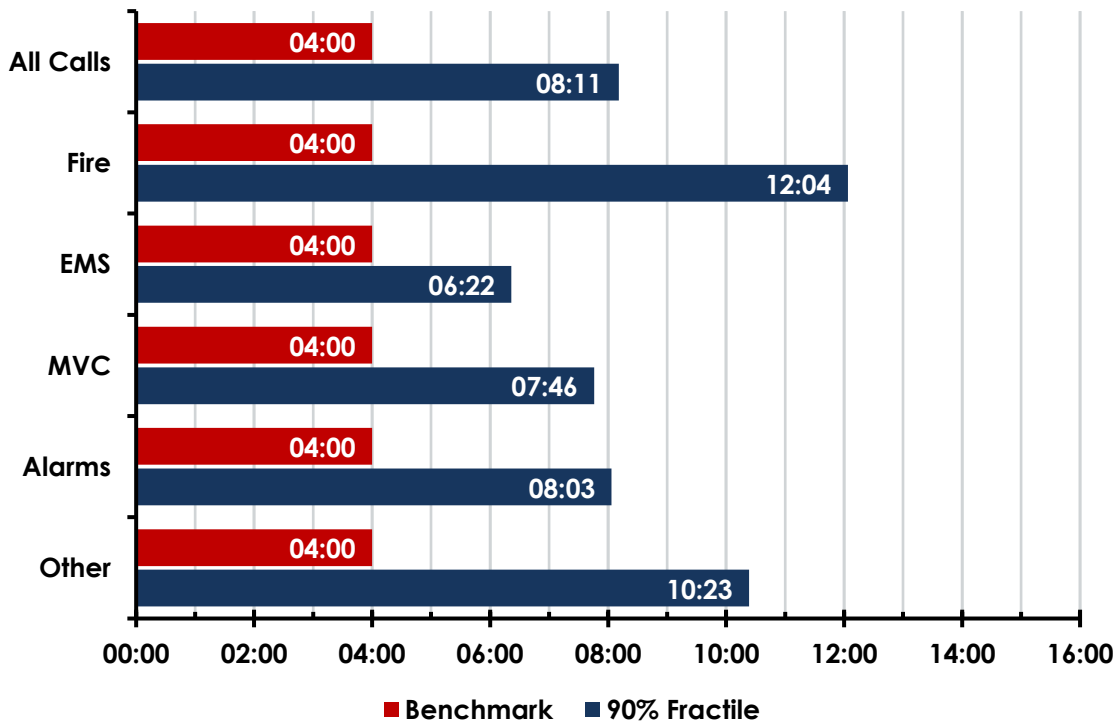
Figure 91: DFD Travel Time Performance, 2015–2018



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.

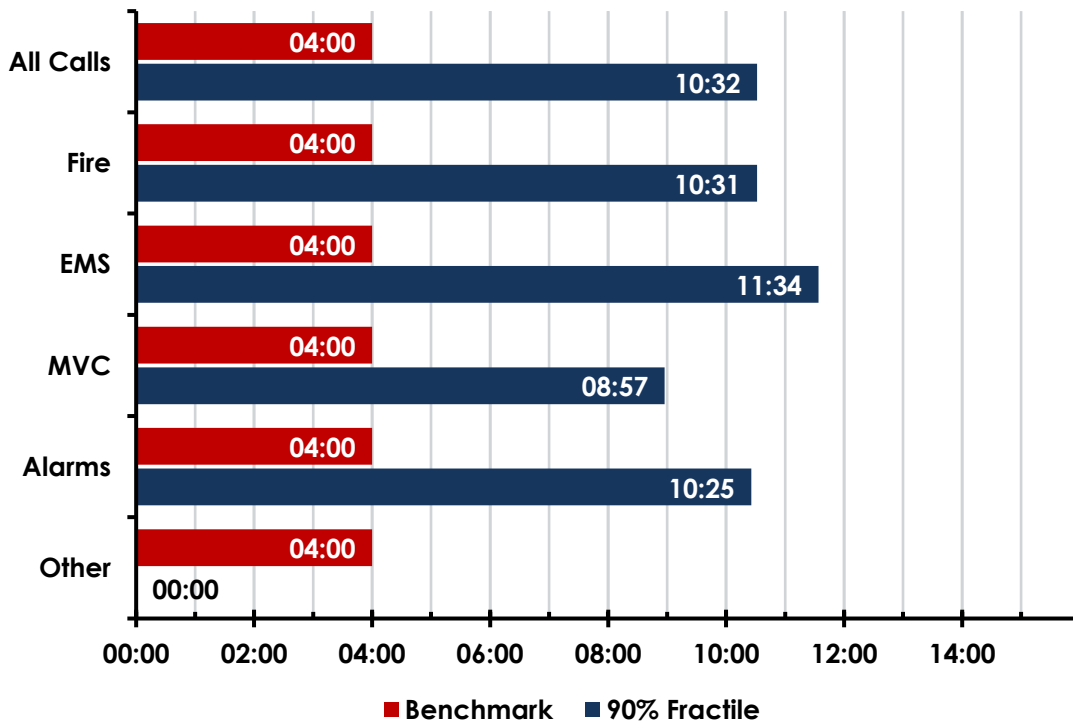
Figure 92: DDF Travel Time Performance, 2015–2018



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.

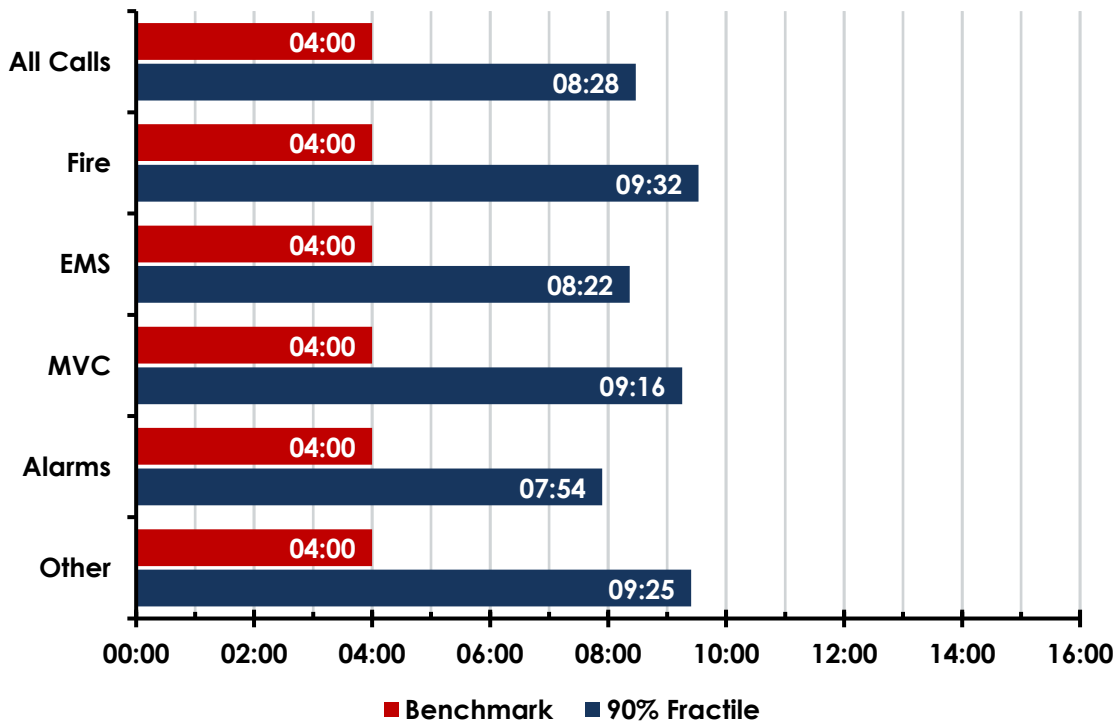
Figure 93: LFD Travel Time Performance, 2015–2018



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.

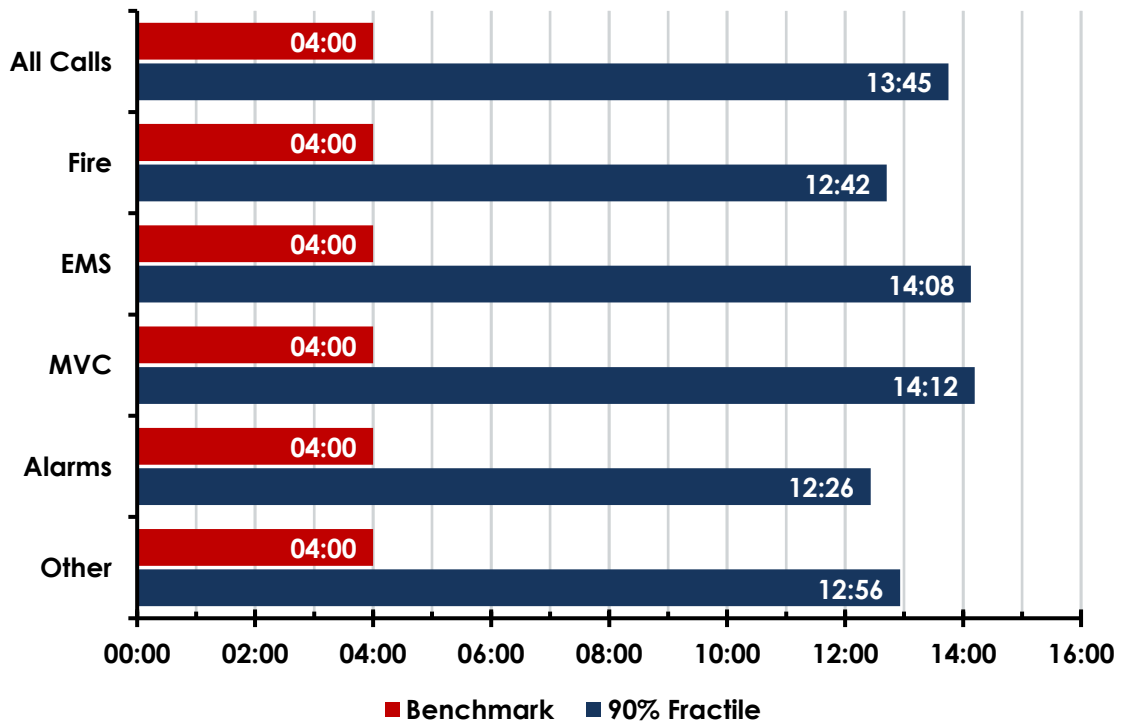
Figure 94: MFD Travel Time Performance, 2015–2018



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.

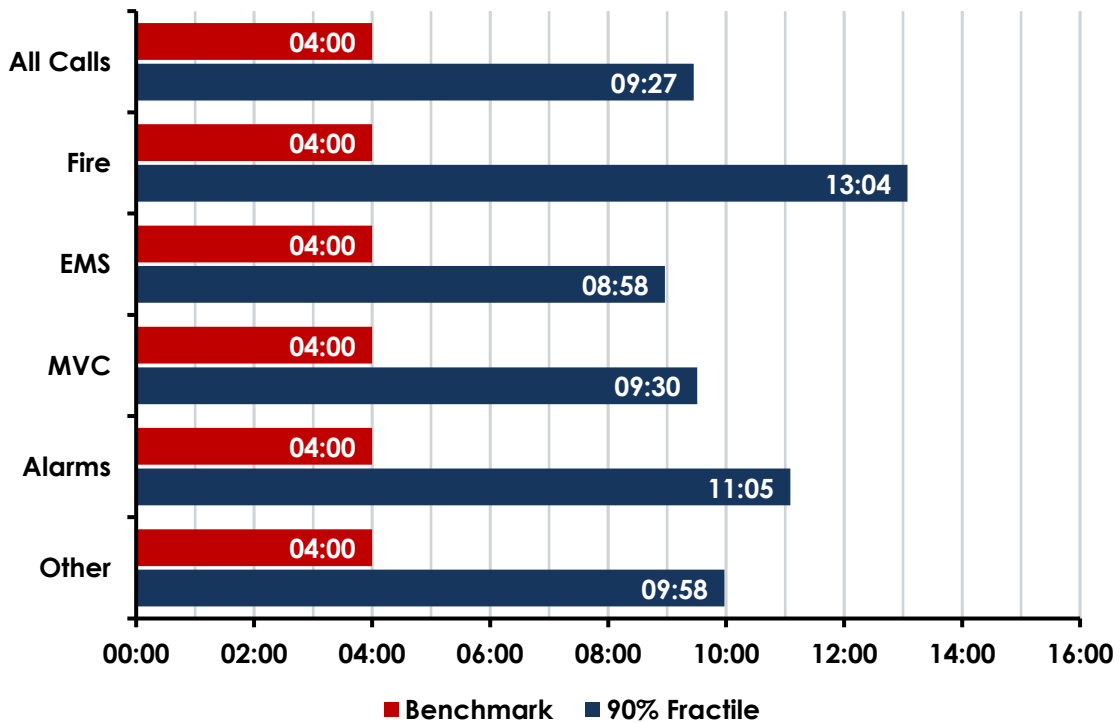
Figure 95: NCFD Travel Time Performance, 2015–2018



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.

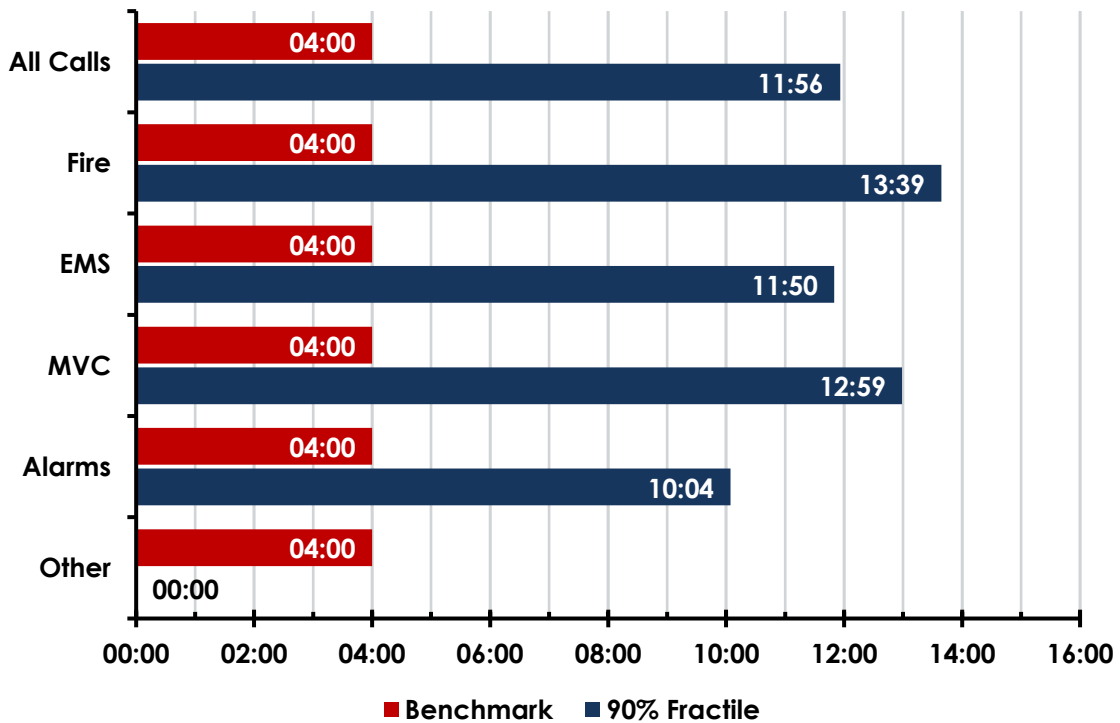
Figure 96: SFD Travel Time Performance, 2015–2018



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.

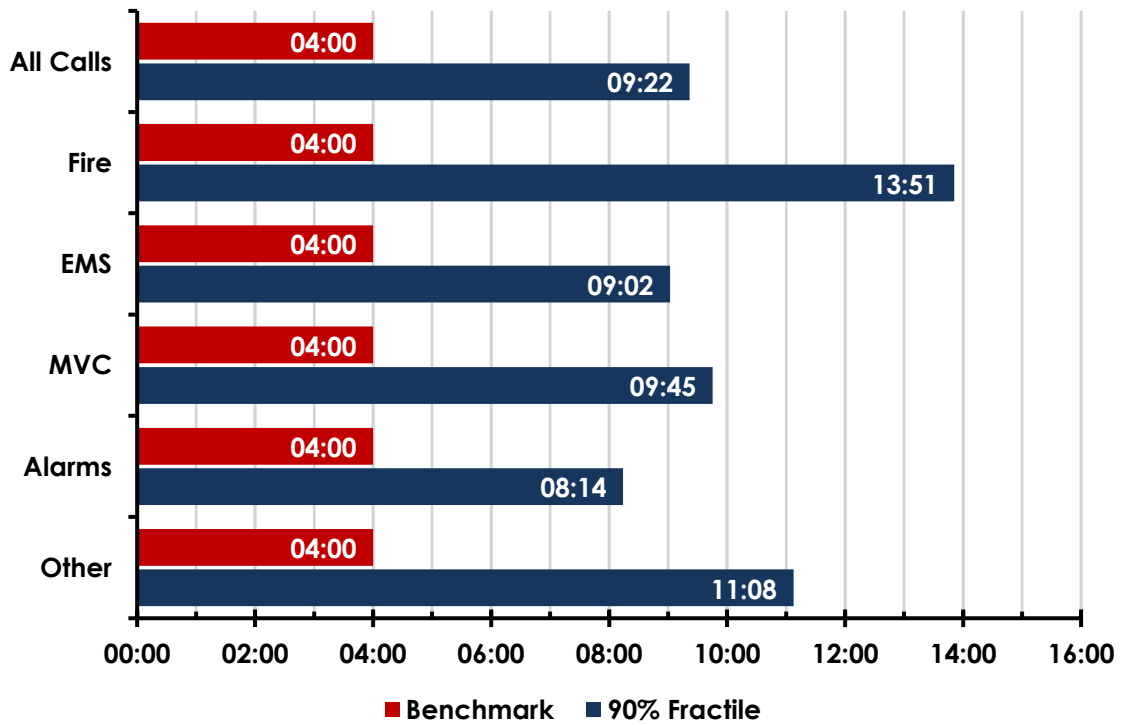
Figure 97: WVFD Travel Time Performance, 2015–2018



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



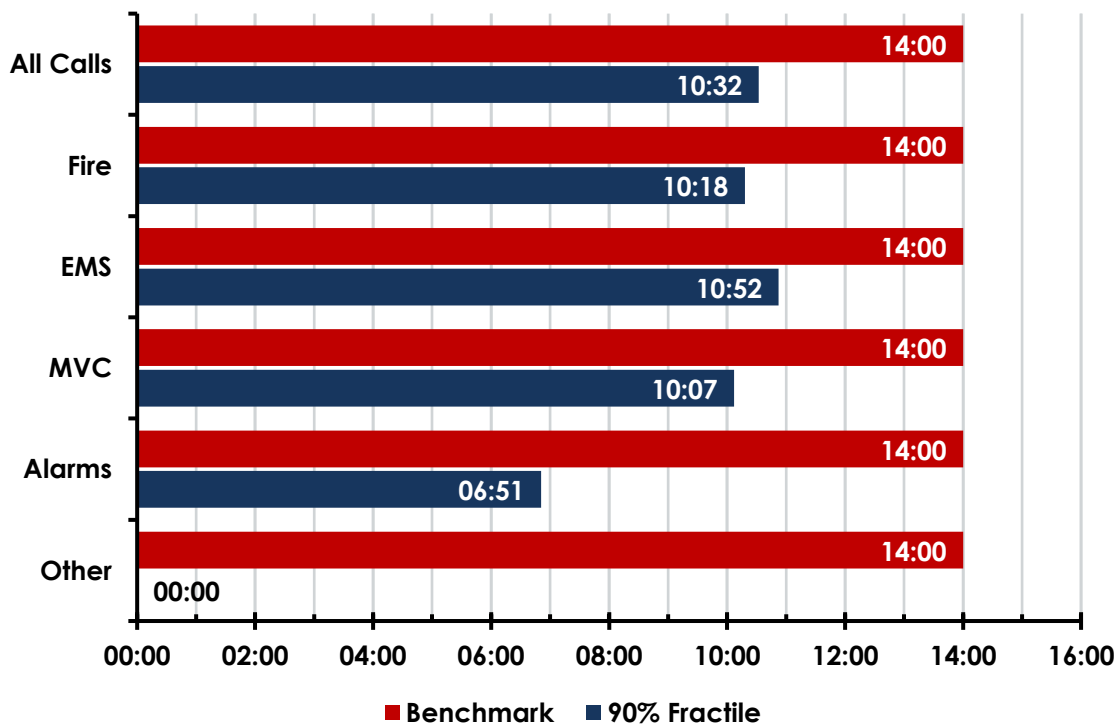
Response Time Performance

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.

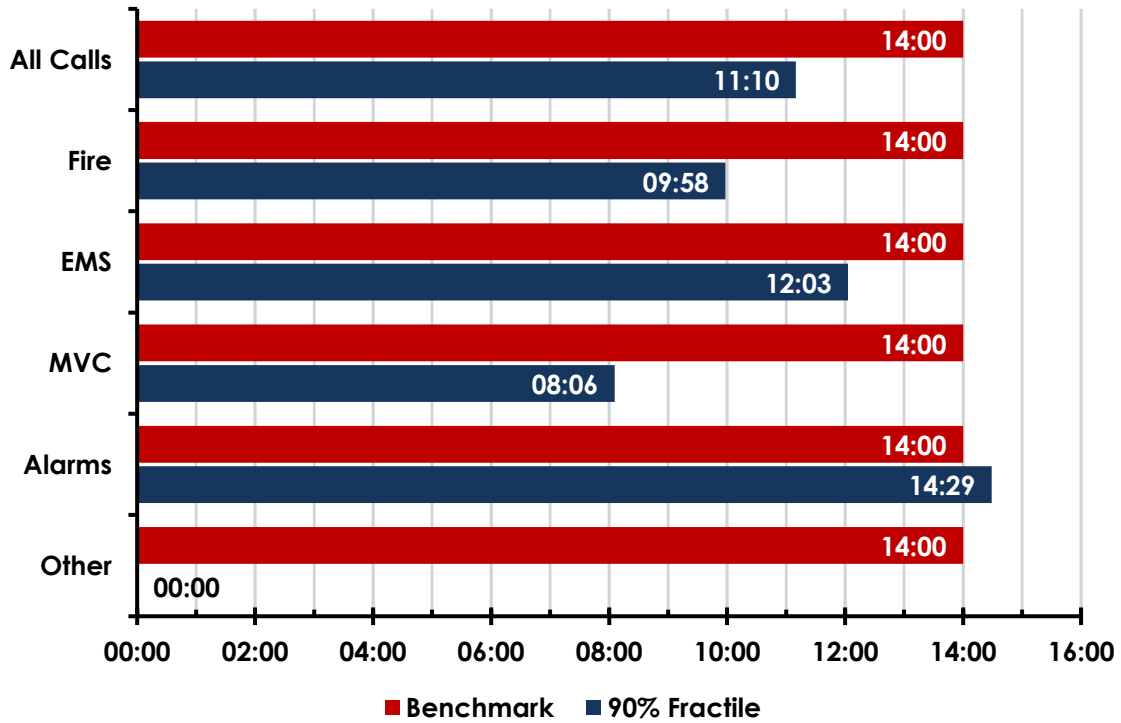
Figure 99: AFD Response Time Performance, 2015–2018



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.

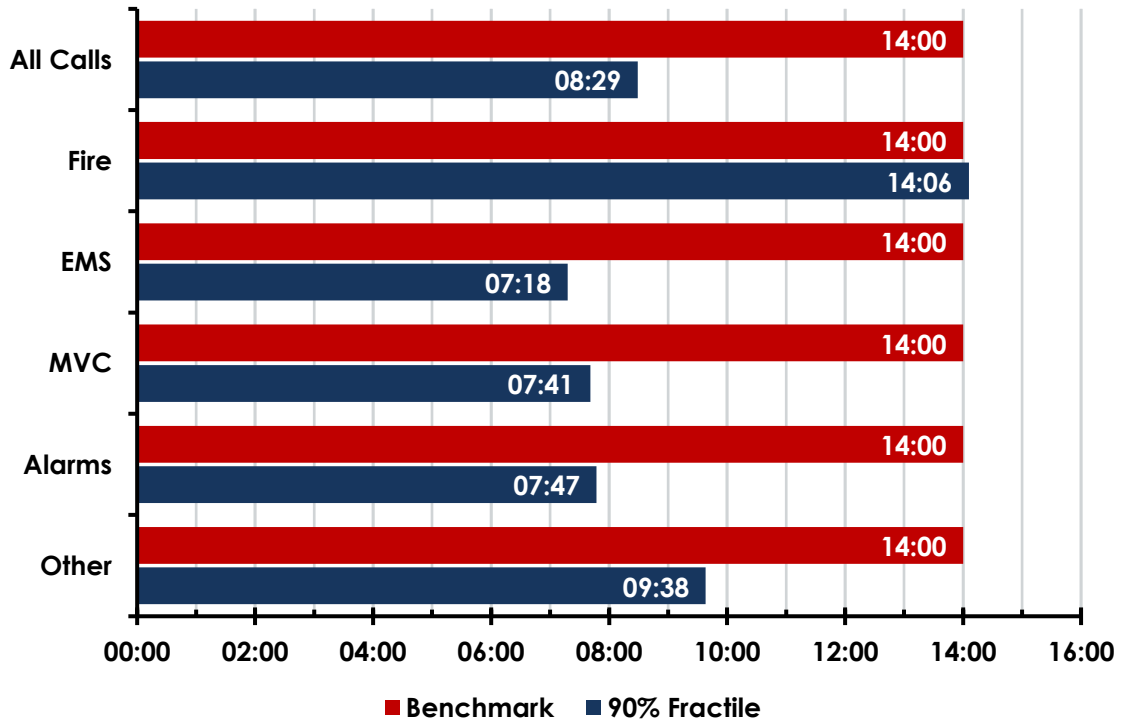
Figure 100: DFD Response Time Performance, 2015–2018



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.

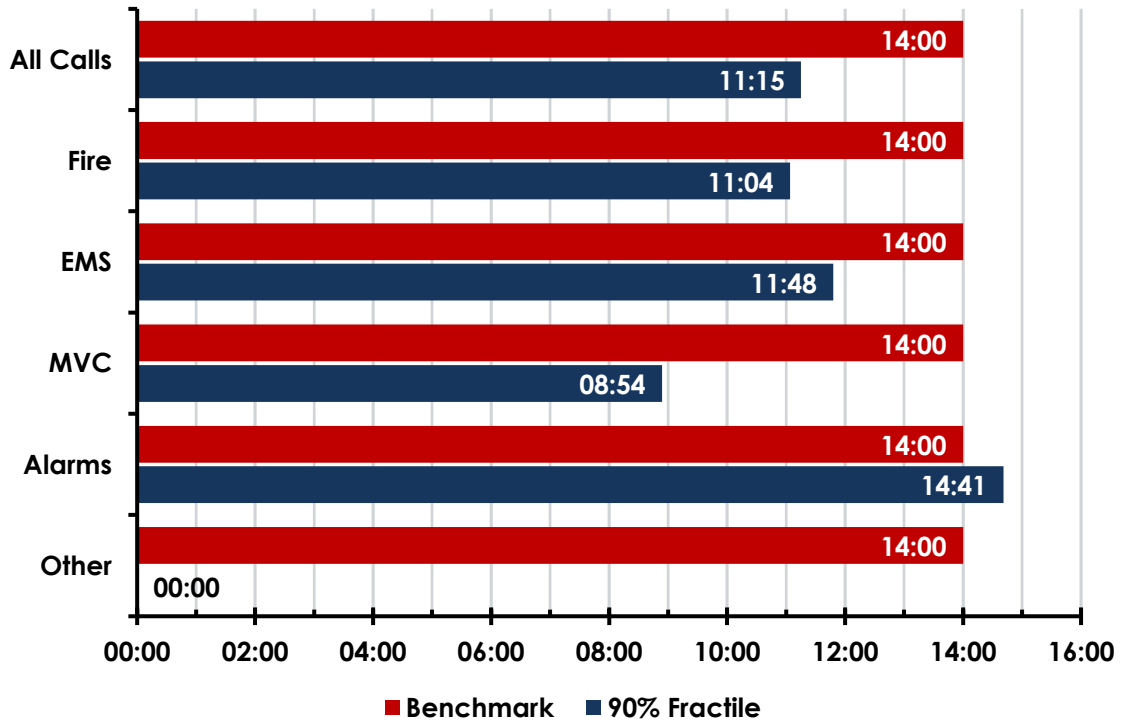
Figure 101: DDF Response Time Performance, 2015–2018



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.

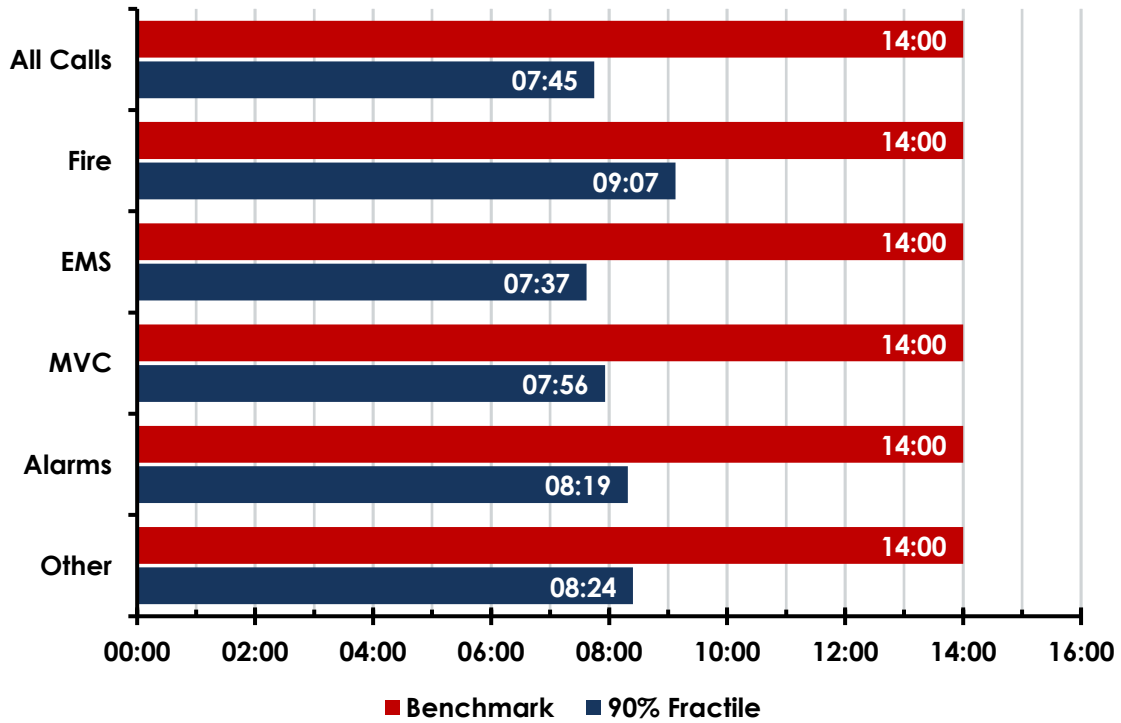
Figure 102: LFD Response Time Performance, 2015–2018



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.

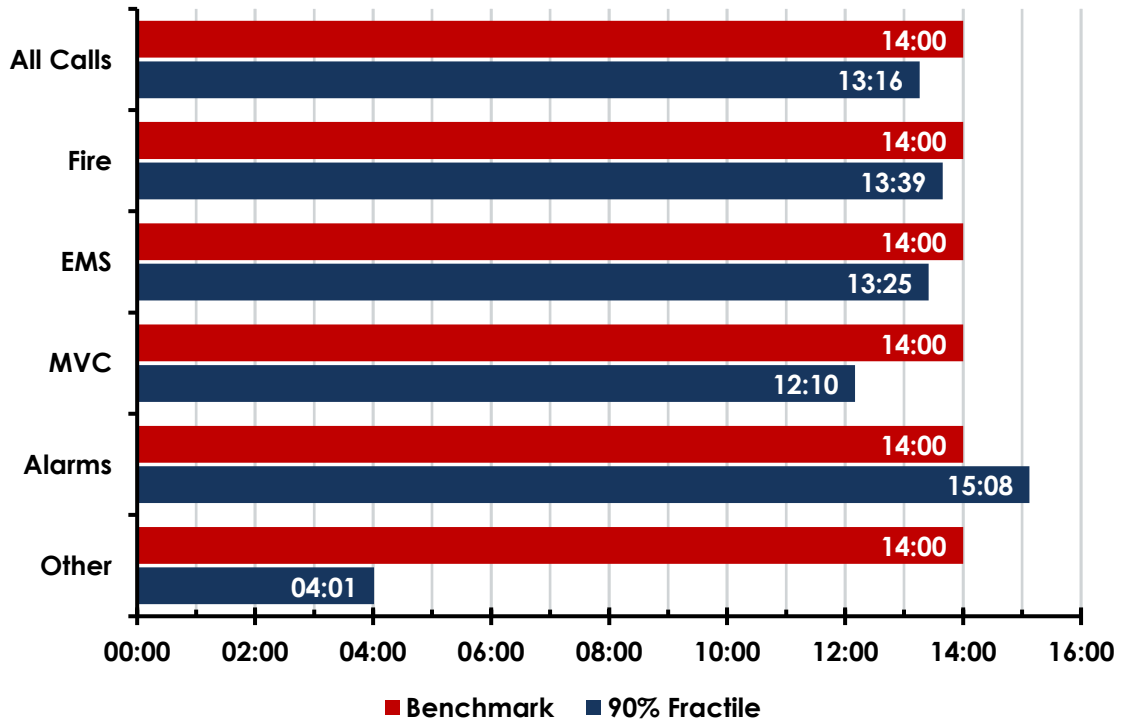
Figure 103: MFD Response Time Performance, 2015–2018



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.

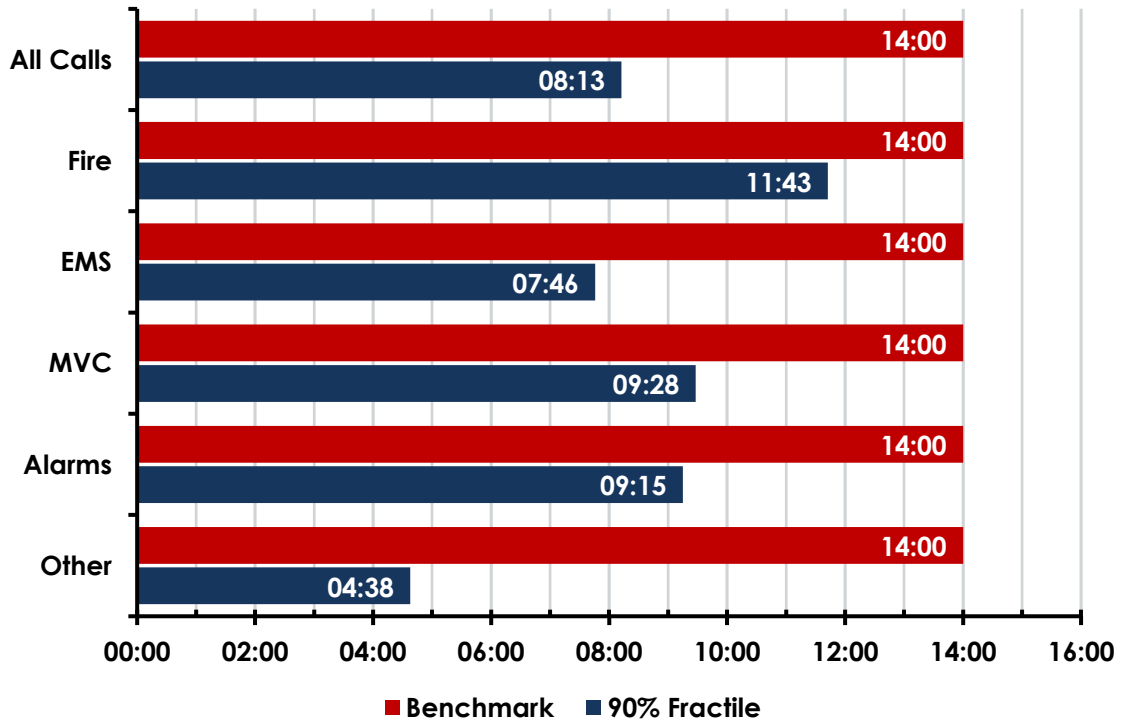
Figure 104: NCFD Response Time Performance, 2015–2018



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.

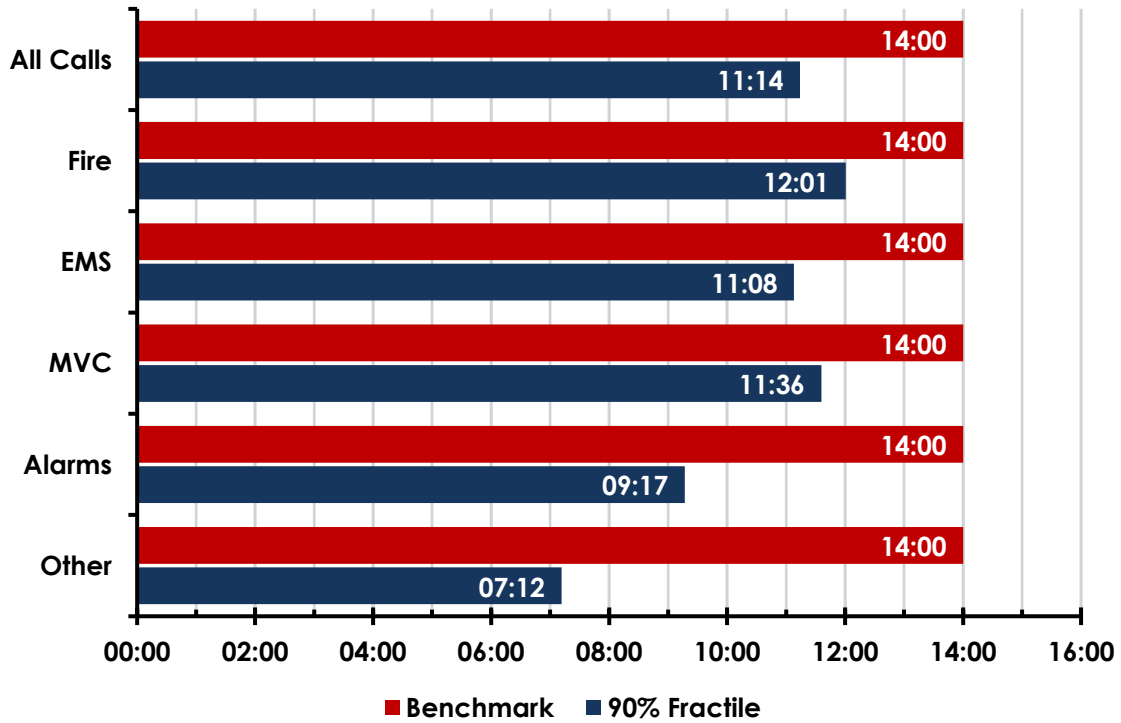
Figure 105: SFD Response Time Performance, 2015–2018



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.

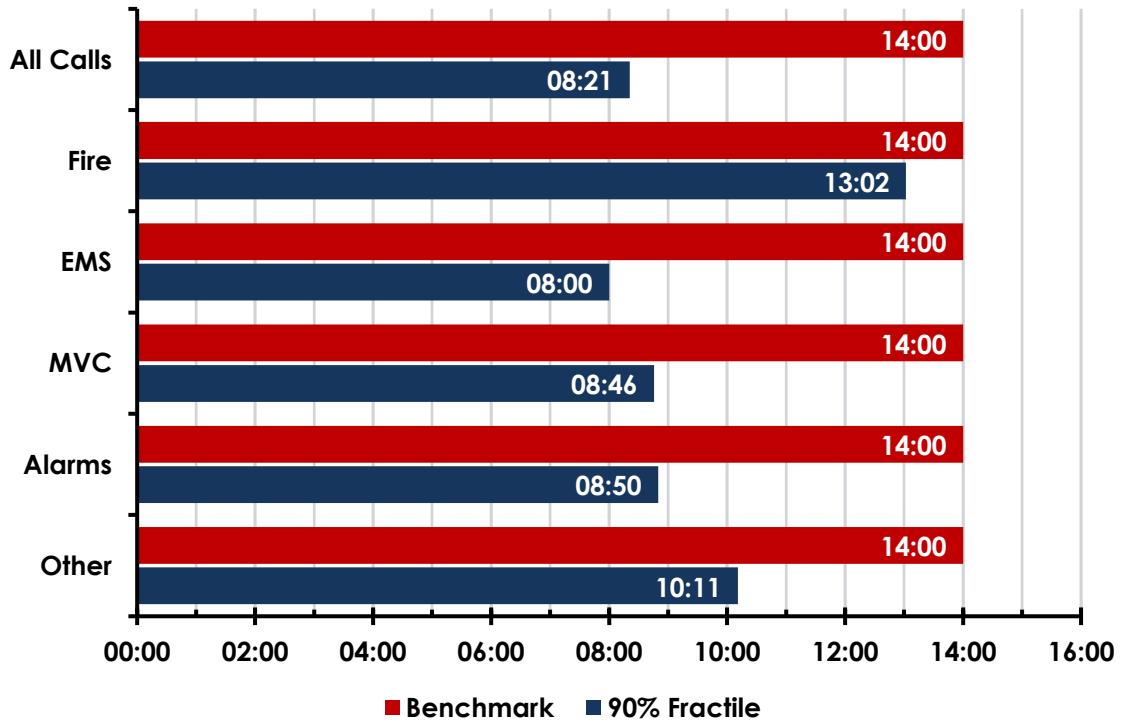
Figure 106: WVFD Response Time Performance, 2015–2018



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

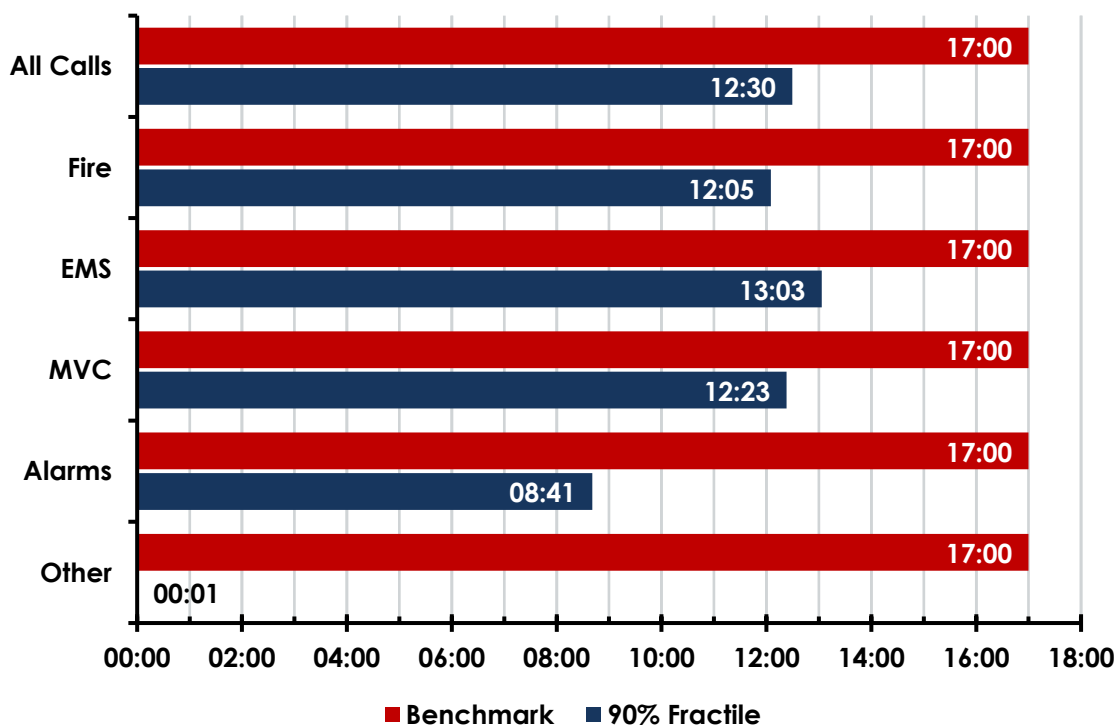
Total response time combines all the measures into a single measurement and reflects the measure of time from when the 911 call is initiated until the first unit arrives on the incident scene. The data provided to ESCI did not contain the timestamp of the 911 call and, thus, the following figures illustrate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

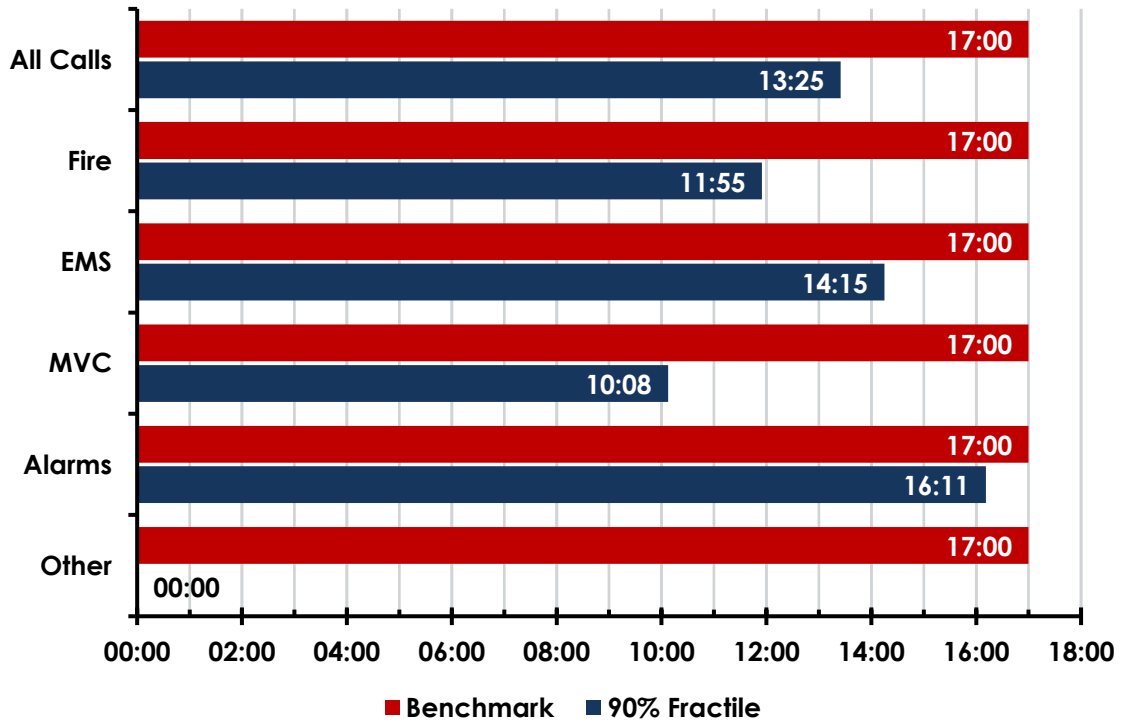
Figure 108: AFD Total Response Time Performance, 2015–2018



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.

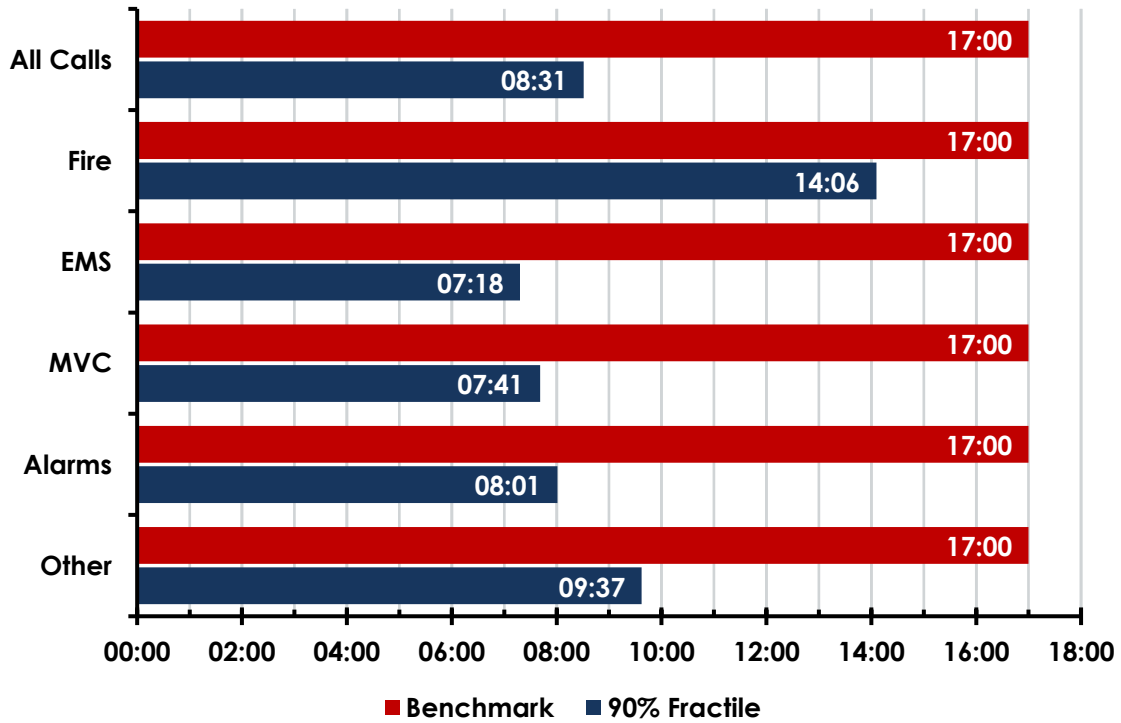
Figure 109: DFD Total Response Time Performance, 2015–2018



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.

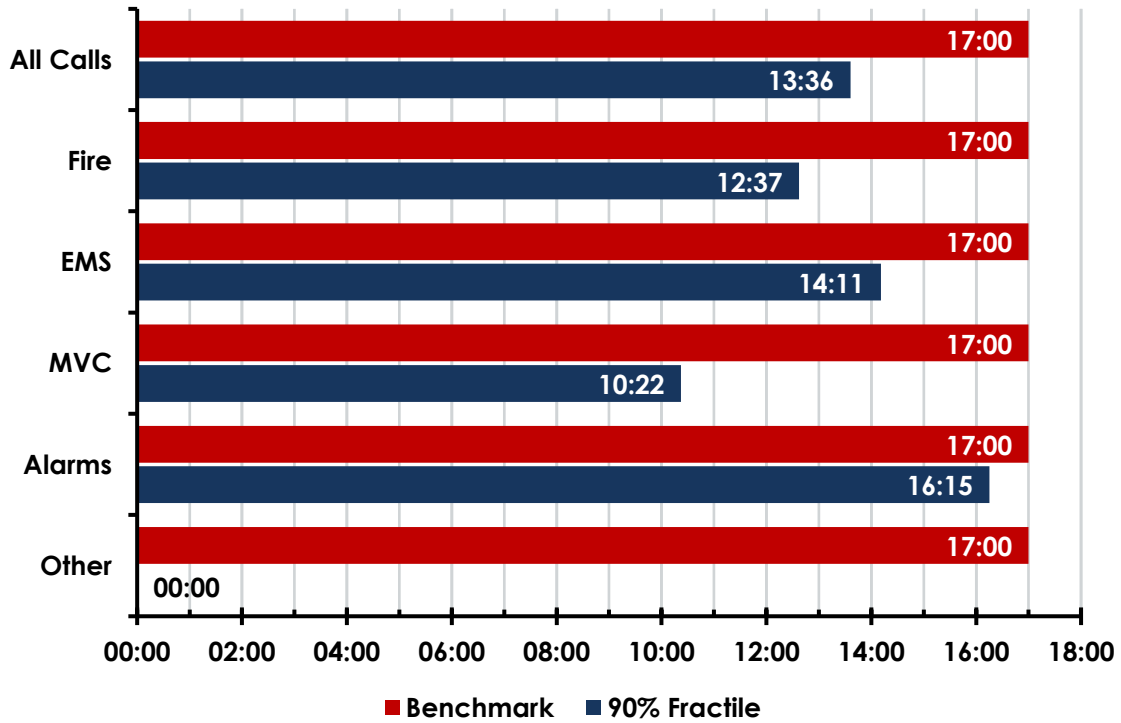
Figure 110: DDF Total Response Time Performance, 2015–2018



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.

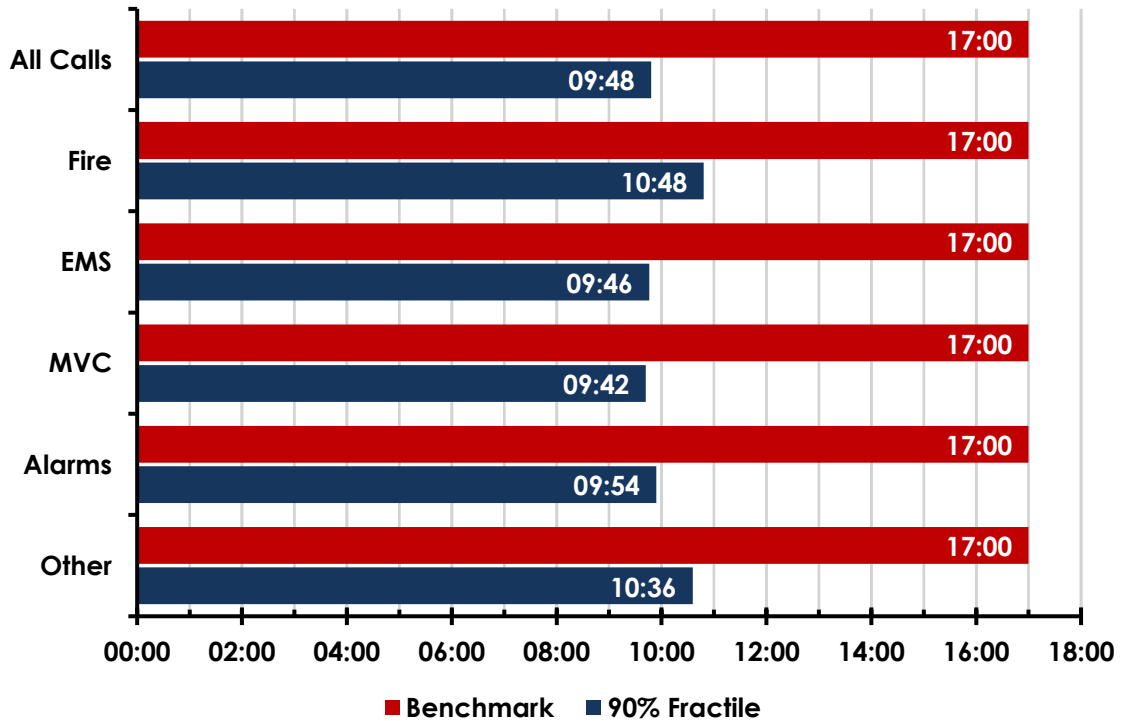
Figure 111: LFD Total Response Time Performance, 2015–2018



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.

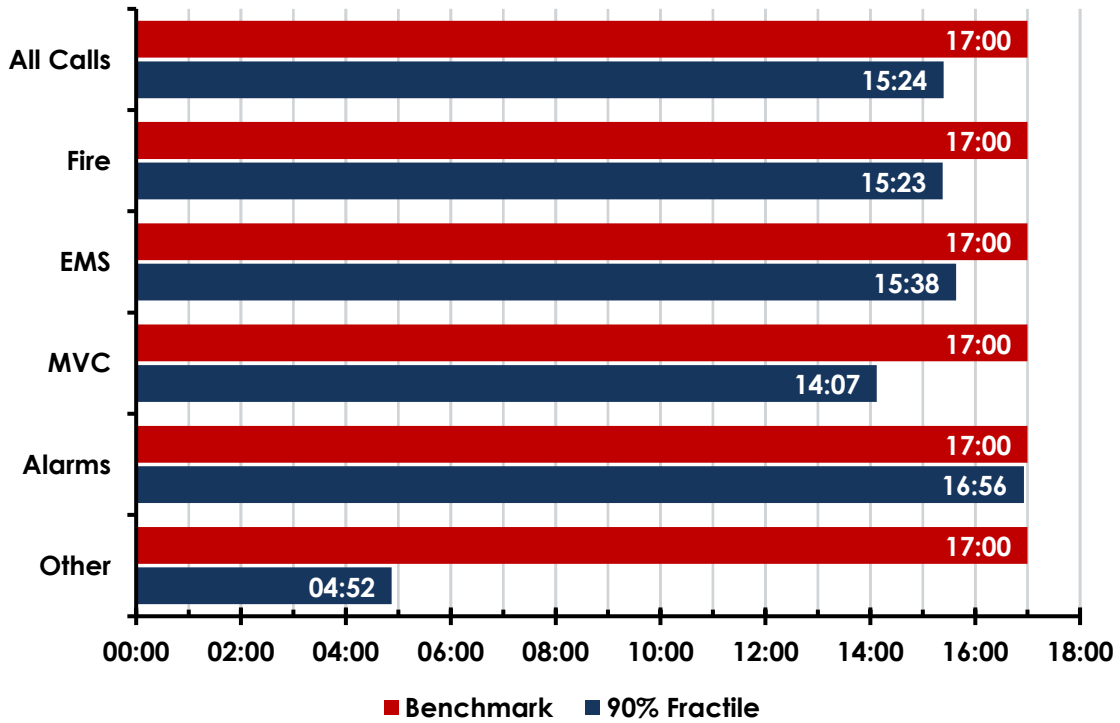
Figure 112: MFD Total Response Time Performance, 2015–2018



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.

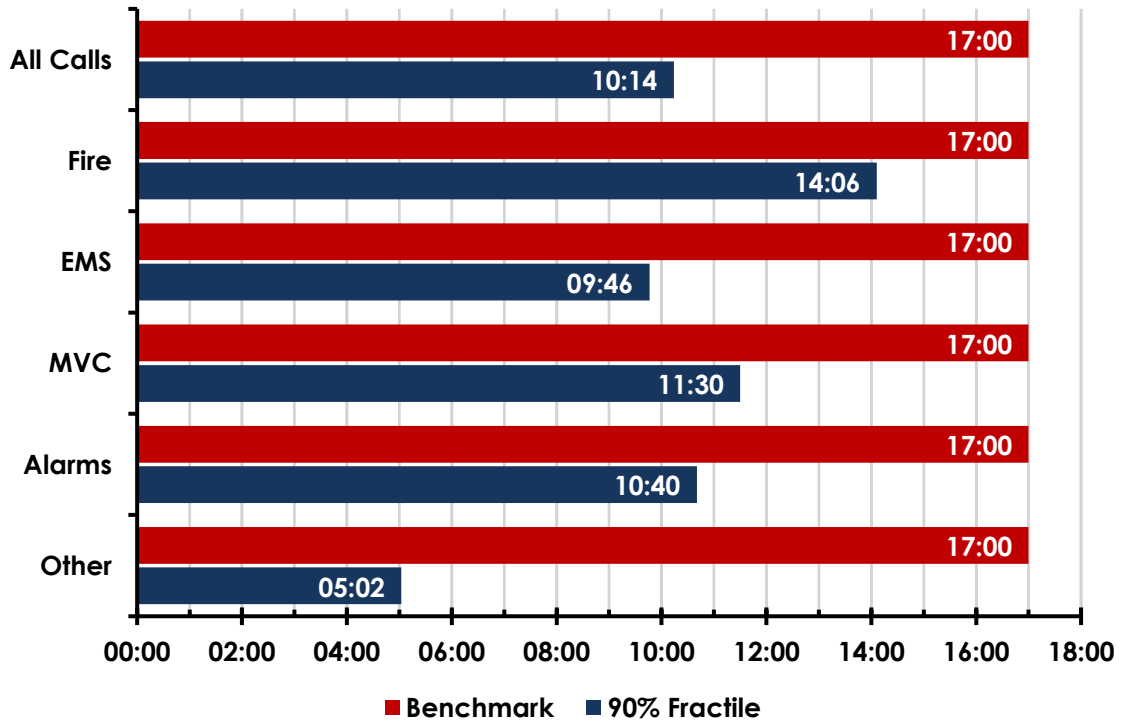
Figure 113: NCFD Total Response Time Performance, 2015–2018



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.

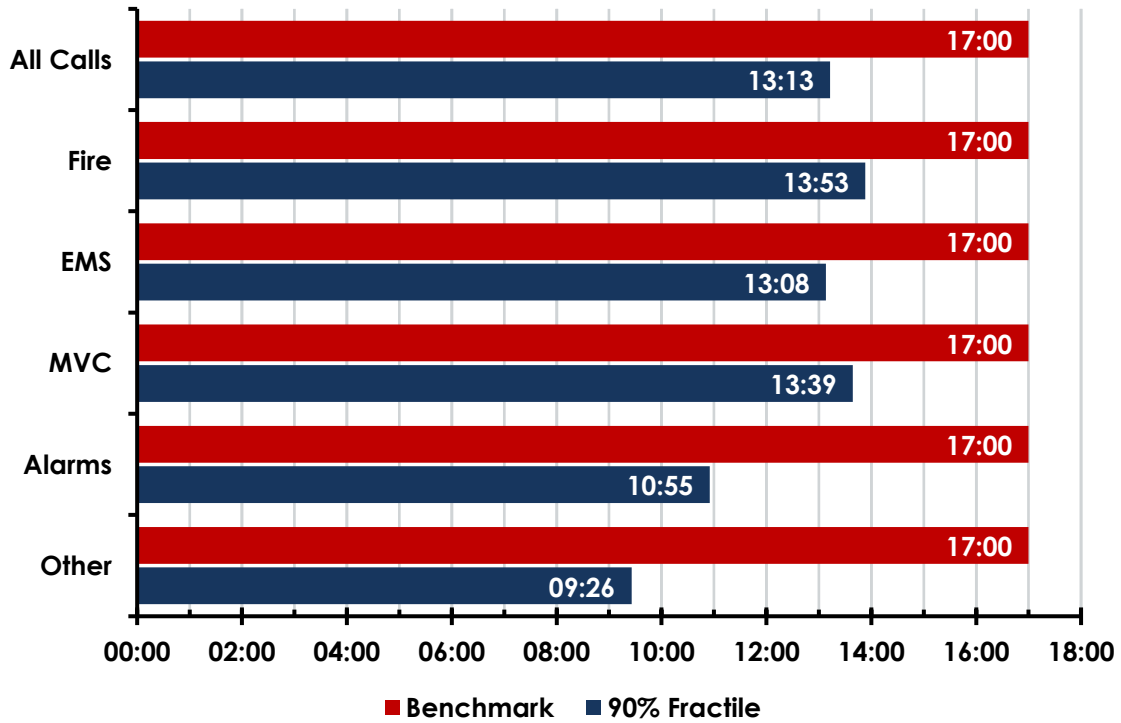
Figure 114: SFD Total Response Time Performance, 2015–2018



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.

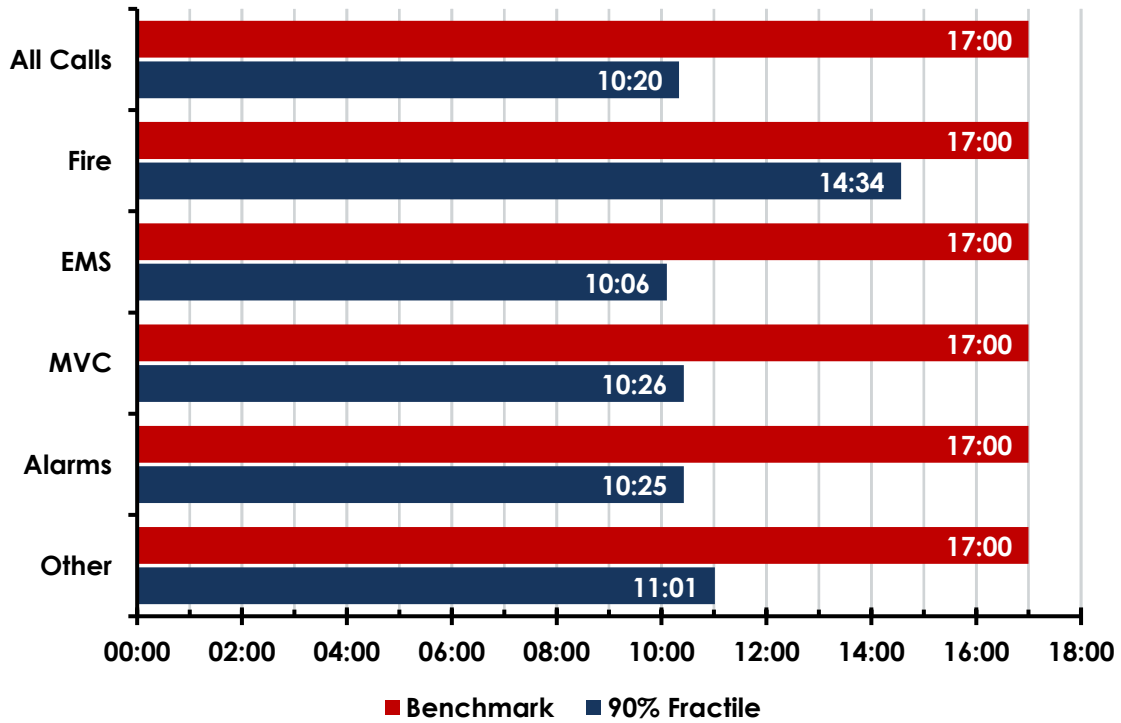
Figure 115: WVFD Total Response Time Performance, 2015–2018



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

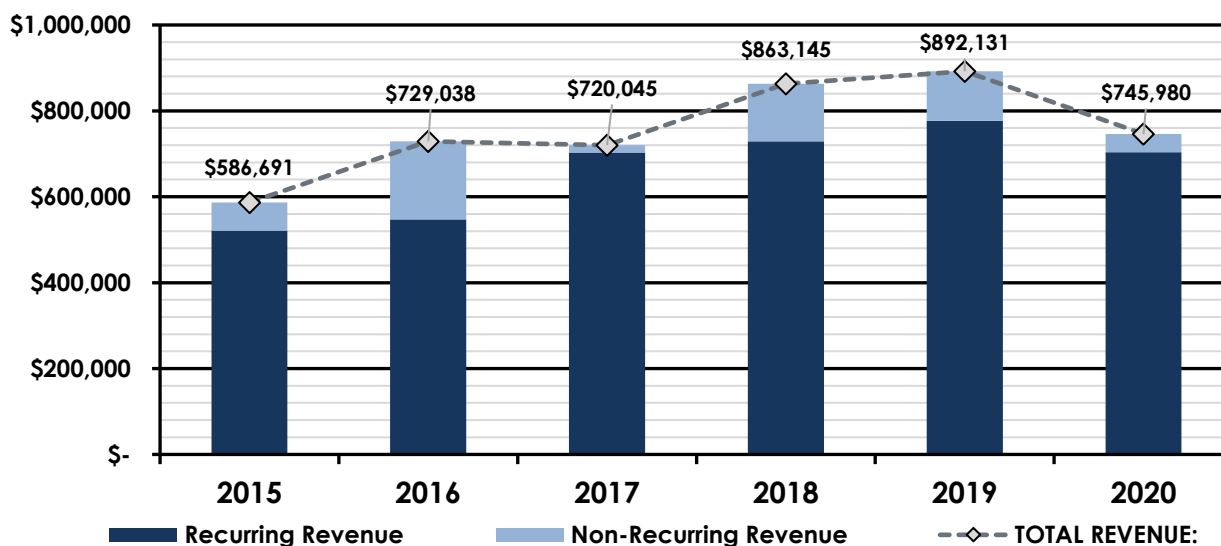
The following figure summarizes actual Amity Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary source of District revenues is property taxes, which, as of FY 2017, is comprised of a current year and five-year operational levy in the General Fund and a debt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



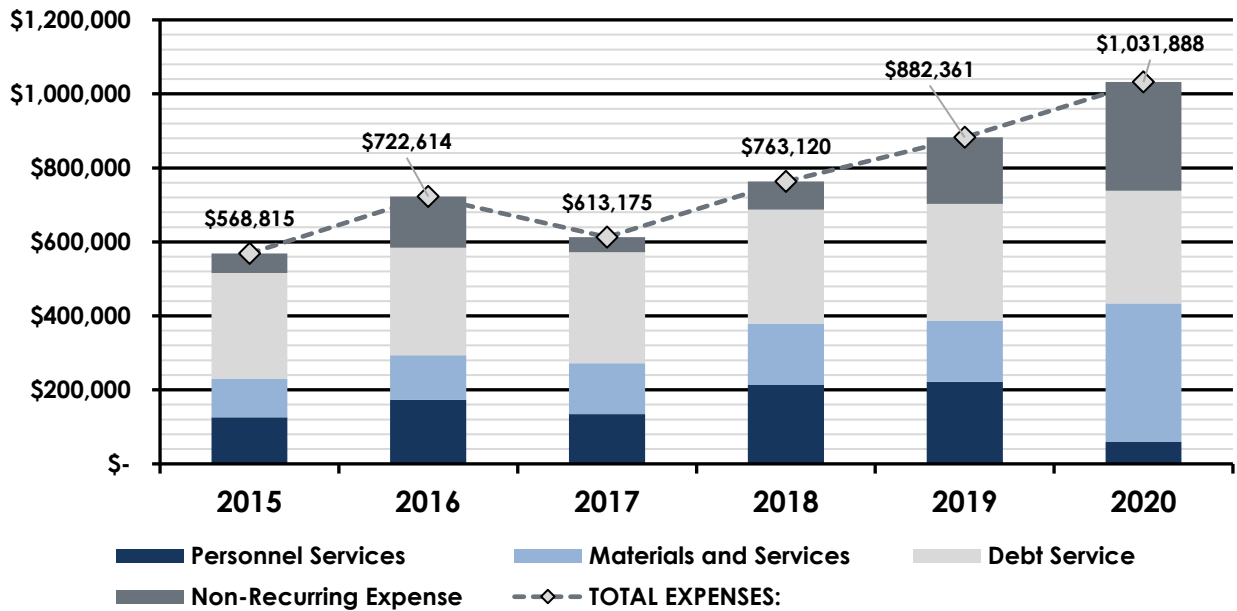
The following figure shows Amity Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have varied between \$40,000 and \$180,000 from FY 2015–19, with the bulk of annual expenditures on equipment. During the historical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

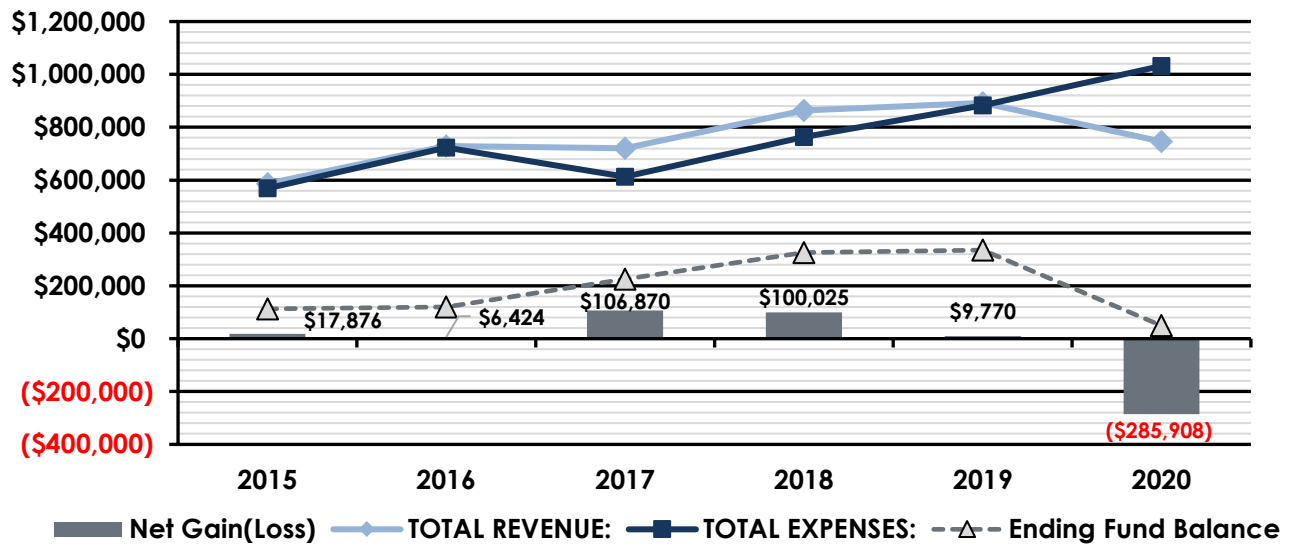
The following figure shows District expense by major category and illustrates the variable impact of capital expenditures on overall expense. Total District expense has generally increased by 11.6% per year from FY 2015 through FY 2019. This trend has been driven by an increase in recurring expense of 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

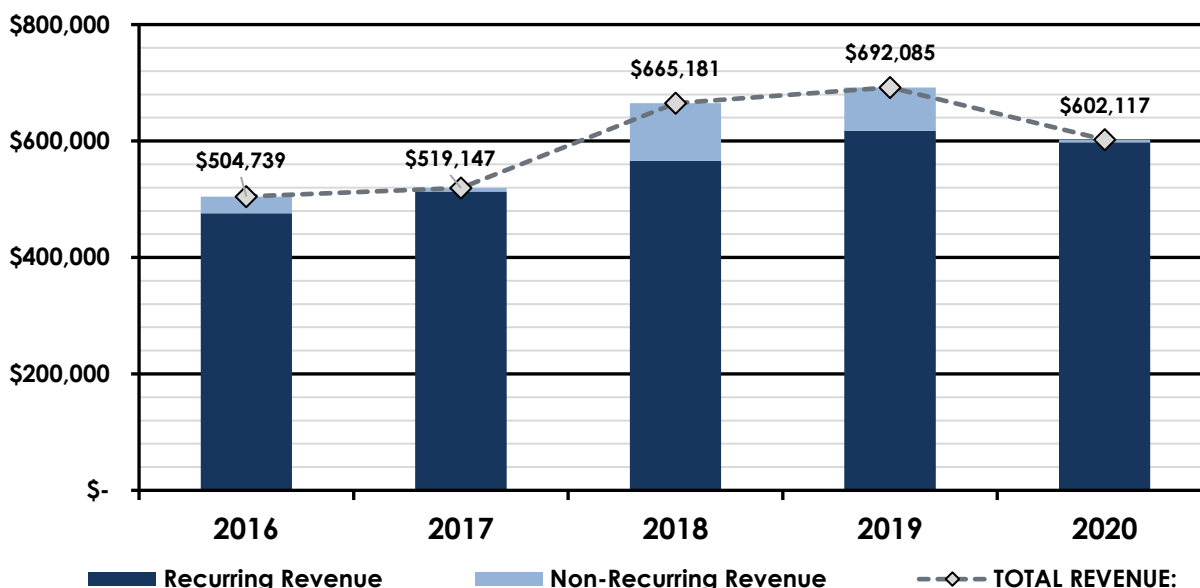
The following figure summarizes actual Dayton Fire District revenues for the period FY 2016–19 and estimated revenues for FY 2020. Estimates are based upon historical projections using the available data. The primary source of District revenues is property taxes.

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



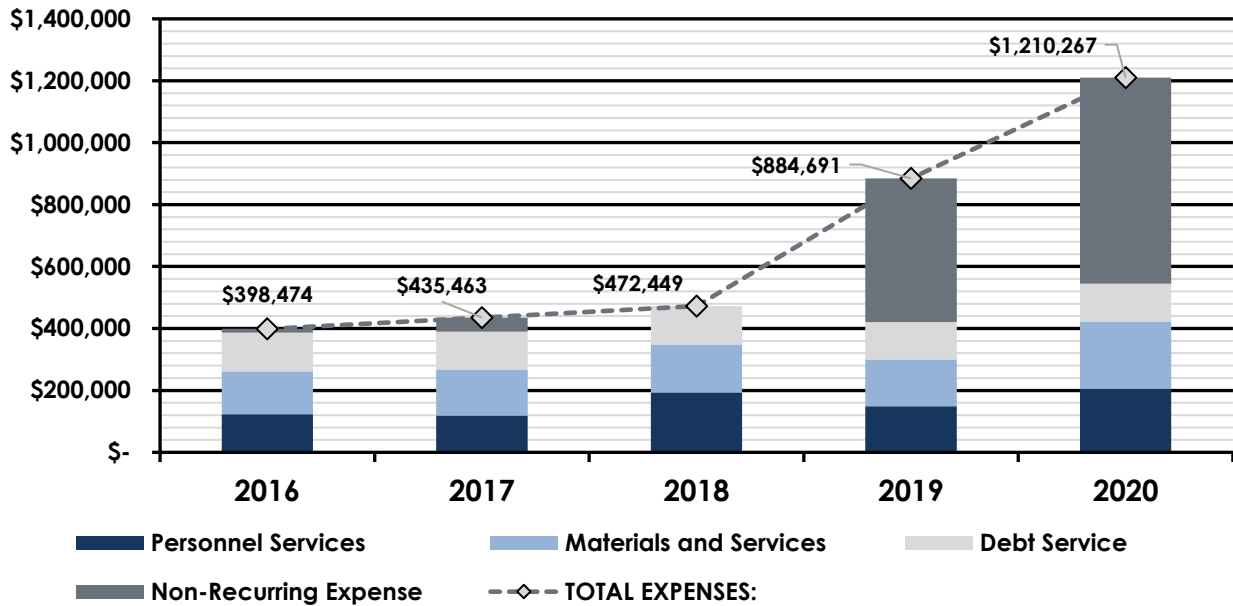
The following figure shows Dayton Fire District expenses for the period FY 2016-19 actual and FY 2020 as estimated. Capital expenses are considered non-recurring expenses and have varied greatly between \$0 and \$464,000 from FY 2016–19, with the large expenditure in FY 2019 on apparatus replacement.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

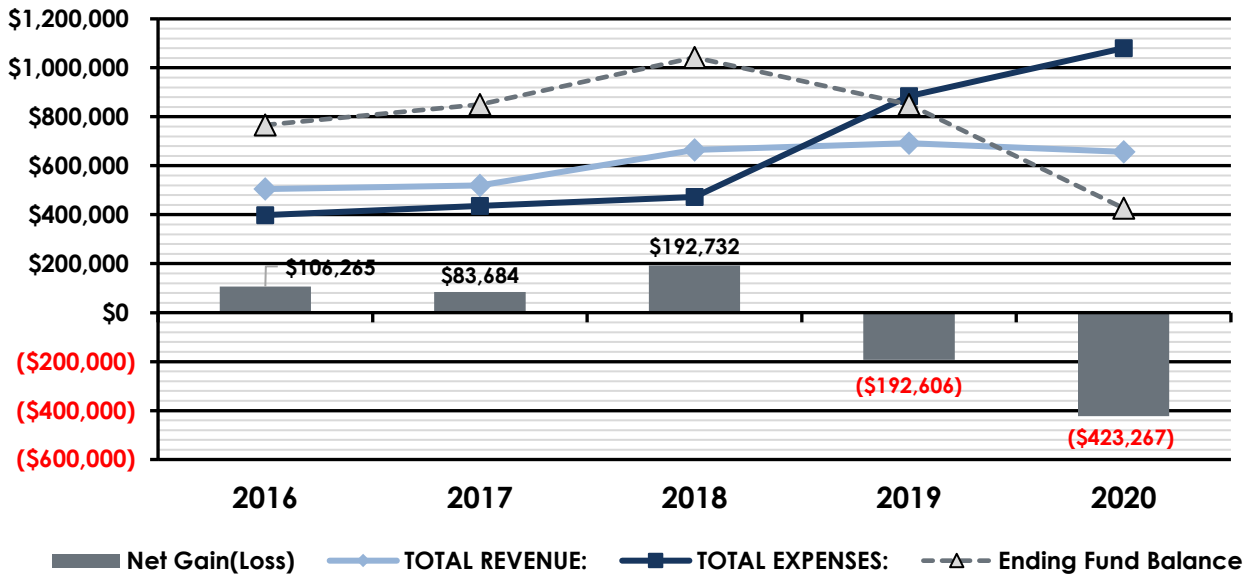
The following figure shows District expense by major category and illustrates the variable impact of capital expenditures, particularly apparatus replacement, on overall expense. Excluding the large capital apparatus purchases in FY 2019 and estimated in FY 2020, total District expense has generally 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.

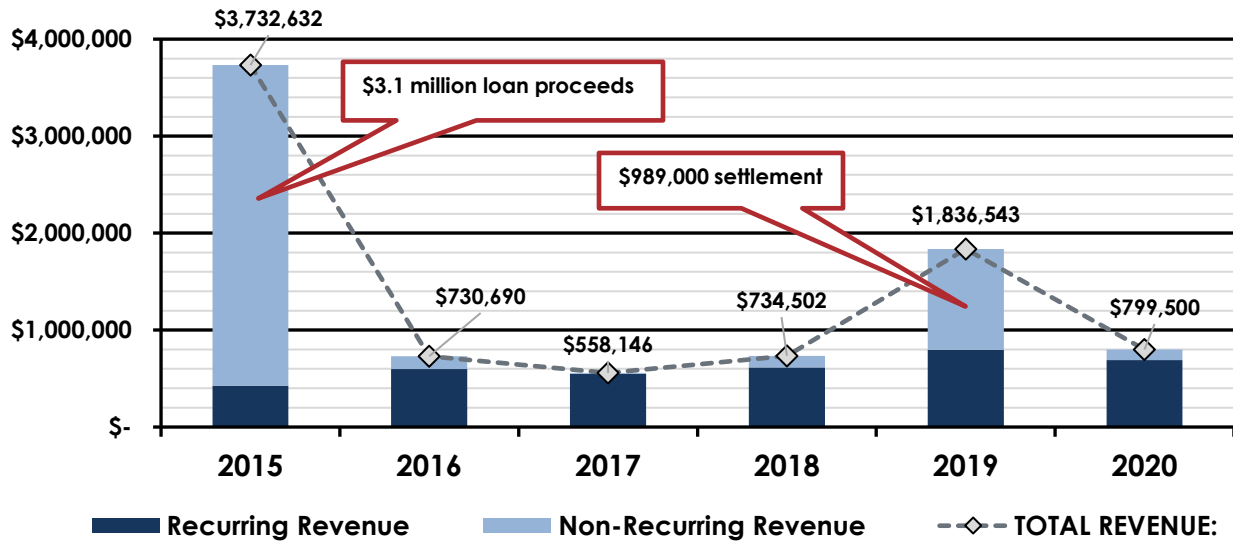
The following figure summarizes actual DDF revenues for the period FY 2015–19 and forecast revenues for FY 2020. The primary source of departmental revenues is property taxes comprised of a share of the City current year levy in the General Fund and a debt service levy in the Bonded Debt Fund. A secondary 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



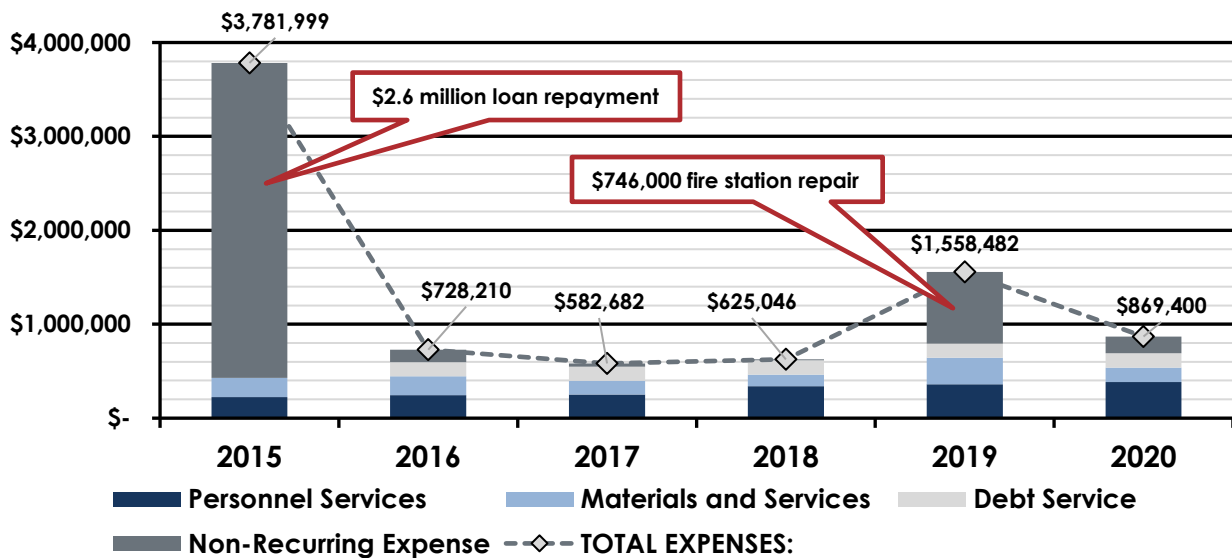
The following figure shows DDF expenses for the period FY 2015 actual and FY 2020 as forecast. Capital expenses are considered non-recurring expenses and the repayment of a construction loan in FY 2015 is also shown as a non-recurring expense.

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

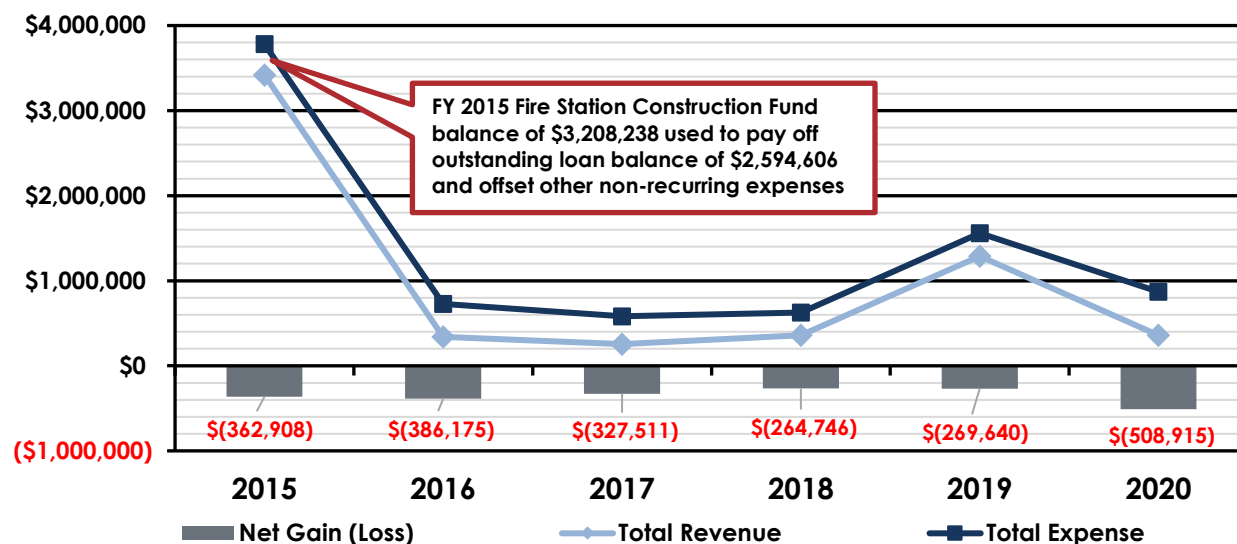
The following figure shows DDF expense by major category. Major spikes in total expenditures are caused by repayment of a construction loan (\$2.6 million) and capital construction costs of \$670,000 in FY 2015 and fire station repair costs of \$746,000 in FY 2019. Equipment/Apparatus costs have generally 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

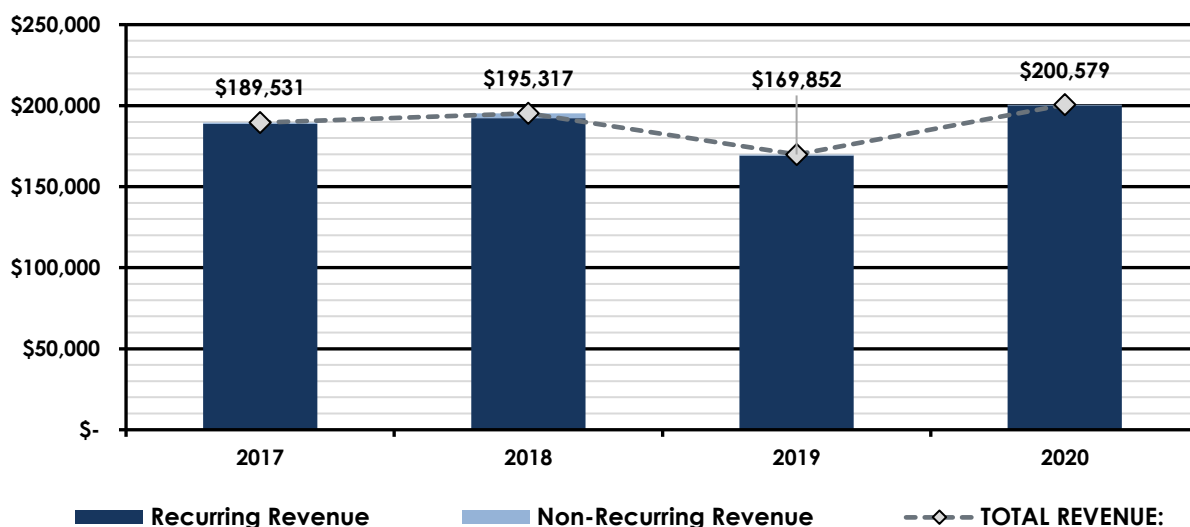
The following figure summarizes actual Dundee Fire District revenues for the period FY 2017–18 and adopted revenues for FY 2019–20. The primary source of District revenues is property taxes comprised of a current year levy in the General Fund and a debt service levy in the Debt Service Fund.

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



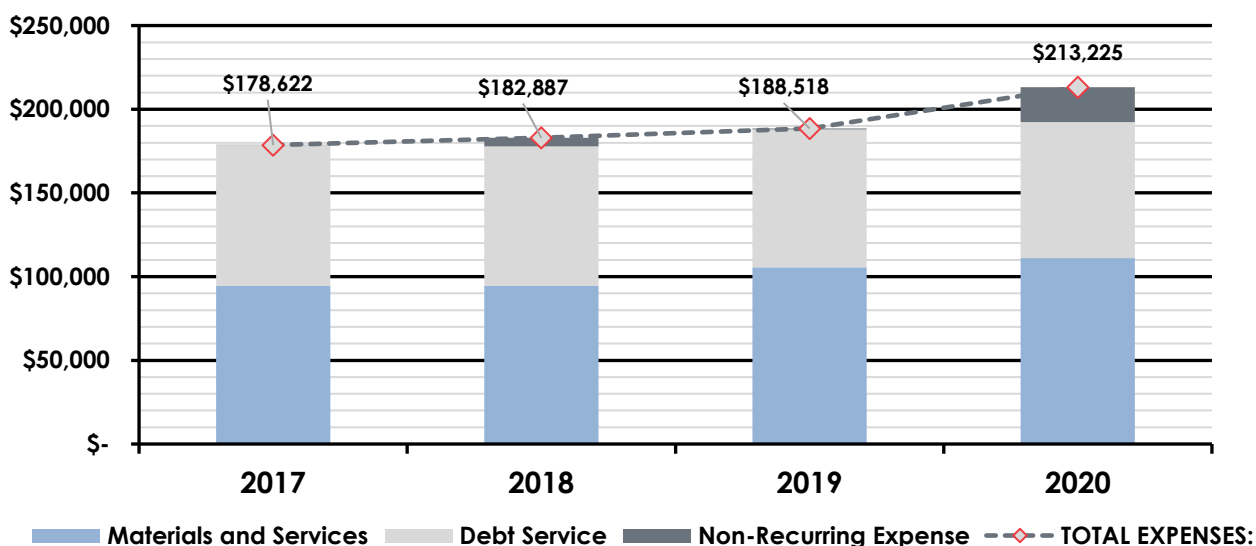
The following figure shows Dundee Fire District expenses for the period FY 2017–18 actual and FY 2019–20 as adopted. Capital expenses are considered non-recurring expenses and have been generally low, \$5,000 or less annually, prior to the FY 2020 adopted amount of \$20,800. These expenses have been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

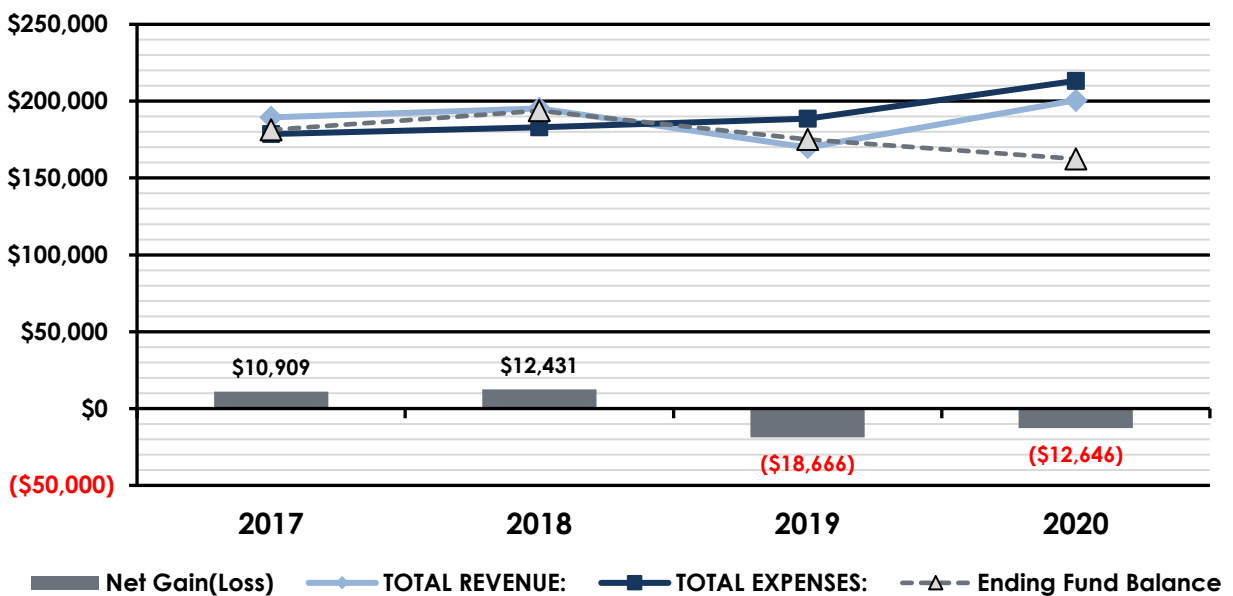
The following figure shows District expense by major category. Actual, total District expenses increased by 2.4% between FY 2017 and FY 2018. When compared to FY 2020 adopted, the average annual increase could be as high as 6.1%. This trend has been driven by an increase in the annual service contract, 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 approximately 12.3% 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

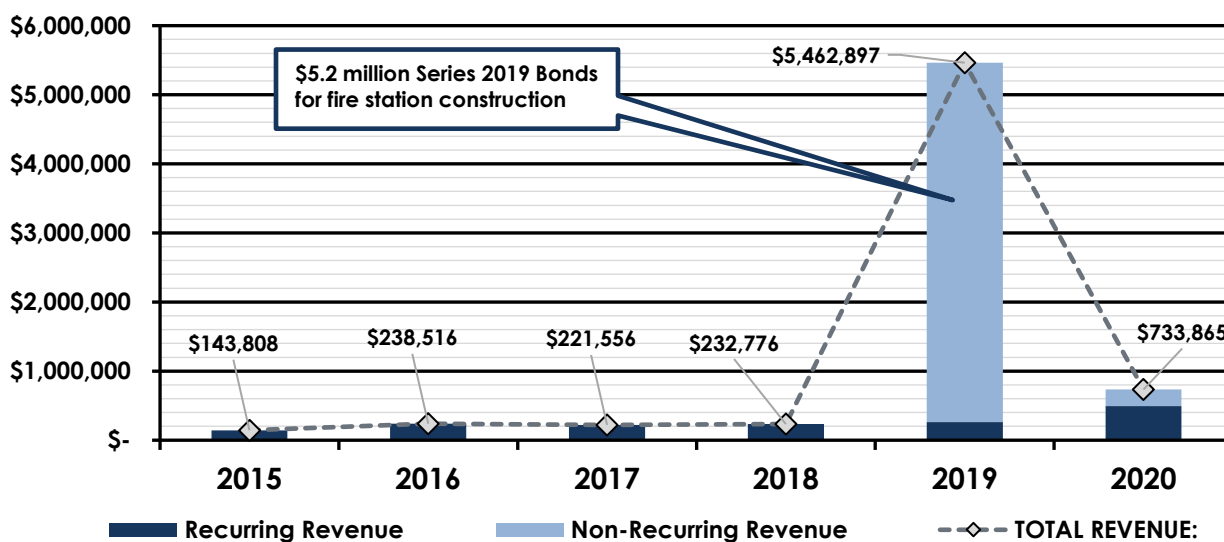
The following figure summarizes actual Lafayette Fire Department revenues for the period FY 2015–19 and adopted revenues for FY 2020. City General Revenues are those GF revenues used to offset fire department operating expenses found within the GF. A separate mill levy in the Fire Station Debt Service 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



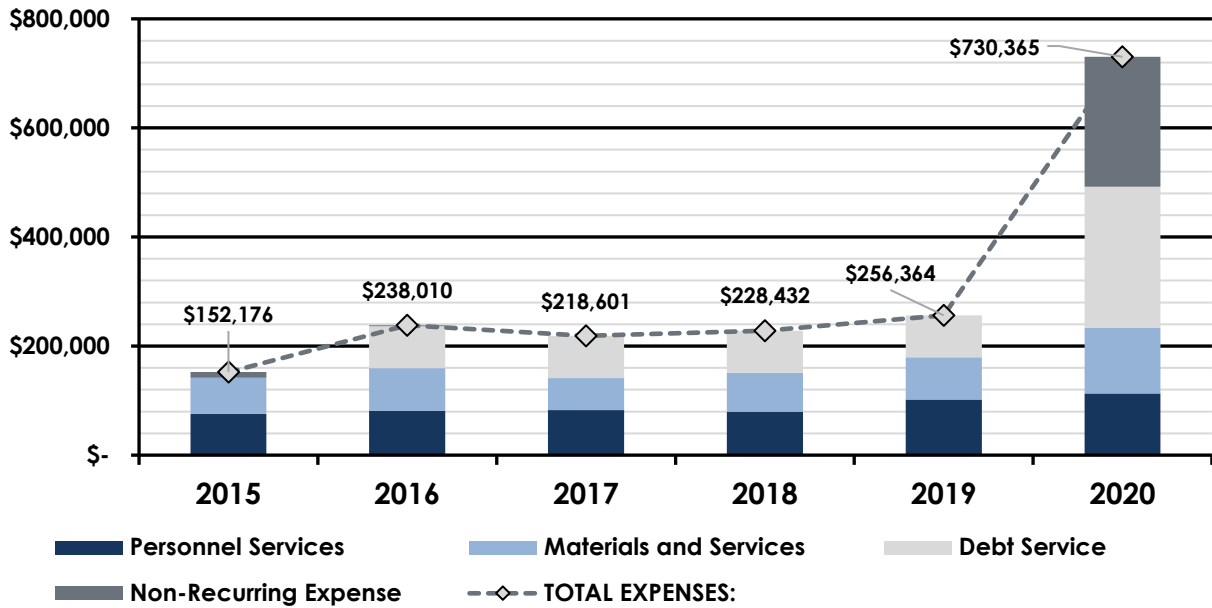
The following figure shows Lafayette Fire Department expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have been generally low, less than \$10,000, to non-existent prior to the FY 2020 adopted amount of \$238,275, which would 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

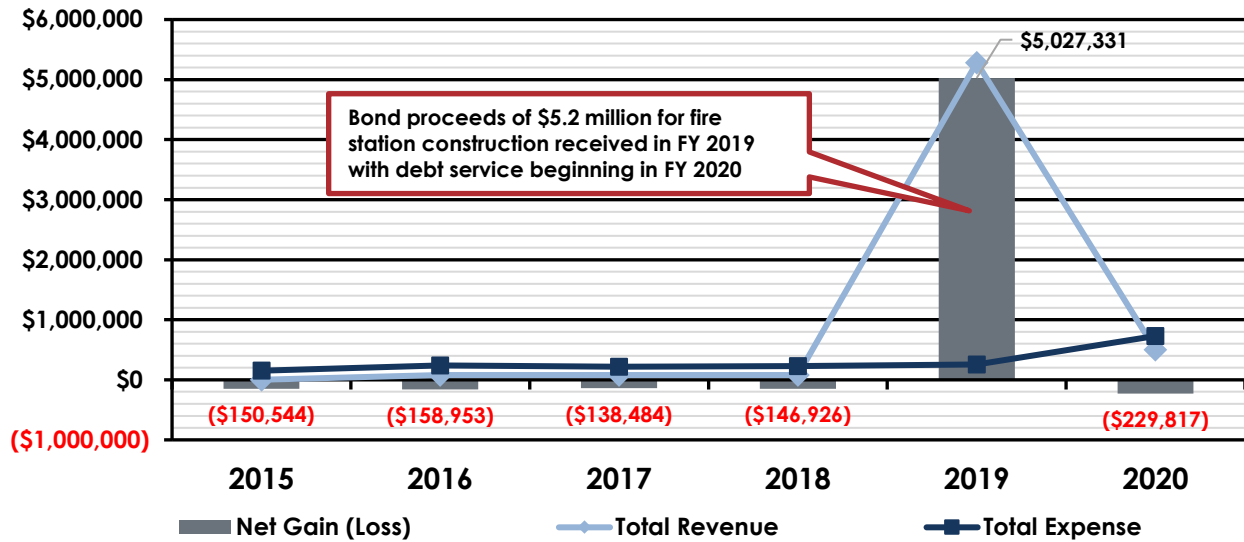
The following figure shows department expense by major category. Actual, total department operating expenses (less debt service) increased by 26% between FY 2015 and FY 2019 for an average annual increase of approximately 6%. When compared to FY 2020 adopted, the average annual increase could be as high 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

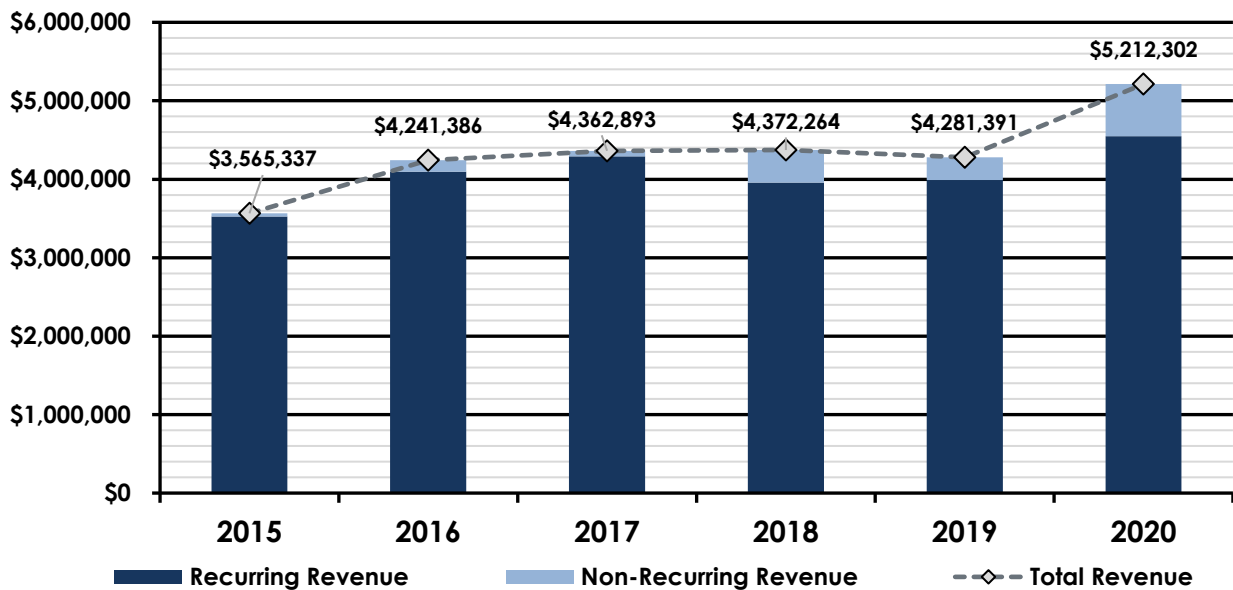
The following figure summarizes actual McMinnville Fire Department revenues for the period FY 2015–19 and amended revenues for FY 2020. The fire and ambulance budgets are shown separately since the ambulance service was budgeted in a separate proprietary fund until FY 2020. As mentioned above, transfers 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



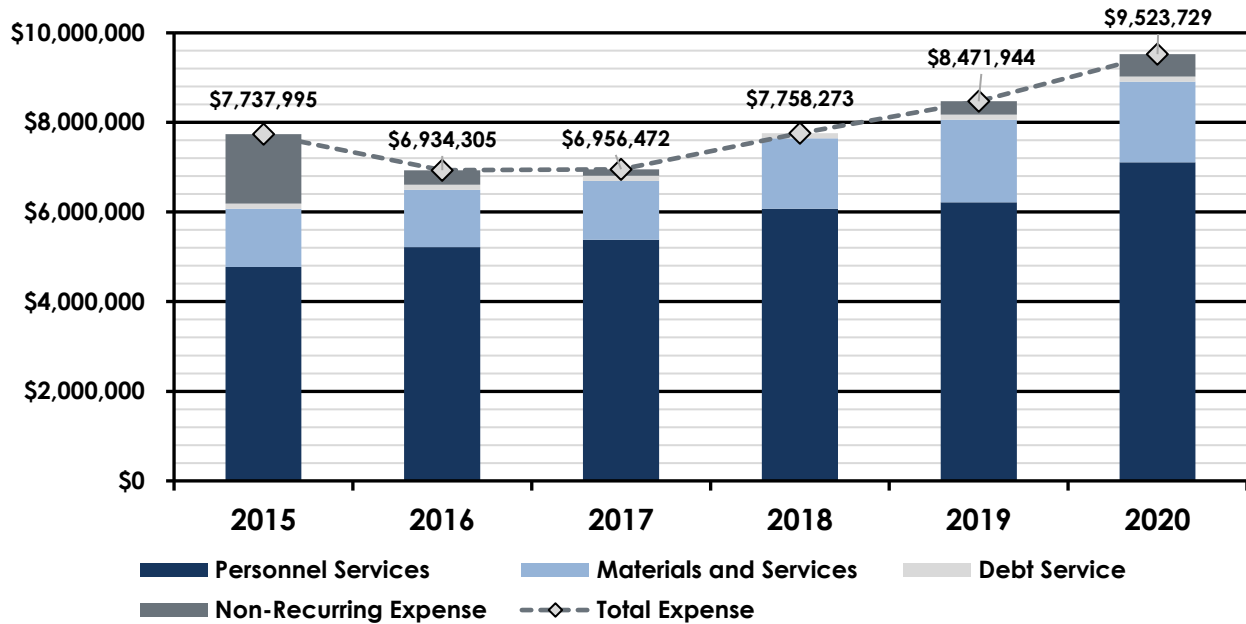
The following figure shows the McMinnville Fire Department expenses for the period FY 2015–19 actual and FY 2020 as amended. Capital expenses are considered non-recurring expenses, although the department could consider an average annual capital expenditure amount of \$4–500,000 as typical between the 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

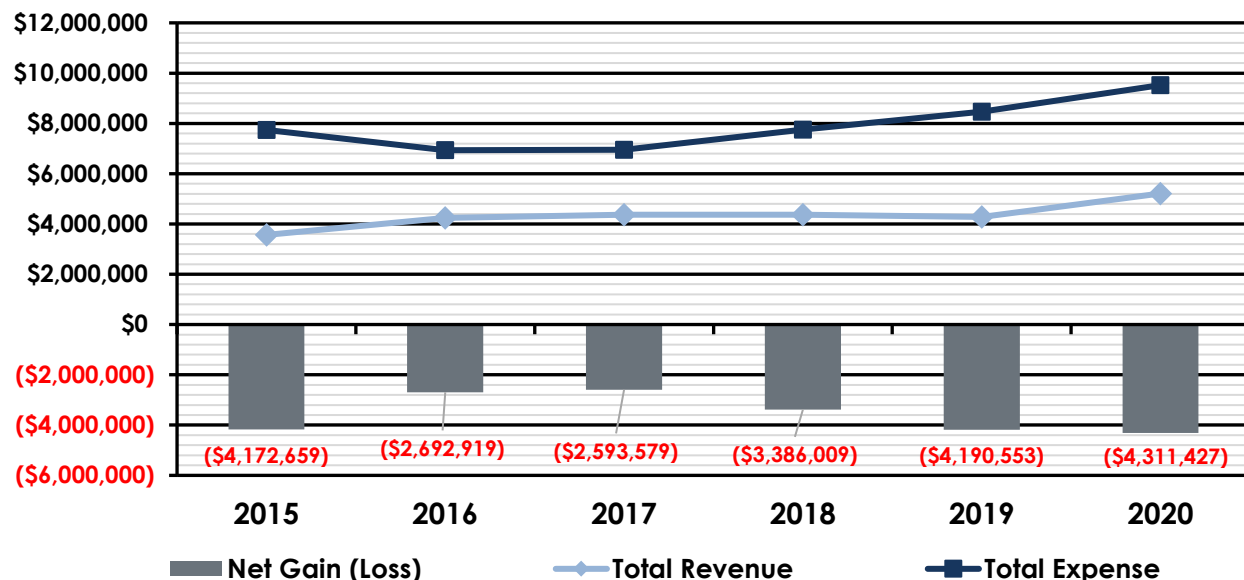
The following figure shows combined fire department expenses by major category. Actual, total department operating expenses (less debt service and capital costs) have increased by 32% between FY 2015 and FY 2019 for an average annual increase of approximately 7.5%. When compared to FY 2020 amended, the 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



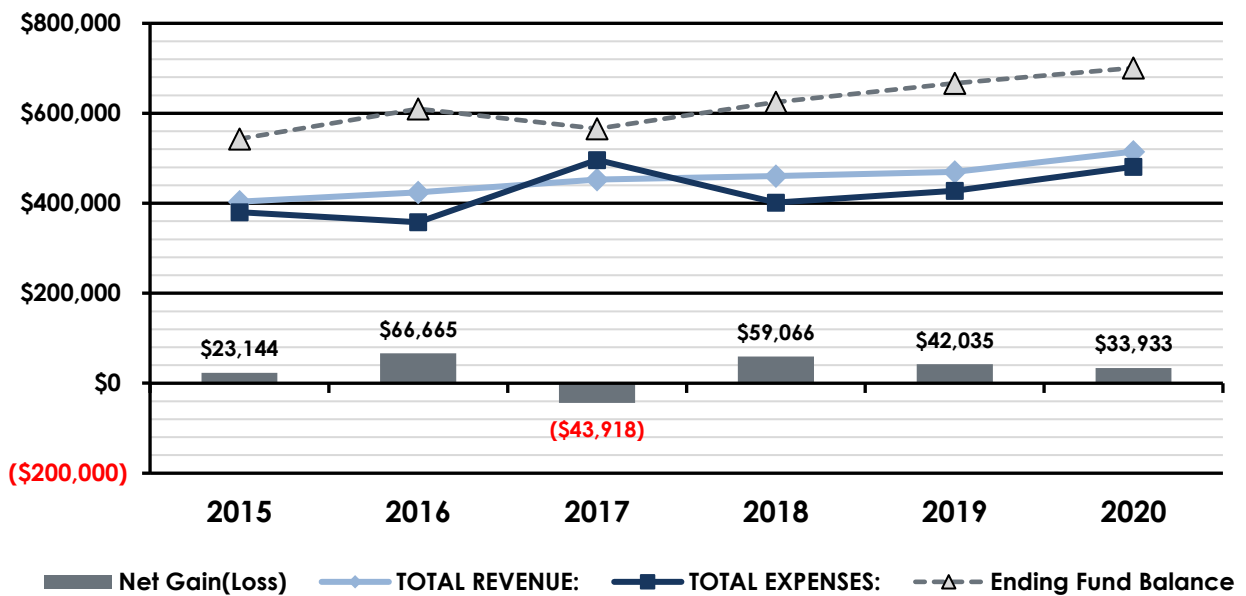
The City provides fire and rescue services to the unincorporated area around the City known as the McMinnville Rural Fire Protection District through a service contract. Although the revenue and expense resulting from this contract are included in the City of McMinnville Fire Department analysis above, 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

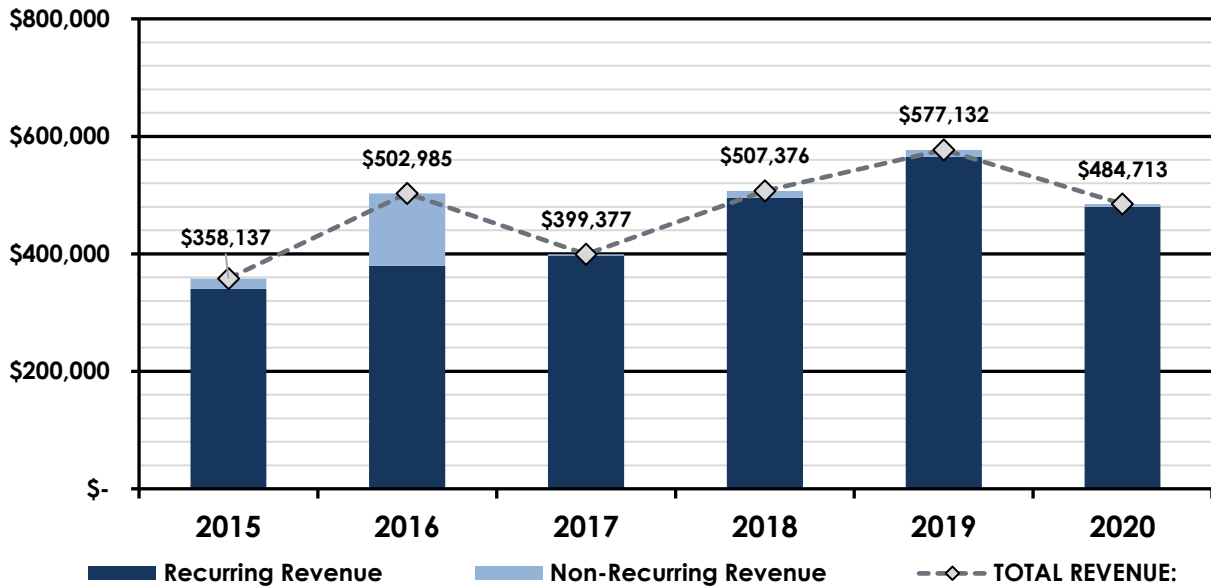
The following figure summarizes actual New Carlton Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary sources of District revenues are property taxes through FY 2017, after which the District entered into a service agreement, which provides approximately 15%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



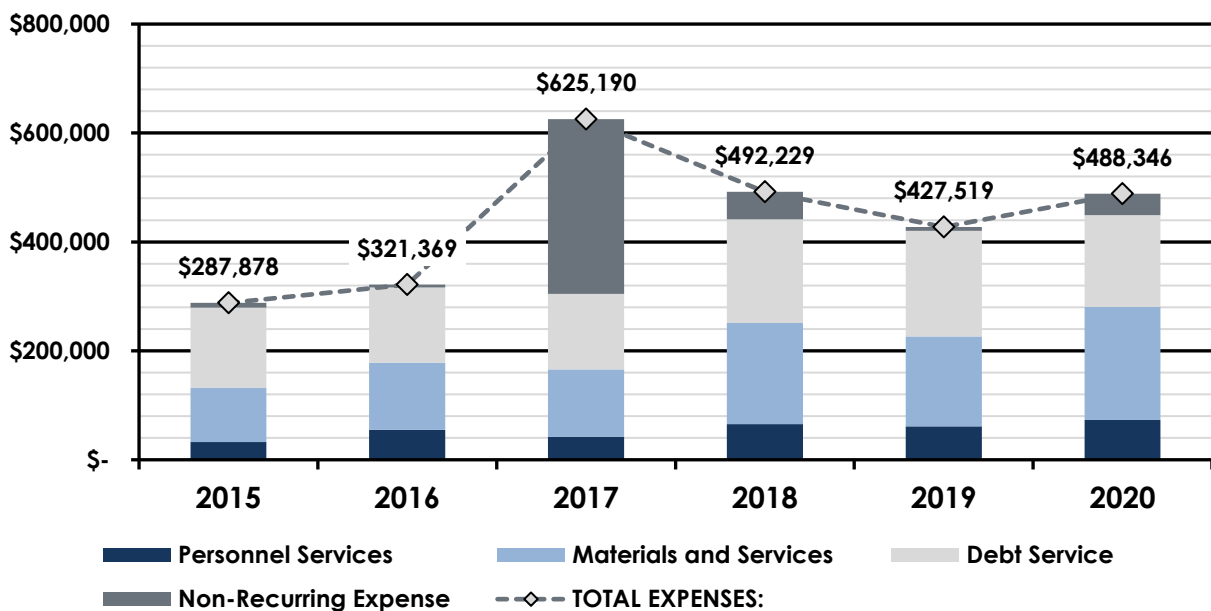
The following figure shows New Carlton Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have generally been very low except for a spike in FY 2017 representing capital apparatus replacement. The District has typically 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

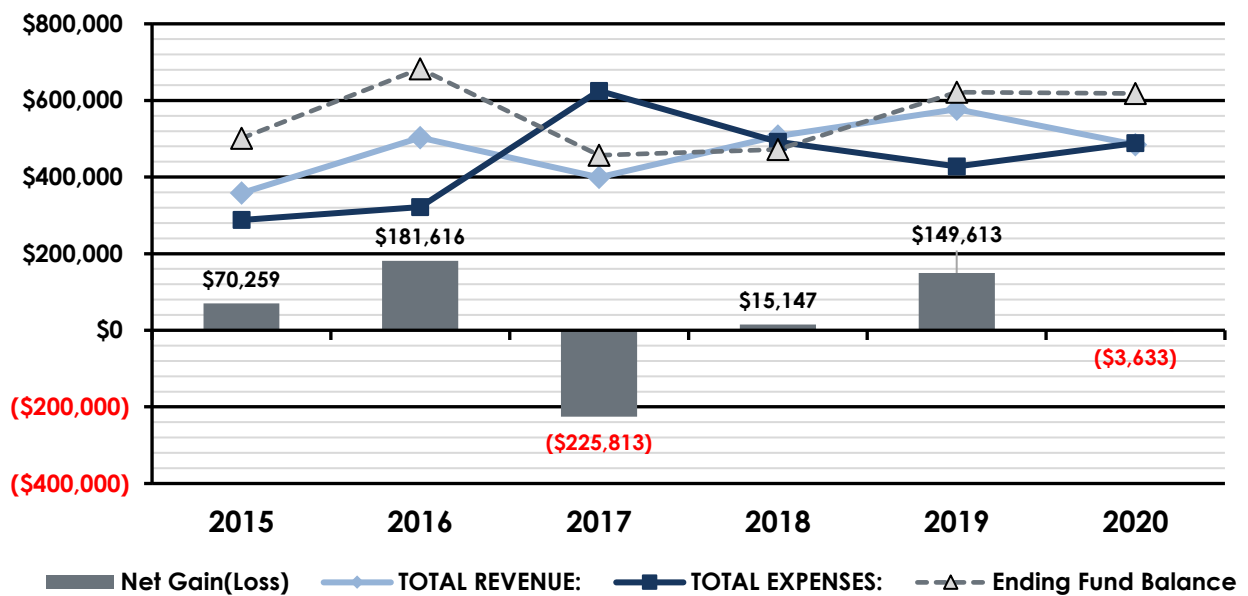
The following figure shows District expense by major category and illustrates the impact of the capital apparatus purchase in FY 2017 on overall expense. Excluding the non-recurring expenditure spike in FY 2017, total District expense has generally increased by 48.5% or 10.4% per year from FY 2015 through 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

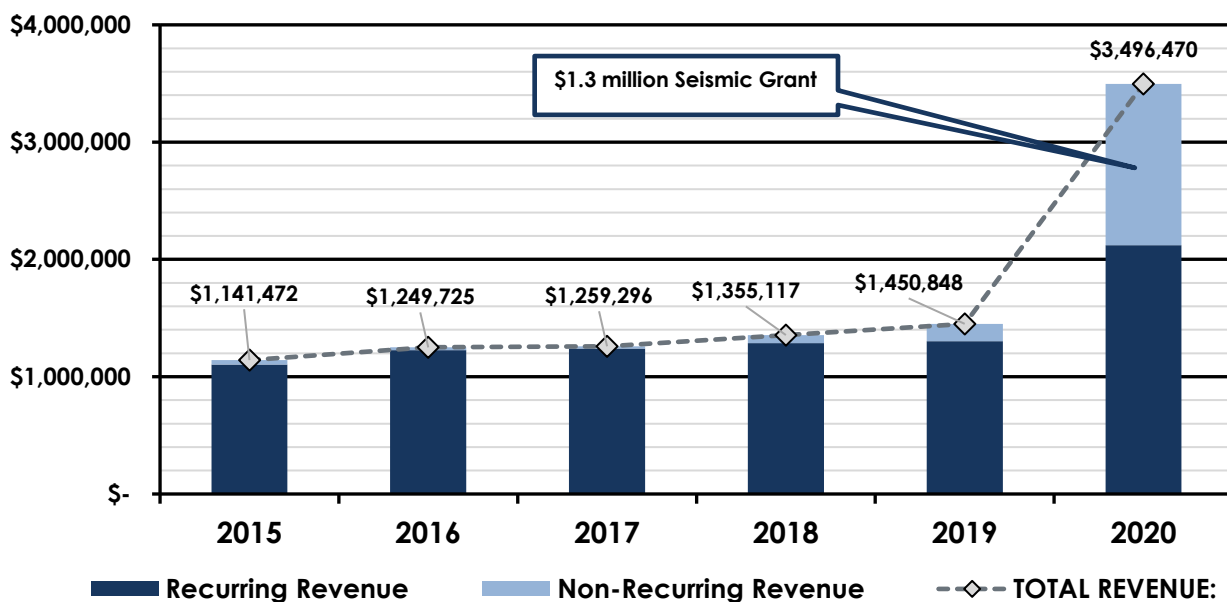
The following figure summarizes actual Sheridan Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary sources of District revenues are property taxes and ambulance user fees through FY 2019, after which the District entered into the IGA, which provides approximately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



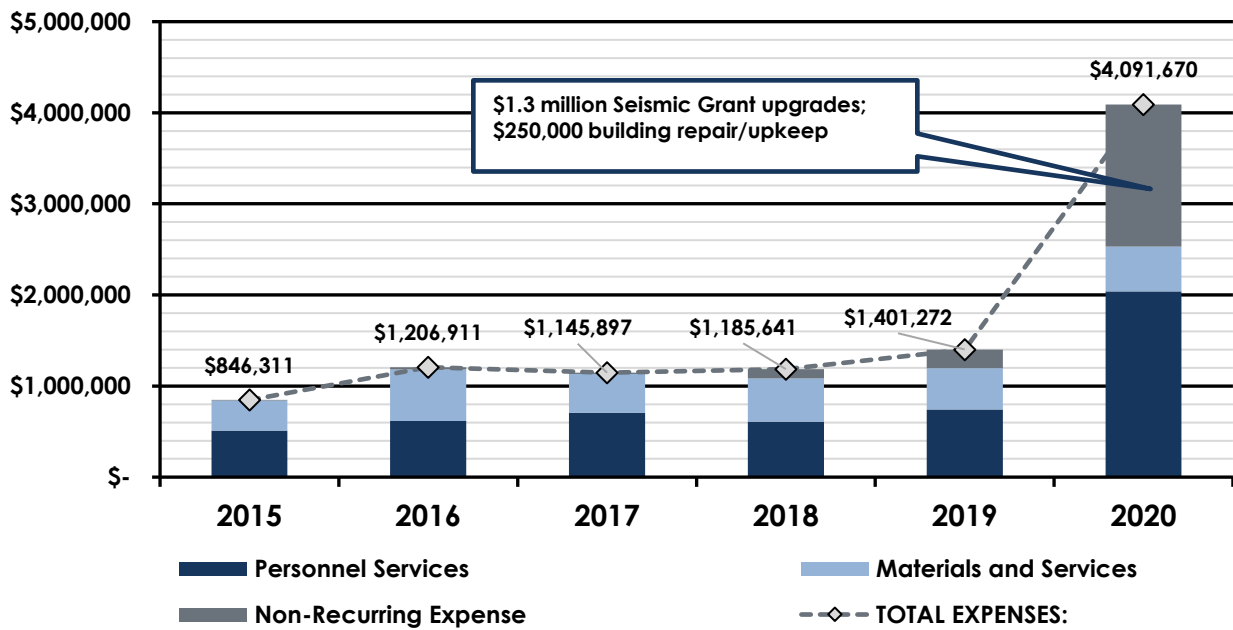
The following figure shows Sheridan Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have increased from \$4,000 in FY 2015 to just over \$200,000 in FY 2019, with a large increase in FY 2020 expected and related 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

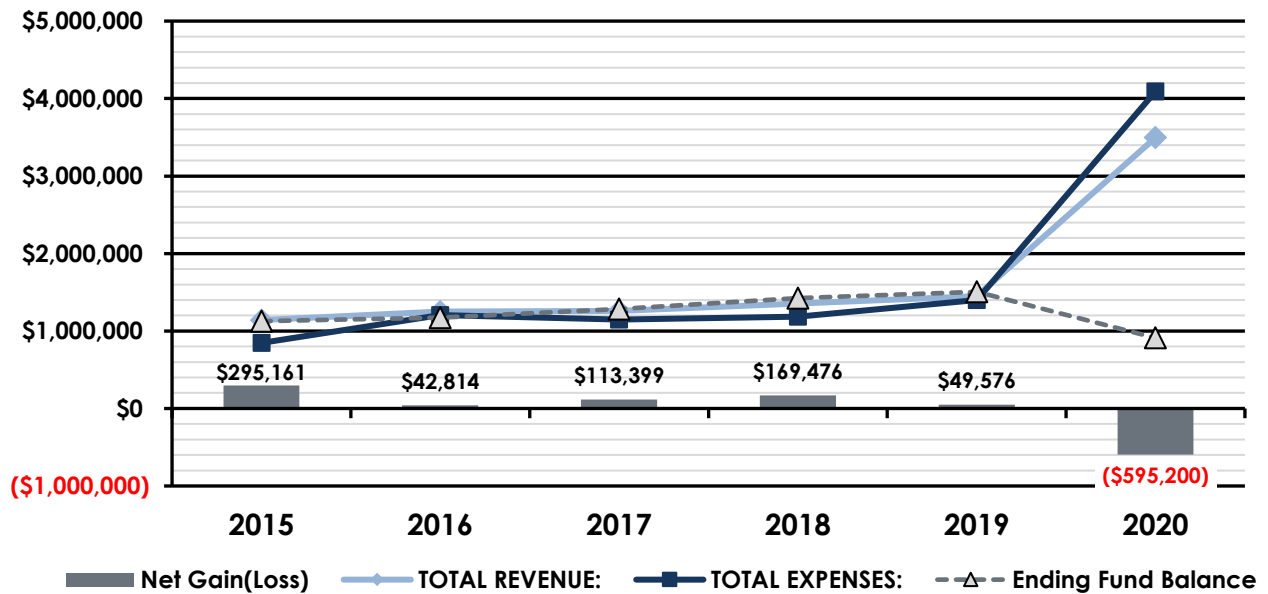
The following figure shows District expense by major category and illustrates the impact of the seismic hardening and other facility upgrades/repairs in FY 2020 on overall expense. Total District expense has generally increased by 65.6% or 13.4% per year from FY 2015 through FY 2019. This trend has been 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

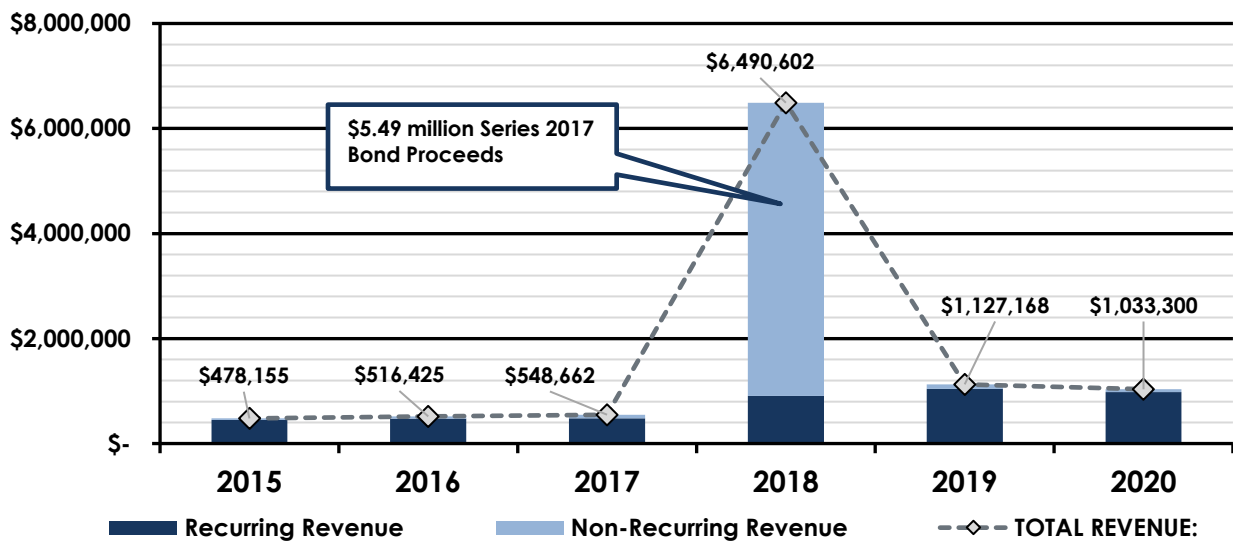
The following figure summarizes actual Southwestern Polk Fire District revenues for the period FY 2015–19 and adopted revenues for FY 2020. The primary source of District revenues is property taxes.

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



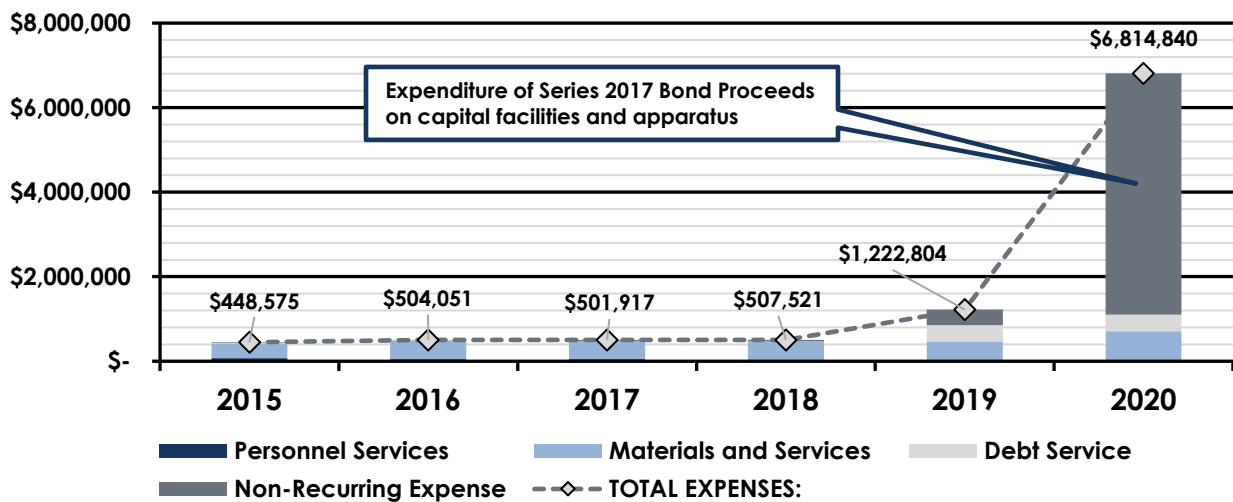
The following figure shows Southwestern Polk Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and increased significantly in FY 2019 with the infusion of bond proceeds. These bond proceeds are being used to purchase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

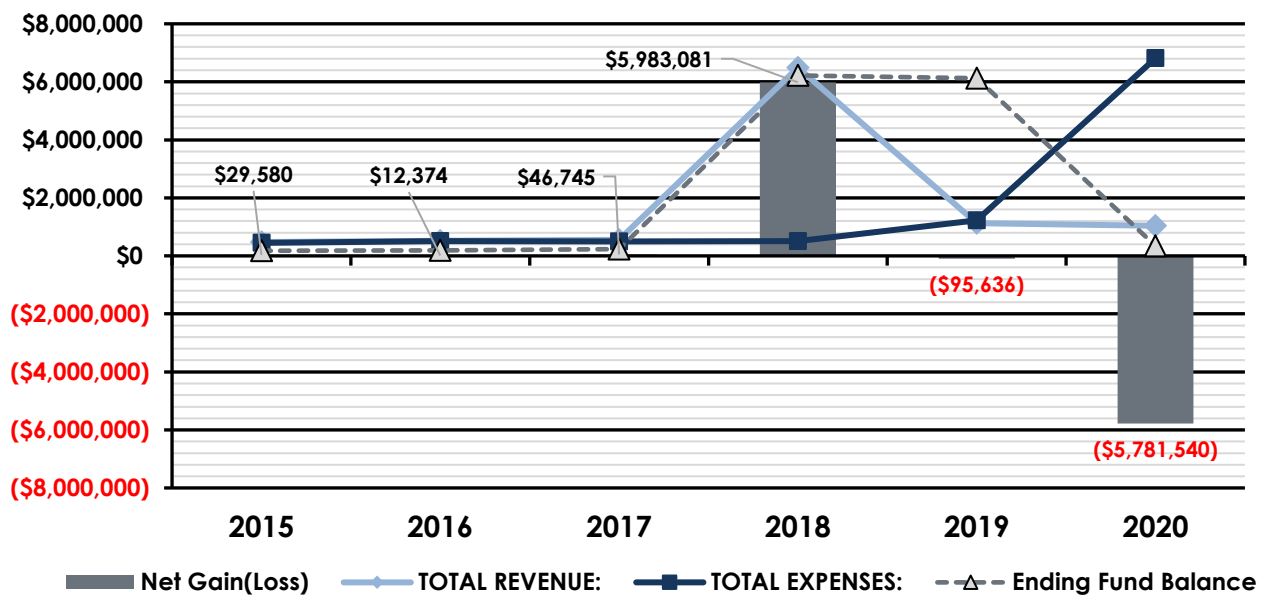
The following figure shows District expense by major category and illustrates the impact of the bond spending on apparatus and facilities beginning in FY 2019. Total District expense remained relatively flat between FY 2015 and FY 2018, averaging approximately \$490,000 annually, of which the bulk was 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

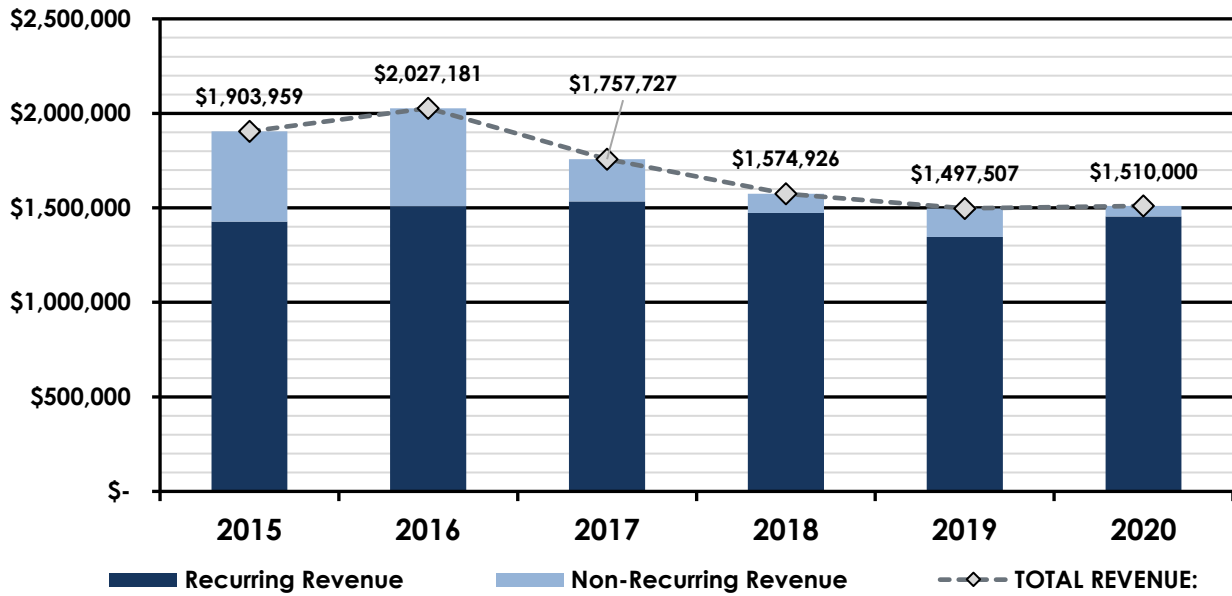
The following figure summarizes actual West Valley Fire District revenues for the period FY 2015–19 (Debt Service Fund tax revenues are estimated from adopted budget as actual FY 2019 for this fund was not available) and adopted revenues for FY 2020. The primary sources of District revenue are service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



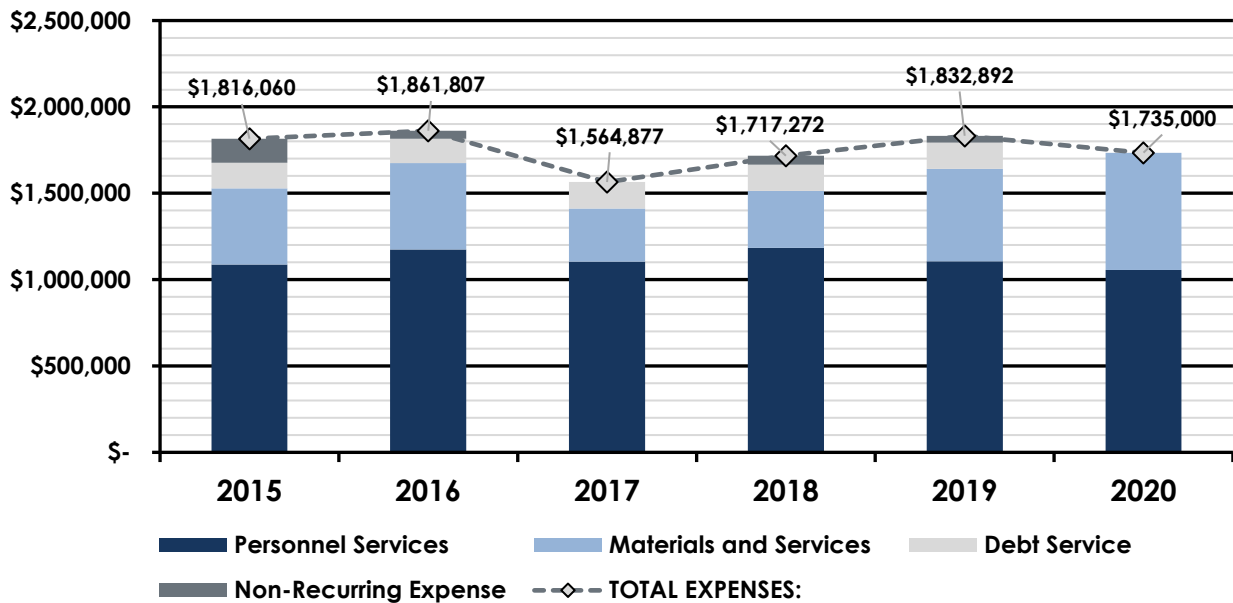
The following figure shows West Valley Fire District expenses for the period FY 2015–19 actual and FY 2020 as adopted. Capital expenses are considered non-recurring expenses and have been generally low, averaging between \$0 and \$50,000 annually. Capital expenditures have been solely for equipment.

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.

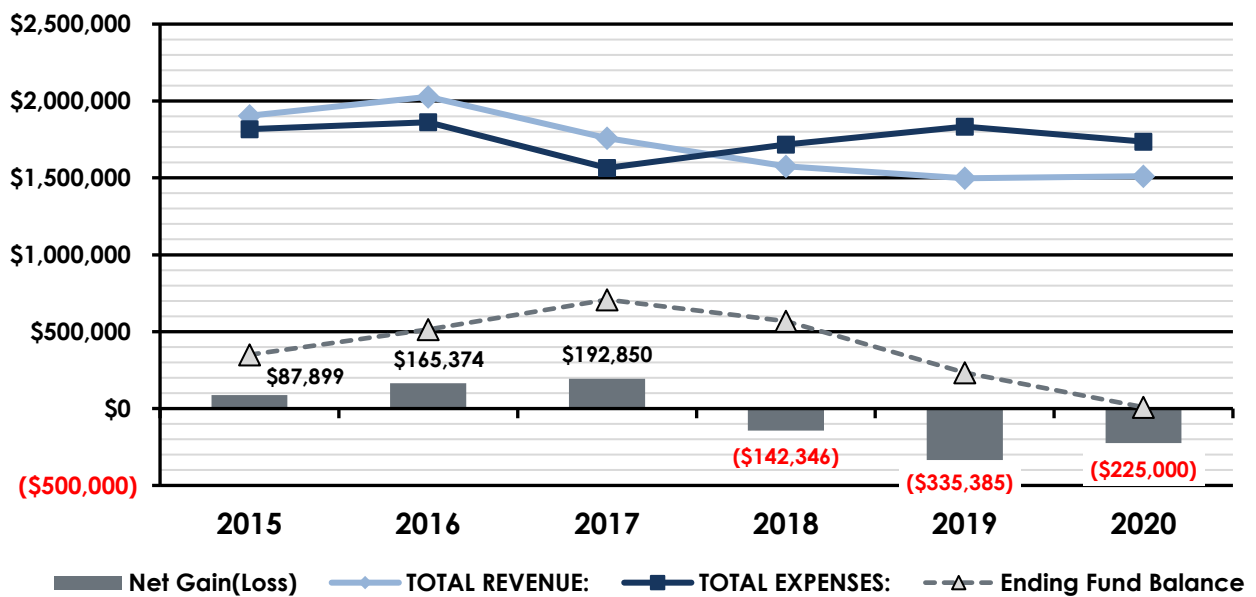
Figure 178: West Valley Fire District Expense by Major Category, FY 2015 Actual-FY 2020 Adopted



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	Bedrooms	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		<i>Not reported</i>					
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	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	Bedrooms	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	Bed	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, aeriels, 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					
Engine 181	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.

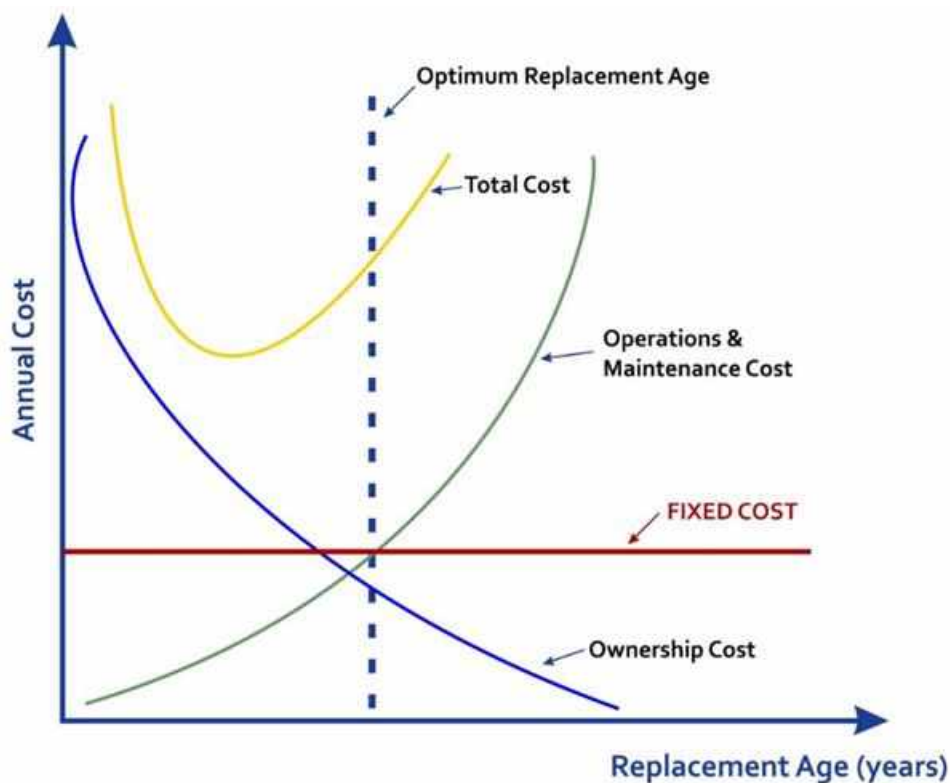
Figure 209: Example Criteria & Method for Determining Apparatus Replacement

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
McMinville			
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
<i>Funding Identified</i>	N/A	Yes	Yes	N/A	Yes
Equipment CIP	No	No	Yes	No	Yes
<i>Funding Identified</i>	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
<i>Funding Identified</i>	N/A	Yes	Yes	Yes
Equipment CIP	No	No	No	Yes
<i>Funding Identified</i>	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.

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City Recorder Use
Final Action:
<input type="checkbox"/> Approve
<input type="checkbox"/> Disapprove

Liquor License Recommendation

Business name/individual: Evensong Winery
Business Location Address: 2803 NE Orchard Ave

Liquor License Type: Winery 1st Location
Is the business at this location currently licensed by OLCC: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, what is the name of the existing business?: Click here to enter text.

Days of operation: Thursday to Sunday Hours of operation: 12:00 pm to 6:00 pm
Entertainment: N/A Hours of music: N/A

Seating count inside: N/A Seating count outside: N/A
Seating count total: N/A

Exemption: N/A

Tritech Records Management System check: yes no

Criminal Records check: yes no

Recommended action: approve disapprove

Chief of Police/Designee

City Manager/Designee



City Recorder Use

Final Action:

Approve

Disapprove

Liquor License Recommendation

Business name/individual: Chipotle Mexican Grill, Inc.

Business Location Address: 2696 N Hwy 99W

Liquor License Type: Limited On-Premises

Is the business at this location currently licensed by OLCC: yes no

If yes, what is the name of the existing business?: N/A

Days of operation: Sunday to Saturday Hours of operation: 10:45 am to 11:00 pm

Entertainment: Recorded Music Hours of music: 10:45 am to 11:00 pm

Seating count inside: 39 Seating count outside: 20

Seating count total: 59

Exemption: N/A

- Tritech Records Management System check: yes no
- Criminal Records check: yes no
- Recommended action: approve disapprove

Chief of Police/Designee

City Manager/Designee



**City of McMinnville
Administration**
230 NE Second Street
McMinnville, OR 97128
(503) 434-7303

www.mcminnvilleoregon.gov

MEMORANDUM

DATE: November 23, 2020
TO: City Council
FROM: Claudia Cisneros, City Recorder
SUBJECT: Certificate of Canvass of the November 3rd, 2020 General Election Results

Report in Brief:

A General Election was held on November 3rd, 2020. The City Recorder's office has received the attached certified canvass report. The resolution reflecting the results is a housekeeping item required by the City Charter.

Background:

Pursuant to chapter VI, section 28 of the charter, election results "shall be made a matter of record in the record of the proceedings of the Council." Accordingly, the city elections officer requests that the Council adopt a resolution acknowledging and certifying the results of the November 3, 2020 election.

Further, the charter also directs that certificates of election be issued to each elected person. Therefore, the city elections officer will issue the attached (Attachments 4) certificates to the elected individuals.

Attachments:

1. Resolution No. 2020-68.
2. Certificate
3. Canvass Report (Election Results Reports)
4. Certificates of Election

Fiscal Impact: None

Recommendation:

Staff recommends that Council approve Resolution 2020-68 and certify the results of the November 3, 2020 election in accordance with the charter directive to make the results a part of the Council record.

RESOLUTION NO. 2020-68

A Resolution approving the issuance of the certificate for the canvass of the returns of the votes cast at the General Election conducted on November 3, 2020, electing of three City Councilors and Mayor.

WHEREAS, Chapter VI, Section 28 of the McMinnville City Charter requires election results to be included in the proceedings of the City Council; and

WHEREAS, the election results from the November 3, 2020 General Election have been certified by the Yamhill County Elections Division.

NOW, THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF McMINNVILLE, OREGON, as follows:

Section 1. That the Common Council in this regular Council meeting on December 8, 2020, in accordance with the Charter of the City of McMinnville, has canvassed the returns of the votes cast in the General Election conducted on November 3, 2020, in regard to the election of three City Councilors and Mayor, as more fully set forth in the Certificate of Canvass of Votes attached hereto and by this reference incorporated herein.

Section 2. That the Common Council and Recorder are hereby authorized and directed to execute a certificate "Exhibit A" of the canvass of said votes.

Adopted by the Common Council of the City of McMinnville at a meeting held the 8th day of December 2020 by the following votes:

Ayes: _____

Nays: _____

Approved this 8th day of December 2020.

MAYOR

Approved as to form:

Attest:

City Attorney

City Recorder

EXHIBIT:

- A. Certificate of Canvass of the returns

C E R T I F I C A T E

CANVASS OF THE RETURNS OF THE VOTES CAST FOR THE ELECTION
OF THREE CITY COUNCILORS AT THE GENERAL ELECTION HELD IN THE
CITY OF McMinnville, Oregon on November 3, 2020.

We, Remy Drabkin, Adam Garvin, Kellie Menke, Sal Peralta, Zack Geary, and Wendy Stassens, being duly elected and sworn Council members of the Common Council of the City of McMinnville, Yamhill County, Oregon, and meeting during the regular City Council meeting on December 8, 2020, for the purpose of canvassing the returns of the General Election held on Tuesday, November 3, 2020, in accordance with officials of said election, did proceed to canvass the returns, and it appears from said official returns as filed by the Yamhill County Clerk and now on file in the office of the Recorder of the City of McMinnville that the following summarizes the votes cast:

Votes Cast in Election Regarding the Election for City Councilors and Mayor

Ward 1 (4-year term)

Lisa McCracken	1809
Chris Chenoweth	2466
Write-In (Misc.)	28
Over Votes	0
Under Votes	793
Total	5096

Ward 2 (4-year term)

Kellie Menke	3847
Brittany Ruiz	2154
Write-In (Misc.)	24
Over Votes	2
Under Votes	982
Total	7009

Ward 3 (4-year term)

Tynan Pierce	1729
Adam D. Garvin	2769
Write-In (Misc.)	18
Over Votes	3
Under Votes	1016
Total	5535

Mayor (4-year term)

Heidi Parker	6264
Scott A. Hill	9404
Write-In (Misc.)	78
Over Votes	4
Under Votes	1890
Total	17640

We certify that the following candidates have been elected to their respective offices:

Councilor Ward 1:	Chris Chenoweth
Councilor Ward 2:	Kellie Menke
Councilor Ward 3:	Adam D. Garvin
Mayor:	Scott A. Hill

IN WITNESS WHEREOF, we have hereunto set our hands this 8th day of December, 2020.

Adam Garvin, Councilor

Remy Drabkin, Councilor

Kellie Menke, Council President

Sal Peralta, Councilor

Zack Geary, Councilor

Wendy Stassens, Councilor



Brian Van Bergen
Yamhill County Clerk

414 NE Evans St, McMinnville, OR 97128-4607 • Ph. 503.434.7518 • Fax 503.434.7520 • clerk@co.yamhill.or.us

Board of Property Tax Appeals • Business Licenses • Elections • Marriage Licenses • Passports • Recording • Voter Registration

Notice of Election Canvass Memorandum

To: Claudia Cisneros, City of McMinnville
From: Brian Van Bergen, Yamhill County Clerk
CC:
Date: November 23, 2020
RE: Certified Contest Results

Enclosed please find the certified results from the November 3rd, 2020 General Election.

These items include:

- Yamhill County's certified Cumulative Results Report
(Summarized statement of votes cast)
- Yamhill County's certified Canvass Results Report
(Statement of votes cast by precinct)
- This Notice of Election Canvass memorandum

If you have any questions, please do not hesitate to contact our office.

Sincerely,

A handwritten signature in blue ink that reads "Brian Van Bergen".

Brian Van Bergen
Yamhill County Clerk

City of McMinnville, Mayor - 4 Year Term - Vote for one

Precincts			Voters		
Counted	Total	Percent	Ballots	Registered	Percent
6	6	100.00%	17,640	22,342	78.95%

Choice	Party	Vote by Mail		Total	
Heidi Parker		6,264	39.78%	6,264	39.78%
Scott A Hill		9,404	59.72%	9,404	59.72%
Misc. Write-in (W)		78	0.50%	78	0.50%
Cast Votes:		15,746	100.00%	15,746	100.00%
Undervotes:		1,890		1,890	
Overvotes:		4		4	

City of McMinnville, Councilor, Ward 1 - 4 Year Term - Vote for one

Precincts			Voters		
Counted	Total	Percent	Ballots	Registered	Percent
2	2	100.00%	5,096	6,532	78.02%

Choice	Party	Vote by Mail		Total	
Lisa McCracken		1,809	42.04%	1,809	42.04%
Chris Chenoweth		2,466	57.31%	2,466	57.31%
Misc. Write-in (W)		28	0.65%	28	0.65%
Cast Votes:		4,303	100.00%	4,303	100.00%
Undervotes:		793		793	
Overvotes:		0		0	

City of McMinnville, Councilor, Ward 2 - 4 Year Term - Vote for one

Precincts			Voters		
Counted	Total	Percent	Ballots	Registered	Percent
2	2	100.00%	7,009	8,510	82.36%

Choice	Party	Vote by Mail		Total	
Kellie Menke		3,847	63.85%	3,847	63.85%
Brittany Ruiz		2,154	35.75%	2,154	35.75%
Misc. Write-in (W)		24	0.40%	24	0.40%
Cast Votes:		6,025	100.00%	6,025	100.00%
Undervotes:		982		982	
Overvotes:		2		2	



I CERTIFY THAT THE VOTES RECORDED ON THIS ABSTRACT CORRECTLY SUMMARIZE THE TALLY OF VOTES CAST AT THE ELECTION INDICATED.

[Signature]
SIGNATURE OF COUNTY CLERK:

11.20.2020
DATE OF ABSTRACT

City of McMinnville, Councilor, Ward 3 - 4 Year Term - Vote for one

Precincts			Voters		
Counted	Total	Percent	Ballots	Registered	Percent
2	2	100.00%	5,535	7,300	75.82%

Choice	Party	Vote by Mail		Total	
Tynan Pierce		1,729	38.29%	1,729	38.29%
Adam D Garvin		2,769	61.32%	2,769	61.32%
Misc. Write-in (W)		18	0.40%	18	0.40%
Cast Votes:		4,516	100.00%	4,516	100.00%
Undervotes:		1,016		1,016	
Overvotes:		3		3	

*** End of report ***

Yamhill County, Oregon

November 3, 2020 General Election

11/3/2020

Page 1

Official Results
Registered Voters
17640 of 73763 = 23.91%
Precincts Reporting
22 of 22 = 100.00%

City of McMinnville, Mayor - 4 Year Term - Vote for one

Precinct	Heidi Parker	Scott A Hill	Misc. Write-in (W)	Cast Votes	Undervotes	Overvotes	Vote by Mail Ballots Cast	Total Ballots Cast	Registered Voters	Turnout Percentage
014	1,041	1,326	9	2,376	295	0	2,671	2,671	3,341	79.95%
015	902	1,226	16	2,144	280	1	2,425	2,425	3,191	75.99%
016	883	1,151	10	2,044	230	1	2,275	2,275	2,958	76.91%
017	900	1,327	9	2,236	272	1	2,509	2,509	3,129	80.19%
018	1,393	2,673	10	4,076	424	0	4,500	4,500	5,381	83.63%
019	1,145	1,701	24	2,870	389	1	3,260	3,260	4,342	75.08%
Totals	6,264	9,404	78	15,746	1,890	4	17,640	17,640	22,342	78.95%



I CERTIFY THAT THE VOTES RECORDED ON THIS ABSTRACT CORRECTLY SUMMARIZE THE TALLY OF VOTES CAST AT THE ELECTION INDICATED.
SIGNATURE OF COUNTY CLERK: [Signature]
DATE OF ABSTRACT: 11.20.2020

City of McMinnville, Councilor, Ward 1 - 4 Year Term - Vote for one

Precinct	Lisa McCracken	Chris Chenoweth	Misc. Write-in (W)	Cast Votes	UnderVotes	Overvotes	Vote by Mail Ballots Cast	Total Ballots Cast	Registered Voters	Turnout Percentage
014	893	1,361	16	2,270	401	0	2,671	2,671	3,341	79.95%
015	916	1,105	12	2,033	392	0	2,425	2,425	3,191	75.99%
Totals	1,809	2,466	28	4,303	793	0	5,096	5,096	6,532	78.02%

City of McMinnville, Councilor, Ward 2 - 4 Year Term - Vote for one

Precinct	Kellie Menke	Brittany Ruiz	Misc. Write-in (W)	Cast Votes	Undervotes	Overvotes	Vote by Mail Ballots Cast	Total Ballots Cast	Registered Voters	Turnout Percentage
017	1,220	878	8	2,106	401	2	2,509	2,509	3,129	80.19%
018	2,627	1,276	16	3,919	581	0	4,500	4,500	5,381	83.63%
Totals	3,847	2,154	24	6,025	982	2	7,009	7,009	8,510	82.36%

City of McMinnville, Councilor, Ward 3 - 4 Year Term - Vote for one

Precinct	Tynan Pierce	Adam D Garvin	Misc. Write-in (W)	Cast Votes	Undervotes	Overvotes	Vote by Mail Ballots Cast	Total Ballots Cast	Registered Voters	Turnout Percentage
016	691	1,200	8	1,899	375	1	2,275	2,275	2,958	76.91%
019	1,038	1,569	10	2,617	641	2	3,260	3,260	4,342	75.08%
Totals	1,729	2,769	18	4,516	1,016	3	5,535	5,535	7,300	75.82%

Yamhill County, Oregon

November 3, 2020 General Election

11/3/2020

Page 5

Official Results

Registered Voters
17640 of 73763 = 23.91%

Precincts Reporting
22 of 22 = 100.00%

*** End of report ***

CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Scott A. Hill

was elected to the **Office of Mayor**

for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros, City Recorder

CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Chris Chenoweth

was elected to the **Office of City Councilor Ward 1**
for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros, City Recorder

CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Kellie Menke

was elected to the **Office of City Councilor Ward 2**
for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros, City Recorder

CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Adam D. Garvin

was elected to the **Office of City Councilor Ward 3**
for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros, City Recorder

CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Scott A. Hill

was elected to the **Office of Mayor**

for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros
Claudia Cisneros, City Recorder



CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Chris Chenoweth

was elected to the **Office of City Councilor Ward 1** for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros
Claudia Cisneros, City Recorder



CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Kellie Menke

was elected to the **Office of City Councilor Ward 2** for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros
Claudia Cisneros, City Recorder



CERTIFICATE OF ELECTION



This certifies that at the **November 3, 2020**, General Election held in the City of McMinnville, County of Yamhill, State of Oregon,

Adam D. Garvin

was elected to the **Office of City Councilor Ward 3** for a term beginning **January 2021** and ending **December 31, 2024**.

As directed by the City Charter, I have placed the seal of the City of McMinnville and signed this certificate, on **December 1, 2020**.

Claudia Cisneros
Claudia Cisneros, City Recorder





City of McMinnville
City Attorney's Office
230 NE Second Street
McMinnville, OR 97128
(503) 434-7303
www.mcminnvilleoregon.gov

STAFF REPORT

DATE: November 30, 2020
TO: Jeff Towery, City Manager
FROM: Amanda Guile-Hinman, City Attorney
SUBJECT: Resolution No. 2020-69, A Resolution Approving a Personal Services Contract with Erskine Law Practice, LLC to Provide City Prosecutorial Services



OBJECTIVE/S: Identify and focus on the City's core services

Report in Brief:

Resolution No. 2020-69 will authorize City Prosecutor services via contract with Erskine Law Practice, LLC for the calendar year 2021, with an option to renew for calendar year 2022.

Background and Discussion:

Beginning in FY17-18, City Prosecutor services were provided by an in-house Deputy City Attorney. When the prior incumbent resigned to take another position in the spring of 2019, the City filled the service need through a contract with Erskine Law Practice, LLC.

Sam and Shannon Erskine have been providing prosecutorial services for the City on a contract basis since May 2019. They began their legal careers as judicial clerks in the Multnomah County Circuit Court. In addition, Shannon worked for the Multnomah County District Attorney's Office and both have provided services to the St. Helens Municipal Court. They have since formed Erskine Law Practice which provides cities with full scale prosecutorial services.

This new agreement will continue the prosecutorial services provided since the initial agreement. The full cost of the contract (approximately \$103,856.40) requires City Council authority and is less than the vacancy savings related to the Deputy City Attorney position (approximately \$140,500). The cost of the proposed contract is an increase of 1.82% from last calendar year's contract, which is reflective of the percent change in the CPI-U for West Region through October 2020.

Attachments:

- Resolution No. 2020-69
- Exhibit 1 –Personal Services Contract with Erskine Law Practice, LLC

Fiscal Impact:

The cost of the contracted services is within the budgeted appropriations for Court and Legal expenses.

Recommendation:

Approve Resolution 2020-69.

RESOLUTION NO. 2020 – 69

A Resolution of the City of McMinnville Approving a Personal Services Contract with Erskine Law Practice, LLC to Provide City Prosecutorial Services.

RECITALS:

WHEREAS, the City of McMinnville (“City”) undertook a request for proposals in 2019 to obtain City Prosecutor services; and

WHEREAS, the City selected Erskine Law Practice, LLC (“Contractor”) as the successful proposer and entered into a contract with Contractor to provide City Prosecutor services for the 2020 calendar year; and

WHEREAS, the City desires to continue to contract with Contractor to provide City Prosecutor services; and

WHEREAS, this contract, if approved, will result in a projected cost increase to the contract of 1.82%.

NOW THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF McMINNVILLE, OREGON as follows:

1. The City of McMinnville incorporates the above-stated findings as if fully set forth herein.
2. The City of McMinnville approves a personal services contract with Erskine Law Practice, LLC to provide City prosecutorial services for calendar year 2021 with a one-year option to renew, which contract is substantially similar to Exhibit 1 attached hereto.
3. This Resolution takes effect immediately upon passage.

Adopted by the Common Council of the City of McMinnville at a regular meeting held the 8th day of December 2020 by the following votes:

Ayes: _____

Nays: _____

Approved this 8th day of December 2020.

MAYOR

Approved as to form:

Attest:

City Attorney

City Recorder

EXHIBIT:

1. Personal Services Contract with Erskine Law Practice, LLC

CITY OF McMinnville, Oregon**PERSONAL SERVICES CONTRACT
for
City Prosecutorial Services**

This Contract is between the CITY OF McMinnville, a municipal corporation of the State of Oregon (City) and Erskine Law Practice, LLC. (Contractor). The City's Project Manager for this Contract is Amanda Guile-Hinman.

The parties mutually covenant and agree as follows:

- 1. Effective Date and Duration.** This contract is effective on January 1, 2021 and will expire, unless otherwise terminated or extended, on December 31, 2021. The parties may exercise one (1) option to renew this Contract for one additional year, through the execution of a written contract amendment. The parties agree that if the option is exercised, the parties will renegotiate the consideration provided in Section 3 below based the over-the-year percent change in the Consumer Price Index – All Urban Consumers (CPI-U) for West Region from October 2020 to October 2021.
- 2. Statement of Work.** The work to be performed under this contract consists of providing legal services as City Prosecutor and administrative duties of the City Prosecutor for the City of McMinnville, as more particularly described in the Statement of Work attached hereto and incorporated herein as **Exhibit A**. The Statement of the Work reflects both the work anticipated and the fees the Contractor will charge for each component of that work. The work provided will be guided by the Statement of the Work, but the Contractor will, with the approval and direction of the City, perform services in such a way as to ensure constant progress is being made to achieve the City's end goals in the most efficient manner possible.
- 3. Consideration.**
 - a. City agrees to pay Contractor a flat fee of \$8,654.70 each month comprised of \$6,109.20 per month paid for "Standard Prosecution Services" and \$2,545.50 per month paid for "Administrative Duties of the City Prosecutor" described in the Statement of Work. In addition, the City agrees to pay Contractor for hours actually worked for "Non-Standard Prosecution Services" at a rate of \$127.27 per hour, to be billed in six-minute (0.10 hour) increments. Contractor will be reimbursed for allowable expenses incurred for accomplishing the work required by this Contract.
 - b. Contractor will furnish with each invoice for services an itemized statement showing both the work performed and the number of hours devoted to the project by the Contractor and its agents. City will pay the Contractor for services within 30 days of receiving an itemized bill that has been approved by the Project Manager.
 - c. City certifies that sufficient funds are available and authorized for expenditure to finance the cost of this contract.
- 4. Additional Services.** Additional services, not covered in Exhibit A, will be provided if mutually agreed upon by the parties and authorized or confirmed in writing by the City, and will be paid for by the City as provided in this Contract in addition to the compensation authorized in subsection 3a. If authorized by the City, the additional services will be performed under a series of Task Orders defining the services to be performed, time of performance, and cost for each phase of services.

CONTRACTOR DATA, CERTIFICATION, AND SIGNATURE

Name (please print): _____

Address: _____

Social Security #: _____

Federal Tax ID #: _____

State Tax ID #: _____

Citizenship: Nonresident alien Yes No

Business Designation (check one): Individual Sole Proprietorship Partnership
 Corporation Government/Nonprofit

The above information must be provided prior to contract approval. Payment information will be reported to the Internal Revenue Service (IRS) under the name and taxpayer I.D. number provided above. (See IRS 1099 for additional instructions regarding taxpayer ID numbers.) Information not matching IRS records could subject you to 31 percent backup withholding.

I, the undersigned, understand that the Standard Terms and Conditions for Personal Services Contracts and Exhibits A, B, C, and D are an integral part of this contract and agree to perform the work described in Exhibit A in accordance with the terms and conditions of this contract; certify under penalty of perjury that I/my business am not/is not in violation of any Oregon tax laws; and certify I am an independent contractor as defined in ORS 670.600.

Signed by Contractor:

Signature/Title

Date

NOTICE TO CONTRACTOR: This contract does not bind the City of McMinnville unless and until it has been fully executed by the appropriate parties.

CITY OF McMINNVILLE SIGNATURE

Approved:

City Manager or Designee

Date

Reviewed:

City Attorney or Designee

Date

CITY OF McMinnville
STANDARD TERMS AND CONDITIONS FOR PERSONAL SERVICES CONTRACTS

1. Contractor is Independent Contractor.

a. Contractor will perform the work required by this contract as an independent contractor. Although the City reserves the right (i) to determine (and modify) the delivery schedule for the work to be performed and (ii) to evaluate the quality of the completed performance, the City cannot and will not control the means or manner of the Contractor's performance. The Contractor is responsible for determining the appropriate means and manner of performing the work.

b. The Contractor represents and warrants that Contractor (i) is not currently an employee of the federal government or the State of Oregon, and (ii) meets the specific independent contractor standards of ORS 670.600, as certified on the Independent Contractor Certification Statement attached as Exhibit D.

c. Contractor will be responsible for any federal or state taxes applicable to any compensation or payment paid to Contractor under this contract.

d. If Contractor is a contributing member of the Public Employees' Retirement System, City will withhold Contractor's contribution to the retirement system from Contractor's compensation or payments under this contract and make a corresponding City contribution. Contractor is not eligible for any federal Social Security, unemployment insurance, or workers' compensation benefits from compensation or payments to Contractor under this contract, except as a self-employed individual.

2. Subcontracts and Assignment. Contractor will not subcontract any of the work required by this contract, or assign or transfer any of its interest in this contract, without the prior written consent of the City. Contractor agrees that if subcontractors are employed in the performance of this contract, the Contractor and its subcontractors are subject to the requirements and sanctions of ORS Chapter 656, Workers' Compensation.

3. No Third Party Beneficiaries. City and Contractor are the only parties to this contract and are the only parties entitled to enforce its terms. Nothing in this contract gives or provides any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this contract.

4. Successors in Interest. The provisions of this contract will be binding upon and will inure to the benefit of the parties, and their respective successors and approved assigns, if any.

5. Early Termination

a. The City and the Contractor, by mutual written agreement, may terminate this Contract at any time.

b. The City, on 30 days written notice to the Contractor, may terminate this Contract for any reason deemed appropriate in its sole discretion.

c. Either the City or the Contractor may terminate this Contract in the event of a breach of the Contract by the other party. Prior to termination, however, the party seeking the termination will give to the other party written notice of the breach and of the party's intent to terminate. If the Party has not entirely cured the breach within 15 days of the notice, then the party giving the notice may terminate the Contract at any time thereafter by giving a written notice of termination.

6. Payment on Early Termination

a. If this contract is terminated under 5(a) or 5(b), the City will pay the Contractor for work performed in accordance with the Contract prior to the termination date. Payment may be pro-rated as necessary.

b. If this contract is terminated under 5(c) by the Contractor due to a breach by the City, then the City will pay the Contractor as provided in subsection (a) of this section.

c. If this contract is terminated under 5(c) by the City due to a breach by the Contractor, then the City will pay the Contractor as provided in subsection (a) of this section, subject to set off of excess costs, as provided for in section 7, Remedies.

7. Remedies

a. In the event of termination under 5(c) by the City due to a breach by the Contractor, the City may complete the work either itself, by agreement with another contractor, or by a combination thereof. In the event the cost of completing the work exceeds the remaining unpaid balance of the total compensation provided under this contract, the Contractor will pay to the City the amount of the reasonable excess.

b. The remedies provided to the City under section 5 and section 7 for a breach by the Contractor are not exclusive. The City will also be entitled to any other equitable and legal remedies that are available.

c. In the event of breach of this Contract by the City, the Contractor's remedy will be limited to termination of the Contract and receipt of payment as provided in section 5(c) and 6(b).

8. Access to Records. Contractor will maintain, and the City and its authorized representatives will have access to, all books, documents, papers and records of Contractor which relate to this contract for the purpose of making audit, examination, excerpts, and transcripts for a period of three years after final payment. Copies of applicable records will be made available upon request. Payment for the cost of copies is reimbursable by the City.

9. Ownership of Work. All work products of the Contractor, including background data, documentation, and staff work that is preliminary to final reports, and which result from this contract, are the property of the City. Contractor will retain no ownership interests or rights in the work product. Use of any work product of the Contractor for any purpose other than the use intended by this contract is at the risk of the City.

10. Compliance with Applicable Law. Contractor will comply with all federal, state, and local laws and ordinances applicable to the work under this contract, including, without limitation, the provisions of ORS 279B.220, 279B.230, and 279B.235, as set forth on Exhibit B. Without limiting the foregoing, Contractor expressly agrees to comply with: (i) Title VI of the Civil Rights Act of 1964; (ii) Section V of the Rehabilitation Act of 1973; (iii) the Americans with Disabilities Act of 1990 (Pub L No. 101-336), ORS 659A.142, and all regulations and administrative rules established pursuant to those laws; and (iv) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules, and regulations.

11. Indemnity and Hold Harmless

a. The City shall defend, hold harmless and indemnify Erskine Law Practice to the full extent provided by Oregon Revised Statutes related to any claim in tort, professional liability or demand or other legal action, whether groundless or otherwise, arising out of an alleged act or omission occurring in the performance of duties as Municipal Prosecutor or resulting from the exercise of judgment or discretion in connection with the performance of program duties or responsibilities as City Prosecutor, unless the act or omission involved malfeasance in office or willful or wanton neglect of duty. Contractor

may request and the City shall not unreasonably refuse to provide defense and indemnification, and independent legal representation of contractor's choosing of which the City may not unreasonably withhold approval. Such legal representation, provided by City or its insurer for contractor, shall extend until a final determination of the legal action including any appeals brought by either party.

b. To the extent allowed under Oregon law, the City shall indemnify contractor against any and all losses, damages, judgments, interest, settlements, fines, court costs and other reasonable costs and expenses of legal proceedings including attorney's fees, and any other liabilities incurred by, imposed upon, or suffered by Contractor in connection with or resulting from any claim, action, suit, or proceeding, actual or threatened, arising out of or in connection with the performance of Contractor's duties.

c. Erskine Law Practice recognizes that the City shall have the right to compromise and settle unilaterally on terms which do not prejudice contractor; however, if contractor in their personal capacity is a party to the suit then contractor shall have a veto authority over any settlement. Further, the City shall pay all reasonable litigation expenses of contractor throughout the pendency of any litigation to which the contractor is a party, witness or advisor to the City. Such expense payments shall continue beyond contractor's service to the City as long as litigation is pending. The City agrees to pay contractor reasonable consulting fees and travel expenses when contractor serves as a witness, advisor or consultant to the City regarding pending litigation to which the City is a party.

d. Contractor shall defend, indemnify, and hold harmless the City, its officers, agents, and employees from any and all claims, actions, costs, judgments damages, and other expenses resulting from injury to any person (including injury resulting in death) or damage to property (including loss or destruction), arising out of or incident to malfeasance, willful and wanton neglect of duty, or knowing and intentional violation of law. Contractor shall not be responsible for any claims, actions, costs, judgments, damages, or other expenses caused by the actions of the City or City staff. The purpose of this section is to allocate risk for claims between City and contractor consistent with public policy as defined by the Oregon Tort Claims Act. Nothing in this Agreement is intended to waive any limitations on liability established by the Oregon Tort Claims Act.

12. Insurance. Contractor will provide insurance in accordance with Exhibit C.

13. Waiver. The failure of the City to enforce any provision of this contract will not constitute a waiver by the City of that or any other provision.

14. Errors. The Contractor will perform such additional work as may be necessary to correct errors in the work required under this contract without undue delays and without additional cost.

15. Governing Law. The provisions of this contract will be construed in accordance with the laws of the State of Oregon and ordinances of the City of McMinnville, Oregon. Any action or suits involving any question arising under this contract must be brought in the appropriate court in Yamhill County, Oregon. Provided, however, if the claim must be brought in a federal forum, then it will be brought and conducted in the United States District Court for the District of Oregon.

16. Severability. If any term or provision of this contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions will not be affected, and the rights and obligations of the parties will be construed and enforced as if the contract did not contain the particular term or provision held invalid.

17. Merger Clause. THIS CONTRACT AND ATTACHED EXHIBITS CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION, OR CHANGE OF TERMS OF THIS CONTRACT WILL BIND EITHER PARTY UNLESS IN WRITING, SIGNED BY BOTH PARTIES. ANY WAIVER, CONSENT, MODIFICATION, OR CHANGE, IF MADE, WILL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. BY ITS SIGNATURE, CONTRACTOR ACKNOWLEDGES IT HAS READ AND UNDERSTANDS THIS CONTRACT AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

EXHIBIT A
STATEMENT OF THE WORK

1. Individuals Performing Duties.

The City of McMinnville (City) contracts with Erskine Law Practice, LLC, (Erskine), to perform the prosecutorial and administrative duties outlined herein. The individuals currently associated with Erskine are Samuel Erskine and Shannon Lee Erskine and, under this proposal, either individual may perform prosecutorial and administrative duties. Other individuals employed by Erskine may be assigned duties in the future provided that the level of services remain consistent with the terms of this agreement.

2. Standard Prosecution Services.

Erskine will undertake to perform the following standard prosecutorial duties:

- a) **Case reviewing and issuing** – Review all criminal cases referred to the City Prosecutor’s office and make a timely issuing decision. For cases where prosecution is declined, draft a brief memo outlining the reason(s) for declining the case.
- b) **Pretrial negotiations** – Draft and provide a pretrial offer on all criminal cases and on violation cases where the defendant has retained counsel. Participate in any additional pretrial negotiations beyond the drafting of the initial offer.
- c) **Court appearances** – Appear as the City Prosecutor at court proceedings every Wednesday that court is in session on all criminal matters and on violation matters where the defendant has retained counsel.
- d) **Trials** – Prepare and try all criminal cases and all violation matters where the defendant has retained counsel.
- e) **Interfacing with crime victims, witnesses, and members of the public** – Respond appropriately to inquiries from victims, case witnesses, and members of the public.
- f) Prosecutorial services other than those identified in subsections (c) and (d) may be completed remotely. The City of McMinnville will agree to facilitate remote access to any computer systems belonging to the city that are necessary to carry out the functions identified in subsections (a), (b), and (e).

3. Non-Standard Prosecution Services.

Erskine will also undertake to perform the following non-standard prosecutorial duties:

- a) **Appeals** – Prepare and present criminal misdemeanor cases on appeal from Municipal Court.
- b) **Law enforcement advice** – Assist the City Attorney in providing legal advice to the City’s police department personnel related to criminal investigations, arrests, searches and seizures, and related criminal enforcement matters.
- c) **Policy review and advice** – Assist the City Attorney in providing legal advice to the City and in drafting ordinances related to criminal laws and public safety.

4. Administrative Duties of the City Prosecutor

Erskine will undertake to perform the following administrative duties:

- a) **General receptionist duties** – Receive and respond to inquiries from individuals or entities seeking information about the operations of the City Prosecutor’s office. A dedicated phone line will be available with general availability from 9:00 AM till 4:40 PM, Monday through Friday (excluding normal holidays). Mail correspondence directed to the City Prosecutor’s

office will continue to be sent to the address associated with the City Prosecutor's Office at City Hall and will be sorted by Municipal Court staff and placed in the City Prosecutor's mailbox at City Hall.

- b) Interfacing with Police Department – Create contact with McMinnville Police Department to facilitate the transferring of police reports and digital and physical evidence, the scheduling and subpoenaing of officers for court matters, and coordination with officers for the subpoenaing of civilian witnesses.
- c) Interfacing with Municipal Court and other jurisdictions – Respond to inquiries from municipal court staff. Facilitate information exchange between City Prosecutor and Yamhill County District Attorney's office or any other applicable law enforcement agency.
- d) Interfacing with crime victims, witnesses, and members of the public – Assist with necessary document creation and mailing of victim communication forms and notifications to maintain compliance with applicable victim contact laws. Respond appropriately to inquiries from victims, case witnesses, and members of the public. Process and track restitution requests.
- e) Responding to discovery demands – Ensuring prompt delivery of discovery materials to defendants and defense attorneys to maintain compliance with relevant discovery laws.
- f) Create and maintain prosecutorial case files – Create and maintain prosecutor files to: track compliance with discovery and victim notification issues, keep a record of documents filed in each case, and maintain a record of case facts and defendant criminal history. These files may be kept electronically or in a hard copy format at the election of Erskine Law Practice, and will be kept for the length of time required by law and remain the property of the City of McMinnville.
- g) Processing motions to set aside – Assist in the processing of motions to set aside including interfacing with members of the public or attorneys, drafting correspondence, and completing any associated data entry tasks.
- h) Administrative duties of the City Prosecutor services may be completed remotely. The City of McMinnville will agree to facilitate remote access to any computer systems belonging to the City that are necessary to carry out the functions identified in subsections (a) through (g).
- i) Keep accurate records of and transmit to City quarterly, a summary of the number of monthly hours worked by Erskine administrative staff carrying out the administrative duties of the Prosecutor, and the average actual hourly cost of such administrative staff incurred by Erskine in the performance of such Administrative duties.

EXHIBIT B
COMPLIANCE WITH APPLICABLE LAW

279B.220 Conditions concerning payment, contributions, liens, withholding. Every public contract shall contain a condition that the contractor shall:

(1) Make payment promptly, as due, to all persons supplying to the contractor labor or material for the performance of the work provided for in the contract.

(2) Pay all contributions or amounts due the Industrial Accident Fund from the contractor or subcontractor incurred in the performance of the contract.

(3) Not permit any lien or claim to be filed or prosecuted against the state or a county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished.

(4) Pay to the Department of Revenue all sums withheld from employees under ORS 316.167. [2003 c.794 §76a]

279B.230 Condition concerning payment for medical care and providing workers' compensation.

(1) Every public contract shall contain a condition that the contractor shall promptly, as due, make payment to any person, copartnership, association or corporation furnishing medical, surgical and hospital care services or other needed care and attention, incident to sickness or injury, to the employees of the contractor, of all sums that the contractor agrees to pay for the services and all moneys and sums that the contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

(2) Every public contract shall contain a clause or condition that all subject employers working under the contract are either employers that will comply with ORS 656.017 or employers that are exempt under ORS 656.126. [2003 c.794 §76c]

279B.235 Condition concerning hours of labor; compliance with pay equity provisions; employee discussions of rate of pay or benefits. (1) Except as provided in subsections (3) to (6) of this section, every public contract subject to this chapter must provide that:

(a) A contractor may not employ an employee for more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency or when the public policy absolutely requires otherwise, and in such cases, except in cases of contracts for personal services designated under ORS 279A.055, the contractor shall pay the employee at least time and a half pay for:

(A)(i) All overtime in excess of eight hours in any one day or 40 hours in any one week if the work week is five consecutive days, Monday through Friday; or

(ii) All overtime in excess of 10 hours in any one day or 40 hours in any one week if the work week is four consecutive days, Monday through Friday; and

(B) All work the employee performs on Saturday and on any legal holiday specified in ORS 279B.020.

(b) The contractor shall comply with the prohibition set forth in ORS 652.220, that compliance is a material element of the contract and that a failure to comply is a breach that entitles the contracting agency to terminate the contract for cause.

(c) The contractor may not prohibit any of the contractor's employees from discussing the employee's rate of wage, salary, benefits or other compensation with another employee or another person and may not retaliate against an employee who discusses the employee's rate of wage, salary, benefits or other compensation with another employee or another person.

(2) A contractor shall give notice in writing to employees who work on a public contract, either at the time of hire or before work begins on the contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week that the contractor may require the employees to work.

(3) A public contract for personal services, as described in ORS 279A.055, must provide that the contractor shall pay the contractor's employees who work under the public contract at least time and a half for all overtime the employees work in excess of 40 hours in any one week, except for employees under a personal services public contract who are excluded under ORS 653.010 to 653.261 or under 29 U.S.C. 201 to 209 from receiving overtime.

(4) A public contract for services at a county fair, or for another event that a county fair board authorizes, must provide that the contractor shall pay employees who work under the public contract at least time and a half for work in excess of 10 hours in any one day or 40 hours in any one week. A contractor shall notify employees who work under the public contract, either at the time of hire or before work begins on the public contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week that the contractor may require the employees to work.

(5)(a) Except as provided in subsection (4) of this section, a public contract for services must provide that the contractor shall pay employees at least time and a half pay for work the employees perform under the public contract on the legal holidays specified in a collective bargaining agreement or in ORS 279B.020 (1)(b)(B) to (G) and for all time the employee works in excess of 10 hours in any one

day or in excess of 40 hours in any one week, whichever is greater.

(b) A contractor shall notify in writing employees who work on a public contract for services, either at the time of hire or before work begins on the public contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week that the contractor may require the employees to work.

(6) This section does not apply to public contracts:

(a) With financial institutions as defined in ORS 706.008.

(b) Made pursuant to the authority of the State Forester or the State Board of Forestry under ORS 477.406 for labor performed in the prevention or suppression of fire.

(c) For goods or personal property. [2003 c.794 §77; 2005 c.103 §8f; 2015 c.454 §4]

**EXHIBIT C
INSURANCE**

(The Project Manager must answer and initial 2, 3, and 4 below).

During the term of this contract, Contractor will maintain in force at its own expense, each insurance noted below:

1. **Workers Compensation** insurance in compliance with ORS 656.017, which requires subject employers to provide Oregon workers' compensation coverage for all their subject workers. (Required of contractors with one or more employees, unless exempt under ORS 656.027).

Required by City I am exempt. Signed _____

2. **Professional Liability** insurance with a combined single limit of not less than \$1,200,000, \$2,000,000, or \$3,000,000 each claim, incident, or occurrence. This is to cover damages caused by error, omission, or negligent acts related to the professional services to be provided under this contract. The coverage must remain in effect for at least one year two years after the contract is completed.

Required by City Not required by City By: _____

3. **General Liability** insurance, on an occurrence basis, with a combined single limit of not less than \$1,200,000, \$2,000,000, or \$3,000,000 each occurrence for Bodily Injury and Property Damage. It must include contractual liability coverage. This coverage will be primary and non-contributory with any other insurance and self-insurance.

Required by City Not required by City By: _____

4. **Automobile Liability** insurance with a combined single limit, or the equivalent of not less than \$1,200,000, \$2,000,000, or \$3,000,000 each accident for Bodily Injury and Property Damage, including coverage for owned, hired or non-owned vehicles.

Required by City Not required by City By: _____

5. **Notice of cancellation or change.** There will be no cancellation, material change, reduction of limits, or intent not to renew the insurance coverage(s) without prior written notice from the Contractor or its insurer(s) to the City.

6. **Certificates of insurance.** As evidence of the insurance coverages required by this contract, the Contractor will furnish acceptable insurance certificates to the City at the time the Contractor returns the signed contracts. For general liability insurance and automobile liability insurance, the certificate will provide that the City, and its agents, officers, and employees, are additional insureds, but only with respect to Contractor's services to be provided under this contract. The certificate will include the cancellation clause, and will include the deductible or retention level. Insuring companies or entities are subject to City acceptance. If requested, complete copies of insurance policies will be provided to the City. The Contractor will be financially responsible for all pertinent deductibles, self-insured retentions, and self-insurance.

EXHIBIT D
CERTIFICATION STATEMENT FOR INDEPENDENT CONTRACTOR
(Contractor complete A or B below, Project Manager complete C below.)

A. CONTRACTOR IS A CORPORATION

CORPORATION CERTIFICATION: I am authorized to act on behalf of the entity named below, and certify under penalty of perjury that it is a corporation.

Entity	Signature	Date

B. CONTRACTOR IS INDEPENDENT.

Contractor certifies he/she meets the following standards:

1. The individual or business entity providing services is free from direction and control over the means and manner of providing the services, subject only to the right of the person for whom the services are provided to specify the desired results,
2. The individual or business entity is licensed under ORS chapters 671 or 701 if the individual or business entity provides services for which a license is required by ORS chapters 671 or 701,
3. The individual or business entity is responsible for obtaining other licenses or certificates necessary to provide the services,
4. The individual or business entity is customarily engaged in an independently established business, as any three of the following requirements are met **(please check three or more of the following):**
 - ___ A. The person maintains a business location i) that is separate from the business or work location of the person for whom the services are provided or ii) that is in a portion of the person’s residence and that portion is used primarily for the business.
 - ___ B. The person bears the risk of loss related to the business or the provision of services as shown by factors such as i) the person enters into fixed-price contracts, ii) the person is required to correct defective work, iii) the person warrants the services provided, or iv) the person negotiates indemnification agreements or purchases liability insurance, performance bonds, or errors and omissions insurance.
 - ___ C. The person provides contracted services for two or more different persons within a 12 month period or the person routinely engages in business advertising, solicitation, or other marketing efforts reasonably calculated to obtain new contracts to provide similar services.
 - ___ D. The person makes a significant investment in the business, through means such as i) purchasing tools or equipment necessary to provide the services, ii) paying for the premises or facilities where the services are provided, or iii) paying for licenses, certificates, or specialized training required to provide the services.
 - ___ E. The person has the authority to hire other persons to provide or to assist in providing the services and has the authority to fire those persons.

Contractor Signature	Date

(Project Manager complete C below.)

C. CITY APPROVAL

ORS 670.600 Independent contractor standards. As used in various provisions of ORS chapters 316, 656, 657, 671, and 701, an individual or business entity that performs services for remuneration will be considered to perform the services as an “independent contractor” if the standards of this section are met. The contractor meets the following standards:

1. The Contractor is free from direction and control over the means and manner of providing the services, subject only to the right of the City to specify the desired results,
2. The Contractor is responsible for obtaining licenses under ORS chapters 671 and 701 when these licenses are required to provide the services,

3. The Contractor is responsible for obtaining other licenses or certificates necessary to provide the services,
4. The Contractor has the authority to hire and fire employees to provide or assist in providing the services, and
5. The person is customarily engaged in an independently established business as indicated in B. 4 above.

Project Manager Signature

Date



MEMORANDUM

DATE: November 17, 2020
TO: Jeff Towery, City Manager
FROM: Mike Bisset, Community Development Director
SUBJECT: SE Chandler Avenue Vacation Request (RV 1-20)

Report in Brief:

A resolution initiating the proceedings and setting a date and time for a public hearing to consider the proposed vacation of a portion of SE Chandler Avenue east of SE Davis Street (RV 1-20).

Background:

The processes for the vacation of public right of way within incorporated cities are outlined in Oregon Revised Statutes (ORS) Chapter 271. The vacation process may be initiated by the adjacent property owners. Under that process, the property owners must file a petition with the City describing the area to be vacated, outlining the purpose for which the vacated area will be used, and noting the reason(s) the vacation is in the best public interest.

The petition must include written consent from all owners abutting the vacation area, and the written consent from two-thirds of the “affected” property owners. Statute prescribes the definition of “affected” properties, and it is generally all properties within 200’ laterally on each side of the vacated area and within 400’ beyond the extension of the vacated area.

Upon receipt of a completed vacation petition, the City Council, via Resolution, shall set a public hearing date to consider public testimony regarding the proposed vacation. Affected utilities are notified of the proposal and allowed to comment. Notice of the hearing is published in the local newspaper, and the notice is posted at each end of the proposed vacation area.

Upon conclusion of the public hearing, the City Council will consider an Ordinance to vacate the subject area. If the vacation Ordinance is adopted by the City Council, it is recorded with the County Clerk’s office, and title to the vacated area is attached to the adjacent properties.

The application fee for the property owner initiated vacation process is \$675.00. Those fees cover the costs of processing the application, publishing and mailing the vacation hearing notices, and the fees to record the adopted vacation ordinance.

Discussion:

The City has received a completed vacation petition, and associated application fee, from Shannon Thorson requesting that the City initiate the proceedings to vacate SE Chandler Avenue east of SE Davis Street. That portion of SE Chandler Avenue is unimproved, and the applicant has indicated that the vacation of the right-of-way will help facilitate redevelopment of the adjacent properties.

The vacation petition included written consent from all owners abutting the vacation area (Shannon Thorson and Linfield University). Additionally, the well written consent from 31 of the 44 affected property owners was received, meeting the “two-thirds” requirement in statute.

Per Chapter 271 of the Oregon Revised Statutes (ORS), the City Council shall fix a time for a formal hearing upon the request, and shall cause the proper notice of the hearing to be published and posted.

The proposed timeline for the vacation process is as follows:

- December 8th: City Council resolution initiating the vacation process and setting a hearing date of January 12, 2021
- December 9th: Notice of proposed vacation to affected utilities
- December 23rd: Deadline for comments from affected utilities
- December 29th: Post notice of the proposed vacation at ends of the vacation area
Publish 1st notice of the proposed vacation in the News Register
- January 5th: Publish 2nd notice of the proposed vacation in the News Register
- January 12th: City Council hearing & adoption of vacation ordinance
- February 12th: Vacation ordinance effective & recorded

Attachments:

1. Resolution No. 2020-66
2. Resolution Exhibit A
3. Completed street vacation application materials

Recommendation:

Staff recommends that the City Council adopt the attached resolution initiating the proceedings and setting a date and time for a public hearing to vacate SE Chandler Avenue east of SE Davis Street (RV 1-20).

RESOLUTION NO. 2020 – 66

A Resolution initiating the proceedings and setting a date and time for a public hearing to vacate SE Chandler Avenue east of SE Davis Street (RV 1-20).

BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF McMinnville, OREGON, as follows:

1. That proceedings be initiated for the purpose of vacating the area as described as follows and as shown on attached Exhibit "A":

A tract of land located in Section 21, Township 4 South, Range 4 West of the Willamette Meridian, City of McMinnville, Yamhill County, Oregon, in a portion of the Samuel Cozine Donation Land Claim No. 56, said tract being more particularly described as follows:

Beginning at the Southwest corner of Block 7 of MRS. P.W. CHANDLER'S FIRST ADDITION to the City of McMinnville, said corner being SOUTH 317.46 feet from a brass screw and washer marking the northwest corner of Parcel 1 of Partition Plat No. 2005-34; thence along the south line of said Block 7 being the North line of Chandler Avenue South 89°54'17" East 184.50 feet to the west margin of Southern Pacific Railroad; thence along said west margin South 26°05'27" West 66.75 feet to the northeast corner of that tract of land conveyed to Linfield College, recorded October 1, 1983, in Film Volume 180, Page 1940, Deed Records of Yamhill County, Oregon; thence along the north line of said "Linfield College" tract and South line of said Chandler Avenue North 89°54'17" West 155.24 feet to the northwest corner of said "Linfield College" tract being a point on the east margin of Davis Street; thence leaving said tract North 00°05'21' East 60.00 feet to the POINT OF BEGINNING, containing 10,192 square feet more or less, as shown on a map attached hereto and made a part hereof.

The Basis of Bearing for this description per Partition Plat No. 2005-34

2. That this resolution, having been duly discussed by the Council, shall constitute an initiation of such vacation proceedings.
3. That the Council does hereby and herein fix the 12th day of January 2020 at the hour of 7:00 p.m. in the McMinnville Civic Hall in the City of McMinnville, Oregon, as the time and place for the hearing upon said proposed vacation and objections thereto, if any.
4. That the Recorder is hereby instructed to give notice of such hearing by publishing a notice in the News Register, the City's official newspaper, once each week for two consecutive weeks prior to said hearing, which notice shall describe the area to be vacated, and within five days after the date of the first publication of said notice, to post or cause to be posted at or near each end of said proposed vacation, a copy of such notice which shall be headed, "Notice of Street Vacation", and such notice shall be posted in at least two conspicuous locations in such proposed vacation as above described.
5. That this Resolution shall take effect immediately upon passage and shall continue in full force and effect until revoked or replaced.

Adopted by the Common Council of the City of McMinnville at a regular meeting held the 8th day of December 2020 by the following votes:

Ayes: _____

Nays: _____

Approved this 8th day of December 2020.

MAYOR

Approved as to form:

Attest:

City Attorney

City Recorder

EXHIBIT:

- A. Vacate Map

Exhibit "A"

Road Vacatio. Exhibit Map for: Shannon Thorson Designs

Location: SW 1/4 Section 21, T. 4 S., R. 4 W., WM.,
In a portion of the Samuel Cozine D.L.C. #56
City of McMinnville, Yamhill County, OR

Date: 27 October 2020

3/4" IRON PIPE,
IN MON. BOX @
CENTERLINE
INTX. OF DAVIS
ST. AND COLLEGE
AVE.

BRASS SCREW AND
WASHER MARKING THE
NORTHWEST CORNER OF
PARCEL 1 OF PT 2005-34

30' 30'

SE DAVIS ST.

SOUTH 377.46'

347.51'

317.46'

TAX LOT: 4421CC-5600

SHANNON THORSON DESIGN LLC

INST. NO. 201800825

SOUTHWEST CORNER OF BLOCK 7 OF MRS.
P.W. CHANDLER'S FIRST ADDITION

S 89°54'17" E 184.50'

SE CHANDLER AVE.

S 89°54'17" E 199.82'

AREA IN RIGHT OF WAY
10192.32 Sq. Feet
0.2340 Acres

N 89°54'17" W 155.24'

S 26°05'27" W 66.75'






NORTH 135.90'

TAX LOT: 4428BA-290

LINFIELD COLLEGE

F.V. 180, PG. 1940

Legend

-  = MONUMENT FOUND
-  = PROPERTY LINE
-  = RAILROAD TRACK
-  = CENTERLINE OF PUBLIC ROAD
-  = VACATION AREA

3/4" IRON BAR, IN
MON. BOX @
CENTERLINE INTX.
OF DAVIS ST. AND
LINFIELD AVE.

**REGISTERED
PROFESSIONAL
LAND SURVEYOR**

Leland A. Macdonald
OREGON
January 16, 2002
LELAND A. MACDONALD
53226

Renews 31 December 2020

BY : LELAND MACDONALD & ASSOC., LLC
FORMERLY DBA MATT DUNCKEL & ASSOC.
3765 RIVERSIDE DRIVE
MCMINNVILLE, OREGON 97128
PHONE : 503-472-7904
FAX: 503-472-0367
EMAIL: LEE@MACDONALDSURVEYING.COM



Scale: 1" = 40'

North



519-20-000560-Plng
Engineering Department
 231 NE Fifth Street
 McMinnville, Oregon 97128
 (503) 434 - 7312 Office
 (503) 474 - 4955 Fax
www.mcminnvilleoregon.gov

ROAD/STREET VACATION APPLICATION

We, the undersigned, request the described vacation and hereby acknowledge that we have read the above application and its attachments, understand the requirements described herein, and state that the information supplied is as complete and detailed as is currently possible, to the best of our knowledge.

Site Information

Site Address: 1142 SE DAVIS

Subdivision Name: Chandlers First Addition

Lot Number(s): _____

Map & Tax Lot(s): R4421CC 05600

Type of Vacation: Street Right-of-way Easement Other

Reason for Vacation: Address Public nuisance. Street no longer serves East side of tracks

Proposed Use: unknown residential development

Applicant Information

Applicant's Name: Shannon Thorsen

Mailing Address: 1140 SE DAVIS

City, State, Zip: McMinnville, OR 97128

Phone Number: 503-550-3911 Fax Number: —

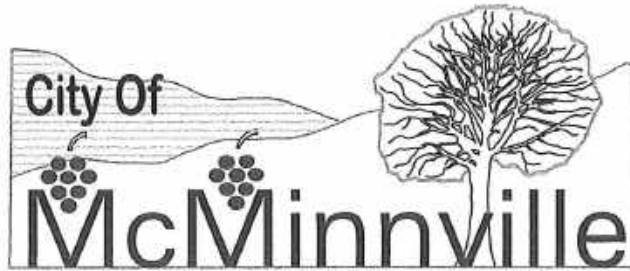
Email Address: Shthorsen@gmail.com

Applicant's Signature: [Signature] Date: 9-18-2020

Applicant's Signature: _____ Date: _____

Note: A metes and bounds legal description and a map of the property to be vacated, prepared and stamped by a licensed surveyor, must be attached to this vacation application.

Office Use Only:			
File No. <u>RV120</u>	Date Received <u>9-18-20</u>	Fee <u>675.00</u>	Receipt No. _____ Staff Member <u>[Signature]</u>
Council Date: _____	Published Date(s): _____	Public Hearing Date: _____	534 of 768



Engineering Department
231 NE Fifth Street
McMinnville, Oregon 97128
(503) 434 – 7312 Office
(503) 474 – 4955 Fax
www.mcminnvilleoregon.gov

VACATION PETITION

To: The Honorable Mayor and Council
of the City of McMinnville, Oregon

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, being the owners of the respective lots and parcels of land set opposite our respective names, do hereby consent to the vacation for purpose of Council jurisdiction and consideration, of all that portion of:

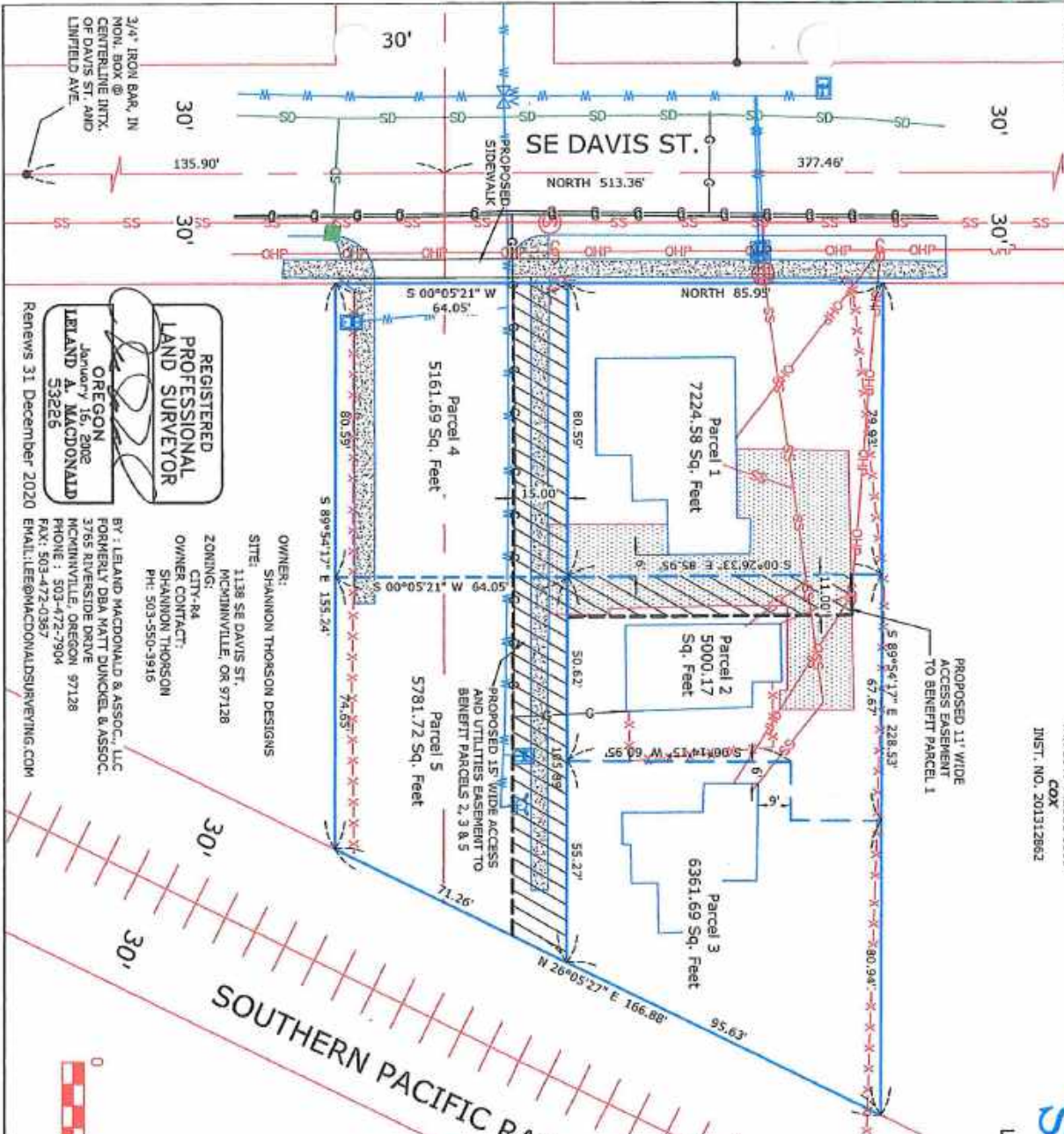
(insert metes and bounds legal description here)

in the City of McMinnville, County of Yamhill, State of Oregon, and we do hereby represent and guarantee that we are the lawful owner of the property set opposite our respective names.

Reason for vacation: This street only serves three
homes and dead-ends into the tracks
since a subdivision was built on the other
side of the tracks. Its unsightly w/
gravel surface and people frequently leave
junk cars and debris there.

Proposed use of vacated property: Residential use

3/4" IRON PIPE, IN MON. BOX @ CENTERLINE INTX. OF DAVIS ST. AND COLLEGE AVE.



TAX LOT: 4421CC-5500
 COX
 INST. NO. 201312862

PROPOSED 11' WIDE ACCESS EASEMENT TO BENEFIT PARCEL 1

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
 January 15, 2002
LELAND A. MACDONALD
 53226

OWNER:
 SHANNON THORSON DESIGNS

SITE:
 1138 SE DAVIS ST.
 McMinnville, OR 97128

ZONING:
 CITY R4

OWNER CONTACT:
 SHANNON THORSON
 PH: 503-550-3916

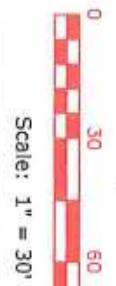
BY: LELAND MACDONALD & ASSOC., LLC
 FORMERLY DBA MATT DUNCAN & ASSOC.
 3765 RIVERSIDE DRIVE
 McMinnville, Oregon 97128
 PHONE: 503-472-7904
 FAX: 503-472-0367
 EMAIL: LEE@MACDONALDSURVEYING.COM

Renews 31 December 2020

Tentative Partition Map for:
Shannon Thorson Designs

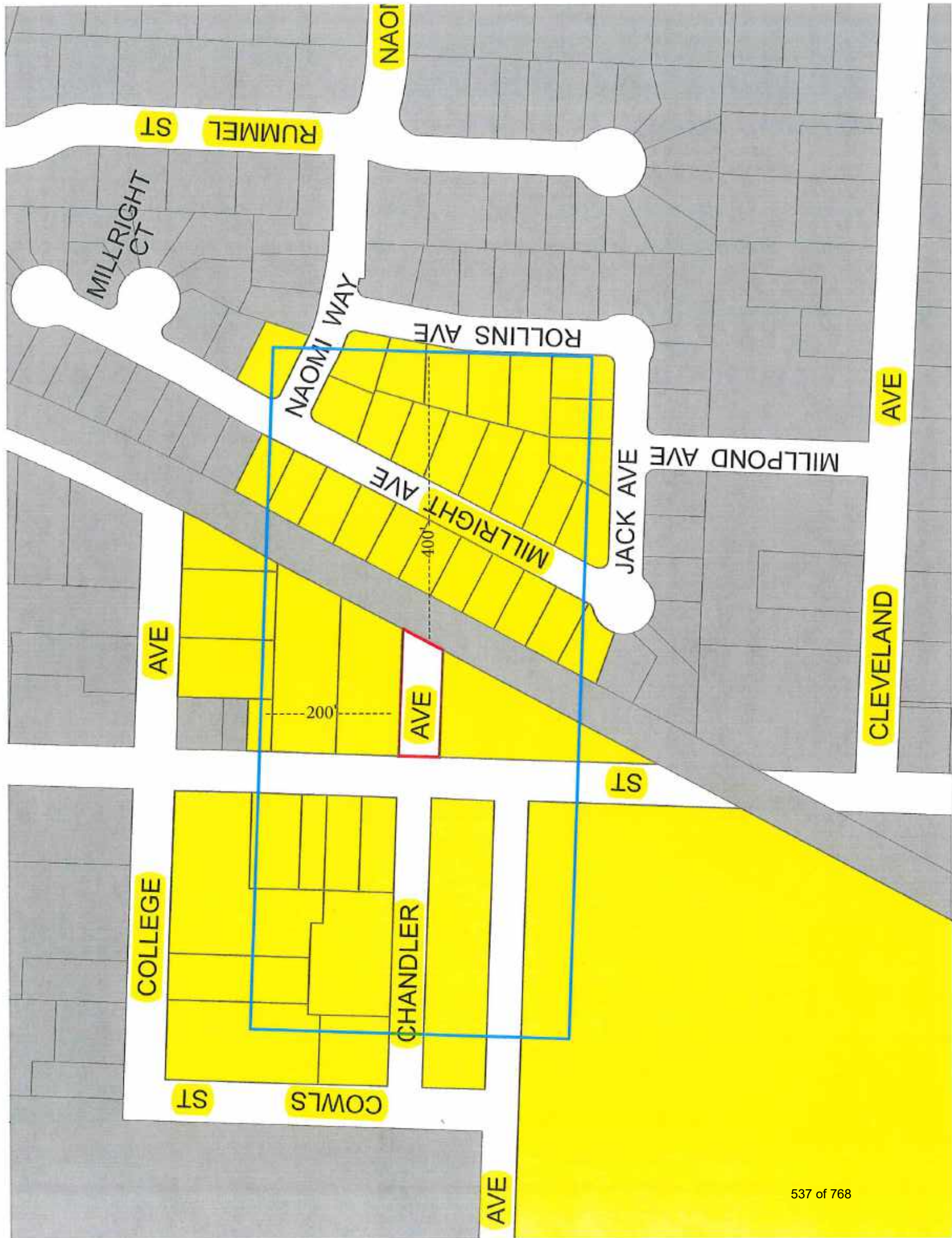
Location: SW 1/4 Section 21, T. 4 S., R. 4 W., WM1,
 In a portion of the Samuel Cozine D.L.C. #56
 In a portion of Lot 7, MRS. P.W. CHANDLER'S FIRST ADDITION
 City of McMinnville, Yamhill County, OR

Tax Lot: 4421CC - 5600
 Date: 14 May 2020



Legend

- = MONUMENT FOUND
- = WATER VALVE
- = WATER METER
- = FIRE HYDRANT
- = POWER POLE
- = SEPTIC CLEANOUT
- = SANITARY SEWER MANHOLE
- = STORM DRAIN CATCH BASIN
- = PROPERTY LINE
- = NEW PROPERTY LINE
- = PUBLIC RIGHT-OF-WAY
- = OVERHEAD POWER
- = GAS LINE
- = SANITARY SEWER LINE
- = STORM DRAIN LINE
- = WATER LINE
- = EDGE OF PAVEMENT
- = EDGE OF CONCRETE
- = PROPOSED EASEMENT
- = CENTERLINE OF PUBLIC ROAD
- = FENCE
- = RAILROAD TRACK
- = ASPHALT
- = BUILDING
- = CONCRETE
- = GRAVEL
- = PROPOSED BASEMENT AREA



RUMMEL ST

MILLRIGHT CT

NAOMI WAY

NAOMI WAY

ROLLINS AVE

MILLRIGHT AVE

JACK AVE

MILLPOND AVE

AVE

CLEVELAND

AVE

AVE

ST

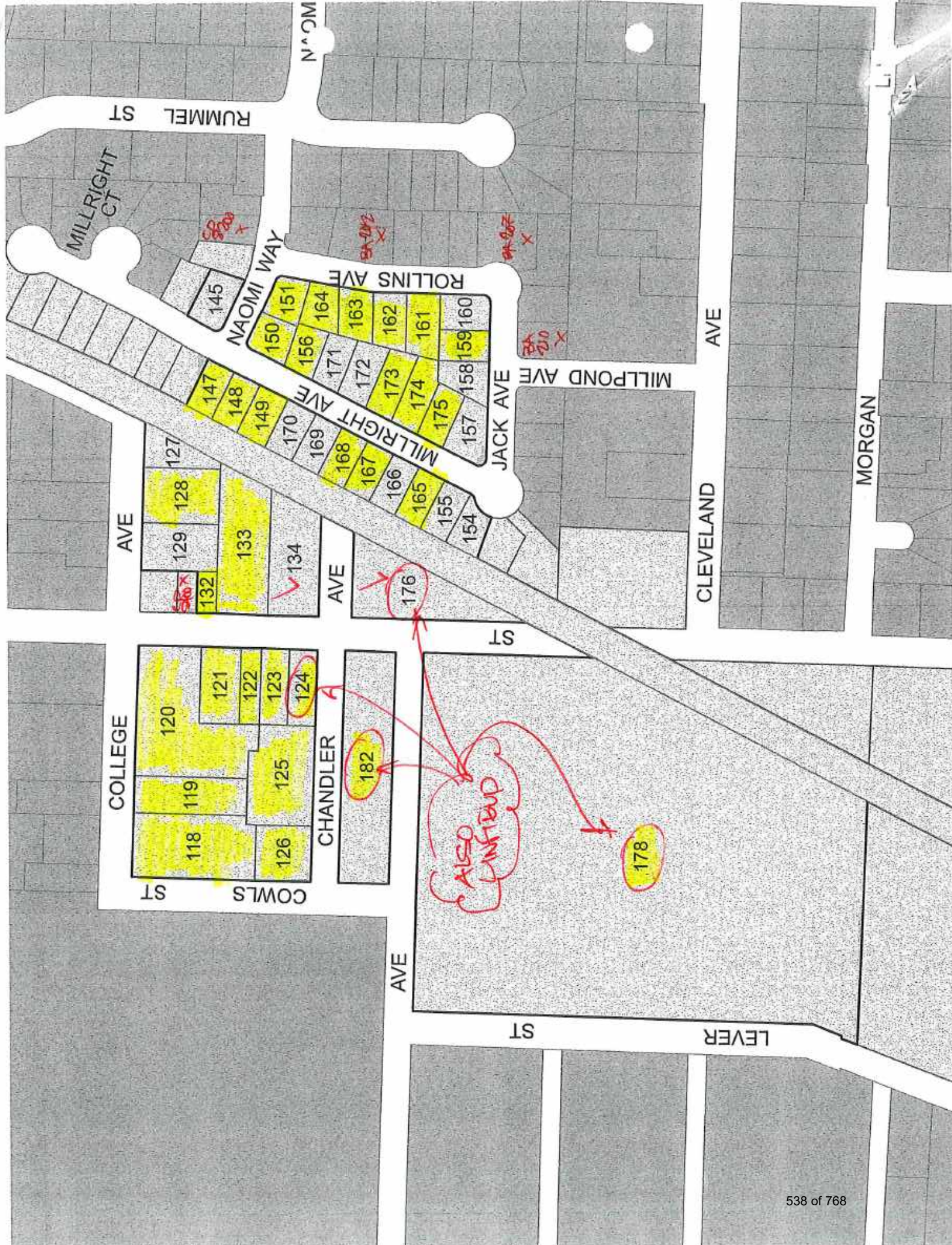
COLLEGE

CHANDLER

ST

COWLS

AVE



Map NO.	Tax Lot	Site Address	Owner	Attn:	Mailing Address	City	State	Zip
118	R4421CC03920	328 SE COLLEGE AVE	LINFIELD COLLEGE		900 S BAKER ST	MCMINNVILLE	OR	97128
119	R4421CC04020	328 SE COLLEGE AVE	LINFIELD COLLEGE		535 NE 5TH ST	MCMINNVILLE	OR	97128
120	R4421CC04120	362 SE COLLEGE AVE	LINFIELD COLLEGE		900 S BAKER	MCMINNVILLE	OR	97128
121	R4421CC04220	1125 SE DAVIS ST	LINFIELD COLLEGE		900 SE BAKER ST	MCMINNVILLE	OR	97128
122	R4421CC04320	1139 SE DAVIS ST	LINFIELD COLLEGE		900 SW BAKER ST	MCMINNVILLE	OR	97128
123	R4421CC04420	1147 SE DAVIS ST	LINFIELD COLLEGE		900 SW BAKER ST	MCMINNVILLE	OR	97128
124	R4421CC04520	1149 SE DAVIS ST	LINFIELD COLLEGE		900 SE BAKER ST NO A451	MCMINNVILLE	OR	97128
125	R4421CC04600	269 SE CHANDLER ST	LINFIELD COLLEGE		535 NE 5TH ST	MCMINNVILLE	OR	97128
126	R4421CC04700	1152 SE COWLES BL	LINFIELD COLLEGE		1172 SW RUSS LN	MCMINNVILLE	OR	97128
127	R4421CC04800	450 SE COLLEGE AVE	GRASSHAM GR & MARY		440 SE COLLEGE AVE	MCMINNVILLE	OR	97128
128	R4421CC04900	440 SE COLLEGE AVE	WIMER DEAN L TRUSTEE	WIMER MARY J TRUSTEE	16830 SE WALLACE RD	DAYTON	OR	97114
129	R4421CC05000	432 SE COLLEGE AVE	MOE ROBERT A SR	MOE SUSAN M	1120 SE DAVIS ST	MCMINNVILLE	OR	97128
130	R4421CC05100	1120 SE DAVIS ST	MAFANA-SANCHEZ-GHARRIDO &	MARGANA FABIO A	18630 S Hwy 99W	AMITY	OR	97101
131	R4421CC05200	1138 SE DAVIS ST	COX SAMUEL L TRUSTEE	COX HANNA A TRUSTEE	1195 NE 4TH ST	MCMINNVILLE	OR	97128
132	R4421CC05300	1140 SE DAVIS ST	SHANNON THORSON DESIGN LLC		1086 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
133	R4421CC05400	3086 SE MILLRIGHT AVE	MAY JORDAN R		30601 AGOURA RD SUITE 200	AGOURA HILLS	CA	91301
134	R4421CC05500	1075 SE MILLRIGHT AVE	AMH 2014-2 BORROWER LLC		7091 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
135	R4421CC05600	1081 SE MILLRIGHT AVE	MAHLIN WILLIS J	MAHLIN CHRISTINE A	PO BOX 2870	AGOURA HILLS	CA	91376
136	R4421CC05700	1091 SE MILLRIGHT AVE	AMERICAN HOMES 4 RENT PROPS THREE LLC		13235 SW HOWARD DR	INGARD	OR	97223
137	R4421CC05800	1136 SE MILLRIGHT AVE	DOTY RENNIKA K B	DOTY DOMINIC	30601 AGOURA RD SUITE 200	AGOURA HILLS	CA	91301
138	R4421CC05900	1138 SE MILLRIGHT AVE	AMH 2014-2 BORROWER LLC		20991 SPINNAKER ST	BEND	OR	97701
139	R4421CC06000	511 SE JACK AVE	HENRY JEFFREY S	HENRY CARLY	1149 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
140	R4421CC06100	1149 SE MILLRIGHT AVE	COOK BRIAN P &	COOK KENNETH I	450 SW FLEISHAUER LN	MCMINNVILLE	OR	97128
141	R4421CC06200	1116 SE MILLRIGHT AVE	AMZNER RYAN	AMZNER JULIE	1146 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
142	R4421CC06300	1146 SE MILLRIGHT AVE	DIRKSEN KRISTY T		7320 WALDO LN	EL CERRITO	CA	94530
143	R4421CC06400	599 SE JACK AVE	YEE PAUL PUI & XIAO ZHEN ZHENG		1971 NANCY AVE	LOS OSOS	CA	92002
144	R4421CC06500	605 SE JACK AVE	MCCURDY FAMILY TRUST	MCCURDY TIMOTHY J TRUSTEE	621 SE JACK AVE	MCMINNVILLE	OR	97128
145	R4421CC06600	621 SE JACK AVE	SCHUCK ERIC C &	LURNER GALANTHE M	1183 SE ROLLINS AVE	MCMINNVILLE	OR	97128
146	R4421CC06700	1139 SE ROLLINS AVE	ORTEGA OSCAR B &	ALDANA YOLANDA	1127 SE ROLLINS AVE	MCMINNVILLE	OR	97128
147	R4421CC06800	1127 SE ROLLINS AVE	COLLINS BRIAN J &	COLLINS COURTNEY M	1121 SE ROLLINS AVE	MCMINNVILLE	OR	97128
148	R4421CC06900	1121 SE ROLLINS AVE	ESPINOZA FERNANDO	ESPINOZA MARGARITA	PO BOX 2370	AGOURA HILLS	CA	91376
149	R4421CC07000	1115 SE ROLLINS AVE	AMERICAN HOMES 4 RENT PROPS THREE LLC		30601 AGOURA RD SUITE 200	AGOURA HILLS	CA	91301
150	R4421CC07100	1145 SE MILLRIGHT AVE	AMH 2014-2 BORROWER LLC		1141 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
151	R4421CC07200	1141 SE MILLRIGHT AVE	ROMERO ARTHURO JR	SA DANA NANCY	1137 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
152	R4421CC07300	1137 SE MILLRIGHT AVE	SWART BONNIE L	SWART DAN C	1185 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
153	R4421CC07400	1133 SE MILLRIGHT AVE	MAF TRICIA		1129 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
154	R4421CC07500	1129 SE MILLRIGHT AVE	RUSSELL MICHAEL B	RUSSEK REBECCA A				0
155	R4421CC07600	1124 SE MILLRIGHT AVE	AGUILAR CARLOS N WROS	NEGRETE JAIME WROS	1124 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
156	R4421CC07700	1130 SE MILLRIGHT AVE	JOHNSON CALVIN J & CHRISTINE		1130 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
157	R4421CC07800	1134 SE MILLRIGHT AVE	HORTON SHIRLEY		1134 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
158	R4421CC07900	1138 SE MILLRIGHT AVE	LEE DEBORAH A REVOCABLE 2018 TRUST	LEE DEBORAH A TRUSTEE	1138 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
159	R4421CC08000	1142 SE MILLRIGHT AVE	DEHM MATTHEW	DEHM ANA	1142 SE MILLRIGHT AVE	MCMINNVILLE	OR	97128
160	R4421CC08100	535 NE 5TH ST	LINFIELD COLLEGE		535 NE 5TH ST	MCMINNVILLE	OR	97128
161	R4421CC08200	535 NE 5TH ST	LINFIELD COLLEGE		535 NE 5TH ST	MCMINNVILLE	OR	97128
162	R4421CC08300	535 NE 5TH ST	LINFIELD COLLEGE		535 NE 5TH ST	MCMINNVILLE	OR	97128

October 28, 2020

Sarah Sullivan, Planning Analyst
City of McMinnville Community Development Center
231 NE 5th Street
McMinnville, Oregon 97128

RECEIVED

OCT 28 2020

COMMUNITY DEVELOPMENT
CENTER

RE: Remaining signatures and survey map for Chandler vacation

Included please find additional signatures for the vacation of Chandler Street and the survey map from Leland McDonald & Associates. Several more signatures came in from this last mailing, and I believe, along with the additional Linfield properties Mike pointed out that we could list, we now have more signatures than required (fingers crossed).

Please contact me with any additional needs. Thank you so much!




Shannon Thorson




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 (503) 474 - 4955 Fax
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ABUTTING PROPERTY OWNER SIGNATURES (100%)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
Linfield College	Mrs Rodriguez Mary Ann Rodriguez	6/22/2020
Shannon Thorson Design 1140, 1142 S Davis 415 + 429 Chandler	 Shannon Thorson member	8-5-2020
1140 SE Davis R4421CC 05600		
1142 SE Davis R4421CC 05600 * Same for 415+429 Chandler - 1 lot.		
308 SE college R4421CC03900 328 SE college R4421CC04000 382 SE college R4421CC04100 1125 SE Davis R4421CC04400 1139 SE Davis R4421CC04500 1147 SE Davis R4421CC04600 369 SE Chandler R4421CC04800 1152 SE Cowls R4421CC04900		
also included		

ALSO UNFILED:
 R4428BA 00700 (ADJACENT)
 R4421CC 04700
 R4428BB 00100
 R4428BB 01700

ADDED





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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1120 SE DAVIS R4421CC0542 Print name <u>Fabiola Martinez</u>	Fabiola Martinez Masouira	10/8/20



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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1142 SE millright map tax lot 00261 R4428BA owner name <u>Ann Dehn</u>		<u>9/12/20</u>



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
Signature to support vacating chandler street near tracks		
R4428BA -00245 605 SE Jack Ave		
Owner name print Timothy J McMurphy	Signature Timothy J McMurphy	Date 10.9.2020



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
Signature to support vacating chandler street near tracks		
R4428BA 00247 1133 SE Bellins		
Owner name print	Signature	date
Oscar Ortega Brown	<i>Oscar Ortega</i>	10/9/20



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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
Signature to support vacating Chandler Street near tracks		
R4428 BA -00249 1121 SE Rollins		
owner name Fernando Espinoza	Signature Fernando Espinoza	date 10-5-2020



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ABUTTING PROPERTY OWNER SIGNATURES (100%)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
Linfield College	MR Rodriguez Mary Ann Rodriguez	6/22/2020
Shannon Thorson Design 1140, 1142 S Davis 415 + 429 Chandler	 Shannon Thorson member	8-5-2020
1140 SE Davis R4421CC 05600		
1142 SE Davis R4421CC 05600 * Same for 415+429 Chandler — 1 lot.		
308 SE college R4421CC03900 328 SE college R4421CC04000 382 SE college R4421CC04100 1125 SE Davis R4421CC04400 1139 SE Davis R4421CC04500 1147 SE Davis R4421CC04600 369 SE chandler R4421CC04800 1152 SE cows R4421CC04900		

ALSO UNIFIED:
 R4428BA 00700 (ADJACENT)
 R4421CC 04700
 R4428BB 00100 } AFFECTED
 R4428BB 01700

RE: Vacat m of Chandler Street



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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1116 millright Owner name <u>Bryan Arzner</u>		9/3/2020 _____
R4428 BA 00232		



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1127 SE Rollins Ave map tax lot 00248 R44283A Owner name <u>BRIAN Collins</u>		8/19/2020



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})



Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1091 SE millright map tax lot 08500 RH21CD owner name <u>WILLIS J. MAHLEN</u>		8/19/20



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NOT IN
 AREA
 ↓


PROPERTY OWNER SIGNATURES (2/3^{rds})

Address/Map & Number	Signature*	Date Signed
map or address map tax lot 00202 R4428BA owner name <u>Shannon Oddo</u>		<u>9/3/2020</u>
1137 SE millright Pan Awarf		<u>9-3-2020</u>
<u>R 4428BA 00253</u>		



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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
610 SE Jack Ave map R4428BA tax lot name <u>Taylor Jaeger</u> 00210		8/19/2020
<div style="background-color: yellow; padding: 10px; text-align: center;"> ↑ NOT IN ABA </div>		



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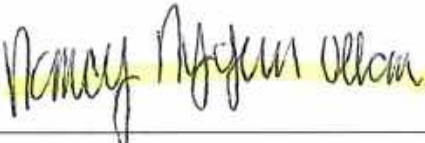

AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
440 SE college tax lot map: R4421CC 05200 name <u>Mary Wimer</u>	<u>Mary Wimer</u>	<u>8/26/20</u>



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
656 Jack Ave R 4428BA tax lot 00207 owner name <u>Nancy Ollom</u>		8-25-20
BRIAN L. OLLOM		8-25-20
<div style="background-color: yellow; padding: 5px; text-align: center;"> NOT IN ABA. </div>		



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1138 SE Davis, R4421CC 05500 name <u>Hanna Amali Cox</u>	Hanna Amali Cox	8-22-2020
R4421CC 05500		



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
name <u>Anne Falla</u> 1118 SE Davis (9712810895) R4421CC0504 05100 ^{cell}	sig 	<u>8/22/2020</u>
John Robinson 1118 SE Davis 503-853-6800		8-22-2020
<div style="background-color: yellow; padding: 10px; text-align: center;"> NOT IN AREA </div>		



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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1133 SE millright map tax lot 00254 R4428 BA owner name <u>Tricia Mae</u>		8-19-2020
		



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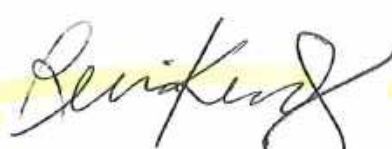
AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1134 SE millright map tax lot 00259 R4428 BA owner name <u>Small</u>		8/19/20
		



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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1100 SE millright map tax lot 08700 R4421C0 owner name <u>Rennisa Doty</u>		9/11/2020



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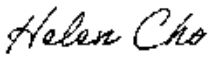




AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
1138 SE millright map tax lot 00260 R442BBA owner name <u>Deborah A. Lee</u>	Consent to abatement of Chandler Avenue East of Davis Street. Deborah A. Lee	9-2-2020

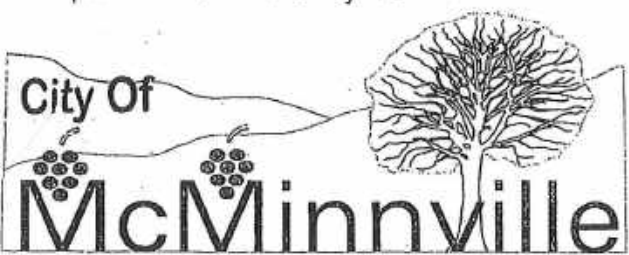


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AFFECTED PROPERTY OWNER SIGNATURES (2/3rds)


Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
AMH 2014-2 Borrower, LP 1103 SE Rollins Avenue R4421CD 08800	 Helen Cho, Assistant Vice President	9/15/2020
American Homes 4 Rent Properties Three, LLC 1115 SE Rollins Avenue R4428BA 00250	 Helen Cho, Assistant Vice President	9/15/2020
American Homes 4 Rent Properties Three, LLC 1105 SE Millright Avenue R4421CD 08600	 Helen Cho, Assistant Vice President	9/15/2020
AMH 2014-2 Borrower, LP 1075 SE Millright Avenue R4421CD 08400	 Helen Cho, Assistant Vice President	9/15/2020
AMH 2014-2 Borrower, LP 1145 SE Millright Avenue R4428BA 00251	 Helen Cho, Assistant Vice President	9/15/2020

RE: Vacation of Chandler Street



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AFFECTED PROPERTY OWNER SIGNATURES (2/3^{rds})

Owner Name/Address/Map & Tax Lot Number	Signature*	Date Signed
693 Naomi McMinnville OR Owner name <u>BRIAN CRUICKSHANK</u>		<u>09/09/2020</u>
R4421CD 00200		
NOT IN ABA		



City of McMinnville Planning Department

Transaction Receipt
Record ID: 569-20-000560-PLNG
IVR Number: 569097189926

231 NE 5th Street
McMinnville, OR 97128
503-434-7311
Fax: 503-474-1955
cdc.planning@mcminnvilleoregon.gov

Receipt Number: 203007

Receipt Date: 9/23/20

www.mcminnvilleoregon.gov

Worksite address: 1140 SE DAVIS ST, MCMINNVILLE, OR 97128

Parcel: R4421CC05600

Fees Paid

Transaction date	Units	Description	Account code	Fee amount	Paid amount
9/23/20	1.00 Fa	Street Vacations	01-07-025-4250-03	\$675.00	\$675.00

Payment Method:	Check number: 1068	Payer: Shannon Thorson Design LLC	Payment Amount:	\$675.00
-----------------	--------------------	--------------------------------------	-----------------	----------

Cashier: Sarah Sullivan

Receipt Total: \$675.00



City of McMinnville
Community Development Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7312
www.mcminnvilleoregon.gov

STAFF REPORT

DATE: November 17, 2020
TO: Jeff Towery, City Manager
FROM: Mike Bisset, Community Development Director
SUBJECT: Natural Hazard Mitigation Plan (NHMP) Adoption
STRATEGIC PRIORITY & GOAL:



OBJECTIVE/S: Lead and plan for emergency preparedness

Report in Brief:

A Resolution adopting the City of McMinnville representation in the updates to the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan (NHMP)

Background:

Since the fall of 2019, McMinnville has participated in the process of developing a Natural Hazard Mitigation Plan (NHMP). The work was completed in cooperation with the University of Oregon's Institute for Policy Research and Engagement - Oregon Partnership for Disaster Resilience and the Oregon Military Department's Office of Emergency Management utilizing funds obtained from the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation Grant Program. Upon adoption of the plan, McMinnville will gain eligibility to apply for federal funding towards natural hazard mitigation projects.

A natural hazard mitigation plan provides communities with a set of goals, action items, and resources designed to reduce risk from future natural disaster events. Engaging in mitigation activities provides jurisdictions with a number of benefits, including reduced loss of life, property, essential services, critical facilities, and economic hardship; reduced short-term and long-term recovery and reconstruction costs; increased cooperation and communication within the community through the planning process; and increased potential for state and federal funding for recovery and reconstruction projects.

Discussion:

The NHMP planning process included a wide range of representatives from city and county government, emergency management personnel, and outreach to members of the public in the form of an electronic survey.

The steering committee for development of the McMinnville NHMP included:

- Jenny Berg, Library Director
- Mike Bisset, Community Development Director
- James Burke, McMinnville Water & Light, Water Division Director
- Scott Burke, Information Technology Director
- John Dietz, McMinnville Water & Light, General Manager
- David Koch, City Attorney
- Leland Koester, Wastewater Services Manager
- Rich Leipfert, Fire Chief
- David Renshaw, Superintendent
- Heather Richards, Planning Director
- Scott Rosenbalm, McMinnville Water & Light, Electric Division Director
- Matt Scales, Chief of Police
- Larry Sherwood, Engineering Services Manager
- Jeff Towery, City Manager

The draft of the NHMP was published and posted on the City's website in June 2020. A press release was issued, and comments from the public and other interested parties were solicited. No comments regarding the draft plan were received.

In September 2020, the State of Oregon completed an update to the Oregon Natural Hazards Mitigation Plan (Oregon NHMP). Planning Director Heather Richards worked with the team from the University of Oregon's Institute for Policy Research and Engagement - Oregon Partnership for Disaster Resilience to ensure that the McMinnville NHMP was updated to be consistent with the Oregon NHMP. Minor clarifications and edits were made regarding earthquake, landslide, and wildfire risks to ensure that the two plans matched. Additionally, the maps for those risks were updated to match the Oregon NHMP.

The final McMinnville NHMP reflects those edits.

Yamhill County adopted the overall plan updates on November 12th, and the McMinnville Water & Light Commission considered the McMinnville NHMP at their November 17th Commission meeting.

Attachments:

1. Resolution No. 2020-67
2. McMinnville NHMP
3. FEMA approval letter
4. Yamhill County NHMP – Volume 1

Recommendation:

Staff recommends that the City Council adopt the attached resolution adopting the City of McMinnville representation in the updates to the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan (NHMP).

RESOLUTION NO. 2020 – 67

A Resolution Adopting the City of McMinnville Representation in the Updates to the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan

RECITALS:

Whereas, the City of McMinnville recognizes the threat that natural hazards pose to people, property and infrastructure within our community; and

Whereas, undertaking hazard mitigation actions will reduce the potential for harm to people, property and infrastructure from future hazard occurrences; and

Whereas, an adopted Natural Hazards Mitigation Plan is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and

Whereas, the City of McMinnville has fully participated in the FEMA prescribed mitigation planning process to prepare the *Yamhill County, Multi-Jurisdictional Natural Hazard Mitigation Plan*, which has established a comprehensive, coordinated planning process to eliminate or minimize these vulnerabilities; and

Whereas, the City of McMinnville has identified natural hazard risks and prioritized a number of proposed actions and programs needed to mitigate the vulnerabilities of the City of McMinnville to the impacts of future disasters within the *Yamhill County, Multi-Jurisdictional Natural Hazard Mitigation Plan*; and

Whereas, these proposed projects and programs have been incorporated into the *Yamhill County, Multi-Jurisdictional Natural Hazard Mitigation Plan* that has been prepared and promulgated for consideration and implementation by the cities of Yamhill County; and

Whereas, the Oregon Office of Emergency Management and Federal Emergency Management Agency, Region X officials have reviewed the *City of McMinnville addendum* to the *Yamhill County Multi-Jurisdictional Natural Hazard Mitigation Plan* and pre-approved it (dated, September 10, 2020) contingent upon this official adoption of the participating governments and entities; and

Whereas, the NHMP is comprised of comprised of three volumes: Volume I: Basic Plan, Volume II: Jurisdictional Addenda, and Volume III: Appendices, collectively referred to herein as the NHMP; and

Whereas, the NHMP is in an on-going cycle of development and revision to improve its effectiveness; and

Whereas, City of McMinnville adopts the NHMP and directs the staff to develop, approve, and implement the mitigation strategies and any administrative changes to the NHMP.

NOW, THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF McMinnville, OREGON, as follows:

1. That the City of McMinnville adopts *the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan* as an official plan; and
2. That the City of McMinnville will submit this Adoption Resolution to the Oregon Office of Emergency Management and Federal Emergency Management Agency, Region X officials to enable final approval of the *Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan*.
3. That this resolution shall take effect immediately upon passage and shall continue in full force and effect until revoked or replaced

Adopted by the Common Council of the City of McMinnville at a regular meeting held the 8th day of December 2020 by the following votes:

Ayes: _____

Nays: _____

Approved this 8th day of December 2020.

MAYOR

Approved as to form:

Attest:

City Attorney

City Recorder

City of McMinnville Addendum to the Yamhill County Multi-Jurisdictional Hazard Mitigation Plan



Photo Credits: Gary Halvorson, Oregon State Archives

September 2020

Volume II: McMinnville Addendum



Prepared for:
City of McMinnville

Prepared by:
**University of Oregon
Institute for Policy Research and Engagement
Oregon Partnership for Disaster Resilience**

Planning grant funding provided by:



FEMA

Federal Emergency Management Agency (FEMA)
Pre-Disaster Mitigation Program
Grant: HMGP-DR4328-5-P-OR
Disaster Award Number: 97.039

and

Additional Support Provided by:



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Purpose

This is an update of the McMinnville addendum to the Yamhill County Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP). This addendum supplements information contained in Volume I (Basic Plan) which serves as the NHMP foundation, and Volume III (Appendices) which provide additional information. This addendum meets the following requirements:

- Multi-Jurisdictional **Plan Adoption** §201.6(c)(5),
- Multi-Jurisdictional **Participation** §201.6(a)(3),
- Multi-Jurisdictional **Mitigation Strategy** §201.6(c)(3)(iv), and
- Multi-Jurisdictional **Risk Assessment** §201.6(c)(2)(iii).

Updates to McMinnville’s addendum are further discussed throughout the NHMP, and within Volume III, Appendix B, which provides an overview of alterations to the document that took place during the update process.

The City of McMinnville and the McMinnville Water and Light Commission (collectively “the City” or “McMinnville”), adopted their addendum to the Yamhill County Multi-jurisdictional NHMP on [Date, 2020] and [Date, 2020], respectively. FEMA Region X approved the Yamhill County NHMP on [Date, 2020] and the City’s addendum on [Date, 2020]. With approval of this NHMP the City is now eligible to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act’s hazard mitigation project grants through [Date, 2025].

Mitigation Plan Mission

The NHMP mission states the purpose and defines the primary functions of the NHMP. It is intended to be adaptable to any future changes made to the NHMP and need not change unless the community’s environment or priorities change.

The City concurs with the mission statement developed during the Yamhill County planning process (Volume I, Section 3):

To promote public policy and mitigation activities which will enhance the safety to life and property from natural hazards.

This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the county towards building a safer, more sustainable community.

Mitigation Plan Goals

Mitigation plan goals are more specific statements of direction that Yamhill County citizens, and public, and private partners can take while working to reduce the City’s risk from natural hazards. These statements of direction form a bridge between the broad mission statement, and serve as checkpoints, as agencies, and organizations begin implementing mitigation action items.

The City concurs with the goals developed during the Yamhill County planning process (Volume I, Section 3). All NHMP goals are important and are listed below in no order of priority. Establishing community priorities within action items neither negates nor eliminates any goals, but it establishes which action items to consider implementing first, should funding become available.

Below is a list of the NHMP goals:

GOAL 1: EMERGENCY OPERATIONS

- Coordinate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures and with other agencies.

GOAL 2: EDUCATION AND OUTREACH

- Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

GOAL 3: PARTNERSHIPS

- Develop effective partnerships with public and private sector organizations and significant agencies and businesses for future natural hazard mitigation efforts.
- Coordinate natural hazard mitigation actions between the County and local jurisdictions to create more cohesive and effective hazard mitigation efforts.

GOAL 4: PREVENTIVE

- Develop and implement activities to protect human life, commerce, and property from natural hazards.
- Reduce losses and repetitive damage for chronic hazard events while promoting insurance coverage for catastrophic hazards.

GOAL 5: NATURAL RESOURCES UTILIZATION

- Link natural resources management, land use planning, and watershed planning with natural hazard mitigation activities to protect natural systems and allow them to serve natural hazard mitigation functions.

GOAL 6: IMPLEMENTATION

- Implement strategies to mitigate the effects of natural hazards and increase the quality of life and resilience of economies in Yamhill County.

GOAL 7: DEVELOPMENT

- Communities appropriately apply development standards that consider the potential impacts of natural hazards.

GOAL 8: DOCUMENTATION

- Document and evaluate progress in achieving hazard mitigation strategies and action items.

Process and Participation

This section of the NHMP addendum addresses 44 CFR 201.6(a)(3), *Participation*.

In addition to establishing a comprehensive community-level mitigation strategy, the Disaster Mitigation Act of 2000 (DMA2K), and the regulations contained in 44 CFR 201, require that jurisdictions maintain an approved NHMP to receive federal funds for mitigation projects. Local adoption, and federal approval of this NHMP ensures that the city will remain eligible for pre-, and post-disaster mitigation project grants.

The Oregon Partnership for Disaster Resilience (OPDR) at the University of Oregon's Institute for Policy Research and Engagement (IPRE) collaborated with the Oregon Office of Emergency Management (OEM), Yamhill County, and McMinnville to update their NHMP. This project is funded through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program for DR-4328 (HMGP-DR-4328-OR-5-P). Members of the McMinnville NHMP Steering committee also participated in the County NHMP update process (Volume III, Appendix B).

The Yamhill County NHMP, and McMinnville addendum, are the result of a collaborative effort between citizens, public agencies, non-profit organizations, the private sector, and regional organizations. The McMinnville NHMP Steering Committee guided the process of developing the NHMP.

Convener and Committee

The McMinnville Community Development Director serves as the NHMP addendum convener. The convener of the NHMP will take the lead in implementing, maintaining, and updating the addendum to the Yamhill County NHMP in collaboration with the designated convener of the Yamhill County NHMP (Yamhill County Emergency Manager).

Representatives from the City of McMinnville Steering Committee met formally, and informally, to discuss updates to their addendum (Volume III, Appendix B). The steering committee reviewed, and revised the City's addendum, with focus on the NHMP's risk assessment, and mitigation strategy (action items).

This addendum reflects decisions made at the designated meetings, and during subsequent work, and communication with Yamhill County Emergency Manager, and OPDR. The changes are highlighted with more detail throughout this document, and within Volume III, Appendix B. Other documented changes include a revision of the City's risk assessment, and hazard identification sections, action items, and community profile.

The McMinnville steering committee was comprised of the following representatives:

- Convener, Mike Bisset, Community Development Director
- Jenny Berg, Library Director
- James Burke, McMinnville Water & Light, Water Division Director
- Scott Burke, Information Technology Director
- John Dietz, McMinnville Water & Light, General Manager
- David Koch, City Attorney
- Leland Koester, Wastewater Services Manager
- Rich Leipfert, Fire Chief
- David Renshaw, Superintendent

- Heather Richards, Planning Director
- Scott Rosenbalm, McMinnville Water & Light, Electric Division Director
- Matt Scales, Chief of Police
- Larry Sherwood, Engineering Technician and Inspector
- Jeff Towery, City Manager

Public Participation

Public participation was achieved by posting the NHMP publicly and providing community members the opportunity to make comments and suggestions during the review process. Community members were also provided an opportunity for comment via a survey administered by IPRE (Volume III, Appendix F). During the City public review period (Attachment B) there were no comments provided.

Implementation and Maintenance

The City Council and the Water and Light Commission will be responsible for adopting the McMinnville addendum to the Yamhill County NHMP. This addendum designates the steering committee, and a convener to oversee the development, and implementation of action items. Because the City addendum is part of the County's multi-jurisdictional NHMP, the City will look for opportunities to partner with the County. The City's steering committee will convene after re-adoption of the McMinnville NHMP addendum on an annual schedule. The County is meeting on a semi-annual basis and will provide opportunities for the cities to report on NHMP implementation, and maintenance during their meetings. The Community Development Director will serve as the convener and will be responsible for assembling the steering committee. The steering committee will be responsible for:

- Reviewing existing action items to determine suitability of funding;
- Reviewing existing, and new risk assessment data to identify issues that may not have been identified at NHMP creation;
- Educating, and training new steering committee members on the NHMP, and mitigation actions in general;
- Assisting in the development of funding proposals for priority action items;
- Discussing methods for continued public involvement; and
- Documenting successes, and lessons learned during the year.

The convener will also remain active in the County's implementation, and maintenance process (Volume I, Section 4).

The City will utilize the same action item prioritization process as the County (Volume I, Section 4).

Implementation through Existing Programs

This NHMP is strategic and non-regulatory in nature, meaning that it does not necessarily set forth any new policy. It does, however, provide: (1) a foundation for coordination and collaboration among agencies and the public in the city; (2) identification and prioritization of future mitigation activities; and (3) aid in meeting federal planning requirements and qualifying for assistance programs. The mitigation plan works in conjunction with other city plans and programs including the Comprehensive Land Use Plan, Capital Improvements Plan, and Building Codes, as well as the [Yamhill County NHMP](#), and the [State of Oregon NHMP](#).

The mitigation actions described herein (and priority actions in Attachment A) are intended to be implemented through existing plans and programs within the city. Plans and policies already in existence have support from residents, businesses and policy makers. Where possible, McMinnville will implement the NHMP's recommended actions through existing plans and policies. Many land-use, comprehensive and strategic plans get updated regularly, allowing them to adapt to changing conditions and needs. Implementing the NHMP's action items through such plans and policies increases their likelihood of being supported and implemented. Implementation opportunities are further defined in action items when applicable.

Future development without proper planning may result in worsening problems associated with natural hazards. McMinnville's acknowledged comprehensive plan is the City of McMinnville Comprehensive Plan. The City implements the plan through the Community Development Code.

McMinnville currently has the following plans that relate to natural hazard mitigation. For a complete list visit the City's [website](#):

- Comprehensive Plan (Volume 1, [Volume 2](#), Volume 3)
- [McMinnville Municipal Code](#)
 - Title 13 Public Utilities
 - Title 15 Building and Construction
 - Title 17 Zoning ([17.48 – Flood Area Zone](#), [17.53 Land Division Standards](#))
- Building Code, [2017 Oregon State Building Code](#) based on 2015 International Residential Code (IRC), and 2012 International Building Code (*to be updated to the 2020 Oregon State Building Code, anticipated October 2020*)
- [Emergency Operations Plan](#) (2010)
- [Public Facility Plan](#) (1995)
- [Transportation System Plan](#) (2010)
- [Conveyance System Master Plan](#) (2008)
- Water Master Plan (2010)
- [Storm Drainage Master Plan](#) (2009)
- Electric System Planning Study (2015)
- [Water Reclamation Facilities Plan](#) (2009)
- McGuire Emergency Action Plan (2018)
- Fire District Seismic Assessment (2018)
- Facilities Assessment (2018)
- [Highway 18/99w South Interchange Access Management Plan](#) (2002)
- [McMinnville Westside Bicycle and Pedestrian Plan](#) (1995)
- [Downtown Improvement Plan](#) (2000)
- [Northeast Gateway Plan](#) (2012)
- [Urban Renewal Plan](#) (2013)
- [Economic Development Strategic Plan](#) (2019)
- McMinnville Water & Light COOP (2018)

Other plans:

- [Yamhill County Community Wildfire Protection Plan](#) (2009, revised Nov. 2015)

Government Structure

The McMinnville City Charter establishes a Mayor-Council form of government, which vests policy authority in a volunteer City Council, and administrative authority for day-to-day operations in an appointed, professional City Manager. The McMinnville City Council consists of a Mayor and six Councilors (two from each ward) who serve four-year terms. The Council meets at least once per month at City Hall. The agenda of each meeting includes time for citizen comment. The city charter vest authority over the water and electric systems of the city in the Water and Light Commission (MW&L). The Commission consists of the mayor and four commissioners whom are appointed to four-year terms by the mayor and approved by the city council. The commission meets at least once per month.

The City of McMinnville currently has the following departments which have a role in natural hazard mitigation:

City Manager office provides strategic planning, budget and finance, and development of public policy recommendations to the City Council.

Community Development is composed of the airport, public works, engineering, and wastewater treatment facilities. Together the departments are responsible for maintaining and operating many of the basic urban services including the City's buildings and fleet (equipment), parks, streets, stormwater system, and wastewater system. The Public Works Department is responsible for the city's [Snow & Ice Response Plan](#).

Planning services include all long range and current planning for new development, as well as the City's flood plain management zone. Planning is also responsible for implementation of the Comprehensive Plan. The planning department also includes the building division which reviews and inspects commercial, industrial, and residential developments.

Police services include law enforcement activities and emergency management (emergency preparedness, mitigation, response and recovery efforts for McMinnville during emergencies, disasters, or disruptions).

Fire provides emergency services including fire suppression, emergency medical response, hospital ambulance transportation, water and dive rescue operations, hazardous materials incidents, and disaster response. Non-emergency services include fire prevention and inspection services, code enforcement, public safety education services/CPR training, fire extinguisher use, residential safety surveys, home fire escape planning, emergency and disaster preparedness planning and training for citizens (CERT), and fire and life safety education in McMinnville schools.

McMinnville Water & Light (MW&L) provides water, power, and fiber to the greater McMinnville area. A general manager oversees daily operations, budgets, finances, and advises the commission on strategic planning. MW&L serves approximately 17,000 electrical customers, 12,000 water customers, and fiber to the City of McMinnville and McMinnville School District facilities. MW&L's electric utility encompasses approximately 75 square miles, has 7 electric sub-stations (11 power transformers), 332 miles of primary distribution lines (55% overhead, 45% underground), and a 115 KV transmission line (5.6 miles). The water utility owns 6350 acres of watershed in the Coast Mountain Range where McGuire and Haskins Reservoirs are located (3.5 billion gallons capacity). Water from McGuire and Haskins Reservoirs is treated at the Norman Scott Water Treatment Plant, which operates

24 hours a day/365 days per year and has the capacity to treat up to 22 million gallons of water per day. After treatment, water is stored in four water reservoirs with storage capacity of 22.7 million gallons.

Continued Public Participation

An open public involvement process is essential to the development of an effective NHMP. To develop a comprehensive approach to reducing the effects of natural disasters, the planning process shall include opportunities for the public, neighboring communities, local, and regional agencies, as well as, private, and non-profit entities to comment on the NHMP during review.¹ Keeping the public informed of efforts to reduce its risk to future natural hazard events is important for successful NHMP implementation, and maintenance. As such, the City is committed to involving the public in the NHMP review and update process (Volume I, Section 4). The City posted the plan update for public comment before FEMA approval, and after approval will maintain the plan on the City's website:

<https://www.mcminnvilleoregon.gov/>.

NHMP Maintenance

The Yamhill County NHMP, and City addendum will be updated every five years in accordance with the update schedule outlined in the Disaster Mitigation Act of 2000. During the County NHMP update process, the City will also review, and update its addendum (Volume I, Section 4). The convener will be responsible for convening the steering committee to address the questions outlined below.

- Are there new partners that should be brought to the table?
- Are there new local, regional, state or federal policies influencing natural hazards that should be addressed?
- Has the community successfully implemented any mitigation activities since the NHMP was last updated?
- Have new issues or problems related to hazards been identified in the community?
- Are the actions still appropriate given current resources?
- Have there been any changes in development patterns that could influence the effects of hazards?
- Have there been any significant changes in the community's demographics that could influence the effects of hazards?
- Are there new studies or data available that would enhance the risk assessment?
- Has the community been affected by any disasters? Did the NHMP accurately address the impacts of this event?

These questions will help the steering committee determine what components of the mitigation plan need updating. The steering committee will be responsible for updating any deficiencies found in the NHMP.

¹ Code of Federal Regulations, Chapter 44. Section 201.6, subsection (b). 2015

Mitigation Strategy

This section of the NHMP addendum addresses 44 CFR 201.6(c)(3)(iv), *Mitigation Strategy*.

The City's mitigation strategy (action items) were first developed during the 2019-2020 NHMP planning process and will be revised during subsequent NHMP updates. During these processes, the steering committee assessed the City's risk, identified potential issues, and developed a mitigation strategy (action items).

Priority Action Items

Table MA-1 presents a list of mitigation actions. The steering committee decided to modify the prioritization of action items in this update to reflect current conditions (risk assessment), needs, and capacity. High priority actions are shown in **bold** text with grey highlight. The City will focus their attention, and resource availability, upon these achievable, high leverage, activities over the next five-years. Although this methodology provides a guide for the steering committee in terms of implementation, the steering committee has the option to implement any of the action items at any time. This option to consider all action items for implementation allows the committee to consider mitigation strategies as new opportunities arise, such as capitalizing on funding sources that could pertain to an action item that is not currently listed as the highest priority. Refer to Attachment A for detailed information for each high priority action. Full text of the plan goals referenced in Table MA-1 is located on page MA-2.

Table MA-1 McMinnville Action Items

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed							
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Multi-Hazard Actions														
Multi-Hazard #1	Develop, enhance, and implement public education and information materials concerning mitigation, preparedness and safety procedures for identified natural hazards.	Emergency Management, MW&L	Planning, Public Works, Fire, Police	General fund, grants	L	Ongoing	✓	✓	✓			✓	✓	
Multi-Hazard #2	Incorporate mitigation planning provisions into community planning processes such as comprehensive, capital improvement, land use, transportation plans, zoning ordinances, community development practices, etc.	Planning	Engineering, MW&L	General fund, utility rates	L	Short	✓			✓	✓	✓	✓	
Multi-Hazard #3	Identify critical facilities without emergency power and encourage these facilities to secure emergency power to mitigate power outage events due to natural hazard events. Consider outreach to private property owners.	MW&L	Fire, Police, Public Works, School District	General fund, utility rates	H	Medium	✓		✓			✓	✓	
Multi-Hazard #4	Construct resilient above ground and underground power grid to reduce power line failure during severe wind or winter ice storm events.	MW&L	Public Works, Planning, Developers	Utility rates, private investment	H	Medium	✓		✓	✓		✓	✓	

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed							
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Multi-Hazard #5	Retrofit critical structures to protect them from seismic, floods, high winds, earthquakes, or other natural hazards.	MW&L	Public Works, Fire, Police, School District	General fund, utility rates, grants	H	Long			✓	✓		✓	✓	✓
Multi-Hazard #6	Develop and maintain GIS mapped critical facility inventory	Engineering, MW&L	Planning, Fire, Police	General fund, grants	L	Short	✓	✓	✓	✓		✓		✓
Multi-Hazard #7	Develop and maintain GIS mapped hazard areas within the UGB.	Engineering, MW&L	Planning, Fire, Police	General fund, grants	L	Short	✓	✓	✓	✓		✓		✓
Multi-Hazard #8	Develop & construct multi-jurisdictional fuel station and mobile fuel capabilities	Engineering, MW&L	Planning, Fire, Police	MW&L, general fund	H	Short	✓	✓	✓	✓		✓		✓
Multi-Hazard #9	Develop & construct redundant community water source and supply	MW&L	Engineering, other cities, Yamhill Co.	Utility rates	H	Long	✓	✓	✓	✓		✓		✓
Multi-Hazard #10	Establish a process to coordinate with state and Federal agencies to maintain up-to-date hazard data, maps and assessments.	Planning	MW&L, Fire, Police, Public Works	General funds, grants	L	Short	✓	✓	✓	✓		✓		✓
Multi-Hazard #11	Limit (e.g. reduced density, etc.) or prohibit development in high hazard areas.	Planning	Engineering	General funds	L	Ongoing		✓	✓	✓		✓	✓	✓
Multi-Hazard #12	Encourage mitigation practices in developments at risk to natural hazards.	Planning	Engineering	General funds	L	Ongoing	✓	✓	✓	✓		✓		✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed							
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Multi-Hazard #13	Promote resilience, response, mitigation, and recovery planning for local businesses to continue operating after a disaster.	Administration	Planning, Public Works, Police, Fire, MW&L, Chamber, MDA, MEDP	General funds, grants, private investment	L	Ongoing	✓	✓	✓	✓		✓	✓	✓

Drought Actions

No actions identified at this time

Earthquake Actions

Earthquake #1	Complete inventory and seismic assessment of critical facilities.	Engineering, MW&L	School District, Fire District, Planning	General funds, utility fees, grants	H	Short	✓	✓	✓		✓	✓	✓
Earthquake #2	Seismically retrofit (structural and nonstructural) identified high risk critical facilities and infrastructure to meet life safety standards in order to continue operations post-earthquake.	Engineering, MW&L	School District, Fire District, Planning	General fund, utility fees, grants	H	Long	✓	✓	✓		✓	✓	✓
Earthquake #3	Complete inventory & seismic assessment of public and commercial buildings that may be particularly vulnerable to earthquake damage.	Engineering, MW&L	Chamber, property owners	General fund, utility fees, grants	H	Short	✓	✓	✓		✓	✓	✓
Earthquake #4	Conduct outreach & training of local builders, architects, engineers and inspectors to develop post-earthquake building evaluation resources	Planning	Professional organization, contractors	General fund, permit fees	L	Ongoing	✓	✓	✓		✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed										
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8			
Earthquake #5	Educate property owners about structural and non-structural retrofitting of vulnerable buildings and encourage retrofit.	Planning	FEMA, DLCD, OEM	General fund, permit fees	L	Ongoing		✓	✓	✓							
Earthquake #6	Develop an outreach program to educate and encourage homeowners and tenants to secure furnishings, storage cabinets, and utilities to prevent injuries and damage.	Planning	FEMA, DLCD, OEM	General fund, permit fees	L	Ongoing		✓	✓	✓							
Flood Actions																	
Flood #1	Ensure continued compliance in the National Flood Insurance Program (NFIP) through enforcement of local floodplain management ordinances.	Planning	Administration, Engineering	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flood #2	Work with FEMA to update FIRMs. Request DOGAMI debris flow and lidar data be included in FIRM updates. Use the updated FIRMS for land use and mitigation planning.	Planning	Public Works, FEMA, DOGAMI, DLCD	General fund, HMA	M	Mid-Term	✓		✓	✓			✓				✓
Flood #3	Inventory and improve drainage (e.g., culverts) to increase drainage capacity and efficiency.	Engineering	Planning, private developers	Stormwater utility fees, private investment	H	Long	✓		✓	✓			✓				✓
Flood #4	Develop and maintain GIS mapped critical facility inventory for all structures and residential and commercial buildings located within 100-year and 500-year floodplains.	Planning	Public Works, Engineering	Stormwater utility fees	L	Short Term	✓		✓	✓			✓				✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed							
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Flood #5	Establish flood mitigation priorities for critical facilities and residential and commercial buildings located within the 100- year floodplain using survey elevation data.	Engineering	Planning, Administration	General fund, HMA	H	Long Term			✓	✓		✓		✓
Landslide Actions														
Landslide #1	Utilize technology, geologic resources and other available data (such as DOGAMI LIDAR data) to identify and map potential areas for landslides - high, moderate and low.	Planning	DOGAMI, Engineering, MW&L	General fund, utility fees, grants	M	Short	✓	✓	✓			✓		✓
Landslide #2	Develop a process to limit future development in high landslide potential areas - permitting, geotechnical review, soil stabilization techniques, etc.	Planning	Engineering, MW&L	General fund, utility fees, grants	M	Short		✓		✓	✓	✓	✓	✓
Landslide #3	Development in steeply-sloped areas (greater than 15%) should be subject to specific development requirements to control erosion.	Planning	Engineering, MW&L	General fund, utility fees, grants	L	Short		✓	✓	✓		✓		✓
Landslide #4	Complete an inventory of locations where critical facilities, other buildings and infrastructure may be subject to landslides.	Planning	Engineering, MW&L	General fund, utility fees, grants	M	Short			✓	✓	✓	✓		✓
Severe Weather Actions (Windstorm and Winter Storms – Snow/Ice)														
Severe Weather #1	Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe winter storms.	Public Works	Engineering, MW&L	Utility fees	M	Ongoing		✓	✓	✓		✓		✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed							
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Severe Weather #2	Review critical facilities and government building energy efficiency, winter readiness, and electrical protection capability. Identify, prioritize, and implement infrastructure upgrade or retrofit project prioritization and development.	Engineering, MW&L	Planning, Fire, Police, School District	General funds, utility fees, grants	H	Medium		✓		✓		✓		✓
Severe Weather #3	Develop, implement, and maintain jurisdictional debris management plans	Public Works	MW&L, Planning, County EM	General funds, utility fees, grants	M	Short		✓	✓	✓		✓		✓
Severe Weather #4	Implement tree clearing mitigation programs to keep trees from threatening lives, property, and public infrastructure from severe weather events.	Public Works, MW&L	Planning, property owners	General funds, utility fees, grants	M	Ongoing		✓	✓	✓	✓	✓		✓
Volcanic Event Actions														
Volcanic Event #1	Evaluate ash impact on utility infrastructure, transportation network, public facilities, including the airport, and develop mitigation actions.	Engineering	Public works, airport, MW&L, Police, Fire	General funds, utility fees, grants	M	Medium				✓	✓	✓		✓
Wildfire Actions														
Wildfire #1	Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan.	Fire	Planning, Emergency Management	General fund, ODF, grants	M	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓
Wildfire #2	Provide wildland fire information in an easily distributed format for all residents.	Fire	Planning, Emergency	General fund, utility fees	L	Ongoing	✓	✓	✓			✓		✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed										
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8			
			Management, MW&L														
Wildfire #3	Develop, implement, and enforce vegetation management codes/plans to reduce wildfire risk.	Planning, Fire	Public Works, MW&L	General fund, grants	L	Short		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wildfire #4	Conduct residential audits for wildland and building fire hazard identification then develop an outreach program to disseminate the findings.	Fire	Planning, Public Works, MW&L	General fund, grants	L	Short		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: City of McMinnville steering committee, 2020.

Note: Full text of the plan goals referenced in this table is located on page MA-2.

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Risk Assessment

This section of the NHMP addendum addresses 44 CFR 201.6(b)(2) - Risk Assessment. In addition, this chapter can serve as the factual basis for addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards. Assessing natural hazard risk has three phases:

- **Phase 1:** Identify hazards that can impact the jurisdiction. This includes an evaluation of potential hazard impacts – type, location, extent, etc.
- **Phase 2:** Identify important community assets, and system vulnerabilities. Example vulnerabilities include people, businesses, homes, roads, historic places, and drinking water sources.
- **Phase 3:** Evaluate the extent to which the identified hazards overlap with or have an impact on, the important assets identified by the community.

The local level rationale for the identified mitigation strategies (action items) is presented herein, and within Volume I, Section 2, and Volume III, Appendix C. The risk assessment process is graphically depicted in Figure MA-1. Ultimately, the goal of hazard mitigation is to reduce the area of risk, where hazards overlap vulnerable systems.

Figure MA-1 Understanding Risk



Hazard Analysis

The McMinnville steering committee developed their hazard vulnerability assessment (HVA), using their previous HVA, and the County's HVA as a reference. Changes from their previous HVA and the County's HVA were made where appropriate to reflect distinctions in vulnerability, and risk from natural hazards unique to McMinnville, which are discussed throughout this addendum.

Table MA-2 shows the HVA matrix for McMinnville listing each hazard in order of rank from high to low. For local governments, conducting the hazard analysis is a useful step in planning for hazard mitigation, response, and recovery. The method provides the jurisdiction with sense of hazard priorities but does not predict the occurrence of a hazard.

One catastrophic hazard (Cascadia Subduction Zone earthquake) and two chronic hazards (winter storm and windstorm) rank as the top hazard threats to the City (Top Tier). The wildfire, drought, and crustal earthquake hazards comprise the next highest ranked hazards (Middle Tier), while the flood, landslide, and volcanic event hazards comprise the lowest ranked hazards (Bottom Tier).

Table MA-2 Hazard Analysis Matrix

Hazard	Maximum		Total Threat Score	Hazard Rank	Hazard Tiers		
	History	Vulnerability				Threat	Probability
Winter Storm	16	40	80	56	192	#1	Top Tier
Earthquake - Cascadia	6	45	100	35	186	#2	
Windstorm	16	25	70	56	167	#3	
Wildfire	6	20	80	35	141	#4	Middle Tier
Drought	8	15	50	56	129	#5	
Earthquake - Crustal	6	25	70	21	122	#6	
Flood	8	15	40	49	112	#7	Bottom Tier
Landslide	6	15	50	35	106	#8	
Volcanic Event	4	10	30	7	51	#9	

Source: McMinnville steering committee, 2019-2020.

Table MA-3 categorizes the probability, and vulnerability scores from the hazard analysis for the City and compares the results to the assessment completed by the Yamhill County steering committee. Variations between the City, and County are noted in **bold** text within the city ratings.

Table MA-3 Probability and Vulnerability Comparison

Hazard	McMinnville		Yamhill County	
	Probability	Vulnerability	Probability	Vulnerability
Drought	High	Low	High	Moderate
Earthquake - Cascadia	Moderate	High	Moderate	High
Earthquake - Crustal	Low	Moderate	Low	Moderate
Flood	Moderate	Low	High	High
Landslide	Moderate	Low	High	Low
Volcanic Event	Low	Low	Low	Low
Wildfire	Moderate	Moderate	Low	Low
Windstorm	High	Moderate	High	Moderate
Winter Storm	High	High	High	High

Source: McMinnville and Yamhill County steering committee, 2019-2020.

Community Characteristics

Table MA-4 and the following section provides information on City specific demographics, and assets. Many of these community characteristics can affect how natural hazards impact communities, and how communities choose to plan for natural hazard mitigation.

Considering the city specific assets during the planning process can assist in identifying appropriate measures for natural hazard mitigation. Between 2012 and 2019 the City grew by 1,495 people (5%).² According to the State's official coordinated population forecast, between 2019 and 2040 the City's population is forecast to grow by 38% to 46,956.³ *Note: the State is currently updating the official forecast and the proposed 2040 population is 42,457 which represents a 25% increase from 2019 population.*⁴ Median household income increased by 12% between 2012 and 2017.⁵

New development has complied with the standards of the [Oregon Building Code](#), and the city's development code including their floodplain ordinance.

Economy

The City of McMinnville is in the south-central portion of Yamhill County. McMinnville's commercial areas developed along primary routes and residential development followed nearby (see Figure MA-2).

McMinnville is the largest incorporated community in Yamhill County. There is significant economic activity happening within the City, making it a desirable place to live, work, and visit. Most workers residing in the city (62%, 9,291 people) travel outside of the city for work primarily to the Portland metro area, Salem, and Newberg.⁶ A significant population of people travel to the city for work, (77% of the workforce, 6,613 people) primarily from Salem, Portland metro area, Newberg, Sheridan, Dayton, Lafayette, Dundee, and Amity.

McMinnville residents are employed in a variety of occupations including professional (18%), management, business, and financial operations (14%), production (12%), office and administrative support (11%), and transportation and material moving (9%) occupations.⁷

The largest employers in the city as of 2019 are [employer (# of employees)]: Willamette Valley Medical Center (473), Linfield College (413), Cascade Steel Rolling Mills Inc. (408), Meggitt Polymers & Composites (377), Betty Lou's, Inc. (243), Oregon Mutual Insurance Company (191), World Class Technology (152), Skyline Homes (125), Wal-mart Stores, Inc. (109), Freelin Wade (108), and Northwest Unmanned Aviation Vehicles (NWUAV; 108).

² Portland State University, Population Research Center, "Annual Population Estimates", 2019.

³ Portland State University, Population Research Center, "Oregon Population Forecast Program Cycle 1 (2014-2017)". 2017.

⁴ Portland State University, Population Research Center, "Oregon Population Forecast Program Cycle 2 (2018-2020)". 2020 (proposed).

⁵ Social Explorer, Table T57, U.S. Census Bureau, 2013-2017 and 2008-2012 American Community Survey Estimates.

⁶ U.S. Census Bureau. LEHD Origin-Destination Employment Statistics (2002-2017). Longitudinal-Employer Household Dynamics Program, accessed on April 25, 2020 at <https://onthemap.ces.census.gov>.

⁷ Social Explorer, Table A17008, U.S. Census Bureau, 2013-2017 American Community Survey Estimates.

Table MA-4 Community Characteristics

Population Characteristics		
2012 Population	32,435	
2019 Population	33,930	
2040 Forecasted Pop. [Proposed]*	46,956	[42,457]
Race (non-hispanic) and Ethnicity (Hispanic)		
White	72%	
Black/ African American	1%	
American Indian and Alaska Native	< 1%	
Asian	2%	
Native Hawaiian and Other Pacific Islander	< 1%	
Some Other Race	< 1%	
Two or More Races	3%	
Hispanic or Latino	22%	
Limited or No English Spoken	2,803	9%
Vulnerable Age Groups		
Less than 15 Years	7,180	22%
65 Years and Over	5,608	17%
Disability Status		
Total Population	5,687	17%
Children	602	7%
Seniors	2,108	39%
Income Characteristics		
Households by Income Category		
Less than \$15,000	1,339	11%
\$15,000-\$29,999	2,059	17%
\$30,000-\$44,999	1,916	16%
\$45,000-\$59,999	1,905	15%
\$60,000-\$74,999	1,216	10%
\$75,000-\$99,999	1,646	13%
\$100,000-\$199,999	1,893	15%
\$200,000 or more	402	3%
Median Household Income	\$50,299	
Poverty Rates		
Total Population	5,173	16%
Children	1,731	22%
Seniors	249	5%
Housing Cost Burden		
Owners with Mortgage	1,201	16%
Renters	2,539	51%

Source: U.S. Census Bureau, 2013-2017 American Community Survey; Portland State University, Population Research Center, "Annual Population Estimates", 2019. Portland State University, Population Research Center, "Oregon Population Forecast Program Cycle 1 (2014-2017)". 2017. and "Oregon Population Forecast Program Cycle 2 (2018-2020)". 2020 (proposed).

Housing Characteristics		
Housing Units		
Single-Family	8,382	64%
Multi-Family	3,007	23%
Mobile Homes	1,700	13%
Year Structure Built		
Pre-1970	2,866	22%
1970-1989	4,075	31%
1990-2009	5,799	44%
2010 or later	349	3%
Housing Tenure and Vacancy		
Owner-occupied	7,362	56%
Renter-occupied	5,014	38%
Seasonal	77	1%
Vacant	636	5%

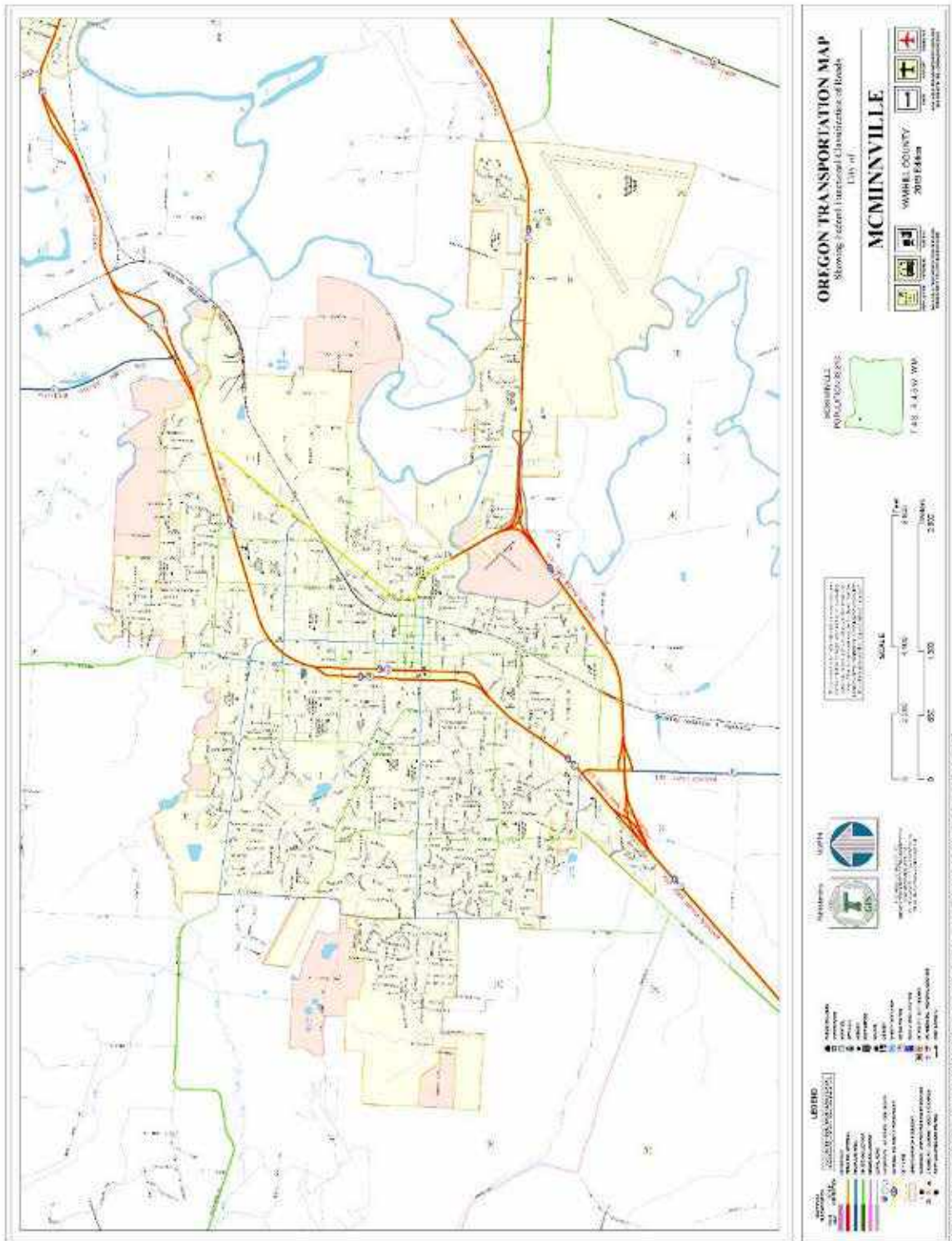
The Willamette River is approximately 6 miles east of the city and there are three drainage basins within the city: North Yamhill River, South Yamhill River, Baker Creek, North and West Cozine Creek.

McMinnville is generally flat with more hilly areas to the west. Its soils are moderately well-drained to well drained silt loams primarily of the Amity and Woodburn series. The area that is not urbanized is cultivated or comprised of small grains, grass, pasture plant, scattered Oak, and Douglas Fir.

McMinnville's temperatures range from a monthly average low of 34-38°F in the winter months to average highs of 75-83°F in the summer months. The coolest months are December-February and the warmest months are July and August. The average annual precipitation is about 42 inches and approximately 73% falls between November and March.

The City has an educated population with 86% of residents 25 years, and older holding a high school degree, 24% have a bachelor's degree or higher. The McMinnville School District has a 91% graduation rate as of 2019. McMinnville includes industrial and commercial development but is zoned primarily residential.

Figure MA-2 Oregon Transportation Map: City of McMinnville



Source: Oregon Department of Transportation

Community Assets

This section outlines the resources, facilities, and infrastructure that, if damaged, could significantly impact the public safety, economic conditions, and environmental integrity of McMinnville.

Critical facilities and infrastructure are those that support government and first responders' ability to act in an emergency. They are a top priority in any comprehensive hazard mitigation plan. These include locally designated shelters and other essential assets, such as fire stations, and water and wastewater treatment facilities (see Table MA-5). **Essential facilities and infrastructure** are those that support the continued delivery of key government services, and/or that may significantly impact the public's ability to recover from the emergency. These facilities may include: City buildings and other public facilities such as schools. MW&L infrastructure and facilities are shown on pages MA-26 to 27.

It is important to note that the facilities identified as "critical" and "essential" are characterized differently than the structural code that identifies buildings as "essential" and "non-essential." The structural code uses different language and criteria and therefore have completely different meanings than the buildings identified in this addendum.

Table MA-5 Critical and Essential Facilities

Facility Name	Address	
Government See Table MA-6 for information on seismic vulnerability.		
City Hall	230 NE 2nd St.	Critical
Community Development Center	231 NE 5th St.	Essential
Public Works	1900 NE Riverside Drive	Critical
Water Reclamation Facility (back up EOC)	3500 NE Clearwater Drive	Critical
Civic Hall	200 NE 2nd Street	Essential
Library	225 NW Adams	Essential
Community Center (Shelter)	600 NE Evans	Critical
McMinnville Senior Center (Shelter)	2250 NE McDaniel Lane	Critical
Collections Shop	3450 NE Clearwater Drive	Critical
See section below for information on Water and Wastewater Infrastructure		
Yamhill County Facilities		
Yamhill County Sheriff's Office / Jail	535 NE 5th St.	Critical
Yamhill County Emergency Management	414 NE Evans Street	Critical
Yamhill County Public Works	2060 NE Lafayette Ave	Critical
Yamhill County Fairgrounds (Shelter)	2070 NE Lafayette Ave	Critical
Riverbend Landfill / Waste Management (private)	13469 SE Hwy 18 (outside city)	Critical
Oregon State Facilities		
ODOT Maintenance Station	1502 Hwy 99W	Critical
Emergency Response		
McMinnville Police Department (EOC)	121 SW Adams St.	Critical

McMinnville Fire Department	175 SE 1st St.	Critical
Yamhill Communications Agency (YCOM)	121 SW Adams	Critical
Oregon State Facilities		
Oregon State Police/FAA	3975 NE Cirrus Ave	Critical
McMinnville Armory	333 Armory Way	Critical
Educational (Public)		
McMinnville SD 40 (Admin Office)	800 NE Lafayette Ave	Essential
Grandhaven Elementary School	3200 NE McDonald Ln.	Essential
Columbus Elementary School	1600 SW Fellows	Essential
Memorial Elementary School	501 W 14th St.	Essential
Newby Elementary School	1125 W 2nd St.	Essential
Sue Buel Elementary	1985 SE Davis	Essential
Duniway Middle School (Shelter)	575 NW Michelbook Ln.	Critical
Patton Middle School (Shelter)	1175 E 19th St.	Critical
McMinnville High School (Shelter)	615 E 15th St.	Critical
Educational (Private/Charter/Montessori, etc.)		
McMinnville Adventist Christian School	1349 NW Elm St.	Essential
St James Catholic School (Shelter)	206 NE Kirby St.	Critical
St John Lutheran School	2142 NE McDonald Ln.	Essential
Bethel Christian School	325 NW Baker Creek Rd.	Essential
International Community School	533 NW Adams St.	Essential
McMinnville Montessori School	1101 SE Brooks St.	Essential
Colleges/Universities		
Linfield College	900 SE Baker St.	
Chemeketa Community College	288 NE Norton	
Medical Care Facilities		
McMinnville Immediate Health Care	207 NE 19th St	Critical
Physicians Medical Center	2435 NE Cumulus Ave	Critical
Virginia Garcia Memorial Health Center	115 NE May Lane	Critical
West Hills Healthcare Clinic	2163 NW 2nd St	Critical
Willamette Valley Medical Center	2700 SE Stratus Avenue	Critical
Community Assets		
First Baptist Church (Shelter)	125 SE Cowls St	Critical
Hillside Retirement Community (Shelter)	900 NW Hill Road	Critical
Seventh Day Adventist Church (Shelter)	1500 Old Sheridan Road	Critical
True Vine Christian Fellowship (Shelter)	118 NE 4th St	Critical
Transportation		
First Student Inc. (school busses)	1936 NE Lafayette Ave	Critical
Yamhill County Transit Center	800 NE 2nd St	Critical

Transportation/Infrastructure

Mobility plays an important role in McMinnville, and the daily experience of its residents, and businesses. Motor vehicles represent the dominant mode of travel through, and within McMinnville. McMinnville is served by Yamhill County Transit among other transit providers.

Infrastructure that provides critical and essential services include:

Railroads

Railroads are major providers of regional and national cargo and trade flows. Railroads run through the Northern Willamette region provide vital transportation links from the Pacific to the rest of the country. The Portland & Western (PNWR) provides freight service to/from the city. There is no passenger rail service in the city.

Rails are sensitive to icing from the winter storms that can occur in the Northern Willamette region. For industries in the region that utilize rail transport, these disruptions in service can result in economic losses. The potential for rail accidents caused by natural hazards can also have serious implications for the local communities if hazardous materials are involved.

Airports

The city has no commercial service airports, however Portland International Airport (PDX), the largest and busiest airport in the state, is in nearby Multnomah County. There is one public airport: McMinnville Municipal Airport located in the southeast portion of the City along the Salmon River Hwy (OR 18)/SE McMinnville Bypass.

Roads/Seismic lifelines

Oregon Highway 99W is the major north-south transportation route, and Oregon Highway 18 (Salmon River Highway) is the major east-west transportation route, through the city. Oregon Highway 47, 2nd Street, Wallace Road, Hill Road, Baker Street, Fellows Street, and Lafayette Avenue are other major transit routes in the city (see Figure MA-2).

Seismic lifeline routes help maintain transportation facilities for public safety and resilience in the case of natural disasters. Following a major earthquake, it is important for response and recovery agencies to know which roadways are most prepared for a major seismic event. The Oregon Department of Transportation has identified lifeline routes to provide a secure lifeline network of streets, highways, and bridges to facilitate emergency services response after a disaster.⁸

System connectivity and key geographical features were used to identify a three-tiered seismic lifeline system. Routes identified as Tier 1 are considered the most significant and necessary to ensure a functioning statewide transportation network. The Tier 2 system provides additional connectivity to the Tier 1 system, it allows for direct access to more locations and increased traffic volume capacity. The Tier 3 lifeline routes provide additional connectivity to the systems provided by Tiers 1 and 2.

The Lifeline Routes in McMinnville:

⁸ Oregon Department of Transportation. Oregon Seismic Lifeline Evaluation, Vulnerability Synthesis, and Identification, *Oregon Seismic Lifeline Routes*, May 15 2012. Page 6-4 figure 6-1. Accessed September 12, 2019.

- Tier I: Hwy 18 southwest of McMinnville, Hwy 99W northeast of McMinnville.
- Tier II: Hwy 99W south of McMinnville
- Tier III: None

Bridges

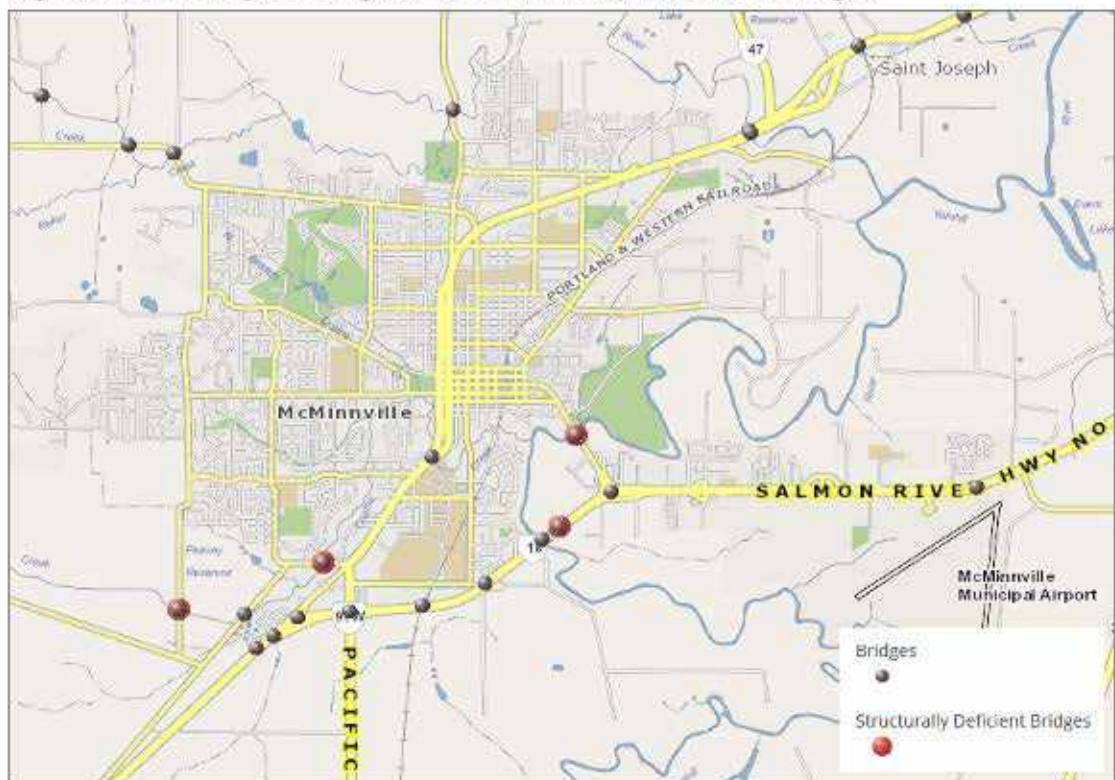
Because of earthquake risk, the seismic vulnerability of the city's bridges is an important issue. Non-functional bridges can disrupt emergency operations, sever lifelines, and disrupt local and freight traffic. These disruptions may exacerbate local economic losses if industries are unable to transport goods. Bridges within the city that are critical or essential include (see Figure MA-3):

- Old Sheridan Rd (City)
- Cozine Creek, Old Sheridan Rd (ODOT 00315F) – *structurally deficient*
- 3 Mile Lane Bridge (ODOT) – *structurally deficient*
- Hwy 99 north (ODOT)
- Hwy 99 south (ODOT)
- Hwy 18-S. Yamhill River (ODOT 08492) - *structurally deficient*
- Hwy 18-S. Yamhill floodplain (ODOT 06758) *structurally deficient*

Overpasses

- 3 Mile Lane over Hwy 18 (ODOT)
- Hwy 18 off ramp over Hwy 18 (ODOT)
- Hwy 18 over RR crossing (ODOT)
- Booth Bend Road over Hwy 18 (ODOT)
- Hwy 99 over Hwy 18 (ODOT)

Figure MA-3 Oregon Bridges and Structurally Deficient Bridges



Source: Oregon Department of Transportation, ODOT TransGIS, accessed April 27, 2020

Utility lifelines are the resources that the public relies on daily such as, electricity, fuel and communication lines. If these lines fail or are disrupted, the essential functions of the community can become severely impaired. Utility lifelines are closely related to physical infrastructures, like dams and power plants, as they transmit the power generated from these facilities.

Generally, the network of electricity transmission lines running throughout the city is operated by McMinnville Water & Light. The Williams Gas Pipeline provides natural gas that is delivered to customers in the city by Northwest Natural Gas. These lines may be vulnerable as infrequent natural hazards, like earthquakes, could disrupt service to natural gas consumers across the region.

The city water, wastewater, and stormwater (culvert) systems include the following:

McMinnville Water and Light Infrastructure

- McMinnville Water & Light, Office, 855 NE Marsh Ln, Essential
- McGuire Dam/Reservoir, 28656 NW Meadowlake Rd, Yamhill (outside City), Critical
- Haskins Dam, 23130 NW Haskins Cr Rd, Yamhill (outside City), Critical
- Fox Ridge Reservoirs, 12300 NW Fox Ridge Rd (outside City), Critical
- Water Treatment Plant, 23100 NW Haskins Cr Rd, Yamhill (outside City), Critical
- High Heaven Lookout, 6660 NW High Heaven Rd, Critical
- Baker Creek substation, 1901 NW Baker Creek Rd, Essential
- Booth Bend substation, 4591 SE Booth Bend Rd, Essential
- Cascade substation, 3250 NE Hwy 99W, Essential
- East McMinnville substation, 1880 NE Riverside Dr, Essential
- Gormley substation, 10120 Hwy 18, Essential
- Walnut City substation, 1945 NW 2nd St, Essential

Wastewater Infrastructure

- Wastewater Treatment Plant, 3500 NE Clearwater Drive, Critical
- Wastewater Diversion Structure, 1900 NE Riverside Drive, Critical
- Wastewater Lafayette Overflow 1220 NE Lafayette Ave, Critical
- Wastewater Outfall-Yamhill River 5115 NE Riverside Drive, Critical
- 3-Mile Lane #1 Pump Station (PS), 2005 NE Cumulus Way, Critical
- 3-Mile Lane #3 PS, 3305 NE 3-Mile Lane, Critical
- Autumn Ridge PS, 599 NE Summerfield Street, Critical
- Cozine PS, 325 SE Irvine, Critical
- Cozine Woods PS, 1355 SW Old Sheridan, Critical
- Crestbrook PS, 1045 NW Baker Crest Ct., Critical
- Kathleen Manor PS, 1835 SW Alexandria, Critical
- Morgan Lane PS, 1655 SE Morgan Lane, Critical
- Northeast PS, 3395 NE Daffodil Dr., Critical
- Oregon Street PS, 200 SE Oregon Street, Critical
- Raw Sewage PS & diversion structure, 1950 NE Riverside Drive, Critical
- Riverside Drive PS, 4015 NE Riverside Drive, Critical
- Westside PS, 2850 NE Baker Street, Critical

Culverts

- 2nd Street, Critical
- Elmwood, Critical
- Michelbook, Critical
- Davis Street, Critical
- Ford Street, Essential
- Fellows Street, Critical
- Fleishauer Lane, Essential
- Cypress Street, Essential

Environmental Assets/Parks:

Environmental assets are those parks, green spaces, wetlands, and rivers that provide an aesthetic, and functional ecosystem services for the community include:

Bend-O-River Mini-Park	Riverside Drive Dog Park
Chegwyn Farms Neighborhood Park	Rotary Nature Preserve at Tice Woods
City Park	Taylor Park
Discovery Meadows Community Park	Thompson Park
Galen McBee Airport Park	West Hills Neighborhood Park
Heather Hollow	West McMinnville Linear Park
Joe Dancer Park	Westside Bicycle/Pedestrian
Kingwood Mini-Park	Greenway
Kiwanis Park	Wortman Park
North Evans Mini-Park	Jay Pearson Park)

Vulnerable Populations:

Vulnerable populations, including seniors, disabled citizens, women, and children, as well those people living in poverty, often experience the impacts of natural hazards and disasters more acutely. Populations that have special needs or require special consideration include:

Child Care Facilities

Bear Hugs Child Development Center	Madrona Childcare
Calico Cat Childcare	Nadines Childcare
Care for Kids	Noah's Ark Daycare
Carolyns Childcare	St James School Extended Care
Chyialis Children	Tender Loving Childcare
Grandma Chris Preschool and Daycare	Trinity Learning Center
Happy Face Daycare	Trinity Learning Daycare Center
Head Start of Yamhill Co McMinnville Ctr	Vickies Daycare
Helping Hands Daycare	West Hills Daycare
Little Friends of Hope Daycare	

Adult Care Facilities

Alterra Villas McMinnville	Brookdale Senior Living-Villa McMinnville
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Community Homecare Willamette Valley
Courtyard at Hillside Memory Care
Harmony Living
Life Care Center of McMinnville
Oakwood Home Services
Osprey Court Memory Care Community

Osprey Pointe Assisted Living Community
Parkland Village Assisted Living
Rock of Ages Mennonite Home
United Homecare Services
Virginia Garcia Memorial Health Center
Wynwood of McMinnville

Community, Cultural, and Historic Assets

The cultural and historic heritage of a community is more than just tourist charm. For families that have lived in the city for generations and new resident alike, it is the unique places, stories, and annual events that make McMinnville an appealing place to live. The cultural and historic assets are both intangible benefits and obvious quality-of-life-enhancing amenities. Because of their role in defining and supporting the community, protecting these resources from the impact of disasters is important. The following community, cultural, and historic resources can be found in the City:

Downtown McMinnville National
Register Historic District
Evergreen Aviation Museum

Northwest Senior & Disability Services
YCAP
Yamhill County Gospel Mission

A complete list of historic resources is located on the City website: [Link](#)

Hazard Characteristics

Drought

The steering committee determined that the City's probability for drought is **high**, and that their vulnerability to drought is **low**.

Volume I, Section 2 describes the characteristics of drought hazards, history, as well as the location, extent, and probability of a potential event. The spring/summer of 2018 was particularly dry period for the City. Due to the climate of Yamhill County, past, and present weather conditions have shown an increasing potential for drought.

The City of McMinnville is provided water by McMinnville Water and Light (MW&L) which owns 6,350 acres of watershed in the Coast Mountain Range approximately 9 miles northwest of the City. Water from the McGuire and Haskins Reservoirs (combined 3.5 billion gallons capacity) is treated at the water treatment facility that can treat up to 22 million gallons per day (mgd). Following treatment water flows via two 24-inch and 16-inch water transmission mains to four (4) water storage reservoirs (22.7 million gallons capacity) at Fox Ridge west of the city. MW&L has approximately 21 miles of transmission pipeline ranging from 16-inch to 48-inch and about 157 miles of distribution pipeline ranging in size from 2-inch to 36-inch.

MW&L has enough capacity to meet current and anticipated future demand.

For more information on McMinnville’s water supply visit their website: <https://www.mc-power.com/>

Vulnerability Assessment

Due to insufficient data and resources, McMinnville is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard. State-wide droughts have historically occurred in Oregon, and as it is a region-wide phenomenon, all residents are equally at risk. Structural damage from drought is not expected; rather the risks apply to humans and resources. Industries important to the City of McMinnville’s local economy such as agriculture, fishing, and timber have historically been affected, and any future droughts would have tangible economic and potentially human impacts.

The city’s existing water supply is most vulnerable to wildfire which may impact the MW&L watershed and is increased during periods of drought. The MW&L water transmission and distribution lines are vulnerable to seismic activity that could cause them to fail. There is a low chance that dams at McGuire and Haskins Reservoirs could be impacted by seismic activity.

Mitigation Activities

The City provides information on water conservation to McMinnville water customers. The City engages in other water conservation measures including water line leak detection and repair, replacement of deteriorating pipe, and replacement/repair of older and under-registering water meters and reducing dead end lines in order to increase water circulation throughout the system.

McMinnville Codes Pertaining to Droughts

The following McMinnville codes, plans, and policies pertain to droughts:

1. McMinnville Comprehensive Plan.
2. McMinnville Municipal Code
3. MW&L provides information on water conservation to residential customers ([link](#)).

Please review Volume I, Section 2 for additional information on this hazard.

Earthquake (Cascadia Subduction Zone)

The steering committee determined that the City’s probability for a Cascadia Subduction Zone (CSZ) earthquake is **moderate** and that their vulnerability to a CSZ earthquake is **high**.

Volume I, Section 2 describes the characteristics of earthquake hazards, history, as well as the location, extent, and probability of a potential event. Generally, an event that affects the County is likely to affect McMinnville as well. The causes, and characteristics of an earthquake event are appropriately described within the Volume I, Section 2 as well as the location, and extent of potential hazards. Previous occurrences are well documented within Volume I, Section 2, and the community impacts described by the County would generally be the same for McMinnville as well.

Within the Northern Willamette Valley are that includes Yamhill County, two potential faults and/or zones can generate high-magnitude earthquakes. These include the Cascadia

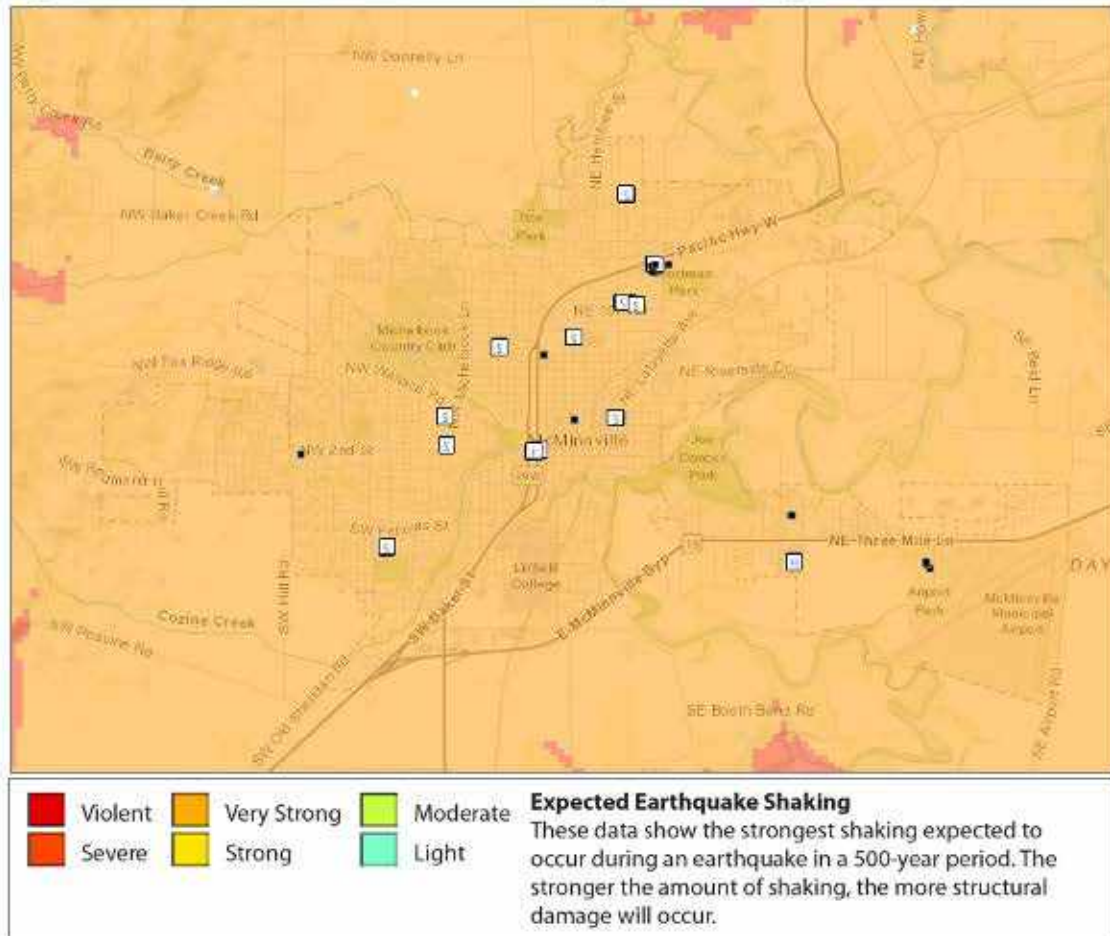
Subduction Zone and the Gales Creek-Newberg-Mt. Angel Structural Zone (including the Newberg Fault).

Cascadia Subduction Zone

The Cascadia Subduction Zone is a 680-mile-long zone of active tectonic convergence where oceanic crust of the Juan de Fuca Plate is subducting beneath the North American continent at a rate of 4 cm per year. Scientists have found evidence that 11 large, tsunami-producing earthquakes have occurred off the Pacific Northwest coast in the past 6,000 years. These earthquakes took place roughly between 300 and 5,400 years ago with an average occurrence interval of about 510 years. The most recent of these large earthquakes took place in approximately 1700 A.D.⁹

Figure MA-4 displays relative shaking hazards from a Cascadia Subduction Zone earthquake event. As shown in the figure, most of the City is expected to experience very strong (orange) shaking in a CSZ event.

Figure MA-4 Cascadia Subduction Zone Expected Shaking



Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)

Note: To view detail click the link above to access Oregon HazVu.

⁹ The Cascadia Region Earthquake Workgroup, 2005. Cascadia Subduction Zone Earthquakes: A magnitude 9.0 earthquake scenario. <http://www.crew.org/PDFs/CREWSubductionZoneSmall.pdf>

The city's proximity to the Cascadia Subduction Zone, potential slope instability, and the prevalence of certain soils subject to liquefaction, and amplification combine to give the City a high-risk profile. Due to the expected pattern of damage resulting from a CSZ event, the Oregon Resilience Plan divides the State into four distinct zones, and places McMinnville within the "Valley Zone" (Valley Zone, from the summit of the Coast Range to the summit of the Cascades). Within the Northwest Oregon region, damage, and shaking is expected to be strong, and widespread - an event will be disruptive to daily life, and commerce, and the main priority is expected to be restoring services to business and residents.

Earthquake (Crustal)

The steering committee determined that the City's probability for a crustal earthquake is **low** and that their vulnerability to crustal earthquake is **moderate**.

Volume I, Section 2 describes the characteristics of earthquake hazards, history (see below), as well as the location, extent, and probability of a potential event. Generally, an event that affects the County is likely to affect McMinnville as well. The causes, and characteristics of an earthquake event are appropriately described within Volume I, Section 2 as well as the location, and extent of potential hazards. Previous occurrences are well-documented within Volume I, Section 2, and the community impacts described by the County would generally be the same for McMinnville as well.

The 1993 Scotts Mill earthquake impacted McMinnville including damaging beyond repair the former building located where Columbus Elementary is now (constructed in 1995).

Figure MA-5 shows a generalized geologic map of the McMinnville area that includes the areas for potential regional active faults, earthquake history (1971-2008), and soft soils (liquefaction) hazard. The figure shows the areas of greatest concern within the City limits as red and orange. Except for portions of the west hills all the city is within the moderate earthquake liquefaction hazard zone. Areas just outside the UGB to the north and south are within the high earthquake liquefaction hazard zone. These areas are also in moderate and high landslide hazard zones and may be prone to earthquake induced landslides (see Figure MA-7).

Vulnerability Assessment (subduction zone and crustal)

Due to insufficient data and resources, McMinnville is currently unable to perform a quantitative risk assessment for this hazard.

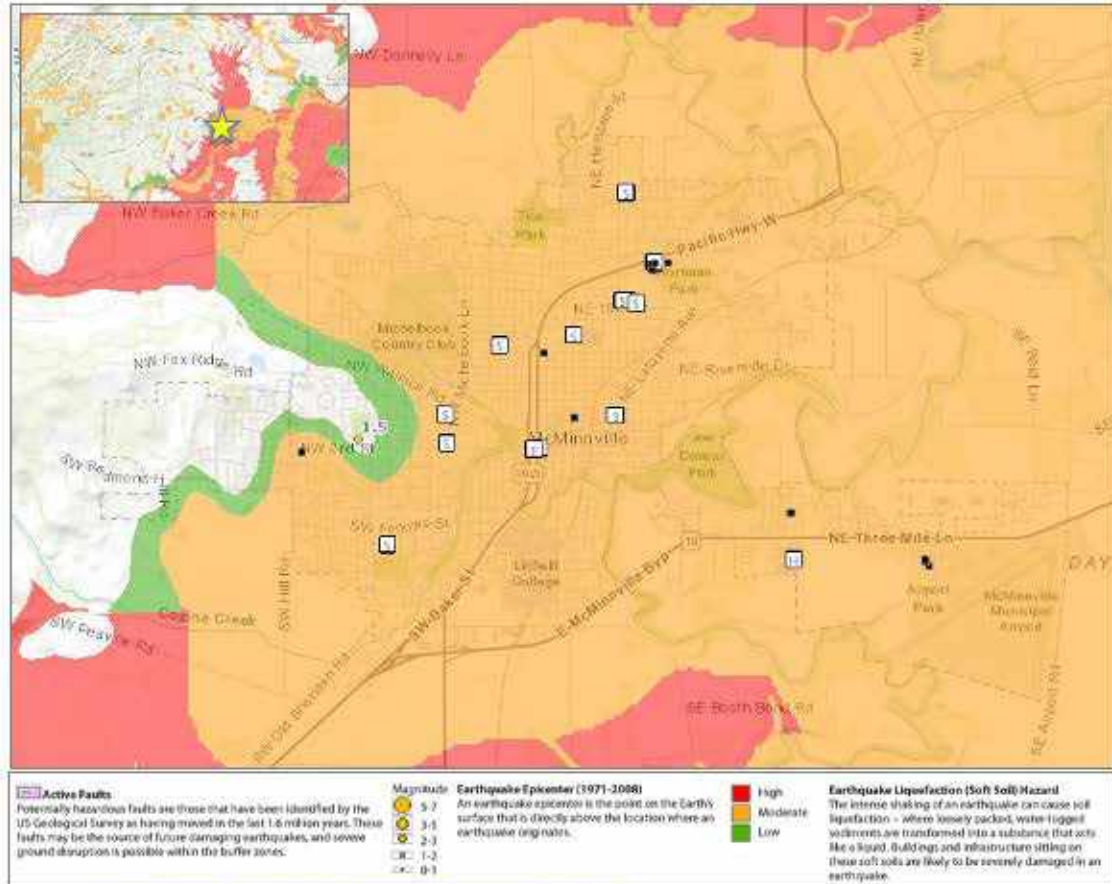
The western portion of Yamhill County is likely to experience higher levels of shaking than the eastern portion, as a result of its proximity to the Cascadia Subduction Zone.

The City of McMinnville is in the south-central portion of Yamhill County, in a region likely to experience strong shaking should a subduction zone or significant crustal earthquake occur. This rating represents the peak acceleration of the ground caused by the earthquake, and for a strong designation corresponds to 9-20 percent of the acceleration of gravity.

Ground movement in both areas, however, is likely to cause damage to weak, unreinforced masonry buildings, and to induce small landslides along unstable slopes. As well as landslide, earthquakes can trigger other hazards such as dam failure and disruption of transportation and utility systems.

Utility systems will be significantly damaged, including damaged buildings, and damage to utility infrastructure, including water treatment plants, and equipment at high voltage substations (especially 230 kV or higher which are more vulnerable than lower voltage substations). Buried pipe systems will suffer extensive damage with approximately one break per mile in soft soil areas. There would be a much lower rate of pipe breaks in other areas. Restoration of utility services will require substantial mutual aid from utilities outside of the affected area. Transportation systems (bridges, pipelines) are also likely to experience significant damage. There is a low probability that a major earthquake will result in failure of upstream dams.

Figure MA-5 Active Crustal Faults, Epicenters (1971-2008), and Soft Soils



Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)

Note: To view detail click the link above to access Oregon HazVu.

Building codes were implemented in Oregon in the 1970s, however, stricter standards did not take effect until 1991 and early 2000s. As noted in the community characteristics section (Table MA-4), approximately 53% of residential buildings were built prior to 1990, which increases the City's vulnerability to the earthquake hazard. Information on specific public buildings' (schools and public safety) estimated seismic resistance, determined by DOGAMI in 2007, is shown in Table MA-6; each "X" represents one building within that ranking category. Of the facilities evaluated by DOGAMI, that have not been retrofitted, using their Rapid Visual Survey (RVS), one building has very high (100% chance) collapse potential and two (2) school buildings have a high (greater than 10% chance) collapse potential.

Table MA-6 Rapid Visual Survey Scores

Facility	Site ID*	Level of Collapse Potential			
		Low (<1%)	Moderate (>1%)	High (>10%)	Very High (100%)
Schools					
District Offices (Cook Elem.) (800 NE Lafayette Ave)	Yamh_sch10	Seismic retrofit per local bond			
Columbus Elementary (1600 SW Fellows)	Yamh_sch26	X			
Grandhaven Elementary (3200 NE McDonald Ln)	Yamh_sch23	X			
Memorial Elementary (501 W 14 th St)	Yamh_sch11		SRGP 2015-17 Phase II: \$692,688		
Newby Elementary (1125 W 2 nd St)	Yamh_sch12		SRGP 2015-17 Phase II: \$420,187		
Duniway Middle (575 Michelbook Ln)	Yamh_sch02	X			
Patton Middle (1175 E 19 th St)	Yamh_sch14		X	X,X	
McMinnville High (615 E 15 th St)	Yamh_sch15				X
Public Safety					
Fire Department (175 E 1 st St)	Yamh_fir06		X		
Oregon State Police (EOC) (130 NE Baker St)	Yamh_pol08		X		
Yamhill Co. Sheriff's Office (535 NE 5 th St)	Yamh_pol02			X	
ODOT Maintenance Station (1502 N Hwy 99W)	Yamh_pol06		X		
Hospital					
Willamette Valley Medical Center (2700 SE Stratus Ave)	Yamh_hos01	X			

Source: [DOGAMI 2007, Open File Report 0-07-02, Statewide Seismic Needs Assessment Using Rapid Visual Assessment](#). "*" – Site ID is referenced on the [RVS Yamhill County Map](#)

Note: The McMinnville Police Department was not assessed. The ODOT Maintenance Station was previously the Newberg-Dundee Police and 911 Call Center. Sue Buell Elementary was built in 2006 and not assessed. The District offices were previously Cook Elementary.

Mitigation Activities

Earthquake mitigation activities listed here include current mitigation programs and activities that are being implemented by McMinnville agencies or organizations.

A primary mitigation objective is to construct or upgrade critical and essential facilities and infrastructure to withstand future earthquake events. Seismic retrofit grant awards per the

[Seismic Rehabilitation Grant Program](#)¹⁰ have been funded to retrofit Adams School, McMinnville School District (2015-17, Phase II, grant award, \$1,500,000), Memorial Elementary, McMinnville School District (2015-17, Phase II, grant award, \$692,688), and Newby Elementary, McMinnville School District (2015-17, Phase II, grant award, \$420,187). Cook Elementary/School District Offices were retrofitted per a local bond in 2017. The McMinnville Fire Department has undergone a Level II seismic analysis in preparation for future seismic retrofit work.

The City of McMinnville fire department [website refers to](#) the Yamhill County [Community Emergency Response Team](#) (CERT) program that trains members in mitigation as well as preparedness and response. The City's Emergency Management Program works with community groups, businesses, residential facilities, and public and private schools in promoting earthquake preparedness and mitigation.

McMinnville Codes Pertaining to Earthquakes

The following McMinnville codes, plans, and policies pertain to earthquakes:

1. McMinnville Comprehensive Plan (*under contract to update in 2020*). The updated plan includes a Natural Hazards Inventory and Management Program Recommendations including information on earthquake and other geologic hazards impacting the city.
2. The City of McMinnville enforces the [Oregon Building Code](#) which includes provisions for earthquakes.

Please review Volume I, Section 2 for additional information on this hazard.

Flood

The steering committee determined that the City's probability for flood is **moderate** and that their vulnerability to flood is **low**.

Volume I, Section 2 describes the characteristics of flood hazards, history, as well as the location, extent, and probability of a potential event. Portions of McMinnville have areas of floodplains (special flood hazard areas, SFHA). These include areas include along the Yamhill River (South and North) and the West and North Forks of Cozine Creek, and Baker Creek (Figure MA-6).

For mitigation planning purposes, it is important to recognize that flood risk for a community is not limited only to areas of mapped floodplains. Other portions of McMinnville outside of the mapped floodplains may also be at relatively high risk from over bank flooding from streams too small to be mapped by FEMA or from local storm water drainage.

Floods can have a devastating impact on almost every aspect of the community, including private property damage, public infrastructure damage, and economic loss from business interruption. It is important for the City to be aware of flooding impacts and assess its level

¹⁰ The Seismic Rehabilitation Grant Program (SRGP) is a state of Oregon competitive grant program that provides funding for the seismic rehabilitation of critical public buildings, particularly public schools and emergency services facilities.

System (CRS). The table shows that most flood insurance policies are for residential structures, single-family homes, and there is one non-residential property insured. There has been one (1) paid flood insurance claims for \$223. The City complies with the NFIP through enforcement of their flood damage prevention ordinance and their floodplain management program.

Table MA-7 Flood Insurance Detail

	Yamhill County	McMinnville
Effective FIRM and FIS	3/2/2010	3/2/2010
Initial FIRM Date	-	12/1/1982
Total Policies	446	29
Pre-FIRM Policies	153	4
Policies by Building Type		
Single Family	401	28
2 to 4 Family	14	0
Other Residential	10	0
Non-Residential	21	1
Minus Rated A Zone	72	0
Insurance in Force	\$100,617,300	\$8,452,700
Total Paid Claims	81	1
Pre-FIRM Claims Paid	68	1
Substantial Damage Claims	3	0
Total Paid Amount	\$1,166,076	\$223
Repetitive Loss Structures	4	0
Severe Repetitive Loss Properties	1	0
CRS Class Rating	-	NP
Last Community Assistance Visit	-	11/13/1997

Source: Department of Land Conservation and Development, August 2019. Repetitive Flood Loss information provided by FEMA correspondence on September 10, 2020. NP = Not Participating

The Community Repetitive Loss record for McMinnville identifies no Repetitive Loss Properties¹¹ or Severe Repetitive Loss Properties¹².

Mitigation Activities

Flood mitigation activities listed here include current mitigation programs and activities that are being implemented by McMinnville agencies or organizations.

¹¹ A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP.

¹² A Severe Repetitive Loss (SRL) property is a single family property (consisting of 1 to 4 residences) that is covered under flood insurance by the NFIP, and has incurred flood-related damage for which 4 or more separate claims payments have been paid under flood insurance coverage, with the amount of each claim payment exceeding \$5,000, and with cumulative amount of such claims payments exceeding \$20,000; or for which at least 2 separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

McMinnville Codes Pertaining to Flooding

The following McMinnville codes, plans, and policies pertain to flooding:

1. McMinnville Comprehensive Plan (*under contract to update in 2020*). The updated plan includes a Natural Hazards Inventory and Management Program Recommendations including information on flood hazards impacting the city.
2. McMinnville Municipal Code [17.48 – Flood Area Zone](#). This portion of the Community Development Code implements the Goal 7 policies of the Comprehensive Plan and regulates development within the floodplain.

Please review Volume I, Section 2 for additional information on this hazard.

Landslide

The steering committee determined that the City's probability for landslide is **moderate** and that their vulnerability to landslide is **low** for the city as a whole, but that there were sections of the West Hills within the city limits that have high probability of landslides and the vulnerability to people and property in this section of the city is high.

Volume I, Section 2 describes the characteristics of landslide hazards, history, as well as the location, extent, and probability of a potential event within the region.

Landslide susceptibility exposure for McMinnville is shown in Figure MA-7. Approximately 8% of McMinnville has very high or high, and approximately 12% moderate, landslide susceptibility exposure.¹³ In general, the areas of greater risk are located adjacent to rivers and creeks (including the South Yamhill River and Cozine Creek). The area of the city that has the highest landslide susceptibility is in the west hills that has high and moderate landslide susceptibility (extending beyond the UGB and to the north and south along NW Fox Ridge Road in the north and SW Redmond Hill Road in the south). This area is sparsely developed currently which reduces the city's vulnerability, however, there is land within the city's UGB in this region. Development in these areas should consider strategies to reduce landslide hazard risk, including the prohibition of development in the highest risk areas. Please see the DLCD and DOGAMI publication [Preparing for Landslide Hazards, A Land Use Guide for Oregon Communities](#) (October 2019).

Potential landslide-related impacts are adequately described within Volume I, Section 2, and include infrastructure damages, economic impacts (due to isolation, and/or arterial road closures), property damages, and obstruction to evacuation routes. Rain-induced landslides, and debris flows can potentially occur during any winter, and thoroughfares beyond City limits are susceptible to obstruction as well. There are two mapped historic landslides in the city adjacent to the Cozine Creek: (1) south end of SE Evans St, damages included a broken 21-inch sanitary sewer trunk line that was replaced, and (2) northeast of Oak Grove Way east of SE Baker St, damages included a 1,000 gallon gasoline tank that was relocated.

The most common type of landslides are slides caused by erosion. Slides move in contact with the underlying surface, are generally slow moving, and can be deep. Rainfall-initiated

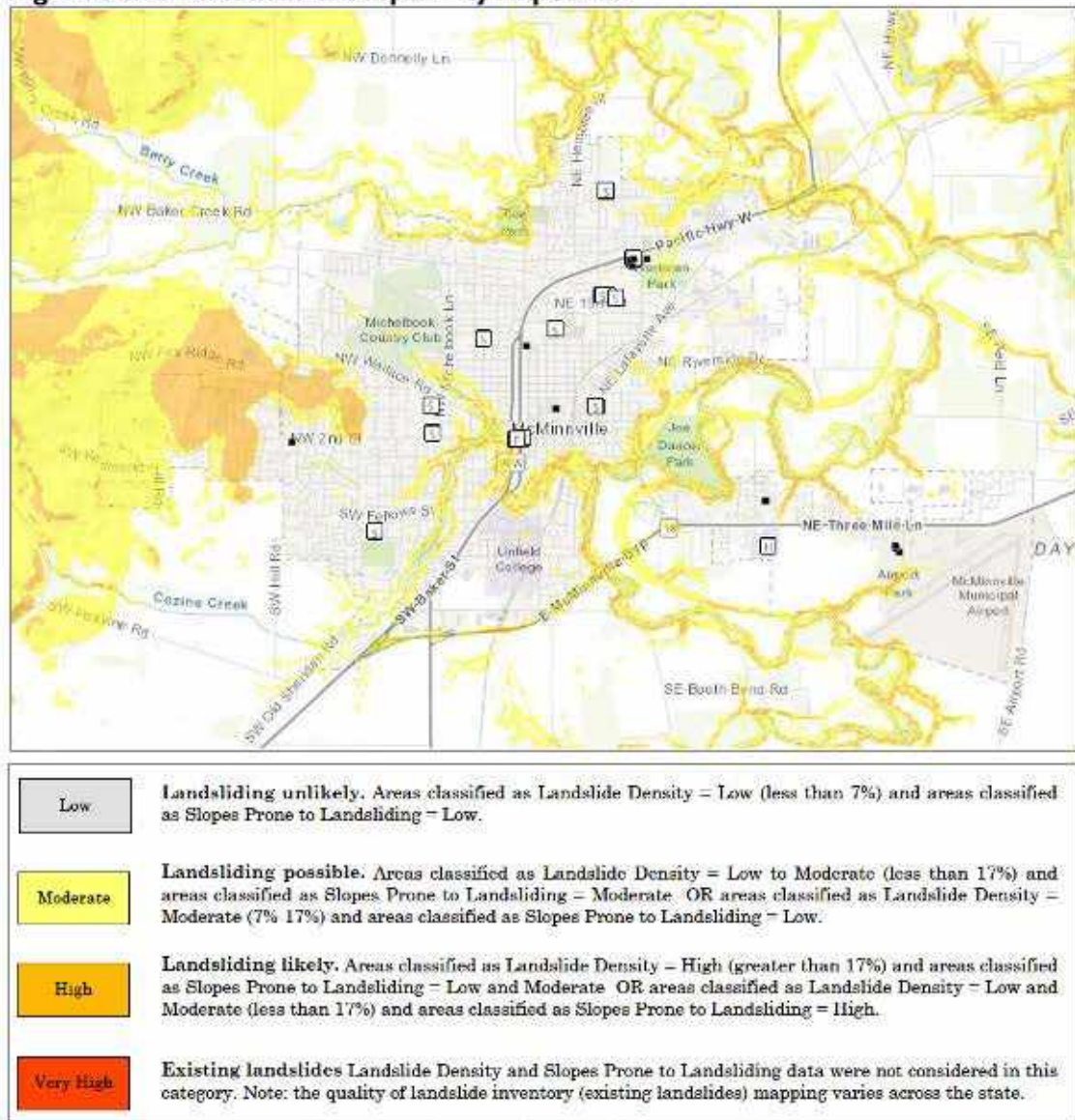
¹³ DOGAMI. [Open-File Report, O-16-02](#), *Landslide Susceptibility Overview Map of Oregon* (2016)

landslides tend to be smaller; while earthquake induced landslides may be quite large. All soil types can be affected by natural landslide triggering conditions.

Vulnerability Assessment

Due to insufficient data and resources, McMinnville is currently unable to perform a quantitative risk assessment for this hazard. DOGAMI completed a statewide landslide susceptibility assessment in 2016 ([O-16-02](#)), general findings from that report are provided above and within Figure MA-7.

Figure MA-7 Landslide Susceptibility Exposure



Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)
 Note: To view detail click the link above to access Oregon HazVu

Response and recovery efforts will likely vary from minor cleanup to more extensive utility system rebuilding. Utility disruptions are usually local and terrain dependent. Damages may require reestablishing electrical, communication, and gas pipeline connections occurring from specific breakage points. Initial debris clearing from emergency routes and

high traffic areas may be required. Water and wastewater utilities may need treatment to quickly improve water quality by reducing excessive water turbidity and reestablishing waste disposal capability.

Mitigation Activities

Landslide mitigation activities listed here include current mitigation programs and activities that are being implemented by the City of McMinnville agencies or organizations.

City of McMinnville Codes Pertaining to Landslides

The following McMinnville codes, plans, and policies pertain to landslides:

1. McMinnville Comprehensive Plan (*under contract to update in 2020*). The updated plan includes a Natural Hazards Inventory and Management Program Recommendations including information on landslide and other geologic hazards impacting the city.
2. The City of McMinnville enforces the [Oregon Building Code](#) which includes provisions that address the potential for geologic hazards including landslides.

Please review Volume I, Section 2 for additional information on this hazard.

Severe Weather

Severe weather can account for a variety of intense, and potentially damaging hazard events. These events include windstorms and winter storms. The following section describes the unique probability, and vulnerability of each identified weather hazard.

Windstorm

The steering committee determined that the City's probability for windstorm is **high** and that their vulnerability to windstorm is **moderate**.

Volume I, Section 2 describes the characteristics of windstorm hazards, history, as well as the location, extent, and probability of a potential event within the region. Because windstorms typically occur during winter months, they are sometimes accompanied by flooding and winter storms (ice, freezing rain, and very rarely, snow). Other severe weather events that may accompany windstorms, including thunderstorms, hail, lightning strikes, and tornadoes are generally negligible for McMinnville.

Volume I, Section 2 describes the impacts caused by windstorms, including power outages, downed trees, heavy precipitation, building damages, and storm-related debris. Additionally, transportation, and economic disruptions result as well.

Damage from high winds generally has resulted in downed utility lines, and trees usually limited to several localized areas. Electrical power can be out anywhere from a few hours to several days. Outdoor signs have also suffered damage. If the high winds are accompanied by rain (which they often are), blowing leaves, and debris clog drainage-ways, which in turn may cause localized urban flooding.

Please review Volume I, Section 2 for additional information on this hazard.

Winter Storm (Snow/Ice)

The steering committee determined that the City's probability for winter storm is **high** and that their vulnerability to winter storm is **high**.

Volume I, Section 2 describes the characteristics of winter storm hazards, history, as well as the location, extent, and probability of a potential event within the region. Severe winter storms can consist of rain, freezing rain, ice, snow, cold temperatures, and wind. They originate from troughs of low pressure offshore that ride along the jet stream during fall, winter, and early spring months. Severe winter storms affecting the City typically originate in the Gulf of Alaska or in the central Pacific Ocean. These storms are most common from November through March.

Vulnerability Assessment

Due to insufficient data and resources, McMinnville is currently unable to perform a quantitative risk assessment, or exposure analysis, for the windstorm and winter storm hazards. All areas within the City of McMinnville are equally at risk of a windstorm or winter storm event.

Mitigation Activities

The City works to mitigate problems regarding windstorm and winter storm issues when they arise. Mitigation activities listed here include current mitigation programs and activities that are being implemented by McMinnville agencies or organizations.

- ODOT is responsible for plowing, sanding, and de-icing state managed roads including: OR 99W within city limits.
- The City is responsible for plowing, sanding and de-icing designated roadways as per the City's [Snow and Ice Response Plan](#).
- The City requires that all new utility lines, cables or wires, on new development be placed underground.
- The City provides education on winter weather preparedness
- The City encourages property owners to trim hazard trees, and to maintain trees within public rights-of-way. Utility companies maintain trees along their utility easements.

City of McMinnville Codes Pertaining to Windstorms and Winter Storms

The following McMinnville codes, plans, and policies pertain to windstorms and winter storms:

1. The City of McMinnville Municipal Code Title 13 Public Utilities provides standards for public infrastructure and utilities.
2. The City of McMinnville enforces the [Oregon Building Code](#) which regulates building material requirements and includes provisions for windstorms and winter storms.

Please review Volume I, Section 2 for additional information on this hazard.

Volcanic Event

The steering committee determined that the City's probability for a volcanic event is **low** and that their vulnerability to a volcanic event is **low**.

Volume I, Section 2 describes the characteristics of volcanic hazards, history, as well as the location, extent, and probability of a potential event within the region. Generally, an event

that affects the Eastern portion of the County is likely to affect McMinnville as well. Several volcanoes are located near McMinnville, the closest of which are Mount Hood, Mount Adams, Mount Saint Helens, Mount Rainier, and the Three Sisters.

Due to McMinnville's relative distance from volcanoes, the city is unlikely to experience the immediate effects that eruptions have on surrounding areas (i.e., mud and debris flows, or lahars). Although the City of McMinnville is unlikely to experience lahars or lava flows, tephra (sand- sized or finer particles of volcanic rock that is ejected rapidly into the air from volcanic vents) drifts downwind from the explosions and can form a blanket-like deposit of ash. The eruption of Mount St. Helens in 1980, for example, coated the Willamette Valley with a fine layer of ash. If Mount Hood erupts, however, the city could experience a heavier coating of ash. Tephra is a public health threat, and can damage agriculture and transportation systems (i.e., aircraft and on- the-ground vehicles). Tephra can also clog drainage systems and create major debris management problems. Within McMinnville, public health would be a primary concern, and keeping transportation routes open/accessible would be important as well.

Vulnerability Assessment

Due to insufficient data and resources, McMinnville is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard.

Mitigation Activities

The existing volcanic event hazard mitigation activities are conducted at the county, regional, state, and federal levels and are described in the Yamhill County NHMP.

City of McMinnville Codes Pertaining to Volcanic Events

The City does not have specific codes, plans, or policies that pertain to volcanic events:

Please review Volume I, Section 2 for additional information on this hazard.

Wildfire

The steering committee determined that the City's probability for wildfire is **moderate** and that their vulnerability to wildfire is **moderate**.

The [Yamhill County Community Wildfire Protection Plan \(CWPP\)](#) was completed in August 2009 and revised in 2015. The CWPP is hereby incorporated into this NHMP addendum by reference, and it will serve as the wildfire section for this addendum.

Volume I, Section 2 describes the characteristics of wildland fire hazards, history, as well as the location, extent, and probability of a potential event within the region. The location, and extent of a wildland fire vary depending on fuel, topography, and weather conditions. Weather, and urbanization conditions are primarily at cause for the hazard level. McMinnville has not experienced a wildfire within City limits. The city is surrounded by developed land, rivers, and/or irrigated agricultural land. However, some wooded areas are a concern in the case of a wildfire event, particularly in the western part of the city. Figure MA-8 shows overall wildfire risk in McMinnville.

Figure MA-8 Overall Wildfire Risk



Source: [Oregon Wildfire Risk Explorer](#), date accessed April 27, 2020.

There have been several small wildfires in and surrounding the city since 1992. One 13-acre human caused wildfire occurred in the northeastern section of the city in 2015, in 2017 a wheat field caught fire near the Grandhaven Development, and in 2019 a 40-acre human caused fire occurred off Baker Creek Rd in the western part of the city. Additional, small wildfire have occurred (usually human caused) adjacent to the city and within the watershed.

The forested areas within, and surrounding McMinnville are interface areas. These areas are characterized by varying housing structures (often large houses on small lots, some with shake roofs), natural, and ornamental vegetation, and topography that may increase the risk for wildfire spreading (particularly to the north and northeast).

Most of the city has less severe (low) wildfire burn probability that includes expected flame lengths less than four feet under normal weather conditions.¹⁴ However, conditions vary widely and with local topography, fuels, and local weather (including wind) conditions. Under warm, dry, windy, and drought conditions expect higher likelihood of fire starts, higher intensity, more ember activity, and a more difficult to control wildfire that will include more fire effects and impacts. The potential community impacts, and vulnerabilities described in Volume I, Section 2 are generally accurate for the City as well. McMinnville's fire response is provided by the McMinnville Fire Department. The CWPP assesses wildfire risk, maps wildland urban interface areas, and includes actions to mitigate wildfire risk (all

¹⁴ [Oregon Wildfire Risk Explorer](#),

identified actions are outside the city limits). However, several identified projects are located within, or near, the city's watershed including moderate priority hazard fuel reduction projects in the Baker Creek Area and Fox Ridge Area, and a high priority defensible space project Eagle Point Way. The City will update the City's wildfire risk assessment if the CWPP presents better data during future updates (an action item is included to participate in future updates to the CWPP).

Vulnerability Assessment

Due to insufficient data and resources, McMinnville is currently unable to perform a quantitative risk assessment for this hazard. The city's biggest wildfire vulnerability is in the west area of the city and adjoining lands and within the city's 6,350-acre watershed, owned McMinnville Water and Light (MW&L), located about 9 miles west of the city in the Coast Mountain Range. Overall, the watershed has low to moderate wildfire risk, however, the forested areas have the potential for large wildfires and a wildfire within the watershed could impact the city's water supply and quality.

Property can be damaged or destroyed with one fire as structures, vegetation, and other flammables easily merge to become unpredictable, and hard to manage. Other factors that affect ability to effectively respond to a wildfire include access to the location, and to water, response time from the fire station, availability of personnel, and equipment, and weather (e.g., heat, low humidity, high winds, and drought).

Exposed infrastructure including wastewater main lines, major water lines, natural gas pipeline and fiber optic lines are buried, decreasing their vulnerability to damage from wildfire hazards. However, wildfire conditions could potentially limit or delay access for the purposes of operation or repair.

The Oregon Wildfire Risk Explorer provides detail on the potential impact to structure from wildfire as shown in Figure MA-9, darker areas have higher potential impacts if fire ignites nearby. The areas of greater risk are generally located west of the city that are hillier and that are more heavily vegetated and forested.

Mitigation Activities

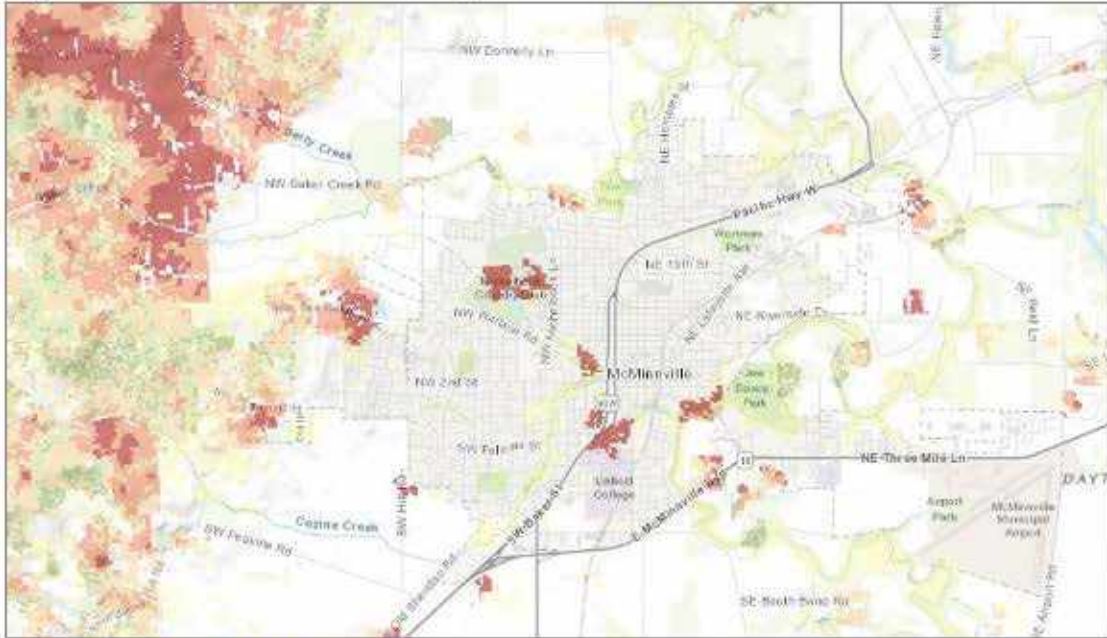
The McMinnville Fire Department works to mitigate problems regarding wildfire issues when they arise. Wildfire mitigation activities listed here include current mitigation programs and activities that are being implemented by McMinnville agencies or organizations. The Oregon Department of Forestry provides fire protection for the McMinnville Watershed.

City of McMinnville Codes Pertaining to Wildfires

The following McMinnville codes, plans, and policies pertain to wildfires:

1. McMinnville Comprehensive Plan (*under contract to update in 2020*). The updated plan includes a Natural Hazards Inventory and Management Program Recommendations including information on wildfire hazards impacting the city.
2. The City of McMinnville Municipal Code Title 13 provides standards for public infrastructure and utilities.
3. The City of McMinnville enforces the [Oregon Building Code](#) which regulates building material requirements and includes provisions for fires.

Figure MA-9 Overall Potential Impact



Source: [Oregon Wildfire Risk Explorer](#), date accessed April 27, 2020.

Please review the [Yamhill County Community Wildfire Protection Plan \(CWPP\)](#) and [Volume I, Section 2](#) for additional information on this hazard.

ATTACHMENT A: ACTION ITEM FORMS

Table MA-1 provides a summary list of 2020 NHMP Actions for the city. Each high priority action item has a corresponding action item worksheet describing the activity, identifying the rationale for the project, identifying potential ideas for implementation, and assigning coordinating and partner organizations. The action item worksheets can assist the community in pre-packaging potential projects for grant funding. The worksheet components are described below.

ALIGNMENT WITH EXISTING PLANS/POLICIES

The City NHMP includes a range of action items that, when implemented, will reduce loss from hazard events in the City. Within the plan, FEMA requires the identification of existing programs that might be used to implement these action items. The City addresses statewide planning goals and legislative requirements through its comprehensive land use plan, capital improvements plan, mandated standards and building codes. To the extent possible, the City will work to incorporate the recommended mitigation action items into existing programs and procedures. Each action item identifies related existing plans and policies.

STATUS/RATIONALE FOR PROPOSED ACTION ITEM

Action items should be fact-based and tied directly to issues or needs identified throughout the planning process. Action items can be developed at any time during the planning process and can come from several sources, including participants in the planning process, noted deficiencies in local capability, or issues identified through the risk assessment. The rationale for proposed action items is based on the information documented in this addendum and within Volume I, Section 2. The worksheet provides information on the activities that have occurred since the previous plan for each action item.

IDEAS FOR IMPLEMENTATION

The ideas for implementation offer a transition from theory to practice and serve as a starting point for this plan. This component of the action item is dynamic, since some ideas may prove to not be feasible, and new ideas may be added during the plan maintenance process. Ideas for implementation include such things as collaboration with relevant organizations, grant programs, tax incentives, human resources, education and outreach, research, and physical manipulation of buildings and infrastructure.

COORDINATING (LEAD) ORGANIZATION:

The coordinating organization is the public agency with the regulatory responsibility to address natural hazards, or that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring and evaluation.

INTERNAL AND EXTERNAL PARTNERS:

The internal and external partner organizations listed in the Action Item Worksheets are potential partners recommended by the project steering committee but not necessarily

contacted during the development of the plan. The coordinating organization should contact the identified partner organizations to see if they are capable of and interested in participation. This initial contact is also to gain a commitment of time and/or resources toward completion of the action items.

Internal partner organizations are departments within the City or other participating jurisdiction that may be able to assist in the implementation of action items by providing relevant resources to the coordinating organization.

External partner organizations can assist the coordinating organization in implementing the action items in various functions and may include local, regional, state, or federal agencies, as well as local and regional public and private sector organizations.

PLAN GOALS ADDRESSED:

The plan goals addressed by each action item are identified as a means for monitoring and evaluating how well the mitigation plan is achieving its goals, following implementation.

TIMELINE:

All broad scale action items have been determined to be ongoing, as opposed to short (0 to 2 years), medium (2-5 years), or long (6 or more years). This is because the action items are broad ideas, and although actions may be implemented to address the broad ideas, the efforts should be ongoing.

POTENTIAL FUNDING SOURCE

Where possible potential funding sources have been identified. Example funding sources may include: Federal Hazard Mitigation Assistance programs, state funding sources such as the Oregon Seismic Rehabilitation Grant Program, or local funding sources such as capital improvement or general funds. An action item may include several potential funding sources.

ESTIMATED COST

A rough estimate of the cost for implementing each action item is included. Costs are shown in general categories showing low, medium, or high cost. The estimated cost for each category is outlined below:

Low - Less than \$50,000

Medium - \$50,000 – \$100,000

High - More than \$100,000

Multi-Hazard #1

Proposed Action Item:		Alignment with Plan Goals:	
Develop, enhance, and implement public education and information materials concerning mitigation, preparedness and safety procedures for identified natural hazards.		Goal 1, Goal 2, Goal 3, Goal 6, Goal 8	
Alignment with Existing Plans/Policies:			
Emergency Operations Plan			
2020 Status/Rationale for Proposed Action Item:			
<p>The natural hazard sections of the City's addendum (Volume II) to the Yamhill Co. NHMP and Yamhill County's risk assessment (Volume I, Section 2 and Volume III, Appendix C) identify vulnerable populations and property within the various identified hazard areas. Increasing public outreach to educate residents about their risk to natural hazards affecting their community as well as what to do in the event of a natural hazard will help decrease their vulnerability to natural hazards.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify how the community will continue to involve the public in the plan maintenance process [201.6(c)(4)(iii)]. Educating landowners on how to mitigate the effects of natural hazards helps keep the public informed of what is being done with the plan, how the City is working to mitigate its risk to natural hazards, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan.</p>			
Ideas for Implementation:			
<p>Distribution of natural hazard information describing dangers and evacuation routes for visitors to McMinnville and continued educational outreach for residents and business owners.</p> <p>Update brochures with new information provided as part of reports provided by DOGAMI, ODF, DLCD, and FEMA (among others).</p> <p>Identify and use existing mechanisms for public outreach (e.g., SWCD, NRCS, watershed councils, OSU Extension, etc.).</p>			
Coordinating Organization:		Emergency management, MW&L	
Internal Partners:		External Partners:	
Planning, Public Works, Fire, Police		OEM, DLCD, FEMA, DOGAMI	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, grants		Low	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input checked="" type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Multi-Hazard #2

Proposed Action Item:		Alignment with Plan Goals:	
Incorporate mitigation planning provisions into community planning processes such as comprehensive, capital improvement, land use, transportation plans, zoning ordinances, community development practices, etc.		Goal 1, Goal 4, Goal 5, Goal 6, Goal 7, Goal 8	
Alignment with Existing Plans/Policies:			
Comprehensive Plan, Development Code, Master Plans (Water/Wastewater), Transportation System Plan			
2020 Status/Rationale for Proposed Action Item:			
<p>Comprehensive plans provide the framework for the physical design of a community. They shape overall growth and development while addressing economic, environmental and social issues. Oregon's statewide goals are accomplished through local comprehensive plans. State Law requires local governments to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into action.</p> <p>Integration of NHMPs into comprehensive plans and other plans will help to reduce a community's vulnerability to natural hazards, support in mitigation activities, help to increase the speed in which action items are implemented and therefore the speed in which communities recover from natural disasters.</p> <p>Integration of NHMPs into local plans gives the action items identified in the NHMP legal status for guiding local decision-making regarding land use and/ or capital expenditures. .</p>			
Ideas for Implementation:			
<p>Conduct a policy crosswalk of the NHMP, the comprehensive plan, and other planning documents, to identify areas of possible integration.</p> <p>Integrate natural hazards information and policies into the comprehensive plan and other plans.</p> <p>Engage in collaborative planning and integration.</p> <p>Coordinate future NHMP and comprehensive plan reviews and updates.</p>			
Coordinating Organization:		Planning	
Internal Partners:		External Partners:	
Engineering, MW&L		DOGAMI, DLCD, OEM	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, DLCD technical assistance grant		Low	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Multi-Hazard #6

Proposed Action Item:		Alignment with Plan Goals:	
Develop and maintain GIS mapped critical facility inventory.		Goal 1, Goal 2, Goal 3, Goal 4, Goal 6, Goal 8	
Alignment with Existing Plans/Policies:			
2020 Status/Rationale for Proposed Action Item:			
<p>McMinnville's addendum and Yamhill County's risk assessment identify limited properties located in hazards areas. Improving technology, particularly GIS and communications, for the identification of vulnerable facilities will help decrease their vulnerability to natural hazards.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify how the community will continue to involve the public in the plan maintenance process [201.6(c)(4)(iii)]. Improving technology capacity will allow more widespread dissemination of information, thus assisting in keeping residents informed of what is being done with the plan, how the City is working to mitigate its risk to natural hazards and allowing for feedback and suggestions from the public for improving, updating, and maintaining the plan.</p>			
Ideas for Implementation:			
<p>Identify and map critical facilities and identify the location and extent of hazard areas and establish a factual base to support implementation of future mitigation measures; and</p> <p>Analyze the risk of these areas to property, and infrastructure.</p>			
Coordinating Organization:		Engineering, MW&L	
Internal Partners:		External Partners:	
Planning, Fire, Police		DOGAMI, DLCD, ODF, other state and federal agencies	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, grants		Low	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Multi-Hazard #7

Proposed Action Item:		Alignment with Plan Goals:	
Develop and maintain GIS mapped hazard areas within the UGB.		Goal 1, Goal 2, Goal 3, Goal 4, Goal 6, Goal 8	
Alignment with Existing Plans/Policies:			
Comprehensive Plan			
2020 Status/Rationale for Proposed Action Item:			
<p>The Risk Assessment section of the McMinnville NHMP addendum identifies the potential hazard risk areas within the city.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Identifying and mapping existing areas with exposure to profiled natural hazard risk will allow for better understanding of the areas at risk and for the implementation of mitigation measures to reduce this risk.</p>			
Ideas for Implementation:			
<p>Collect existing available GIS data for profiled natural hazards from state and federal partners. Data is available for geohazards on the DOGAMI website publications search: https://www.oregongeology.org/pubs/pubsearch.htm</p>			
Coordinating Organization:		Engineering, MW&L	
Internal Partners:		External Partners:	
Planning, Fire, Police		DOGAMI, USGS, FEMA, DLCD, ODF	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, grants		Low	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:		2019-20 NHMP Steering Committee	
Priority:		High	

Multi-Hazard #8

Proposed Action Item:		Alignment with Plan Goals:	
Develop & construct multi-jurisdictional fuel station and mobile fuel capabilities.		Goal 1, Goal 2, Goal 3, Goal 4, Goal 6, Goal 8	
Alignment with Existing Plans/Policies:			
2020 Status/Rationale for Proposed Action Item:			
A multi-jurisdictional fueling station coupled with mobile fueling capacity will provide more reliable and redundant fuel supply to participating partners during emergency response operations.			
Ideas for Implementation:			
McMinnville Water & Light is advancing plans to construct a fueling station during fiscal year 2021 and is working with the City regarding its ability to participate.			
Coordinating Organization:		Engineering, MW&L	
Internal Partners:		External Partners:	
Planning, Fire, Police		ODOT, Yamhill Co, other cities in Yamhill County	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, MW&L		High	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Multi-Hazard #1 I

Proposed Action Item:		Alignment with Plan Goals:	
Limit (e.g. reduced density, etc.) or prohibit development in high hazard areas.		Goal 2, Goal 3, Goal 4, Goal 6, Goal 7, Goal 8	
Alignment with Existing Plans/Policies:			
Comprehensive Plan, Development Code, Strategic Plan			
2020 Status/Rationale for Proposed Action Item:			
The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Limiting and prohibiting development in high hazards zones will reduce risk to people and property.			
Ideas for Implementation:			
Complete, adopt and implement the "McMinnville Area Natural Hazards Inventory and Management Program Recommendations" plan, which will include an inventory of natural hazards based on available mapping sources; consider alternative management options; and suggest policy and mapping amendments to the McMinnville Comprehensive Plan to systematically address McMinnville's mappable natural hazards.			
Coordinating Organization:		Planning	
Internal Partners:		External Partners:	
Engineering		DLCD	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund		Low	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Multi-Hazard #12

Proposed Action Item:		Alignment with Plan Goals:	
Encourage mitigation practices in developments at risk to natural hazards.		Goal 1, Goal 2, Goal 3, Goal 4, Goal 6, Goal 8	
Alignment with Existing Plans/Policies:			
Comprehensive Plan, Development Code, Strategic Plan			
2020 Status/Rationale for Proposed Action Item:			
The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Encouraging the use of mitigation techniques to limit risk to natural hazards will reduce risk to people and property.			
Ideas for Implementation:			
Complete, adopt and implement the "McMinnville Area Natural Hazards Inventory and Management Program Recommendations" plan, which will include an inventory of natural hazards based on available mapping sources; consider alternative management options; and suggest policy and mapping amendments to the McMinnville Comprehensive Plan to systematically address McMinnville's mappable natural hazards.			
Coordinating Organization:		Planning	
Internal Partners:		External Partners:	
Engineering		DLCD	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund		Low	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Earthquake #1

Proposed Action Item:		Alignment with Plan Goals:	
Complete inventory and seismic assessment of critical facilities.		Goal 2, Goal 3, Goal 4, Goal 6, Goal 7, Goal 8	
Alignment with Existing Plans/Policies:			
2020 Status/Rationale for Proposed Action Item:			
<p>Currently, all new facilities must comply with and meet seismic standards. If someone moves into an old building, they must upgrade to current standards.</p> <p>DOGAMI did a windshield survey of schools, fire stations, police, and city halls (2007 RVS). The focus was on action of existing buildings and information was shared with participants.</p> <p>Seismic resiliency is a component of MW&L's collection system and the city's wastewater treatment facility master plans. Upgrades are constructed as opportunity and funding allow.</p>			
Ideas for Implementation:			
<p>Provide information to government building and school facility managers and teachers on nonstructural mitigation techniques including: securing bookcases, filing cabinets, light fixtures, and other objects that can cause injuries and block exits;</p> <p>Encourage facility managers, business owners, and teachers to refer to FEMA's practical guidebook: Reducing the Risks of Nonstructural Earthquake Damage;</p> <p>Encourage homeowners and renters to use Is Your Home Protected from Earthquake Disaster? A Homeowner's Guide to Earthquake Retrofit (IBHS) for economic and efficient mitigation techniques;</p> <p>Use the FEMA 154 seismic evaluations generated by DOGAMI to prioritize critical and essential buildings for upgrades;</p> <p>Explore partnerships to provide retrofitting classes for homeowners, renters, building professionals, and contractors; and</p> <p>Target development located in potential fault zones or in unstable soils for intensive education and retrofitting resources.</p>			
Coordinating Organization:		Engineering, MW&L	
Internal Partners:		External Partners:	
Fire, Planning		School district	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, utility fees, HMA grants		High	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:		2019-20 NHMP Steering Committee	
Priority:		High	

Landslide #2

Proposed Action Item:		Alignment with Plan Goals:	
Develop a process to limit future development in high landslide potential areas - permitting, geotechnical review, soil stabilization techniques, etc.		Goal 2, Goal 4, Goal 5, Goal 6, Goal 7, Goal 8	
Alignment with Existing Plans/Policies:			
Comprehensive Plan, Development Code, Strategic Plan			
2020 Status/Rationale for Proposed Action Item:			
The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Identifying existing landslide hazard areas will allow for a better understanding of the area at risk and the implementation of mitigation measures to reduce this risk.			
Ideas for Implementation:			
Complete, adopt and implement the “McMinnville Area Natural Hazards Inventory and Management Program Recommendations” plan, which will include an inventory of natural hazards based on available mapping sources; consider alternative management options; and suggest policy and mapping amendments to the McMinnville Comprehensive Plan to systematically address McMinnville’s mappable natural hazards.			
Incorporate relevant aspects of the DLCD Landslide Land Use Guide (“Preparing for Landslide Hazards, A Land Use Guide for Oregon Communities”)			
Coordinating Organization:		Planning	
Internal Partners:		External Partners:	
Engineering, McMinnville Water & Light		DLCD, DOGAMI	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, Utility Fees, grants		Medium	<input checked="" type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
Form Submitted by:		2019-20 NHMP Steering Committee	
Priority:		High	

Wildfire #1

Proposed Action Item:		Alignment with Plan Goals:	
Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan.		Goal 1, Goal 2, Goal 3, Goal 4, Goal 5, Goal 6, Goal 7, Goal 8	
Alignment with Existing Plans/Policies:			
Yamhill County CWPP			
2020 Status/Rationale for Proposed Action Item:			
The wildfire mitigation action items provide direction on specific activities that organizations and residents in McMinnville/Yamhill County can take to reduce wildfire hazards.			
Ideas for Implementation:			
Implement high and medium priority projects including defensible space and fuels reduction projects identified in the CWPP.			
Coordinating Organization:		Fire	
Internal Partners:		External Partners:	
Planning, Emergency Management, MW&L		ODF, USFS, Fire Defense Board	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, ODF grants		Medium to High	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input checked="" type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

Wildfire #2

Proposed Action Item:		Alignment with Plan Goals:	
Provide wildland fire information in an easily distributed format for all residents.		Goal 1, Goal 2, Goal 3, Goal 6, Goal 8	
Alignment with Existing Plans/Policies:			
2020 Status/Rationale for Proposed Action Item:			
<p>The natural hazard sections of the City's addendum (Volume II) to the Yamhill Co. NHMP and Yamhill County's risk assessment (Volume I, Section 2 and Volume III, Appendix C) identify vulnerable populations and property within the wildfire hazard area. Increasing public outreach to educate residents about their risk to natural hazards affecting their community as well as what to do in the event of a natural hazard will help decrease their vulnerability to natural hazards.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify how the community will continue to involve the public in the plan maintenance process [201.6(c)(4)(iii)]. Educating landowners on how to mitigate the effects of natural hazards helps keep the public informed of what is being done with the plan, how the City is working to mitigate its risk to natural hazards, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan.</p>			
Ideas for Implementation:			
<p>Distribution of wildfire hazard information describing dangers and evacuation routes for visitors to McMinnville and continued educational outreach for residents and business owners.</p> <p>Update brochures with new information provided as part of reports provided by Firewise, ODF, DOGAMI, DLCD, and FEMA (among others).</p> <p>Identify and use existing mechanisms for public outreach (e.g., SWCD, NRCS, watershed councils, OSU Extension, etc.).</p>			
Coordinating Organization:	Fire		
Internal Partners:		External Partners:	
Planning, Emergency Management, MW&L		ODF, USFS, Fire Defense Board	
Potential Funding Sources:		Estimated cost:	Timeline:
General fund, utility fees		Low	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input checked="" type="checkbox"/> Ongoing
Form Submitted by:	2019-20 NHMP Steering Committee		
Priority:	High		

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ATTACHMENT B: PUBLIC INVOLVEMENT SUMMARY

Members of the steering committee provided edits and updates to the NHMP prior to the public review period as reflected in the final document.

To provide the public information regarding the draft NHMP addendum, and provide an opportunity for comment, an announcement (see text below) was placed on the city's website and an email contact was provided for public comment. The press release was also provided to the local newspaper (News Register) and was posted on the city's social media pages (Facebook, Instagram).

During the public review period there were no comments provided.

The screenshot shows the City of McMinnville website. The header includes the city name and navigation links for Home, Contact Us, Code Compliance & Community Relations, and a language selector. A red navigation bar contains links for GOVERNMENT, BUSINESS, COMMUNITY, and I WANT TO, along with a search bar. The main content area features a large heading for a press release: "Press Release for McMinnville addendum to the Yamhill County Multi-Jurisdictional Natural Hazard Mitigation Plan Update – Notice and Opportunity for Public Comment". Below this heading is a "Supporting Documents" section with two links: "Press Release - McMinnville seeks additional public input on update to Natural Hazard Mitigation Plan (41 KB)" and "City of McMinnville Addendum to the Yamhill County Multi-Jurisdictional Hazard Mitigation Plan - DRAFT (10 MB)". To the right of the main content is a sidebar with a "Community" button, a "Get Involved!" button, and a "Contact Information" section. The contact information lists Noelle Anaya, Community Engagement & Public Affairs, with an address in McMinnville, OR, and a phone number. A link to "View Full Contact Details" is also present.



PRESS RELEASE

DATE: June 29, 2020

SUBJECT: Press Release for McMinnville addendum to the Yamhill County Multi-Jurisdictional Natural Hazard Mitigation Plan Update – Notice and Opportunity for Public Comment

For Immediate Release

McMinnville seeks additional public input on update to Natural Hazard Mitigation Plan

(McMinnville, OR) – McMinnville is in the process of updating their existing Natural Hazard Mitigation Plan (NHMP). This work is being performed in cooperation with the University of Oregon's Institute for Policy Research and Engagement - Oregon Partnership for Disaster Resilience and the Oregon Military Department's Office of Emergency Management utilizing funds obtained from the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation Grant Program. With re-adoption of the plan, McMinnville will regain its eligibility to apply for federal funding towards natural hazard mitigation projects. This local planning process includes a wide range of representatives from city and county government, emergency management personnel, and outreach to members of the public in the form of an electronic survey.

A natural hazard mitigation plan provides communities with a set of goals, action items, and resources designed to reduce risk from future natural disaster events. Engaging in mitigation activities provides jurisdictions with a number of benefits, including reduced loss of life, property, essential services, critical facilities, and economic hardship; reduced short-term and long-term recovery and reconstruction costs; increased cooperation and communication within the community through the planning process; and increased potential for state and federal funding for recovery and reconstruction projects.

An electronic version of the updated draft McMinnville NHMP addendum will be available for formal public comment beginning June 29, 2020. To view the draft please visit the "Latest News" section of the City's website: <https://www.mcminnvilleoregon.gov/>

If you have any questions regarding the McMinnville NHMP addendum or the update process in general, please contact: Mike Bisset, Community Development Director at (503) 434-7312 or mike.bisset@mcminnvilleoregon.gov; or Michael Howard, Assistant Program Director for the Oregon Partnership for Disaster Resilience at mrhoward@uoregon.edu.

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FEMA

September 10, 2020

Ms. Amie Bashant
State Hazard Mitigation Officer
Oregon Military Department
Office of Emergency Management
P.O. Box 14370
Salem, Oregon 97309

Dear Ms. Bashant:

The Federal Emergency Management Agency (FEMA) Region 10 completed a pre-adoption review of the draft *Yamhill County Multi-Jurisdictional Hazard Mitigation Plan*. The attached Mitigation Plan Review Tool documents the Region's review and compliance with all required elements of 44 CFR Part 201.6, as well as identifies the jurisdictions that have met the requirements by participating in the planning process. This letter serves as Region 10's commitment to approve the plan upon receiving documentation of its adoption by one participating jurisdictions that have met all of the requirements.

Formal adoption documentation must be submitted to FEMA Region 10 by at least one jurisdiction that has met the requirements within one calendar year of the date of this letter, or the entire plan must be updated and resubmitted for review. Once FEMA approves the plan, the jurisdictions are eligible to apply for FEMA Hazard Mitigation Assistance grants.

Please contact John Schelling, Regional Mitigation Planning Program Manager, at (425) 487-2104 or john.schelling@fema.dhs.gov with any questions.

Sincerely,

A handwritten signature in black ink that reads "Ted Perkins".

Ted Perkins, P.E.
Acting Chief, Risk Analysis Branch
Mitigation Division

Enclosure

JS:v1

Yamhill County Multi-Jurisdictional Hazard Mitigation Plan

Yamhill County and the Cities of:
Amity, Carlton, Dayton, McMinnville,
Newberg, Sheridan, Willamina, and Yamhill



September 2020

Volume I: Basic Plan



Prepared for:

Yamhill County Emergency Management

Prepared by:

University of Oregon
Institute for Policy Research and Engagement
Oregon Partnership for Disaster Resilience



UNIVERSITY OF
OREGON

School of Planning, Public
Policy and Management

Institute for Policy
Research and Engagement

This Natural Hazard Mitigation Plan was prepared by:



With support from:



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School of Planning, Public
Policy and Management

Institute for Policy
Research and Engagement

Planning grant funding provided by:



FEMA

Federal Emergency Management Agency (FEMA)
Hazard Mitigation Grant Program
Grant No.: HMGP-DR-4328-OR-5-P

Additional Support Provided by:



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SPECIAL THANKS & ACKNOWLEDGEMENTS

Yamhill County developed this Multi-Jurisdictional Natural Hazards Mitigation Plan (NHMP) through a regional partnership funded by the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) Grant No. HMGP-DR-4328-OR-5-P. This updated NHMP is a collaboration between Yamhill County and the Cities of Amity, Dayton, McMinnville, Newberg, Sheridan, Willamina, Yamhill, Sheridan School District, McMinnville Water & Light, Tualatin Valley Fire & Rescue, McMinnville Fire, and Sheridan Fire/West Valley Fire. Planning process, plan templates, and plan development support provided by the Oregon Partnership for Disaster Resilience (OPDR) at the University of Oregon's Institute for Policy Research and Engagement (IPRE).

Special thanks to Brian Young, Yamhill County Emergency Manager for his vision, passion, and positive outlook throughout the plan update process.

Hazard Mitigation Advisory Committee

County Departments

- County Convener, Brian Young, Emergency Manager, Yamhill County
- Carol Ann Harlan, Emergency Management Technician, Yamhill County
- Mike Kemper, Code Enforcement, Yamhill County
- Paul Myatt, Public Health Specialist, Yamhill County
- Malachi Nelson, Public Health Preparedness VISTA, Yamhill County
- Ken Nygren, Assistant Emergency Manager, Yamhill County
- Steve Sims, Road Supervisor, Yamhill County
- Mary Starrett, Yamhill County Board of Commissioners
- Gary Van Der Veen, Environmental Health Specialist, Yamhill County
- Matt Vogt, Assistant Planner, Yamhill County

Special District Steering Committee Members

- John Dietz, General Manager, McMinnville Water and Light
- James Burke, Water Division Director, McMinnville Water and Light
- Scott Rosenbalm, Electric Division Manager, McMinnville Water and Light
- Damon Schulze, Deputy Chief, Sheridan/West Valley Rural Fire Districts
- Steven Sugg, Superintendent, Sheridan School District

City Steering Committee Members

Amity

- Convener, Michael Thomas, City Administrator
- Gary Mathis, Public Works Superintendent
- Scott Law, Chief Amity Fire District
- Jeff Clark, Amity Public Schools Superintendent

Carlton

- Convener, Aimee Amerson, Community and Economic Development Coordinator
- Kevin Martinez, Police Chief
- Dennis Durham, City Manager
- Bryan Burnham, Public Works Director
- Christy Martinez, Director of Administrative Services

Dayton

- Convener, Rochelle Roaden, City Manager
- Steve Sagmiller, Public Works Director

McMinnville

- Convener, Mike Bisset, Community Development Director
- Jenny Berg, Library Director
- James Burke, McMinnville Water & Light, Water Division Director
- Scott Burke, Information Technology Director
- John Dietz, McMinnville Water & Light, General Manager
- David Koch, City Attorney
- Leland Koester, Wastewater Services Manager
- Rich Leipfert, Fire Chief
- David Renshaw, Superintendent
- Heather Richards, Planning Director
- Scott Rosenbalm, McMinnville Water & Light, Electric Division Director
- Matt Scales, Chief of Police
- Larry Sherwood, Engineering Technician and Inspector
- Jeff Towery, City Manager

Newberg

- Convener, Jay Harris, Public Works Director (*former*)
- Karen Tarmichael, Project Specialist
- Dan Weinheimer, City Manager

Sheridan

- Convener, Frank Sheridan, City Manager
- Jim Anderson, Public Works Director
- Laury Hall, Public Works Clerk
- Damon Schulze, Deputy Chief, Sheridan/West Valley Rural Fire Districts
- Steven Sugg, Superintendent, Sheridan School District

Willamina

- Convener, Kenna West, City Manager

Yamhill

- Convener, Lori Gilmore, City Recorder/Emergency Coordinator
- Mayor, Yvette Potter

- Police Chief, Greg Graven
- Public Works Superintendent, Bernard Malis
- Fire Chief, Brian Jensen
- Committee Member, Jay Disbrow, Council-President
- Yamhill-Carlton School District Superintendent, Charan Kline

Institute for Policy Research and Engagement Team

- Michael Howard, Assistant Program Manager
- Conrad Hock, Research Assistant
- Alyssa Gamble, Research Assistant

Additional Thanks:

To the Department of Geology and Mineral Industries for assistance with hazard data; the Department of Land Conservation and Development staff in the hazards for flood data, mapping and process support; to the Oregon Office of Emergency Management for grant administration and process support.

About the Institute for Policy Research and Engagement

The Institute for Policy Research and Engagement (IPRE), a research center affiliated with the School of Planning, Public Policy and Management at the University of Oregon, is an interdisciplinary organization that assists Oregon communities by providing planning and technical assistance to help solve local issues and improve the quality of life for Oregon residents. The role of the IPRE is to link the skills, expertise and innovation of higher education with the transportation, economic development and environmental needs of communities and regions in the State of Oregon, thereby providing service to Oregon and learning opportunities to the students involved.

About the Oregon Partnership for Disaster Resilience

The Oregon Partnership for Disaster Resilience (OPDR) is a coalition of public, private and professional organizations working collectively toward the mission of creating a disaster-resilient and sustainable state. Developed and coordinated by the Institute for Policy Research and Engagement at the University of Oregon, the OPDR employs a service-learning model to increase community capacity and enhance disaster safety and resilience statewide.

NHMP Template Disclaimer

This NHMP is based in part on a plan template developed by the Oregon Partnership for Disaster Resilience. The template is structured to address the requirements contained in 44 CFR 201.6; where language is applicable to communities throughout Oregon, OPDR encourages the use of standardized language. As part of this regional planning initiative, OPDR provided copies of the plan templates to communities for use in developing or updating their hazards mitigation plans. OPDR hereby authorizes the use of all content and language provided to Yamhill County in the plan template.

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PLAN SUMMARY

Yamhill County updated this Multi-Jurisdictional Natural Hazards Mitigation Plan (NHMP) to prepare for the long-term effects resulting from hazards. It is impossible to predict exactly when these hazards will occur, or the extent to which they will affect the community. However, with careful planning and collaboration among public agencies, private sector organizations and citizens within the community, it is possible to create a resilient community that will benefit from long-term recovery planning efforts.

FEMA defines mitigation as “. . . the effort to reduce loss of life and property by lessening the impact of disasters . . . through risk analysis, which results in information that provides a foundation for mitigation activities that reduce risk.” Said another way, hazard mitigation is a method of permanently reducing or alleviating the losses of life, property and injuries resulting from hazards through long and short-term strategies. Example strategies include policy changes, such as updated ordinances, projects, such as seismic retrofits to critical facilities; and education and outreach to targeted audiences, such as non-English speaking residents or the elderly. Hazard mitigation is the responsibility of the “Whole Community.” FEMA defines Whole Community as, “private and nonprofit sectors, including businesses, faith-based and disability organizations and the public, in conjunction with the participation of local, tribal, state, territorial and Federal governmental partners.”

44 CFR 201.6 – The local mitigation plan is the representation of the jurisdiction’s commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. . . .

Why Develop this Mitigation Plan?

The Disaster Mitigation Act of 2000 (DMA2K) and the regulations contained in 44 CFR 201 require that jurisdictions maintain an approved NHMP in order to receive FEMA Hazard Mitigation Assistance (HMA) funds for mitigation projects. To that end, Yamhill County is involved in a broad range of hazard and emergency management planning activities. Local and federal approval of this NHMP ensures that the County and listed jurisdictions will (1) remain eligible for pre- and post-disaster mitigation project grants and (2) promote local mechanisms to accomplish risk reduction strategies.

44 CFR 201.6(a)(1) – A local government must have a mitigation plan approved pursuant to this section in order to receive HMGP project grants . . .

What is Mitigation?

“Any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.”

- U.S. Federal Emergency Management Agency

Who Participated in Developing the Plan?

The Yamhill County NHMP is the result of a collaborative effort between the County, cities, special districts, citizens, public agencies, non-profit organizations, the private sector and regional organizations. County, city, and special district Steering Committees guided the NHMP development process.

For a list of specific County steering committee participants, refer to the acknowledgements section above. The update process included representatives from the following jurisdictions and agencies:

<u>County Departments</u>	<u>Participating Cities</u>	<u>Other</u>
Board of County Commissioners	City of Amity	Sheridan School District
Emergency Management	City of Dayton	Sheridan Fire/West Valley Fire
Planning	City of McMinnville	Tualatin Valle Fire & Rescue
Public Health	McMinnville Water & Light	
Public Works	McMinnville Fire	
	City of Newberg	
	City of Sheridan	
	City of Willamina	
	City of Yamhill	

44 CFR 201.6(c)(1) – Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process and how the public was involved.

The Yamhill County Emergency Manager convened the planning process and will take the lead in implementing, maintaining and updating the County NHMP. Each of the participating cities and special districts have also named a local convener who is responsible for implementing,

maintaining and updating their Jurisdictional Addendum (see addenda for specific names and positions). Yamhill County is dedicated to directly involving the public in the continual review and update of the NHMP. The County achieves this through systematic engagement of a wide variety of active groups, organizations or committees, public and private infrastructure partners, watershed and neighborhood groups and numerous others. Although members of the steering committee represent the public to some extent, the public will continue to provide feedback about the NHMP throughout the implementation and maintenance period.

How Does this NHMP Reduce Risk?

The NHMP is intended to assist Yamhill County reduce the risk from hazards by identifying resources, information and strategies for risk reduction. It is also intended to guide and coordinate mitigation activities throughout the County. A risk assessment consists of three

44 CFR 201.6(c)(2) – A Risk Assessment that provides the factual basis for activities proposed in the strategy

...

phases: hazard identification, vulnerability assessment and risk analysis, as illustrated in Figure PS-1.

By identifying and understanding the relationship between hazards, vulnerable systems and existing capacity, Yamhill County is better equipped to identify and implement actions aimed at reducing the overall risk to hazards.

Figure PS-1 Understanding Risk



What is Yamhill County’s Overall Risk to Hazards?

Yamhill County reviewed and updated the risk assessment to evaluate the probability of each hazard as well as the vulnerability of the community to that hazard. Table PS-1 summarizes hazard probability and vulnerability as determined by the County steering committee (for more information see Volume I, Section 2).

Table PS-1 Hazard and Vulnerability Assessment Summary

Hazard	Maximum				Total Threat Score	Hazard Rank	Hazard Tiers
	History	Vulnerability	Threat	Probability			
Flood	18	40	90	63	211	#1	Top Tier
Winter Storm	16	40	80	56	192	#2	
Earthquake - Cascadia	6	45	100	35	186	#3	
Drought	8	25	80	56	169	#5	Middle Tier
Windstorm	16	25	70	56	167	#6	
Wildfire	8	15	80	21	124	#7	
Landslide	16	15	30	56	117	#8	Bottom Tier
Earthquake - Crustal	6	20	60	21	107	#9	
Volcanic Event	4	10	30	7	51	#10	

Source: Yamhill County NHMP Steering Committee, 2019

What is the NHMP’s Mission?

The mission of the Yamhill County NHMP is to:

“To promote public policy and mitigation activities which will enhance the safety to life and property from natural hazards.”

This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the county towards building a safer, more sustainable community.

What are the NHMP Goals?

The plan goals describe the overall direction that the participating jurisdiction's agencies, organizations and citizens can take toward mitigating risk from all-hazards. The goals of the Yamhill County NHMP are organized under several broad categories. The goals are:

44 CFR 201.6(c)(3)(i) – A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

GOAL 1: EMERGENCY OPERATIONS

- Coordinate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures and with other agencies.

GOAL 2: EDUCATION AND OUTREACH

- Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

GOAL 3: PARTNERSHIPS

- Develop effective partnerships with public and private sector organizations and significant agencies and businesses for future natural hazard mitigation efforts.
- Coordinate natural hazard mitigation actions between the County and local jurisdictions to create more cohesive and effective hazard mitigation efforts.

GOAL 4: PREVENTATIVE

- Develop and implement activities to protect human life, commerce, and property from natural hazards.
- Reduce losses and repetitive damage for chronic hazard events while promoting insurance coverage for catastrophic hazards.

GOAL 5: NATURAL RESOURCE UTILIZATION

- Link natural resources management, land use planning, and watershed planning with natural hazard mitigation activities to protect natural systems and allow them to serve natural hazard mitigation functions.

GOAL 6: IMPLEMENTATION

- Implement strategies to mitigate the effects of natural hazards and increase the quality of life and resilience of economies in Yamhill County.

GOAL 7: DEVELOPMENT

- Communities appropriately apply development standards that consider the potential impacts of natural hazards.

GOAL 8: DOCUMENTATION

- Document and evaluate progress in achieving hazard mitigation strategies and action items.

How are the Action Items Organized?

The action items are organized within an action matrix included within Section 3, Mitigation Strategy.

Data collection, research and the public participation process resulted in the development of the action items. The Action Item Matrix portrays the plan framework and identifies linkages between the plan goals and actions. The matrix documents the title of each action along with, the coordinating organization, timeline and the NHMP goals addressed. City and special district specific action items are included in Volume II, Jurisdictional Addenda.

44 CFR 201.6(c)(3)(ii) – A section that identifies and analyzes a comprehensive range of specific mitigation actions . . .

Comprehensive Action Plan

Action items are detailed recommendations for activities that local departments, citizens, and others could engage in to reduce risk. The Steering Committee will prioritize the following actions to focus their attention, and resource availability, upon an achievable set of high leverage activities over the next five-years.

44 CFR 201.6(c)(3)(iii) – An action plan describing how the actions . . . will be prioritized, implemented and administered . . .

44 CFR 201.6(c)(4) – A plan maintenance process . . .

- **Multi-Hazard #1:** Develop, produce, and distribute public education and information materials concerning mitigation, preparedness and safety procedures for identified natural hazards.
- **Multi-Hazard #5:** Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration in Yamhill County such as MOUs and CPODS etc.
- **Multi-Hazard #6:** Develop a long-term recovery plan for Yamhill County from the effects of natural hazards.
- **Multi-Hazard #8:** Train elected officials and recorders in small towns who have no emergency management background on hazard mitigation needs.
- **Earthquake #1:** Conduct seismic strength evaluations of critical facilities and infrastructure to identify vulnerabilities and seismically retrofit (structural and nonstructural) identified critical facilities and infrastructure to meet life safety standards in order to continue operations post-earthquake.
- **Landslide #1:** Use DOGAMI landslide risk maps to improve public knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas in Yamhill County.
- **Wildfire #1:** Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan.
- **Wildfire #4:** Improve fire identification data collection and reporting to enhance emergency response and evacuation procedures.

How will the NHMP be implemented?

The implementation and maintenance section (Section 4) details the formal process that will ensure that the Yamhill County NHMP remains an active and relevant document. The Yamhill County Emergency Manager is the designated convener (NHMP Convener) and is responsible for overseeing the review and implementation processes (see jurisdictional addenda for city and special district conveners). The NHMP maintenance process includes a schedule for monitoring and evaluating the NHMP semi-annually and revising the NHMP every five years. This section also describes how the communities will integrate public participation throughout the implementation and maintenance process.

The accomplishment of the NHMP goals and actions depends upon regular steering committee participation and adequate support from County, city, and special district leadership. Comprehensive familiarity with this NHMP will result in the efficient and effective implementation of appropriate mitigation activities and a reduction in the risk and the potential for loss from future natural hazard events.

NHMP Adoption

Once the NHMP is locally reviewed and deemed complete the NHMP Convener (or their designee) submits it to the State Hazard Mitigation Officer at the Oregon Office of Emergency Management (OEM). OEM reviews the NHMP and submits it to FEMA Region X for pre-approval. This review will address the federal criteria outlined in [44 CFR Part 201.6](#). Once pre-approved by FEMA, the County, cities, and special districts may formally adopt it via resolution.

The Yamhill County NHMP Convener will be responsible for ensuring local adoption of the NHMP and providing the support necessary to ensure NHMP implementation. Once the resolution is executed at the local level and documentation is provided to FEMA, the NHMP will be formally approved by FEMA and the County, participating cities, and special districts will regain eligibility for Hazard Mitigation Assistance (HMA) grant programs

The steering committees for Yamhill County and participating cities each met to review the NHMP update process and their governing bodies adopted the NHMP as shown below and in Volume II.

44 CFR 201.6(c)(5) – Documentation that the plan has been formally adopted by the governing body of the jurisdiction . . .

44 CFR 201.6(d) – Plan review [process] . . .

County Date of Adoption and Approval

Yamhill County adopted the NHMP on **[month] [date], 2020**

FEMA Region X approved the Yamhill County NHMP on **[month] [date], 2020**. With approval of this NHMP, the entities listed above are now eligible to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act's hazard mitigation project grants through **[month] [date], 2025**.

For the date of adoption for each participating City or special district see Volume II.

**Volume I:
Basic Plan**

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SECTION I: INTRODUCTION

This section provides a general introduction to natural hazard mitigation planning in Yamhill County. In addition, it addresses the planning process requirements contained in 44 CFR 201.6(b) thereby meeting the planning process documentation requirement contained in 44 CFR 201.6(c)(1). The section concludes with a general description of how the NHMP is organized.

What is Natural Hazard Mitigation?

The Federal Emergency Management Agency (FEMA) defines mitigation as “. . . the effort to reduce loss of life and property by lessening the impact of disasters . . . through risk analysis, which results in information that provides a foundation for mitigation activities that reduce risk.”¹ Said another way, natural hazard mitigation is a method of permanently reducing or alleviating the losses of life, property and injuries resulting from natural hazards through long and short-term strategies. Example strategies include policy changes, such as updated ordinances, projects, seismic retrofits to critical facilities and education and outreach to targeted audiences, such as Spanish speaking residents or the elderly. Natural hazard mitigation is the responsibility of the “Whole Community”; individuals, private businesses and industries, state and local governments and the federal government.

Engaging in mitigation activities provides jurisdictions (counties, cities, special districts, etc.) with many benefits, including reduced loss of life, property, essential services, critical facilities and economic hardship; reduced short-term and long-term recovery and reconstruction costs; increased cooperation and communication within the community through the planning process; and increased potential for state and federal funding for recovery and reconstruction projects.

Why Develop a Mitigation Plan?

Yamhill County updated this Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP) to reduce future loss of life and damage to property resulting from natural hazards. It is impossible to predict exactly when natural hazard events will occur, or the extent to which they will affect community assets. However, with careful planning and collaboration among public agencies, private sector organizations and citizens within the community, it is possible to minimize the losses that can result from natural hazards.

In addition to establishing a comprehensive community-level mitigation strategy, the Disaster Mitigation Act of 2000 (DMA2K) and the regulations contained in 44 CFR 201, require that jurisdictions maintain an approved NHMP to receive federal funds for mitigation projects. Local adoption and federal approval of this NHMP ensures that the County and listed cities will remain eligible for pre- and post-disaster mitigation project grants.

¹ FEMA, *What is Mitigation?* <http://www.fema.gov/what-mitigation>

What Federal Requirements Does This NHMP Address?

DMA2K is the latest federal legislation addressing mitigation planning. It reinforces the importance of mitigation planning and emphasizes planning for natural hazards before they occur. As such, this Act established the Pre-Disaster Mitigation (PDM) grant program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). Section 322 of the Act specifically addresses mitigation planning at the state and local levels. State and local jurisdictions must have approved mitigation plans in place in order to qualify to receive post-disaster HMGP funds. Mitigation plans must demonstrate that State and local jurisdictions' proposed mitigation measures are based on a sound planning process that accounts for the risk to the individual and State and local jurisdictions' capabilities.

Chapter 44 Code of Federal Regulations (CFR), section 201.6, also requires a local government to have an approved NHMP in order to receive HMGP project grants.² Pursuant of Chapter 44 CFR, the NHMP planning processes shall include opportunity for the public to comment on the NHMP during review and the updated NHMP shall include documentation of the public planning process used to develop the NHMP.³ The NHMP update must also contain a risk assessment, mitigation strategy and a NHMP maintenance process that has been formally adopted by the governing body of the jurisdiction.⁴ Lastly, the NHMP must be submitted to the Oregon Office of Emergency Management (OEM) for initial review and then sent to FEMA for federal approval.⁵ Additionally, a recent change in the way OEM administers the Emergency Management Performance Grant (EMPG), which helps fund local emergency management programs, also requires a FEMA-approved NHMP.

What is the Policy Framework for Natural Hazards Planning in Oregon?

Planning for natural hazards is an integral element of Oregon's statewide land use planning program, which began in 1973. All Oregon cities and counties have comprehensive plans and implementing ordinances that are required to comply with the statewide planning goals. The challenge faced by state and local governments is to keep this network of local plans coordinated in response to the changing conditions and needs of Oregon communities.

Statewide land use planning Goal 7: Areas Subject to Natural Hazards calls for local plans to include inventories, policies and ordinances to guide development in or away from hazard areas. Goal 7, along with other land use planning goals, has helped to reduce losses from natural hazards. Through risk identification and the recommendation of risk-reduction actions, this NHMP aligns with the goals of the jurisdiction's Comprehensive Plan and helps each jurisdiction meet the requirements of statewide land use planning Goal 7.

The primary responsibility for the development and implementation of risk reduction strategies and policies lies with local jurisdictions. However, additional resources exist at the state and federal levels. Some of the key agencies in this area include OEM, Oregon Building Codes Division (BCD), Oregon Department of Forestry (ODF), Oregon Department of

² Code of Federal Regulations, Chapter 44. Section 201.6, subsection (a), 2015

³ *ibid*, subsection (b). 2015

⁴ *ibid*, subsection (c). 2015

⁵ *ibid*, subsection (d). 2015

Geology and Mineral Industries (DOGAMI) and the Department of Land Conservation and Development (DLCD).

How was the NHMP Developed?

The NHMP was developed by the Yamhill County NHMP Steering Committee and the Steering Committees for the participating jurisdictions (cities and special districts). The Yamhill County Steering Committee formally convened on two occasions to discuss and revise the NHMP. Each of the participating city and special district steering committees participated in the County NHMP update process. Steering Committee members contributed data and maps, reviewed and updated the community profile, risk assessment, action items, and implementation and maintenance plan.

An open public involvement process is essential to the development of an effective NHMP. To develop a comprehensive approach to reducing the effects of natural disasters, the planning process shall include opportunity for the public, neighboring communities, local and regional agencies, as well as, private and non-profit entities to comment on the NHMP during review.⁶ Yamhill County provided an accessible project website for the public to provide feedback on the draft NHMP: <https://www.co.yamhill.or.us/emergency-management>. In addition, Yamhill County provided a press release on their website to encourage the public to offer feedback on the NHMP update. The County, city, and special district websites continue to be a focal point for distribution natural hazard information using hazard viewers, emergency alerts, hazard preparation and annual natural hazard progress reports. In addition, the County administered a survey (see Appendix F) that was used to inform the content of, and prioritization, of action items.

How is the NHMP Organized?

Each volume of the NHMP provides specific information and resources to assist readers in understanding the hazard-specific issues facing county and city residents, businesses and the environment. Combined, the sections work in synergy to create a mitigation plan that furthers the community's mission to reduce or eliminate long-term risk to people and their property from hazards and their effects. This NHMP structure enables stakeholders to use the section(s) of interest to them.

Volume I: Basic Plan

Plan Summary

The NHMP summary provides an overview of the FEMA requirements, planning process and highlights the key elements of the risk assessment, mitigation strategy and implementation and maintenance strategy.

Section I: Introduction

The Introduction briefly describes the countywide mitigation planning efforts and the methodology used to develop the NHMP.

⁶ Code of Federal Regulations, Title 44, Section 201.6, subsection (b), 2015

Section 2: Hazard Identification and Risk Assessment

This section provides the factual basis for the mitigation strategies contained in Volume I, Section 3. (Additional information is included within Volume III, Appendix C, which contains an overall description of Yamhill County and the incorporated cities.) This section includes a brief description of community sensitivities and vulnerabilities. The Risk Assessment allows readers to gain an understanding of each jurisdiction’s vulnerability and resilience to natural hazards.

A hazard summary is provided for each of the hazards addressed in the NHMP. The summary includes hazard history, location, extent, vulnerability, impacts and probability. This NHMP addresses the following hazards:

- Drought
- Earthquake
- Flood
- Landslide
- Volcanic Event
- Wildfire
- Windstorm
- Winter Storm

Additionally, this section provides information on each jurisdictions’ participation in the National Flood Insurance Program (NFIP).

Section 3: Mitigation Strategy

This section documents the NHMP vision, mission, goals and actions (mitigation strategy) and describes the components that guide implementation of the identified actions. Actions are based on community sensitivity and resilience factors and the risk assessments in Volume I, Section 2 and Volume II.

Section 4: Plan Implementation and Maintenance

This section provides information on the implementation and maintenance of the NHMP. It describes the process for prioritizing projects and includes a suggested list of tasks for updating the NHMP, to be completed at the semi-annual and five-year review meetings.

Volume II: Jurisdictional Addenda

Volume II of the NHMP is reserved for any city or special district addenda developed through this multi-jurisdictional planning process. Each of the cities with a FEMA approved addendum went through an update to coincide with the county’s update. As such, the five-year update cycle will be the same for the participating cities and the county.

The NHMP includes addenda for the following cities:

- Amity
- Dayton
- McMinnville
- Newberg
- Sheridan
- Willamina
- Yamhill

Note 1: The cities of Dundee and Lafayette are incorporated cities in Yamhill County that did not participate in this update of the NHMP, as such there are no addenda for these cities.

Note 2: Special districts may opt to develop an addendum during future versions of the NHMP. See acknowledgements for a list of special districts that participated in the development of this NHMP.

Volume III: Appendices

The appendices are designed to provide the users of the Yamhill County NHMP with additional information to assist them in understanding the contents of the NHMP and provide them with potential resources to assist with NHMP implementation.

Appendix A: Action Item Forms

This appendix contains the detailed action item forms for each of the mitigation strategies identified in this NHMP.

Appendix B: Planning and Public Process

This appendix includes documentation of all the countywide public processes utilized to develop the NHMP. It includes invitation lists, agendas and sign-in sheets of Steering Committee meetings as well as any other public involvement methods.

Appendix C: Community Profile

The community profile describes the County from several perspectives to help define and understand the region's sensitivity and resilience to natural hazards. The information in this section represents a snapshot in time of the current sensitivity and resilience factors in the region when the NHMP was updated.

Appendix D: Economic Analysis of Natural Hazard Mitigation Projects

This appendix describes the FEMA requirements for benefit cost analysis in natural hazards mitigation, as well as various approaches for conducting economic analysis of proposed mitigation activities.

Appendix E: Grant Programs and Resources

This appendix lists state and federal resources and programs by hazard.

Appendix F: Community Survey

This appendix includes the survey instrument and results from the community survey administered by OPDR and Yamhill County.

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SECTION 2: HAZARD IDENTIFICATION AND RISK ASSESSMENT

This section of the NHMP addresses 44 CFR 201.6(c)(2) - Risk Assessment. The Risk Assessment applies to Yamhill County and the city addenda included in the NHMP. We address city specific information where relevant. In addition, this section can assist with addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards.

We use the information presented in this section, along with community characteristics presented in Volume III, Appendix C to inform the risk reduction actions identified Volume I, Section 3. Figure 2-1 shows how we conceptualize risk in this NHMP. Ultimately, the goal of hazard mitigation is to reduce the area where hazards and vulnerable systems overlap.

Figure 2-1 Understanding Risk



Source: Oregon Partnership for Disaster Resilience.

What is a Risk Assessment?

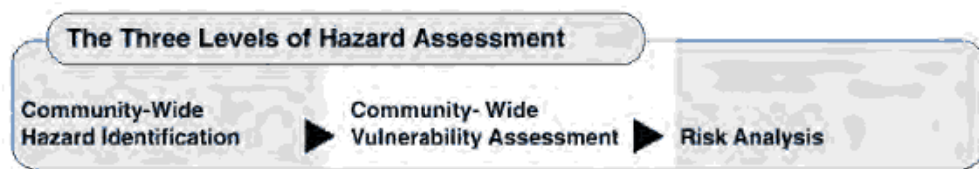
A risk assessment consists of three phases: hazard identification, vulnerability assessment and risk analysis.

- **Phase 1:** Identify hazards that can affect the jurisdiction. This includes an evaluation of potential hazard impacts – type, location, extent, etc.
- **Phase 2:** Identify important community assets and system vulnerabilities. Example vulnerabilities include people, businesses, homes, roads, historic places and drinking water sources.

- **Phase 3:** Evaluate the extent to which the identified hazards overlap with, or have an impact on, the important assets identified by the community.

The following figure illustrates the three-phase risk assessment process:

Figure 2-2 Three Phases of a Risk Assessment



Source: Planning for Natural Hazards: Oregon Technical Resource Guide, 1998

This three-phase approach to developing a risk assessment should be conducted sequentially because each phase builds upon data from prior phases. However, gathering data for a risk assessment need not occur sequentially.

Hazard Identification

Yamhill County identifies eight natural hazards that could have an impact on the County and participating cities and special districts. Table 2-1 lists the hazards identified in the County in comparison to the hazards identified in the Oregon NHMP for the Mid/Southern Willamette Valley (Region 3), which includes Yamhill County.

Table 2-1 Yamhill County Hazard Identification

Yamhill County	State of Oregon NHMP Region 3: Mid/Southern Willamette Valley
Drought	Drought
Earthquake	Earthquake
Flood	Flood
Landslide	Landslide
Volcanic Event	Volcano
Wildfire	Wildfire
Windstorm	Windstorm
Winter Storm	Winter Storm

Source: Yamhill County NHMP Steering Committee (2019) and State of Oregon NHMP, Region 3: Mid/Southern Willamette Valley (2015)

Probability and Vulnerability Summary

Table 2-2 presents the probability scores for each of the natural hazards present in Yamhill County for which descriptions are provided herein. Probability assesses the likelihood that a hazard event will take place in the future. Vulnerability assesses the extent to which people are susceptible to injury or other impacts resulting from a hazard as well as the exposure of the built environment or other community assets (social, environmental, economic, etc.) to hazards. The exposure of community assets to hazards is critical in the assessment of the degree of risk a community has to each hazard. Identifying the populations, facilities and infrastructure at risk from various hazards can assist the County in prioritizing resources for

mitigation and can assist in directing damage assessment efforts after a hazard event has occurred. The exposure of County assets to each hazard and potential implications are explained in each hazard section.

Vulnerability includes the percentage of population and property likely to be affected under an “average” occurrence of the hazard. Yamhill County evaluated the best available vulnerability data to develop the vulnerability scores presented below.

Table 2-2 Probability and Vulnerability Assessment Summary

Hazard	Probability	Vulnerability
Drought	High	Moderate
Earthquake - Cascadia	Moderate	High
Earthquake - Crustal	Low	Moderate
Flood	High	High
Landslide	High	Low
Volcanic Event	Low	Low
Wildfire	Low	Low
Windstorm	High	Moderate
Winter Storm	High	High

Source: Yamhill County Steering Committee 2019.

Community vulnerabilities are an important component of the NHMP risk assessment. Changes to population, economy, built environment, critical facilities, and infrastructure have not significantly influenced vulnerability within the unincorporated County. New development has complied with the standards of the Oregon Building Code and the county’s development code including their floodplain ordinance. For more in-depth information regarding specific community vulnerabilities see Volume II and Volume III, Appendix C.

Hazard Analysis Matrix and Methodology

For local governments, conducting the hazard analysis is a useful step in planning for hazard mitigation, response and recovery. The method provides the jurisdiction with a sense of hazard priorities but does not predict the occurrence of a hazard.

For the purposes of this NHMP, the County, cities, and special districts utilized the Oregon Office of Emergency Management (OEM) Hazard Analysis methodology. The hazard analysis methodology in Oregon was first developed by FEMA circa 1983 and gradually refined by OEM over the years.

The methodology produces scores that range from 24 (lowest possible) to 240 (highest possible). Vulnerability and probability are the two key components of the methodology. Vulnerability examines both typical and maximum credible events and probability endeavors to reflect how physical changes in the jurisdiction and scientific research modify the historical record for each hazard. Vulnerability accounts for approximately 60% of the total score and probability approximately 40%. We include the hazard analysis summary here to ensure consistency between the EOP and NHMP.

The Oregon method provides the jurisdiction with a sense of hazard priorities, or relative risk. It doesn't predict the occurrence of a hazard, but it does "quantify" the risk of one

hazard compared with another. By doing this analysis, planning can first be focused where the risk is greatest.

In this analysis, severity ratings and weight factors, are applied to the four categories of history, vulnerability, maximum threat (worst-case scenario) and probability.

The hazard analysis matrix involves estimating the damage, injuries and costs likely to be incurred in a geographic area over time. Risk has two measurable components: (1) the magnitude of the harm that may result, defined through the vulnerability assessment (assessed in the previous sections) and (2) the likelihood or probability of the harm occurring.

Table 2-3 presents the updated hazard analysis matrix for Yamhill County. The hazards are listed in rank order from high to low. The table shows that hazard scores are influenced by each of the four categories combined. With considerations for past historical events, the probability or likelihood of a hazard event occurring, the vulnerability to the community and the maximum threat or worst-case scenario, flood, winter storm, and the Cascadia Subduction Zone earthquake rank as the top hazard threats to the County (top tier). Drought, windstorm, and wildfire events rank in the middle (middle tier). Landslides, crustal earthquake, and volcanic events comprise the lowest ranked hazards in the county (bottom tier).

Table 2-3 Hazard Analysis Matrix – Yamhill County

Hazard	Maximum				Total Threat Score	Hazard Rank	Hazard Tiers
	History	Vulnerability	Threat	Probability			
Flood	18	40	90	63	211	#1	Top Tier
Winter Storm	16	40	80	56	192	#2	
Earthquake - Cascadia	6	45	100	35	186	#3	
Drought	8	25	80	56	169	#5	Middle Tier
Windstorm	16	25	70	56	167	#6	
Wildfire	8	15	80	21	124	#7	
Landslide	16	15	30	56	117	#8	Bottom Tier
Earthquake - Crustal	6	20	60	21	107	#9	
Volcanic Event	4	10	30	7	51	#10	

Source: Yamhill County Steering Committee (2019)

Jurisdiction Specific Risk Assessment

Each participating jurisdiction (cities and special districts) in Yamhill County completed a jurisdiction specific hazard analysis that assessed each jurisdiction’s risks where they vary from the risks facing the entire planning area. The multi-jurisdictional risk assessment information is located within each jurisdiction’s addendum in Volume II.

Federal Disaster and Emergency Declarations

Reviewing past events can provide a general sense of the hazards that have caused significant damage in the county. Where trends emerge, disaster declarations can help inform hazard mitigation project priorities.

President Dwight D. Eisenhower approved the first federal disaster declaration in May 1953 following a tornado in Georgia. Since then, federally declared disasters have been approved

within every state because of natural hazard related events. As of September 2020, FEMA has approved a total of 35 major disaster declarations, 76 fire management assistance declarations and two (2) emergency declarations in Oregon.¹ When governors ask for presidential declarations of major disaster or emergency, they stipulate which counties in their state they want included in the declaration. Table 2-4 summarizes the major disasters declared in Oregon that affected Yamhill County, since 1955. The table shows that there have been 11 major disaster declarations for Yamhill County. Most of which were related to weather events resulting primarily in flooding, snow and landslide related damage. There has been one disaster declaration for earthquake (1993 Scott Mills).

Table 2-4 FEMA Major Disaster (DR) for Yamhill County

Declaration Number	Declaration Date	Incident Period		Incident	Individual Assistance	Public Assistance Categories
		From	To			
DR-184	12/24/1964	12/24/1964	12/24/1964	Heavy rains and flooding	Yes	A, B, C, D, E, F, G
DR-413	1/25/1974	1/25/1974	1/25/1974	Severe Storms, Snowmelt, Flooding	Yes	A, B, C, D, E, F, G
DR-985	4/26/1993	3/25/1993	3/25/1993	Earthquake	None	A, B, C, D, E, F, G
DR-1099	2/9/1996	2/4/1996	2/21/1996	Severe Storms/Flooding	Yes	A, B, C, D, E, F, G
DR-1107	3/19/1996	12/10/1995	12/12/1995	Severe Storms/High Winds	None	A, B, C, D, E, F, G
DR-1510	2/19/2004	12/26/2003	1/14/2004	Severe winter storms	None	A, B, C, D, E, F, G
DR-1632	3/20/2006	12/18/2005	1/21/2006	Severe storms, Flooding, Landslides, Mudslides	None	A, B, C, D, E, F, G
DR-1683	2/2/2007	12/14/2006	12/15/2006	Severe Winter Storm and Flooding	None	A, B, C, D, E, F, G
DR-1733	12/8/2007	12/1/2007	12/17/2007	Severe Storms, Flooding, Landslides, and Mudslides	None	A, B, C, D, E, F, G
DR-1824	3/2/2009	12/13/2008	12/26/2008	Severe Winter Storm, Record and Near Record Snow, Landslides, and Mudslides	None	A, B, C, D, E, F, G
DR-4258	2/17/2016	12/6/2015	12/23/2015	Oregon Severe Winter Storms, Straight-line Winds, Flooding, Landslides, and Mudslides	None	A, B, C, D, E, F, G

Source: FEMA, Oregon Disaster History. Major Disaster Declarations.

Table 2-5 summarizes fire management assistance and emergency declarations. Fire Management Assistance may be provided after a State submits a request for assistance to the FEMA Regional Director at the time a "threat of major disaster" for a fire emergency exists. There are no fire management assistance declarations or fire suppression authorizations on record for the county.

¹ FEMA, *Declared Disasters by Year or State*, <https://www.fema.gov/disasters/#>. . Accessed August 9, 2019.

An Emergency Declaration is more limited in scope and without the long-term federal recovery programs of a Major Disaster Declaration. Generally, federal assistance and funding are provided to meet a specific emergency need or to help prevent a major disaster from occurring. Yamhill County has two recorded Emergency Declarations related to the 1977 Drought and 2005 Hurricane Katrina evacuation.

Table 2-5 FEMA Fire Management (FM) and Emergency Declarations (EM) for Yamhill County

Declaration Number	Declaration Date	Incident Period		Incident	Individual Assistance	Public Assistance Categories
		From	To			
EM-3228	9/7/2005	8/29/2005	10/1/2005	Hurricane Katrina Evacuation	None	B

Source: FEMA, Oregon Disaster History. Major Disaster Declarations.

Note: Oregon was granted an Emergency Declaration to support the Hurricane Katrina Evacuation. The Oregon National Guard deployed over 2,100 soldiers and their equipment to New Orleans in less than three days.

Hazard Profiles

The following subsections briefly describe relevant information for each hazard. For additional background on the hazards, vulnerabilities and general risk assessment information for hazards in Yamhill County, refer to the [Risk Assessment for Region 3, Mid/Southern Willamette Valley, of the Oregon NHMP \(2015\)](#).

Drought.....	7
Earthquake	11
Flood.....	23
Landslide	32
Severe Weather	38
Windstorm	39
Winter Storm.....	41
Volcanic Event	45
Wildfire	48

Drought

Significant Changes since Previous NHMP:

One (1) significant drought event has occurred since the previous NHMP.

Characteristics

A drought is a period of drier than normal conditions. Drought occurs in virtually every climatic zone, but its characteristics vary significantly from one region to another. Drought is a temporary condition; it differs from aridity, which is restricted to low rainfall regions and is a permanent feature of climate. The extent of drought events depends upon the degree of moisture deficiency and the duration and size of the affected area. Typically, droughts occur as regional events and often affect more than one city and county.

There are four types of drought: meteorological, agricultural, hydrological and socioeconomic. Meteorological drought is based on the degree of dryness. Agricultural drought focuses the amount of soil moisture versus the needs of the crops. Hydrological drought is associated with shortfalls of surface and subsurface water supply. Socioeconomic drought refers to physical water shortages and its human effect, and occurs when the need for water exceeds the supply resulting in a shortfall.

Location and Extent

Droughts occur in every climate zone and can vary from region to region. Drought may occur throughout Yamhill County and may have profound effects on the economy, particularly the agricultural and hydro-power sectors. The extent of drought depends upon the degree of moisture deficiency, and the duration and size of the affected area. Typically, droughts occur as regional events and often affect more than one county. In severe droughts, environmental and economic consequences can be significant. The extent of the hazard is shown in Figure 2-3 and Figure 2-4, surface water supply index values below -1.5 indicate low water availability, which could lead to drought.

History

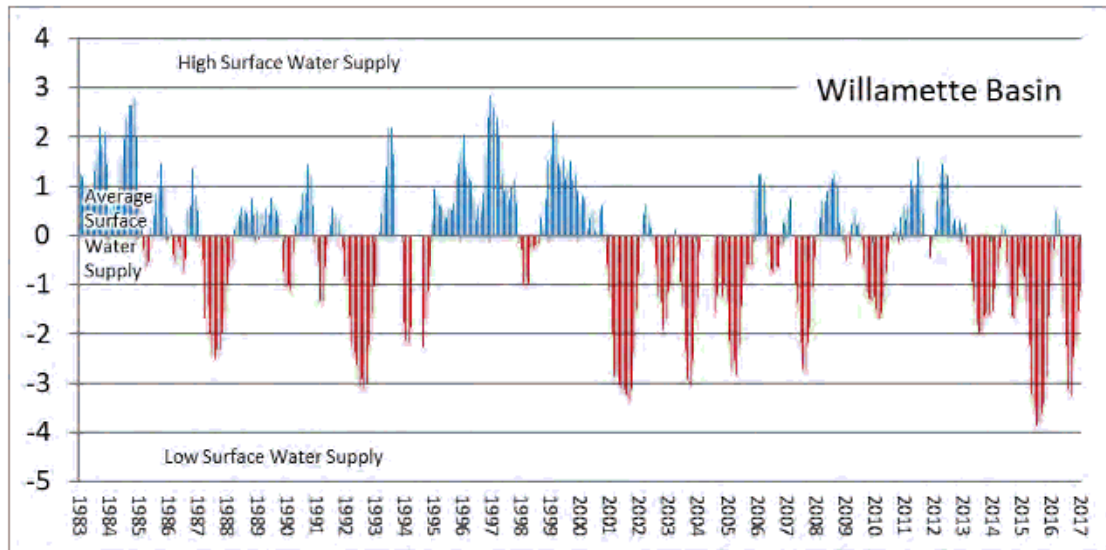
Yamhill County experiences annual dry conditions typically during the summer months from July through September. Drought is typically measured in terms of water availability in a defined geographical area. It is common to express drought with a numerical index that ranks severity. Most federal agencies use the Palmer Method which incorporates precipitation, runoff, evaporation and soil moisture. However, the Palmer Method does not incorporate snowpack as a variable. Therefore, it is not believed to provide a very accurate indication of drought conditions in Oregon and the Pacific Northwest.

The Surface Water Supply Index (SWSI) from the Natural Resources Conservation Service is an index of current water conditions throughout the state. The index utilizes parameters derived from snow, precipitation, reservoir and stream flow data. NRCS collects data each month from key stations in each basin. The lowest SWSI value, -4.2, indicates extreme drought conditions (Low Surface Water Supply ranges from -1.6 to -4.2). The highest SWSI value, +4.2, indicates extreme wet conditions (High Surface Water Supply ranges from +1.6

to +4.2). The mid-point is 0.0, which indicates an average water supply (Average Water Supply ranges from +1.5 to -1.5).

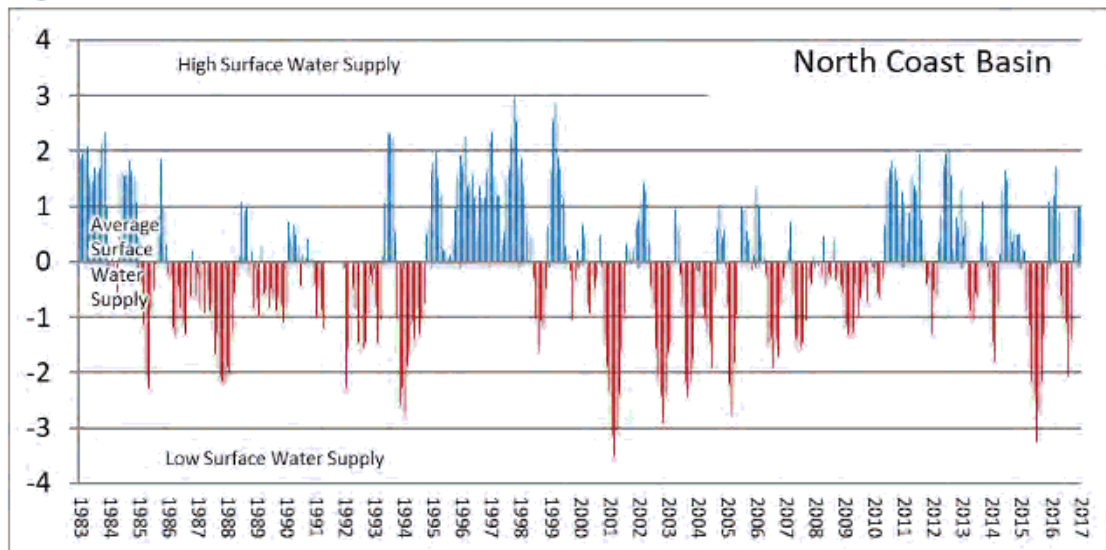
The figures below show the monthly history of SWSI values from 1983 to 2017 for the Willamette Basin (Figure 2-3, includes all portions of the County that are outside of the North Coast Basin) and the North Coast Basin (Figure 2-4, includes the far west portion of the County that is within the Oregon Coast Range that extends into the North Coast Basin).

Figure 2-3 SWSI Values for the Willamette Basin



Source: Department of Agriculture-Natural Resources Conservation Service, "Surface Water Supply Index, Willamette Basin" www.or.nrcs.usda.gov. Accessed September 2020.

Figure 2-4 SWSI Values for the North Coast Basin



Source: Department of Agriculture-Natural Resources Conservation Service, "Surface Water Supply Index, North Coast Basin". www.or.nrcs.usda.gov. Accessed September 2020.

Research shows that the periods of drought have fluctuated; recent drought periods in the Willamette Basin occurred (SWSI < -3.0 for four or more months) in 2001 and 2015 (no drought periods occurred in the North Coast Basin). In addition, two (2) executive orders

declaring drought emergencies have occurred in 1991 and 2015; the 2015 drought was also federally declared.²

El Niño/La Niña

El Niño Southern Oscillation (ENSO) weather patterns can increase the frequency and severity of drought. During El Niño periods, alterations in atmospheric pressure in equatorial regions yield an increase in the surface temperature off the west coast of North America. This gradual warming sets off a chain reaction affecting major air and water currents throughout the Pacific Ocean; La Niña periods are the reverse with sustained cooling of these same areas. In the North Pacific, the Jet Stream is pushed north, carrying moisture laden air up and away from its normal landfall along the Pacific Northwest coast. In Oregon, this shift results in reduced precipitation and warmer temperatures, normally experienced several months after the initial onset of the El Niño. These periods tend to last nine to twelve months, after which surface temperatures begin to trend back towards the long-term average. El Niño periods tend to develop between March and June, and peak from December to April. ENSO generally follows a two to seven-year cycle, with El Niño or La Niña periods occurring every three to five years. However, the cycle is highly irregular, and no set pattern exists. The last major El Niño was during 1997-1998, and in 2015-2016 Oregon experience a “super” El Niño (the strongest in 15 years, the two previous events occurred in 1982-1983 and 1997-1998) that included record rainfall and snowpack in areas of the state.³

Future Climate Variability⁴

Climate models for Oregon suggest, future regional climate changes include increases in temperature around 0.2-1°F per decade in the 21st Century, along with warmer and drier summers, and some evidence that extreme precipitation will increase in the future. By the year 2100, Oregon is expected to see temperature increases between 4 and 9°F, depending on global emissions. Increased droughts may occur in the Willamette Valley under various climate change scenarios because of various factors, including reduced snowpack, rising temperatures, and likely reductions in summer precipitation. Climate models suggest that as the region warms, winter snow precipitation will likely shift to higher elevations and snowpack will be diminished as more precipitation falls as rain, altering surface flows. Increases in rainfall may contribute to greater risk of landslide in certain areas.

Probability Assessment

Based on the available data and research the Steering Committee (Steering Committee) assessed the **probability of experiencing a locally severe drought as “High,”** meaning one incident is likely within the next 10 to 35 years.

Droughts are not uncommon in the State of Oregon, nor are they just an “east of the mountains” phenomenon. They occur in all parts of the state, in both summer and winter. Oregon’s drought history reveals many short-term and a few long-term events. The average recurrence interval for severe droughts in Oregon is somewhere between 8 and 12 years.

² Oregon Water Resources Department Public Declaration Status Report, http://apps.wrd.state.or.us/apps/wr/wr_drought/declaration_status_report.aspx, accessed December, 2019.

³ Cho, Renne. “El Nino and global warming – what’s the connection.” Phys.org, February 3, 2016. <https://phys.org/news/2016-02-el-nino-global-warmingwhat.html>

⁴ Oregon Climate Change Research Institute (OCCRI), 4th Oregon Climate Assessment Report (2019) and Northwest Climate Assessment Report (2013). <http://www.occri.net/publications-and-reports/publications/>

According to SWSI analysis there have been three (3) droughts between 1983 and 2017 (see Figure 2-3 and Figure 2-4).

Vulnerability Assessment

The Steering Committee rated the County as having a **“moderate” vulnerability to drought hazards**, meaning it is expected that between one and 10% of the unincorporated County’s population or assets would be affected by a major drought emergency or disaster.

The environmental and economic consequences can be significant, especially for the agricultural sector. Drought also increases the probability of wildfires – a major natural hazard concern for Yamhill County. Drought can affect all segments of Yamhill County’s population, particularly those employed in water-dependent activities (e.g., agriculture, hydroelectric generation, recreation, etc.). Also, domestic water-users may be subject to stringent conservation measures (e.g., rationing) as per the County’s water management plan.

All parts of Yamhill County are susceptible to drought; however, the following areas and issues are of concern:

- Drinking water systems
- Power and water enterprises
- Residential and community wells in rural areas
- Fire response capabilities
- Fish and wildlife

Potential impacts to county water supplies and the agriculture industry are the greatest threats. Additionally, long-term drought periods of more than a year can impact forest conditions and set the stage for potentially destructive wildfires.

More information on this hazard can be found in the [Risk Assessment for Region 3, Mid/Southern Willamette Valley, of the Oregon NHMP \(2015\)](#).

Earthquake

Significant Changes since Previous NHMP:

There have been no significant updates since the previous plan. The Oregon Resilience Plan (2013) has been cited and incorporated where applicable.

Characteristics

The Pacific Northwest in general is susceptible to earthquakes from four sources: 1) the offshore Cascadia Subduction Zone, 2) deep intraplate events within the subducting Juan de Fuca Plate, 3) shallow crustal events within the North American Plate, and 4) earthquakes associated with volcanic activity.

Crustal Fault Earthquakes

Crustal fault earthquakes are the most common earthquakes and occur at relatively shallow depths of 6-12 miles below the surface.⁵ While most crustal fault earthquakes are smaller than magnitude 4 and generally create little or no damage, they can produce earthquakes of magnitudes up to 7, which cause extensive damage. Yamhill County has the following documented crustal faults: Gales Creek-Newberg-Mt. Angel Structural Zone (including the Newberg Fault). The Mount Angel Fault is located approximately 15 miles east of Yamhill County, and is responsible for the 5.7 magnitude Spring Break Quake in 1993.

Deep Intraplate Earthquakes

Occurring at depths from 25 to 40 miles below the earth's surface in the subducting oceanic crust, deep intraplate earthquakes can reach up to magnitude 7.5.⁶ The February 28, 2001 earthquake in Washington State was a deep intraplate earthquake. It produced a rolling motion that was felt from Vancouver, British Columbia to Coos Bay, Oregon and east to Salt Lake City, Utah. A 1965 magnitude 6.5 intraplate earthquake centered south of Seattle-Tacoma International Airport caused seven deaths.⁷

Subduction Zone Earthquakes

The Pacific Northwest is located at a convergent plate boundary, where the Juan de Fuca and North American tectonic plates meet. The two plates are converging at a rate of about 1-2 inches per year. This boundary is called the Cascadia Subduction Zone (CSZ). It extends from British Columbia to northern California. Subduction zone earthquakes are caused by the abrupt release of slowly accumulated stress.⁸

Subduction zones like the CSZ have produced earthquakes with magnitudes of 8 or larger. Historic subduction zone earthquakes include the 1960 Chile (magnitude 9.5) and 1964

⁵ Madin, Ian P. and Zhenming Wang. Relative Earthquake Hazard Maps Report. (1999) DOGAMI.

⁶ Planning for Natural Hazards: The Oregon Technical Resource Guide, Department of Land Conservation and Development (July 2000), Ch. 8, pp. 8.

⁷ The Oregonian. "A region at risk." March 4, 2001.

⁸ Questions and Answers on Earthquakes in Washington and Oregon (February 2001) www.geophys.washington.edu/seis/pnsn/info_general/faq.html.

southern Alaska (magnitude 9.2) earthquakes⁹ with more recent events being the 2004 Indian Ocean (magnitude 9.1) and 2011 Japan (magnitude 9).

Volcanic Earthquakes

Volcanic earthquakes are usually smaller than magnitude 2.5, roughly the threshold for shaking felt by observers close to the event. Swarms of small earthquakes may persist for weeks to months before eruptions, but little or no earthquake damage would occur to buildings in surrounding communities. Some volcanic related swarms may include earthquakes as large as about magnitude 5.

While all four types of earthquakes have the potential to cause major damage, local crustal faults are expected to be more damaging primarily because of their proximity to densely populated areas.¹⁰

Location and Extent

The seismic hazard for Yamhill County arises predominantly from major earthquakes on the Cascadia Subduction Zone. Large (M6.8-7.0M), crustal earthquakes in or near Yamhill County could be more damaging than a CSZ earthquake but the likelihood of these events is considerably less. Additional fault zones throughout the county and region may produce localized crustal earthquakes up to 6.0. Table 2-6 presents a list of the different Class A and B fault lines throughout the county. It is expected that earthquakes in Yamhill County would affect water and sewer systems, natural gas lines, bridges and power/electrical systems. For hazard mitigation purposes, it should be considered that the extent of a major event would be greater than county-wide. A local earthquake of M 6.0 or a regional M 9.0 earthquake is likely to cause substantial structural damage to bridges, buildings, utilities, and communications systems, as well as the following impacts to infrastructures and the environment:

- Floods and landslides
- Fires, explosions, and hazardous materials incidents
- Disruption of vital services such as water, sewer, power, gas, and transportation routes
- Disruption of emergency response systems and services
- Displaced Households
- Economic losses for buildings
- Economic loss to highways, airports, communications
- Generated debris
- Illness, injury, and death
- Significant damage to critical and essential facilities, including schools, hospitals, fire stations, police departments, city hall

⁹ The Oregonian. "A region at risk." March 4, 2001.

¹⁰ Bauer, John, William Burns, and Ian Madin. Earthquake Regional Impact Analysis for Yamhill, Multnomah, and Washington Counties, Oregon. (2018). DOGAMI

Table 2-6 Class A and B Faults Located in or near Yamhill County-

Name	Class	Fault ID	Primary County, State	Length (km)	Time of Most Recent Deformation	Slip-Rate Category
Gales Creek Fault Zone	A	718	Washington County	73km	undifferentiated Quaternary	Less than 0.2 mm/yr
Newberg Fault	A	717	Yamhill County	5km	undifferentiated Quaternary	Less than 0.2 mm/yr
Canby-Molalla Fault	A	716	Clackamas County	50km	Latest Quaternary (<15ka)	Less than 0.2 mm/yr
Mount Angel Fault	A	873	Marion County	30km	Latest Quaternary (<15ka)	Less than 0.2 mm/yr
Bolton Fault	B	874	Clackamas County	9km	Quaternary (<1.6 Ma)	Less than 0.2 mm/yr
Oatfield Fault	A	875	Washington County	29km	Quaternary (<1.6 Ma)	Less than 0.2 mm/yr
Portland Hills Fault	A	877	Multnomah County	49km	Quaternary (<1.6 Ma)	Less than 0.2 mm/yr
Salem-Eola Hills homocline	A	719	Polk County	32km	undifferentiated Quaternary	Less than 0.2 mm/yr

Source: Source: US Geological Survey (USGS), Quaternary Fault and Fold Database

For more information on Class A and B faults located in Yamhill County see the US Geological Survey, Quaternary Fault and Fold Database:

<https://earthquake.usgs.gov/hazards/qfaults/>.

The extent of the earthquake hazard is measured in magnitude. Figure 2-5 shows active faults and areas for liquefaction hazards. The figure also shows that recent earthquakes have registered as Magnitude 5 or less (earthquakes at this magnitude are often felt but cause no damage, or only minor damage). Yamhill County can expect similar earthquake magnitudes to occur in the future. The Cascadia Subduction Zone earthquake has the capacity to cause a magnitude 8.5 or greater earthquake; however, due to the distance from Yamhill County the damage locally is expected to be significant, but less than a local crustal fault.

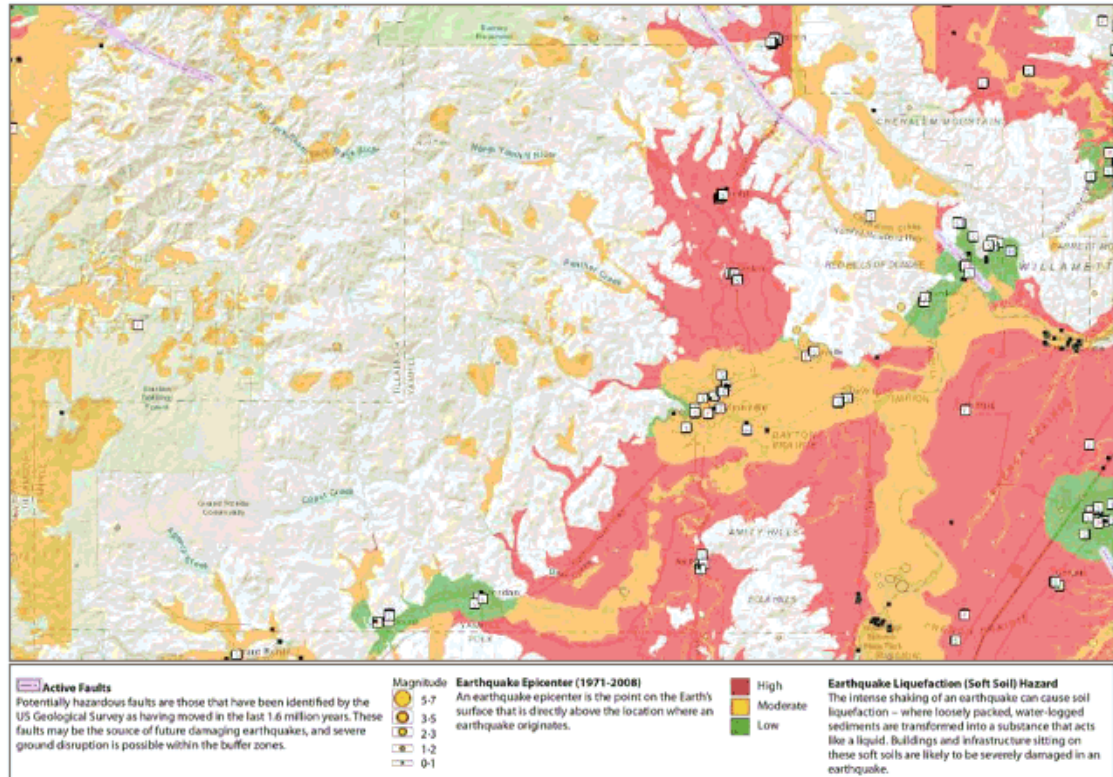
Liquefaction

Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures.

To develop a regional liquefaction hazard map for Yamhill County, DOGAMI started by collecting the best available geologic information. Hazard groupings were primarily based on lithologies and checked with individual data points. With the available information compiled, DOGAMI assigned liquefaction susceptibility classes based on the dominant lithologies for each geologic unit in the study area, checked source data boundaries, and simplified the GIS outputs into four relative hazard classes: None/Very Low, Low, Moderate, and High. Areas with Moderate to High liquefaction susceptibilities are concentrated along the rivers and flood plains in the Willamette Valley, Cascade Range tributaries, and major stream valleys within the Cascade Range. Older river terrace and Missoula Flood deposits in

the Willamette Valley were assigned a lower liquefaction hazard yet are still considered susceptible to liquefaction in larger earthquakes. It is important to note that the quality and scale of the available base maps precluded identification of all liquefaction hazard areas, particularly in the eastern portion of the county.

Figure 2-5 Earthquake Active Faults, Epicenters (1971-2008), and Soft Soils



Source: [Oregon HazVu: Statewide Geohazards Viewer](#) – To view map in more detail click hyperlink to left.

Amplification

Soils and soft sedimentary rocks near the earth's surface can modify ground shaking caused by earthquakes. One of these modifications is amplification. Amplification increases the magnitude of the seismic waves generated by the earthquake. The amount of amplification is influenced by the thickness of geologic materials and their physical properties. The degree of amplification greatly affects the performance of infrastructure in earthquake. Buildings and structures built on soft and unconsolidated soils, for example, face greater risk. Amplification can also occur in areas with deep sediment filled basins and on ridge tops.

DOGAMI developed the ground shaking amplification map based generally on the NEHRP 1997 method of categorizing relative hazards and simplified the GIS outputs into relative hazard classes – Low, Moderate, and High. The resulting map is not intended to be used in place of site-specific studies. The high hazard soils are located along and adjacent to streams and rivers in Yamhill County. The western portion of the county is varied, with competent bedrock areas mapped as Low hazard, dense soil areas mapped as Moderate hazard, and

younger landslide and alluvial deposit areas mapped as High hazard for ground shaking amplification.¹¹

DOGAMI and Yamhill County GIS worked together to combine the ground shaking, amplification, and liquefaction data to develop a composite Relative Earthquake Hazard Map. This map represents the overall earthquake hazards in Yamhill County.

Due to the expected pattern of damage resulting from a CSZ event, the Oregon Resilience Plan divides the State into four distinct zones and places Yamhill County predominately within the "Valley Zone" (Valley Zone, from the summit of the Coast Range to the summit of the Cascades).

DOGAMI, in partnership with other state and federal agencies, has undertaken a rigorous program in Oregon to identify seismic hazards, including active fault identification, bedrock shaking, tsunami inundation zones, ground motion amplification, liquefaction and earthquake induced landslides. DOGAMI has published several seismic hazard maps that are available for communities to use. The maps show liquefaction, ground motion amplification, landslide susceptibility and relative earthquake hazards. OPDR used the DOGAMI Statewide Geohazards Viewer to present a visual map of recent earthquake activity, active faults and liquefaction; ground shaking is generally expected to be higher in the areas marked by soft soils in the map above. The severity of an earthquake is dependent upon a number of factors including: 1) the distance from the earthquake's source (or epicenter); 2) the ability of the soil and rock to conduct the earthquake's seismic energy; 3) the degree (i.e., angle) of slope materials; 4) the composition of slope materials; 5) the magnitude of the earthquake; and 6) the type of earthquake.

For more information, see the following reports:

- Geologic hazards, earthquake and landslide hazard maps, and future earthquake damage estimates for six counties in the Mid/Southern Willamette Valley including Yamhill, Marion, Polk, Benton, Linn, and Lane Counties, and the City of Albany, Oregon (2008, [IMS-24](#))
- Statewide Cascadia earthquake hazard data (2013, [O-13-06](#))
- Cascadia Subduction Zone earthquakes: A magnitude 9.0 earthquake scenario, (2012, [O-12-22](#))
- Statewide seismic needs assessment: Implementation of Oregon 2005 Senate Bill 2 relating to public safety, earthquakes, and seismic rehabilitation of public buildings, (2007, [O-07-02](#)).
- Map of selected earthquakes for Oregon: 1841-2002 (2003, [O-03-02](#)).
- Interpretive Map Series: IMS-9 - Relative earthquake hazard maps for selected urban areas in western Oregon (2000, [IMS-9](#)).
- Interpretive Map Series: IMS-7 - Relative earthquake hazard maps for selected urban areas in western Oregon (1999, [IMS-7](#)).
- Earthquake damage in Oregon: Preliminary estimate for future earthquake losses (1999, [SP-29](#))

¹¹ Burns, Hofmeister, Wang, 2008. "Geologic Hazards, Earthquake and Landslide Hazard Maps, and Future Earthquake Damage Estimates for Six Counties in the Mid/Southern Willamette Valley including Yamhill, Marion, Polk, Benton, Linn and Lane Counties and the City of Albany, Oregon: Oregon Department of Geology and Mineral Industries [Interpretive Map Series IMS-24](#)."

Additional reports are available via DOGAMI's Publications Search website:
<https://www.oregongeology.org/pubs/pubsearch.htm>

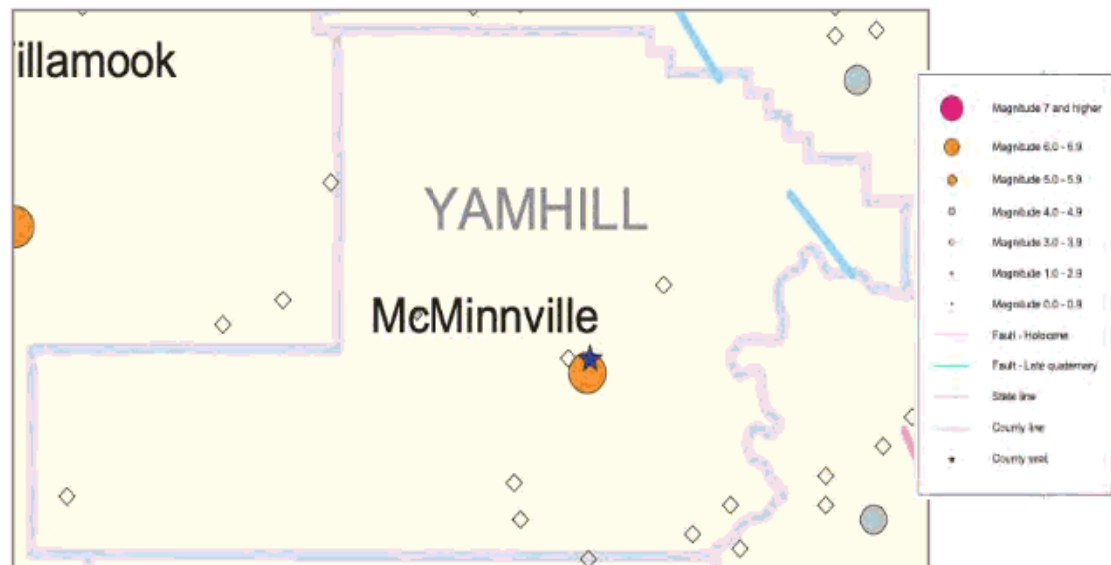
Other agency/ consultant reports:

[Oregon Resilience Plan \(2013\)](#)

History

Dating back to 1841, there have been more than 6,000-recorded earthquakes in Oregon, most with a magnitude below three (Figure 2-5 and Figure 2-6). Portland and its surrounding region is potentially the most seismically active area within Oregon. The Portland metropolitan region has encountered seventeen earthquakes of an estimated magnitude of four and greater, with major earthquakes in 1877 (magnitude 5.3), 1962 (magnitude 5.2), and 1993 (magnitude 5.6). Although seismograph stations were established as early as 1906 in Seattle and 1944 in Corvallis, improved seismograph coverage of the Portland region did not begin until 1980, when the University of Washington expanded its regional network into northwestern Oregon.

Figure 2-6 Regional Earthquake History (1841-2001)



Source: DOGAMI, Snippet of Map of Selected Earthquakes for Oregon, 1841 through 2002 ([O-03-02](#))

Geologic evidence shows that the Cascadia Subduction Zone has generated great earthquakes, most recently about 300 years ago. It is generally accepted to have been magnitude 9 or greater. The average recurrence interval of these great Cascadia earthquakes is approximately 500 years, with gaps between events as small as 200 years and as large as 1,000 years.

Probability Assessment

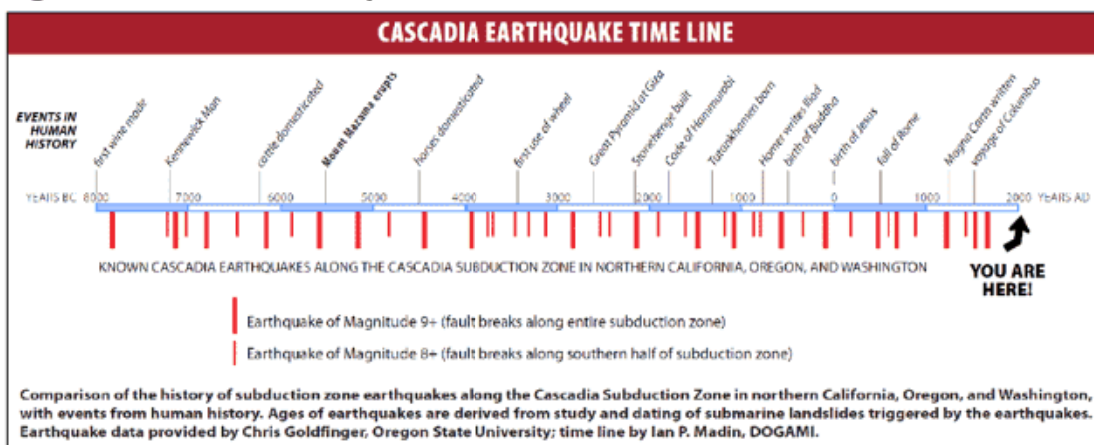
Based on the available data and research the Steering Committee determined the **probability of experiencing a Cascadia Subduction Zone (CSZ) is "moderate"**, meaning one incident may occur within the next 35 to 75 years. The Steering Committee determined the

probability of experiencing a crustal earthquake is “low”, meaning one incident may occur within the next 100 years.

Yamhill County is susceptible to deep intraplate events within the Cascadia Subduction Zone (CSZ), where the Juan de Fuca Plate is diving beneath the North American Plate and shallow crustal events within the North American Plate.

According to the Oregon NHMP, the return period for the largest of the CSZ earthquakes (Magnitude 9.0+) is 530 years with the last CSZ event occurring 314 years ago in January of 1700 (Figure 2-7). The probability of a 9.0+ CSZ event occurring in the next 50 years ranges from 7 - 12%. Notably, 10 - 20 “smaller” Magnitude 8.3 - 8.5 earthquakes occurred over the past 10,000 years that primarily affected the southern half of Oregon and northern California. The average return period for these events is roughly 240 years. The combined probability of any CSZ earthquake occurring in the next 50 years is 37 - 43%.¹²

Figure 2-7 Cascadia Earthquake Timeline



Source: OSSPAC, [The Oregon Resilience Plan](#) (2013)

Establishing a probability for crustal earthquakes is difficult given the small number of historic events in the region. However, both faults used to inform this report (Gales Creek Fault zone and the Newberg Fault) have a low probability of rupture. Earthquakes generated by volcanic activity in Oregon’s Cascade Range are possible, but likewise unpredictable. For more information, see the DOGAMI reports cited previously.

Vulnerability Assessment

The Steering Committee rated the County as having a “high” vulnerability to the Cascadia Subduction Zone (CSZ) earthquake hazard meaning that more than 10% of the unincorporated County’s population or assets would be affected by a major CSZ event. The Steering Committee rated the County as having a “moderate” vulnerability to a crustal earthquake hazard, meaning that one to 10% of the unincorporated County’s population or assets would be affected by a major crustal earthquake event.

¹² DLCD, Oregon Natural Hazards Mitigation Plan (2015).

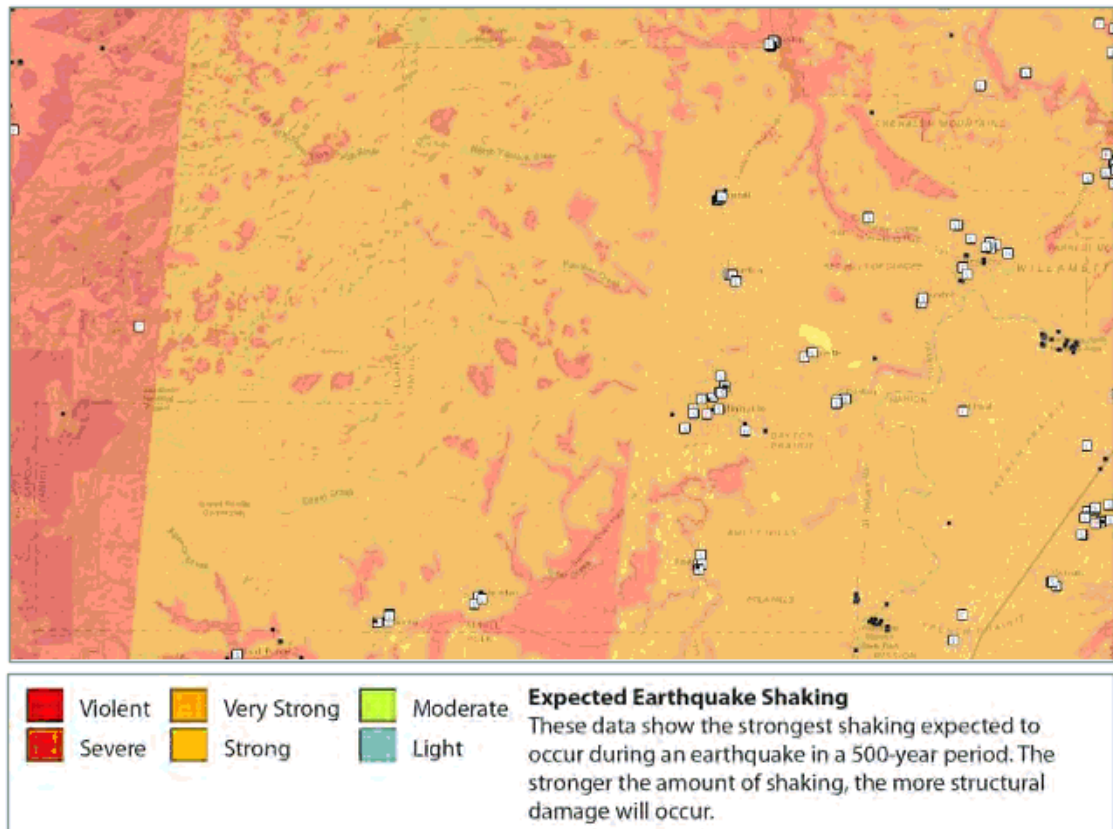
The local crustal faults, the county's proximity to the Cascadia Subduction Zone, potential slope instability and the prevalence of certain soils subject to liquefaction and amplification combine to give the county a high-risk profile.

Factors included in an assessment of earthquake risk include population and property distribution in the hazard area, the frequency of earthquake events, landslide susceptibility, buildings, infrastructure and disaster preparedness of the region. This type of analysis can generate estimates of the damages to the county due to an earthquake event in a specific location.

Seismic activity can cause great loss to businesses, either a large-scale corporation or a small retail shop. Losses not only result in rebuilding cost, but fragile inventory and equipment can be destroyed. When a company is forced to stop production for just a day, business loss can be tremendous. Residents, businesses and industry all suffer temporary loss of income when their source of finances is damaged or disrupted.

Figure 2-8 shows the expected shaking/damage potential for Yamhill County as a result of a Cascadia Subduction Zone (CSZ) earthquake event.

Figure 2-8 Cascadia Subduction Zone Expected Shaking



Source: [Oregon HazVu: Statewide Geohazards Viewer](#) – To view map in more detail click hyperlink to left.

The figure shows that the county will experience “moderate” to “severe” shaking that will last two to four minutes. The strong shaking will be extremely damaging to lifeline transportation routes including I-5. For more information on expected losses due to a CSZ event see the [Oregon Resilience Plan](#).

2008 Assessment

There has not been an assessment of earthquake vulnerability since 2008. In 2008, the Oregon Department of Geology and Mineral Industries (DOGAMI) developed regional earthquake hazard information to assess potential damages and losses for various earthquake scenarios in the Mid-Willamette Valley (see also 1999 Assessment below).¹³ Note this assessment utilizes assessor and building data from 2005 and population and housing data from the 2000 Decennial US Census; see Appendix C for updated information. More specifically, DOGAMI:

- Identified the primary geologic hazards of Yamhill, Marion, Polk, Benton, Linn, and Lane Counties and the City of Albany;
- Developed countywide earthquake and landslide hazard maps for each county; and
- Developed future earthquake damage estimates for each community.

Damage and loss estimates for each community were analyzed for two earthquake scenarios:

- A magnitude ~6.8 crustal fault earthquake
- A magnitude 8.5 Cascadia Subduction Zone earthquake

Information was consolidated into the Hazards U.S. Multi-Hazard methodology and computer application (HAZUS – MH), which is a federally developed program used to model various earthquake scenarios and estimate associated damage and loss.

The following is a brief summary of damage and loss estimates for Yamhill County in a magnitude 6.8 Newberg Fault Zone crustal earthquake scenario:

- Expected Building Damages: 26% extensive to complete; 24% moderate
- Estimated fatalities during late afternoon business hours: 67
- Injuries from minor to life threatening: 1,178
- Households displaced: 4,256
 - Water and electric service is expected to not be available immediately after an event; majority of water and electric back within 30 days
- People needing shelter: 1,008 (out of 84,992)
- Injuries requiring hospitalization: 53
- No essential facilities are expected to be destroyed; however, many will not be able to be occupied immediately after the event.

The following is a brief summary of damage and loss estimates for Yamhill County in a magnitude 8.5 Cascadia Subduction Zone earthquake scenario¹⁴:

- Expected Building Damages: 19% extensive to complete; 8% moderate
- Estimated fatalities during late afternoon business hours: 74
- Injuries from minor to life threatening: 1,190

¹³ Burns, William J., R. Jon Hofmeister, and Yumei Wang. Geologic Hazards, Earthquake and Landslide Hazard Maps, and Future Earthquake Damage Estimates for Six Counties in the Mid/Southern Willamette Valley including Yamhill, Marion, Polk, Benton, Linn, and Lane Counties, and the City of Albany, Oregon. Oregon Department of Geology and Mineral Industries Interpretive Map Series IMS-24. 2008.

¹⁴ Note that this information differs from that provided in the 1999 report (Table 2-7) based on the methodology and modeling that was used. See full reports for details.

- Households displaced: 3,082
 - Water services expected to not be immediately available to about half of households and back within one week; no disruption of electric service is expected
- People needing shelter: 750 (out of a population of 84,992 per the 2000 Census)
- Injuries requiring hospitalization: 53
- No essential facilities are expected to be completely destroyed, however, many will not be able to be occupied immediately after the event.

For more information, see: Geologic hazards, earthquake and landslide hazard maps, and future earthquake damage estimates for six counties in the Mid/Southern Willamette Valley including Yamhill, Marion, Polk, Benton, Linn, and Lane Counties, and the City of Albany, Oregon (2008, [IMS-24](#)).

2007 Rapid Visual Screening

As noted in the community profile (Appendix C) approximately 57% of residential buildings were built prior to 1990 (79% in the unincorporated portions of the County), which increases the County's vulnerability to the earthquake hazard.

In 2007, DOGAMI completed a rapid visual screening (RVS) of educational and emergency facilities in communities across Oregon, as directed by the Oregon Legislature in Senate Bill 2 (2005). RVS is a technique used by FEMA ([FEMA P-154](#)) to identify, inventory and rank buildings that are potentially vulnerable to seismic events. DOGAMI ranked each building surveyed with a 'low,' 'moderate,' 'high,' or 'very high' potential for collapse in the event of an earthquake. It is important to note that these rankings represent a probability of collapse based on limited observed and analytical data and are therefore approximate rankings. To fully assess a buildings potential for collapse, a more detailed engineering study completed by a qualified professional is required, but the RVS study can help to prioritize which buildings to survey.

DOGAMI screened 52 facilities in the unincorporated County and incorporated cities. There are no screened facilities located within the unincorporated portion of the County with a 'high' or 'very high' potential for collapse (only the Perrydale School and Ewing Young Elementary School are within the unincorporated County). Collapse potential for facilities located in the incorporated cities are listed in the addenda (Volume II). Additional information, can be found within the [RVS study](#) on DOGAMI's website (www.oregongeology.org).

Mitigation Successes

Seismic retrofit grant awards per the [Seismic Rehabilitation Grant Program](#)¹⁵ have been funded to retrofit Adams Elementary School (McMinnville), (2017 grant award, \$1,500,000); Memorial Elementary School (McMinnville), (2017 grant award, \$692,688); Newberry Elementary School (McMinnville), (2017 grant award, \$420,187); Yamhill Fire District Fire

¹⁵ The Seismic Rehabilitation Grant Program (SRGP) is a state of Oregon competitive grant program that provides funding for the seismic rehabilitation of critical public buildings, particularly public schools and emergency services facilities.

Station (2017 grant award, \$594,410); City of Newberg Public Safety Building (2018 grant award, \$815,687); and Dayton Grade School (2019 grant award, \$2,499,570).

See city addenda for mitigation successes within each city.

For more information, see: Statewide seismic needs assessment: Implementation of Oregon 2005 Senate Bill 2 relating to public safety, earthquakes, and seismic rehabilitation of public buildings, (2007, [O-07-02](#)).

1999 Assessment

Factors included in an assessment of earthquake risk include population and property distribution in the hazard area, the frequency of earthquake events, landslide susceptibility, buildings, infrastructure, and disaster preparedness of the region. This type of analysis can generate estimates of the damages to the county due to an earthquake event in a specific location.

Seismic activity can cause great loss to businesses, either a large-scale corporation or a small retail shop. Losses not only result in rebuilding cost, but fragile inventory and equipment can be destroyed. When a company is forced to stop production for just a day, business loss can be tremendous. Residents, businesses, and industry all suffer temporary loss of income when their source of finances is damaged or disrupted.

The potential losses from an earthquake in Yamhill County extend beyond those to human life, homes, property and the landscape. A recent earthquake damage model has not been conducted for Yamhill County, however, based upon data from a 1999 DOGAMI report rough loss estimates are available (see also 2008 Assessment above). The economic base in Yamhill County is estimated at \$3.038 billion (in 1999 dollars; \$4.693 billion in 2019 dollars, ranking it 14 of 36 Oregon counties); it is expected that the County will incur total direct losses valuing \$259 million (in 1999 dollars, \$400 million in 2019 dollars) for the Cascadia model and \$1.1 billion (in 1999 dollars, \$1.6 billion in 2015 dollars) for the 500-year model. The CSZ event direct losses amount to a loss ratio of five-percent, while the 500-year model event direct losses amount to a loss ratio of 13-percent.¹⁶ Table 2-7 on the next page adjusts the economic loss estimates from DOGAMI's 1999 report to account for inflation and reflect potential economic loss in 2019 dollars.

While the expected losses have increased due to increased development in the county, as well as inflation, the loss ratio and relative damage for the county is expected to be similar. See table on the following page for more information on expected losses. Local business economies are at substantial risk if an earthquake damages or otherwise necessitates the closure of any of the major transportation routes.

For more information, see: [Special Paper: SP-29, Earthquake damage in Oregon Preliminary estimates of future earthquake losses \(1999\)](#)

¹⁶ Ibid. The loss ratio is determined as a percentage of the expected losses to the county's economic base.

Table 2-7 Yamhill County Earthquake Damage Summary

Yamhill County	8.5 Cascadia Subduction Zone Event	500-year model
Injuries	148	427
Death	3	9
Displaced households	385	871
Short-term shelter needs	310	696
Economic losses for buildings	\$400 million*	\$1.01 billion*
Operational the day after the quake		
Fires Stations	52%	n/a
Police Stations	45%	n/a
Schools	45%	n/a
Bridges	63%	n/a
Economic losses to		
Highways	\$7.7 million*	\$17 million*
Airports	\$12.3 million*	\$30.9 million*
Communication Systems		
Economic losses	\$1.5 million*	\$4.6 million*
Operating the day of the quake	53%	n/a
Debris generated (<i>thousands of tons</i>)	247	532

These figures have a high degree of uncertainty and should be used only for general planning purposes. Because of rounding, numbers may not add up to 100%. Because the 500 year model includes several earthquakes, the number of facilities operational the "day after" cannot be calculated.

Source: Y. Wang & J.L. Clark, Special Paper 29, Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses. 1999. DOGAMI.

Note: * - 1999 dollars were adjusted for inflation to represent estimated economic loss in 2019 dollars (State of Oregon Employment Department Inflation Calculator)

More information on this hazard can be found in the [Risk Assessment for Region 3, Mid/Southern Willamette Valley, of the Oregon NHMP \(2015\)](#).

Flood

Significant Changes since Previous NHMP:

This section has updated data for the National Flood Insurance Program and hazard history.

Characteristics

Flooding results when rain and snowmelt create water flow that exceeds the carrying capacity of rivers, streams, channels, ditches and other watercourses. In Oregon, flooding is most common from October through April when storms from the Pacific Ocean bring intense rainfall. Most of Oregon's destructive natural disasters have been floods.¹⁷

The flood events in Yamhill County usually occur when storms move in from the Pacific, dropping heavy precipitation into the Willamette valley; flooding is most significant during rain-on-snow events. Flooding in the valley becomes a problem when human activities infringe on the natural floodplain. Two types of flooding primarily affect Yamhill County: riverine flooding and urban flooding. In addition, any low-lying area has the potential to flood. The flooding of developed areas may occur when the amount of water generated from rainfall and runoff exceeds a storm water system's (ditch or sewer) capability to remove it.

Riverine Flooding

Riverine flooding is the overbank flooding of rivers and streams. The natural processes of riverine flooding add sediment and nutrients to fertile floodplain areas. Flooding in large river systems typically results from large-scale weather systems that generate prolonged rainfall over a wide geographic area, causing flooding in hundreds of smaller streams, which then drain into the major rivers.

Shallow area flooding is a special type of riverine flooding. FEMA defines shallow flood hazards as areas that are inundated by the 100-year flood with flood depths of only one to three feet. These areas are generally flooded by low velocity sheet flows of water.

Urban flooding

As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization of a watershed changes the hydrologic systems of the basin. Heavy rainfall collects and flows faster on impervious concrete and asphalt surfaces. The water moves from the clouds, to the ground, and into streams at a much faster rate in urban areas. Adding these elements to the hydrological systems can result in floodwaters that rise very rapidly and peak with violent force.

Almost one-eighth of the area in Yamhill County is incorporated and has a high concentration of impermeable surfaces that either collect water or concentrate the flow of water in unnatural channels. During periods of urban flooding, streets can become swift

¹⁷ Taylor, George H. and Chris Hannan. *The Oregon Weather Book*. Grants Pass, OR: Oregon State University Press. 1999

moving rivers and basements can fill with water. Storm drains often back up with vegetative debris causing additional, localized flooding.

Bank erosion

Erosion is a process that involves the gradual wearing away, transport, and movement of land. Not all erosion is gradual. It can occur quite quickly as the result of a flash flood, coastal storm, or other event. Erosion rarely causes death or injury, although it can cause significant destruction to property and infrastructure.

All of Yamhill County's 113 rivers and creeks are subject to erosion. Some of those potentially threatened by erosion include the Willamette, Wind, and North and South Yamhill Rivers; and Ash, Berry, Baker, Fairchild, Maroney, Perkins, Turner, Petch, Panther, and Willamina Creeks. DOGAMI has mapped the Yamhill River channel migration zone (see reports cited at the end of this section for more information).

Location and Extent

Yamhill County is in the Willamette River basin in northwestern Willamette Valley. Its western edge lies in the Coast Range and extends east to the Willamette River, west of the Cascade Mountain Range. Weather patterns generally move west to east where air masses from the Pacific Ocean rise over the Coast Range, cool, and become saturated. The Coast and Cascade ranges buffer the Willamette Valley from continental air moving westward.

Yamhill County is subject to flooding from overflowing rivers (Willamette, North Yamhill, and South Yamhill) and smaller tributaries (Ayers, Panther, Turner, Haskins, Fairchild, Mill, Willamina, Rock, and Agency creeks), and flooding from local storm water drainage.

Flooding is most common from October through April, when storms from the Pacific Ocean bring intense rainfall to the area. During the rainy season, monthly rainfall totals average far higher than other months of the year. This results in high water, particularly in December and January. The larger floods are the result of heavy rains of two-day to five-day durations augmented by snowmelt at a time when the soil is near saturation from previous rains. Frozen topsoil also contributes to the frequency of floods.

A large portion of Yamhill County's area lies in the lower Willamette River basin. The broad floodplain of the valley can be easily inundated by floodwaters. The surface material includes poorly drained, unconsolidated, fine-grained deposits of Willamette silt, sand, and gravel. Torrential flood events can introduce large deposits of sand and gravel that assist in the drainage of the otherwise poorly drained soils.

Floods can result in loss of life and property, with the extent of the damage dependent on the depth and velocity of the floodwaters. Floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. Flood studies often use historical records, such as streamflow gauges, to determine the probability of occurrence for floods of different magnitudes.

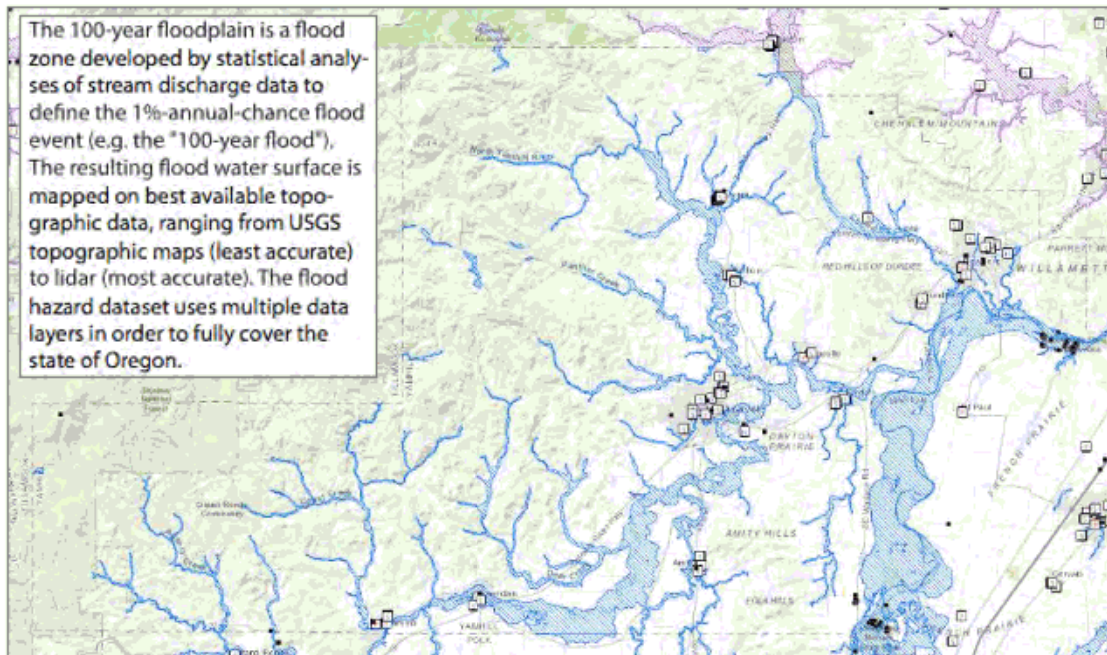
FEMA has mapped most of the flood-prone streams in Oregon for 100- and 500-year flood events. A 100-year flood (a flood with a 1-percent probability of occurring within any given year) is used as the standard for floodplain management in the United States and is referred to as a base flood. Flood Insurance Rate Maps (FIRMs) prepared by FEMA provide the most

readily available source of information for 100-year floods. These maps are used to support the NFIP. FIRMs delineate 100- and 500-year (a flood with a 0.2-percent probability of occurring within any given year) floodplain boundaries for identified flood hazards; these areas are Special Flood Hazard Areas (SFHAs) and provide the basis for flood insurance and floodplain management requirements. These maps represent a snapshot in time, and do not account for later changes which occurred in the floodplains. Development and other natural and artificial changes in the floodplain have caused changes to the rivers and streams in Yamhill County. Figure 2-9 provides an overview of the flood zones and extent in Yamhill County.

For detailed information, refer to the following Flood Insurance Study (FIS) and associated Flood Insurance Rate Maps (FIRMs):

- [Yamhill County FIS \(2010\)](#)
- [Yamhill County FIRMS \(2010\)](#)

Figure 2-9 Special Flood Hazard Area (100-year floodplain)



Source: [Oregon HazVu: Statewide Geohazards Viewer](#) – To view map in more detail click hyperlink to left.

An area totaling 66.2 square miles within the county is within the 100-year floodplain and an additional 3.5 square miles are within the 500-year floodplain. The 500-year floodplain generally encompasses slightly more area than a 100-year event. Each watershed has its own water absorption characteristics. Buildings, roads, and parks replace grass and soil limiting water absorption. Therefore, 500-year events contain more water, which spreads further throughout the floodplain until the water can be managed by manmade and natural drainage systems.

Historic data indicates flood depths exceeding flood levels by one foot on the Willamette River (crested at 29 feet) and levels by five feet on the South Yamhill River (crested at 55 feet).

The FEMA FIRMs provide a comprehensive analysis of the 100- and 500-year floodplains. The maps cover the entire geographic extent of Yamhill County and therefore include small waterways, reservoirs and less densely populated areas that were not included in previous editions of the FIRMs.

Floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. Flood studies often use historical records, such as streamflow gages, to determine the probability of occurrence for floods of different magnitudes. The probability of occurrence is expressed in percentages as the chance of a flood of a specific extent occurring in any given year.

The magnitude of flood used as the standard for floodplain management in the United States is a flood having a one percent probability of occurrence in any given year. This flood is also known as the 100-year flood or base flood. The most readily available source of information regarding the 100-year flood is the system of Flood Insurance Rate Maps (FIRMs) prepared by FEMA. These maps are used to support the National Flood Insurance Program (NFIP). The FIRMs show 100-year floodplain boundaries for identified flood hazards. These areas are also referred to as Special Flood Hazard Areas (SFHAs) and are the basis for flood insurance and floodplain management requirements. In 2008 FEMA undertook an update of all FIRMs in Yamhill County as part of a recalibration of the datum for measuring elevation into the Digital FIRM (DFIRM) format.

Additional reports are available via FEMA's Flood Map Service Center website:

<https://msc.fema.gov/portal>

Refer to the following DOGAMI reports for additional information:

- Statewide subbasin-level channel migration screening (2017, [IMS-56](#)).

Additional reports are available via DOGAMI's Publications Search website:

<https://www.oregongeology.org/pubs/pubsearch.htm>

Other agency/ consultant reports:

- [Engineering with Nature: Alternative Techniques to Riprap Bank Stabilization.](#)

History

The Willamette, North Yamhill, and South Yamhill rivers and smaller tributaries are susceptible to annual floods.

The Willamette River has flooded on many occasions with the largest flood in 1861. In 1880 another large flood damaged the Yamhill River Bridge and washed out portions of the Willamette Valley Railroad's track. Flood control dams constructed in the 1940s and 1950s have changed the flooding pattern. The largest and most damaging was the 1964 flood, which FEMA categorized as a 100-year flood event. The following list summarizes significant flood events since 1964 in Yamhill County.

December 1964-January 1965. (DR-184; 12/24/1964) Two storm systems brought record rainfall to the region that had already experienced record, early season low-elevation snow. In Yamhill County, the flooding caused 10 deaths and hundreds of landslides, washed out

roads and bridges, and damaged or destroyed houses. Thousands evacuated and the entire state was declared a disaster area.

January 1974. (DR-413; 1/25/1974) Snowmelt caused by a series of storms combined with heavy snow and freezing rain to produce rapid runoff. Several roads were closed because of landslides and high water including some roads in Sheridan and Willamina. In several communities along the Willamette River, wastewater plants exceeding capacity discharged raw sewage into the river. February 1986. The flood was caused by heavy rains and snow melt. The Willamette River crested at 29 feet and was within inches of flooding. Homes were flooded and highways closed.

February 1996. (DR-1099; 2/9/1996) A series of floods were caused by deep snow pack, warm temperatures, and record-breaking rain. The City of Carlton's wastewater treatment plant overflowed into the North Yamhill River. Total damages in the county exceeded \$4 million.

November 1996. A warm weather system deposited heavy rain on the area causing flooding. La Niña was observed in 1996-1997.

December 1996. (DR-1160; 1/23/1997, Yamhill not included) Heavy rains caused flooding throughout the county. Willamette River crested at 29 feet, one foot above flood level. The South Yamhill River at McMinnville crested at 55 feet, five feet above flood level. Five thousand residents lost power when high winds damaged power lines. La Niña was observed in 1996-1997.

December 2005. (DR-1632; 3/20/2006) Severe storms, flooding, landslides, and mudslides occurred between December 18, 2005 and January 21, 2006.

December 2006. (DR-1683; 2/2/2007) Severe winter storm and flooding occurred between December 14 and 15, 2006.

December 2007. (DR-1733; 12/8/2007) Severe storms, winds, mudslides, landslides, and flooding occurred between December 1 and 17, 2007 shutting down roads and highways including Interstate 5. Public infrastructure, homes, and personal property were damaged. In Oregon, 73,000 residents were without power, and wastewater treatment plants were overwhelmed. A major disaster was declared for the State of Oregon on December 8, 2007 with Yamhill County included in the declaration. Yamhill County suffered the loss of the south approach fill at Ayers Creek Bridge on North Valley Road.

December 2008. (DR-1824; March 2, 2009) Severe winter storm, record and near record snow, landslides, and mudslides occurred between December 13 and 26, 2008. FEMA statewide disaster aid was estimated at approximately \$20 million.

January 2009. Heavy rains on New Year's Eve caused the South Yamhill River to crest to 16 feet, a level not seen since 1964. The Governor declared Yamhill County and several other Oregon counties in a state of emergency. Major roads throughout the county were closed because of flooding or adjacent high river waters. Street runoff caused flooding issues at many residences including cutting off access to homes and inundation of crawl spaces. Damage to about 24 homes caused residents to evacuate.

January 17-21, 2012. Heavy rains and snow melt caused water bodies throughout Yamhill County to flood. The Yamhill River crested at 55 feet, four feet above flood level causing

highway and local road closures, the closure of the Wheatland Ferry across the Willamette River, water damage & flooding to homes, and farmland flooding. Water infrastructure and supply was also compromised including clogged storm drains, overwhelmed wastewater treatment facilities and water loss after a pond edge gave way. Schools and college campuses closed early and cancelled classes.

January 2014. Heavy rains caused flooding throughout Yamhill County. Impacts were similar to impacts of the January 2012 storms.

December 2015. (DR-4258; 2/17/2016) Heavy rains caused flooding throughout Yamhill County from December 6 to 23, 2015.

September 2020. Heavy rain caused the South Yamhill River near McMinnville to flood. The river crested at 50.15 feet, which is 0.15 feet above flood stage.

Probability Assessment

Based on the available data and research the Steering Committee determined the **probability of experiencing a flood is “high”**, meaning one incident is likely within the next 10 to 35-year period

Flood studies use this information to determine the probability of flood occurrence of different magnitudes. The probability of occurrence is expressed as a percentage indicating the probability of a specific flood event occurring in any given year.

Factors contributing to the frequency and severity of riverine flooding include:

- Rainfall intensity and duration
- Antecedent moisture conditions
- Watershed conditions, including steepness of terrain, soil types, amount and type of vegetation, and density of development
- The existence of attenuating features in the watershed, including natural features such as swamps and lakes, and human-built features such as dams
- The existence of flood control features, such as levees and flood control channels
- Velocity of flow
- Tide heights and storm surge
- Availability of sediment for transport, and the erodibility of the bed and banks of the watercourse

These factors are evaluated using a hydrologic analysis to determine the probability that discharge of a certain size will occur, and to determine the characteristics and depth of the flood resulting from that discharge.

Yamhill County has a wide range of climate and elevations with average monthly precipitation ranging from approximately fourteen inches in the highest elevations to five inches in lower elevations. Floods are most common in Yamhill County from October through April when storms from the Pacific Ocean bring intense rainfall. Based on previous occurrences, flood events are likely to occur around the county every one to ten years. Climate change will likely be an influencing factor for future flood probabilities. Long-term modeling suggests increases in annual average temperatures may translate in the Pacific Northwest to less total accumulated snow pack as winter precipitation falls as rain. This may

result in faster storm runoff with flashier flood events for upper watersheds and the need for greater attention to storm water management in floodplains.¹⁸

Vulnerability Assessment

The Steering Committee rated the county as having a **“High” vulnerability to flood hazards**, meaning that greater than 10% of the unincorporated County’s population or assets would be affected by a major flood event.

A floodplain vulnerability assessment combines the floodplain boundary, generated through hazard identification, with an inventory of the property within the floodplain. Understanding the population and property exposed to natural hazards will assist in reducing risk and preventing loss from future events.

Yamhill County development regulations restrict, but do not prohibit, new development in areas identified as floodplain. This reduces the impact of flooding on future buildings. As new land has been brought into the regional Urban Growth Boundary, the applicable development codes have been applied to prevent the siting of new structures in flood prone areas.

For mitigation planning purposes, it is important to recognize that flood risk for a community is not limited only to areas of mapped floodplains. Other portions of the county outside of the mapped floodplains may also be at relatively high risk from over bank flooding from streams too small to be mapped by FEMA, from channel migration, or from local storm water drainage.

National Flood Insurance Program (NFIP)

FEMA updated the Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) in 2010 (effective March 2, 2010). Yamhill County’s (unincorporated) last Community Assistance Visit (CAV) was initiated July 22, 2011. Yamhill County, and all cities within the County actively participate in the NFIP and have implemented floodplain policies, regulations, and ordinances to protect their threatened population and infrastructure to assure NFIP compliance. Table 2-8 shows that most flood insurance policies are for residential structures, primarily single-family homes. There are 82 National Flood Insurance Program (NFIP) policies in force within the unincorporated portion of the County. Of those, 38 are for properties that were developed before adoption of the initial FIRMs.

Flood insurance covers only the improved land, or the actual building structure. There have been 26 paid claims as of August 2019 (21 pre-FIRM) in the unincorporated County totaling \$361,265. Yamhill County and its incorporated cities have 446 National Flood Insurance Program (NFIP) policies, representing over \$100 million in coverage.

The NFIP’s Community Rating System (CRS) recognizes jurisdictions for participating in floodplain management practices that exceed NFIP minimum requirements. The City of Sheridan has exceeded NFIP minimum requirements to receive a Community Rating System (CRS) rating of “9” The remainder of Yamhill County and the incorporated jurisdictions do

¹⁸ Mote, P.W., J. Abatzoglou, K.D. Dello, K. Hegewisch, and D.E. Rupp, 2019: Fourth Oregon Climate Assessment Report. Oregon Climate Change Research Institute. ocri.net/ocar4.

not have a CRS rating and do not receive discounted flood insurance premiums for residents in a special flood hazard zone.

Table 2-8 Flood Insurance Detail

	Yamhill County	Unincorporated Yamhill County
Effective FIRM and FIS	3/2/2010	3/2/2010
Initial FIRM Date	-	9/30/1983
Total Policies	446	82
Pre-FIRM Policies	153	38
Policies by Building Type		
Single Family	401	78
2 to 4 Family	14	1
Other Residential	10	0
Non-Residential	21	3
Minus Rated A Zone	72	8
Insurance in Force	\$100,617,300	\$19,818,900
Total Paid Claims	81	26
Pre-FIRM Claims Paid	68	21
Substantial Damage Claims	3	0
Total Paid Amount	\$1,166,076	\$361,265
Repetitive Loss Structures	4	3
Severe Repetitive Loss Properties	1	1
CRS Class Rating	-	NP
Last Community Assistance Visit	-	7/22/2011

Source: Department of Land Conservation and Development, August 2019. Repetitive Flood Loss information provided by FEMA correspondence on September 10, 2020. NP = Not Participating

Repetitive Loss Properties:

Yamhill County works to mitigate problems regarding flood issues when they arise. Some areas in the county are more susceptible to flooding issues and have incurred repetitive losses. The community repetitive loss record for unincorporated Yamhill County identifies three (3) Repetitive Loss Properties¹⁹, of which one (1) is considered a Severe Repetitive Loss Property²⁰. All repetitive loss properties are single-family residences.

Repetitive loss and severe repetitive loss properties are troublesome because they continue to expose lives and valuable property to the flooding hazard. Local governments as well as

¹⁹ A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP.

²⁰ A Severe Repetitive Loss (SRL) property is a single family property (consisting of 1 to 4 residences) that is covered under flood insurance by the NFIP, and has incurred flood-related damage for which 4 or more separate claims payments have been paid under flood insurance coverage, with the amount of each claim payment exceeding \$5,000, and with cumulative amount of such claims payments exceeding \$20,000; or for which at least 2 separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

federal agencies such as FEMA attempt to address losses through floodplain insurance and attempts to remove the risk from repetitive loss properties through projects such as acquiring land and improvements, relocating homes or elevating structures. Continued repetitive loss claims from flood events lead to an increased amount of damage caused by floods, higher insurance rates, and contribute to the rising cost of taxpayer funded disaster relief for flood victims. Substantially damaged buildings located in the Special Flood Hazard Area do not require benefit-cost analysis to qualify for mitigation funds.

Landslide

Significant Changes since Previous NHMP:

New landslide susceptibility information based on updated Lidar data provided by DOGAMI (O-16-02) has also been included.

Characteristics

A landslide is any detached mass of soil, rock, or debris that falls, slides or flows down a slope or a stream channel. Landslides are classified according to the type and rate of movement and the type of materials that are transported. In a landslide, two forces are at work: 1) the driving forces that cause the material to move down slope, and 2) the friction forces and strength of materials that act to retard the movement and stabilize the slope. When the driving forces exceed the resisting forces, a landslide occurs.

Yamhill County is subject to landslides or debris flows (mudslides), especially in the Coast Range/Salem Hills in the western portion of the county, which may affect buildings, roads and utilities.

Additionally, landslides often occur together with other natural hazards, thereby exacerbating conditions, as described below:

- Shaking due to earthquakes can trigger events ranging from rockfalls and topples to massive slides.
- Intense or prolonged precipitation that causes flooding can also saturate slopes and cause failures leading to landslides.
- Landslides into a reservoir can indirectly compromise dam safety and a landslide can even affect the dam itself.
- Wildfires can remove vegetation from hillsides, significantly increasing runoff and landslide potential.

Location and Extent

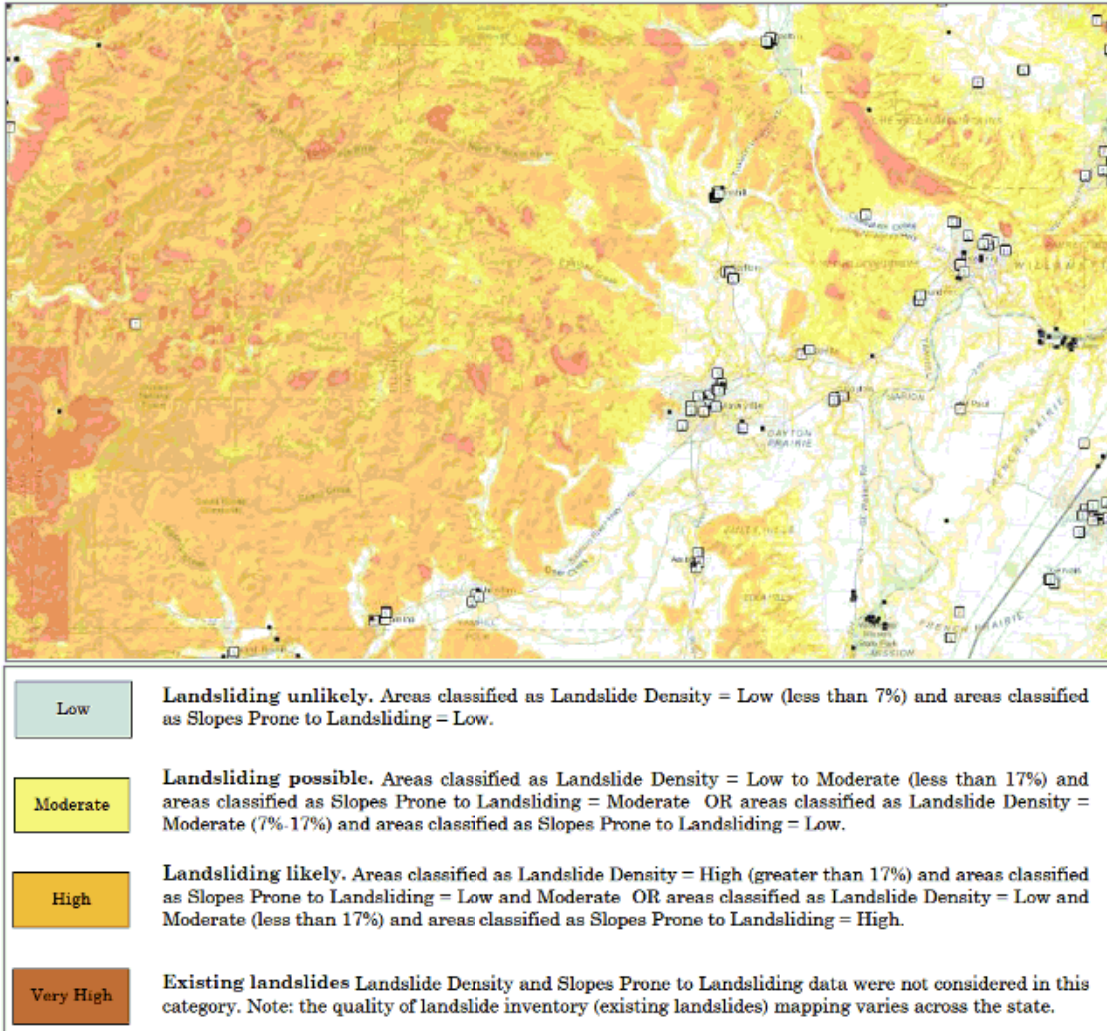
In Yamhill County, DOGAMI reports the slopes nearest to the Willamette River, in the western portion of the Salem Hills, are at greatest risk of landslides (Figure 2-10). Weak, low-permeability marine sediments overlain by basalts, and clay rich residual soils overlying basalts are susceptible to water-induced landslides on steep slopes and within existing slide masses. Features such as hummocky topography, disrupted drainage patterns, sag ponds, springs, back-tilted bedrock blocks, and subdued head scarps are indicative of landslide terrain. For Yamhill County, most landslide areas are found in less populated western hills of Yamhill County, historic landslide areas are also present in or adjacent to urban areas. These areas include:

- Two sites in McMinnville: one at the southern end of SE Evans Street, just south of downtown and the second just north of the Linfield College campus;
- One site at the intersection of Hwy 99 and 233 just north of Amity;
- Four sites east of the City of Yamhill on NE Hwy 240
- One just east of the outlet to the Hickory Hill Farm Reservoir and on NE Hwy 240, west of Newberg;

- And three sites east of Dundee on the Yamhill County side of the Willamette River.

Landslides in these areas could cause disruptions in transportation and potable water systems.

Figure 2-10 Landslide Susceptibility Exposure



Source: [Oregon HazVu: Statewide Geohazards Viewer](#) – To view map in more detail click hyperlink to left.

More detailed landslide hazard assessment at specific locations requires a site-specific analysis of the slope, soil/rock and groundwater characteristics at a specific site. Such assessments are often conducted prior to major development projects in areas with moderate to high landslide potential, to evaluate the specific hazard at the development site.

Table 2-9 shows landslide susceptibility exposure for Yamhill County and the incorporated cities. Approximately 52% of the county has high or very high landslide susceptibility exposure. These are concentrated in areas of high slopes, and close to river valleys (see Figure 2-10). In general cities within the County have a lower landslide susceptibility exposure than does the unincorporated area of the County, except Willamina (see Volume II for more information on each city's exposure). *Note that even if a County or City has a high*

percentage of area in a high or very high landslide exposure susceptibility zone, this does not mean there is a high risk, because risk is the intersection of hazard and assets.

The severity or extent of landslides is typically a function of geology and the landslide triggering mechanism. Rainfall initiated landslides tend to be smaller and earthquake induced landslides may be very large. Even small slides can cause property damage, result in injuries or take lives.

Table 2-9 Landslide Susceptibility Exposure

Jurisdiction	Area, ft ²	Low	Moderate	High	Very High
Yamhill County	20,024,032,738	26.4%	21.2%	46.9%	5.5%
Amity	17,399,913	81.3%	14.6%	4.1%	0.0%
Carlton	24,865,027	62.8%	32.8%	4.5%	0.0%
Dayton	21,139,259	71.1%	18.7%	10.2%	0.0%
Dundee	38,346,886	59.7%	34.0%	6.3%	0.0%
Lafayette	24,326,932	52.1%	36.9%	11.0%	0.0%
McMinnville	293,827,529	80.1%	12.3%	7.5%	0.0%
Newberg	162,397,179	74.7%	20.1%	4.9%	0.3%
Sheridan	54,273,946	80.5%	14.0%	5.5%	0.0%
Willamina	26,402,748	26.2%	8.3%	65.5%	0.0%
Yamhill	14,049,006	73.4%	25.1%	1.4%	0.0%

Source: DOGAMI [Open-File Report, O-16-02](#), Landslide Susceptibility Overview Map of Oregon (2016)

For more information, refer to the following report and maps provided by DOGAMI:

- Preparing for Landslide Hazards, A Land Use Guide for Oregon Communities (October 2019) [Link](#)
- Statewide Landslide Susceptibility (2016, [O-16-02](#)).
- Landslide Susceptibility of Lifeline Routes in the Oregon Coast Range (2015, [O-15-01](#))
- Landslide inventory maps of the Sherwood quadrangle (2012, [IMS-50](#))
- Geologic hazards, earthquake and landslide hazard maps for counties in the Mid/Southern Willamette Valley (2008, [IMS-24](#))
- Slope failures in Oregon: GIS inventory for three 1996/97 storm events (2000, [Special Paper 34](#)).
- Storm Impacts and Landslides of 1996: [Final Report](#)

Additional reports are available via DOGAMI's Publications Search website: <http://www.oregongeology.org/pubs/search.php>

History

Landslides may happen at any time of the year. In addition to landslides triggered by a combination of slope stability and water content, earthquakes may also trigger landslides. Areas prone to seismically triggered landslides are generally the same as those prone to ordinary (i.e., non-seismic) landslides. As with ordinary landslides, seismically triggered landslides are more likely for earthquakes that occur when soils are saturated with water.

Debris flows and landslides are a very common occurrence in hilly areas of Oregon, including portions of Yamhill County. Many landslides occur in undeveloped areas and thus may go

unnoticed or unreported. For example, DOGAMI conducted a statewide survey of landslides from four winter storms in 1996 and 1997 and found 9,582 documented landslides, with the actual number of landslides estimated to be many times the documented number. For the most part, landslides become a problem only when they impact developed areas and have the potential to damage buildings, roads or utilities.

Oregon Department of Geology and Mineral Industries (DOGAMI) reports fewer landslides in the Willamette Valley than in the Cascade or Oregon Coast mountain ranges, however, southern Yamhill County and the edges of the valley are susceptible because of the occurrence of marine sedimentary rock and clay-rich residual soils overlying basalts. Yamhill County does not have a comprehensive list of landslide events, but they likely occur during major storms in western Oregon. Major landslides were reported in 1964, 1966, 1982, 1996, 2006, 2007, 2008, and 2015 during winter storms and flood events. Two winter storms in November 1996 triggered over 9,500 landslides and debris flows on logged and un-logged land mostly in the Cascade and Oregon Coast mountain ranges.

A severe storm in December 2008 resulted in record and near-record snow, mudslides, and landslides and a disaster declaration for Yamhill County.

In March of 2012 in Sheridan there was a water break on the Stoney Mountain Transmission Line caused by a 200'-300' landslide on a hill located between Canyon Road and Richard Street. In 2014, landslides in Buck Hollow (near Willamina) partly closed adjacent roads.

Figure 2-11 shows the landslide inventory for Yamhill County and the [Statewide Landslide Information Database for Oregon](#).

Probability Assessment

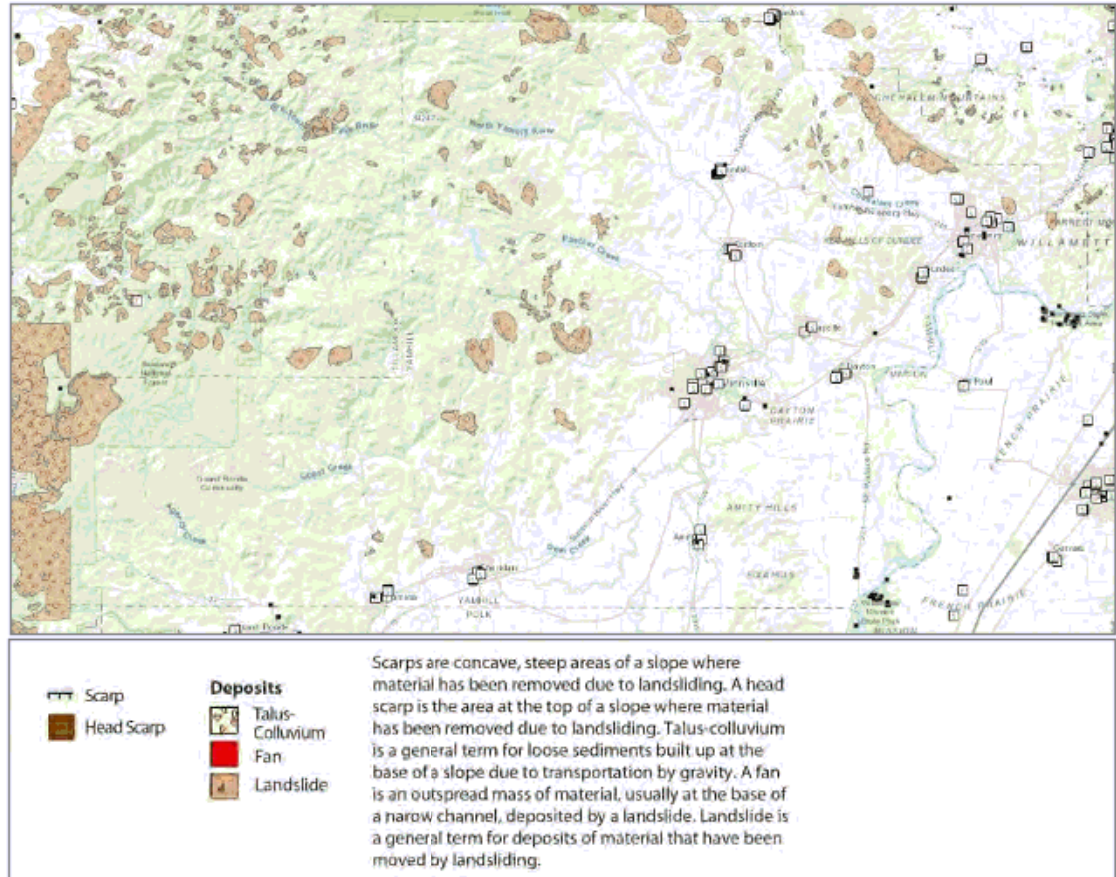
Based on the available data and research the Steering Committee determined the **probability of experiencing a landslide or debris flow is "high"**, meaning at least one incident is likely within the next 10 to 35-year period.

The probability of rapidly moving landslide occurring depends on several factors, including steepness of slope, slope materials, local geology, vegetative cover, human activity and water. There is a strong correlation between intensive winter rainstorms and the occurrence of rapidly moving landslides (debris flows). Consequently, the National Weather Service tracks storms during the rainy season, monitors rain gauges and snow melt and issues warnings as conditions warrant. Given the correlation between precipitation, snowmelt and rapidly moving landslides, it would be feasible to construct a probability curve. The installation of slope indicators or the use of more advanced measuring techniques could provide information on slower moving slides.

Geo-engineers with DOGAMI estimate widespread landslides about every 20 years; landslides at a local level can be expected every two or three years.²¹

²¹Mills, K. 2002. Oregon's Debris Flow Warning System. Cordilleran Section-98th Annual Meeting. Corvallis.

Figure 2-11 Landslide Inventory



Source: [Oregon HazVu: Statewide Geohazards Viewer](#) – To view map in more detail click hyperlink to left.

Vulnerability Assessment

The Steering Committee rated the County as having a **“low” vulnerability to landslide hazards**, meaning that less than 1% of the unincorporated County’s population or assets would be affected by a major disaster.

To a large degree, landslides are very difficult to predict. At the time of this update, enough data was not available to determine landslide vulnerability in terms of the population and total value of property at risk from future landslide occurrences.

Landslides can impact major transportation arteries, blocking residents from essential services and businesses. Many aspects of the county are vulnerable to landslides. This includes land use and development patterns, the economy, population segments, ecosystem services and cultural assets.

A quantitative landslide hazard assessment requires overlay of landslide hazards (frequency and severity of landslides) with the inventory exposed to the hazard (value and vulnerability) by considering:

- Extent of landslide susceptible areas;
- Inventory of buildings and infrastructure in landslide susceptible areas;
- Severity of earthquakes or winter storm event (inches of rainfall in 24 hours);

- Percentage of landslide susceptible areas that will move and the range of movements (displacements) likely; and
- Vulnerability (amount of damage for various ranges of movement).

Roads and Bridges

Large losses incurred from landslide hazards in Yamhill County have been associated with roads. The Yamhill County Public Works Department is responsible for responding to slides that inhibit the flow of traffic or are damaging a road or a bridge. The department does its best to communicate with residents impacted by landslides, but can usually only repair the road itself, as well as the areas adjacent to the slide where the county has the right of way.

It is not cost effective to mitigate all slides because of limited funds and the fact that some historical slides are likely to become active again even with mitigation measures. The Public Works Department alleviates problem areas by grading slides, and by installing new drainage systems on the slopes to divert water from the landslides. This type of response activity is often the most cost-effective in the short-term but is only temporary. Unfortunately, many property owners are unaware of slides and the dangers associated with them.

Severe Weather (Windstorm and Winter Storm)

Severe wind events may occur throughout Oregon during all seasons. Often originating in the Pacific Ocean, westerly winds pummel the coast, slowing as they cross the Coastal mountain range and head into the inland valleys.²² Similarly, severe winter storms consisting of rain, freezing rain, ice, snow, cold temperatures, and wind originate from troughs of low pressure offshore in the Gulf of Alaska or in the central Pacific Ocean that ride along the jet stream during fall, winter, and early spring months.²³ In summer, the most common wind directions are from the west or northwest; in winter, they are from the south and east. Local topography, however, plays a major role in affecting wind direction. For example, the north-south orientation of the Willamette Valley channels the wind most of the time, causing predominately north and south winds.

Climate Change Factors

Oregon and the Pacific Northwest experience a variety of extreme weather incidents ranging from severe winter storms and floods to drought and dust storms, often resulting in morbidity and mortality among people living in the impacted regions. According to the Oregon Climate Change Research Institute, climate change is expected to increase the frequency and intensity of some weather incidents.²⁴

Climate change poses risks for increased injuries, illnesses and deaths from both direct and indirect effects. Incidents of extreme weather (such as floods, droughts, severe storms, heat waves and fires) can directly affect human health as well as cause serious environmental and economic impacts. Indirect impacts can occur when climate change alters or disrupts natural systems.

Future Climate Variability²⁵

Climate models for Oregon suggest, future regional climate changes include increases in temperature around 0.2-1°F per decade in the 21st Century, along with warmer and drier summers, and some evidence that extreme precipitation will increase in the future. Increased droughts may occur in the Willamette Valley under various climate change scenarios because of various factors, including reduced snowpack, rising temperatures, and likely reductions in summer precipitation. Climate models suggest that as the region warms, winter snow precipitation will likely shift to higher elevations and snowpack will be diminished as more precipitation falls as rain altering surface flows.

²² US Department of Agriculture. <http://www.fsa.usda.gov/or/Notice/Flp104.pdf>

²³ Interagency Hazard Mitigation Team. 2000. State Hazard Mitigation Plan. Salem, OR: Oregon Office of Emergency Management

²⁴ Oregon Climate Change Research Institute <http://occri.net/wp-content/uploads/2011/04/chapter9ocar.pdf> Page 412

²⁵ Oregon Climate Change Research Institute (OCCRI), 4th Oregon Climate Assessment Report (2019) and Northwest Climate Assessment Report (2013). <http://www.occri.net/publications-and-reports/publications/>

Windstorm

Significant Changes since Previous NHMP:

The windstorm hazard section has been edited to reference new history since the previous NHMP.

Characteristics

A windstorm is generally a short duration event involving straight-line winds and/or gusts in excess of 50 mph. Although windstorms can affect the entirety of Yamhill County, they are especially dangerous near developed areas with large trees or tree stands. The extent of any windstorm is determined by its track, intensity and local terrain.²⁶ In the southwest Oregon, wind speed is typically 60 mph for 25-year storm events, 70 mph for 50-year storm events and 80 mph for 100-year storm events. Yamhill County has experienced multiple 25-, 50- and 100-year windstorm events over the past century with impacts often occurring countywide. A windstorm will frequently knock down trees and power lines, damage homes, businesses, public facilities and create tons of storm related debris. Windstorms are a common, chronic hazard in Yamhill County.

Location and Extent

The most common type of wind pattern affecting Yamhill County is straight-line winds, which originate as a downdraft of rain-cooled air and reach the ground and spread out rapidly. Straight-line winds can produce gusts of 100 mph or greater. Records of major Pacific windstorms are documented by state agencies and weather stations throughout Oregon, including several official weather stations in Yamhill County's lower valleys. Table 2-10 shows the expected wind speeds from windstorm events in Yamhill County.

Yamhill County in the Willamette Valley is somewhat sheltered from strong westerly winds, as the north-south orientation of the Coast Range and Cascades obstructs and slows down these surface winds. The north-south orientation of the Willamette Valley often channels the winds in a north south direction. Winds blowing along a north to south axis, parallel to the major mountain ranges, can prove to be extremely destructive. Regardless of wind direction, prolonged windstorms are likely to last an average of three to six hours before moving on. High winds are likely to occur during the months of October through April. Although windstorms can affect the entirety of the county, they are especially dangerous in developed areas with significant tree stands and major infrastructure, especially above ground utility lines. A windstorm will frequently knock down trees and power lines, damage homes, businesses, public facilities and create tons of storm related debris.

History

The most destructive windstorm ever recorded in Oregon, in terms of loss of life and property damage, was the Columbus Day storm of 1962. Damage was most severe in the Willamette Valley. The storm killed thirty-eight people and did upwards of \$200 million in damage (over \$1.7 billion in today's dollars). Hundreds of thousands of homes were without power for short periods of time, while others were without power for two to three weeks.

²⁶ State of Oregon Natural Hazard Mitigation Plan (2015)

More than 50,000 homes were seriously damaged, and nearly 100 were destroyed. The storm destroyed fruit and nut orchards and killed scores of livestock. Intense wind speeds were recorded in the metropolitan areas with gusts of 116 mph on Portland’s Morrison Bridge.

Yamhill County has experienced several high wind events. A regional storm in early December 2007 that required a federal disaster declaration along the Oregon Coast brought high winds and heavy rain to the County.

Yamhill county has experienced one tornado in the past ten years. On June 13, 2013 an EF1 tornado touched down in McMinnville causing downed power lines and traffic disruptions due to debris in roadways. Building damage was observed on four McMinnville buildings. A tornado has not been recorded in Yamhill County since the previous plan update.

Several additional, small windstorm events have occurred since the previous NHMP, see the [Storm Events Database](#) provided by the National Oceanic and Atmospheric Administration for more information. According to historical records, there have been an estimated six major windstorm events in the past 100 years, which is about one every 16-17 years.

Probability Assessment

Based on the available data and research the Steering Committee determined the **probability of experiencing a windstorm is “high”**, meaning one severe incident is likely within the next ten to 35-year period.

Windstorms in the county usually occur in the winter from October to March and their extent is determined by their track, intensity (the air pressure gradient they generate) and local terrain. Summer thunderstorms may also bring high winds along with heavy rain and/or hail. The National Weather Service uses weather forecast models to predict oncoming windstorms, while monitoring storms with weather stations in protected valley locations throughout Oregon.

Table 2-10 shows the wind speed probability intervals that structures 33 feet above the ground would expect to be exposed to within a 25, 50 and 100-year period. The table shows that structures in Region 2, which includes Yamhill County, can expect to be exposed to 65 mph winds in a 25-year recurrence interval (4% annual probability).

Table 2-10 Probability of Severe Wind Events (Region 2)

	25-Year Event (4% annual probability)	50-Year Event (2% annual probability)	100-Year Event (1% annual probability)
Region 2:			
North Willamette Valley	65 mph	72 mph	80 mph

Source: Oregon State Natural Hazard Mitigation Plan, 2012

Vulnerability Assessment

The Steering Committee rated the county as having a **“moderate” vulnerability to windstorm hazards**, meaning that between one and ten percent of the unincorporated County’s population or assets would be affected by a major disaster.

Many buildings, utilities and transportation systems within Yamhill County are vulnerable to wind damage. This is especially true in open areas, such as natural grasslands or farmlands. It is also true in forested areas, along tree-lined roads and electrical transmission lines and on residential parcels where trees have been planted or left for aesthetic purposes. Structures most vulnerable to high winds include insufficiently anchored manufactured homes and older buildings in need of roof repair.

Fallen trees are especially troublesome. They can block roads and rails for long periods of time, impacting emergency operations. In addition, up-rooted or shattered trees can down power and/or utility lines and effectively bring local economic activity and other critical facilities to a standstill. Much of the problem may be attributed to a shallow or weakened root system in saturated ground. In Yamhill County, trees are more likely to blow over during the winter (wet season).

More information on this hazard can be found in the [Risk Assessment for Region 3, Mid/Southern Willamette Valley, of the Oregon NHMP \(2015\)](#).

Winter Storm

Significant Changes since Previous NHMP:

The winter storm hazard section has been edited to reference new history since the previous NHMP.

Characteristics

Winter storms occurring in Yamhill County result in several natural hazards— including floods, landslides/debris flows, snow, ice and wind. Each on its own, or in combination, can completely immobilize emergency response activities, close down transportation corridors, and disrupt transportation and utilities. Each of these natural hazards is individually discussed in detail in their respective sections.

Winter storms in Yamhill County can bring rain as well as snow or can be followed by rising temperatures that melt newly fallen snow. Either scenario often causes flooding; most floods in western Oregon occur as a result of winter storms. The flood hazard is described in detail in flood section of this document.

As is the case with flood, wind as a hazard in Yamhill County most frequently occurs as part of a winter storm. The nature, history, location, extent, and probability of future events for wind, including winter storm wind, are explored in detail in the wind section of this plan.

The winter storms that affect Yamhill County typically are not local events affecting only small geographic areas. Rather, winter storms are usually large cyclonic low-pressure systems that move in from the Pacific Ocean and affect large areas of Oregon and/or the whole Pacific Northwest. These storms are most common from October through March.

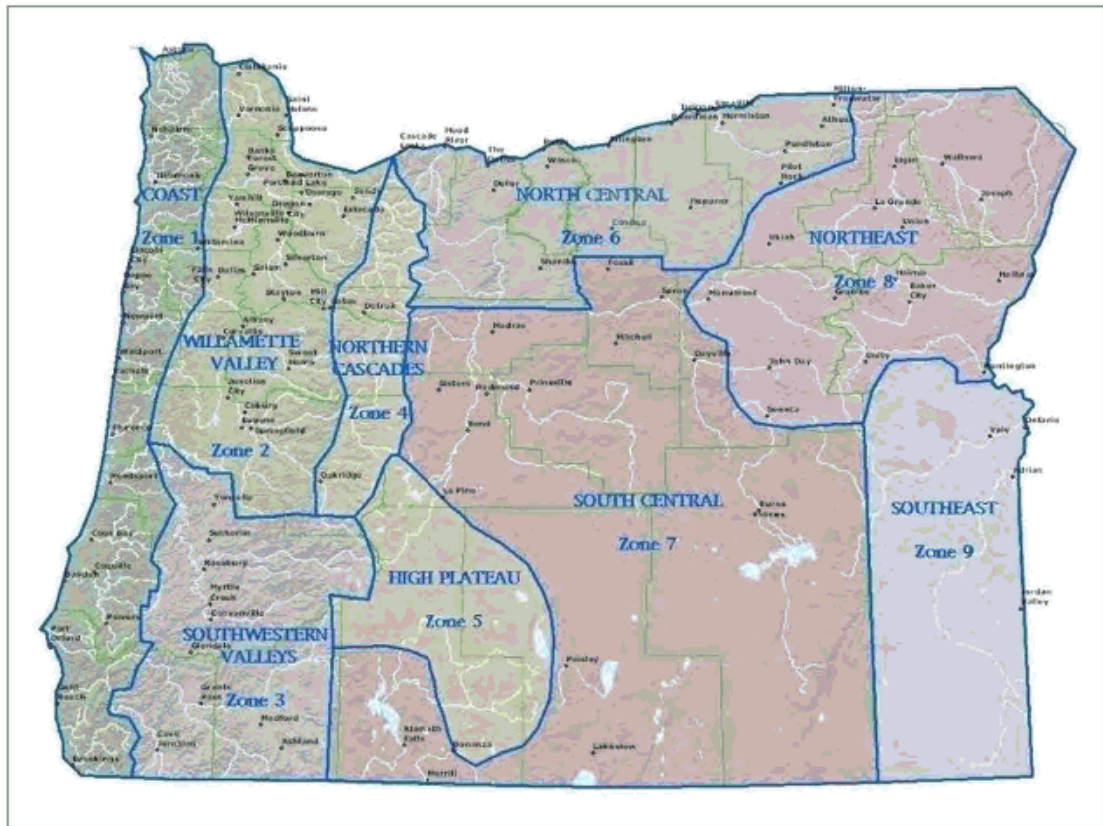
Ice storms are comprised of cold temperatures and moisture, but subtle changes can result in varying types of ice formation which may include freezing rain, sleet and hail. Of these, freezing rain can be the most damaging of ice formations.

Outside of mountainous areas, significant snow accumulations are much less likely in western Oregon than on the east side of the Cascades. A natural break in the Cascade Mountains sometimes allows cold air from the east to funnel through the Columbia Gorge into the Portland area, which can eventually settle south to the Willamette Valley, and thus create snow and ice events.

Location and Extent

The National Climatic Data Center has established climate zones in the United States for areas that have similar temperature and precipitation characteristics. Oregon’s latitude, topography and proximity to the Pacific Ocean give the state diversified climates. Figure 2-12 shows that Yamhill County is located within Zone 1: Coast and Zone 2: Willamette Valley. Winter storm events have relatively predictable and longer speeds of onset and the effects of winter storms are often long lasting.

Figure 2-12 Oregon Climate Divisions



Source: Oregon Climate Service

The principal types of winter storms that occur include:

- **Snowstorms:** require three ingredients: cold air, moisture and air disturbance. The result is snow, small ice particles that fall from the sky. In Oregon, the further inland and north one moves, the more snowfall can be expected. Blizzards are included in this category.
- **Ice storms:** are a type of winter storm that forms when a layer of warm air is sandwiched by two layers of cold air. Frozen precipitation melts when it hits the

warm layer and refreezes when hitting the cold layer below the inversion. Ice storms can include sleet (when the rain refreezes before hitting the ground) or freezing rain (when the rain freezes once hitting the ground).

- **Extreme Cold:** Dangerously low temperatures accompany many winter storms. This is particularly dangerous because snow and ice storms can cause power outages, leaving many people without adequate heating.

Unlike most other hazards, it is not simple to systematically map winter storm hazard zones. The entire County is susceptible to damaging severe weather. Winter storms that bring snow and ice can impact infrastructure, business and individuals. Those resources that exist at higher elevations will experience more risk of snow and ice, but the entire County can face damage from winter storms and, for example, the hail or life threateningly cold temperatures that winter storms bring.

History

Winter storms occur yearly; more destructive storms occur once or twice per decade, most recently in 2015.²⁷ More recent winter storm events occurred in 2016, 2017, and 2019, however, these winter storm events did not lead to a disaster declaration within the County.

Downed trees disrupted power to several portions of the county, leaving many residents without heat or water for several days. Residential care facilities, home-bound ill personnel requiring daily treatment, hospital patients, and anyone requiring emergency assistance was affected by this winter storm because obstructed roadways prevented emergency vehicle movement. The damage to fire stations, equipment, roads, and other infrastructure affected the ability to effectively respond, as well as reducing the operating budgets of these facilities.

Probability Assessment

Based on the available data and research the Steering Committee determined the **probability of experiencing a winter storm is “high”**, meaning one incident is likely within the next ten to 35-year period.

The recurrence interval for a moderate to severe winter storm is about once every year; however, there can be many localized storms between these periods. Severe winter storms occur in western Oregon regularly from November through February. Yamhill County experiences moderate winter storms every year to every other year, more damaging winter storms happen less often. According to historical records, there have been an estimated 16 severe winter storm events in the past 100 years, which is about one every six years.

Vulnerability Assessment

The Steering Committee rated the County as having a **“high” vulnerability to winter storm hazards**, meaning that greater than 10% of the unincorporated County’s population or assets would be affected by a major disaster.

Given current available data, no quantitative assessment of the risk of winter storm was possible at the time of this NHMP update. However, assessing the risk to the County from

²⁷ NOAA, Storm Events Database, <https://www.ncdc.noaa.gov/stormevents/>

winter storms should remain an ongoing process determined by community characteristics and physical vulnerabilities. Weather forecasting can give County resources (emergency vehicles, warming shelters) time to prepare for an impending storm, but the changing character of the County population and resources will determine the impact of winter storms on life and property in Yamhill County.

The most likely impact of snow and ice events on Yamhill County are road closures limiting access/egress to/from some areas, especially roads to higher elevations. Winter storms with heavy wet snow or high winds and ice storms may also result in power outages from downed transmission lines and/or poles.

Winter storms which bring snow, ice and high winds can cause significant impacts on life and property. Many severe winter storm deaths occur as a result of traffic accidents on icy roads, heart attacks may occur from exertion while shoveling snow and hypothermia from prolonged exposure to the cold. The temporary loss of home heating can be particularly hard on the elderly, young children and other vulnerable individuals.

Property is at risk due to flooding and landslides that may result if there is a heavy snowmelt. Additionally, ice, wind and snow can affect the stability of trees, power and telephone lines and TV and radio antennas. Downed trees and limbs can become major hazards for houses, cars, utilities and other property. Such damage in turn can become major obstacles to providing critical emergency response, police, fire and other disaster recovery services.

Severe winter weather also can cause the temporary closure of key roads and highways, air and train operations, businesses, schools, government offices and other important community services. Below freezing temperatures can also lead to breaks in un-insulated water lines serving schools, businesses, industries and individual homes. All these effects, if lasting more than several days, can create significant economic impacts for the affected communities and the surrounding region. In the rural areas of the county severe winter storms can isolate small communities, farms, and ranches.

At the time of this update, enough data was not available to determine winter storm vulnerability in terms of explicit types and numbers of existing and future buildings, infrastructure or critical infrastructure.

More information on this hazard can be found in the [Risk Assessment for Region 3, Mid/Southern Willamette Valley, of the Oregon NHMP \(2015\)](#).

Volcanic Event

Significant Changes since Previous NHMP:

Updated report formatting.

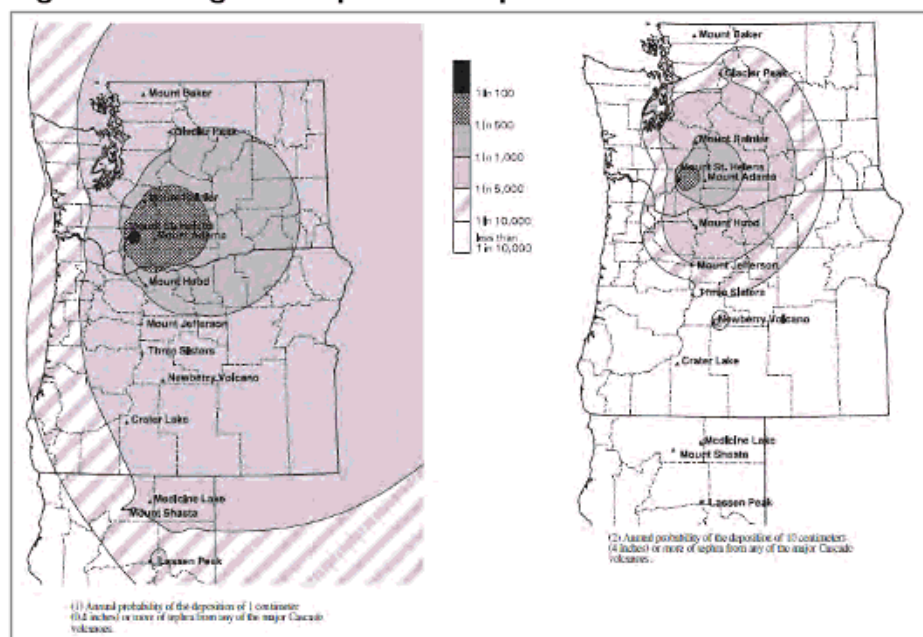
Characteristics

The Pacific Northwest lies within the “ring of fire,” an area of very active volcanic activity surrounding the Pacific Basin. Volcanic eruptions occur regularly along the ring of fire, in part because of the movement of the Earth’s tectonic plates. The Earth’s outermost shell, the lithosphere, is broken into a series of slabs known as tectonic plates. These plates are rigid, but they float on a hotter, softer layer in the Earth’s mantle. As the plates move about on the layer beneath them, they spread apart, collide, or slide past each other. Volcanoes occur most frequently at the boundaries of these plates and volcanic eruptions occur when molten material, or magma, rises to the surface.

Location and Extent

Three closest three volcanoes to Yamhill County, Mount St. Helens, Mount Hood, and Mount Jefferson, all lie to the east. Figure 2-13 depicts the potential and geographical extent of volcanic ash fall in excess of ten centimeters from a large eruption of Mt. St. Helens.

Figure 2-13 Regional Tephra-fall Maps



Source: USGS “Volcano Hazards in the Mount Jefferson Region, Oregon”

Scientists use wind direction to predict areas that might be affected by volcanic ash; during an eruption that emits ash, the ash fall deposition is controlled by the prevailing wind direction. The predominant wind pattern over the Cascades originates from the west and previous eruptions seen in the geologic record have resulted in most ash fall drifting to the

east of the volcanoes. Volcanic activity from ash clouds that drift downwind to the county from near or distant eruptions is possible from Mount Saint Helens, Mount Hood, the Three Sisters, Mount Bachelor, and the Newberry Crater areas. Because the distance to these potentially active volcanic areas is so great, the only adverse effect that would impact areas of Yamhill County is ash fallout, with potential impact on water supplies. The area affected by ash fallout depends upon the height attained by the eruption column and the atmospheric conditions at the time of the eruption. Volcanic ash can contaminate water supplies, cause electrical storms, create health problems and collapse roofs. Regional tephra fall shows the annual probability of ten centimeters or more of ash accumulation from Pacific Northwest volcanoes.

Geologic hazard maps have been created for most of the volcanoes in the Cascade Range (including Mt. St Helens, Mt. Adams, Mt. Hood, and Mt. Jefferson) by the USGS Volcano Program at the Cascade Volcano Observatory in Vancouver, WA and are available at http://vulcan.wr.usgs.gov/Publications/hazards_reports.html. Volcanic activity from more distant volcanoes will have less impact upon the County.

Additional reports are available via DOGAMI's Publications Search website:

<http://www.oregongeology.org/pubs/search.php>

Other agency/ consultant reports:

- Ewert, J.W., Diefenbach, A.K., and Ramsey, D.W., 2018, 2018 update to the U.S. Geological Survey national volcanic threat assessment: U.S. Geological Survey Scientific Investigations Report 2018–5140, 40 p., <https://doi.org/10.3133/sir20185140>.

History

Mount St. Helens has been the most active volcano in the Cascade Range during the past 10,000 years. Mount St. Helens is in southern Washington State and has been active throughout its 50,000-year lifetime. Mount Hood is just over 100 miles northeast of the county and is more than 500,000 years old. It has had two significant eruptive periods in the past 1,500 years.

In the past 200 years, seven of the Cascade volcanoes have erupted, including (from north to south): Mt. Baker, Glacier Peak, Mt. Rainier, Mount St. Helens (Washington), Mt. Hood (Oregon), Mt. Shasta and Mt. Lassen (California).

There has been no recent volcanic activity near the county associated with Mount Hood. The 1980 explosion of Mount St. Helens in southern Washington State is the latest on record; both Mount St. Helens and Mount Hood remain listed as active volcanoes.

Probability Assessment

Based on the available data and research the Steering Committee determined the **probability of experiencing volcanic activity is “low”**, meaning one incident is likely within the next 75 to 100-year period.

The United States Geological Survey-Cascades Volcano Observatory (CVO) produced volcanic hazard zonation reports for Mount St. Helens and Mount Hood in 1995 and 1997.

The reports include a description of potential hazards that may occur to immediate communities. The CVO created an updated annual probability of tephra (ash) fall map for the Cascade region in 2001, which could be a rough guide for Yamhill County in forecasting potential tephra hazard problems (Figure 2-13). The map identifies the location and extent of the hazard.

The CVO Volcanic tephra fall map is based on the combined likelihood of tephra-producing eruptions occurring at Cascade volcanoes. Probability zones extend farther east of the range because winds blow from westerly directions most of the time. The map shows annual probabilities for a fall of one centimeter (about 0.4 inch). The patterns on the map show the dominating influence of Mount St. Helens as a tephra producer. Because small eruptions are more numerous than large eruptions, the probability of a thick tephra fall at a given locality is lower than that of a thin tephra fall. The USGS estimates there is annual probability of 0.01 percent that 10 centimeters or more of tephra (ash) accumulation will occur in the far west portions of Yamhill County. Most of the county has less than 0.01 percent probability of ash fall impact.²⁸

Vulnerability Assessment

The Steering Committee rated the county as having a **“low” vulnerability to volcanic activity**, meaning that between less than one percent of the unincorporated County’s population or assets would be affected by a major disaster (volcanic ash/lahar).

The U.S. Geological Survey (USGS) lists the threat potential of volcanoes. According to the USGS there are nine volcanoes with Very High or High threat potentials in Oregon and Washington (listed here in order of threat potential): Mount St. Helens, Mount Rainier, Mount Hood, Three Sisters, Newberry, Mount Baker, Glacier Peak, Crater Lake, and Mount Adams (High).²⁹

The primary threat to lives and property from active volcanoes is from violent eruptions that unleash tremendous blast forces, generate mud and debris flows (lahars), or produce flying debris and ash clouds. Volcano hazards are divided into proximal (near the volcano) and distal (far from the volcano). Ashfall, and tephra, distal eruptive hazards, are of the greatest concern in Yamhill County. There are no proximal eruptive hazards in Yamhill County.

²⁸ USGS, 1999, *Volcano Hazards in the Mount Jefferson Region, Oregon*, Open-File Report 99-24

²⁹ Ewert, J.W., Diefenbach, A.K., and Ramsey, D.W., 2018, 2018 update to the U.S. Geological Survey national volcanic threat assessment: U.S. Geological Survey Scientific Investigations Report 2018–5140, 40 p., <https://doi.org/10.3133/sir20185140>.

Wildfire

Significant Changes since Previous NHMP:

Data from the Wildfire Risk Explorer was incorporated with this update.

The [Yamhill County Community Wildfire Protection Plan \(CWPP\)](#) was completed in August 2009 and revised in November, 2015. The CWPP is hereby incorporated into this NHMP by reference and it will serve as the wildfire chapter. The following presents a brief summary of key information; refer to the full CWPP for a complete description and evaluation of the wildfire hazard.

Characteristics

Wildfires occur in areas with large amounts of flammable vegetation that require a suppression response due to uncontrolled burning. Fire is an essential part of Oregon's ecosystem, but can also pose a serious threat to life and property particularly in the state's growing rural communities. Wildfire can be divided into three categories: interface, wildland and firestorms. The increase in residential development in interface areas has resulted in greater wildfire risk. Fire has historically been a natural wildland element and can sweep through vegetation that is adjacent to a combustible home. New residents in remote locations are often surprised to learn that in moving away from built-up urban areas, they have also left behind readily available fire services providing structural protection. Recent fires in Oregon and across the western United States have increased public awareness over the potential losses to life, property and natural and cultural resources that fire can pose.

The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas.

Topography: As slope increases, the rate of wildfire spread increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridgetops may mark the end of wildfire spread, since fire spreads more slowly or may even be unable to spread downhill.

Fuel: The type and condition of vegetation plays a significant role in the occurrence and spread of wildfires. Certain types of plants are more susceptible to burning or will burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available to fuel the fire (referred to as the "fuel load"). The ratio of living to dead plant matter is also important. The risk of fire is increased significantly during periods of prolonged drought as the moisture content of both living and dead plant matter decreases. The fuel's continuity, both horizontally and vertically, is also an important factor.

Weather: The most variable factor affecting wildfire behavior is weather. Temperature, humidity, wind and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signals reduced Wildfire occurrence and easier containment.

The frequency and severity of wildfires is also dependent upon other hazards, such as lightning, drought, equipment use, railroads, recreation use, arson and infestations. If not promptly controlled, wildfires may grow into an emergency or disaster. Even small fires can threaten lives and resources and destroy improved properties. In addition to affecting people, wildfires may severely affect livestock and pets. Such events may require emergency watering/feeding, evacuation and shelter.

The indirect effects of wildfires can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the soil, waterways and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards, as described above.

Location and Extent

Wildfire hazard areas are commonly identified in regions as the Wildland Urban Interface (WUI). The interface is the urban-rural fringe where homes and other structures are built into a densely forested or natural landscape. If left unchecked, it is likely that fires in these areas will threaten lives and property. One challenge Yamhill County faces is from the increasing number of houses being built in the urban/rural fringe and areas with heavy fuel loads. The “interface” between urban or suburban areas and the resource lands has significantly increased the threat to life and property from fires. Responding to fires in the expanding Wildland Urban Interface area may tax existing fire protection systems beyond original design or current capability.

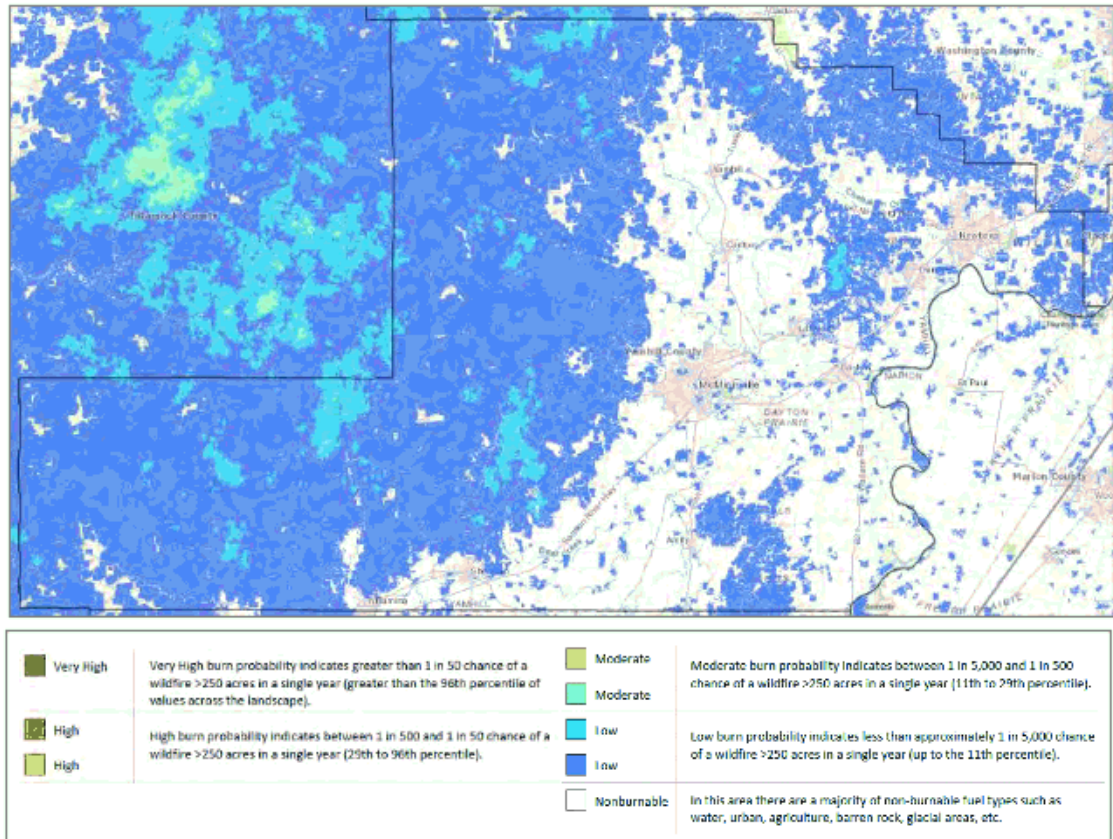
The ease of fire ignition further determines ranges of the wildfire hazard due to natural or human conditions and the difficulty of fire suppression. The wildfire hazard is also magnified by several factors related to fire suppression/control, such as the surrounding fuel load, weather, topography and property characteristics.

Fire susceptibility throughout the county dramatically increases in late summer and early autumn as summer thunderstorms with lightning strikes increases and vegetation dries out, decreasing plant moisture content and increasing the ratio of dead fuel to living fuel. However, various other factors, including humidity, wind speed and direction, fuel load and fuel type and topography can contribute to the intensity and spread of wildland. In addition, common causes of wildfires include arson and negligence from industrial and recreational activities.

In Yamhill County, Wildland/Urban Conflagrations burn primarily vegetative fuels, outside highly urbanized areas. The Willamette Valley was originally covered by lowland evergreen and deciduous forests and native prairie grasslands. Now there is more brush, small diameter trees, Douglas fir, and more crops, such as wheat, which can increase potential for wildfire damage. The extent of the hazard is greatest along the county’s mountainous eastern boundary (see Figure 2-14). In these areas, there is low burn probability with expected flame lengths generally less than 4 to 8-feet under normal weather conditions. Most of the developed portion of the county has less severe (unburnable to low) wildfire burn probability that include expected flame lengths less than 8-feet under normal weather conditions. Conditions vary widely and with local topography, fuels, and local weather (including wind) conditions. Under warm, dry, windy, and drought conditions expect higher

likelihood of fire starts, higher intensity, more ember activity, and a more difficult to control wildfire that will include more fire effects and impacts.

Figure 2-14 Extent of Wildfire Hazard (Burn Probability)



Source: [Oregon Wildfire Risk Explorer: County Summary Report](#) (December 2018) – To view map in more detail click hyperlink to left. Retrieved September 11, 2019.

Other agency/ consultant reports:

- Scott L. Stephens, Ralph E.J. Boerner, Jason J. Maghaddas, Emily E.Y. Maghaddas, Brandon M. Collins, Christopher B. Dow, Carl Edminster, Carl E. Fiedler, Danny L. Fry, Bruce R. Hartsough, Jon E. Keeley, Eric E. Knapp, James D. McIver, Carl N. Skinner, and Andrew P. Youngblood, Fuel treatment impacts on estimated wildfire carbon loss from forests in Montana, Oregon, California, and Arizona; 07 May 2012, available at <https://pubs.er.usgs.gov/publication/70157098>

History

From 2008 to 2017, Yamhill County saw 390 acres burned from a total of 137 fires.³⁰ Figure 2-15 shows fire starts from 2008 to 2017, fires ignited by humans are shown in red, lightning caused fires are shown in yellow. In the past 10 years 7% of all fires were caused by lightning and 93% of fires were caused by human activity (ranging from arson and debris burning to equipment use and fires caused along powerlines). In general, the human caused wildfires

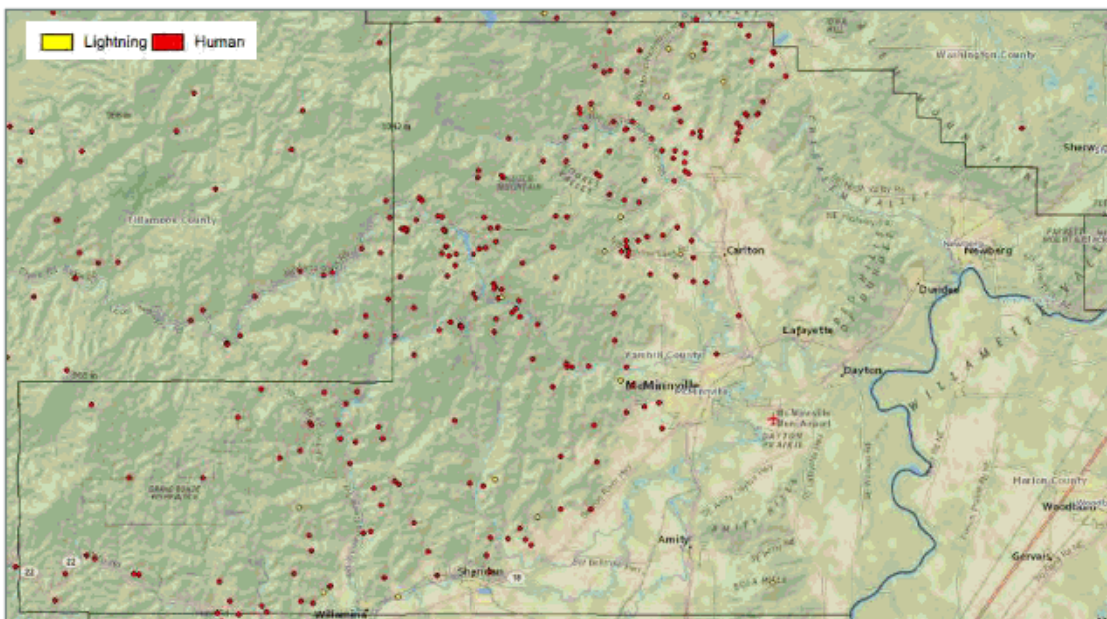
³⁰ Oregon Wildfire Risk Explorer, Area of Interest Report, Yamhill County, accessed September 11, 2019. http://oe.oregonexplorer.info/ExternalContent/wildfire_reports/WildfireRisk_summary_report_yamhill_county.pdf

are in populated areas and within river and stream corridors near transportation routes, while lightning caused wildfires are often in more remote locations. Wildland/Urban Conflagrations are not common in the Willamette Valley and based on historic events, large fires (1,000-acres) are only likely to occur every 20 years.

Urban fires are the most preventable type of fire, and future events depend largely on prevention measures. Although no historical urban conflagrations in have occurred, educating residents, building and maintenance code enforcement, and firefighting equipment, staff, and response systems upkeep are all steps that can ensure that highly likely localized urban fires do not become large-scale conflagrations.

While most fire ignitions occurred along travel corridors and the edges of major urban areas, the fires that escape initial suppression efforts tend to be in more remote areas and are more likely to occur in some portions of the landscape than others.

Figure 2-15 Local Fire Starts (1992-2017)



Source: [Oregon Wildfire Risk Explorer: County Summary Report](#) (December 2018)– To view map in more detail click hyperlink to left. Retrieved September 11, 2019.

Probability Assessment

Based on the available data and research the Steering Committee determined the **probability of experiencing a Wildfire is “low”**, meaning one incident is likely within the next 75 to 100-year period. See Figure 2-14 for more information on location of probable wildfires.

Certain conditions must be present for significant interface fires to occur. The most common are hot, dry and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel, topography, weather, drought and development. Many of these conditions are demonstrated across large areas within Yamhill County, creating a significant collective risk.

Vulnerability Assessment

The Steering Committee rated the county as having a “**low**” **vulnerability to wildfire hazards**, meaning that less than one percent of the County’s population or assets would be affected by a major disaster.

The Yamhill County CWPP addresses wildfires countywide and defined as either Zone 1 or Zone 2. Zone 1 is the western one-third of the county (225,000 acres) that is forested, mountainous, and sparsely populated.

Zone 1 is outside of any County Fire Protection District and is considered commercial forest (private and industrial forest lands including BLM and National Forest) within the Oregon Department of Forestry Protection District. Table 2-11 shows the overall fire risk rating for Zone 1 is considered high.

Zone 2 includes all portions of the County that are east of Zone 1 and includes incorporated cities, agricultural land, unincorporated communities, and scattered homes. Most of this land is flat and privately owned. Table 2-11 shows the overall fire risk rating for Zone 2 is considered high.

Table 2-11 CWPP Wildfire Risk Assessment: Overall Fire Risk

Risk Factors	Zone 1	Zone 2
Ignition Risk	15 points (Moderate)	27 points (Moderate)
Hazard	59 points (High)	52 points (High)
Values Protected	35 points (Moderate)	35 points (Moderate)
Protection Capability/ Community Preparedness	36 points (High)	10 points (Moderate)
Overall Rating	145 points (High)	124 points (High)

Source: [Yamhill County Community Wildfire Protection Plan](#) (2009)

The CWPP utilized the local level wildfire risk assessment methodology developed by the Oregon Department of Forestry. The risk assessment provides ratings of low, moderate, or high based on four risk factors: Ignition Risk, Hazard, Values Protected, and Protection Capability/Community Preparedness. Zone 1 and Zone 2 were assessed separately based on the four factors, each factor has from two to five criteria to better describe them, each criterion was given a score based on its level of importance, ratings were assigned based on the cumulative criteria scores, and the cumulative scores of the four factors determined the Overall Risk Rating.

The NHMP steering committee reviewed the CWPP risk assessment along with the County Summary Report from the Oregon Wildfire Risk Explorer to determine their countywide vulnerability to wildfire (see description below and Figure 2-16 and Figure 2-17). The wildfire risk assessment will be revised and updated when the Yamhill County CWPP is updated.

Table 2-12 shows the detail of the CWPP Wildfire Risk Assessment Overall Fire Risk for Zones 1 and 2. For an explanation of the categories see the [Yamhill County CWPP \(2015\)](#).

Table 2-12 CWPP Wildfire Risk Assessment: Ratings Summary

FACTOR	CRITERIA	POSSIBLE SCORE	ZONE 1 SCORE	ZONE 2 SCORE
Ignition Risk	Wildfire History	5-20	10	15
	Home Density	0-10	0	2
	Other Wildfire Risks	0-10	5	10
Ignition Risk Rating			Moderate	Moderate
Hazard	Weather	20	20	20
	Slope	0-3	2	0
	Aspect	0-5	5	5
	Elevation	0-2	2	2
	Vegetation	0-20	20	20
	Crown Fire	0-10	10	5
Hazard Rating			High	High
Values	Natural Resources	0-15	15	8
	Home Density	0-30	0	7
	Infrastructure	0-20	20	20
Values Rating			Moderate	Moderate
Protection Capability	Response Capability	0-36	36	8
	Community Preparedness	0-4	0	2
Protection Capability Rating			High	Moderate
TOTAL		0-195	145	124
Overall Risk Rating			High	High

Source: [Yamhill County Community Wildfire Protection Plan](#) (2015)

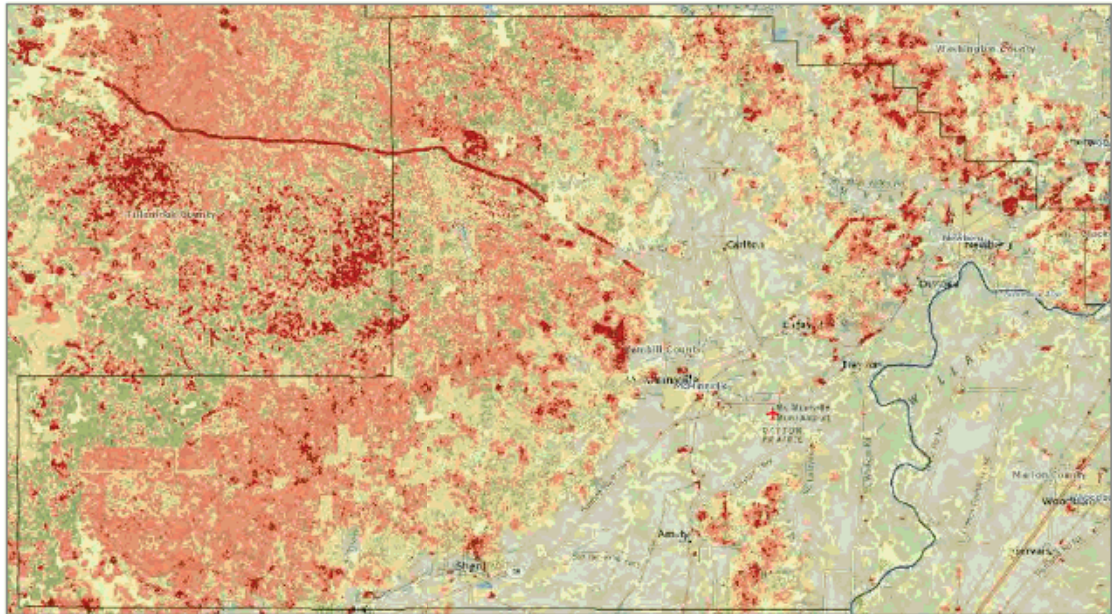
The Oregon Wildfire Risk Explorer provides detail on the potential impact to structure from wildfire as shown in Figure 2-16, darker areas have higher potential impacts if fire ignites nearby. The areas of greater risk are generally located in more rural parts of the county, that are hillier, and more heavily vegetated and forested.

Generally, the populated areas of the county (Zone 2 in the CWPP) have low to moderate consequences to wildfire to all mapped highly valued resources and assets (e.g., critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic structures, timber, municipal watershed, vegetation condition, and terrestrial and aquatic wildlife). The unpopulated areas of the county (Zone 1 in the CWPP) generally have moderate consequences with some areas of high to very high consequences. The areas of high to very high consequences are generally in forested areas.

Figure 2-17 shows that the overall wildfire risk for Yamhill County is considered low for the majority of Yamhill County with some pockets of medium overall fire risk in the forested hills in the western portion of the county (Zone 1 in the CWPP) per the Oregon Wildfire Risk Explorer. Overall wildfire risk is calculated based on the likelihood and consequence of wildfire on all mapped highly valued resources and assets combined (see list in previous section). The data considers the likelihood of wildfires burning greater than 250 acres, the

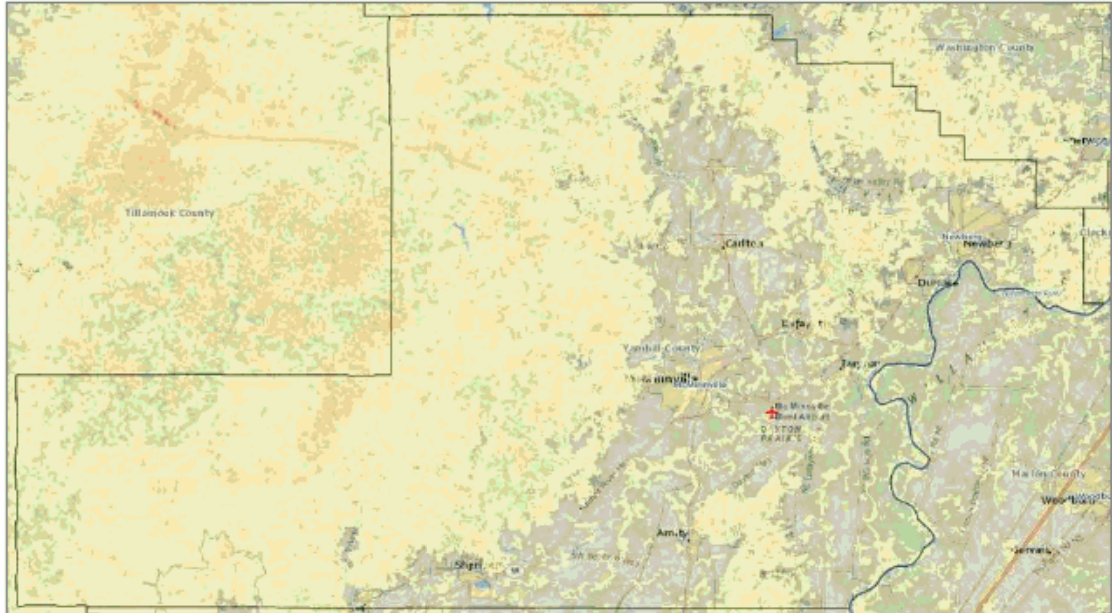
susceptibility of resources and assets to wildfire of different intensities, and the likelihood of those intensities.

Figure 2-16 Oregon Wildfire Risk Explorer – Overall Potential Impact



Source: [Oregon Wildfire Risk Explorer: County Summary Report](#)– To view map in more detail click hyperlink to left. Accessed September 11, 2019.

Figure 2-17 Oregon Wildfire Risk Explorer – Overall Wildfire Risk



Source: [Oregon Wildfire Risk Explorer: County Summary Report](#)– To view map in more detail click hyperlink to left. Accessed September 11, 2019.

Additional wildfire hazard information for Yamhill County and cities is available via the [Yamhill County CWPP \(2015\)](#) and Oregon Explorer’s [Wildfire Risk Explorer](#).

SECTION 3: MITIGATION STRATEGY

This section outlines Yamhill County's strategy to reduce or avoid long-term vulnerabilities to the identified hazards. Specifically, this section presents a mission and specific goals and actions thereby addressing the mitigation strategy requirements contained in 44 CFR 201.6(c). The NHMP Steering Committee viewed and updated the mission, goals, and action items documented in this NHMP. Additional planning process documentation is in Volume III, Appendix B.

Mitigation Plan Mission

The NHMP mission states the purpose and defines the primary functions of Yamhill County's NHMP. It is intended to be adaptable to any future changes made to the NHMP and need not change unless the community's environment or priorities change.

The mission of the Yamhill County NHMP is to:

To promote public policy and mitigation activities which will enhance the safety to life and property from natural hazards.

This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the county towards building a safer, more sustainable community.

Note: The 2019 NHMP Steering Committee developed the above mission statement to fit the needs of Yamhill County for this update.

Mitigation Plan Goals

Mitigation plan goals are more specific statements of direction that Yamhill County citizens and public and private partners can take while working to reduce the County's risk from natural hazards. These statements of direction form a bridge between the broad mission statement and action items. The goals listed here serve as checkpoints as agencies and organizations begin implementing mitigation action items.

Meetings with the Steering Committee, previous hazard event reports, and the previous county NHMPs served as methods to obtain input and identify priorities in developing goals for reducing risk and preventing loss from natural hazards in Yamhill County.

The 2019 Yamhill County NHMP Steering Committee reviewed the previous NHMP goals in comparison to the State NHMP (2015) goals and determined that they would retain their original goals without modifications.

All the NHMP goals are important and are listed below in no order of priority. Establishing community priorities within action items neither negates nor eliminates any goals, but it establishes which action items to consider implementing first, should funding become available.

GOAL 1: EMERGENCY OPERATIONS

- Coordinate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures and with other agencies.

GOAL 2: EDUCATION AND OUTREACH

- Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

GOAL 3: PARTNERSHIPS

- Develop effective partnerships with public and private sector organizations and significant agencies and businesses for future natural hazard mitigation efforts.
- Coordinate natural hazard mitigation actions between the County and local jurisdictions to create more cohesive and effective hazard mitigation efforts.

GOAL 4: PREVENTIVE

- Develop and implement activities to protect human life, commerce, and property from natural hazards.
- Reduce losses and repetitive damage for chronic hazard events while promoting insurance coverage for catastrophic hazards.

GOAL 5: NATURAL RESOURCES UTILIZATION

- Link natural resources management, land use planning, and watershed planning with natural hazard mitigation activities to protect natural systems and allow them to serve natural hazard mitigation functions.

GOAL 6: IMPLEMENTATION

- Implement strategies to mitigate the effects of natural hazards and increase the quality of life and resilience of economies in Yamhill County.

GOAL 7: DEVELOPMENT

- Communities appropriately apply development standards that consider the potential impacts of natural hazards.

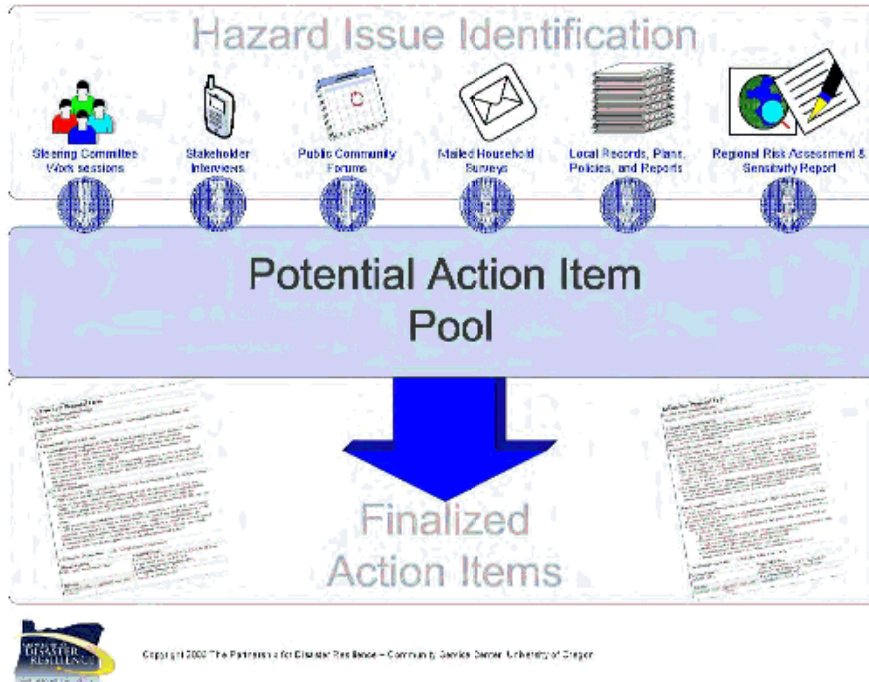
GOAL 8: DOCUMENTATION

- Document and evaluate progress in achieving hazard mitigation strategies and action items.

Action Item Development Process

Action items identified through the planning process are an important part of the mitigation plan. Action items are detailed recommendations for activities that local departments, citizens, and others could engage in to reduce risk. Development of action items was a multi-step, iterative process that involved brainstorming, discussion, review and revisions. Action items can be developed through many sources. Figure 3-1 illustrates some of these sources.

Figure 3-1 Development of Action Items



Most of the action items were first created during the previous NHMP planning processes. During these processes, the Steering Committee developed maps of local vulnerable populations, facilities and infrastructure in respect to each identified hazard. Review of these maps generated discussion around potential actions to mitigate impacts to the vulnerable areas. The Oregon Partnership for Disaster Resilience (OPDR) provided guidance in the development of action items by presenting and discussing actions that were used in other communities. OPDR also took note of ideas that came up in Steering Committee meetings and drafted specific actions that met the intent of the Steering Committee. All actions were then reviewed by the Steering Committee, discussed at length and revised as necessary before becoming a part of this document.

Action Item Matrix

The action item matrix (Table 3-1) portrays the overall action plan framework and identifies linkages between the NHMP goals, partnerships (coordination and partner organizations), and actions. The matrix documents a brief description of the action, coordinating and partner (internal) organizations, timeline (ongoing, short term, long term), priority (low, medium, high), and NHMP goals addressed. Refer to Volume III, Appendix A for detailed information for each action.

Action Item Framework

Many of the Yamhill County NHMP’s recommendations are consistent with the goals and objectives of the County’s existing plans and policies. Where possible, Yamhill County will implement the NHMP’s recommended actions through existing plans and policies. Plans and policies already in existence have support from residents, businesses, and policy makers. Many land-use, comprehensive, and strategic plans get updated regularly, and can adapt

easily to changing conditions and needs. Implementing the NHMP's action items through such plans and policies increases their likelihood of being supported and implemented.

See Volume II for the actions for each participating city or special district.

Action Item Prioritization

The Steering Committee decided to modify the prioritization of action items in this update to reflect current conditions and needs. Upon review, the Steering Committees assigned a high priority ranking to actions that best fulfill the goals of the NHMP and are appropriate and feasible for each jurisdiction and responsible entities to implement during the five-year lifespan of this version of the NHMP. High priority actions are shown in **bold** text with grey highlight within Table 3-1 (see page 3-2 for full text of the referenced plan goals).

During the 2019 update, the Steering Committee agreed to revise some existing actions to make them more specific, to remove actions that no longer apply or are considered complete, and to add new actions to respond to new vulnerabilities (see Volume III, Appendix A for an updated list of action items and Appendix B for information on changes).

The Steering Committee will prioritize the following actions to focus their attention, and resource availability, upon an achievable set of high leverage activities over the next five-years.

- **Multi-Hazard #1:** Develop, produce, and distribute public education and information materials concerning mitigation, preparedness and safety procedures for all natural hazards.
- **Multi-Hazard #5:** Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration in Yamhill County such as MOUs and CPODS etc.
- **Multi-Hazard #6:** Develop a long-term recovery plan for Yamhill County from the effects of natural hazards.
- **Multi-Hazard #8:** Train elected officials and recorders in small towns who have no emergency management background on hazard mitigation needs.
- **Earthquake #1:** Conduct seismic strength evaluations of critical facilities and infrastructure to identify vulnerabilities and seismically retrofit (structural and nonstructural) identified critical facilities and infrastructure to meet life safety standards in order to continue operations post-earthquake.
- **Landslide #1:** Use DOGAMI landslide risk maps to improve public knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas in Yamhill County.
- **Wildfire #1:** Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan.
- **Wildfire #4:** Improve fire identification data collection and reporting to enhance emergency response and evacuation procedures.

Although this methodology provides a guide for the Steering Committee in terms of implementation, the Steering Committee has the option to implement any of the action items at any time. This option to consider all action items for implementation allows the committee to consider mitigation strategies as new opportunities arise, such as capitalizing on funding sources that could pertain to an action item that is not the highest priority.

Table 3-1 Yamhill County Action Items

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Internal Partners	Potential Funding	Cost	Timing	Plan Goals Addressed																
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8									
Multi-Hazard Actions																							
Multi-Hazard #1	Develop, produce, and distribute public education and information materials concerning mitigation, preparedness and safety procedures for identified natural hazards.	Emergency Management	Public Health, Fire, Sheriff's Office	General fund, grants	L	Ongoing	✓	✓	✓			✓		✓									
Multi-Hazard #2	Incorporate Yamhill County Natural Hazard Mitigation Plan actions and goals in regulatory documents, e.g., Comprehensive Plan and the zoning code, and in existing plans, policies, or programs in the county that address natural hazards.	Planning	Emergency Management	General fund, grants, DLCD TA	M	Medium	✓		✓	✓	✓	✓	✓	✓									
Multi-Hazard #3	Use DOGAMI Corridor study to identify the effects of each natural hazard on priority transportation routes to and from critical facilities, such as, emergency facilities and first responder sites.	Public Works	ODOT	General fund, grants, ODOT, DOGAMI	L	Ongoing	✓		✓					✓									
Multi-Hazard #4	Participate in collaborative programs to decrease the risk of natural hazards such as FEMA FLIP and FIRRM.	Emergency Management	Public Health	General fund	L	Ongoing	✓		✓	✓	✓	✓	✓	✓									
Multi-Hazard #5	Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration in Yamhill County such as MOUs and CPODS etc.	Emergency Management	Public Health	General fund, grants	L	Ongoing	✓	✓	✓			✓		✓									

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Internal Partners	Potential Funding	Cost	Timing	Plan Goals Addressed								
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	
Multi-Hazard #6	Develop a long-term recovery plan for Yamhill County from the effects of natural hazards.	Emergency Management	County Administration	General fund, grants	M	Short	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Hazard #7	Update jurisdictional debris management plan to include provisions for winter storm and windstorm. Update should include labor & equipment tracking protocols for disaster assessment data collection.	Emergency Management	Public Works	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Hazard #8	Train elected officials and recorders in small towns who have no emergency management background on hazard mitigation needs.	Emergency Management	Administration, OEM	General fund, EMPG	L	Short	✓	✓	✓						✓
Multi-Hazard #9	Determine critical bridge infrastructure – lifeline routes – water, sewer, power.	Public Works	ODOT	General fund, grants	M	Ongoing	✓	✓							✓
Multi-Hazard #10	Promote and educate public on energy independence projects in neighborhoods and communities.	BOC	County Administration	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drought Actions															
Drought #1	Encourage coordination among municipalities for water issues, such as inter-tied water systems and local water storage to mitigate drought	Emergency Management	Public Health, COG, LOC	General fund, grants	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Internal Partners	Potential Funding	Cost	Timing	Plan Goals Addressed											
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8				
Earthquake Actions																		
Earthquake #1	Conduct seismic strength evaluations of critical facilities and infrastructure to identify vulnerabilities and seismically retrofit (structural and nonstructural) identified critical facilities and infrastructure to meet life safety standards in order to continue operations post-earthquake.	Facilities	Emergency Management	General fund, grants, SRGP	M-H	Medium	✓											
Flood Actions																		
Flood #1	Implement, and maintain the requirements needed for Yamhill County to participate in the NFIP's Community Rating System and seek to improve the County's rating.	Planning	Emergency Management	General fund	L	Ongoing	✓					✓	✓	✓	✓	✓	✓	✓
Flood #2	Coordinate with DOGAMI and DLCD to enhance data and mapping of floodplain data in the county. Identify and map flood-prone areas outside of designated floodplains.	Emergency Management	Planning	General fund, Risk MAP, HMA	H	Medium	✓					✓	✓	✓	✓	✓	✓	✓
Flood #3	Retrofit culverts in Yamhill County with pipes designed for 50 to 100-year flood intervals.	Public Works	Planning, ODOT	General fund, ODOT	H	Ongoing	✓					✓	✓	✓	✓	✓	✓	✓
Flood #4	Ensure continued compliance in the NFIP through enforcement of local flood plain management ordinances. Mitigate repetitive flood loss properties as applicable.	Planning	Public Works, Emergency Management	General fund	L	Ongoing	✓					✓	✓	✓	✓	✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Internal Partners	Potential Funding	Cost	Timing	Plan Goals Addressed							
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Landslide Actions														
Landslide #1	Utilize the updated regional landslide risk maps (DOGAMI O-16-02) to identify hazard areas and collaborate with the Oregon Department of Geology and Mineral Industries to work on landslide risk reduction efforts; determine areas and buildings at risk to landslides and propose Comprehensive Plan and land use policies accordingly.	Emergency Management	Planning, Public Works, DOGAMI	Risk MAP, HMA grants, General fund	M	Short	✓	✓	✓	✓	✓	✓	✓	✓
Landslide #2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.	Planning	Public Works	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓
Severe Weather Actions (Windstorm and Winter Storm – Snow/Ice)														
Winter Storm #1	Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe weather (windstorms and winter storms).	Public Works	Local Utilities	General fund, grants	L	Short	✓	✓	✓	✓	✓	✓	✓	✓
Wildfire Actions														
Wildfire #1	Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan.	Fire Defense Board	Emergency Management	General fund, ODF	L-H	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Internal Partners	Potential Funding	Cost	Timing	Plan Goals Addressed									
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8		
Wildfire #2	Coordinate with ODF to regularly update and maintain the Community Wildfire Protection Plan for susceptible urban/wildland interface areas in Yamhill County.	Fire Defense Board	Emergency Management	General fund, ODF	L	Ongoing	✓		✓							✓
Wildfire #3	Conduct regular fuel-reduction projects throughout wildfire hazard-prone areas in Yamhill County.	Fire Defense Board	ODF, BOC,	General fund, ODF, grants	M	Ongoing	✓	✓		✓	✓	✓				✓
Wildfire #4	Improve fire identification data collection and reporting to enhance emergency response and evacuation procedures.	Fire Defense Board	Sheriff's Office	General fund, grants	L	Short	✓		✓							✓
Wildfire #5	Develop an inventory of alternative firefighting water sources and encourage the development of additional sources.	Fire Defense Board	ODF	General fund, grants	L	Short	✓		✓			✓				✓
Wildfire #6	Develop an inventory of firefighting hardware to be better prepared when attacking wildfires. (Resource inventory is complete)	Fire Defense Board	ODF	General fund, grants	L	Short	✓		✓							✓

Source Yamhill County NHMP Steering Committee, updated 2019
 Note: Full text of the plan goals referenced in this table is located on page 3-2.

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SECTION 4:

PLAN IMPLEMENTATION AND MAINTENANCE

This section details the formal process that will ensure that the NHMP remains an active and relevant document. The NHMP implementation and maintenance process includes a schedule for monitoring and evaluating the NHMP semi-annually, as well as producing an updated NHMP every five years. Finally, this section describes how the County will integrate public participation throughout the NHMP maintenance and implementation process.

Implementing the NHMP

The success of the Yamhill County NHMP depends on how well the outlined action items are implemented. In an effort to ensure that the activities identified are implemented, the following steps will be taken: 1) the NHMP will be formally adopted, 2) a Steering Committee will be assigned, 3) a convener shall be designated, 4) semi-annual meetings will be held, 5) the identified activities will be prioritized and evaluated, and 6) the NHMP will be implemented through existing plans, programs and policies.

NHMP Adoption

The Yamhill County NHMP was developed and will be implemented through a collaborative process. After the NHMP is locally reviewed and deemed complete, the Yamhill County Resilience Coordinator, or their designee, shall submit it to the State Hazard Mitigation Officer (SHMO) at the Oregon Office of Emergency Management (OEM). OEM submits the NHMP to FEMA-Region X for review. This review addresses the federal criteria outlined in the FEMA Interim Final Rule 44 CFR Part 201. Upon acceptance by FEMA, the County will adopt the NHMP via resolution. At that point, the County will gain eligibility for the Pre-Disaster Mitigation (PDM) Grant Program, the Hazard Mitigation Grant Program (HMGP) and Flood Mitigation Assistance (FMA) grant program funds. Following adoption by the County, the participating jurisdictions should convene local decision makers and adopt the Yamhill County Multijurisdictional NHMP.

Convener

The Board of County Commissioners (BCC) will adopt the Yamhill County NHMP, and the Steering Committee will take responsibility for plan implementation. The County Administrator or designee (Yamhill County Emergency Manager) will serve as the NHMP convener to facilitate the Steering Committee meetings and will assign tasks such as updating and presenting the NHMP to the members of the committee.

- Coordinate Steering Committee meeting dates, times, locations, agendas and member notification;
- Document the discussions and outcomes of committee meetings;
- Serve as a communication conduit between the Steering Committee and the public/stakeholders;
- Identify emergency management-related funding sources for natural hazard mitigation projects; and
- Utilize the Risk Assessment as a tool for prioritizing proposed natural hazard risk reduction projects.

NHMP implementation and evaluation will be a shared responsibility among all Steering Committee members.

Hazard Mitigation Advisory Committee

The Steering Committee serves as the coordinating body for the NHMP and is responsible for coordinating implementation of NHMP action items and undertaking the formal review process. The BCC will assign representatives from county agencies, including, but not limited to, the current Steering Committee members.

Roles and responsibilities of the Steering Committee include:

- Attending future meetings;
- Prioritizing projects and recommending funding for natural hazard risk reduction projects;
- Participation in the NHMP update process;
- Documenting successes and lessons learned;
- Evaluating and updating the NHMP following a disaster;
- Evaluating and updating the NHMP in accordance with the prescribed maintenance schedule; and
- Development and coordination of ad hoc and/or standing subcommittees as needed.

Steering Committee Members

The following jurisdictions, agencies and/or organizations were represented and served on the Steering Committee during the development of the Yamhill County NHMP and may be represented during implementation and maintenance phase (for a list of individuals see *Acknowledgements*):

<u>County Departments</u>	<u>Participating Cities</u>	<u>Other</u>
Board of County Commissioners	City of Amity	Sheridan School District
Emergency Management	City of Dayton	Sheridan Fire/West Valley Fire
Planning	City of McMinnville	Tualatin Valley Fire & Rescue
Public Health	McMinnville Water & Light	
Public Works	McMinnville Fire	
	City of Newberg	
	City of Sheridan	
	City of Willamina	
	City of Yamhill	

To make the coordination and review of the Yamhill County NHMP as broad and useful as possible, the Steering Committee will engage additional stakeholders and other relevant hazard mitigation organizations and agencies to implement the identified action items. Specific organizations have been identified as partners in the action item matrices.

Implementation through existing programs

The NHMP includes a range of action items that, when implemented, will reduce loss from hazard events in the county. Within the NHMP, FEMA requires the identification of existing programs that might be used to implement these action items. Yamhill County and the participating cities currently address statewide planning goals and legislative requirements through their comprehensive land use plans, capital improvement plans, mandated standards and building codes. To the extent possible, Yamhill County and participating cities will work to incorporate the recommended mitigation action items into existing programs and procedures.

Many of the recommendations contained in the NHMP are consistent with the goals and objectives of the participating City and County's existing plans and policies. Where possible, Yamhill County and participating cities should implement the recommended actions contained in the NHMP through existing plans and policies. Plans and policies already in existence often have support from residents, businesses and policy makers. Many land-use, comprehensive and strategic plans get updated regularly and can adapt easily to changing conditions and needs. Implementing the action items contained in the NHMP through such plans and policies increases their likelihood of being supported and implemented.

Examples of plans, programs or agencies that may be used to implement mitigation activities include:

- City and County Budgets
- Community Wildfire Protection Plans
- Comprehensive Land Use Plans
- Economic Development Action Plans
- Zoning Ordinances and Building Codes

For additional examples of plans, programs or agencies that may be used to implement mitigation activities refer to list of plans in Volume I, Section 2.

NHMP Maintenance

NHMP maintenance is a critical component of the NHMP. Proper maintenance of the NHMP ensures that it will maximize the County and participating Cities' efforts to reduce the risks posed by natural hazards. This section was developed by OPDR and includes a process to ensure that a regular review and update of the NHMP occurs. The Steering Committee and local staff are responsible for implementing this process, in addition to maintaining and updating the NHMP through a series of meetings outlined in the maintenance schedule below.

Meetings

The Steering Committee will meet on a **semi-annual basis** to complete the following tasks. During the first meeting the Steering Committee will:

- Review existing action items to determine appropriateness for funding;
- Educate and train new members on the NHMP and mitigation in general;
- Identify issues that may not have been identified when the NHMP was developed; and

- Prioritize potential mitigation projects using the methodology described below.

During the second meeting, the Steering Committee will:

- Review existing and new risk assessment data;
- Discuss methods for continued public involvement; and
- Document successes and lessons learned during the year.

The County's Emergency Manager will host a meeting once a year with the city and special district leads for participating jurisdictions. This meeting is an opportunity for the cities and special districts to report back to the County on progress that has been made towards their NHMP Addenda. This meeting will also serve as a means for the Emergency Manager to provide information regarding potential funding sources for mitigation projects, as well as provide additional support for the city and special district steering committees.

The convener will be responsible for documenting the outcome of the semi-annual meetings. The process the coordinating body will use to prioritize mitigation projects is detailed in the section below. The NHMP's format allows the County and participating jurisdictions (cities and special districts) to review and update sections when new data becomes available. New data can be easily incorporated, resulting in a NHMP that remains current and relevant to the participating jurisdictions.

Project Prioritization Process

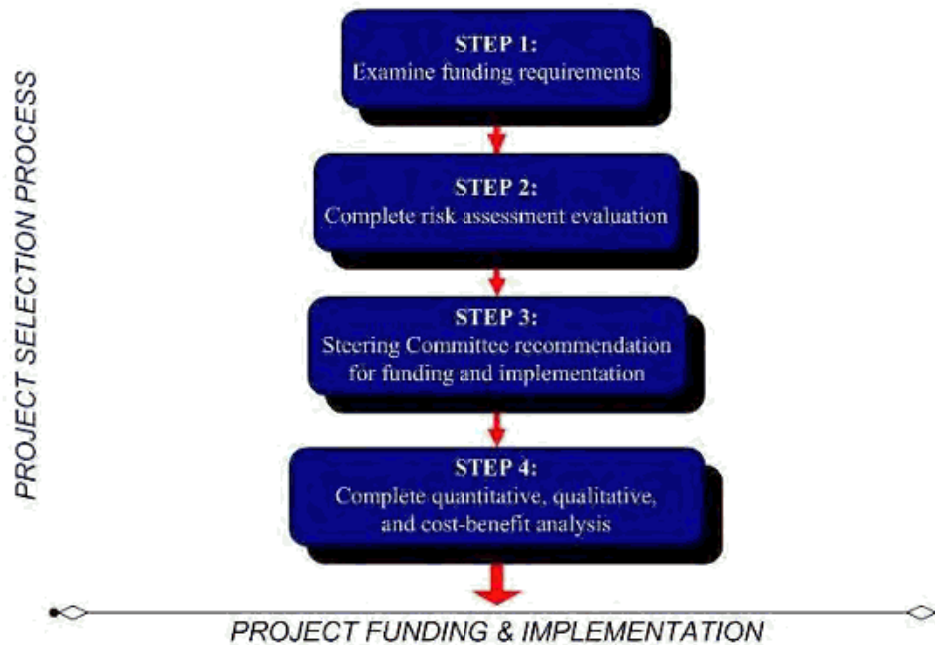
Chapter 3 describes the process the Steering Committee used to establish the current prioritization of action items. Understanding that priorities may change over time depending on new events or resource availability, the Disaster Mitigation Act of 2000 requires that jurisdictions identify a process for future action item prioritization. Potential mitigation activities often come from a variety of sources; therefore, the project prioritization process needs to be flexible. Committee members, local government staff, other planning documents or the risk assessment may be the source to identify projects. Figure 4-1 illustrates the project development and prioritization process that the Steering Committee can use in the future.

Step I: Examine funding requirements

The first step in prioritizing the NHMP's action items is to determine which funding sources are open for application. Several funding sources may be appropriate for the County's proposed mitigation projects. Examples of mitigation funding sources include but are not limited to: FEMA's Pre-Disaster Mitigation (PDM) competitive grant program, Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) grant program, National Fire Plan (NFP), Community Development Block Grants (CDBG), local general funds and private foundations, among others. Please see Volume II, Appendix F for a more comprehensive list of potential grant programs.

Because grant programs open and close on differing schedules, the Steering Committee will examine upcoming funding streams' requirements to determine which mitigation activities would be eligible. The Steering Committee may consult with the funding entity, OEM, or other appropriate state or regional organizations about project eligibility requirements. This examination of funding sources and requirements will happen during the Steering Committee's semi-annual NHMP maintenance meetings.

Figure 4-1 Action Item and Project Review Process



Source: Oregon Partnership for Disaster Resilience, 2008.

Step 2: Complete risk assessment evaluation

The second step in prioritizing the NHMP's action items is to examine which hazards the selected actions are associated with and where these hazards rank in terms of community risk. The Steering Committee will determine whether the NHMP's risk assessment supports the implementation of eligible mitigation activities. This determination will be based on the location of the potential activities, their proximity to known hazard areas and whether community assets are at risk. The Steering Committee will additionally consider whether the selected actions mitigate hazards that are likely to occur in the future or are likely to result in severe/catastrophic damages.

Step 3: Hazard Mitigation Advisory Committee Recommendation

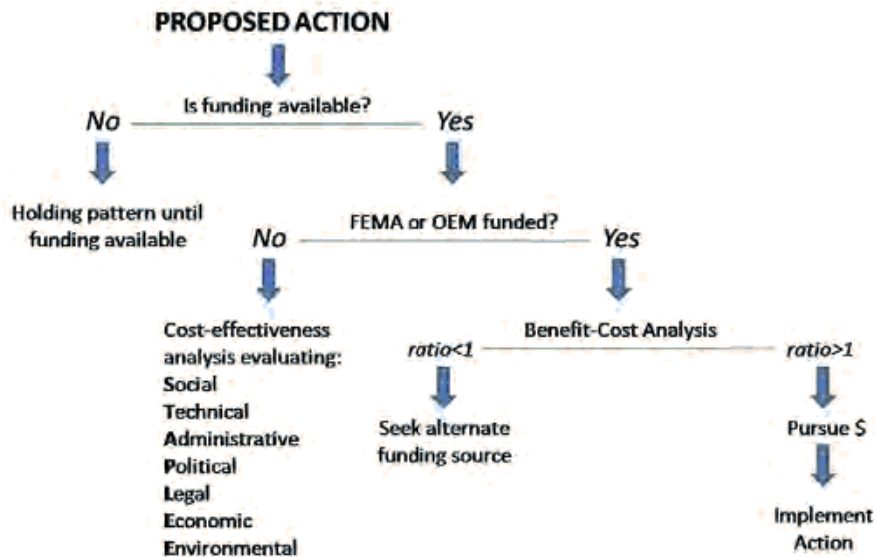
Based on the steps above, the Steering Committee will recommend which mitigation activities should be moved forward. If the Steering Committee decides to move forward with an action, the coordinating organization designated in the matrix will be responsible for taking further action and, if applicable, documenting success upon project completion. The Steering Committee will convene a meeting to review the issues surrounding grant applications and to share knowledge and/or resources. This process will afford greater coordination and less competition for limited funds.

Step 4: Complete quantitative and qualitative assessment and economic analysis

The fourth step is to identify the costs and benefits associated with the selected natural hazard mitigation strategies, measures or projects. Two categories of analysis that are used

in this step are: (1) cost-benefit analysis and (2) cost-effectiveness analysis. Conducting cost-benefit analysis for a mitigation activity assists in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later. Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating natural hazards provides decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects. Figure 4-2 shows decision criteria for selecting the appropriate method of analysis.

Figure 4-2 Benefit Cost Decision Criteria



Source: Oregon Partnership for Disaster Resilience, 2010.

If the activity requires federal funding for a structural project, the Steering Committee will use a FEMA-approved cost-benefit analysis tool to evaluate the appropriateness of the activity. A project must have a cost-benefit ratio of greater than one in order to be eligible for FEMA grant funding.

For non-federally funded or nonstructural projects, a qualitative assessment will be completed to determine the project's cost effectiveness. The Steering Committee will use a multivariable assessment technique called STAPLE/E to prioritize these actions. STAPLE/E stands for Social, Technical, Administrative, Political, Legal, Economic and Environmental. Assessing projects based upon these seven variables can help define a project's qualitative cost effectiveness. OPDR at the University of Oregon's Community Service Center has tailored the STAPLE/E technique for use in natural hazard action item prioritization.

Continued Public Involvement and Participation

The participating jurisdictions are dedicated to involving the public directly in the continual reshaping and updating of the Yamhill County NHMP. Although members of the Steering Committee represent the public to some extent, the public will also have the opportunity to continue to provide feedback about the NHMP.

To ensure that these opportunities will continue, the County and participating jurisdictions will:

- Post copies of their plan on corresponding websites;
- Place articles in the local newspaper directing the public where to view and provide feedback; and
- Use existing newsletters such as schools and utility bills to inform the public where to view and provide feedback.

In addition to the involvement activities listed above, Yamhill County will ensure continued public involvement by posting the Yamhill County NHMP on the county's [website](#). The NHMP will also be archived and posted on the University of Oregon Libraries' Scholar's Bank Digital Archive (<https://scholarsbank.uoregon.edu>).

Five-Year Review of NHMP

This NHMP will be updated every five years in accordance with the update schedule outlined in the Disaster Mitigation Act of 2000. **The Yamhill County NHMP is due to be updated before [Month] [DATE], 2025.** The Convener will be responsible for organizing the Steering Committee to address NHMP update needs. The Steering Committee will be responsible for updating any deficiencies found in the NHMP and for ultimately meeting the Disaster Mitigation Act of 2000's NHMP update requirements.

The following 'toolkit' can assist the Convener in determining which NHMP update activities can be discussed during regularly scheduled NHMP maintenance meetings and which activities require additional meeting time and/or the formation of sub-committees.

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Table 4-1 Natural Hazard Mitigation Plan Update Toolkit

Question	Yes	No	Plan Update Action
<p>Is the planning process description still relevant?</p> <p>Do you have a public involvement strategy for the plan update process?</p> <p>Have public involvement activities taken place since the plan was adopted?</p> <p>Are there new hazards that should be addressed?</p> <p>Have there been hazard events in the community since the plan was adopted?</p> <p>Have new studies or previous events identified changes in any hazard's location or extent?</p> <p>Has vulnerability to any hazard changed?</p> <p>Have development patterns changed? Is there more development in hazard prone areas?</p> <p>Do future annexations include hazard prone areas?</p> <p>Are there new high risk populations?</p> <p>Are there completed mitigation actions that have decreased overall vulnerability?</p> <p>Did the plan document and/or address National Flood Insurance Program repetitive flood loss properties?</p>			<p>Modify this section to include a description of the plan update process. Document how the planning team reviewed and analyzed each section of the plan, and whether each section was revised as part of the update process. (This toolkit will help you do that).</p> <p>Decide how the public will be involved in the plan update process. Allow the public an opportunity to comment on the plan process and prior to plan approval.</p> <p>Document activities in the "planning process" section of the plan update</p> <p>Add new hazards to the risk assessment section</p> <p>Document hazard history in the risk assessment section</p> <p>Document changes in location and extent in the risk assessment section</p> <p>Document changes in vulnerability in the risk assessment section</p> <p>Document changes in vulnerability in the risk assessment section</p> <p>Document changes in vulnerability in the risk assessment section</p> <p>Document changes in vulnerability in the risk assessment section</p> <p>Document any changes to flood loss property status</p>

Source: Oregon Partnership for Disaster Resilience, 2010.

Table 4-1 Natural Hazard Mitigation Plan Update Toolkit (continued)

Question	Yes	No	Plan Update Action
Did the plan identify the number and type of existing and future buildings, infrastructure, and critical facilities in hazards areas?			1) Update existing data in risk assessment section, or 2) determine whether adequate data exists. If so, add information to plan. If not, describe why this could not be done at the time of the plan update
Did the plan identify data limitations?			If yes, the plan update must address them: either state how deficiencies were overcome or why they couldn't be addressed 1) Update existing data in risk assessment section, or 2) determine whether adequate data exists. If so, add information to plan. If not, describe why this could not be done at the time of the plan update
Did the plan identify potential dollar losses for vulnerable structures?			Document any updates in the plan goal section
Are the plan goals still relevant?			Document whether each action is completed or pending. For those that remain pending explain why. For completed actions, provide a 'success' story.
What is the status of each mitigation action?			Add new actions to the plan. Make sure that the mitigation plan includes actions that reduce the effects of hazards on both new and existing buildings.
Are there new actions that should be added?			If not, add this action to meet minimum NFIP planning requirements
Is there an action dealing with continued compliance with the National Flood Insurance Program?			Document these changes in the plan implementation and maintenance section
Are changes to the action item prioritization, implementation, and/or administration processes needed?			Document these changes in the plan implementation and maintenance section
Do you need to make any changes to the plan maintenance schedule?			If the community has not made progress on process of implementing mitigation into existing mechanisms, further refine the process and document in the plan.
Is mitigation being implemented through existing planning mechanisms (such as comprehensive plans, or capital improvement plans)?			

Source: Oregon Partnership for Disaster Resilience, 2010.



City of McMinnville
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STAFF REPORT

DATE: December 8, 2020
TO: Mayor and City Councilors
FROM: Heather Richards, Planning Director
SUBJECT: Resolution No. 2020 – 70, “Board, Committee and Commission Appointments”

STRATEGIC PRIORITY & GOAL:



ENGAGEMENT & INCLUSION

Create a culture of acceptance & mutual respect that acknowledges differences & strives for equity.

OBJECTIVE/S: Grow City's employees and Boards and Commissions to reflect our community

Report in Brief:

This is the consideration of Resolution No. 2020-70, appointing volunteers to City boards, committees and commissions.

Background:

The City of McMinnville has many boards, committees and commissions that support the City's work on a volunteer basis. The City Council makes annual appointments to these boards, committees and commissions at their meeting in December of each year to fill those positions that are being vacated by people whose terms have expired or have resigned from their position.

The City solicits applications by advertising the vacancies in October and November in the News Register, and through social media. The applications are then reviewed and interviews conducted by the Mayor, Council President, and the board, committee or commission chair, who then make recommendations to the City Council for appointment.

Planning Commission interviews are being conducted on Monday, December 7 and Tuesday, December 8. There are 13 applicants for five positions. Three Planning Commissions vacancies are due to the terms expiring and two are due to resignations (work conflict and relocation to another community).

Discussion:

After interviews, the following are the recommendations of the interview panel to the City Council for the committee vacancies.

AFFORDABLE HOUSING TASK FORCE
(4-year term)

Lori Bergen Expires December 31, 2024
(Business/Finance)

LANDSCAPE REVIEW COMMITTEE
(3-year term)

Patty Sorensen Expires December 31, 2023
Carlton Davidson Expires December 31, 2023

PLANNING COMMISSION
(4-year term)

_____ (Ward 1) Expires December 31, 2024
_____ (Ward 2) Expires December 31, 2024
_____ (At Large) Expires December 31, 2024
_____ (Ward 2) Expires December 31, 2023
_____ (Ward 3) Expires December 31, 2022

Fiscal Impact:

There is no anticipated fiscal impact to the City of McMinnville with this decision.

Recommendation/Suggested Motion:

“I MOVE TO APPROVE RESOLUTION NO. 2020 – 70 APPOINTING THE FOLLOWING PEOPLE TO THE FOLLOWING COMMITTEES AND COMMISSIONS:

Lori Bergen to the Affordable Housing Task Force to serve a four year term that expires on December 31, 2024.

Patty Sorensen and Carlton Davidson to the Landscape Review Committee to serve a three year term that expires on December 31, 2023.

_____ to the Planning Commission representing Ward 1 to serve a four year term that expires on December 31, 2024.

_____ to the Planning Commission representing Ward 2 to serve a four year term that expires on December 31, 2024.

_____ to the Planning Commission representing an At-Large position to serve a four year term that expires on December 31, 2024.

_____ to the Planning Commission representing Ward 2 to serve a three year term that expires on December 31, 2023.

_____ to the Planning Commission representing Ward 3 to serve a two year term that expires on December 31, 2022.

RESOLUTION NO. 2020 - 70

A Resolution appointing and re-appointing members to the various Boards, Committees, and Commissions.

RECITALS:

The City of McMinnville has several Boards, Committees, Commissions, and Task Forces made up of volunteers; and

The City Council is responsible for making appointments and re-appointments.

NOW THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF McMINNVILLE, OREGON as follows:

- 1. The City Council appoints the following volunteers the various Boards, Commissions, and Committees as detailed below.

AFFORDABLE HOUSING TASK FORCE
(4-year term)

Lori Bergen Expires December 31, 2024
(Business / Finance)

LANDSCAPE REVIEW COMMITTEE
(3-year term)

Patty Sorensen Expires December 31, 2023

Carlton Davidson Expires December 31, 2023

PLANNING COMMISSION
(4-year term)

_____ (Ward 1) Expires December 31, 2024

_____ (Ward 2) Expires December 31, 2024

_____ (At Large) Expires December 31, 2024

_____ (Ward 2) Expires December 31, 2023

_____ (Ward 3) Expires December 31, 2022

2. This Resolution and these appointments will take effect January 1st, 2021.

Adopted by the Common Council of the City of McMinnville at a meeting held the 8th day of December 2020 by the following votes:

Ayes: _____

Nays: _____

Approved this 8th day of December 2020.

MAYOR

Approved as to form:

Attest:

City Attorney

City Recorder



City of McMinnville
Planning Department
 231 NE Fifth Street
 McMinnville, OR 97128
 (503) 434-7311
www.mcminnvilleoregon.gov

STAFF REPORT

DATE: December 8, 2020
TO: Mayor and City Councilors
FROM: Heather Richards, Planning Director
SUBJECT: Public Hearing – Ordinance No. 5098 – UGB Amendment (Docket Number G 6-20)

STRATEGIC PRIORITY & GOAL:



GROWTH & DEVELOPMENT CHARACTER
 Guide growth & development strategically, responsively & responsibly to enhance our unique character.

OBJECTIVE/S: Strategically plan for short and long-term growth and development that will create enduring value for the community



HOUSING OPPORTUNITIES [ACROSS THE INCOME SPECTRUM]
 Create diverse housing opportunities that support great neighborhoods.

OBJECTIVE/S: Conduct thorough and timely planning and forecasting to ensure that regulatory frameworks for land supply align with market-driven housing needs



ECONOMIC PROSPERITY
 Provide economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors.

OBJECTIVE/S: Accelerate growth in living wage jobs across a balanced array of industry sectors



COMMUNITY SAFETY & RESILIENCY
 Proactively plan for & responsibly maintain a safe & resilient community.

OBJECTIVE/S: Provide exceptional police, municipal court, fire, emergency medical services EMS), utility services and public works

Report in Brief:

This is the consideration of the second reading of Ordinance No. 5098, an ordinance approving the McMinnville Growth Management and Urbanization Plan (MGMUP) 2020 UGB Update. The approval of Ordinance No. 5098 and the MGMUP 2020 UGB Update would result in an expansion of the McMinnville urban growth boundary (UGB) to add 662.40 gross buildable acres (862.40 gross acres) of additional land to the UGB to meet identified residential, commercial, industrial, and other public and semi-public land needs for a targeted population forecast of 44,055 people.

The MGMUP 2020 UGB Update also includes Comprehensive Plan Map Amendments that assign urban Comprehensive Plan map designations to all lands proposed to be included in the UGB and those that are currently in the UGB, as well as Comprehensive Plan Text Amendments to amend and/or create policies to guide the implementation of the MGMUP 2020 UGB Update.

This is the result of the work to respond to a Court of Appeals remand of the 2003 MGMUP adopted in 2003 by Ordinance No. 4796, and subsequently amended by Ordinances No. 4840, 4841 and 4961 respectively.

MAC Town Strategic Plan, 2032 Objectives Achieved:

GROWTH AND DEVELOPMENT CHARACTER F-3, Strategically plan for short and long-term growth and development that will create enduring value for the community.

Update long range land-use plans.

Set a policy for updating facilities plans

HOUSING G-2, Conduct thorough and timely planning and forecasting to ensure that regulatory frameworks and land supply align with market-drive housing needs.

Assess urban growth boundaries adjustment.

Background:

On January 22, 2020, staff conducted a work session with the City Council about growth planning, current efforts that were underway at the time, and options for the City to consider to move forward with planning for the growth of the City of McMinnville. At that time staff presented numerous options and paths for moving forward with growth planning, ranging from starting a new UGB study and analysis to doing nothing and waiting for a state-wide fix to the Oregon state-mandated land use planning program. After weighing the potential costs, timeframe, and appeal risk for each option, as well as the potential for each option to achieve land needs and achieve state planning goals, the City Council directed staff to pick up the previous UGB study and expansion work that the City had attempted to adopt in 2003 and to work on the remand issues. This previous UGB work is referred to as the McMinnville Growth Management and Urbanization Plan (MGMUP or “Plan”), and was subject to appeals that ultimately resulted in the MGMUP being remanded from the Oregon Court of Appeals in 2011 to the Land Conservation and Development Commission (LCDC) who eventually remanded it to the City on February 29, 2012.

The MGMUP was the product of ten years of community engagement, community visioning and planning by the City of McMinnville from 1994 – 2003. Based on a three year community visioning effort from 1997 – 1999 entitled McMinnville 2020, the MGMUP was first intended to plan for a future McMinnville, 2000 – 2020. However, after a couple of years of opposition and challenges from local and state land-use advocates, the City of McMinnville adjusted its planning horizon to 2003 – 2023, and adopted the MGMUP in 2003 via Ordinance No. 4796, while maintaining the values and vision of McMinnville 2020.

The Plan was progressive for its time, built upon the premise of smart growth planning of compact, mixed-used neighborhoods that provided residents with amenities, goods and services within a twenty minute walkshed in order to help alleviate pressure on the transportation network and to protect surrounding farmland. The hallmark of the Plan is the need to expand the city’s urban growth boundary to accommodate future population growth, where that expansion would take place, and how the land in the expansion area would develop.

As discussed above, the MGMUP encountered some opposition from 1000 Friends of Oregon, Friends of Yamhill County, Ilsa Perse and Mark Davis when it was reviewed by the Department of Land Conservation and Development and the Land Conservation and Development Commission. Eventually it was appealed to the Oregon Court of Appeals (COA) in 2007 by 1000 Friends of Oregon, Friends of Yamhill County and Ilsa Perse. In 2011, the COA issued a decision, which remanded the Plan to LCDC for additional analysis and to respond to one assignment of error. In 2012, LCDC remanded it to the City. Upon the receipt of the remand from LCDC, the City elected to pause on its effort to move forward with the Plan and adopted Ordinance No. 4961 which repealed certain aspects of the Plan that had been adopted into the Comprehensive Plan and the Zoning Ordinance.

Since January, 2020, staff has been working on the remanded assignment of error – which is essentially the analysis, process and methodology for selecting the land to include in the City’s UGB to meet the needs of 44,055 people (which is the targeted population forecast for the planning period). Throughout

the year, staff provided monthly updates to the City Council on the progress of this work during public work session meetings from April 2020 to November 2020.

Ordinance No. 5098, which is now before the City Council for consideration, adopts the proposed Comprehensive Plan Map Amendment for the new UGB, the proposed comprehensive plan map designations for land within the city's UGB, the MGMUP and its appendices, the proposed Comprehensive Plan policy amendments, the proposed Zoning Ordinance code amendments, and the Findings document for the MGMUP. The remand response is referred to within the documents associated with Ordinance No. 5098 as the "MGMUP 2020 UGB Update".

Since this is a remand of a decision that went through considerable public process and engagement for many years in McMinnville, including public hearings with the McMinnville Urban Area Management Committee, the Planning Commission and the City Council, the remand is being considered by City Council.

The City Council conducted three nights of public hearings on December 1, 2 and 3, closing the public hearing on December 3, 2020, and keeping the record open for additional written testimony to 12:00 PM on December 4, 2020.

Prior to the public hearing, the City also offered public information sessions as an additional opportunity for the public to learn more about the recommended UGB and Comprehensive Plan amendments associated with the MGMUP 2020 UGM Update. Those public information sessions were held on November 11th, November 13th, November 17th, and November 23rd.

After closing the public hearing on December 3, 2020, the City Council conducted the first reading of the Ordinance. Consideration of the second reading of Ordinance No. 5098 is scheduled for December 8, 2020. Should the City Council make a decision to approve Ordinance No. 5098, the proposal would then be forwarded to the Yamhill County Board of Commissioners for their consideration and review during another public hearing held by the County. The Yamhill County Board of Commissioners public hearing, deliberation, and decision is currently scheduled to occur on December 10, 2020, with a potential second date for continued hearing, deliberation, and/or decision on December 17, 2020.

Following review and decision by both the McMinnville City Council and the Yamhill County Board of Commissioners, the UGB amendment and associated Comprehensive Plan and Zoning amendments will be submitted to the Department of Land Conservation and Development (DLCD) for their review and acknowledgment, in the manner provided for periodic review under applicable Oregon Revised Statute (ORS).

Discussion:

The adoption of Ordinance No. 5098 would result in the adoption of the MGMUP 2020 UGB Update to the 2003 McMinnville Growth Management and Urbanization Plan – McMinnville's Remand Response to the COA.

Below is a summary of the major components of the MGMUP 2020 UGB Update. Much more detail is provided in the MGMUP and its associated appendices, which are included as attachments to this staff report.

Plan Components

The MGMUP 2020 UGB Update includes the following components:

- McMinnville Growth Management and Urbanization Plan (MGMUP or "Plan"), including:

- Appendix A – Population and Employment Forecast
- Appendix B – Buildable Lands Analysis
- Appendix C – Urbanization Report or the Alternatives Analysis
- Appendix D – Proposed Comprehensive Plan Policy Amendments
- Appendix E – Proposed Zoning Ordinance Amendments
- Appendix F – Proposed Comprehensive Plan Map Amendment
- Appendix G – The Framework Plan and Area Planning Process

How the Remand Work Interacts with the Original Planning Documents

Staff recommends that the City Council retain most of the original work and documents to honor the years of community visioning that formed the basis for the Plan and to build on the community’s previous investment in this effort. The vast majority of this original work was also affirmed by the COA and not part of the remand or the assignment of error. The MGMUP 2020 UGB Update and its associated appendices all blend both the original work and any updated analysis that was necessary as part of this remand effort. Within the documents, new sections are included to note when the original elements are being retained and when new analysis is being introduced or the original elements are being affirmed with a verification of achievement.

Urban Growth Boundary Amendment

In the original planning work, the City of McMinnville had determined that, in order to accommodate future growth needs for housing, employment and livability, the urban growth boundary (UGB) needed to expand by approximately 1,538.45 gross acres and 880.66 gross buildable acres to accommodate a future planning horizon of 2003 – 2023. Again, staff is suggesting that the City Council retain this original work and land need. Since McMinnville is literally surrounded by high-value farmland, any discussion and analysis of urban expansion into the rural farm lands needs to be very carefully analyzed and thoughtful in terms of overall impact.

The initial MGMUP submittal in 2003 resulted in 259 gross buildable acres of residential land being amended into the UGB boundary in 2004 (hereinafter referred to as “Phase I”). This amendment was substantially less than what was required to meet the City’s identified need for housing, employment and livability needs. The remainder of the land need and UGB amendment was appealed by 1000 Friends of Oregon, Friends of Yamhill County and Ilsa Perse to the Court of Appeals which eventually remanded the effort back to LCDC and subsequently to the City of McMinnville for one assignment of error – the analysis of lands to include within the proposed UGB amendment per the provisions of ORS 197.298, Goal 14, ORS 197.732(1)(c)(B), Goal 2, Part II (c), and OAR 660-004-0020.

This remand effort focuses on the remaining land need identified by the City of McMinnville for housing, employment and livability (parks, public facilities, etc.) as a “Phase II” effort of the MGMUP UGB amendment. The remand effort also updates the analysis of lands for potential inclusion in the UGB as directed within the COA decision.

The focus of this remand effort is the alternatives analysis evaluating where the city’s UGB should expand. That analysis is what the COA determined the City needed to evaluate again. City Council will find that analysis in Appendix C of the MGMUP.

Summary of Future Growth Need

As discussed above, staff is suggesting that the City Council decide to continue to utilize all of the data that informed the original Plan – in terms of the Coordinated Population Forecast, Buildable Land Inventory, Housing Needs Analysis and Economic Opportunity Analysis, as these were all challenged in

the past and have since been affirmed. A summary of those evaluations and outcomes can be found in Appendix A and Appendix B of the MGMUP.

Planning Horizon Data*

*See Appendix A, Population and Employment Forecast, and Appendix B, Buildable Lands Analysis, for details.

Planning Horizon = 2003 – 2023
Population Forecast = 44,055
Increase in Population in Planning Horizon = 15,545
Housing Needed to Accommodate Population Growth = 6,014 Dwelling Units
Housing Supply Target = 60% single-family, 40% multi-family
Housing Density Target = 5.7 dwelling units/gross buildable residential acre
Employment Forecast in 2023 = 22,161 Employees
Increase in Employees in Planning Horizon = 7,420 Employees

Land Need in UGB Expansion*

*Please see Appendix B, Buildable Lands Analysis, for details.

Table 1: Total additional acres needed in the McMinnville UGB, 2003-2023 (Phases I and II)

Category of Land Need	Needed Gross Buildable Acres
Residential	818.00
Commercial	106.00
Industrial ¹	(46.00)
Total	924.00²

¹ The City of McMinnville will retain its surplus in Industrial Land to achieve its economic development strategy.

²The overall land need has increased from the original 880.66 gross buildable acres in 2003 to 924.00 gross buildable acres in 2020 due to the application of a Conservation Easement on 81 acres of buildable land within the city’s existing urban growth boundary that prohibits any future development on the property in perpetuity. This effort though was able to find another 40 acres of land efficiency to decrease that overall impact to 43 acres.

In 2004, 259 gross buildable acres were amended into McMinnville’s UGB as Phase I of this effort. The remaining acres in the proposed UGB amendment were appealed to the Court of Appeals which eventually remanded the work back to the City of McMinnville for further evaluation and refinement. Table 2 below identifies the Phase I UGB amendment, as well as the remaining land need proposed to be achieved by the Phase II UGB amendment.

Table 2: Phase II total additional acres needed in the McMinnville UGB, 2003-2023

Category of Land Need	Phase I Amendment (Gross Buildable Acres)	Phase II Amendment Need (Gross Buildable Acres)
Residential	259.00	559.00
Commercial		106.00
Industrial ¹		(46.00)
Total	259.00	665.00

¹ The City of McMinnville will retain its surplus in Industrial Land to achieve its economic development strategy.

Comprehensive Plan Map Amendments (Phase II)

The City Council’s adoption of this Ordinance No. 5098 would result in a Comprehensive Plan Amendment to expand the city’s existing urban growth boundary by 862.40 gross acres with 662.40 gross buildable acres, which is just under the 665.00 gross buildable acres identified in Table 2 as necessary to accommodate the city’s future land need. (See Appendix C, Urbanization Report, for more details).

Staff is recommending that the City use an Urban Holding (UH) Comprehensive Plan Designation for most land in the UGB until Area Planning and Master Planning is completed that enables the adoption of urban land use designations. This will allow for maximum efficiencies of land use within the UGB expansion areas and guarantee that the City's need for housing types, commercial uses and public amenities is achieved. These future Area Planning and Master Planning processes will be described in more detail below.

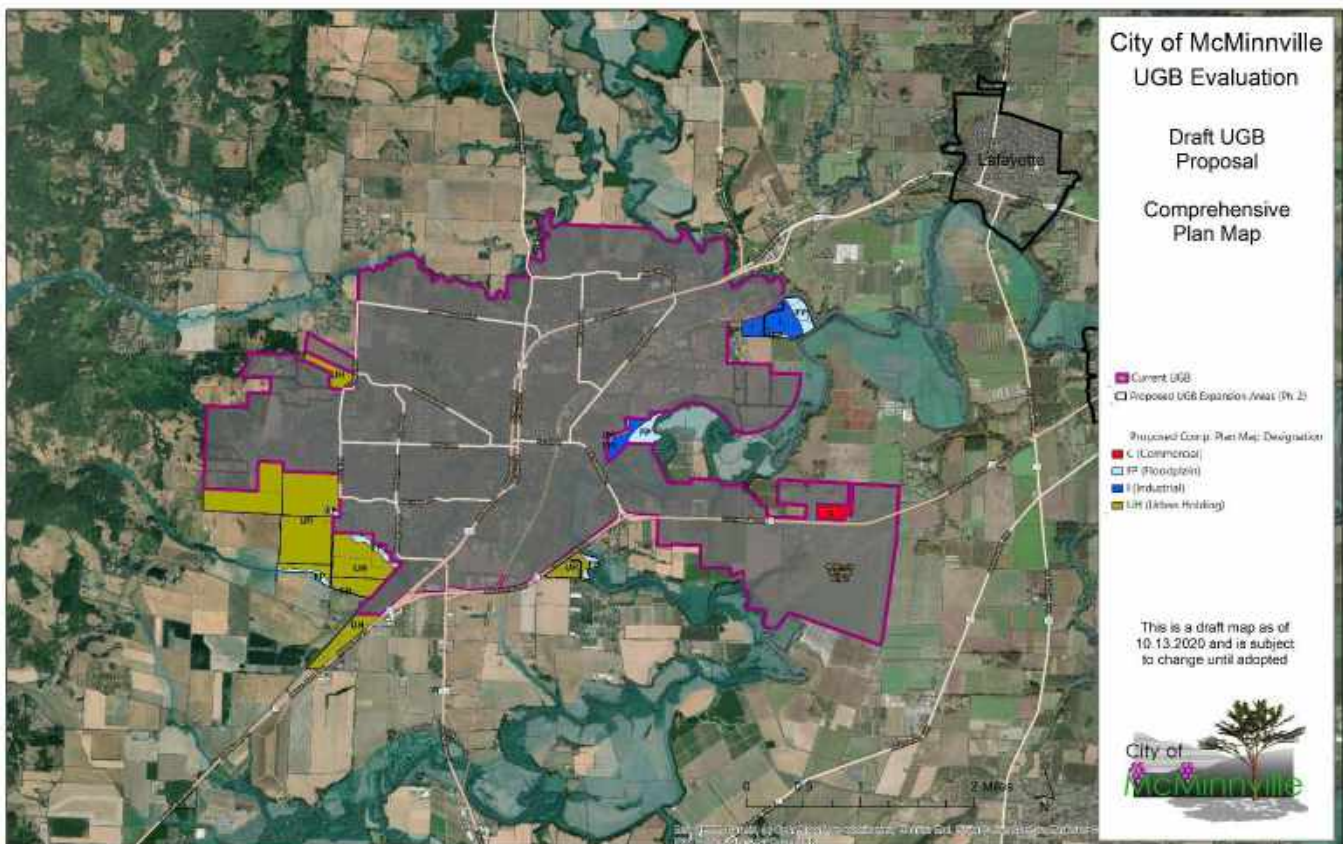
Table 3: Comprehensive Plan designations in the McMinnville UGB, 2003-2023, gross buildable acres, (Phase II)

Comprehensive Plan Designation	Gross Buildable Acres
Urban Holding	595.40
Commercial	26.70
Industrial ¹	40.30
Total	662.40

¹ As a land-use efficiency, the City of McMinnville will rezone 40 acres of industrially zoned property within the existing UGB to a commercial zone, and amend its UGB with an exception area that will be designated industrial to preserve more higher value, higher priority farmland within the UGB expansion study area.

Map 1 below is the proposed comprehensive plan map amendment for the Phase II lands. *Note: Included on the map is land within the City of McMinnville's floodplains that are not considered buildable and therefore do not meet an identified land need, but which are being included in the UGB amendment as a means to protect the riparian habitat and to mitigate negative agricultural conflicts between urban and rural uses.*

Map 1: McMinnville MGMUP Remand UGB Comprehensive Plan Map Amendment (Phase II)



Comprehensive Plan Designations (Phase I and II)

The final UGB amendment to support the MGMUP 2020 UGB Update (Phase I and Phase II) will be 1,280.30 gross acres, and 921.40 gross buildable acres, which is just under the 924.00 gross buildable acres identified in Table 1 as necessary to accommodate the city's future land need. Table 4 describes the gross buildable acres needed to accommodate the City's identified housing, employment and livability needs for the entire UGB amendment (both Phase I and Phase II).

Table 4: Comprehensive Plan designations in the McMinnville UGB, 2003-2023, gross buildable acres, (Phase I and Phase II)

Comprehensive Plan Designation	Gross Buildable Acres (to satisfy land need)
Urban Holding	854.40
Commercial	26.70
Industrial ¹	40.00
Total	921.40

Some of the proposed UGB expansion includes acreage that is not buildable, such as floodplains, land with slopes that are greater than 25%, and land that already has development on it. Table 5 describes the total gross acres of UGB expansion land needed to accommodate the City's identified housing, employment and livability needs for the entire UGB amendment (both Phase I and Phase II).

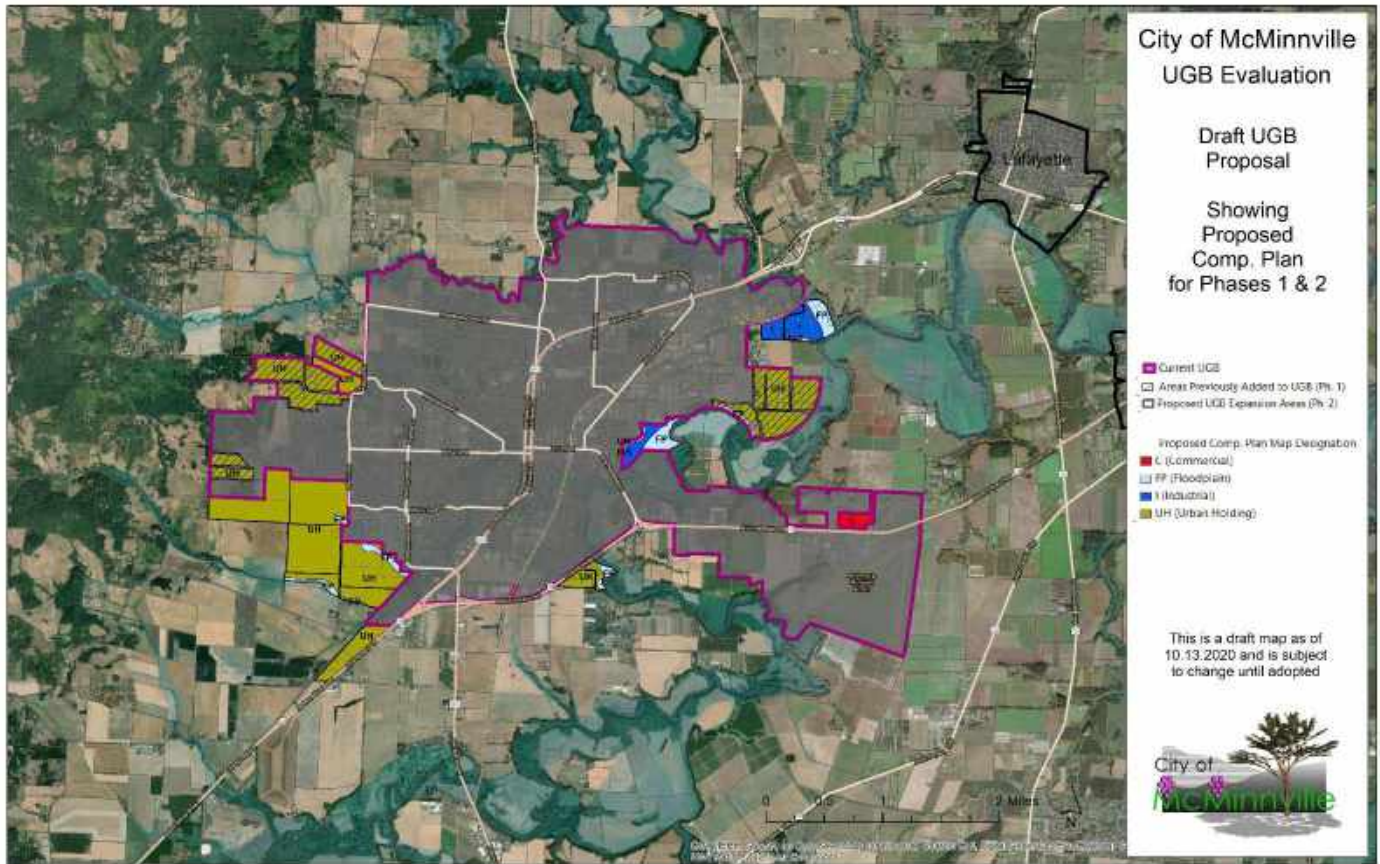
Table 5: Comprehensive Plan designations in the McMinnville UGB, 2003-2023, gross acres, (Phase I and Phase II)

Comprehensive Plan Designation	Gross Acres
Urban Holding	1039.50
Commercial	27.50
Industrial	92.30
Floodplain	121.00
Total	1280.30

Comprehensive Plan Map Amendment (Phase I and Phase II)

Map 2 below identifies the proposed McMinnville MGMUP 2020 UGB Update comprehensive plan map amendment for both Phase I and Phase II. Staff is recommending that the City Council amend the Comprehensive Plan Map designations of the land that was included in 2004 to the new Urban Holding designation, in order to accommodate more detailed Area Planning and Master Planning (which will be discussed in more detail below). *Note: Included on the map is land within the City of McMinnville's floodplains that are not considered buildable and therefore do not meet an identified land need, but which are being included in the UGB amendment as a means to protect the riparian habitat and to mitigate negative agricultural conflicts between urban and rural uses.*

Map 2: MGMUP Remand UGB Comprehensive Plan Map Amendment, 2003-2023, (Phase I and Phase II)



Implementation Plan - Proactive Planning Prior to Annexation

The success of the MGMUP 2020 UGB Update is predicated on comprehensive strategic community planning of the UGB expansion land prior to annexation to the City of McMinnville and development. The Plan depends upon the successful implementation of many different Comprehensive Plan proposals (see Appendix D, Proposed Comprehensive Plan Policy Amendments for more details), Zoning Ordinance Amendments (see Appendix E, Proposed Zoning Ordinance Amendments for more details), and a Framework Plan, Area Planning and Master Planning process (see Appendix G – Framework Plan and Area Planning Process for more details). Staff recommends this Framework Plan, Area Planning, and Master Planning process to provide a mechanism that the City can use to ensure that all of the city’s future land needs for housing, employment and livability for the planning horizon of 2003-2023 can be accommodated within the principles of smart growth planning that is the hallmark of the McMinnville 2020 community visioning effort, and can also be supported with the appropriate infrastructure systems.

Comprehensive Plan Policy Amendments

With the adoption of the MGMUP 2020 UGB Update, the City Council would be committing to the necessary planning work to support the appropriate development in the UGB expansion area. Staff recommends several proposed policies and proposals to update the appropriate public facility plans to serve this expansion area (Parks and Recreation, Wastewater, Transportation, Water, etc.), which are contemplated to occur within 5 years after adoption of any major UGB amendment.

The staff-recommended Comprehensive Plan Policy Amendments also include the development and adoption of several new comprehensive plan and zoning designations to clarify land uses per the adopted maps of the City of McMinnville. These proposals include an Open Space and Recreation comprehensive plan designation and Parks Zone, a Public Facilities Zone, an Airport Zone, etc.

The staff-recommended Comprehensive Plan Policy Amendments are included in detail in Appendix D.

Zoning Ordinance Amendments

Staff is also recommending zoning ordinance amendments to carry out the MGMUP 2020 UGB Update. These include a new high density residential zone (R-5) to help the City achieve its affordable housing and density needs for housing, a neighborhood activity center overlay district that enables the smart growth planning that is the hallmark of the Plan, and master planning guidelines to help ensure that new developments on parcels of 10 acres or more are master planned in a thoughtful and coherent manner in relationship with each other to achieve the community's overall future vision for itself.

The staff-recommended zoning amendments are included in detail in Appendix E.

Implementation through Future Planning Processes

Staff recommends that the City Council implement a three-step planning process for those lands that are included in the UGB expansion areas. This implementation and planning process includes the following steps, listed in the order in which they must be completed:

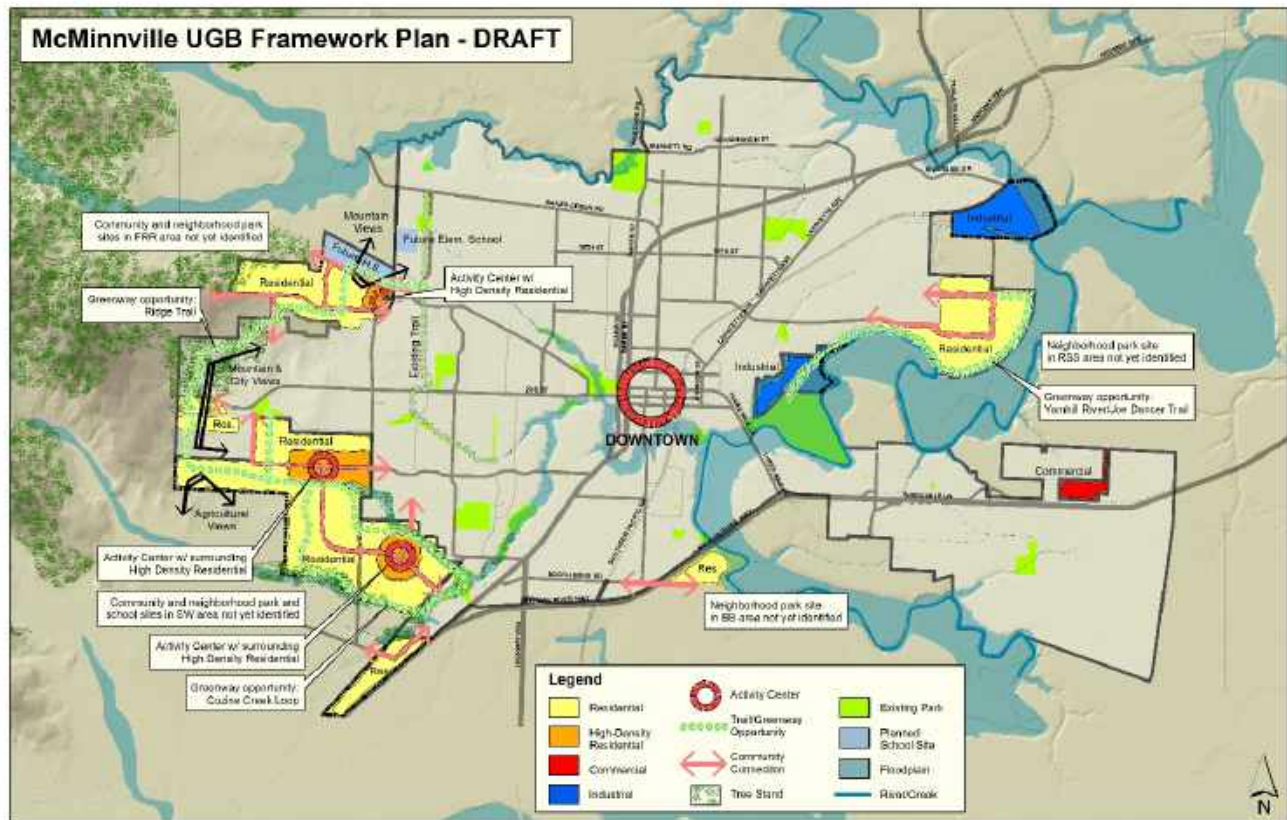
- Framework Plan
- Area Plan
- Master Plan

The order in which the planning process occurs is critical, because each step in the process builds upon the previous step and provides guidance for the future step. The ultimate result of the implementation and planning process is the development of the UGB in a manner that is consistent with the MGMUP and consistent with the land development and urban design concepts that the McMinnville community has embraced. The planning process will also provide future opportunities for the City to demonstrate how it will achieve the overall need for the variety of housing types and land uses as described in Appendix B.

A brief description of the Framework Plan, Area Planning, and Master Planning processes is provided below, but more detail on each planning process is included in Appendix G.

Framework Plan

The McMinnville Framework Plan is recommended to be included as part of the Plan, and would provide general overall guidance for future development in the UGB expansion area. While the Framework Plan is included in the MGMUP and is referenced in it, the Framework Plan is not formally adopted with the MGMUP and is not binding on land owners, developers, or the City. The Framework Plan is intended to be conceptual in nature, but it will serve as an advisory plan that informs and provides guidance for more detailed Area Planning and Master Planning that will be required for lands before they are annexed into the City.



Area Plans

Staff is suggesting that the City create an Area Planning process to allow the City and the community to engage in a thoughtful and intentional area planning process for all of the distinctive areas of the UGB expansion land. The Area Planning process would ensure that the proposed future development in those areas serves the city’s needs and values. Area Plans would be required to follow the overall guidance of the Framework Plan. These Area Plans will be informed through a community engagement process and adopted by the City Council. The Area Plans will describe where and what type of housing will be allowed in the area, location of neighborhood serving commercial and office development, major road networks necessary to serve the area, and the general location of parks, trails and public facilities. The Area Plans will be based on the identified land needs in Appendix B, and will also need to be consistent with the City’s adopted Great Neighborhood Principles.

Master Plans

Prior to annexation into the City of McMinnville, any parcel larger than 10 acres will need to submit a concept master plan to the McMinnville City Council for review as part of an annexation agreement. The concept master plan will need to demonstrate how the proposed development achieves the covenants of the adopted Area Plan for that specific area, and how it achieves the City’s adopted Great Neighborhood Principles.

This concept master plan will become part of the annexation agreement with the City of McMinnville and will need to be successfully adopted as a Final Master Plan land-use decision with a public review and engagement process prior to city zoning and development entitlements being granted for the property.

Discussion:

The City Council hosted a public hearing for three consecutive nights of testimony and elected to receive written testimony in advance of the hearing, during the hearing and after the hearing closed on December 3, 2020, elected to keep the public record open until December 4, 2020. Below is a summary of the testimony received.

Written Public Testimony Received:

Received From:	Date:
Morris Eagleman , 1886 NW Wallace Road	November 13, 2020
Ruby Troncin , no address provided	November 19, 2020
AWT LLC representing Thompson Property	November 23, 2020
Kari Moser , 2256 SW Redmond Hill Road	November 23, 2020
Dan Fricke , ODOT	November 25, 2020
Susan Dirks , no address provided	November 28, 2020
Steve Leonard , Fox Ridge Road	November 29, 2020
Mark Davis , 652 SE Washington Street	November 30, 2020
R. Scott Trent , 5423 Bow Canyon Way, Meridian, ID 83642	November 28, 2020
Aaron and Jennifer Wood , no address provided	November 30, 2020
McMinnville Industrial Promotions , PO Box 328	November 30, 2020
Jenny Stolarz , 1301 SW Hill Road	November 30, 2020
Alexis Biddle / Sid Friedman , 1000 Friends of Oregon / Friends of Yamhill County	December 1, 2020
Abigail Neilan , 2461 SW Hannah Circle	December 1, 2020
Dennis McGanty , no address provided	December 1, 2020
Melanie Byer-Jones , 6151 NE Riverside Drive, 6331 NE Riverside Dr.	December 1, 2020
Gene Baty , 5760 SW Parma Drive	December 1, 2020
Peg Hegna , no address provided	December 1, 2020
Al Ashcroft , 2280 Redmond Hill Road	December 1, 2020
Charles Walker , 10315 SW Old Sheridan Road	December 1, 2020
Christine Anderson , 4714 NE Riverside Loop	December 2, 2020
MEDP , 231 NE Fifth Street	December 2, 2020
Perkins Coie representing McMinnville Properties LLC	December 2, 2020
Patty O'Leary , no address provided	December 2, 2020
Cristi Mason-Rivera , 7135 Red Prairie Road, Sheridan	December 3, 2020
Mara Pauda , no address provided	December 3, 2020
Janet Redmond , 13700 SW Peavine Road	December 3, 2020
Alexis Biddle / Sid Friedman , 1000 Friends of Oregon / Friends of Yamhill County	December 3, 2020
Mark Fery , 3850 NE Arnold Lane	December 3, 2020
Travis Johnson , 2325 NW Cemetery Road	December 4, 2020
Mark Davis , 652 SE Washington Street	December 4, 2020
Patty O'Leary , no address provided	December 4, 2020
Ramsey McPhillips , 1300 SW McPhillips Road	December 4, 2020

Verbal testimony received at the public hearing:

Provided By:	Date:
<i>Ezra Hammer</i> , Homebuilders Association	December 1, 2020
<i>Sid Friedman</i> , Friends of Yamhill County	December 1, 2020
<i>Al Ashcroft</i> , 2280 Redmond Hill Road	December 1, 2020
<i>Jennifer Redmond-Noble</i> , 13500 SW Peavine Road	December 2, 2020
<i>Joseph Wain</i> , 463 SW Heath Street	December 2, 2020
<i>Christine Anderson</i> , 4714 NE Riverside Loop	December 2, 2020
<i>Kari Moser</i> , 2256 SW Redmond Hill Road	December 2, 2020
<i>Jerri Solan</i> , 2166 SW Alexandria Street	December 2, 2020
<i>Mark Davis</i> , 652 SE Washington Street	December 3, 2020
<i>R. Scott Trent</i> , 5423 Bow Canyon Way, Meridian, ID 83642	December 3, 2020
<i>Donnie Mason</i> , 20901 Caleb Payne Road	December 3, 2020
<i>Alexis Biddle</i> , 1000 Friends of Oregon	December 3, 2020
<i>Barbara Boyer</i> , 12255 Boyer Road	December 3, 2020
<i>David S. Wall</i> , PO Box 756, Newberg	December 3, 2020
<i>Ramsey McPhillips</i> , 1300 SW McPhillips Road	December 3, 2020
<i>Patricia Lea Trent</i> , 3587 S. Veranda Way, Boise, ID 83706	December 3, 2020
<i>John F. Porter II</i> , 340 NE Hill Street, Sheridan	December 3, 2020
<i>Steve Langer</i> , 4025 NE Arnold Lane	December 3, 2020
<i>Susanne Beukema</i> , 1164 NW Sunrise Court	December 3, 2020
<i>Debbie Robertson</i> , 2964 SW Redmond Hill Road	December 3, 2020
<i>Joe Rivera</i> , 7135 Red Prairie Road, Sheridan	December 3, 2020

Summary of Issues Raised and Response:

The following does not represent all of the issues raised, but it highlights the themes of testimony heard that were relevant to the proceedings.

GENERAL:

ISSUE: GENERAL STATEMENTS OF SUPPORT OR OPPOSITION

Some testimony was presented in general support or opposition to the proposal overall, or relating to inclusion or exclusion of certain areas or properties. If the testimony included specific reasons for support or opposition relating to the criteria for the locational analysis, that testimony is addressed as a separate issue within these findings.

RESPONSE:

Testimony expressing a preference for the City not to grow is inconsistent with state law that requires cities to plan for growth and provide a 20-year buildable land supply within the UGB. The City is responding to the one assignment of error in the Court of Appeals decision regarding its locational analysis. The remand must base the locational analysis on the amount of growth and land needs provided in the acknowledged population and employment forecasts, and provided in the acknowledged land needs analysis based on those forecasts.

The amount of land proposed for inclusion is determined by those acknowledged documents, and the location of the areas proposed for inclusion resulted from the analysis required by state law and the Court of appeals “roadmap” based on evaluation and inclusion of higher priority lands found to be adequate and suitable for the identified land needs.

The testimony did not include findings in conflict with the findings in the locational analysis or the conclusory findings with the applicable criteria.

ISSUE: EFFECT OF UGB AMENDMENT AND COMPREHENSIVE PLAN MAP AMENDMENT ON CONTINUATION OF CURRENT USE OF PROPERTY

Testimony was presented expressing questions or concerns about how the proposal would affect continuation of the current use of property. This testimony included questions relating to properties previously added to the UGB in Phase 1, for which the current proposal includes a Comprehensive Plan Map Amendment from “R” Residential to “UH” Urban Holding. This testimony also included questions relating to properties proposed for addition to the UGB and the Comprehensive Plan designations applied to them.

RESPONSE:

The current proposal doesn’t include rezoning or annexation of property. The county zoning applicable to the properties continues to apply, and land use regulations continue to be administered by Yamhill County under their zoning ordinance and rural zoning regulations, allowing for continuation of allowed uses.

Testimony presented regarding this issue doesn’t affect the conclusory findings that the applicable criteria are satisfied. Testimony presented regarding this issue didn’t include additional facts that conflict with the findings of fact in support of the conclusory findings. No errors were alleged in the City’s remand response to the assignment of error identified in the Court of Appeals decision or LCDC’s subsequent remand to the City.

Staff recommends applying a Comprehensive Plan designation of Urban Holding instead of Residential for certain Phase I and Phase II areas because these areas will accommodate uses beyond residential housing, including, but not limited to, parks, public and semi-public uses, religious uses, and more.

AMOUNT OF GROWTH

ISSUE: LESS GROWTH IN MCMINNVILLE

Testimony was presented expressing that McMinnville should not grow more, or should grow less than the amount of growth upon which this proposal is based.

RESPONSE:

Testimony presented regarding this issue didn’t include additional facts that conflict with the findings of fact in support of the conclusory findings. No errors were alleged in the City’s remand response to the assignment of error identified in the Court of Appeals decision or LCDC’s subsequent remand to the City. Moreover, the testimony is inconsistent with state law that requires cities to plan for growth and provide a 20-year buildable land supply within the UGB.

The proposal is submitted in respond to the remand, and is based on the applicable acknowledged population forecast, employment forecast, housing needs analysis, and economic opportunities analysis which apply to the remand. The MGMUP 2020 remand does not recommend any changes to Appendix A of the MGMUP which provided the population and employment forecasts, and the remand continue to use the same data. Changing the population forecast for McMinnville would be outside the scope of the remand.

ISSUE: REALLOCATION OF GROWTH TO OTHER SMALL CITIES IN YAMHILL COUNTY

Testimony was presented expressing that some of the growth in McMinnville’s acknowledged forecasts should be reallocated to other smaller communities in Yamhill County.

RESPONSE:

The proposal is submitted in respond to the remand, and is based on the applicable acknowledged population forecast, employment forecast, housing needs analysis, and economic opportunities analysis which apply to the remand. The MGMUP 2020 remand does not recommend any changes to Appendix A of the MGMUP which provided the population and employment forecasts, and the remand continue to use the same data. Changing the population forecast for McMinnville or allocating a portion of that forecast population to another city would be outside the scope of the remand.

Testimony presented regarding this issue doesn't affect the conclusory findings that the applicable criteria are satisfied. Testimony presented regarding this issue didn't include additional facts that conflict with the findings of fact in support of the conclusory findings. No errors were alleged in the City's remand response to the assignment of error identified in the Court of Appeals decision or LCDC's subsequent remand to the City.

ISSUE: LOCATION POLICIES REGARDING MEDIUM AND HIGH DENSITY HOUSING

Testimony was submitted expressing that locational policies with guidelines regarding medium and high density residential use should be less restrictive. (Policy 188.03, also Zoning Ordinance 17.06.425, p. 88 and p. 100 of the record.

RESPONSE:

With the findings, the City has demonstrated that the proposal provides land supply to meet the identified land needs, including sufficient land for medium and high density housing, as well as lower densities, to meet the land needs for needed housing types.

The proposed locational policies provide guidance on how the City will achieve other related policies, including its policy for dispersal of multi-family housing described in Policy 86.00, amended as part of the proposal. Policy 86.00 addresses multi-family housing, and does not explicitly address the density of multifamily housing. Multi-family housing includes a variety of housing forms from smaller-scale "middle housing" types to larger multi-family structures, which occur within a range of densities. The City has proposed additional policies and amendments to provide further clarifications and internal consistency among policies.

It is within the City's discretion to adopt policies and implementing provisions that address the urban form for how it will meet its identified housing needs. Staff prepared a separate memo, Public Comment Response, December 1, 2020 Ordinance No. 5098 Public Hearing" entered into the record, which explains how the multiple policies and implementing provisions relate to one another regarding this issue.

The memo clarifies the proposed policies and some misconceptions presented in testimony regarding this issue. In part, testimony provided states there is an inconsistency between certain policies, including transit-supportive development and Great Neighborhood Principles. However, some of the testimony conflates multi-family housing and R-5 high-density zoning. The testimony incorrectly suggests that densities allowed within moderate density zones would also be subject to the same locational policies of the high density R-5 zone, which is incorrect. Multi-family uses are not limited to the R-5 zone, and are permitted in other zones, including moderate density zones.

The memo further clarifies that some policies describe the locational pattern of certain residential density ranges and urban form within NACs and other policies provide city-wide locational policies. The policies that described the urban form of uses within NACs do not exclude where land uses may occur outside of NACs.

The testimony further commented on zoning locational policies relative to HB 2001. The current proposal is responsive to the assignment of error on remand. The City will address compliance with the requirements with HB 2001 consistent with the statutory schedule for implementation of HB 2001,

which is June 30, 2022 (Section 3 of HB 2001). The City is not required to address the requirements of HB 2001 at this time as part of the remand, which relates to issues broader than the assignment of error of the remand.

ISSUE: ORIGINAL LAND NEED FOR UGB EXPANSION AREA IS 72 ACRES OF R5 LAND

Testimony was presented suggesting that the amount of R5 land in the UGB expansion area should be 72 acres and not 36 acres.

RESPONSE:

The original 2003 MGMUP Plan identified the need for 36 acres of R5 zoned land in the UGB expansion area (Table 11 of Appendix B and Table 71 of the Findings Document). Increasing the amount of R5 zoned land in the UGB expansion area to 72 acres would double the amount of R5 zoned land first identified for the UGB expansion area and would overdevelop apartment units within the City of McMinnville since it is the only housing type allowed in the R5 zone.

The adopted 2001 Housing Needs Analysis identified the need for 1,685 apartment units as part of the 6,014 new housing units projected to serve the future population forecast. Per ORS 197.296(6) and (7), the City needs to determine the housing types and number of housing types needed to meet the future population's housing. 900 apartment units have been built within the existing city limits since the original adoption of the plan in 2003, leaving a remainder 47% of the housing type needed to be achieved in the UGB expansion area. The original MGMUP identified that this housing type would be achieved through both R4 and R5 zoned land as multifamily is allowed in both zones. What is unique about the proposed R5 zone is that only multifamily is allowed in that zone. With half of the apartment units needed in the Housing Needs Analysis already built within the existing city limits as originally projected and forecasted by the Plan, the remaining need will be achieved with the proposed 36 acres of R5 zoned land and 80.40 acres of R4 zoned land proposed in the UGB expansion area (Table 11 of Appendix B and Appendix G).

The amount of acreage dedicated to the R5 zone in the UGB expansion area was an argument of the opponent's petition to the Court of Appeals and was rejected by the Court of Appeals decision. Therefore, the testimony presented regarding this issue doesn't affect the conclusory findings that the applicable criteria are satisfied for identifying land to be included in the UGB.

ISSUE: MGMUP PLAN LANGUAGE STATES THAT R5 ZONED LAND CAN ONLY OCCUR IN NACs

Testimony was presented suggesting that since the original language of the MGMUP states that R5 zoned land can only occur within the NACs that it would prohibit R5 zoned land from being located anywhere else within the city limits despite Comprehensive Plan policies that state otherwise.

RESPONSE:

On the page following this original language in the MGMUP is an MGMUP 2020 Remand update stating that the R5 zoned land is meant to occur throughout the community. However, since this is not as clear as it could be, staff recommends that the language be changed to the amended language included in this staff report to clarify the intention of the comprehensive plan policies which encourage integration and dispersal of high density residential development throughout the community.

ISSUE: PROPOSED COMPREHENSIVE PLAN POLICY 86.00

Policy 86.00 expresses the City's policy for dispersal of multifamily housing throughout the urban area, rather than concentrating it in areas that are disconnected from neighborhoods, or in areas lacking high quality amenities, public facilities, and services.

The intent of the original policy was to also encourage multi-family housing in the vicinity of areas rich in amenities and services, including the area around the urban core and Linfield University. The proposal

included an amendment to Policy 86.00 to add language indicating proximity to core areas with amenities in Neighborhood Activity Centers to also be a desirable location for multi-family housing.

Testimony was presented expressing that part of Policy 86.00 appeared to be in conflict with the policy of dispersal.

RESPONSE:

The City concurred that the language in Policy 86.00 was unclear and could be read in a way that was counter to the intent, requiring clarification. Policy 86.00 has been amended to clearly express the policy objective and the updated Policy 86.00 is part of the proposal. This provides clarification regarding the policy and internal consistency within the planning documents in support of the proposal amendment.

This amendment provides clarification and doesn't affect the conclusory findings that the applicable criteria are satisfied.

ISSUE: PARK LAND NEED IS OVERSTATED

Testimony was presented suggesting that there was too much park land need in the proposal, that greenways was not part of the overall stated park land need and that based on past performance the city would not be able to financially achieve the park land need stated in the proposal.

RESPONSE:

The amount of park land in the proposed UGB expansion area was an area of challenge and opposition for the MGMUP throughout its development and adoption phases, and was also part of the petitioners appeal to the Court of Appeals. It was rejected by the state and the court of appeals as not having merit since the City had an adopted Comprehensive Plan policy that relied on the adopted Parks Master Plan to determine the number of acres required to serve the community for neighborhood parks, community parks and greenways. (Table 23 of Appendix B and Appendix G outlines the amount of acreage that the adopted Parks Master Plan identifies for near park land need specific to population targets. This table includes 102.50 acres of Greenways/Greenspaces/Natural Areas of the overall identified 313.76 park land need. (See pages 101 – 105 of the Findings Document.)

The City's past performance for acquisition and development of parks does not negate the adopted levels of service in the Parks Master Plan and the comprehensive plan policies. A Parks Master Plan is recommended as part of proposed Comprehensive Plan Policy 182.50. This plan update should identify different types of resources to acquire and develop parks.

The park land need in the UGB expansion area was an argument of the opponent's petition to the Court of Appeals and was rejected by the Court of Appeals decision. Therefore, testimony presented regarding this issue doesn't affect the conclusory findings that the applicable criteria are satisfied for identifying land to be included in the UGB.

ISSUE: LEGALITY OF REMAND WORK

Testimony was presented questioning how the remand response, rather than new work, was consistent with state law due to the time since the remand decision was issued.

RESPONSE:

Legal Counsel and staff explained there are separate regulations governing periodic review and urban growth boundary amendments, and further explained that the Court of Appeals decision resulted in new case law with a different interpretation of the inter-relationship between the applicable state goals, statutes, and administrative rules than was commonly understood by practitioners. As a result, the legislature subsequently amended the applicable statutes, and LCDC subsequently amended the applicable Administrative Rules governing UGB amendments. Within the amended statutes and

administrative rules, they included explicit authorization for cities that had initiated a UGB amendment prior to the new statute and rule to continue to use the regulations in effect at the time. DLCD concurred that this procedure for the City's response to the remand is in compliance with applicable state law.

Testimony presented regarding this issue doesn't affect the conclusory findings that the applicable criteria are satisfied. Testimony presented regarding this issue didn't include additional facts that conflict with the findings of fact in support of the conclusory findings.

ISSUE: COUNCIL SHOULD DELAY ACTION AND ENGAGE CITY COMMITTEES/COMMISSIONS

Testimony was presented that the City Council should delay action, and that the City should provide for more public involvement and Planning Commission involvement before adopting the proposal. Other testimony suggested insufficient public involvement leading to the preparation of the original MGMUP which was locally adopted and approved by DLCD and DLCD before being remanded by the Court of Appeals on the one remaining assignment of error.

RESPONSE:

This is a discretionary decision and does not affect compliance with applicable law. The action is to address the one remaining assignment of error upheld in the Court of Appeals decision, consistent with the "roadmap" and LCDC's remand order.

The following is excerpted from Page 13 of the MGMUP 2020 remand document:

"The Court of Appeals decision focused on the City of McMinnville's alternatives analysis for identifying suitable land in an UGB amendment to satisfy the City's identified land need housing, employment, and livability in the planning horizon of 2003-2023.

Since the original MGMUP was based on ten (10) years of community engagement and decision-making, the City of McMinnville has chosen to respond to the remand by maintaining the majority of the existing MGMUP and its appendices, where possible, that were originally provided as part of that legal record..."

The prior local community engagement and decision-making is summarized below. This is excerpted from the summaries provided in the preambles for the respective ordinances and the findings in the MGMUP documents.

- The preamble for Ordinance 4795 on page 1609 of the Court of Appeal Record,
- The preamble for Ordinance 4796 on page 911 of the Court of Appeals Record,
- The Findings for the MGMUP on pages 1093-1094 of the Court of Appeals Record,
- The preamble for Ordinance 4840 on page 313 of the Court of Appeals Record,
- The preamble for Ordinance 4841 on page 335 of the Court of Appeals record, and
- The preamble for Ordinance 4961 which followed the Court of Appeals decision.

- **Residential Lands Analysis**
 - January 23, 2001 public work session with Planning Commission and City Council
 - Joint Planning Commission and City Council public hearings on February 27, 2001 and April 10, 2001
 - Citizens' Advisory Committee public hearing on March 20, 2001
 - Joint Planning Commission and City Council public hearing on May 22, 2001
- **Economic Opportunities Analysis**
 - December 11, 2001 joint public work session. City Council, Planning Commission, and Citizens' Advisory Committee
 - January 8, 2002 joint public hearing. City Council, Planning Commission, and Citizens' Advisory Committee

- February 12, 2002 joint public hearing City Council, Planning Commission, and Citizens' Advisory Committee voted to adopt.
 - October 14, 2003 City Council adoption
- Community-wide public forums to solicit input on McMinnville's future growth and how it should be managed on June 3, 2002 and July 8, 2002, at which approximately 150 people participated
- Joint work session held on September 17, 2002 with the City Council, Planning Commission, McMinnville Urban Area management Commission, Citizens' Advisory Committee, and Yamhill County Board of Commissioners to review the results of the forums and provide direction to staff regarding preparation of the MGMUP.
- **MGMUP**
 - June 18, 2003 public work session with City Council, Planning Commission, Citizens' Advisory Committee, County Commissioners, and McMinnville Urban Area Management Commission
 - July 21, 2003 public work session with City Council, Planning Commission, Citizens' Advisory Committee, County Commissioners, and McMinnville Urban Area Management Commission
 - Joint public hearings August 4 and 5, 2003
 - August 12, 2003 public hearing
 - Recommendation by the McMinnville Citizens' Advisory Committee, Planning Commission, McMinnville Urban Area Management Commission, and Yamhill County Board of Commissions to City Council that the plan be adopted, subject to certain amendments described on Page 912 of the COA record.
 - Adopted, as amended, by the City Council on October 14, 2003
- **MGMUP, amended to address remanded items**
 - May 24, 2005 City Council public hearing
 - October 25, 2005 Joint work session of City Council, Yamhill County Board of Commissioners, and the McMinnville Urban Area Management Commission
 - December 6, 2005 public hearing of City Council, Yamhill County Board of Commissioners, and the McMinnville Urban Area Management Commission
 - January 11, 2006 City Council adoption
- Following a series of subsequent appeals and remands, LCDC issued an order approving the MGMUP on November 8, 2006
- On December 22, 2006 this action was appealed to the Court of Appeals
- Following attempts at reaching a negotiated settlement with the appellants that proved unsuccessful, DLCD drafted amendments to the Commission's 2006 approval order to address interpretations of law. LCDC approved the revised Order in November 2008
- After multiple time extensions were granted, the appellants filer their opening brief with the Court of Appeals in October 2009. Oral arguments were presented to the Court in September 2010.
- On July 13, 2011, the Court issued its decision to reverse and remand LCDC's approval of portions of the MGMUP. This decision became effective on January 13, 2012. On February 28, 2012, LCDC issued an order reversing and remanding its prior decision to the City consistent with the court's final opinion and order.
- The City Council determine that the prudent course of action at that time was to delay further work necessary to satisfy the LCDC Order, and to remove from the adopted MGMUP those elements that were no longer relevant.
- The City Council held a public hearing to take testimony to consider those proposed amendments on November 27, 2012. At the conclusion fo the hearing, the City Council held the record open and directed staff to provide a written response to comment offered during public testimony fro review at the December 11, 2012 City Council meeting.
- At the December 11, 2012 City Council meeting, City Council reviewed staff's response and received and considered additional public testimony. Following thorough deliberation, the

Council found the amendments proposed by staff appropriate and consistent with the referenced LCDC order and directed staff to prepare an amended ordinance for their consideration and adoption.

- On January 8, 2013, the City Council adopted those amendments.

ISSUE: CITY SHOULD GROW TO THE NORTH AND/OR NORTHEAST

Testimony was submitted expressing a preference for the City to grow to the north and/or northeast.

RESPONSE:

The City established study areas and evaluated land consistent with the priority requirements established in state law and the Court of Appeals “roadmap.” The City found that it could not grow into areas with farm zoning in those directions because of the land priority requirements for evaluation under state law. Those were lower priority lands for inclusion and were not required to meet needs after inclusion of higher priority lands. Lands to the north and northeast which are classified as higher priority exception areas were evaluated consistent with the priority requirements established in state law and the Court of Appeals “roadmap.” Those exception areas were found to be inadequate and/or unsuitable for the identified needs. High priority exception areas at other locations were found to be adequate and suitable for the identified needs and were included in the UGB. There was insufficient acreage in those exception areas to meet all identified land needs, so next priority lands were then evaluated for inclusion.

The City evaluated the areas and made findings as to why they are inadequate and/or unsuitable, and therefore not included. The findings of fact and conclusory findings reflect this analysis and remain unchanged.

ISSUE: IMPACT OF GROWTH ON QUALITY OF LIFE

The City received testimony from several City and area residents concerned about the impact of growth on infrastructure, traffic, community character, crime, and general quality of life. None of the persons testifying on this issue presented evidence of expected increases in crime or traffic or degradation to other quality of life measures tied to growth.

RESPONSE:

The need to expand the Urban Growth Boundary is determined by state law and local rules that require the City to adopt a land use plan that will accommodate a future population that has been adopted in coordination with Yamhill County. The testimony did not address the locational factors for expanding the UGB, which is the single assignment of error the Court of Appeals upheld that is the subject of the remand. The testimony did not address the regulatory framework that the City is adopting for the lands added to the UGB. The proposed MGMUP includes requirements in Appendix G for additional land use planning to occur before areas added to the UGB can develop, including requirements to update public facility plans. These updates must occur prior to approving annexation and assigning zoning to urbanizable land that would allow urban development to take place. The concern of citizens is noted but none of the testimony provided is relevant to the approval criteria for this proposal, nor is it actionable within the existing structure and requirements of state law.

ISSUE: ADEQUACY OF SERVICES TO SUPPORT GROWTH

The City received testimony from City and area residents concerned about the adequacy of existing infrastructure to accommodate the additional demand that urban expansion will place on urban services. Specific concerns were raised about additional traffic congestion on the existing road network. One person asked if the impact of stormwater runoff had been analyzed.

RESPONSE:

A serviceability analysis was performed for candidate study areas. Appendix C, Attachment 3b includes a report by Jacobs Engineering re: its analysis of serviceability impacts for 31 study areas. Page 7 of

the report outlines the analysis assumptions that were used for assessing infrastructure needs in each study area and anticipated “downstream” effects from urbanization. A stormwater analysis was conducted using National Resource Conservation Service (NRCS) Curve Number method. Table 3 of the report lists the outcome of that analysis, which indicated that all study areas were considered to contribute “Moderate” stormwater runoff impacts given the level of urban development modeled.

The Jacobs report also reviewed its conclusions re: the impact of urbanization in study areas on the transportation system. Table 3 shows that the resource areas in the southwest that are recommended for inclusion in the UGB rated “Good” or “Moderate” for transportation impacts relative to both cost and feasibility. While this analysis was not conducted to a level that would meet requirements for system master planning, it did provide comparative cost and feasibility ratings for study areas. All areas recommended for inclusion in the UGB received adequate ratings for serviceability.

The MGMUP 2020 Plan includes a new plan policy 182.50 (see Appendix D, page 10) that calls on the City to update master plans for public facilities and services within five years of a major UGB expansion. The list of plan effected includes the Transportation System Plan (TSP), airport plan, water, sewer, storm drainage plans, the Park and Recreation Master Plan, and planning related to Goal 5 resources and Goal 7 natural hazards.

ISSUE: NEEDED HOUSING – FOR COMMUTERS OR “RESIDENTS”

The City received testimony from people concerned about the City expanding in order to provide housing for commuters rather than for residents employed in the City.

RESPONSE:

The need to expand the Urban Growth Boundary is determined by state law and local rules that require the City to adopt a land use plan that will accommodate a future population that has been adopted in coordination with Yamhill County. The proposed MGMUP was predicated on population, housing land needs, and employment land needs that are presented in Attachment A – Population and Employment Forecast, and Attachment B – Land Need Analysis. The methodology of these forecasts was performed consistent with state rules that were in effect at the time the plan was submitted to LCDC for approval in 2003. There is no provision in the rules governing the preparation of these forecasts that permit the City to discriminate between resident workers, retirees, or commuters. The City is obligated to plan for and include sufficient lands to accommodate the forecast population and employment totals. Neither the Department of Land Conservation and Development nor the Oregon Court of Appeals took issue with the adopted population or employment forecast on which the MGMUP is based. The adopted population and employment forecast has been acknowledged as the planning basis for the MGMUP. The concern of citizens is noted but none of the testimony provided is relevant to the approval criteria for this proposal, nor is it actionable within the existing structure and requirements of state law.

ISSUE: EMPLOYMENT FORECASTS HAVE NOT BEEN REALIZED YET

The City received testimony from people concerned that the City expanding in order to provide land for employment growth that has not been achieved.

RESPONSE:

The adopted Economic Opportunity Analysis, which includes forecast employment levels, was prepared consistent with the rules that were in place at that time. Neither the Department of Land Conservation and Development nor the Oregon Court of Appeals took issue with the adopted employment forecast on which the MGMUP is based. The adopted employment forecast has been acknowledged as the planning basis for the MGMUP. The concern of citizens is noted but none of the testimony provided is relevant to the approval criteria for this proposal, nor is it actionable within the existing structure and requirements of state law.

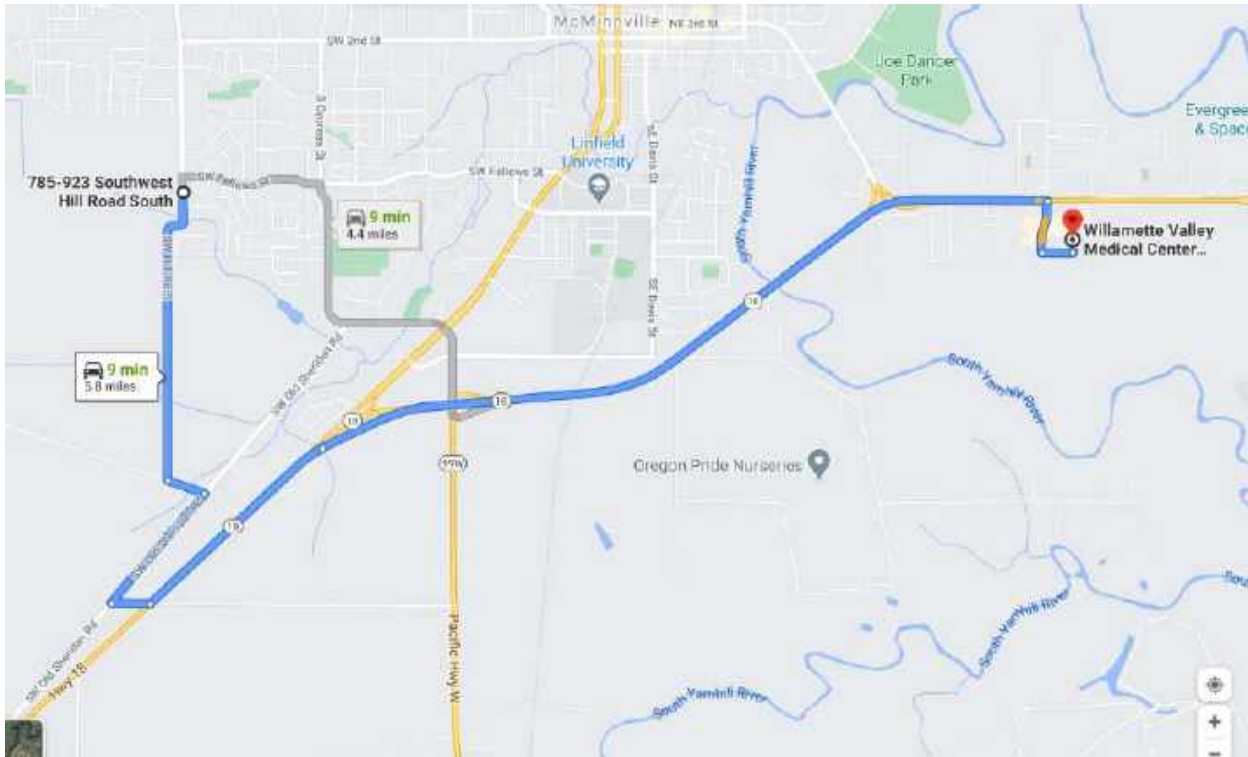
ISSUE: LOCATION OF UGB EXPANSION AREA AND DISTANCE TO HOSPITAL

The City received testimony from people concerned that the recommended areas for inclusion in the UGB are too far removed from essential facilities. Specific concerns were raised about travel time to reach the hospital - Willamette Valley Medical Center.

RESPONSE:

Consideration of areas to include in an urban growth boundary involves balancing how well study areas perform in meeting the five location factors under Goal 14, as provided in the Court of Appeals' "roadmap." The analysis of candidate study areas included an analysis of Goal 14 Location Factor 4 – Maximum efficiency of land uses within and at the fringe of the existing urban area. One of the criteria used in the evaluation of this factor was distance to services, which is documented in Appendix C, Technical Memorandum #5. One area recommended for inclusion in the UGB rated "poor" under this criteria because of its distance to existing transit, residential services, and a grocery store. The intent in the plan to expand transit and to locate Neighborhood Activity Centers in the southwest over time is expected to mitigate this locational disadvantages. The other study areas recommended for inclusion in the UGB received moderate ratings for distance to services. On balance, distance to services was not considered significant enough to rule out any of the recommended study areas.

The analysis did not consider travel time to the hospital as a criteria. The comment noted expected delays getting to the hospital via 2nd Avenue through downtown. A travel time search using a mapping direction tool starting at SW Fellows/SW Hill Road, which is the northwest edge of the areas in the southwest that are recommended for inclusion, shows that travel time to the medical center is ~9 minutes and the recommended route is not through downtown. The concern of citizens on this issue is noted but the testimony provided is not supported evidence that would alter the objective analysis that is in the record nor does it rise to a level that would alter the recommendation.



ISSUE: NATURAL AND CULTURAL RESOURCE PROTECTION

The City received testimony from people concerned that the MGMUP lacks sufficient information about cultural resource sites, heritage trees, and other significant resources that should be protected from development.

RESPONSE:

The proposed MGMUP includes policies in Appendix D, and planning requirements outlined in Appendix G, that require additional land use planning to occur in areas added to the UGB. These include requirements under MGMUP 2020 Plan policy 182.50 (see Appendix D, page 10) for the City to update master plans within five years of a major UGB expansion. The list of documents to be updated includes plans related to Goal 5 resources, which include natural, historic, and cultural resources, and Goal 7 - natural hazards. These interim planning steps must take place before urban development can take place in areas added to the UGB.

ISSUE: ADJACENCY OF URBAN DEVELOPMENT ON AGRICULTURAL USES

Property owners within the proposed Urban Growth Boundary expansion area engaged in agricultural uses are concerned about impacts of urbanization adjacent to their property.

RESPONSE:

To establish priority for lands to be included in the UGB, impact on adjacent agricultural uses was a consideration in the analysis and selection process as part of Step 3 of the Court of Appeals' "roadmap" – determining suitability. Nearby Agricultural Use Conflicts and Agricultural Adjacency were two screening factors that, by state law, had to be weighed in consideration with many other factors to determine the suitability of land for inclusion in the UGB. Please see Technical Memorandum #3: Nearby Agricultural Use Conflicts and Technical Memorandum #4: Agricultural Adjacency Screening Process for further detail regarding the analysis of lands for impact on adjacent agricultural uses.

There is an existing Great Neighborhood Principle (in existing Comprehensive Plan Policy 187.50 as Great Neighborhood Principle #10) that speaks to urban-rural interface and buffering between those uses. That existing Great Neighborhood Principle is identified below:

10. Urban-Rural Interface. Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.
 - a. Buffers or transitions in the scale of uses, buildings, or lots shall be provided on urban lands adjacent to rural lands to ensure compatibility.

The currently proposed Zoning text amendments would require that Area Plans and Master Plans be developed to be consistent with the Great Neighborhood Principles. Proposed Section 17.10.50(B)(1) (also can be seen on page E-17 of Appendix E) states that "Area Plans must embody the development principles of the applicable Framework Plan, UGB expansion plan, McMinnville Comprehensive Plan, and any other City land use policies and standards." More specifically, proposed Section 17.10.50(B)(1)(a)(3) specifies that "...Area Plans for UH areas within the MGMUP areas will be developed to be consistent with: ... The City's adopted Great Neighborhood Principles, as described in Comprehensive Plan Policies 187.10 through 187.50." Further, at the Master Plan level, proposed Section 17.10.80(4) (also can be seen on page E-20 of Appendix E) describes one of the review criteria for the consideration of a Master Plan as "Whether the Master Plan is consistent with the City's adopted Great Neighborhood Principles" (and then goes on to list all of the Great Neighborhood Principles). Therefore, the "Urban-Rural Interface" Great Neighborhood Principle and its requirements for buffers or transitions between urban lands and rural lands will need to be addressed through the development of Area Plans and Master Plans, which would occur prior to any development and would ultimately need to be reviewed and approved by the City Council. Management of growth within the UGB through the Area Planning and Master Planning process is discretionary to manage the impacts of growth on surrounding areas.

The Area Planning and Master Planning process established by the MGMUP-Appendix G will provide opportunity for public participation in the urbanization of UGB land and will require demonstration of consistency with Comprehensive Plan policies, including the Great Neighborhood Principle requirement for buffers or transitions between urban lands and rural lands.

RECOMMENDED AMENDMENTS BASED ON PUBLIC TESTIMONY:

Amend proposed Comprehensive Plan Policy #86.00 to:

Dispersal of new-multi-family housing development will be encouraged throughout the City in areas designated for residential and mixed-use development to encourage a variety of housing types

throughout the community and to avoid an undue concentration of multi-family development in specific areas of the community leading to a segregation of multi-family development in McMinnville from residential neighborhoods. Dispersal policies will be consistent with the Great Neighborhood Principles

In areas where there are the amenities, services, infrastructure and public facilities to support a higher density of multi-family development, and the area is commensurate with a higher concentration of multi-family development without creating an unintended segregation of multi-family development, such as McMinnville's downtown, the area surrounding Linfield University and Neighborhood Activity Centers, a higher concentration of multi-family development will be encouraged.

New Proposed Amendment to Existing Policy 71.09

Medium and High-Density Residential (R-3 and R-4) - The majority of residential lands in McMinnville are planned to develop at medium density range (4 – 8 dwelling units per net acre). Medium density residential development uses include small lot single-family detached uses, single family attached units, duplexes and triplexes, and townhouses. High density residential development (8 – 30 dwelling units per net acre) uses typically include townhouses, condominiums, and apartments:

1. Areas that are not committed to low density development;
2. Areas that have direct access from collector or arterial streets; or a local collector street within 600' of a collector or arterial street; or (similar to proposed MMC Amendment 17.21.010(C))
3. Areas that are not subject to development limitations such as topography, flooding, or poor drainage;
4. Areas where the existing facilities have the capacity for additional development;
5. Areas within one-quarter mile of existing or planned public transportation; and
6. ~~Areas that can be buffered from low density residential areas in order to maximize the privacy of established low density residential areas.~~

Amend page 54 of the MGMUP, replacing the MGMUP 2020 Remand update text box with:

MGMUP 2020 Remand:

The MGMUP 2020 Remand retains the R-5 zone as a means of helping to provide the 1,685 apartment housing units identified in the Housing Needs Analysis (Table 3 of this Plan and Table 8 of Appendix B). However in order to meet the City's housing policies of integrated neighborhoods and encouraging a dispersal of high density residential housing throughout the community, the MGMUP 2020 Remand update amends the statement that the R5 zone will only occur in the Neighborhood Activity Centers. Per proposed Comprehensive Plan policy 71.12, if there are other appropriate locations identified for the R5 zone both within the existing city limits and within the UGB during the Area Planning process, the R5 zone should be utilized.

This remand update will maintain the same 36 acres of R5 zoned land need within the UGB expansion area as originally proposed in the 2003 Plan (Table 11 of Appendix B and Table 71 of the Findings Document) based on the analysis identified in Technical Memorandum #17B, that identifies 900 apartment units that were built within the existing city limits after the adoption of the 2003 Plan, meeting the need for half of the overall apartment unit housing identified in the adopted Housing Needs Analysis, leaving only half of that overall need that still remains to be developed.

Originally the City proposed to rezone 72 acres of land to the R5 zone, 36 acres within the existing UGB as part of two planned Neighborhood Activity Centers (Grandhaven and the Northwest) and 36 acres in two planned Neighborhood Activity Centers in the UGB expansion area, as a means of achieving the stated apartment unit housing need in the Housing Needs Analysis. The only housing type that the R5 zone allows is multifamily dwellings. However, in McMinnville, the R4 zone also allows multifamily development and when the Grandhaven Neighborhood Activity Center and the

Northwest Neighborhood Activity Center did not move forward following the Petitioners successful appeal to the Court of Appeals, the City rezoned land to the R4 zone to work towards meeting the city's apartment unit housing need within the existing UGB. This land-use measure was successful in generating 900 apartment units, (53% of the overall need). While the R-5 rezone did not occur, the housing type that the R5 zone is meant to realize, apartment units, (which is the only housing type allowed in the R5 zone) did develop per the locational policies of high density residential development in Comprehensive Plan policy #71.09. In effect, the planned R-5 housing was achieved through other land use actions.

See Technical Memorandum #17B of Attachment 2 to Appendix D of the MGMUP.

The 2020 MGMUP Remand does not identify specific locations in the expansion areas for the R-5 zone to be applied, but the Framework Plan does identify potential locations where higher density residential R-5 zoning could be implemented based on potential locations for Neighborhood Activity Centers, along with other land uses that are envisioned for these districts. Specific locations, sizes, and uses within the NACs, including R-5 zoned areas, will be further defined through Area Planning and Master Planning processes.

Comprehensive Plan Policies are proposed to describe the R-5 zone, how it should be developed and where it should be located. These Policies are proposed to be included in Chapter IX (Urbanization) of the McMinnville Comprehensive Plan. The specific Comprehensive Plan amendments are identified in Appendix D of the MGMUP.

Replace Technical Memorandum #17 with Technical Memorandum #17B.

Attachments:

- Ordinance No. 5098

Link to Documents:

Please note that due to document size, all of the documents below can be located at the following link: <https://www.mcminnvilleoregon.gov/planning/page/mgmup-2003-ugb-remand-project> or at www.growingmcminnvillemindfully.com

McMinnville Growth Management and Urbanization Plan (MGMUP or “The Plan”)

- Appendix A – Population and Employment Forecast
- Appendix B – Buildable Lands Analysis
- Appendix C – Urbanization Report or the Alternatives Analysis, including:
 - Attachment 1 – Alternative Analysis Screening Criteria Workbook
 - Attachment 2 – Technical Memorandums
 - Attachment 3 – Reference Materials
 - Attachment 4 – Maps Repository
 - Attachment 5 – Legal Documents
 - Attachment 6 – Phase 1 Expansion Land Study Areas
- Appendix D – Proposed Comprehensive Plan Policy Amendments
- Appendix E – Proposed Zoning Ordinance Amendments
- Appendix F – Proposed Comprehensive Plan Map Amendment

- Appendix G – The Framework Plan and Area Planning Process
- MGMUP Findings Document
- Public Notices
 - Notice Mailed to Property Owners within UGB Expansion, dated November 10, 2020
 - Notice Mailed to Property Owners within 300 feet of UGB Expansion, dated November 10, 2020
 - Notice Mailed to all Property Owners with Hearing Time Correction, dated November 19, 2020
 - Public Hearing Notice Published in *News Register*, included in November 24, 2020, November 27, 2020 and December 1, 2020 Publications of the *News Register*
- Public Testimony (*all written testimony received*)

Alternative Courses of Action:

1. ADOPT Ordinance No. 5098, **APPROVING** G 6-20 and adopting the MGMUP 2020 UGB Update.
2. DO NOT ADOPT Ordinance No. 5098 by providing a motion to **DENY**.

Recommendation:

Staff recommends that the Council adopt Ordinance No. 5098, with the recommended amendments provided in this Staff Report, which would approve G 6-20 and adopt the MGMUP 2020 UGB Update. If adopted, the MGMUP 2020 UGB Update would then be forwarded to the Yamhill County Board of Commissioners for their consideration and action before being submitted to the Department of Land Conservation and Development (DLCD).

“THAT BASED ON THE FINDINGS OF FACT, THE CONCLUSIONARY FINDINGS FOR APPROVAL, AND THE MATERIALS INCLUDED IN THE RECORD, I MOVE TO ADOPT ORDINANCE NO. 5098, including the recommended amendments provided in the December 8, 2020 Staff Report.”

ORDINANCE NO. 5098

AN ORDINANCE ADOPTING CERTAIN AMENDMENTS TO THE MCMINNVILLE COMPREHENSIVE PLAN MAP, COMPREHENSIVE PLAN AND MCMINNVILLE MUNICIPAL CODE (CHAPTER 17), APPROVING THE MCMINNVILLE GROWTH MANAGEMENT AND URBANIZATION PLAN AND ITS APPENDICES, AND ADDING LAND SUPPLY TO MCMINNVILLE'S URBAN GROWTH BOUNDARY.

RECITALS:

On October 14, 2003, the McMinnville City Council adopted the "McMinnville Growth Management and Urbanization Plan" and appendices (MGMUP), and Findings (ORD No. 4796), and the "Economic Opportunities Analysis," (ORD No. 4795), as part of the McMinnville Comprehensive Plan, Volume I, amending the policies in McMinnville Comprehensive Plan, Volume II, amending the McMinnville Municipal Code (Chapter 17), and amending the Comprehensive Plan Map to add land supply to McMinnville's urban growth boundary (UGB) for the City's periodic review Task 1, pursuant to ORS 197.626, OAR 660-025-0040(1)(a). These documents were prepared in response to an analysis of the city's buildable lands and future land needs, which determined that there exists a shortfall of both residential and commercial land necessary to accommodate projected growth needs through the year 2023. Yamhill County adopted Ordinance 730 on 16 October 2003 supporting the plan amendments.

On October 20, 2003, the City provided notice of the ordinance adoptions and periodic review work task submittal to DLCD and interested parties. On April 20, 2004, the Director of the Department of Land Conservation and Development (DLCD) issued a response to written objections and exceptions filed by participants and the City pursuant to OAR 660-025-0160(3).

At the April 22 and September 10, 2004, Land Conservation and Development Commission (LCDC) hearings, the Commission heard oral argument from the City, DLCD staff and objectors and acknowledged certain elements of the MGMUP while remanding others.

On January 11, 2006, the City adopted a series of amendments to the MGMUP and related implementing measures to address concerns raised by DLCD and the Commission. The amendments were enacted by adoption of January Ordinances 4840 and 4841. Yamhill County adopted Ordinance 778 on 25 October 2006 supporting the plan amendments.

Following a series of subsequent challenges, objections and appeals by local opponents, the Oregon Land Conservation and Development Commission (LCDC) issued an Order approving the MGMUP on November 8, 2006, Approval Order 06-WKTASK 001709.

On August 1, 2007, 1000 Friends of Oregon, Friends of Yamhill County and Ilsa Persa petitioned the Oregon Court of Appeals about the LCDC Approval Order 06-WKTASK 001709.

After multiple attempts to resolve disputes between the parties and multiple time extensions that were granted by the Court, oral arguments were presented to the Court in September, 2010.

On July 13, 2011, the Court issued its decision to reverse and remand LCDC's approval of portions of the MGMUP. The remand decision cited one assignment of error that related to the selection of land for inclusion in the UGB. On February, 29, 2012, LCDC rescinded its approval of the MGMUP and

issued a remand order to the City consistent with the court's final opinion and order, Remand Order 12-WKTASK-001814.

On 18 January 2013, the City adopted Ordinance 4961, which temporally suspended further work on the MGMUP and UGB amendment. The ordinance also repealed Ordinance 4841 entirely and modified portions of the MGMUP amendments that were approved in ORD 4840. The ordinance left in place the "Phase 1" UGB amendments that added 259 acres of land in three exception areas and a school site. The ordinance also left in place the Population Forecast, 2001 Residential Land Need Analysis, and the 2003 Economic Opportunities Analysis that had been relied on to determine urban land needs. The ordinance did not alter the public involvement record that served as a basis for enacting the MGMUP.

In January, 2020, the City Council directed staff to restart work on the MGMUP and UGB amendment. The City confirmed with DLCD that it was still under the revised 1994 Periodic Review Work Program to update the Comprehensive Plan to address identified land needs. After conferring with DLCD, the City Council elected to prepare a revised Urbanization element that would respond to the Court and LCDC remand decisions. This action was premised on the understanding that the Court's remand order is limited and primarily effects the selection of land to include in the UGB. This work is referred to as the "Phase II UGB amendments that are detailed in a new Urbanization Element, which was prepared following guidance provided by the Court in its remand order, as Appendix C of the MGMUP. The City also updated land needs, plan policies, and developed procedures to urbanize these land additions through subsequent planning steps.

In October and November of 2020, the City hosted a series of public information sessions concerning proposed revisions to the Urbanization element of the MGMUP and a revised UGB proposal. The presentations also addressed related plan implementation measures. City staff also met with individuals and interest groups one-on-one to review the proposed amendments. Meetings and presentations included:

On October 27, 2020, the City provided notice to DLCD that it would take up amendments to the comprehensive plan as a matter of reconsideration under the LCDC remand order. Individual notice was sent to all property owners directly affected by the proposed UGB amendments and to nearby property owners on November 10, 2020. General notice was published in the McMinnville News Register on November 24 and November 27.

The City Council hosted its first public hearing for this Ordinance on December 1, 2020. The hearing included three successive evenings of public testimony on December 1, 2, and 3, concluding with the first reading of the ordinance on December 3, 2020. These events included a City presentation about the proposed amendments followed by public comment. In light of requirements for social distancing and public safety related to the COVID 19 pandemic, these sessions were conducted virtually. An on-camera public testimony station was set up at City Hall that allowed members of the public without access to on-line virtual communication to testify in person. The City also accepted written testimony prior to and throughout the public hearing process.

A second reading of this ordinance occurred on 8 December, 2020. After deliberation, the City Council, in its quasi-judicial role as the decision body for considering the remand order from LCDC, took steps to amend the City's land use plan and regulations and complete the periodic review process initiated in 1994.

NOW, THEREFORE, THE COMMON COUNCIL FOR THE CITY OF MCMINNVILLE ORDAINS AS FOLLOWS:

Section 1: The City adopts Exhibit A to this ordinance, the “McMinnville Growth Management and Urbanization Plan (MGMUP), December 2020” and its appendices. This action amends the McMinnville Comprehensive Plan, Volume I, the urbanization element; adopts the McMinnville Growth Management and Urbanization Plan (MGMUP) and its appendices; amends the goals, policies and proposals of Chapter II (Natural Resources), Chapter IV (Economy), Chapter V (Housing), Chapter VII (Facilities and Services), and Chapter IX (Urbanization) of the McMinnville Comprehensive Plan per Appendix D of the MGMUP; and adopts amendments to the McMinnville Municipal Code adding a Neighborhood Activity Center Planned Development Overlay District, a new Chapter 17.10, “Area and Master Planning Process”, and a new Chapter 17.22, “High Density Residential Zone”. per Appendix E of the MGMUP. Two appendices, Appendix A and Appendix B are adopted with this plan that previously were adopted. These provided the factual basis for the population, housing and employment land needs to which the plan responds. Appendix C, D, E, and G provide supporting evidence for the application of the urban growth boundary land selection analysis and related implementation policies and procedures. Appendix F provides the Comprehensive Plan Map amendments for the urban growth boundary amendment. Please see Section 2 of this ordinance.

McMinnville Growth Management and Urbanization Plan

- Appendix A – Population and Employment Forecast
- Appendix B – Buildable Lands Analysis
- Appendix C – Urbanization Report or the Alternatives Analysis
- Appendix D – Comprehensive Plan Policy Amendments
- Appendix E – Zoning Ordinance Amendments
- Appendix F – Comprehensive Plan Map Amendment
- Appendix G – The Framework Plan and Area Planning Process

Section 2: The City adopts Exhibit B to this ordinance, an amended Comprehensive Plan Map adding land to the urban growth boundary (862.40 gross acres and 662.40 gross buildable acres) and designating/redesignating land within the City’s UGB with Comprehensive Plan designations for both the Phase I and Phase II UGB expansions (Urban Holding, Industrial, Commercial and Floodplain). (Exhibit B).

- Map 1: Comprehensive Plan Map Amendment – Expansion of the Urban Growth Boundary
- Map 2: Comprehensive Plan Designations for Land in the Urban Growth Boundary but not in the City Limits.

Section 3: The City adopts Exhibit C to this ordinance, which includes findings of fact that support the development and conclusions reached for preparing and adopting these amendments to the McMinnville Comprehensive Plan.

Section 4. That this ordinance shall take effect thirty (30) days after its passage by the City Council.

Passed by the Council this _____ day of December, 2020, by the following votes:

Ayes: _____

Nays: _____

MAYOR

Attest:

Approved as to form:

CITY RECORDER

CITY ATTORNEY



**CITY OF MCMINNVILLE
PLANNING DEPARTMENT**
231 NE FIFTH STREET
MCMINNVILLE, OR 97128

503-434-7311

www.mcminnvilleoregon.gov

On File with the Planning Department:

McMinnville Growth Management and Urbanization Plan

- **Appendix A – Population and Employment Forecast**
- **Appendix B – Buildable Lands Analysis**
- **Appendix C – Urbanization Report or the Alternatives Analysis**
- **Appendix D – Comprehensive Plan Policy Amendments**
- **Appendix E – Zoning Ordinance Amendments**
- **Appendix F – Comprehensive Plan Map Amendment**
- **Appendix G – The Framework Plan and Area Planning Process**

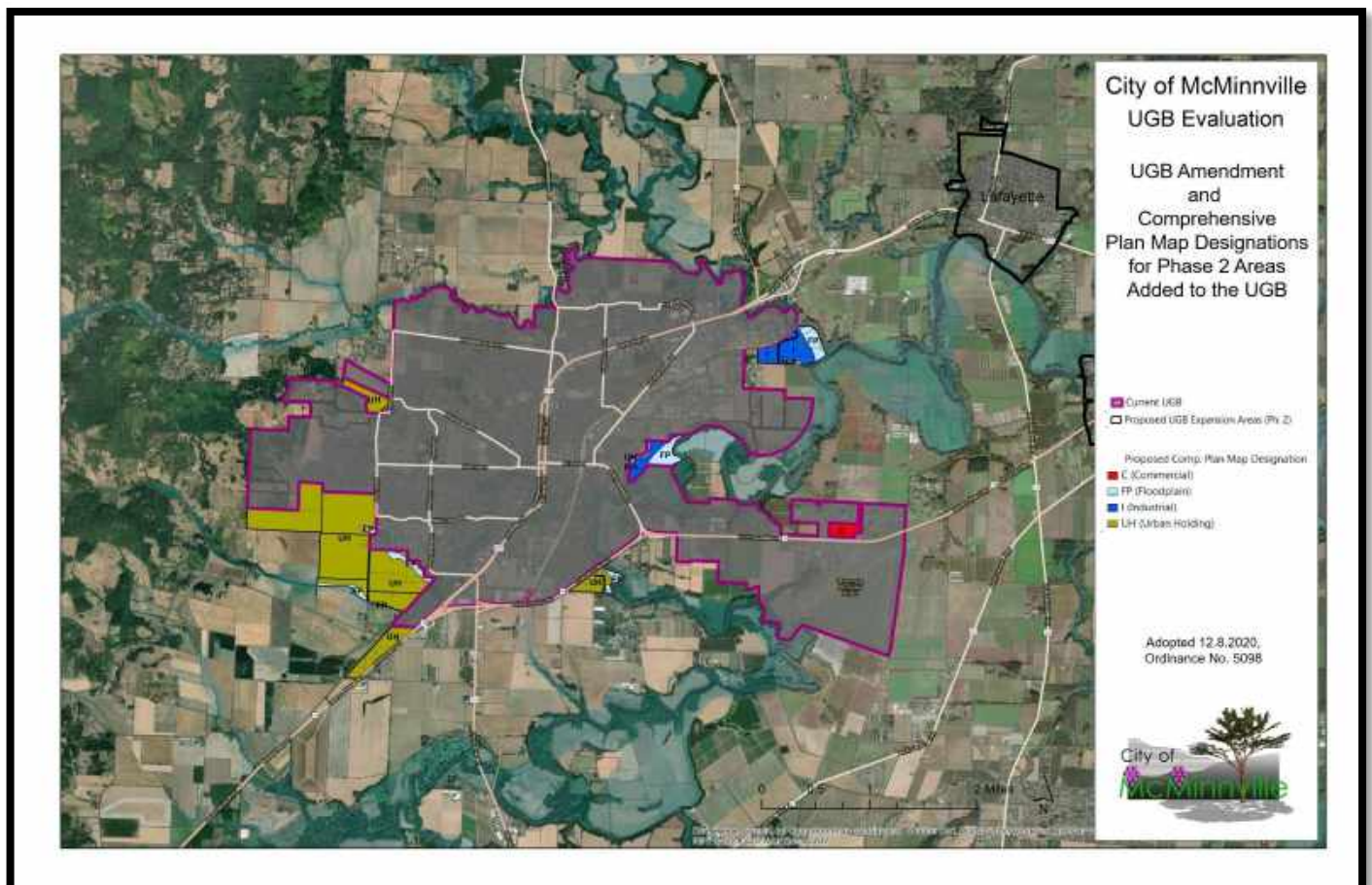


**CITY OF MCMINNVILLE
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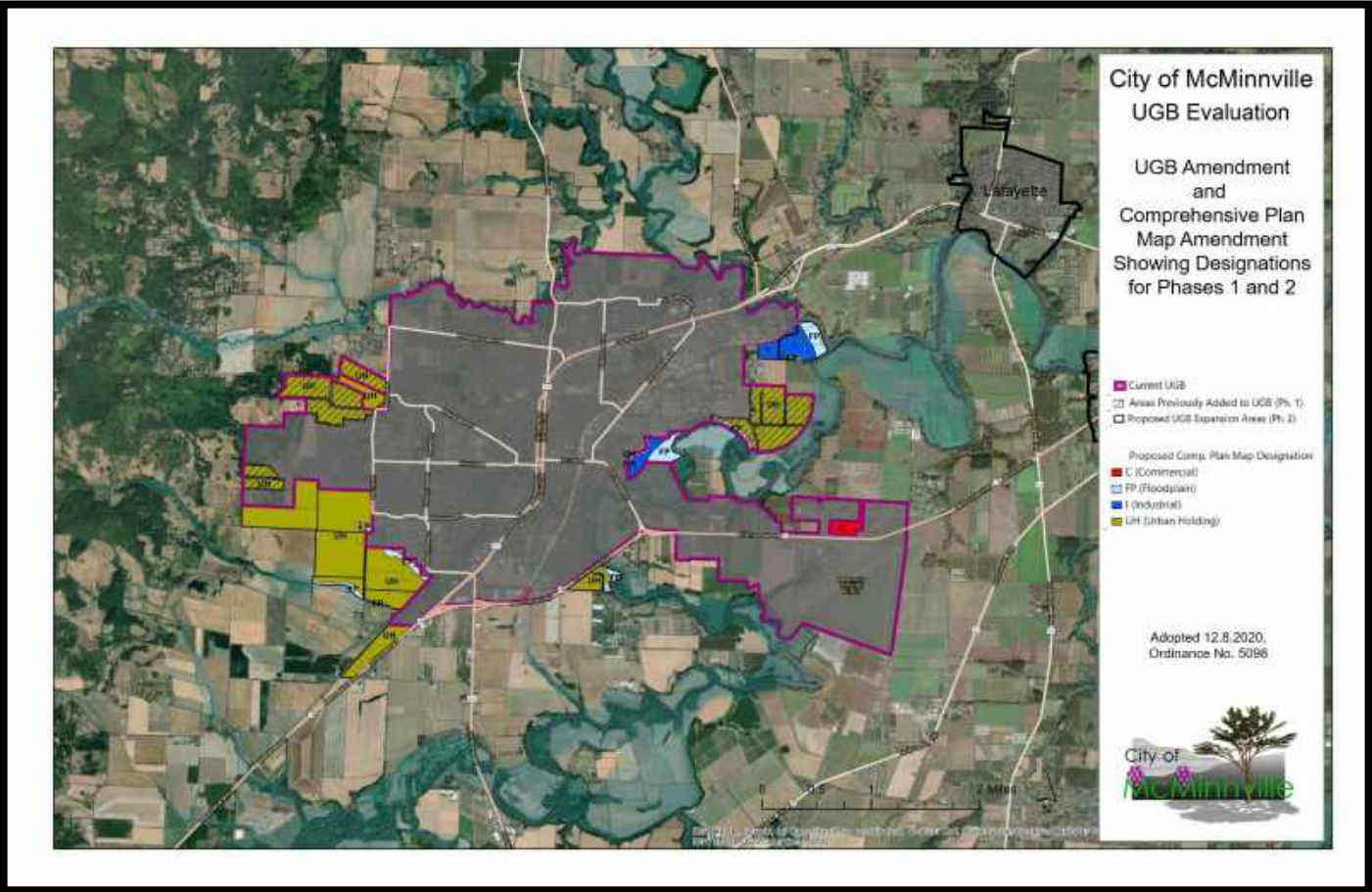
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**COMPREHENSIVE PLAN MAP AMENDMENTS:
PLEASE SEE APPENDIX F OF THE MGMUP FOR MORE DETAILS**

Map 1: Expansion of the Urban Growth Boundary



Map 2: Comprehensive Plan Designations for Land in the Urban Growth Boundary but not in the City Limits





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DECISION, FINDINGS OF FACT AND CONCLUSIONARY FINDINGS FOR THE APPROVAL OF LEGISLATIVE AMENDMENTS TO THE MCMINNVILLE COMPREHENSIVE PLAN MAP AND COMPREHENSIVE PLAN PERTAINING TO THE MCMINNVILLE GROWTH MANAGEMENT AND URBANIZATION PLAN (MGMUP), AND ITS APPENDICES.

DOCKET: G 6-20

REQUEST: The City of McMinnville is proposing to amend the McMinnville Comprehensive Plan Map by adding 862.40 gross acres (662.40 gross buildable acres) to the McMinnville urban growth boundary (UGB); designating and redesignating land within McMinnville’s UGB to a Urban Holding, Industrial, Commercial and Floodplain comprehensive plan designations; adopting the McMinnville Growth Management and Urbanization Plan (MGMUP) and its appendices; amending the goals, policies and proposals of Chapter II (Natural Resources), Chapter IV (Economy), Chapter V (Housing), Chapter VII (Facilities and Services), and Chapter IX (Urbanization) of the McMinnville Comprehensive Plan per Appendix D of the MGMUP; and adopting amendments to the McMinnville Municipal Code adding a Neighborhood Activity Center Planned Development Overlay District, a new Chapter 17.10, “Area and Master Planning Process”, and a new Chapter 17.22, “High Density Residential Zone”. per Appendix E of the MGMUP.

LOCATION: N/A

ZONING: N/A

APPLICANT: City of McMinnville

STAFF: Heather Richards, Planning Director

HEARINGS BODY: McMinnville City Council

DATE & TIME: December 1, 2 and 3, 2020. Zoom virtual public hearing and Civic Hall, 200 NE 2nd Street, McMinnville, Oregon

PROCEDURE: Response to Land Conservation and Development Commission Remand Order 12-WKTASK-001814.

CRITERIA: Amendments to the Comprehensive Plan must be consistent with the Oregon state statutes and administrative rules, and the Goals and Policies in Volume II of the Comprehensive Plan and the Purpose of the Zoning Ordinance.

