Fire District and Emergency Medical Services Consolidation Feasibility Study

JEFFERSON COUNTY, OREGON

FINAL REPORT

matrix consulting group

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1 Introduction and Executive Summary

The Matrix Consulting Group was retained by Jefferson County to conduct a consolidation feasibility study of the Jefferson County Fire District #1 and the Jefferson County Emergency Medical Services District. This document is the report of the project teams' work that includes an analysis of staffing, response capabilities, financial resources, and operational readiness.

1. Study Scope of Work

Government organizations should periodically review the services that they deliver to identify resource requirements, operational efficiencies, management and that customer services goals are met. Public safety operations are not exempt from this need. The focus of this study is the feasibility of consolidating the Jefferson County Fire District #1 and the Jefferson County Emergency Medical Services. As a result, the scope of this project was comprehensive and included:

- Response capabilities;
- Response time analysis;
- Resource locations;
- Financial resources;
- Staffing and manpower.

This assessment is intended to provide analysis and clearly illustrate the choices for the viability of the consolidation of services to be more effective in response to calls for service for fire and emergency medical needs.

2. Methodology Used in the Study

To understand and evaluate service level issues facing the County, the project team undertook an assessment of both District's operations. The principal approaches utilized by the project team in this study included, but were not limited to, the following:

- **Internal Interviews** – members of the project team individually interviewed numerous executives, management, and supervisory staff of Jefferson County,

Culver, Madras, Fire District Officials, and Emergency Medical Services District Officials as part of this study.

- **Data Collection** – the project team collected a wide variety of external and internal data documenting the structure, operations and organization, including:

  – Department staffing and scheduling
  – Documentation reflecting operations management
  – Numerous output data reflecting services provided
  – Various other performance information

  This data was summarized in a 'descriptive profile' of both Districts, which was reviewed by the staff of both Districts to ensure we had a factual foundation for the study. This approach ensured that the project team had an appropriate understanding of the Districts.

Data was collected over the past several months and presented in interim deliverables. Throughout this process, the project team reviewed facts, findings, and conclusions through these interim deliverables with the Districts.

3. Summary of Findings

The cost of providing emergency services is rising throughout the country. Volunteer staffing is on the decline due to training requirements and the time required to dedicate to the service. Apparatus is aging and becoming more expensive and difficult to replace. Funding sources are limited through taxes and user fees making it tougher to provide the financial resources necessary to fund the emergency services.

Effectively evaluating the services provided was limited due to the limitations of the dispatch system. The current system does not provide the data necessary to evaluate the response of individual units of the fire and ambulance services. In addition, the times recorded by the system are not complete. For example, in 2017 20.4% of the calls for the Fire District did not have an enroute time stamp and 27.6% of the calls did not have an arrival time stamp. For the Ambulance Service, in 2017 11.6% of their calls did not have an enroute time stamp and 16.4% of the calls did not have an arrival time stamp. The use of reponse time components is essential in determining station locations, the number of resources, and staffing of those resources.

The financial projection for the JCEMS indicates the District will likely be operating at a deficit in the next three years. However, the JCEMS recently changed its billing practices

and the financial picture is improving. Should this improvement to the financial outlook continue, the JCEMS could be in a positive financial condition in the next three years and beyond. The primary funding source for the JCEMS is user fees and according to the EMS District those fees are becoming more dependent on Medicare and Medicaid which caps the cost regardless of the actual cost. This issue will continue to become increasingly prevalent with the population getting older and more dependent on Medicare.

Likewise the JCFD will likely be operating at a deficit in the next six years unless the local option tax is approved. This additional revenue will provide the financial stability to the Fire District for the foreseeable future.

The consolidation of the two Districts does not allow for the addition of career staffing to staff two ambulances and an engine company. It does allow the two Districts to combine and provide a more financially stable emergency services organization with the increase to the permanent tax rate. The consolidated organization would need to use the existing staffing model to continue operations.

With the changes in the billing practices of the JCEMS, Appendix C provides an assessment of the new financial data. The data is for a six-month period and while it does not provide a substantial amount of data, it does provide a view of possible improvement to their financial health. The organizations should be cautiously optimistic in reviewing this data and the financial improvements shown in the projections.

4. Summary of Recommendations

Throughout this report the project team provides evaluation and analysis of the staffing, organization, and services provided by the Districts and, where appropriate, make suggestions for improvements. The table below provides a summary list of all the recommendations, appearing in sequential order, in this report.

RECOMMENDATIONS

OPERATIONS
The Jefferson County Fire District and County should work with the Dispatch Center to ensure a single incident number is provided for each unique call and secondary apparatus or stations are included as part of the original call.
The County, Fire District and EMS District should work with the Dispatch Center to continue to improve their performance on processing and dispatching emergency calls for service.

The Jefferson County Fire District #1 should continue to work towards improving turnout times during the daytime when staffing is present in the station.

The Jefferson County EMS District should continue to work towards improving turnout times.

CONSOLIDATION

Do not pursue an intergovernmental agreement for the administrative function of the two Districts.

The Jefferson County Fire District and the Jefferson County Emergency Medical Services District should move forward with seeking voter approval to form a single emergency service district.

A permanent tax rate of $2.1847 per $1,000 assessed value will be needed to adequately fund the new district.

A permanent tax rate of $2.50 per $1,000 assessed value will be needed to fund the new district with enough personnel to staff two ambulances and one fire apparatus twenty-four hours a day seven days a week.

INDIVIDUAL DISTRICTS

The Jefferson County Fire District should seek voter approval for a Local Option Tax of $1.000 per $1,000 assessed valuation to improve the sustainable revenues of the District.

PHYSICAL RESOURCES

The Fire District should adopt a program for apparatus replacement that contains benchmarks and measurable components.

The EMS District should adopt a program for ambulance replacement that contains benchmarks and measurable components.

COMMUNICATIONS

The communications center should establish call processing time benchmark performance objectives of 64 seconds for emergency calls for service.

Work with the communications center to ensure the time stamp data is accurately collected for analysis.

Consider installing mobile data terminals in the police cars to enable the capture of time stamps electronically and enhance communication between police units and the emergency communication center.

2 Overview of the Current Service Environment

This chapter provides summary information regarding the current organization and operation of the Jefferson County Fire District #1 (JCFD) and the Jefferson County Emergency Medical Services (JCEMS) and serves as the context for the analysis of emergency services. The various types of data were developed through interviews with management and personnel, tours of stations and the response areas of the Districts, review of available documents and records, as well as access to computerized records and data sets. The organization of this chapter is as follows:

- Background and Overview
- Financial Resources
- Organizational Structure
- Overview of the Districts
- Operations

This chapter provides information that was utilized by the project team to analyze workloads, organization, management and service levels provided by the Districts.

1. Background and Overview

Jefferson County is in north central Oregon approximately 50 miles north of Bend along U.S. Highway 97. The County was created in 1914 and covers approximately 1,791 square miles, of which 10 square miles is water. An estimated 23,080 residents live in the County with most residents in Madras, which is the County seat. There are two additional incorporated cities in the County, Culver and Metolius.

The following sections of this chapter explore the Jefferson County Fire District #1 and Jefferson County Emergency Medical Services budget, staffing, organizational structure and workload information.

2. Jefferson County Fire District

The Jefferson County Fire District #1 (JCFD) is organized as a Special District that is governed by a five (5) member Board of Directors. The Board is elected by the citizens of the Fire District on at large basis. The Board serves staggered four (4) year terms and is responsible for budget development and making policy decisions for the District. The Board meets monthly.

The District currently employs six full-time personnel that operate out of the headquarters station in Madras. These personnel include the Fire Chief/Fire Marshal, Support Services Captain, Training Captain, Volunteer Recruitment and Retention Captain (grant funded position), Support Services Lieutenant and two part-time administrative positions that amount to 1.15 full-time equivalents. The District covers approximately 200 square miles with a population of about 14,000 residents.

The Fire Chief is responsible for the overall command and control of the District. The Chief is accountable for all facets of the agency, its operations and the overall management. This is provided through the assigned administrative staff within the District. The Chief is supported by the Administrative Assistant, Captains and Lieutenant.

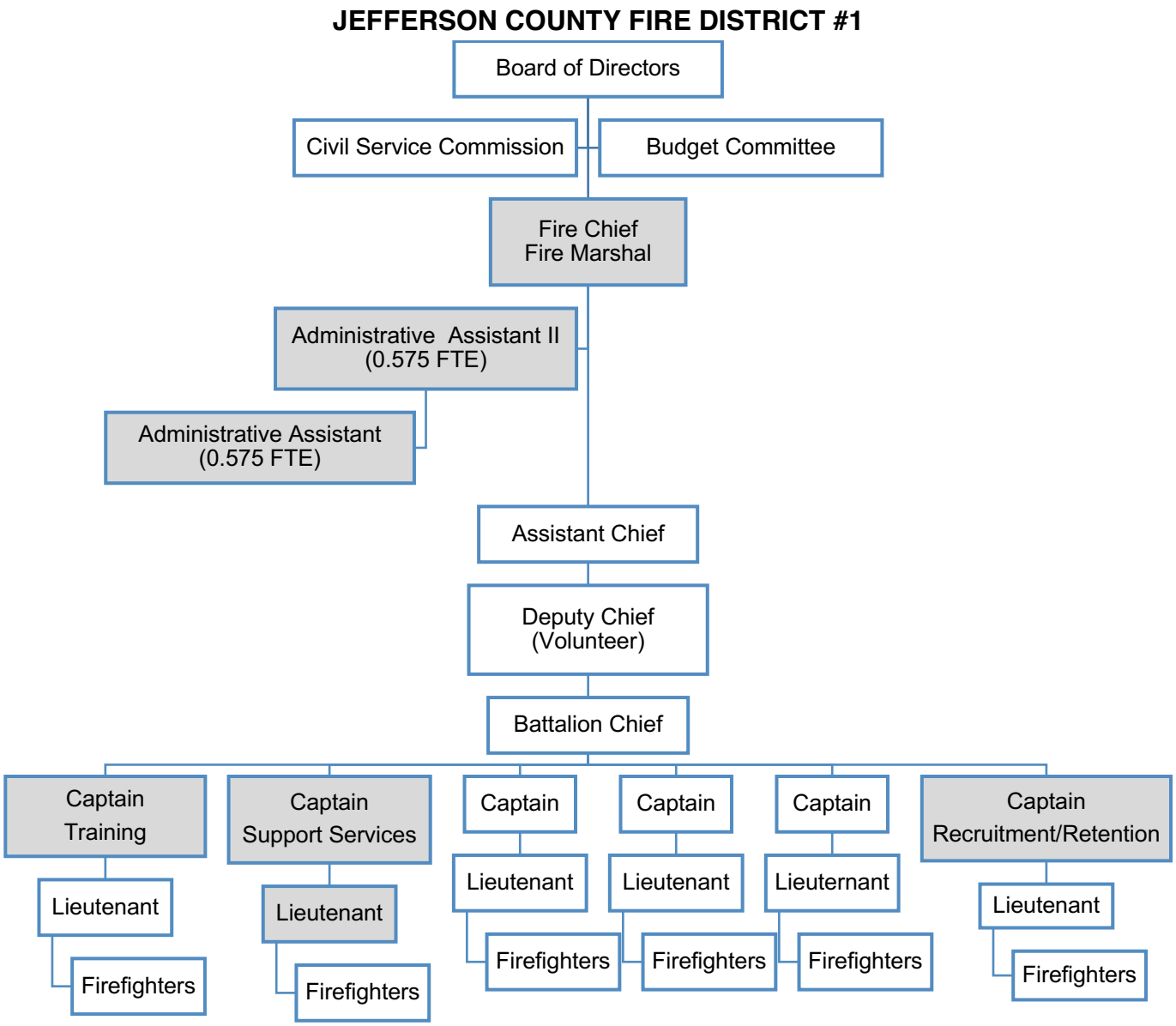
The mission of the JCFD is to "protect life and property from fire, hazardous materials, and other perils, provide necessary basic life support services, and to preserve the quality of life for the citizens whom we protect."

(1) Organizational Structure

The organizational chart for the JCFD is shown on the next page. The District provides fire suppression, emergency medical response, and special operations response to the communities within their service area. The highlighted positions represent the career positions in the District.

(2) Financial Resources

The tables following the organizational chart illustrate the financial resources for the past five years and the current budget. For FY2018 the total revenues were $1.062 million with expenditures totaling $972,110 including capital items.


JEFFERSON COUNTY FIRE DISTRICT #1
Board of Directors
Civil Service Commission
Budget Committee
Fire Chief
Fire Marshal
Administrative Assistant II
(0.575 FTE)
Administrative Assistant
(0.575 FTE)
Assistant Chief
Deputy Chief
(Volunteer)
Battalion Chief
Captain
Training
Lieutenant
Firefighters
Captain
Support Services
Lieutenant
Firefighters
Captain
Lieutenant
Firefighters
Captain
Lieutenant
Firefighters
Captain
Lieuternant
Firefighters
Captain
Recruitment/Retention
Lieutenant
Firefighters

The table below provides a summary of the fund balance including operating revenues and expenditures.

JCFD #1 Fire District Fund Balance Summary							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Beginning Net Working Capital	$552,850	$580,274	$1,026,565	$666,174	$1,101,544	$985,860	$1,094,516
Current Revenues	$846,450	$906,508	$940,589	$1,193,022	$1,057,565	$1,140,663	$1,520,000
Fund Transfers IN	$0	$66,109	$18,287	$148,796			
Loan Proceeds	$0	$29,564		$200,000			
Sale of Fixed Assets	$1,485	$356,445	$9,189	$810	$15,438	$5,000	$1,500
Operating Expenditures	$789,741	$800,145	$818,807	$904,496	$973,390	$966,885	$1,093,400
Capital and Debt Service	$30,770	$112,190	$409,649	$202,762	$215,297	$70,122	$427,000
Fund Transfers OUT	$0	$0	$100,000	$0	$0	$0	$0
Ending Net Working Capital	$580,274	$1,026,565	$666,174	$1,101,544	$985,860	$1,094,516	$1,095,616
Changes to Net Working Capital	**$27,424**	**$446,291**	**($360,391)**	**$435,370**	**($115,684)**	**$108,656**	**$1,100**

JCFD #1 Fire District Revenue							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Operating Revenues							
Previously Levied Taxes	$27,632	$39,520	$32,403	$28,980	$24,726	$24,661	$35,000
Interest	$3,964	$3,846	$988	$90	$1,786	$13,949	$6,000
Out of District Alarms	$11,723	$817	$2,064	$3,679	$0	$1,720	$3,500
Miscellaneous and Street Signs	$7,357	$25,376	$19,671	$46,012	$25,751	$26,658	$10,000
Contractual Services	$120,921	$115,405	$123,343	$144,207	$136,665	$145,900	$120,000
Donations/Local Grants	$5,241	$0	$42,283	$152,893	$100	$5,832	$500
Rents	$0	$0	$0	$3,600	$5,300	$770	$0
Grants	$0	$39,910	$0	$44,425	$59,219	$83,878	$472,000
Circle Track	$0	$0	$0	$1,080	$0	$1,090	$3,000
Taxes Collected in Year Levied	$669,612	$681,634	$719,837	$768,056	$804,018	$836,205	$870,000
	$846,450	**$906,508**	**$940,589**	**$1,193,022**	**$1,057,565**	**$1,140,663**	**$1,520,000**

JCFD #1 Fire District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Personnel Services							
Salaries	$236,283	$248,297	$257,357	$318,582	$317,002	$268,325	$284,000
Call Pay	$11,801	$12,000	$21,540	$21,076	$22,458	$32,057	$35,000
Compensated Absences/Overtime	$6,512	$158	($4,525)	$10,888	($4,679)	$13,215	$35,000
Overtime	$12,783	$13,357	$5,190	$0	$0	$0	$0
Workers Comp	$11,393	$10,661	$6,244	$6,202	$15,944	$9,600	$20,000
Health Insurance	$54,702	$62,255	$73,692	$54,989	$78,009	$65,562	$85,000
Retirement	$38,038	$44,936	$41,224	$43,935	$58,022	$62,679	$73,000
Payroll Taxes	$30,907	$29,967	$32,190	$34,421	$35,836	$39,132	$55,000
Student Scholarships	$53,303	$43,330	$56,229	$26,641	$25,270	$0	$0
Support Services FF	$54,098	$54,102	$58,635	$24,345	$45,012	$46,440	$49,000
Grant Funded Position	$0	$0	$0	$25,106	$50,727	$52,791	$54,000
	$509,820	**$519,063**	**$547,776**	**$566,185**	**$643,601**	**$589,801**	**$690,000**
Materials & Services							
Legal Services	$2,874	$4,553	$5,212	$4,138	$967	$1,820	$10,000
Audit	$10,500	$9,350	$10,078	$11,250	$10,850	$10,450	$12,000
Bookkeeping and Professional Fees	$0	$0	$0	$0	$5,825	$11,765	
Volunteer Incentives	$19,701	$29,710	$32,037	$44,299	$31,417	$44,891	$46,000
Operating Supplies	$27,025	$8,865	$11,565	$13,888	$14,261	$11,880	$16,000
Uniforms	$5,168	$4,618	$2,372	$8,613	$3,492	$6,102	$8,000
Dues	$3,194	$3,229	$4,065	$3,573	$5,528	$3,132	$3,000
Gas and Oil	$19,970	$22,690	$17,565	$11,157	$10,997	$16,146	$22,000
Building Maintenance	$13,963	$14,853	$20,770	$13,122	$20,828	$25,137	$20,000
Fire Equipment Maintenance	$16,440	$7,164	$6,003	$8,188	$1,370	$4,776	$8,000
Respiratory Equipment Maintenance	$0	$3,422	$4,866	$1,931	$734	$1,906	$4,000
Extrication Equipment Maintenance	$0	$2,000	$1,475	$1,653	$1,600	$2,069	$2,000
Equipment Purchases	$0	$0	$11,744	$49,483	$37,121	$52,108	$25,000
Apparatus Maintenance	$281	$32,862	$8,670	$22,872	$32,095	$11,368	$30,000
Shop Supplies	$1,266	$2,638	$2,760	$2,252	$4,446	$301	$2,500
Office Equipment Repair	$1,319	$1,439	$2,161	$460	$0	$0	$2,000
Equipment Rental	$1,987	$2,214	$2,372	$2,483	$2,380	$2,214	$2,400

JCFD #1 Fire District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Utilities	$28,415	$27,558	$25,460	$27,543	$26,948	$28,891	$29,000
Utilities - Culver	$13,654	$13,249	$10,014	$9,659	$13,597	$13,091	$15,000
Culver Station Lease	$14,218	$14,765	$14,765	$14,765	$14,665	$17,238	$18,000
Liability Insurance	$19,279	$20,851	$21,255	$21,222	$21,171	$23,558	$25,000
Office Supplies	$5,597	$1,848	$1,857	$2,942	$4,405	$1,972	$2,000
Elections	$809	$0	$2,169	$0	$1,069	$0	$1,000
Dispatching	$27,965	$18,912	$27,106	$34,000	$36,679	$37,963	$41,000
Training	$9,854	$7,943	$7,055	$9,717	$18,251	$12,009	$12,000
Fire Prevention	$1,505	$1,045	$2,724	$4,493	$1,568	$376	$3,000
Public Education	$0	$0	$0	$0	$611	$0	$0
Recruitment Expense	$0	$811	$1,414	$1,746	$699	$5,162	$1,500
Medical Supplies	$2,207	$1,573	$2,606	$2,220	$2,229	$3,022	$3,000
Student Scholarships	$0	$0	$0	$0	$0	$27,737	$32,000
Addressing Signs	$212	$455	$0	$0	$990	$0	$0
SAFER Grant Supplies	$0	$0	$0	$0	$2,846	$0	$0
Contract Services	$32,518	$22,465	$10,891	$4,700	$0	$0	$8,000
NFPA Medical/Physicals/Recruit/Retent.	$0	$0	$0	$5,942	$150	$0	$0
	$279,921	**$281,082**	**$271,031**	**$338,311**	**$329,789**	**$377,084**	**$403,400**
Total Operating Expenditures	$789,741	$800,145	$818,807	$904,496	$973,390	$966,885	$1,093,400
Capital Outlay							
Capital Equipment	$29,497	$108,460	$382,022	$199,262	$189,700	$44,836	$399,000
Debt Services	$1,273	$3,730	$27,627	$3,500	$25,597	$25,286	$28,000
	$30,770	**$112,190**	**$409,649**	**$202,762**	**$215,297**	**$70,122**	**$427,000**
Total Expenditures	**$820,511**	**$912,335**	**$1,228,456**	**$1,107,258**	**$1,188,687**	**$1,037,007**	**$1,520,400**

(3) Operations

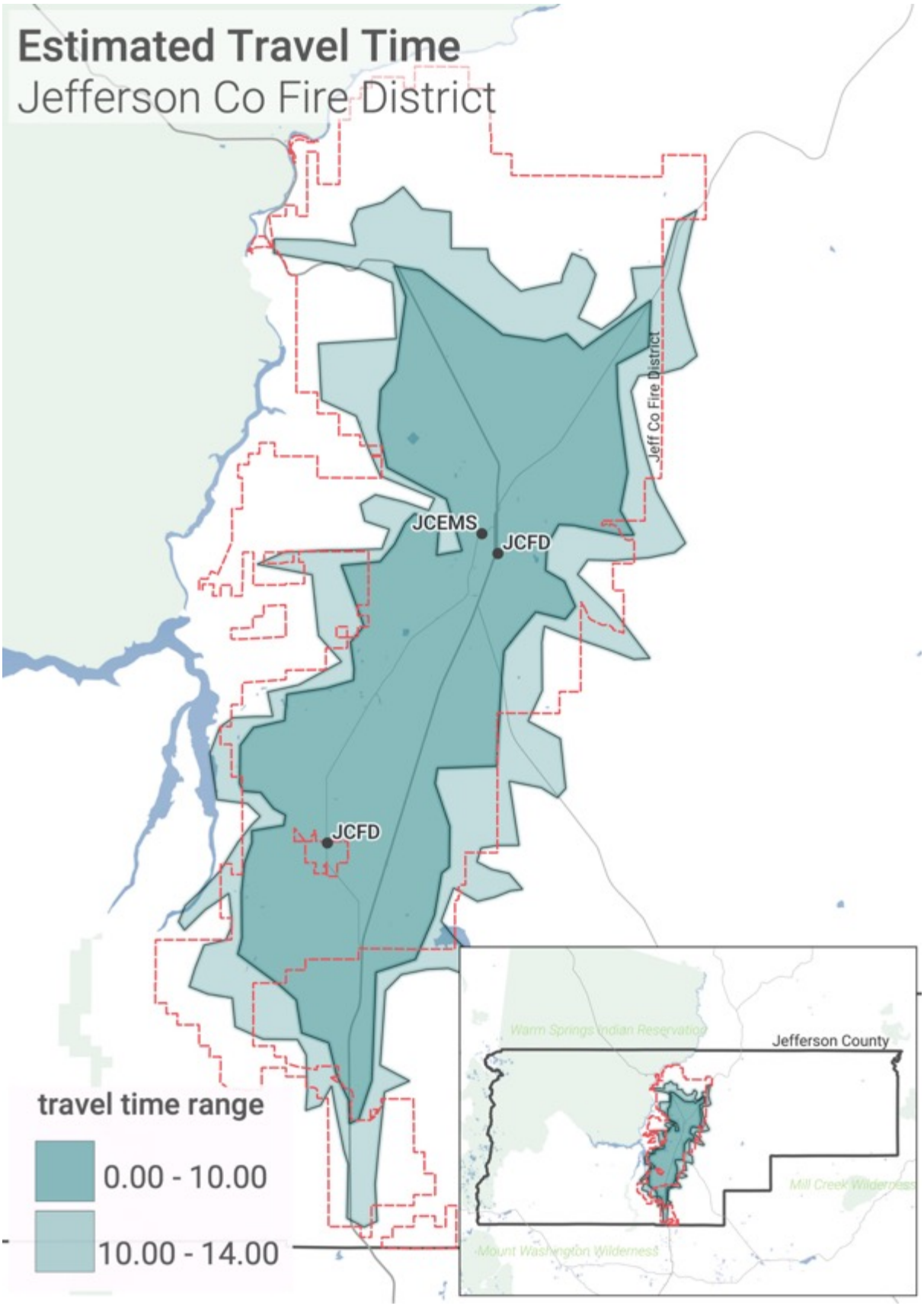
The Fire District operates with all career personnel working Monday – Friday from 8:00 am – 5:00 pm and volunteer personnel responding 24 hours per day. While career personnel are working, apparatus is available for immediate response. After hours all calls are handled by volunteer personnel and career personnel that respond after hours. In addition, there is a designated career staff member that serves as the duty officer and responds to emergency calls requiring an officer. The tables below illustrate the physical resources available to the Fire District. The staffing shown below is the minimum staffing necessary for the apparatus to respond to a call for service as established by the Fire District.

Madras Station **Facility Location:** 765 SE Fifth Street					
Description of Use	Serves as Headquarters and includes Administration, Fire Prevention, Training, with primary coverage of the City of Madras and surrounding area.				
Apparatus Space	Six drive-through bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	1721	2000	E-One	Type I Engine	3
	1722	1995	Pierce/Freightliner	Type I Engine	3
	1730	2008	Freightliner	Water Tender	1
	1740	2006	Ford F-550	Quick Attack	2
	1742	2009	Ford F-550	Quick Attack	2
	1744	1998	Stewart/Stevens	Type 4 Engine	2
	1750	1985	Pierce Arrow	Tele-Squirt	3
	1760	2000	E-One	Light Rescue	3
	1790	1991	Ford F-250	Utility	1
	1792	2014	Ford F-350	Utility	1
	1793	1994	Ford Van	Utility	1
	1795	2014	Ford F-150	Command	1
	1796	1998	Ford Expedition	Utility	1
	Crash 15	1986	Oshkosh	ARFF	2

Culver Station Facility Location: 200 First Avenue					
Description of Use	Serves as the second station for the Fire District with primary coverage of the City of Culver and surrounding area. Station is a part of the Culver City Building.				
Apparatus Space	Five drive-through bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	1724	2000	E-One	Type 1 Engine	3
	1731	2006	Freightliner	Water Tender	1
	1741	2003	Ford F-350	Quick Attack	2
	1745	1971	6x6 Military Surplus	Type 6 Engine	2
	1746	1993	AMG 6x6	Type 6 Engine	2

With the District utilizing volunteer personnel as part of the staffing model, the table above illustrates the minimum number of personnel the apparatus should respond with to calls for service in order to provide services to the public. Nationally the performance standards require at least four personnel on the scene to perform interior structural firefighting operations. The performance standards do not necessarily stipulate how they arrive such as using two apparatus to attain the four personnel on the scene.

The following map illustrates the locations of the two stations operated by JCFD and the station operated by the EMS District. It also illustrates projected 10 minute and 14-minute travel time expectations.


Estimated Travel Time
Jefferson Co Fire District
Jeff Co Fire District
JCEMS
JCFD
JCFD
travel time range
0.00 - 10.00
10.00 - 14.00
Jefferson County
Warm Springs Indian Reservation
Mount Washington Wilderness

(4) Workload

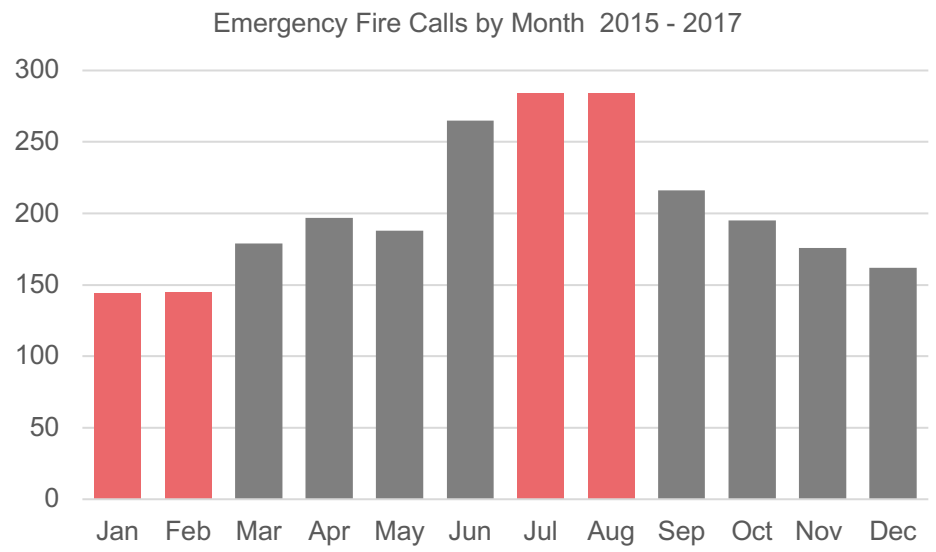
This section illustrates the emergency call for service workload of JCFD. The information is compiled from the CAD data received from the regional dispatch center.

JCFD Calls for Service					
	2015	2016	2017	Total	Pct.
Auto Accidents	130	137	174	441	18.1%
Burn Complaint	107	74	95	276	11.3%
Emergency Medical Calls	213	156	159	528	21.7%
Hazardous Conditions	11	14	13	38	1.6%
Fires	207	172	192	571	23.5%
Fire Alarm	85	101	67	253	10.4%
Rescue Calls	2	2	3	7	0.3%
Service Calls	50	45	73	168	6.9%
Other	31	77	44	152	6.2%
Total	**836**	**778**	**820**	**2,434**	**100%**

As shown above, fire calls account for most of calls for service at 23.5% of the call volume while medical calls account for approximately 22% of the call volume and auto accidents 18%. JCFD has several mutual aid agreements with surrounding Districts and Departments including Warm Springs, Redmond, and Crooked River Ranch. However, the CAD data was not detailed enough to identify calls that were providing mutual aid vs. those calls where mutual aid was received, as the data only contained the station response and not individual units that responded. Additionally, the CAD system assigns two different call numbers to the same incident for each station whether the call is for fire, EMS or both. For example, two different call numbers are assigned to the fire stations responding to the same call. This does not allow for an evaluation of the number of units responding to an incident from fire, EMS or both. Mutual Aid calls from the JCFD annual reports are illustrated in the table below.

JCFD Mutual Aid Responses			
	2015	2016	2017
Mutual Aid Provided	21	12	15
Mutual Aid Received	12	10	8

There are several recreational areas in the County that can increase the number of people in the area and therefore the potential for increases to fire and emergency medical call volume during high tourism periods. The table below illustrates the emergency calls by the month of the year.



The months of July and August are the busiest with January and February being the slowest. There is a significant drop in call volume between August and September.

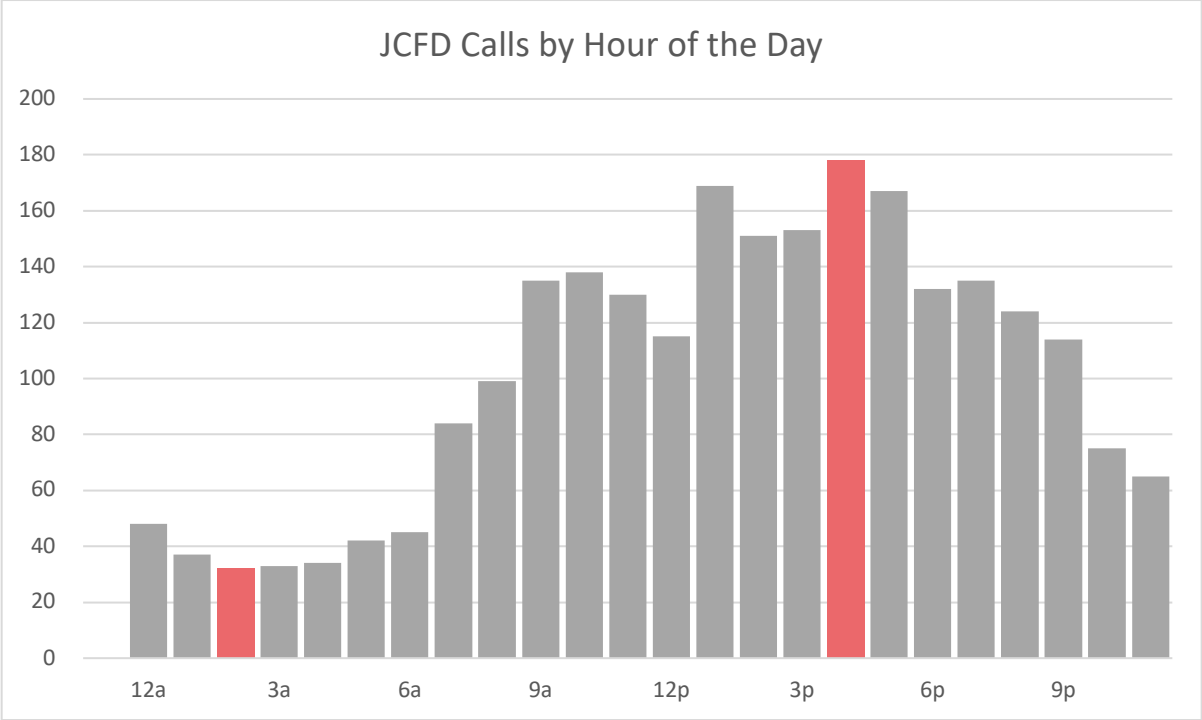
The following table displays the total number of emergency calls for service handled by the Fire District by each hour and day of the week from 2015 - 2017.

JCFD Calls for Service by Hour and Weekday

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	Bus. Hours
12 am	10	7	3	10	6	5	7	48	
1 am	6	4	3	7	3	6	8	37	
2 am	6	5	3	5	4	3	6	32	
3 am	8	3	3	6	4	5	4	33	
4 am	6	5	9	3	6	1	4	34	
5 am	6	8	6	3	10	4	5	42	
6 am	4	6	11	5	7	7	5	45	
7 am	5	19	12	17	11	11	9	84	
8 am	13	11	12	18	17	13	15	99	**71**
9 am	13	18	24	19	16	24	21	135	**101**
10 am	15	30	23	14	17	22	17	138	**106**
11 am	15	19	21	16	17	21	21	130	**94**
12 pm	16	16	17	21	16	17	12	115	**87**
1 pm	27	21	27	26	24	25	19	169	**123**
2 pm	16	26	23	19	20	27	20	151	**115**
3 pm	17	22	21	30	16	29	18	153	**118**
4 pm	33	16	24	19	23	36	27	178	**118**
5 pm	18	24	23	17	24	29	32	167	**117**
6 pm	11	20	15	21	20	21	24	132	
7 pm	24	22	22	21	21	12	13	135	
8 pm	20	15	16	17	13	28	15	124	
9 pm	13	17	17	25	14	11	17	114	
10 pm	14	9	7	12	11	14	8	75	
11 pm	9	6	10	4	8	13	15	65	
Total	325	349	352	355	328	384	342	2,435	1,050

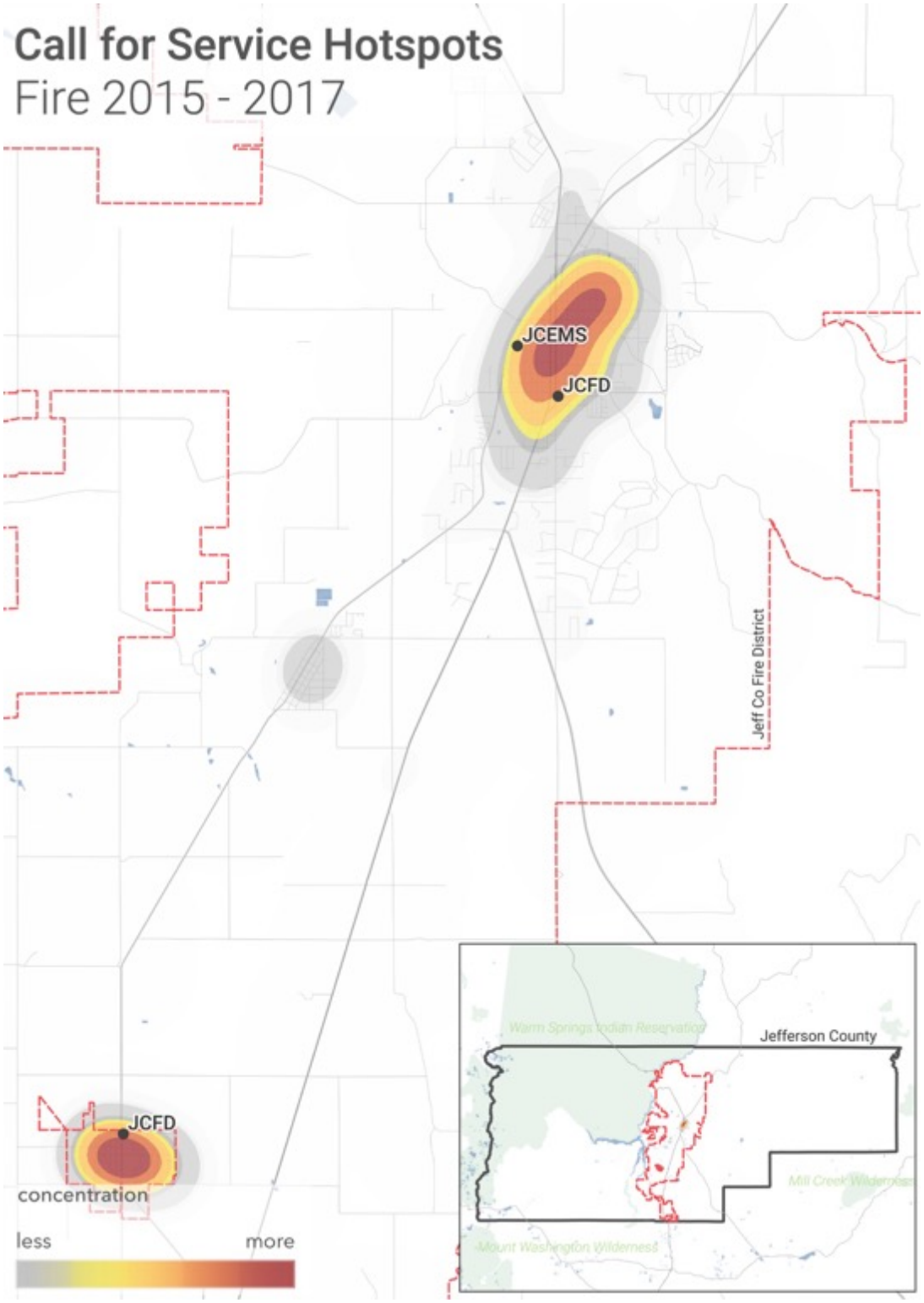
The calls for service varied by time of day and day of the week. The call volume is heaviest during the middle part of the day into the evening hours with the 4 pm hour being the busiest. Friday is the busiest day of the week and Sunday the slowest day of the week in terms of call demand. The outlined area highlights the calls for service during the week and during normal business hours and illustrates the calls are heaviest at the 1 pm hour.

The following chart further illustrates the calls for service by hour of the day for 2015 - 2017.



As illustrated above, calls begin to increase at the 7 am hour peaking at the 4:00 pm hour. The calls begin to decline at the 8 pm hour with 2 am, 3 am, and 4 am hours being the slowest hours of the day.

The map below illustrates the calls using GIS technology to outline where many of the calls are occurring in the Fire District. As expected, the population centers in the District account for the largest concentration of calls.



3. Jefferson County Emergency Medical Services District

The Jefferson County EMS District (JCEMS) is organized as a Special Healthcare District, which operates under Oregon Revised Statute Chapter 440. The District is governed by a five (5) member Board. The Board is responsible for budget development and making policy decisions for the District. The Board meets monthly.

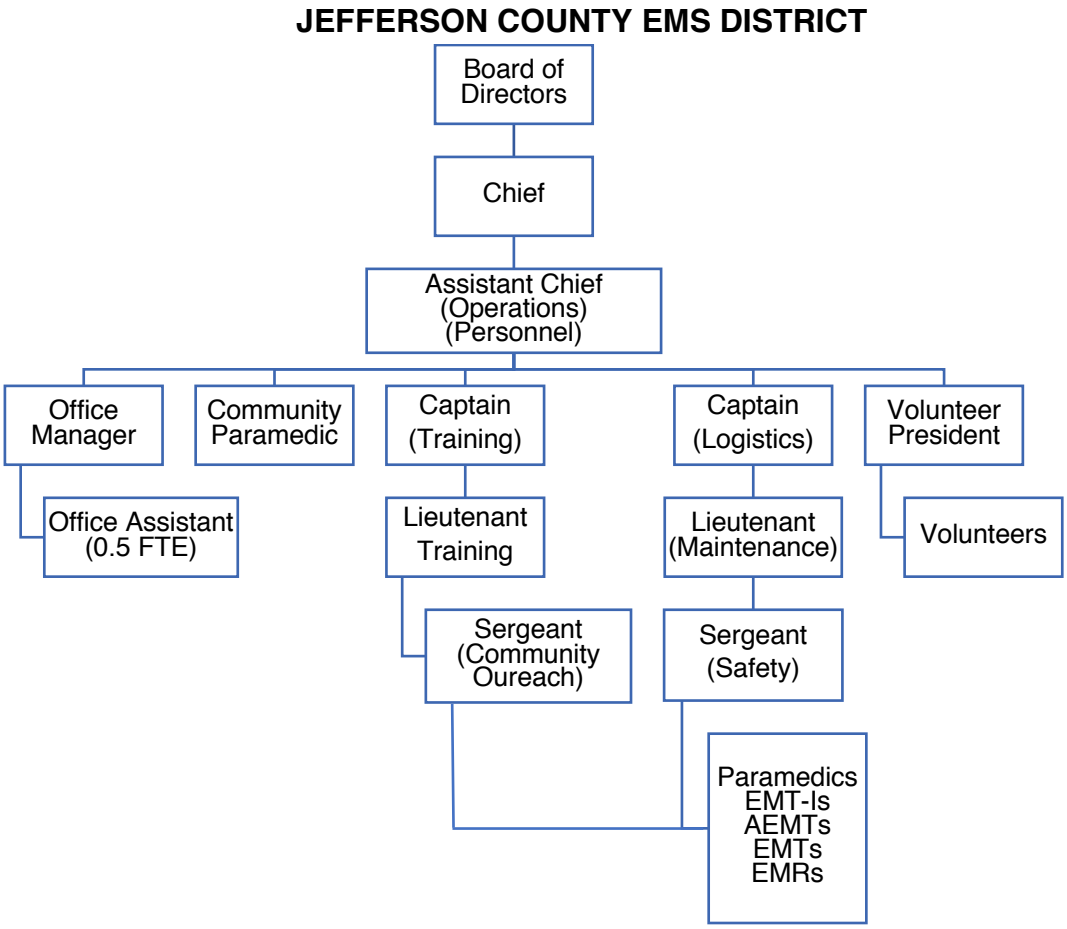
The District currently employs thirteen and one half (13.5) full time equivalents that operate from the single station located in Madras. These personnel include the Chief, Office Manager, Office Assistant/EMT (part-time), two (2) Captains, two (2) Lieutenants, two (2) Sergeants, one (1) Community Paramedic (grant funded), and two (2) EMT's. Staffing also includes 10 part-time EMT's and Paramedics to fill two (2) full-time equivalents (FTE). The District covers about 1,200 square miles that includes approximately 16,000 residents. Also included is an area of Wasco County in the southeastern part of that county. Antelope and the Washington Family Ranch is in this response area.

The EMS Chief is responsible for the overall command and control of the District. The Chief is accountable for all facets of the agency, its operations and the overall management. This is provided through the assigned administrative staff within the District. The Chief is supported by the Office Manager, Captains, Lieutenants and Sergeant. The District contracts with a physician to provide Medical Direction as regulated by Oregon State EMS.

The mission of JCEMS is to "respond, treat and transport all equally with compassion and respect during their medical emergencies; and to promote safety and encourage good health."

(1) Organizational Structure

The organizational chart for the JCEMS is shown on the next page. The District provides emergency medical treatment and transport and interfacility transfers to the communities within their service area.



(2) Financial Resources

The following tables illustrate the financial resources for the past five years and the budgets for the past two years as the actual financial data for FY 2018 was not available. The total budget for the JCEMS is approximately $1.23 million.

The table below provides a summary of the fund balance including operating revenues and expenditures.

JCEMS District Fund Balance Summary							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Beginning Net Working Capital	$576,626	$657,161	$575,954	$629,226	$976,553	$456,275	$396,635
Current Revenues	$846,368	$841,676	$992,018	$1,166,244	$1,154,143	$1,333,485	$1,230,604
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$370,000	$0	$0	$0
Sale of Fixed Assets	$0	$438	$1,458	$546	$4,500	$848	$840
Operating Expenditures	$723,077	$806,331	$895,910	$1,117,277	$1,221,451	$1,266,639	$1,141,958
Capital and Debt Service	$42,756	$116,990	$44,294	$72,186	$457,470	$127,334	$145,122
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$657,161	$575,954	$629,226	$976,553	$456,275	$396,635	$341,000
Changes to Net Working Capital	**$80,535**	**($81,207)**	**$53,272**	**$347,327**	**($520,278)**	**($59,640)**	**($55,636)**

JCEMS District Revenue							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Operating Revenues							
Interest Earned	$6,104	$8,012	$3,609	$3,704	$2,281	$951	$790
User Fees (Net)	$783,275	$795,162	$951,988	$1,118,080	$1,107,085	$1,124,764	$1,096,851
Pro Med Sales	$31,395	$30,665	$29,550	$27,440	$24,606	$18,330	$20,000
Refunds Received	$1,700	$6,992	$4,762	$4,779	$4,093	$7,923	$7,923
Grants Received	$20,069	$0	$600	$0	$11,500	$5,267	$0
Community Paramedic	$0	$0	$0	$0	$0	$139,860	$100,000
Eclipse Income	$0	$0	$0	$0	$0	$30,000	$0
CPR/ACLS Training	$0	$0	$0	$4,108	$558	$1,036	$0
Uncategorized Income	$3,825	$845	$1,509	$8,133	$4,020	$5,354	$5,040
	$846,368	**$841,676**	**$992,018**	**$1,166,244**	**$1,154,143**	**$1,333,485**	**$1,230,604**

JCEMS District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Personnel Services							
Salaries and Wages	$410,214	$438,296	$460,848	$604,139	$665,250	$555,132	$541,620
Community Paramedic	$0	$0	$0	$0	$0	$0	$64,500
Payroll Taxes	$14,039	$14,237	$22,181	$19,009	$16,089	$14,411	$40,000
Payroll Taxes - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$2,200
Worker's Comp. (SAIF)	$22,822	$9,403	$17,217	$28,445	$19,747	$27,231	$23,000
State Unemployment (SUIOR)	$6,026	$5,888	$7,030	$11,956	$14,846	$12,738	$0
Retirement	$30,808	$47,470	$49,154	$58,552	$101,975	$88,993	$79,371
Retirement - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$7,404
Health Insurance	$104,032	$123,820	$132,944	$157,017	$163,178	$169,865	$125,522
Health Insurance - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$13,748
Dental	$0	$0	$0	$0	$0	$0	$4,000
Dental - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$2,000
Disability - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$340
Life. S/T Disability	$0	$0	$0	$0	$0	$0	$2,960
	$587,941	**$639,114**	**$689,374**	**$879,118**	**$981,085**	**$868,370**	**$906,665**
Materials and Services							
Grant Expenses	$0	$0	$0	$1,639	$11,639	$93,262	$0
Bank Fees	$0	$0	$0	$0	$2,216	$1,150	$0
Bond Fees	$0	$0	$0	$18,166	$0	$0	$0
First Aid/CPR/ACLS/Stop the Bleed	$0	$0	$0	$0	$0	$0	$5,100
Credit Card Fees	$0	$0	$0	$0	$0	$0	$1,500
Patient Care Supplies	$13,065	$25,423	$31,332	$37,591	$50,208	$45,723	$35,000
Office Supplies	$5,364	$9,428	$10,368	$10,340	$9,230	$18,797	$12,000
Uniform and Laundry	$1,035	$870	$4,622	$2,196	$4,776	$6,424	$3,500
Legal Expenses	$2,705	$5,641	$3,419	$4,031	$3,070	$8,590	$4,500
Vehicle Maintenance	$0	$15,546	$17,043	$12,382	$10,375	$9,969	$11,000
Audit Expenses	$9,550	$9,800	$10,100	$10,400	$10,750	$15,250	$17,000
Accounting	$0	$1,460	$14,128	$11,543	$11,149	$0	$0
Contract Services	$0	$0	$0	$0	$0	$21,088	$14,000
Solar Eclipse	$0	$0	$0	$0	$0	$29,793	$0
Building Maintenance	$3,080	$2,948	$2,916	$7,211	$3,115	$6,297	$7,000

JCEMS District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Utilities	$8,661	$11,402	$10,673	$9,791	$9,812	$12,522	$12,000
Phone Service	$1,741	$1,839	$1,977	$1,847	$1,886	$2,194	$0
Insurance	$11,055	$11,783	$13,406	$12,694	$17,814	$32,231	$17,382
Radio Maintenance	$2,396	$2,480	$1,958	$2,620	$2,236	$2,738	$2,500
Rents	$0	$0	$0	$0	$0	$0	$200
Computer Maintenance	$0	$3,647	$957	$2,433	$0	$2,371	$1,000
Training and Education	$1,877	$3,075	$3,981	$4,007	$5,561	$4,231	$5,000
Dispatch Services	$41,947	$28,367	$47,752	$54,886	$55,018	$56,943	$59,001
Pro Med Expenses	$955	$573	$1,454	$1,898	$0	$0	$500
Dues and Subscriptions	$1,823	$4,373	$6,463	$6,942	$6,845	$3,859	$4,000
Vehicle Fuel	$19,875	$12,316	$11,565	$8,886	$10,308	$13,670	$17,000
Medical Equip. Maintenance	$7	$4,371	$274	$1,060	$0	$0	$5,000
Elections	$2,758	$0	$1,309	$0	$3,036	$0	$3,000
Community Outreach/Morale	$0	$0	$0	$0	$0	$0	$2,000
Volunteer Awards	$1,253	$2,630	$3,489	$2,070	$651	$1,774	$2,000
Volunteer Contract	$1,672	$2,237	$1,270	$711	$585	$2,813	$500
Miscellaneous Expenses	$2,988	$5,004	$4,449	$10,799	$9,758	$5,742	$4,000
Travel Expenses	$0	$0	$0	$0	$0	$0	$4,300
Vaccinations	$1,271	$0	$539	$1,332	$328	$748	$1,000
Community Paramedic Expenses	$0	$515	$0	$0	$0	$0	$6,810
Advertising	$58	$1,489	$1,092	$684	$0	$90	$500
	$135,136	**$167,217**	**$206,536**	**$238,159**	**$240,366**	**$398,269**	**$258,293**
Total Operating Expenditures	$723,077	$806,331	$895,910	$1,117,277	$1,221,451	$1,266,639	$1,164,958
Capital and Debt Service							
Fund Transfers/Contingency		$0	$0	$0	$0	$0	$84,799
Capital Investments	$25,443	$95,045	$22,829	$30,346	$436,875	$64,553	$0
Debt Service	$17,313	$21,945	$21,465	$41,840	$20,595	$62,781	$60,323
	$42,756	**$116,990**	**$44,294**	**$72,186**	**$457,470**	**$127,334**	**$145,122**
Total Expenditures	**$765,833**	**$923,321**	**$940,204**	**$1,189,463**	**$1,678,921**	**$1,393,973**	**$1,310,080**

(3) Operations

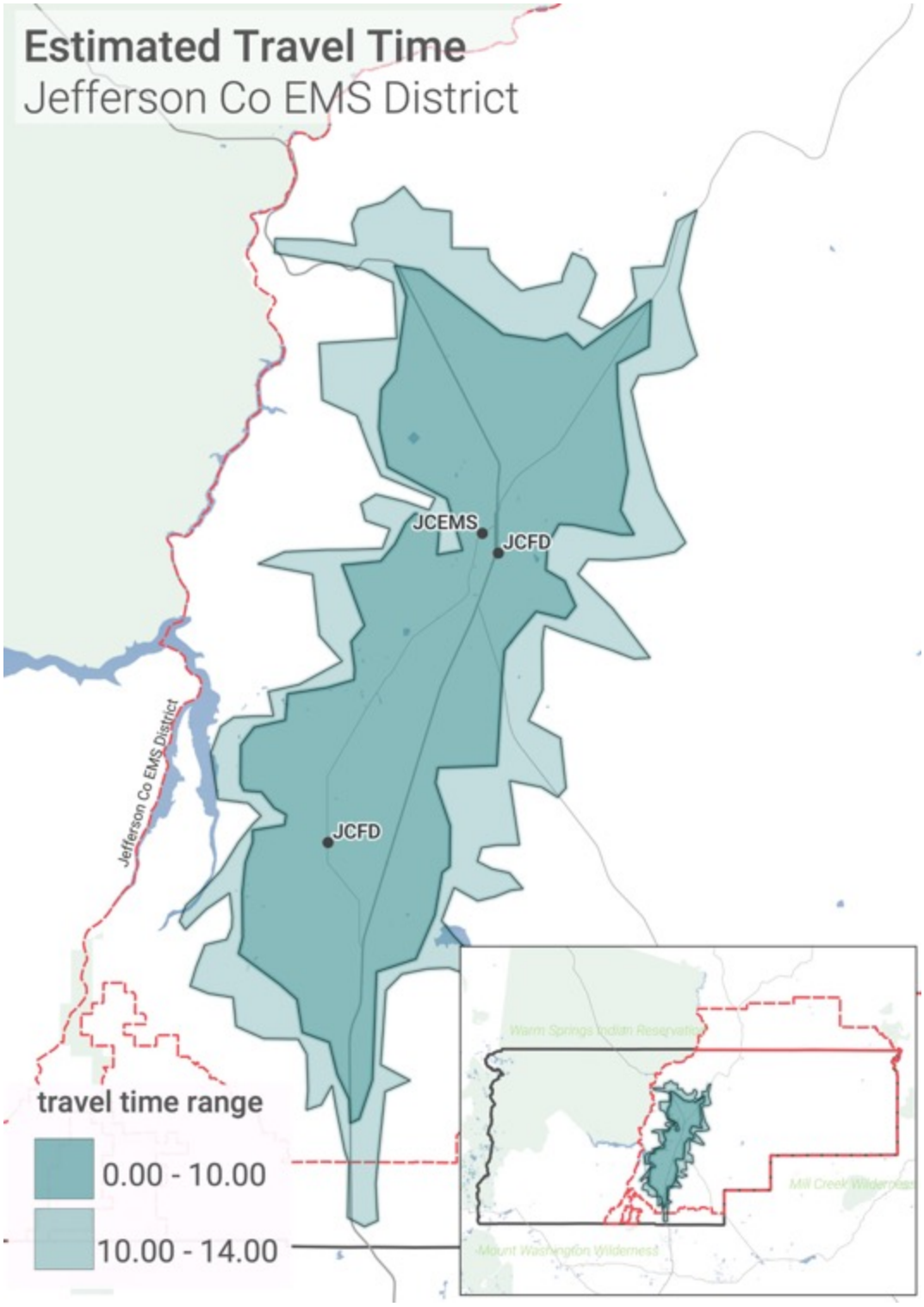
The EMS District operates 24 hours per day and staffs two (2) ambulances at all times. Personnel work two days on followed by three days off. The schedule is 12 hours on duty, followed by 12 hours on standby. With the two staffed ambulances, the third ambulance is staffed with back-up personnel as needed and is available about 75% of the time. As noted below, the ambulances require two personnel to be functional. Volunteer personnel staff an ambulance for EMS standby events. The apparatus type indicates ALS (advanced life support) and BLS (basic life support) equipped vehicles. The tables below illustrate the stations, apparatus and staffing.

Madras Station **Facility Location:** 360 SW Culver Highway					
Description of Use	The single station of the EMS District serves as its main offices, apparatus bays and living quarters				
Apparatus Space	Three bays capable of holding four ambulances				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	2173	2016	Dodge D3500 / Braun	ALS Ambulance	2
	2174	2016	Dodge D3500 / Braun	ALS Ambulance	2
	2172	2010	GMC G3500 / Braun	ALS Ambulance	2
	2170	2002	Ford E350 / Horton	BLS Ambulance	2
	2191	2017	Ford Escape	Community Paramedic	1

Culver Station **Facility Location:** 200 First Avenue					
Description of Use	A single leased bay at this facility for the storage of one reserve ambulance				
Apparatus Space	Single leased bay.				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	2171	2010	GMC G3500 / Braun	BLS Ambulance	

Operationally JCEMS requests stand-by assistance from Warm Springs once the second ambulance is dispatched and there is no third ambulance or crew available to respond. The units from Warm Springs will either respond to the Madras Station or will stage in an area about six miles north of Madras depending on the situation and needs at the time. JCEMS has several mutual aid agreements with surrounding Districts and Departments including Warm Springs, Crooked River Ranch, and Southern Wasco County Ambulance. Unfortunately, the CAD data did not contain enough detail to determine the number of times mutual aid was requested, provided, or received.

The following map illustrates the locations of the station operated by JCEMS and the stations operated by the Fire District. It also illustrates projected 10 minute and 14-minute travel time expectations.



(4) Workload

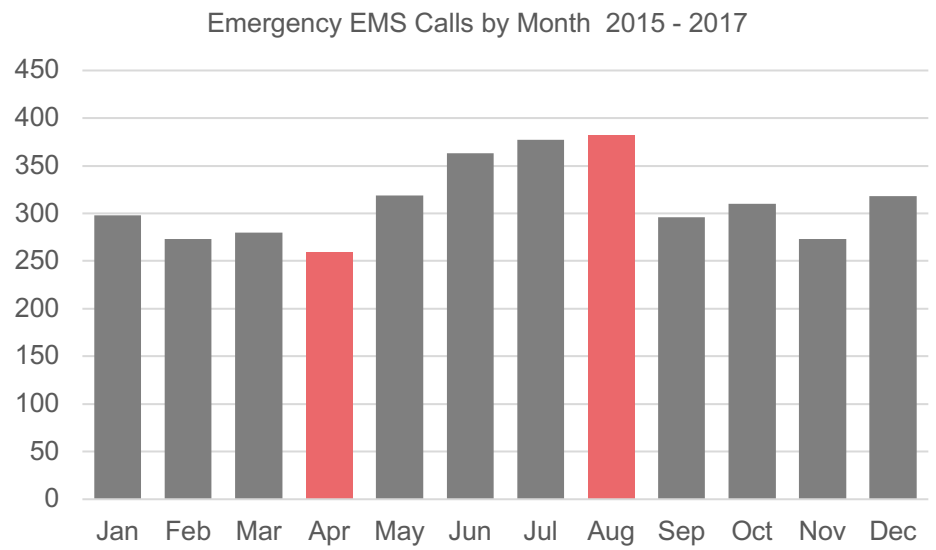
This section illustrates the emergency call for service workload of JCEMS. The information is compiled from the CAD data received from the regional dispatch center.

JCEMS Calls for Service					
	2015	**2016**	**2017**	**Total**	**Pct.**
Auto Accidents	129	145	183	457	8.8%
Agency Assist	60	70	77	207	4.0%
Alarm	32	41	9	82	1.6%
Assault/Fight	27	22	17	66	1.3%
Fires	44	23	25	92	1.8%
Medical	1,264	1,186	1,248	3,698	71.0%
Suicide Attempt	25	16	15	56	1.1%
Suspicious Circumstance	39	24	15	78	1.5%
Welfare Check	22	39	25	86	1.7%
911	32	48	25	105	2.0%
Other	97	95	92	284	5.5%
Total	**1,771**	**1,709**	**1,731**	**5,211**	**100%**

JCEMS Transfers					
	2015	**2016**	**2017**	**Total**	**Average**
Interfacility Transfer	537	578	570	1,685	561.7
Total	**537**	**578**	**570**	**1,685**	**561.7**

As shown above, medical calls account for the majority of calls for service at 71%% of the call volume while auto accidents account for approximately 9%. Interfacility transfers have increased 6% over the three-year period from 2015 – 2017. The agency assist calls are those calls that are mutual aid given to other agencies. The CAD data was limited in the detail necessary to accurately portray those agencies that received assistance. In addition, there is no data to identify any incoming assistance to the JCEMS from other agencies. Additionally, the CAD system assigns two different call numbers to the same incident for each station whether it was dispatching fire, EMS or both. For example, two different call numbers are assigned to the fire stations responding to the same call. This does not allow for an evaluation of the number of units responding to an incident from fire, EMS or both.

There are several recreational areas in the County that can increase the number of people in the area and therefore there is the potential to add to the emergency call volume for the emergency medical services. The table below illustrates the emergency calls by the month of the year.



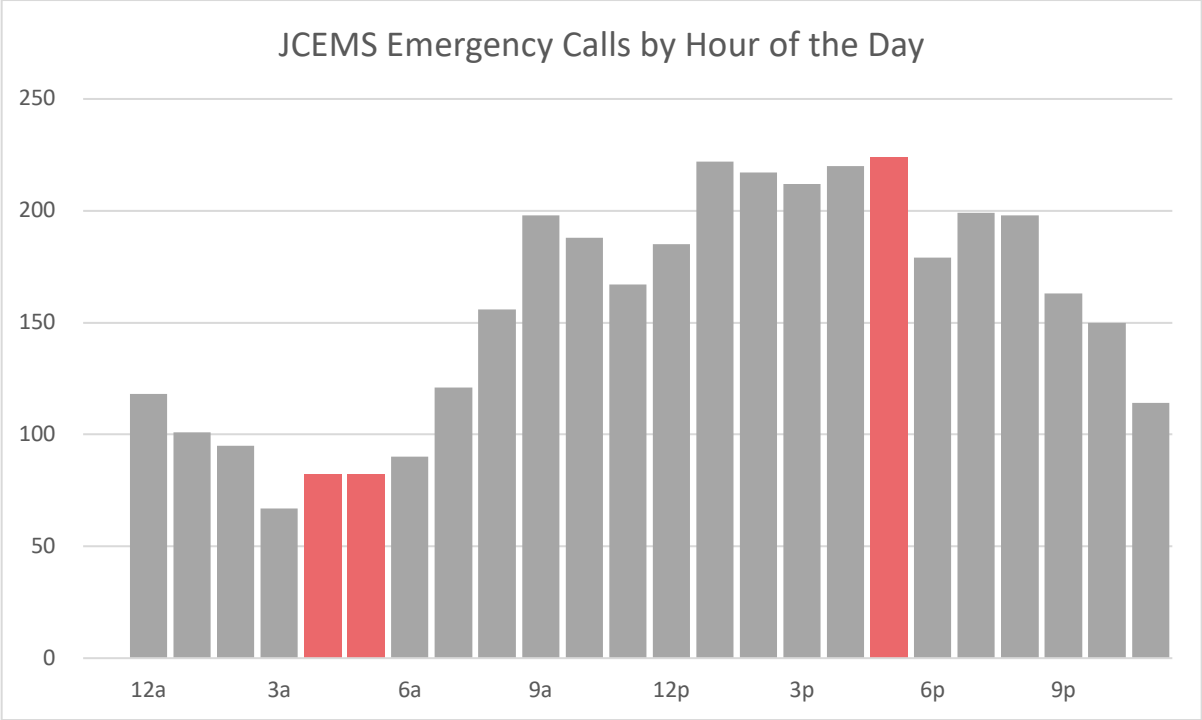
The call volume during the month of August is the highest with April being the lowest. There is a steady increase in the volume of calls beginning in May with a significant drop in calls between August and September.

The following table displays the total number of emergency calls for service handled by the EMS District by each hour and day of the week for 2015 - 2017.

JCEMS Emergency Calls for Service by Hour and Weekday									
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	Bus Hours
12 am	26	17	13	15	15	13	19	118	
1 am	15	14	14	8	22	15	13	101	
2 am	19	11	13	13	18	11	10	95	
3 am	10	12	12	12	8	3	10	67	
4 am	15	11	11	12	15	7	11	82	
5 am	15	8	12	7	14	9	17	82	
6 am	14	20	11	11	14	9	11	90	
7 am	17	23	10	20	17	15	19	121	
8 am	20	28	19	25	28	21	15	156	**121**
9 am	35	25	25	28	24	33	28	198	**135**
10 am	30	27	27	30	30	22	22	188	**136**
11 am	23	27	23	30	18	25	21	167	**123**
12 pm	33	27	19	33	31	23	19	185	**133**
1 pm	27	34	38	24	25	38	36	222	**159**
2 pm	28	29	38	24	41	30	27	217	**162**
3 pm	26	38	21	34	26	34	33	212	**153**
4 pm	34	29	25	34	31	32	35	220	**151**
5 pm	30	33	36	28	32	34	31	224	**163**
6 pm	33	26	24	23	29	23	21	179	
7 pm	27	30	38	28	27	33	16	199	
8 pm	22	30	35	17	27	37	30	198	
9 pm	18	26	28	31	18	15	27	163	
10 pm	25	19	25	18	20	25	18	150	
11 pm	16	22	16	17	8	12	23	114	
Total	558	566	533	522	538	519	512	3,748	1,436

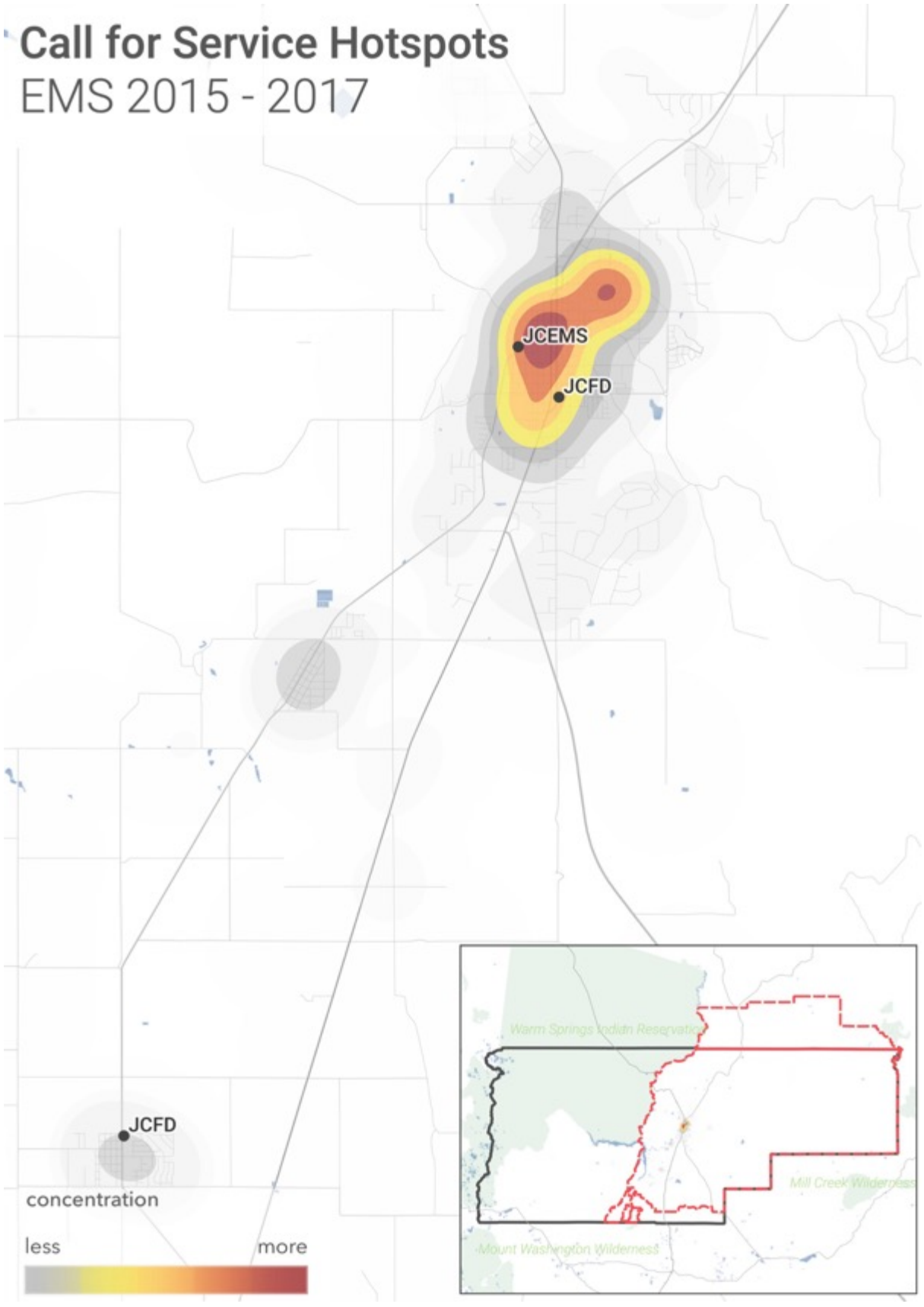
The calls for service varied by time of day and day of the week. The call volume is heaviest during the middle part of the day into the evening hours with 5 pm being the busiest hour. Monday is the busiest day of the week and Saturday the slowest day of the week in terms of call demand. The outlined area highlights the calls for service during the week and during normal business hours and illustrates the calls are heaviest in the afternoon with 2 pm and 5 pm having the highest volume.

The following chart further illustrates the emergency calls for service by hour of the day for 2015 - 2017.



As illustrated above, calls begin to increase at the 8 am hour peaking at the 5 pm hour. The calls begin to decline at the 9 pm hour with the 4 and 5 am hours being the slowest hour of the day.

The map below illustrates the calls using GIS technology to outline where many of the emergency calls are occurring in the EMS District. A large part of the call volume is in Madras with Culver and Metolius accounting for some of the volume.


Call for Service Hotspots
EMS 2015 - 2017
JCEMS
JCFD
JCFD
concentration
less
more
Warm Springs Indian Reservation
Mill Creek Wilderness
Mount Washington Wilderness

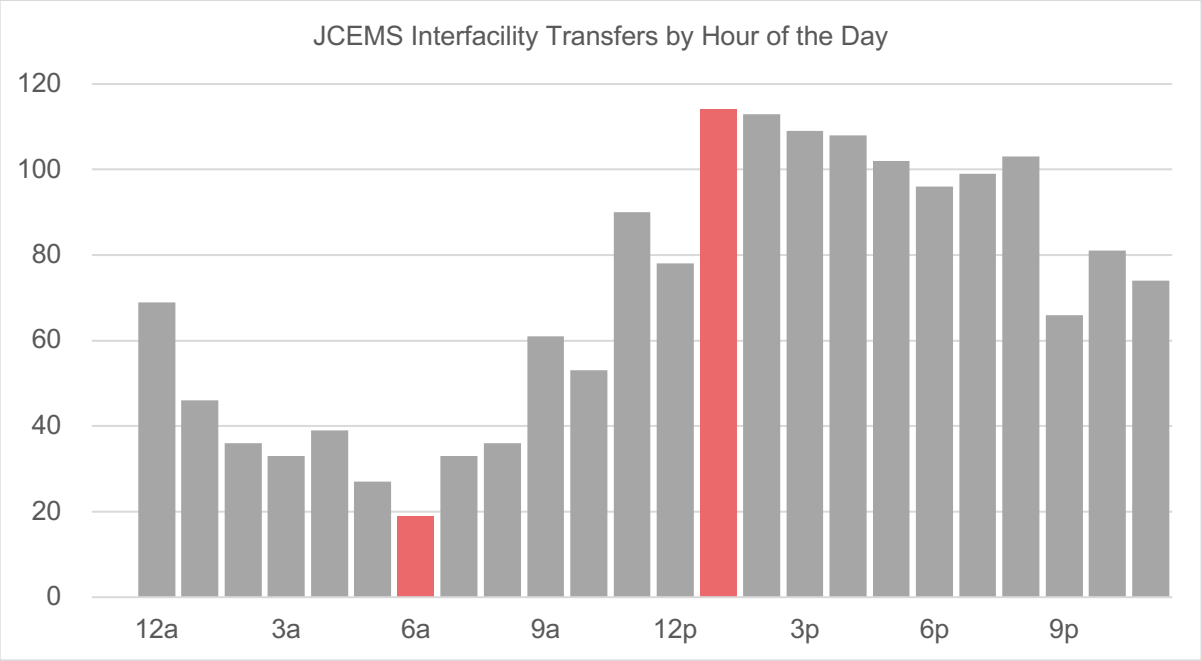
The next table illustrates the demand for interfacility transfers by time of day and day of week for 2015 - 2017:

JCEMS Interfacility Transfers by Hour and Weekday

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	Bus. Hours
12 am	8	11	3	18	6	16	7	69	
1 am	7	6	13	4	4	5	7	46	
2 am	7	11	3	2	4	3	6	36	
3 am	5	5	5	3	3	5	7	33	
4 am	4	10	8	3	7	5	2	39	
5 am	4	5	2	4	2	6	4	27	
6 am	2	4	2	4	1	3	3	19	
7 am	3	6	3	2	6	3	10	33	
8 am	5	7	4	4	7	2	7	36	**24**
9 am	9	11	7	10	7	10	7	61	**45**
10 am	8	9	5	3	10	10	8	53	**37**
11 am	9	12	19	9	11	17	13	90	**68**
12 pm	7	12	6	12	15	15	11	78	**60**
1 pm	15	15	22	19	13	17	13	114	**86**
2 pm	15	12	16	15	18	20	17	113	**81**
3 pm	13	13	21	22	9	16	15	109	**81**
4 pm	10	12	14	16	16	21	19	108	**79**
5 pm	16	13	12	16	14	16	15	102	**71**
6 pm	12	6	13	16	14	19	16	96	
7 pm	20	14	10	14	17	13	11	99	
8 pm	18	9	13	15	10	19	19	103	
9 pm	8	12	4	8	18	6	10	66	
10 pm	8	9	13	13	10	16	12	81	
11 pm	10	16	12	10	10	6	10	74	
Total	223	240	230	242	232	269	249	1,685	632

As illustrated above, interfacility transfers are the heaviest during the afternoon hours with 1 pm being the busiest hour. The volume remains steady through the 5 pm hour. There is a bit of a spike in calls during the 10 pm hour with the 6 am hour being the slowest. Friday is the busiest day for interfacility transfers. The outlined area highlights the calls for service during the week and during normal business hours and illustrates the calls are heaviest in the mid-afternoon between 1 pm and 3 pm having the highest volume. It is also important to note that higher demand for interfacility transfers continues until the 8:00 pm hour.

The following chart further illustrates the demand for interfacility transfers by hour of the day for 2015 - 2017.



As illustrated above, calls begin to increase at the 9 am hour peaking at the 1 pm hour. The calls begin to decline at the 11 pm hour with the 6 am hour being the slowest hour of the day.

4. Response Times

Response time is divided into three segments for evaluation; call processing, turnout time, and travel time. Each of these components represent a different point in the response time continuum and through their measurement and evaluation areas for improvement can be identified. Below are the definitions for the three components:

- Call Processing is the defined as beginning when the call taker answers the call and ends with the dispatching of appropriate emergency services.
- Turnout Time is defined as beginning when the emergency service receives the call and is on the apparatus responding (wheels rolling) to the call.
- Travel Time is defined as beginning when the apparatus and personnel begin the response (wheels rolling) and ends once on location of the emergency (wheels stopped).

The expression of response time has changed. In years past the measurement was expressed as an average of time. This essentially represents how the system or department is performing 50% of the time and is not a true reflection of how a department is performing. With the research that has been performed in developing performance standards and practices the use of fractile time has become the best practice in the measurement and presentation of response time components. Fractile response time measures how often (as a percent of calls) a department can perform within each response time component.

Computer Aided Dispatch (CAD) data is used in the analysis of the Fire District and EMS District in terms of response time for the department. However, the data is not without issues such as coding problems, transcription errors, and equipment failures. The project team has developed the following mechanism to address these issues.

Only qualified data is used to calculate call processing, turnout time, travel time, and call duration. To be considered the data must meet the following criteria:

- The incident must have been unique
- The incident must have involved at least one fire department unit being dispatched to the call.
- Calls that are missing data are not used in the computations for call processing, total response time, or call duration.
- Any call with usually long times or times sorted incorrectly (arrived before dispatch time) were removed.
- Non-emergency responses are removed, only emergency responses are included.

After filtering the data using the methodology outlined above, the remaining incidents represent the response time for calls for service handled by the Fire Department. The performance is illustrated for call processing, turnout time (time from dispatch to units responding) and travel time (time from unit going enroute to arrival at the scene). The tables below illustrate the average time and the 90% fractile time for each component. Fractile is defined as a cutoff point where the time measurement reaches a certain probability.

The tables below illustrate the calls that were filtered using this methodology.

Jefferson County Fire District Filtered Calls	2015		2016		2017	
	No.	%	No.	%	No.	%
Number of Calls Examined	836		778		820	
No Time Stamp for Received Time	49	5.9%	48	6.2%	52	6.3%
No Time Stamp for Dispatch Time	69	8.3%	73	9.4%	59	7.2%
No Time Stamp for Enroute Time	188	22.5%	200	25.7%	167	20.4%
No Time Stamp for Arrival Time	246	29.4%	250	32.1%	226	27.6%
Call Processing removed due to Outliers	71	8.5%	65	8.4%	83	10.1%
Turnout Time removed due to Outliers	31	3.7%	34	4.4%	34	4.1%
Travel Time removed due to Outliers	19	2.3%	17	2.2%	17	2.1%

Jefferson County Emergency Medical Services Filtered Calls	2015		2016		2017	
	No.	%	No.	%	No.	%
Number of Calls Examined	1,703		1,633		1,659	
No Time Stamp for Received Time	0	0.0%	0	0.0%	0	0.0%
No Time Stamp for Dispatch Time	45	2.6%	71	4.3%	80	4.8%
No Time Stamp for Enroute Time	158	9.3%	171	10.5%	192	11.6%
No Time Stamp for Arrival Time	277	16.3%	255	15.6%	272	16.4%
Call Processing removed due to Outliers	123	7.2%	68	4.2%	102	6.1%
Turnout Time removed due to Outliers	31	1.8%	33	2.0%	68	4.1%
Travel Time removed due to Outliers	127	7.5%	108	6.6%	88	5.3%

In this instance the outliers are those calls that had unusually long times such as 35 minutes for call processing or 23 minutes for a turnout time.

Emergency responses were the only calls considered in the response time calculations.

The table below illustrates those call types that were considered as emergency responses.

Emergency Calls Types	
EMS Call Types	**Fire Call Types**
911	911
Abandoned call	Agency Assist
Alarm	Assault
Assault	Burn Complaint
Death Reported	Death Reported
Disturbance/Verbal Argument	Domestic Violence
Domestic Violence	Explosion
Fight	Fight
Fire	Fire
Hit and Run	Fire Alarm
Intoxicated/Drunk Subject	Hazard
Medical	HazMat Incident
Mental Subject	Hit and Run
Motor Vehicle Crash	Intoxicated/Drunk Subject
Motorist Assist	Medical
River/Water Event	Mental Subject
Search and Rescue	Motor Vehicle Crash
Shots Fired	Motorist Assist
Subject Stop	Panic/Fire/Burglar
Suicide Attempted/Threatened	Pursuit
Suspicious Circumstance	River/Water Event
Threat	Search and Rescue
Unk. Detail	Shots Fired
Unwanted	Structure/ Vehicle/All
Vehicle Stop	Suicide Attempted/Threatened
Wanted Subject/Warrant Service	Suspicious Circumstance

The CAD data contained call types that are also used for law enforcement, so those calls were used based on the likelihood fire or EMS services were needed. For example, a domestic violence call could result in an injury to a person or a pursuit could result in a vehicle wreck and were included in the emergency call for the District.

The table below illustrates the call processing performance for the past three years.

System Performance – Call Processing				
		2015	2016	2017
		Performance	Performance	Performance
EMS District Calls	90% Fractile	2:28	1:17	1:29
	Average	1:05	0:39	0:41
Fire District Calls	90% Fractile	3:00	2:28	2:19
	Average	1:16	1:09	1:04

The time is shown in two formats. The fractile time displayed in the table above is the performance for 90% of the calls for each of the three years. For example, the call processing in 2015 was 2:28 or less for 90% of the EMS calls. The other 10% were longer in duration. During that same time period call processing for fire calls was 3:00 or less 90% of the time. The average time shown is the average of the calls examined.

The tables below illustrate the turnout time for the EMS District and Fire District for the past three years. It is further subdivided into the daytime calls and nighttime and weekend calls. For purposes of this data, daytime calls are Monday through Friday from 8 am to 5 pm.

System Performance – Turnout Time				
EMS District Calls		2015	2016	2017
		Performance	Performance	Performance
Daytime	90% Fractile	5:28	4:41	3:13
	Average	2:26	2:18	1:48
Nighttime & Weekends	90% Fractile	7:32	7:12	5:31
	Average	4:27	3:58	2:49

System Performance – Turnout Time				
Fire District Calls		2015	2016	2017
		Performance	Performance	Performance
Daytime	90% Fractile	3:23	3:49	3:41
	Average	1:42	1:51	1:52
Nighttime & Weekends	90% Fractile	7:14	6:05	5:50
	Average	3:23	2:56	2:57

The time is shown in two formats. The fractile time displayed in the table above is the performance for 90% of the calls for each of the three years. For example, the turnout time in 2015 was 5:28 or less for 90% of the EMS calls during the daytime hours. The other 10% were longer in duration. During that same time period turnout time for fire calls was 3:23 or less 90% of the time for the daytime calls. The average time shown is the average of the calls examined.

The EMS District placed crews in the station in May 2017, the table below illustrates the turnout time from May to December 2017 in the same format as above.

System Performance – Turnout Time		
EMS District Calls May - Dec		**2017**
		Performance
Daytime	90% Fractile	2:37
	Average	1:31
Nighttime & Weekends	90% Fractile	5:31
	Average	2:49

The last measurable component of the response time continuum is travel time. The tables below display the travel time for the EMS District and Fire District.

System Performance – Travel Time				
EMS District Calls		**2015**	**2016**	**2017**
		Performance	**Performance**	**Performance**
Daytime	90% Fractile	13:17	12:25	11:15
	Average	6:38	6:27	6:10
Nighttime & Weekends	90% Fractile	13:46	13:35	11:42
	Average	6:45	6:42	6:07

System Performance – Travel Time				
Fire District Calls		2015	2016	2017
		Performance	Performance	Performance
Daytime	90% Fractile	11:37	10:17	11:07
	Average	4:56	4:35	6:01
Nighttime & Weekends	90% Fractile	14:58	15:34	12:14
	Average	7:46	7:35	6:12

The time is shown in two formats. The fractile time displayed in the table above is the performance for 90% of the calls for each of the three years. For example, the travel time in 2015 was 13:17 or less for 90% of the EMS calls during the daytime hours. The other 10% were longer in duration. During that same time period travel time for fire calls was 11:37 or less 90% of the time for the daytime calls. The average time shown is the average of the calls examined.

The EMS District placed crews in the station in May 2017, the table below illustrates the travel time from May to December 2017 in the same format as above.

System Performance – Travel Time		
EMS District Calls May - Dec		2017
		Performance
Daytime	90% Fractile	11:13
	Average	6:00
Nighttime & Weekends	90% Fractile	11:30
	Average	5:51

The review and evaluation of the time components is essential to determine where improvements can be made. It is equally important to know and understand what the customer experiences.

The tables below display the total time measured from the time the customer places the call requesting assistance until an emergency unit is on the scene.

System Performance – Total Response Time				
EMS District Calls		**2015**	**2016**	**2017**
		Performance	**Performance**	**Performance**
Daytime	90% Fractile	18:20	16:00	14:39
	Average	10:28	9:43	9:04
Nighttime & Weekends	90% Fractile	20:07	19:21	16:49
	Average	12:28	11:28	9:53

The time is shown in two formats. The fractile time displayed in the table above is the performance for 90% of the calls for each of the three years. For example, the total response time in 2015 was 18:20 or less for 90% of the EMS calls during the daytime hours. The other 10% were longer in duration. The average time shown is the average of the calls examined.

System Performance – Total Response Time				
Fire District Calls		**2015**	**2016**	**2017**
		Performance	**Performance**	**Performance**
Daytime	90% Fractile	16:01	14:14	15:06
	Average	8:27	8:24	9:35
Nighttime & Weekends	90% Fractile	18:57	19:43	16:15
	Average	12:25	11:39	10:14

The time is shown in two formats. The fractile time displayed in the table above is the performance for 90% of the calls for each of the three years. For example, the total response time in 2015 was 16:01 or less for 90% of the fire calls during the daytime hours. The other 10% were longer in duration. The average time shown is the average of the calls examined.

The EMS District placed crews in the station in May 2017, the table below illustrates the total response time from May to December 2017 in the same format as above.

System Performance – Total Response Time		
EMS District Calls May - Dec		**2017 Performance**
Daytime	90% Fractile	14:19
	Average	8:31
Nighttime & Weekends	90% Fractile	15:26
	Average	9:04

3 Analysis of Fire and EMS Operations

In making decisions about the emergency services, it is important for the leadership of Jefferson County, Culver, Madras, Metolius, and both Districts to understand the science behind the location of resources and the deployment strategies of those resources. For many years the Insurance Services Office (ISO) had set the standard for deployment through their Public Protection Classification system. This system was designed to provide insurers a basis for setting insurance rates and to limit their exposure to large losses and catastrophic events. While these efforts provided a good starting point, there is much more for the leadership to know while making decisions about the emergency services in Jefferson County, the Jefferson Fire District, and Jefferson Emergency Medical Services District.

1. Service Level Definition within Emergency Services

Nationwide, a great deal of effort and research has been put into developing performance objectives for the delivery of fire and EMS services. This effort is critical for agencies making decisions about deployment and location of emergency resources. The objectives promoted for fire/rescue and EMS have their basis derived from research that has been conducted in these two critical issues:

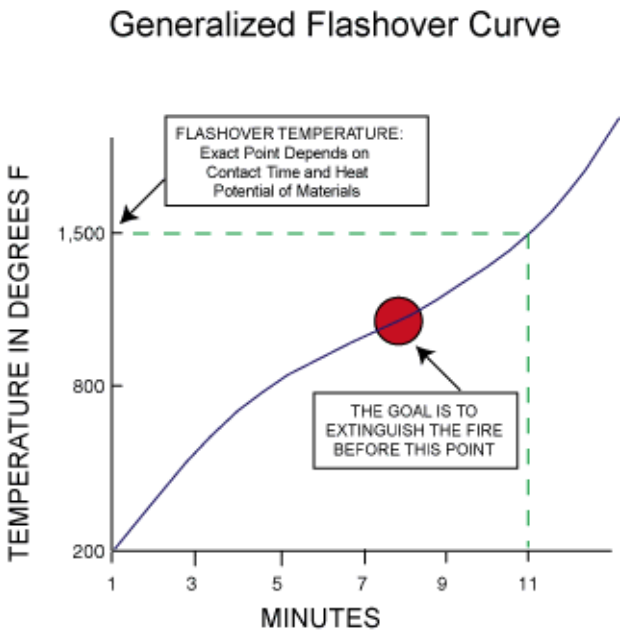
- What is the critical point in a fire's "life" for gaining control of the blaze while minimizing the impact on the structure of origin and on those structures around it?

- What is the impact of the passage of time on survivability for victims of cardiac arrest?

The following sections describe these factors.

(1) Fire Protection Services

The chart that follows, shows a typical "flashover" curve for interior structure fires. The point in time represented by the occurrence of "flashover" is critical because it defines when all the contents of a room become involved in the fire. This is also the point at which a fire typically shifts from "room and contents" to a "structure" fire – involving a wider area of the building and posing a potential risk to the structures surrounding the original location of the fire.



Note that this illustration depicts a fire from the moment of inception – not from the moment that a fire is detected or reported. This demonstrates the importance of early detection and fast reporting as well as rapid dispatch of responding units. This also shows the critical need for a rapid (and sufficiently staffed) initial response – by quickly initiating the attack on a fire, "flashover" can be averted. The points below describe the major changes that occur at a fire when "flashover" occurs:

- It is the end of time for effective search and rescue in a room involved in the fire. It means the likely death of any person trapped in the room – either civilian or firefighter.

- After this point in a fire is reached, portable extinguishers can no longer have a successful impact on controlling the blaze. Only larger hand-lines will have enough water supply to affect a fire after this point.

- The fire has reached the end of the "growth" phase and has entered the fully developed phase. During this phase, every combustible object is subject to the full impact of the fire.

- This also signals the changeover from "contents" to "structure" fire. This is also the beginning of collapse danger for the structure. Structural collapse begins to become a major risk at this point and reaches the highest point during the decay stage of the fire (after the fire has been extinguished).

It should be noted that not every fire will reach flashover – and that not every fire will "wait" for the 8-minute mark to reach flashover. A quickly responding fire crew can do things to prevent or delay the occurrence of flashover. These options include:

- Application of portable extinguisher or other "fast attack" methodology.

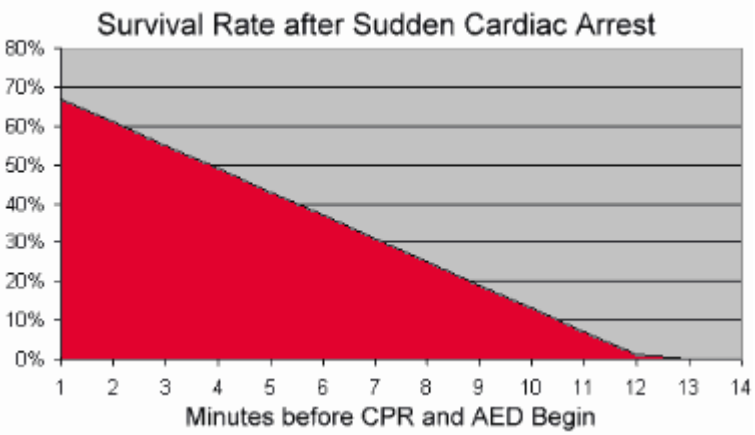
- Venting the room to allow hot gases to escape before they can cause the ignition of other materials in the room.

- Not venting a room – under some circumstances this will stifle a fire and prevent flashover from occurring.

Each of these techniques requires the rapid response of appropriately trained fire suppression resources that can safely initiate these actions. In the absence of automatic fire suppression systems, access to interior fires can again be limited by a safety requirement related to staffing levels. OSHA and related industry standards require the presence of at least 2-firefighters on the exterior of a building before entry can be made to a structure in which the environment has been contaminated by a fire. In the absence of a threat to life demanding immediate rescue, interior fire suppression operations are limited to the extent a fire service delivery system can staff, to assuring a minimum of 4-people actively involved in firefighting operations.

(2) Emergency Medical Services

Delivery of emergency medical services is another function of the emergency services system to be considered. Emergency medical calls are rising, and the types of calls are wide ranging. However, as a part of a community's healthcare system, one of the primary factors in the design of the emergency medical response is the ability to deliver basic CPR and defibrillation to victims of cardiac arrest. The graph below, demonstrates the survivability of cardiac patients as related to time from onset:



This graph illustrates that the chances of survival of cardiac arrest diminish approximately 10% for each minute that passes before the initiation of CPR and/or defibrillation. These dynamics are the result of extensive studies of the survivability of patients suffering from cardiac arrest. While the demand for services in EMS is wide ranging, the survival rates for full-arrests are often utilized as benchmarks for response time standards as they are more readily evaluated because of the ease in defining patient outcomes (a patient either survives or does not). This research results in the recommended objective of provision of basic life support within 4-minutes of notification and the provision of advanced life support within 8 minutes of notification.

Considering the response time continuum, the response time goal for emergency services is to provide BLS within 6 minutes of the onset of the incident (including detection, dispatch and travel time) and ALS within 10 minutes. This is often used as the foundation for a two-tier system where fire resources function as first responders with additional (ALS) assistance provided by responding ambulance units and personnel.

Additionally, recent research is beginning to show the impact and efficacy of rapid deployment of automatic defibrillators to cardiac arrests. This research – conducted in King County (WA), Houston (TX) and as part of the OPALS study in Ontario, Canada – shows that the AED can be the largest single contributor to the successful outcome of a cardiac arrest – particularly when accompanied by early delivery of CPR. It is also important to note that these medical research efforts have been focused on a small fraction of the emergency responses handled by typical EMS systems – non-cardiac events make up the large majority of EMS and total system responses and this research

does not attempt to address the need for such rapid (and expensive) intervention on these events.

The results of these research efforts have been utilized by communities and first responders, often on their own with no single reference, to develop local response time and other performance objectives. However, there are four major sources of information to which responders and local policymakers can refer when determining the most appropriate response objectives for their community:

- The Insurance Services Office (ISO) provides basic information regarding distances between fire stations. However, this "objective" does little to recognize the unique nature of every community's road network, population, calls for service, call density, etc.

- The National Fire Protection Association (NFPA) promulgated a document entitled: "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." This document (NFPA 1720) was published in 2001 and generated a great deal of dialogue and debate – which is still ongoing.

- The Commission on Fire Accreditation International (CFAI) in its "Objectives of Coverage" manual places the responsibility for identifying "appropriate" response objectives on the locality. These objectives should be developed following a comprehensive exercise in which the risks and hazards in the community are compared to the likelihood of their occurrence.

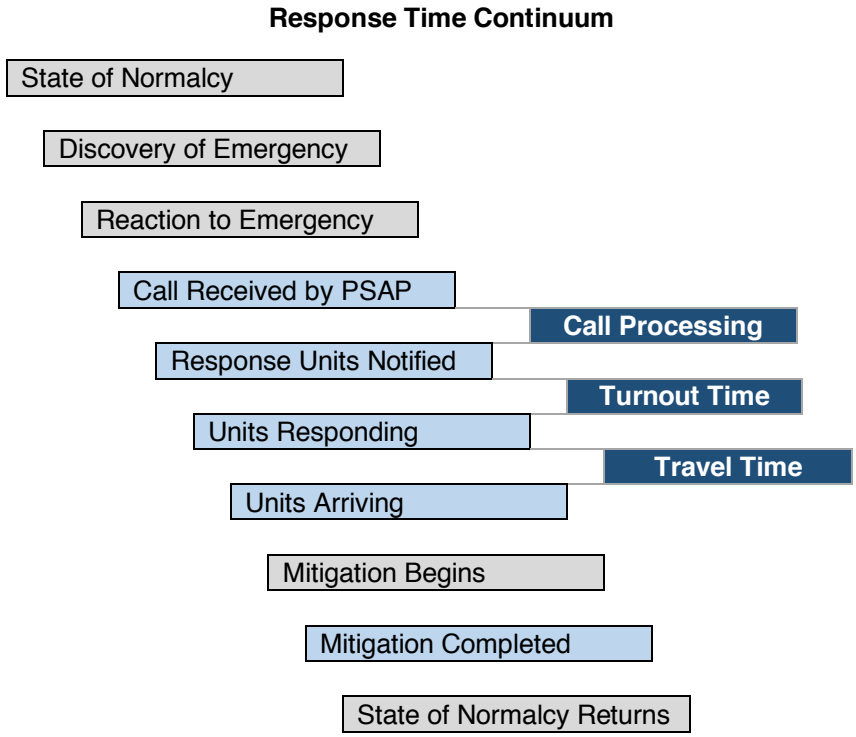
- The American Heart Association (AHA) provides information on the response to cardiac events, the preferred methods of treatment, and the timing of the delivery of the medical care and treatment.

The next section examines the issue of response times.

2. Response Time Goals and Objectives

Response time to an emergency or call for assistance has been broken down into measurable and non-measurable segments. The response time continuum begins when the state of normalcy changes to a recognizable emergency. The following chart outlines the cascade of events that occurs once an emergency starts or is recognized. Those

highlighted points represent hard data or that which is quantitative versus soft data or that which is subjective and unknown.



Each of the four organizations provide a reference point for communities and civic leaders to follow. The NFPA is only one that currently offers any specificity to benchmarks derived from the basic research previously described. These include the following (taken from the NFPA Standards as noted):

- One minute four seconds (64 seconds) for the processing of an incoming emergency phone call, including the completion of the dispatching of fire response units. (NFPA 1221 Section 7.4.2)

- "One minute (60 seconds) for turnout time for EMS calls." This component is for staffed stations only. This is also called reflex time, reaction time, "out-the-chute" time, etc. This is the time that elapses between dispatch and when the units are actively responding. (NFPA 1720 Section 4.3.3)

- "One minute thirty seconds (90 seconds) for turnout time for fire and special operations calls." This component is for staffed stations only. This is also called reflex time, reaction time, etc. This is the time that elapses between dispatch and when the units are actively responding. (NFPA 1720 Section 4.3.3)

- "Nine minutes (540 seconds) or less for the deployment of a full first-alarm

assignment at a fire suppression incident in an urban area." (NFPA 1720 Section 4.3.2)

- "Ten minutes (600 seconds) or less for the deployment of a full first-alarm assignment at a fire suppression incident in a suburban area." (NFPA 1720 Section 4.3.2)

- "Fourteen minutes (840 seconds) or less for the deployment of a full first-alarm assignment at a fire suppression incident in a rural area." (NFPA 1720 Section 4.3.2)

- Table 4.3.2, NFPA 1720 identifies the performance objective for each demographic at not less than 90 percent for urban areas and 80 percent for suburban and rural areas.

- CFAI, by contrast, identifies the performance objective at less than 90 percent regardless of the demographic.

- The AHA does not promulgate or identify performance objectives it does however provide the background information and motivation for the responses to cardiac arrest and other health related issues.

It is also critical to note that these time objectives apply to emergency calls for service – there is nothing in the NFPA documents (nor in any other objective) that suggests that communities cannot establish a differential response to calls for service determined to be non-emergency in nature.

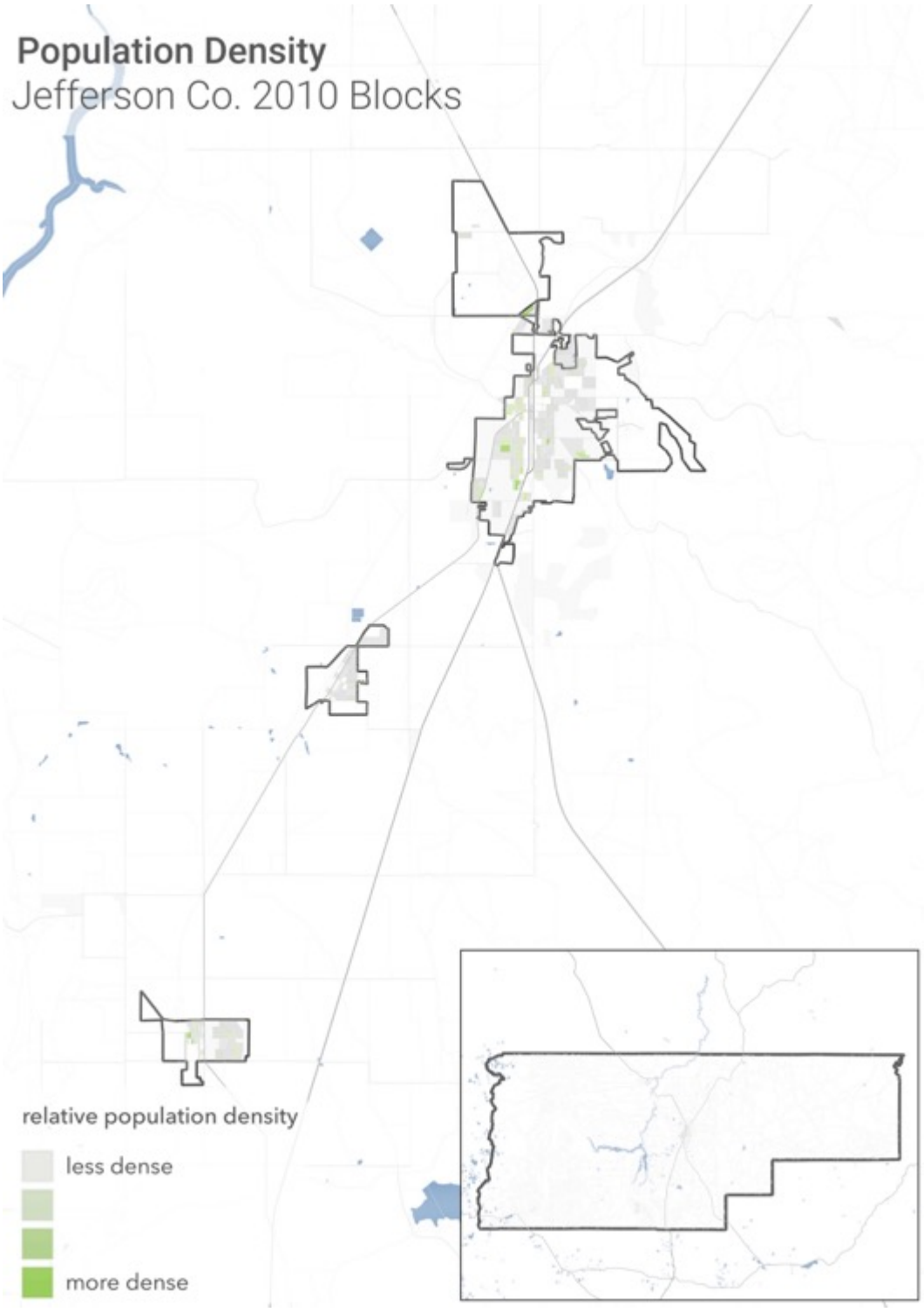
Previously the Center for Public Safety Excellence had defined benchmark and baseline response times for each of the three components. They have since determined they are not a standard making organization and decided to leave the establishment of response time standards to others. However, their body of work is significant and has been used by numerous communities across the country to establish performance objectives. As such, this work will be used in the following analysis of response time performance for the Fire and EMS Districts.

The performance objectives outlined in NFPA 1720 are further defined by population densities. The following table illustrates those definitions for each of four demographics.

Demographic Risk Categories

Risk Category	Definition
Urban	An area with a population density greater than 1,000 people per square mile
Suburban Area	An area with a population density of 500 - 1,000 people per square mile
Rural Area	An area with a population density of less than 500 people per square mile
Remote/Frontier Area	Travel Distance greater than 8 miles.

The map below illustrates the population densities based on U.S. Census data. The population centers of Madras, Culver, and Metolius are the more populous areas in the two Districts. The City of Madras meets the definition of an urban cluster, according to the U.S. Census Bureau, having a population of more than 2,500 residents and less than 50,000 residents. As well, with a five-square mile area having a population density of 1,310 per square mile using an estimated population of 6,552 residents. Culver and Metolius are below the U.S. Census Bureau definition but do have a higher population density within their smaller boundaries. NFPA 1720 further defines the urban areas as those with more than 1,000 people per square mile and suburban area with population densities between 500 and 1,000 people per square mile.


Population Density
Jefferson Co. 2010 Blocks
relative population density
less dense
more dense

The State of Oregon has established benchmark response time standards for the emergency medical system response to trauma calls. These standards are slightly different than those previously identified for the fire related calls for service.

State of Oregon Response Time Standards	
Travel Time	**Demographic Definition**
8 minutes	Urban Areas - an incorporated area of 50,000 or more in population.
15 minutes	Suburban Areas - not an urban area but is contiguous to an urban area. Including the area within a 10-mile radius of the urban area and has a population density of 1,000 or more persons per square mile.
45 minutes	Rural Areas - an area 10 or mile miles from a population center of 50,000 or more with a population density of six or more persons per square mile.
4 hours and 28 minutes	Remote/Frontier Areas - a population density of less than six per square mile and accessible by paved roads.

Each Ambulance Service Area (ASA) is required by the State to develop a service plan for the County. Plans need to address several topics including but limited to dispatching, response time, level of service, vehicles and equipment, and quality improvement. Within the service plan for Jefferson County there are baseline response time components that all ASA's must follow as illustrated in the table below.

JCEMS Response Time Performance Objectives	
Travel Time	**Demographic Definition**
8 minutes	Urban Areas
15 minutes	Suburban Areas
45 minutes	Rural Areas
4 hours 28 minutes	Remote/Frontier Areas

Response time illustrated in the table above is measured from the time the emergency service receives the call until the response unit is on the scene of the emergency.

3. Response Time Data

The project team collected data from the Regional Dispatch Center Computer Aided Dispatch (CAD) records to evaluate current response time capabilities in the Districts. The project team evaluated the services on the following time intervals: call processing time (call receipt to dispatch), turnout time (dispatch to enroute), travel time (enroute to on-scene), and total fire rescue response time (dispatch to on-scene).

However, the data is not without issues such as coding problems, transcription errors, and equipment failures. The project team has developed the following mechanism to address these issues. Only qualified data is used to calculate call processing, turnout

time, travel time, and call duration. To be considered, the data must meet the following criteria:

- The incident must have been unique
- The incident must have involved at least one fire department unit being dispatched to the call.
- Calls that are missing data are not used in the computations for call processing, total response time, or call duration.
- Any call with usually long times or times sorted incorrectly (arrived before dispatch time) were removed.
- Non-emergency responses are removed, only emergency responses are included.

After filtering the data using the methodology outlined above, the remaining incidents represent the response time for calls for service handled by the Fire and EMS Districts. One issue that was noted is that separate incidents numbers were provided on calls when a second station was dispatched to the same fire call. These additional calls were removed from the data.

The tables below illustrate the calls that were filtered using this methodology.

Jefferson County Fire District Filtered Calls						
	2015		2016		2017	
	No.	%	No.	%	No.	%
Number of Calls Examined	836		778		820	
No Time Stamp for Received Time	49	5.9%	48	6.2%	52	6.3%
No Time Stamp for Dispatch Time	69	8.3%	73	9.4%	59	7.2%
No Time Stamp for Enroute Time	188	22.5%	200	25.7%	167	20.4%
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Travel Time removed due to Outliers	19	2.3%	17	2.2%	17	2.1%

Jefferson County Emergency Medical Services Filtered Calls						
	2015		2016		2017	
	No.	%	No.	%	No.	%
Number of Calls Examined	1,703		1,633		1,659	
No Time Stamp for Received Time	0	0.0%	0	0.0%	0	0.0%
No Time Stamp for Dispatch Time	45	2.6%	71	4.3%	80	4.8%
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Travel Time removed due to Outliers	127	7.5%	108	6.6%	88	5.3%

In this instance the outliers are those calls that had unusually long times such as 35 minutes for call processing or 23 minutes for a turnout time.

The expression of response time has changed and continues to be a work in progress. In years past the measurement was expressed as an average of time. This essentially represents how the system or department is performing 50% of the time and is not a true reflection of how a department is performing. With the research that has been performed in developing performance standards and practices the use of fractile time has become the best practice in the measurement and presentation of response time components. Fractile response time measures how often (as a percent of calls) a department can perform within each response time component. The NFPA and CPSE use the 90th percentile as the standard to meet for benchmark and baseline criteria.

4. Call Processing

The public safety answering point (PSAP) is the Frontier Regional 911 center located in Condon, Oregon. This regional center dispatches four Sheriff's Offices, two police departments, nine emergency medical services and thirteen fire departments or districts. There is an advisory board with members from the four Sheriff's Offices and one commissioner from each of the four Counties. NFPA 1221 Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems establishes the call processing benchmarks as outlined in the table below.

NFPA 1221 Time Requirements		
Component	**Target**	**Performance**
Calls Answered	Within 15 seconds	95%
	Within 40 seconds	99%
Call Processing	Within 64 seconds	90%
	Within 106 seconds	95%
Call Processing for: * EMD * Language Translation * TTY/TDD Device Services	Within 90 seconds	90%
* Hazardous Materials * Technical Rescue * Text Message * Unable to Determine Location	Within 120 seconds	99%

Additionally, NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems in section 7.4.2 provides a benchmark call processing time: One minute four seconds (64 seconds) for the processing of an incoming emergency phone call, including the completion of the dispatching of fire response units.

The table below illustrates the performance of the dispatch center for JCFD and JCEMS using 64 seconds as the benchmark time.

System Performance – Call Processing							
		2015		**2016**		**2017**	
		Performance	**Deviation**	**Performance**	**Deviation**	**Performance**	**Deviation**
EMS District Calls	90% Fractile	2:28	1:24	1:17	0:13	1:29	0:25
	Average	1:05		0:39		0:41	
Fire District Calls	90% Fractile	3:00	1:56	2:28	1:24	2:19	1:15
	Average	1:16		1:09		1:04	

The times are shown in two formats, the average and the 90th fractile time. The performance column represents the fractile time for the call processing time. The next column represents the difference between the benchmark performance objective. For example, the call processing time in 2015 for the EMS District was 2:28 or less for 90% of the calls. The column labeled deviation is the difference between the benchmark performance objective. For example, in 2015 the call processing time was 1:24 over the benchmark performance objective. The average response time is an average of the call

processing time for the calls evaluated and represents how the system is performing 50% of the time. As shown above, the call processing performance of the dispatch center has improved over the three-year period but remains outside industry best practices.

Improving and working with the dispatch center to improve call processing and information can take several forms. Department and field personnel can work with the dispatch center personnel to educate them on performance objectives and time measurements and how they fit into the overall response time continuum. Establishing a work group with the agencies that use the dispatch center to identify problem areas and the corrections that may be necessary to improve the system. Understanding the internal workings of each agency can improve the recordkeeping and service delivery of public safety agencies.

Recommendation: The County, Fire District and EMS District should work with the Dispatch Center to continue to improve their performance on processing and dispatching emergency calls for service.

5. Turnout Time

Turnout time is a measurable time segment that begins when the emergency service receives the call and ends with the apparatus responding (wheels rolling) to the call. 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 in section 4.3.3 provides the following performance objectives for turnout time:

- "One minute thirty seconds (90 seconds) for turnout time for fire and special operations."

- "One minute (60 seconds) for turnout time for emergency medical services."

NFPA 1720 turnout time metrics are only applicable to staffed stations. Due to the staffing models used by the Districts, turnout time was divided between daytime and nighttime and weekends. For the daytime, calls from 8 am through the 4 pm hour was considered. Nighttime calls were from the 5 pm hour through the 7 am hour.

In 2006 the JCFD adopted a Deployment Standard for the Fire District and was updated in 2017. This document outlined their risk assessment, service level objectives, and operations. Included in this document are their response time baseline objectives for the

measurable response time components. Their baseline turnout time is three (3) minutes during normal business hours and five (5) minutes outside normal business hours with a 90% achievement objective.

The tables below illustrate the turnout time for the Fire District using the benchmark turnout time established by NFPA 1720 for staffed stations. During the time the stations are not staffed there is no turnout time performance objective, it is shown here for comparison purposes and to be consistent with the established baseline performance objectives established by the JCFD. The first table illustrates the turnout time for medical calls and the second table for fire related calls as there are different benchmark performance objectives.

Fire District Benchmark Turnout Time							
Medical Calls		**2015**		**2016**		**2017**	
		Performance	**Deviation**	**Performance**	**Deviation**	**Performance**	**Deviation**
Daytime	Benchmark	4:22	3:22	3:54	2:54	3:40	2:40
	Average	2:07		2:23		2:20	
Nighttime & Weekends	Benchmark	7:31	6:31	6:53	5:53	6:47	5:47
	Average	4:08		3:52		3:28	

Fire District Benchmark Turnout Time							
Fire Related Calls		**2015**		**2016**		**2017**	
		Performance	**Deviation**	**Performance**	**Deviation**	**Performance**	**Deviation**
Daytime	Benchmark	2:52	1:22	3:38	2:08	3:17	1:47
	Average	1:17		1:44		1:33	
Nighttime & Weekends	Benchmark	5:19	3:49	4:39	3:09	4:52	3:22
	Average	2:23		2:16		2:18	

The times are shown in two formats, the average and the 90th fractile time. The performance column represents the fractile time for the turnout time. The next column represents the difference between the benchmark performance objective. For example, the turnout time in 2015 for the daytime medical calls was 4:22 or less for 90% of the calls. The column labeled deviation is the difference between the benchmark performance objective. For example, in 2015 the turnout time for medical calls during the daytime was 3:22 over the benchmark performance objective. The average response time is an average of the turnout time for the calls evaluated and represents how the District is performing 50% of the time.

As noted previously the JCFD has established baseline turnout times for the District. These performance objectives are not segregated by the type of call but is based on the staffing of the station. The baseline turnout time is three (3) minutes during normal business hours and five (5) minutes outside normal business hours with a 90% achievement objective. The table below illustrates the turnout time for the established baseline performance objectives.

Fire District Baseline Turnout Time							
All Calls		2015		2016		2017	
		Performance	Deviation	Performance	Deviation	Performance	Deviation
Daytime	Baseline	3:13	0:13	3:51	0:51	3:25	0:25
	Average	1:32		1:58		1:42	
Nighttime & Weekends	Baseline	6:19	1:19	6:01	1:01	5:27	0:27
	Average	2:58		2:43		2:35	

The times are shown in two formats, the average and the 90th fractile time. The performance column represents the fractile time for the turnout time. The next column represents the difference between the baseline performance objective. For example, the turnout time in 2015 for the daytime calls was 3:13 or less for 90% of the calls. The column labeled deviation is the difference between the baseline performance objective. For example, in 2015 the turnout time for the daytime calls was 13 seconds over the baseline performance objective. The average response time is an average of the turnout time for the calls evaluated and represents how the District is performing 50% of the time.

Due to the call processing issue mentioned earlier, it is not clear if the longer daytime turnout times are due to a call initially being dispatched for the Culver station and then responded to by the Madras station. The JCFD #1 should develop a mechanism to isolate and report turnout time performance when the station is staffed as the data from the dispatch center does not appear to be accurate or being captured correctly. Other methods of improving the turnout time is to establish a procedure to check the time stamps at the conclusion of the call to identify any issues that may have occurred and to identify reoccurring issues recording the time stamps. Working with the dispatch center to identify how the units communicate with dispatch center to ensure accurate data is being captured.

Recommendation:

The Jefferson County Fire District #1 should continue to work towards improving turnout times during the daytime when staffing is present in the station.

The table below illustrates the turnout time for JCEMS. The EMS District does not have established baseline turnout times for the District. For consistency, the same performance objectives used for the JCFD was used in the following table.

System Performance – Turnout Time							
EMS District Calls		2015		2016		2017	
		Performance	Deviation	Performance	Deviation	Performance	Deviation
Daytime	Benchmark	5:28	4:28	4:41	3:41	3:13	2:13
	Baseline		2:28		1:41		0:13
	Average	2:26		2:18		1:48	
Nighttime & Weekends	Benchmark	7:32	6:32	7:12	6:12	5:31	4:31
	Baseline		2:32		2:12		0:31
	Average	4:27		3:58		2:49	

The times are shown in two formats, the average and the 90th fractile time. The performance column represents the fractile time for the turnout time. The next column represents the difference between the benchmark or baseline performance objective. For example, the turnout time in 2015 for the daytime calls was 5:28 or less for 90% of the calls. The column labeled deviation is the difference between the benchmark or baseline performance objective. For example, in 2015 the turnout time during the daytime was 4:28 over the benchmark performance objective and 2:28 over the baseline performance objective. The average response time is an average of the turnout time for the calls evaluated and represents how the District is performing 50% of the time. In May 2017 the JCEMS placed crews in the station. One issue is with determining true performance is that it is not known whether the EMS District was waiting on on-call staff to respond to the station and subsequently to the call for service, which may lead to the longer turnout time performance at the 90th percentile.

The table below illustrates the turnout time from May to December 2017 in the same format as above.

System Performance – Turnout Time			
EMS District Calls May - Dec		2017	
		Performance	Deviation
Daytime	Benchmark	2:37	1:37
	Baseline		- 0:23
	Average	1:31	
Nighttime & Weekends	Benchmark	5:31	4:31
	Baseline		2:31
	Average	2:49	

As illustrated above, while the performance did improve in the May – December 2017 timeframe, there is still a need to further improve turnout time performance to meet industry best practices. It should be noted the baseline performance for the daytime calls is 23 seconds under the baseline performance objective as illustrated with the negative time deviation. Similar to the Fire District, methods of improving the turnout time are to establish a procedure to check the time stamps at the conclusion of the call to identify any issues that may have occurred and to identify reoccurring issues recording the time stamps at the dispatch center. Working with the dispatch center to identify how the units communicate with dispatch center to ensure accurate data is being captured.

Recommendation:

The Jefferson County EMS District should continue to work towards improving turnout times.

6. Resource Distribution and Travel Time

Travel time is the third measurable performance component for the emergency services to continuously analyze to ensure they are providing effective and efficient service to the community. Travel time begins when the apparatus is responding (wheels rolling) and ends with the apparatus arriving at the scene (wheels stopped). Distribution is the measure of getting initial resources to an emergency to begin mitigation efforts. This is measured in a variety of ways including percentage of square miles, percentage of road miles and travel time. The Insurance Services Office (ISO) has used road miles for many

years. With the advent of GIS technology, the use of travel time is another more accurate measure for the distribution of resources.

Based on the U.S. Census Bureau data, the Fire District and EMS District are rural in nature as defined by NFPA 1720. Madras, Culver, and Metolius are also included in the rural demographic.

Travel Time Performance for Rural Demographic				
	1st Unit	2nd Unit	1st Alarm Balance	Performance
Benchmark	10 minutes	14 minutes	14 minutes	90%
Baseline	13 minutes	18 minutes/12 seconds	18 minutes/12 seconds	90%

In 2006 the JCFD adopted a Deployment Standard for the Fire District and was updated in 2017. This document outlined their risk assessment, service level objectives, and operations. Included in this document are their response time baseline objectives for the measurable response time components.

The table below outlines the JCFD travel time performance objectives.

JCFD Travel Time Performance Objectives	
Travel Time	**Demographic Definition**
6 minutes	Urban area is defined as a three (3) mile radius around the fire station.
11 minutes	Suburban area id defined as more than three (3) mile radius but less than five (5) mile radius around the fire station.
16 minutes	Rural areas are defined as more than a five (5) mile radius around the fire station.

The benchmark time is typically described as the standard or industry best practice. The baseline time is generally described that which is acceptable by the community.

The table below displays the travel for the JCFD for the past three years and provides a comparison to the benchmarks and baseline performance objectives.

System Performance – Travel Time							
Fire District Calls		2015		2016		2017	
		Performance	Deviation	Performance	Deviation	Performance	Deviation
Daytime	Benchmark	11:37	1:37	10:17	0:17	11:07	1:07
	Baseline		- 1:23		- 2:43		- 1:53
	Average	4:56		4:35		6:01	
Nighttime & Weekends	Benchmark	14:58	4:58	15:34	5:34	12:14	2:14
	Baseline		1:58		2:34		- 0:46
	Average	7:46		7:35		6:12	

The times are shown as benchmark, baseline, and average. The average time is an average of the turnout time for the calls evaluated and represents how the District is performing 50% of the time. The benchmark and baseline time use fractile time and illustrates how the Fire District is performing 90% of the time. For example, in 2017 the travel time for 90% of the calls evaluated was 11 minutes and 7 seconds or less for the daytime calls. The benchmark is 10 minutes making the deviation 1 minute and 7 seconds over the goal or industry best practice. The baseline is 13 minutes making the deviation 1 minutes and 53 seconds under the travel time that is acceptable to the community.

The State of Oregon has established a Standard for Area Trauma Systems and has included response times for the various demographic areas. The table below illustrates the responses and definitions of the demographic areas.

State of Oregon Response Time Standards	
Travel Time	Demographic Definition
6 minutes	Urban Areas - an incorporated area of 50,000 or more in population.
13 minutes	Suburban Areas - not an urban area but is contiguous to an urban area. Including the area within a 10-mile radius of the urban area and has a population density of 1,000 or more persons per square mile.
43 minutes	Rural Areas - an area 10 or mile miles from a population center of 50,000 or more with a population density of six or more persons per square mile.
4 hours 28 minutes	Remote/Frontier Areas - a population density of less than six per square mile and accessible by paved roads.

Response time is defined as from the time emergency units are notified until they arrive on the scene of the incident. The Jefferson County Ambulance Service Area Plan uses these same response time definitions and baselines for the response to calls for service.

The JCEMS indicated, from a state perspective, they are considered a rural response system. The table below displays the response time as defined above for the JCEMS for the past three years and provides a comparison to the benchmarks and baseline performance objectives. The benchmark time is from NFPA 1720 and the baseline time shown is the Oregon Standards.

System Performance – Total Response Time							
EMS District Calls		2015		2016		2017	
		Performance	Deviation	Performance	Deviation	Performance	Deviation
Daytime	Benchmark	13:08	2:08	12:11	1:11	12:14	1:14
	Baseline		- 29:52		- 30:49		- 30:46
	Average	7:27		7:23		7:08	
Nighttime & Weekends	Benchmark	16:00	5:00	14:42	3:42	13:39	2:39
	Baseline		- 27:00		- 28:18		- 29:21
	Average	9:47		9:04		8:06	

The times are shown as benchmark, baseline, and average. The average time is an average of the response time for the calls evaluated and represents how the District is performing 50% of the time. The benchmark and baseline time use fractile time and illustrates how the EMS District is performing 90% of the time. For example, in 2017 the response time for 90% of the calls evaluated was 12 minutes and 14 seconds or less for the daytime calls. The benchmark is 11 minutes making the deviation 1 minute and 14 seconds over the goal or industry best practice. The baseline is 43 minutes making the deviation 30 minutes and 46 seconds under the response time that is acceptable to the community.

7. Concentration of Resources and Staffing

Concentration is generally described as the ability of the fire department to get the appropriate number of personnel and resources to the scene of an emergency in a prescribed time to effectively mitigate the incident. There are two parts to this concentration component which is an effective response force and the amount of time to get the resources in place.

(1) Effective Response Force

There are several tasks, which must occur simultaneously to adequately combat different types of fires. The absence of adequate personnel to perform these tasks requires each task to be prioritized and completed in chronological order. These fire ground tasks include command, scene safety, search and rescue, water supply, fire attack, pump operations, ventilation, back up, and rapid intervention.

An initial full alarm assignment for any structural fire incident should be able to provide personnel to accomplish the following tasks:

- Establish incident command outside of the hazard area. This will allow coordination and direction of the incoming emergency response personnel and apparatus. A minimum of one person should be dedicated to this task.

- Establish an uninterrupted water supply of at least 400 gallons per minute for 30 minutes. Once established the supply line can be maintained by the pump operator to ensure uninterrupted water supply. A minimum of one person is assigned to this task that can then assume support role.

- Establish an effective water flow rate of 300 gallons per minute. This will be supplied to a minimum of two hand lines each operating at a minimum flow of 100 gallons per minute. Each hand line must have two individuals assigned with one serving as the attack line and the other as a back-up line.

- Provision of one support person to handle the hydrant hookup, utility control, forcible entry, and assist in deploying fire hose lines.

- Establish a search and rescue team. Each team will consist of a minimum of two personnel.

- Establish a ventilation team. Each team will consist of a minimum of two personnel.

- Establish an initial rapid intervention team (RIT). Each RIT team shall consist of a minimum of two properly trained and equipped personnel.

Critical tasking will vary depending on the size and nature of the incident. The Center for Public Safety Excellence (CPSE) provides a suggestive list of tasks that need to be completed at a fire situation based on the risk. The CPSE analysis, from the 8th edition, is summarized in the table below showing the minimum required personnel to mitigate the initial emergency response requirements by occupancy risk:

Critical Tasks for the Effective and Efficient Control of Structural Fires				
Critical Task	**Maximum Risk**	**High Risk**	**Moderate Risk**	**Low Risk**
Attack Line	4	4	4	2
Search and Rescue	4	2	2	0
Ventilation	4	2	2	0
Backup Line	2	2	2	2
Rapid Intervention	2	2	0	0
Pump Operator	1	1	1	1
Water Supply	1*	1*	1*	1*
Support (Utilities)	1*	1*	1*	1*
Command	1	1	1	1
Safety Officer	1	1	1	1
Salvage/Overhaul	2	0	0**	0
Command Aid	1	1	0	0
Operations Chief	1	1	0	0
Logistics	1	0	0	0
Planning	1	0	0	0
Staging Officer	1	1	0	0
Rehabilitation	1	1	0	0
Division Supervisors	2	1	0	0
High-rise Evacuation	10	0	0	0
Stairwell Support	10	0	0	0
Total Personnel	**50-51**	**21-22**	**14-15**	**8-9**

*Tasks can be performed by the same individual **Task can be performed by the attack crew

For planning purposes, the fire service defines a moderate risk as a wood frame single family home. These buildings range in size from 1,250 to 2,500 square feet and represent a typical risk in most communities. It is generally cost prohibitive to plan and staff a fire department based on the maximum risk.

While the fire ground tasks are the same regardless of the location of the structure, NFPA 1720 defines minimum staffing based on the demographics of the area. This is in consideration of the typical make-up of the fire service in these areas such as all volunteer personnel and the limited availability of resources. Note the urban area minimum staffing is fifteen (15) which matches the critical tasks previously identified.
The table below illustrates the minimum staffing for each of the population demographics.

NFPA 1720 Fire Staffing		
Zone	**Demographic**	**Minimum Staffing**
Urban Area	> 1,000 people	15
Suburban Area	500 - 1,000 people	10
Rural Area	< 500 people	6
Remote Area	Travel > 8 miles	4

A task analysis for emergency medical calls analyzes three different types of calls or patient conditions. These three types of calls usually require the most effort on the part of the response team. Other calls or patient types can generally be handled with two or three personnel. Many times, especially in trauma calls, there are multiple patients. The table below outlines the tasks for handling these critical patients and the number of responders it may require for a successful outcome.

Critical Tasks for Effective Patient Care

Critical Task	Cardiac Arrest	Stroke	Multi-System Trauma
Patient Assessment	2 per patient	2 per patient	2 per patient
Airway Management/Intubation	2 per patient	2 per patient	2 per patient
Cardiac Defibrillation	1	N/A	N/A
CPR	1	N/A	N/A
EKG Monitoring	1	1	1
IV/Pharmacology	1	1	1
Splint/Bandage/Immobilization	N/A	N/A	1
Patient Lifting/Packaging	2 – 4	2 – 4	2 – 4
Medical Information Collection	1	1	1

It is incumbent upon a fire agency to have a response plan in place to ensure enough personnel are on scene to accomplish the stated critical tasks in a timely fashion. Structure fires are very labor-intensive incidents with any number of factors, such as weather, making the task that much more difficult.

Jefferson County Fire District policy adopted in 2006 stipulates the response to a variety of call types. The tables below illustrate the responses by call type and the total staffing for the call.

Structure Fire - with Hydrants		
Unit Type	**Number of Units**	**Personnel**
Engine	2	6
Rescue	1	2
Command Officer	1	1
Total Personnel		9

Structure Fire - without Hydrants		
Unit Type	**Number of Units**	**Personnel**
Engine	2	6
Rescue	1	2
Tender	1	1
Command Officer	1	1
Total Personnel		10

Automatic Alarm Activation		
Unit Type	**Number of Units**	**Personnel**
Engine	1	3
Rescue	1	2
Command Officer	1	1
Total Personnel		6

Wildland Fire		
Unit Type	**Number of Units**	**Personnel**
Brush Trucks	4	8
Tender	1	1
Command Officer	1	1
Total Personnel		10

Wildland Fire with Interface		
Unit Type	**Number of Units**	**Personnel**
Brush Trucks	4	8
Engine	1	3
Tender	1	1
Command Officer	1	1
Total Personnel		13

Emergency Medical Response		
Unit Type	**Number of Units**	**Personnel**
Rescue	1	2
Command Officer (as needed)	1	1
Total Personnel		3

According to NFPA 1720, the effective response force for a structure fire in a rural area is six (6) personnel and in a suburban area the effective response force is ten (10) personnel. The response matrix from JCFD is between nine (9) and ten (10) personnel depending on the water supply available. This response matrix is within the framework of the NFPA 1720 guidelines.

(2) First Alarm Assignment Travel Time

The second part to the concentration model is the travel time for the remainder of the first alarm assignment. The concentration of resources is necessary to ensure the effective response force arrives in a timely manner. Much like the distribution of resources, the concentration is dependent on the population density. It is not reasonable or financially possible for a rural area to have the same concentration of resources that is in an urban setting. The following table illustrates the travel time benchmarks and baselines for the various population densities.

Service Area / Population Density Response Travel Time Standards				
Urban: Population density of over 2,000 per square mile				
	1st Unit	**2nd Unit**	**1st Alarm Balance**	**Performance**
Benchmark	4 minutes	8 minutes	8 minutes	90%
Baseline	5 minutes/12 seconds	10 minutes 24 seconds	10 minutes/24 seconds	90%
Suburban: Population density between 1,000 and 2,000 per square mile				
Benchmark	5 minutes	8 minutes	10 minutes	90%
Baseline	6 minutes/30 seconds	10 minutes/24 seconds	13 minutes	90%
Rural: Population density of less than 1,000 per square mile				
Benchmark	10 minutes	14 minutes	14 minutes	90%
Baseline	13 minutes	18 minutes/12 seconds	18 minutes/12 seconds	90%

As shown above, the utilization of performance measures based on population density will allow Jefferson County Fire District to evaluate when standards need to change as rural areas of the District develop and move into suburban or urban categories.

The computer-aid dispatch (CAD) data did not capture the enroute time or on-scene time for individual responding units. This data is needed to evaluate the travel time of the first alarm assignment. The Fire District provided data from their system containing the various call types and the number of personnel for each responding unit. However, the report did not contain the enroute or arrival times of the apparatus. The table below illustrates the staffing for structure fire incidents for 2017.

JCFD Response Concentration - 2017				
Station	Number of Incidents	6 or more personnel	10 or more personnel	14 or more personnel
Madras	22	77%	54%	18%
Culver	5	100%	80%	20%

The call types of building fire, chimney fire, mobile home fire or fire in a motor home were considered in the table above. Personnel assigned to apparatus were counted as responding and assumed arriving on the scene. In 2017, the Madras Station responded to 22 of these types of calls, 77% of the time six or more personnel presumably arrived on the scene and 54% of the calls had a response of 10 or more personnel. Without the CAD data the travel time component cannot be confirmed or evaluated for compliance to the performance objective.

To accurately evaluate the concentration of resources, the number of personnel and the time stamps for each responding apparatus is essential. The current method of evaluation is based on travel time as those resources are typically located at a station. In order to determine station/resource placement this data is necessary. The current CAD system does not provide individual apparatus time stamps or detail on which units are in fact responding. Without this data, the Counties, Fire Districts, and Ambulance Services are unable to make decisions about the location of resources or the need for additional resources. Further, these agencies are not able to accurately inform or show the public their needs without this data . The JCFD and JCEMS should work with the dispatch center and the CAD vendor to effect theses changes or to fund an acceptable solution.

Recommendation:

The JCFD #1 and County should work with the Dispatch Center to ensure a single incident number is provided for each unique call and secondary apparatus or stations are included as part of the original call.

8. Concurrent Calls and Reliability

The concept of distribution and concentration of resources can be influenced by other contributing factors including unit hour utilization and concurrent calls for service. Unit hour utilization is calculated by taking the total hours the unit is committed to an incident divided by the total available hours. Expressed as a percentage, it identifies the amount of time the unit is committed but more importantly the amount of time the unit is available.

Within the framework of the 90th percentile performance standards the amount of available time can have an impact in meeting that standard. If utilization rates are too high the units are often unavailable for immediate response. However, the CAD data was insufficient to provide this evaluation as the only time stamps were for the station and not the individual units.

Concurrent calls for service are the evaluation of multiple calls occurring simultaneously. Evaluating this factor speaks to the reliability of the units and whether there are enough resources to handle the call volume. The tables below illustrate the concurrent calls for both Districts.

JCFD Concurrent Calls for Service					
Calls	**2015**	**2016**	**2017**	**Total**	**%**
1	589	579	604	1,772	79.4%
2	160	110	117	387	17.3%
3	12	9	30	51	2.3%
4+	7	6	9	22	1.0%
Total	**768**	**704**	**760**	**2,232**	**100%**

JCEMS Concurrent Calls for Service					
Calls	**2015**	**2016**	**2017**	**Total**	**%**
1	1079	1085	1130	3,294	53.9%
2	696	639	691	2,026	33.2%
3	202	255	182	639	10.5%
4+	12	78	59	149	2.4%
Total	**1,989**	**2,057**	**2,062**	**6,108**	**100%**

The CAD data used to develop these tables is based on the station dispatch data and not any individual units. The Fire District data indicates there are multiple calls occurring approximately 20% of the time. For the EMS District, about 46% of the time there are multiple calls occuring. Addtionally, about 12% of the time there are more than two calls for service for the EMS District ocurring over the past three years. This would indicate there is a need for at least two ambulances to be available.

4 Independent Fire District

This chapter presents the projects team's analysis of the Jefferson County Fire District #1 remaining as an independent fire district.

1. Organization Overview

The Jefferson County Fire District #1 was originally organized in 1952 as the North Unit Rural Fire Protection District under Oregon Revised Statute Chapter 478. In 1984 the name was officially changed to be more reflective of the location of the District. The organization is governed by a five (5) member Board of Directors that are elected by the citizens of the District on an at large basis. Members of the Board serve staggered four (4) year terms and is responsible for policy and financial decisions of the District.

In 1986 the Jefferson County Fire District and the City of Madras Fire Department merged into a single department through an annexation of the City into the District. Then in 1996 the City of Culver dissolved their fire department and entered into an interlocal agreement with the Jefferson County Fire Protection District (JCFD) for fire protection services. This agreement is still in force and the Fire District also operates a fire station in the City.

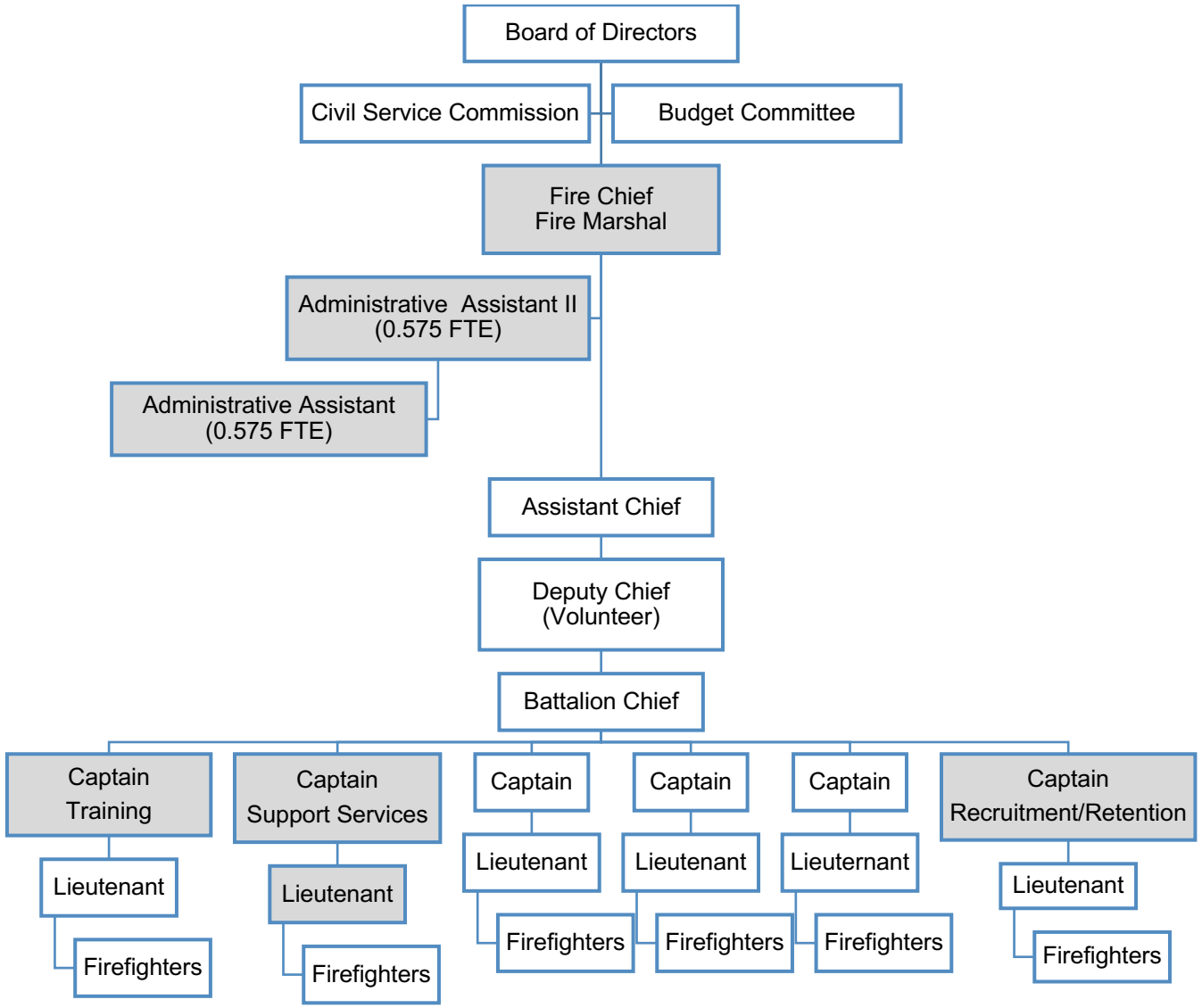
The District currently employs six full-time personnel that operate out of the headquarters station in Madras. These personnel include the Fire Chief/Fire Marshal, Support Services Captain, Training Captain, Volunteer Recruitment and Retention Captain, Support Services Lieutenant and an Administrative Assistant.

The Fire District operates with all career personnel working Monday – Friday from 8:00 am – 5:00 pm and volunteer personnel responding 24 hours per day. While career personnel are working, apparatus is available for immediate response. After hours all calls are handled by volunteer personnel and there is a designated career staff member that serves as the duty officer and responds to emergency calls requiring an officer.

The mission of the JCFD is to protect life and property from fire, hazardous materials, and other perils, provide necessary basic life support services, and to preserve the quality of life for the citizens whom we protect.

The following is the organization chart of the JCFD. The District operates as a combination department with a mixture of career and volunteer personnel. The highlighted positions represent the career positions in the District.

JEFFERSON COUNTY FIRE DISTRICT #1



2. Physical Resources

The Fire District operates from two facilities, one in the City of Madras and the other in the City of Culver. The station in Madras is owned by the Fire District and the station in Culver is leased from the City of Culver. The tables below depict the stations and the assigned apparatus.

Madras Station **Facility Location:** 765 SE Fifth Street					
Description of Use	Serves as Headquarters and includes Administration, Fire Prevention, Training, with primary coverage of the City of Madras and surrounding area.				
Apparatus Space	Six drive-through bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	1721	2000	E-One	Type 1 Engine	3
	1722	1995	Pierce/Freightliner	Type 1 Engine	3
	1730	2008	Freightliner	Water Tender	1
	1740	2006	Ford F-550	Quick Attack	2
	1742	2009	Ford F-550	Quick Attack	2
	1744	1998	Stewart/Stevens	Type 4 Engine	2
	1750	1985	Pierce Arrow	Telesquirt	3
	1760	2000	E-One	Light Rescue	3
	1790	1991	Ford F-250	Utility	1
	1792	2014	Ford F-350	Utility	1
	1793	1994	Ford Van	Utility	1
	1794	2018	Chevrolet Tahoe	Command	1
	1795	2014	Ford F-150	Command	1

Culver Station **Facility Location:** 200 First Avenue					
Description of Use	Serves as the second station for the Fire District with primary coverage of the City of Culver and surrounding area. Station is a part of the Culver City Building.				
Apparatus Space	Five drive-through bays				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	1724	2000	E-One	Type 1 Engine	3
	1731	2006	Freightliner	Water Tender	1
	1741	2003	Ford F-350	Quick Attack	2
	1745	1971	6x6 Military Surplus	Type 6 Engine	2
	1746	1993	AMG 6x6	Type 6 Engine	2

The staffing shown in the tables represent the minimum number of personnel the apparatus should respond with to calls for service as the District utilizes volunteer personnel as a staffing model.

(1) Apparatus

Replacement of apparatus has been the topic of discussion on the national level for many years within the fire service. For many years the age of the apparatus was the driving factor for replacement. The common practice within the fire service was to replace a truck once it reached 20 years old. There are some that believe the Insurance Services Office (ISO) required apparatus to be replaced once it reached 20 years of age which is not true.

In 1987, the National Fire Protection Association (NFPA) promulgated the first edition of NFPA 1911 The Standard on Acceptance and Service Tests of Fire Department Pumping Apparatus and is now known as The Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles. This standard defines the minimum requirements for the inspection and testing of fire apparatus. As well, it provides guidance on the refurbishment and retirement of fire apparatus. In the past the trigger for replacement of apparatus was its age. According to NFPA 1911 safety should be the primary concern in the retirement decision for apparatus. Appendix D of this standard provides additional support for the replacement and retirement of apparatus. According to this section apparatus over 25 years old should be replaced as many safety features and improved functional capabilities are not available on the older apparatus.

The Fire District has a replacement plan for the apparatus. The table below outlines the District's plan which is based on age of the apparatus.

Fire District Replacement Plan	
Apparatus Type	Replacement Age
Type 1 Engines	30
Rescue/Quick Attack	15
Water Tenders	30
Type 4 & 6 Engines	15
Command and Utility	100,000 miles

Using the District's replacement plan, the following table displays the apparatus that should be replaced over the next seven years

Replacement by Age										
Year	Age	Description	Type	2019	2020	2021	2022	2023	2024	2025
1971	47	6x6 Military Surplus	Type 6 Engine	✓						
1985	33	Pierce Arrow	Telesquirt	✓						
1993	25	AMG 6x6	Type 6 Engine	✓						
1998	20	Stewart/Stevens	Type 4 Engine	✓						
2000	18	E-One	Light Rescue	✓						
2003	15	Ford F-350	Quick Attack	✓						
2006	12	Ford F-550	Quick Attack			✓				
2009	9	Ford F-550	Quick Attack						✓	
1995	23	Pierce/Freightliner	Type 1 Engine							✓
1991	27	Ford F-250	Utility							
1994	24	Ford Van	Utility							
1998	20	Ford Expedition	Utility							
2000	18	E-One	Type 1 Engine							
2000	18	E-One	Type 1 Engine							
2006	12	Freightliner	Water Tender							
2008	10	Freightliner	Water Tender							
2014	4	Ford F-150	Command							
2014	4	Ford F-350	Utility							

Based on the previous table and using age as the primary trigger for replacement, there are 6 apparatus that should be replaced in 2019. This does not include any staff vehicles or other smaller support vehicles in the fleet. The table below illustrates the potential cost to replace this apparatus.

Potential Replacement Cost			
Apparatus Type	Number to Replace	Lower Cost Range	Upper Cost Range
Type 4 Engine	1	$125,000	$175,000
Type 6 Engine	2	$200,000	$300,000
Telesquirt	1	$650,000	$800,000
Light Rescue / Quick Attack	2	$200,000	$325,000
Total Cost		**$1,175,000**	**$1,600,000**

The cost illustrated above is dependent on several factors including the manufacturer, configuration of the truck and any other needs of the department. The cost does not include any equipment that is normally carried on the truck.

(2) Apparatus Replacement Program

Using the age of apparatus is one method of determining when apparatus should be replaced. However, an effective apparatus replacement program will have benchmarks established to drive the replacement schedule. These benchmarks should establish a replacement guideline to categorize the various units and their target replacement date, definitions for the determination of the condition of the vehicle and other criteria to be used in the evaluation of the vehicle. The table below outlines a suggested set of life-cycle benchmarks to begin the process.

Life Cycle Anticipated Benchmarks

Vehicle Type	Anticipated Front Line Life Cycle	Anticipated Reserve Life Cycle	Anticipated Mileage
Staff Vehicle	7 - 10 years		85,000 - 100,000
Engines	10 years	3 to 5 years	
Aerials	15 years	3 to 5 years	

This establishes the expected life for purposes of depreciation and the funds that will to be available for the eventual replacement. This can be adjusted to fit the needs of any community based on finances and use of the apparatus.

The replacement guideline uses a point system to determine when the unit should be replaced. It utilizes a variety of factors to score the apparatus. The table on the following page identifies those factors and the recommended point system to use.

Replacement Guidelines

Factor	Points
Age	One point for each year of chronological age.
Mileage / Engine Hours	One point for each 10,000 miles or 1,000 engine hours.
Type of Service	Points are based on severity of service 5 points - Engine Company 3 Points - Aerial Ladders / Specialty Units 1 Point - Administrative Vehicles
Reliability	Points are based on the frequency a vehicle is in the garage for repair 5 points - Two or more times per month (average) 3 Points - Two times every three months (average) 1 point - Once every three months (average)
M & R Costs	Maintenance and repair costs on the total life of the vehicle, excluding accident damage. 5 points – M & R costs equal to or greater than original purchase price 4 points – M & R costs 75% to equal to the original purchase price. 3 points – M & R costs 50% to 75% of the original purchase price 2 points – M & R cost 20% to 50% of the original purchase price. 1 point – M & R costs 20% or less than original purchase price.
Condition	Consideration given to body condition, rust, interior condition, accident history, anticipated repairs, etc. 5 points - Poor Condition 4 points - Fair Condition 3 points - Good Condition 2 points - Very Good Condition 1 point - Excellent Condition

This system uses the major components typically considered in evaluating vehicles and then puts a numeric value to the vehicle. It can be adjusted to fit the local perspective. For example, if the maintenance costs are a more important factor then adjusting the percentage to the original cost will provide a higher weight to that category.

The table below outlines the total score and the expected outcome of that score.

Replacement Guideline Scoring

Point Range	Condition
Fewer than 18 points	Condition I - Excellent
18 to 22 points	Condition II - Good
23 to 27 points	Condition III - Qualifies for Replacement
28 points and above	Condition IV - Needs Immediate Consideration

Another component to this type of system is the collaboration between the Fire District and a Fleet Manager or Fleet Mechanic. Both should discuss the results of the survey to determine the needs of the apparatus in terms of mechanical issues. It is possible there is a unit or units that will need major repairs that would influence the decision to replace the apparatus.

The investment in fire apparatus is a significant endeavor for any department or district. Changes in the standards by which they are built and the performance standards by which they are tested continue to evolve and has resulted in rapidly increasing costs for fire apparatus. The Fire District may borrow the funds to purchase the apparatus or will have set funds aside based on the depreciation of the current apparatus and planned replacement schedule. Without an effective program for planned replacement of apparatus, the District could very easily and quickly find itself in a position of having to replace several units at once and relying on reserve apparatus in the event of critical apparatus failures.

Recommendation:

The Fire District should adopt a program for apparatus replacement that contains benchmarks and measurable components.

3. Financial Resources

This section will examine the financial resources available to the JCFD.

(1) Property Taxes

Ballot Measure 47 was passed in 1996 in the State of Oregon that reduced property taxes to the lesser of the 1994-1995 tax or the 1995-1996 tax minus 10% and limited future increases in assessed property values to 3% per year. In 1997 Ballot Measure 50 was passed to clarify language in the Ballot Measure 47. Essentially, the assessed value of property is limited to a 3% increase per year and fixes the property tax rate of a taxing district to its 1997-1998 rate.

A primary source of revenue for JCFD is through property tax assessment. The current rate for the JCFD is $1.1847 per $1,000 of assessed value or $118.47 for a property assessed at $100,000. Districts have constitutional and statutory limitations on the amount of taxes they can assess. Once a permanent tax rate limit is set, it cannot be changed by the District or its patrons. A District can only have one permanent rate limit.

(2) Consumer Fees and Permits

Unlike the emergency medical services, the collection of user fees is relatively new to the fire service. Permit fees, fire alarm response fees, out of district fees, and standby fees are part of the fee schedule for the fire service in the State of Oregon. Generally, these fees cover the cost of the service and in most instances only partially cover the cost. JCFD utilizes consumer fees as a part of their operation and the table on the next page illustrates the current fee structure.

Jefferson County Fire District #1 Fee Schedule		
Activity	**Fee/Citation**	**Notes/Comments**
Fire Inspection Fees		
Initial Fire Inspection	$0	
1st Re-Inspection, violations corrected	$0	
1st Re-Inspection, violations not corrected	$50	Fees are per violation
2nd Re-Inspection, violations not corrected	$100	
3rd Re-Inspection, violations not corrected	$200	
4th Re-Inspection, violations not corrected	$400	
After 4th Re-Inspection	Citation Issued on a per violation per day basis dating back to initial inspection.	Per Oregon Revised Code based on violation as listed in Oregon Fire Code or local ordinance.
Permits		
Residential Burn Permit	$25	per address
Commercial Burn Permit	$50	if not restricted by DEQ
Fireworks Display Permit	$50	Optional
Fireworks retail or storage (structure)	$50	Optional
Fireworks retail or storage (tent)	$50	Optional
Special Event - area up to 12,000 sq. ft.	$50	Optional
Special Event - area over 12,000 sq. ft.	$100	Optional
Pyrotechnics/Flaming Art Performance	$50	Optional
Standby / Response		
Fire/Rescue Standby Request by private for-profit companies, event, etc. (excluding ambulance service)	Full Reimbursement	Fees tied to Oregon Fire Service Mobilization Plan rates.
Vehicle Accident - Non-Resident	Full Reimbursement	
Response to out of control fire resulting from illegal burning or specialized fire suppression required due to burning of illegal material.	Full Reimbursement Option to issue citation	
False or Nuisance Alarm response after 2 responses in a six-month period.	$200 plus option to issue citation	
General Violation Fees		
Failure to obtain a permit or Failure to adhere to the conditions of the permit.	$200 Option to issue citation	
Burning in violation of Fire Code/Ordinance; typically, after 1 Notice of Violation Issued.	$200 Option to issue citation Option to notify DEQ	Follow ORS, take photographic evidence including address

The fee structure for JCFD is comprehensive and within the parameters of other similar jurisdictions. Clackamas Fire District uses the Oregon Fire Mobilization Plan for the basis of their fee structure as does JCFD. McMinnville fees for fireworks storage and vendors are $50 and for fireworks displays their fee is $200 per event. Portland fees are primarily tied to plan reviews and for others they charge by the hour for standby and special inspections. In Eugene the permit fees are generally for special events and are set at $240 for each type of permit.

The Oregon Fire Service Mobilization Plan is designed to mobilize resources to an incident beyond the capabilities of the local fire department. This plan is more designed to address those large regional incidents rather than a local incident, it does encourage the use of mutual aid agreements. As well, the plan does provide reimbursement rates for personnel and apparatus for these types of incidents. Many fire district and departments use this same reimbursement rate for their responses, as does JCFD. This reimbursement program should continue to be used as it provides a uniform rate throughout the state.

The table below provides a summary of the fund balance including operating revenues and expenditures.

JCFD #1 Fire District Fund Balance Summary							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Beginning Net Working Capital	$552,850	$580,274	$1,026,565	$666,174	$1,101,544	$985,860	$1,094,516
Current Revenues	$846,450	$906,508	$940,589	$1,193,022	$1,057,565	$1,140,663	$1,520,000
Fund Transfers IN	$0	$66,109	$18,287	$148,796	$0	$0	$0
Loan Proceeds	$0	$29,564	$0	$200,000	$0	$0	$0
Sale of Fixed Assets	$1,485	$356,445	$9,189	$810	$15,438	$5,000	$1,500
Operating Expenditures	$789,741	$800,145	$818,807	$904,496	$973,390	$966,885	$1,093,400
Capital and Debt Service	$30,770	$112,190	$409,649	$202,762	$215,297	$70,122	$427,000
Fund Transfers OUT	$0	$0	$100,000	$0	$0	$0	$0
Ending Net Working Capital	$580,274	$1,026,565	$666,174	$1,101,544	$985,860	$1,094,516	$1,095,616
Changes to Net Working Capital	**$27,424**	**$446,291**	**($360,391)**	**$435,370**	**($115,684)**	**$108,656**	**$1,100**

The table below displays the revenues for the Fire District for the past six (6) years along with the FY19 budget.

JCFD #1 Fire District Revenue							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Operating Revenues							
Previously Levied Taxes	$27,632	$39,520	$32,403	$28,980	$24,726	$24,661	$35,000
Interest	$3,964	$3,846	$988	$90	$1,786	$13,949	$6,000
Out of District Alarms	$11,723	$817	$2,064	$3,679	$0	$1,720	$3,500
Miscellaneous and Street Signs	$7,357	$25,376	$19,671	$46,012	$25,751	$26,658	$10,000
Contractual Services	$120,921	$115,405	$123,343	$144,207	$136,665	$145,900	$120,000
Donations/Local Grants	$5,241	$0	$42,283	$152,893	$100	$5,832	$500
Rents	$0	$0	$0	$3,600	$5,300	$770	$0
Grants	$0	$39,910	$0	$44,425	$59,219	$83,878	$472,000
Circle Track	$0	$0	$0	$1,080	$0	$1,090	$3,000
Taxes Collected in Year Levied	$669,612	$681,634	$719,837	$768,056	$804,018	$836,205	$870,000
	$846,450	**$906,508**	**$940,589**	**$1,193,022**	**$1,057,565**	**$1,140,663**	**$1,520,000**

The table below illustrates the change in the line items over the past six years.

JCFD Change in Revenue					
	FY 2013 Actual	FY2018 Actual	Six Year Change	Pct. Change	Avg. Annual Change
Operating Revenues					
Previously Levied Taxes	$27,632	$24,661	($2,971)	-10.8%	-1.8%
Interest	$3,964	$13,949	$9,985	251.9%	42.0%
Out of District Alarms	$11,723	$1,720	($10,003)	-85.3%	-14.2%
Miscellaneous and Street Signs	$7,357	$26,658	$19,301	262.3%	43.7%
Contractual Services	$120,921	$145,900	$24,979	20.7%	3.4%
Donations	$5,241	$5,832	$591	11.3%	1.9%
Rents	$0	$770	$770		
Grants	$0	$83,878	$83,878		
Circle Track	$0	$1,090	$1,090		
Taxes Collected in Year Levied	$669,612	$836,205	$166,593	24.9%	4.1%
Total Revenues	**$846,450**	**$1,140,663**	**$294,213**	**34.8%**	**5.8%**

The table below displays the expenditures for the past six (6) years along with the current budget.

JCFD #1 Fire District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Personnel Services							
Salaries	$236,283	$248,297	$257,357	$318,582	$317,002	$268,325	$284,000
Call Pay	$11,801	$12,000	$21,540	$21,076	$22,458	$32,057	$35,000
Compensated Absences/Overtime	$6,512	$158	($4,525)	$10,888	($4,679)	$13,215	$35,000
Overtime	$12,783	$13,357	$5,190	$0	$0	$0	$0
Workers Comp	$11,393	$10,661	$6,244	$6,202	$15,944	$9,600	$20,000
Health Insurance	$54,702	$62,255	$73,692	$54,989	$78,009	$65,562	$85,000
Retirement	$38,038	$44,936	$41,224	$43,935	$58,022	$62,679	$73,000
Payroll Taxes	$30,907	$29,967	$32,190	$34,421	$35,836	$39,132	$55,000
Student Scholarships	$53,303	$43,330	$56,229	$26,641	$25,270	$0	$0
Support Services FF	$54,098	$54,102	$58,635	$24,345	$45,012	$46,440	$49,000

JCFD #1 Fire District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Grant Funded Position	$0	$0	$0	$25,106	$50,727	$52,791	$54,000
	$509,820	**$519,063**	**$547,776**	**$566,185**	**$643,601**	**$589,801**	**$690,000**
Materials & Services							
Legal Services	$2,874	$4,553	$5,212	$4,138	$967	$1,820	$10,000
Audit	$10,500	$9,350	$10,078	$11,250	$10,850	$10,450	$12,000
Bookkeeping and Professional Fees	$0	$0	$0	$0	$5,825	$11,765	
Volunteer Incentives	$19,701	$29,710	$32,037	$44,299	$31,417	$44,891	$46,000
Operating Supplies	$27,025	$8,865	$11,565	$13,888	$14,261	$11,880	$16,000
Uniforms	$5,168	$4,618	$2,372	$8,613	$3,492	$6,102	$8,000
Dues	$3,194	$3,229	$4,065	$3,573	$5,528	$3,132	$3,000
Gas and Oil	$19,970	$22,690	$17,565	$11,157	$10,997	$16,146	$22,000
Building Maintenance	$13,963	$14,853	$20,770	$13,122	$20,828	$25,137	$20,000
Fire Equipment Maintenance	$16,440	$7,164	$6,003	$8,188	$1,370	$4,776	$8,000
Respiratory Equipment Maintenance	$0	$3,422	$4,866	$1,931	$734	$1,906	$4,000
Extrication Equipment Maintenance	$0	$2,000	$1,475	$1,653	$1,600	$2,069	$2,000
Equipment Purchases	$0	$0	$11,744	$49,483	$37,121	$52,108	$25,000
Apparatus Maintenance	$281	$32,862	$8,670	$22,872	$32,095	$11,368	$30,000
Shop Supplies	$1,266	$2,638	$2,760	$2,252	$4,446	$301	$2,500
Office Equipment Repair	$1,319	$1,439	$2,161	$460	$0	$0	$2,000
Equipment Rental	$1,987	$2,214	$2,372	$2,483	$2,380	$2,214	$2,400
Utilities	$28,415	$27,558	$25,460	$27,543	$26,948	$28,891	$29,000
Utilities - Culver	$13,654	$13,249	$10,014	$9,659	$13,597	$13,091	$15,000
Culver Station Lease	$14,218	$14,765	$14,765	$14,765	$14,665	$17,238	$18,000
Liability Insurance	$19,279	$20,851	$21,255	$21,222	$21,171	$23,558	$25,000
Office Supplies	$5,597	$1,848	$1,857	$2,942	$4,405	$1,972	$2,000
Elections	$809	$0	$2,169	$0	$1,069	$0	$1,000
Dispatching	$27,965	$18,912	$27,106	$34,000	$36,679	$37,963	$41,000
Training	$9,854	$7,943	$7,055	$9,717	$18,251	$12,009	$12,000
Fire Prevention	$1,505	$1,045	$2,724	$4,493	$1,568	$376	$3,000
Public Education	$0	$0	$0	$0	$611	$0	$0
Recruitment Expense	$0	$811	$1,414	$1,746	$699	$5,162	$1,500
Medical Supplies	$2,207	$1,573	$2,606	$2,220	$2,229	$3,022	$3,000

JCFD #1 Fire District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Student Scholarships	$0	$0	$0	$0	$0	$27,737	$32,000
Addressing Signs	$212	$455	$0	$0	$990	$0	$0
SAFER Grant Supplies	$0	$0	$0	$0	$2,846	$0	$0
Contract Services	$32,518	$22,465	$10,891	$4,700	$0	$0	$8,000
NFPA Medical/Physicals/Recruit/Retent.	$0	$0	$0	$5,942	$150	$0	$0
	$279,921	**$281,082**	**$271,031**	**$338,311**	**$329,789**	**$377,084**	**$403,400**
Total Operating Expenditures	$789,741	$800,145	$818,807	$904,496	$973,390	$966,885	$1,093,400
Capital Outlay							
Capital Equipment	$29,497	$108,460	$382,022	$199,262	$189,700	$44,836	$399,000
Debt Services	$1,273	$3,730	$27,627	$3,500	$25,597	$25,286	$28,000
	$30,770	**$112,190**	**$409,649**	**$202,762**	**$215,297**	**$70,122**	**$427,000**
Total Expenditures	**$820,511**	**$912,335**	**$1,228,456**	**$1,107,258**	**$1,188,687**	**$1,037,007**	**$1,520,400**

The table below illustrates the change in the expenditures over the past six (6) years.

JCFD Change in Expenditures					
	FY 2013 Actual	FY2018 Actual	Six Year Change	Pct. Change	Avg. Annual Change
Operating Expenditures					
Salaries	$236,283	$268,325	$32,042	13.6%	2.3%
Call Pay	$11,801	$32,057	$20,256	171.6%	28.6%
Compensated Absences/Overtime	$6,512	$13,215	$6,703	102.9%	17.2%
Overtime	$12,783	$0	($12,783)	-100.0%	-16.7%
Workers Comp	$11,393	$9,600	($1,793)	-15.7%	-2.6%
Health Insurance	$54,702	$65,562	$10,860	19.9%	3.3%
Retirement	$38,038	$62,679	$24,641	64.8%	10.8%
Payroll Taxes	$30,907	$39,132	$8,225	26.6%	4.4%
Student Scholarships	$53,303	$0	($53,303)	-100.0%	-16.7%
Support Services FF	$54,098	$46,440	($7,658)	-14.2%	-2.4%
Grant Funded Position	$0	$52,791	$52,791		
Total Personnel Services	**$509,820**	**$589,801**	**$79,981**	**15.7%**	**2.6%**
Materials and Services	**$279,921**	**$377,084**	**$97,163**	**34.7%**	**5.8%**
Total Operating Expenditures	**$789,741**	**$966,885**	**$177,144**	**22.4%**	**3.7%**

The average annual increase in the revenues was 5.8% with the street sign program providing a larger increase. Donations and out of district alarms have declined over this period. The out of district alarms uses a fee schedule that is set by the State so that it remains uniform throughout the State. Increases in the Property Tax line item are averaging 4.1% per year for the past six years indicating about 1.1% growth as the state statutes only allow a 3% increase through property valuation increases.

On the expenditures the average annual increase was 3.7%. Retirement increased an average of 10.8% and the call pay increased an average of 28.6%. There is a reduction in the overtime line item of 16.7% and is largely due to a change in accounting procedures and budgeting. Overtime was combined with the Call Pay line item which is the reason for the large increase in that line item. In the materials and supplies category the largest increases are for vehicle maintenance, building maintenance, and audit fees.

The table below projects the revenues for the next seven years. Ballot Measures 47 and 50 limit the increase of assessed property valuation to 3% per year. As a result, the projection uses this 3% as the annual increase for the property taxes.

JCFD Revenue Projection									
Annual Change	Line Item	FY 19 Budget	FY 2020	FY 2021	FY2022	FY2023	FY2024	FY2025	FY2026
-1.8%	Previously Levied Taxes	$35,000	$34,373	$33,757	$33,152	$32,558	$31,974	$31,401	$30,839
-14.2%	Out of District Alarms	$3,500	$3,002	$2,575	$2,209	$1,895	$1,625	$1,394	$1,196
	Miscellaneous and Street Signs	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
3.4%	Contractual Services	$120,000	$124,131	$128,405	$132,826	$137,399	$142,130	$147,023	$152,085
3.0%	Taxes Collected in Year Levied	$870,000	$896,100	$922,983	$950,672	$979,193	$1,008,568	$1,038,825	$1,069,990
	Sustainable Revenues	**$1,038,500**	**$1,067,607**	**$1,097,720**	**$1,128,859**	**$1,161,044**	**$1,194,298**	**$1,228,644**	**$1,264,110**
	Interest	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
	Donations	$500	$500	$500	$500	$500	$500	$500	$500
	Grants	$472,000	$37,900	$37,900	$37,900	$37,900	$37,900	$37,900	$37,900
	Circle Track	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
	Unsustainable Revenues	**$481,500**	**$47,400**	**$47,400**	**$47,400**	**$47,400**	**$47,400**	**$47,400**	**$47,400**
	Total Revenues	**$1,520,000**	**$1,115,007**	**$1,145,120**	**$1,176,259**	**$1,208,444**	**$1,241,698**	**$1,276,044**	**$1,311,510**

Out of District Alarms has been declining over the past five years at a rate of 14.2% per year and that percentage was used in this revenue projection. As well, the Contractual Services has been increasing at rate of 3.4% per year. In the lower section of the table there are line items that are identified as unsustainable revenues. While these line items are revenues for the District, they are not necessarily reliable or may be designated for a specific purpose such as grants. These items are shown in the projection based on the FY2019 budget and have no increases. The grants line item is an average of the grants received from 2013 through 2018 or $37,900.

The table below projects the expenditures for the next seven years. For purposes of the projections, the annual change used is the percentage that Jefferson County anticipates the increases to be for the next seven years.

JCFD Expenditure Projection									
Annual Change	Line Item	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries	$284,000	$289,680	$295,474	$301,383	$307,411	$313,559	$319,830	$326,227
2.0%	Call Pay	$35,000	$35,700	$36,414	$37,142	$37,885	$38,643	$39,416	$40,204
2.0%	Compensated Absences/Overtime	$35,000	$35,700	$36,414	$37,142	$37,885	$38,643	$39,416	$40,204
	Workers Comp	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
5.0%	Health Insurance	$85,000	$89,250	$93,713	$98,398	$103,318	$108,484	$113,908	$119,604
10.0%	Retirement	$73,000	$80,300	$88,330	$97,163	$106,879	$117,567	$129,324	$142,256
2.0%	Payroll Taxes	$55,000	$56,100	$57,222	$58,366	$59,534	$60,724	$61,939	$63,178
2.0%	Support Services FF	$49,000	$49,980	$50,980	$51,999	$53,039	$54,100	$55,182	$56,286
2.0%	Grant Funded Position	$54,000	$55,080	$56,182	$57,305	$58,451	$59,620	$60,813	$62,029
	Total Personnel Services	**$690,000**	**$711,790**	**$734,727**	**$758,900**	**$784,403**	**$811,341**	**$839,827**	**$869,987**
3.0%	Materials and Services	$403,400	$415,502	$427,967	$440,806	$454,030	$467,651	$481,681	$496,131
	Total Operating Expenditures	**$1,093,400**	**$1,127,292**	**$1,162,694**	**$1,199,706**	**$1,238,433**	**$1,278,992**	**$1,321,508**	**$1,366,118**
	Debt Service	$28,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000
	Capital Improvements	$399,000	$0	$0	$0	$0	$0	$0	$0
	Total Expenditures	**$1,520,400**	**$1,152,292**	**$1,187,694**	**$1,224,706**	**$1,263,433**	**$1,303,992**	**$1,346,508**	**$1,391,118**

There is no projection for capital improvements in this table.

The table below illustrates the revenues and expenditures based on the projections and provides an overall view of the financial health.

JCFD #1 Fire District Fund Balance Summary Projection								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,094,516	$1,095,616	$899,830	$666,256	$426,810	$180,821	($72,473)	($333,936)
Sustainable Revenues	$1,038,500	$1,067,607	$1,097,720	$1,128,859	$1,161,044	$1,194,298	$1,228,644	$1,264,110
Unsustainable Revenues	$481,500	$47,400	$47,400	$47,400	$47,400	$47,400	$47,400	$47,400
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Operating Expenditures	$1,093,400	$1,127,292	$1,162,694	$1,199,706	$1,238,433	$1,278,992	$1,321,508	$1,366,118
Capital and Debt Service	$427,000	$185,000	$217,500	$217,500	$217,500	$217,500	$217,500	$217,500
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,095,616	$899,830	$666,256	$426,810	$180,821	($72,473)	($333,936)	($604,545)
Recommended Ending Fund Balance	$273,350	$281,823	$290,674	$299,926	$309,608	$319,748	$330,377	$341,530
Changes to Net Working Capital	**$1,100**	**($195,785)**	**($233,574)**	**($239,446)**	**($245,988)**	**($253,294)**	**($261,464)**	**($270,608)**

Sustainable revenues represent those revenues that are consistent from year to year such as property taxes and contractual services. Line items such as grants, interest, and donations are variable in nature and do provide a consistent source of revenue. The ending fund balance or reserve fund represents unencumbered funds the organization can use for emergency repairs or to sustain operations if a revenue source becomes unavailable. The Financial Accounting Standards Board is responsible for establishing Generally Accepted Accounting Principles and they indicate there no single method that is correct for all non-profit organizations. However, the group suggests the appropriate amount for operating reserves is 25% of the annual expenses. In the table above, the recommended ending balance is 25% of the current years' budgeted expenses. The Changes to the Net Working Capital represents the net change in the fund balance for that year. For example, for FY 2020 there is a net negative change of $195,785 to the projected fund balance. As was noted previously, projections indicate the fund balance will continue to decline over the next seven years.

This table assumes apparatus is replaced according to the needs previously outlined. There is an immediate need to replace 6 apparatus at a cost of $1,600,000. Amortized over 10 years the cost would be $160,000 per year. In 2021 another replacement will be needed at a cost of $325,000 amortized over 10 years adds $32,500 to the capital improvements. Then again in 2024 another replacement is scheduled adding another $32,500 to the capital improvement plan. In 2025 a Type 1 Engine will need to be replaced at a cost between $600,000 to $750,000 depending on the manufacturer and configuration. With the addition of the capital improvements needed, the ending fund balance is nearly depleted in three years. As well the operating expenses continue to outpace the revenues. The table below outlines the apparatus that will need to be replaced based on the age of the apparatus.

Replacement by Age									
Year	Description	Type	2019	2020	2021	2022	2023	2024	2025
1971	6x6 Military Surplus	Type 6 Engine	✓						
1985	Pierce Arrow	Telesquirt	✓						
1993	AMG 6x6	Type 6 Engine	✓						
1998	Stewart/Stevens	Type 4 Engine	✓						
2000	E-One	Light Rescue	✓						
2003	Ford F-350	Quick Attack	✓						
2006	Ford F-550	Quick Attack			✓				
2009	Ford F-550	Quick Attack						✓	
1995	Pierce/Freightliner	Type 1 Engine							✓

Financially the Fire District needs an additional source of sustainable revenue. The current tax rate for the Fire District is permanently set at $1.1847 per $1,000 of assessed value. This rate cannot increase, and the assessed value is only permitted to increase at an annual rate of 3%. One option is to request approval of a local option tax. This tax is permitted by law and is limited to 5 years for operations and 10 years for capital construction purposes. The tax must be approved by the voters and may be renewed with the approval of the voters.

The valuation used to compute the property tax in the Fire District is $796,702,070 as of October 4, 2018 and represents the valuation used for 2019. The assumption used in the revenue projections is an increase of 3% per year. Extending this to FY2020 would have the estimated assessed value at $820,603,132. Adding a local option tax of $1.000 per $1,000 of assessed valuation would add approximately $820,603 in the first year, FY2020, of the tax and collected in FY2021. For perspective, this would add about $100 a year to a property valued at $100,000.

The table below illustrates the change in financial condition with the addition of the local option tax.

JCFD #1 Fire District Fund Balance Summary Projection								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,094,516	$1,095,616	$899,830	$1,486,859	$2,092,634	$2,717,223	$3,360,624	$4,022,756
Sustainable Revenues	$1,038,500	$1,067,607	$1,097,720	$1,128,859	$1,161,044	$1,194,298	$1,228,644	$1,264,110
Local Option Tax	$0	$0	$820,603	$845,221	$870,578	$896,695	$923,596	$951,304
Unsustainable Revenues	$481,500	$47,400	$47,400	$47,400	$47,400	$47,400	$47,400	$47,400
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Operating Expenditures	$1,093,400	$1,127,292	$1,162,694	$1,199,706	$1,238,433	$1,278,992	$1,321,508	$1,366,118
Capital and Debt Service	$427,000	$185,000	$217,500	$217,500	$217,500	$217,500	$217,500	$217,500
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,095,616	$899,830	$1,486,859	$2,092,634	$2,717,223	$3,360,624	$4,022,756	$4,703,452
Recommended Ending Fund Balance	$273,350	$281,823	$290,674	$299,926	$309,608	$319,748	$330,377	$341,530
Changes to Net Working Capital	**$1,100**	**($195,785)**	**$587,029**	**$605,775**	**$624,589**	**$643,401**	**$662,132**	**$680,695**

The addition of the local option tax provides immediate improvement as the ending fund balance continues in a positive trend. The capital improvement items of needed apparatus replacement are included in this projection as they were in the previous table.

Recommendation:

The Jefferson County Fire District should seek voter approval for a Local Option Tax of $1.000 per $1,000 assessed valuation to improve the sustainable revenues of the District.

5 Independent EMS District

This chapter presents the projects team's analysis of the Jefferson County Emergency Medical Services District remaining as an independent EMS district.

1. Organization Overview

The Jefferson County EMS District (JCEMS) is organized as a Special Healthcare District, which operates under Oregon Revised Statute Chapter 440. The District is governed by a five (5) member Board. The Board hires a Chief to manage the day to day operations of the District. The District contracts with a physician to act as the Medical Director.

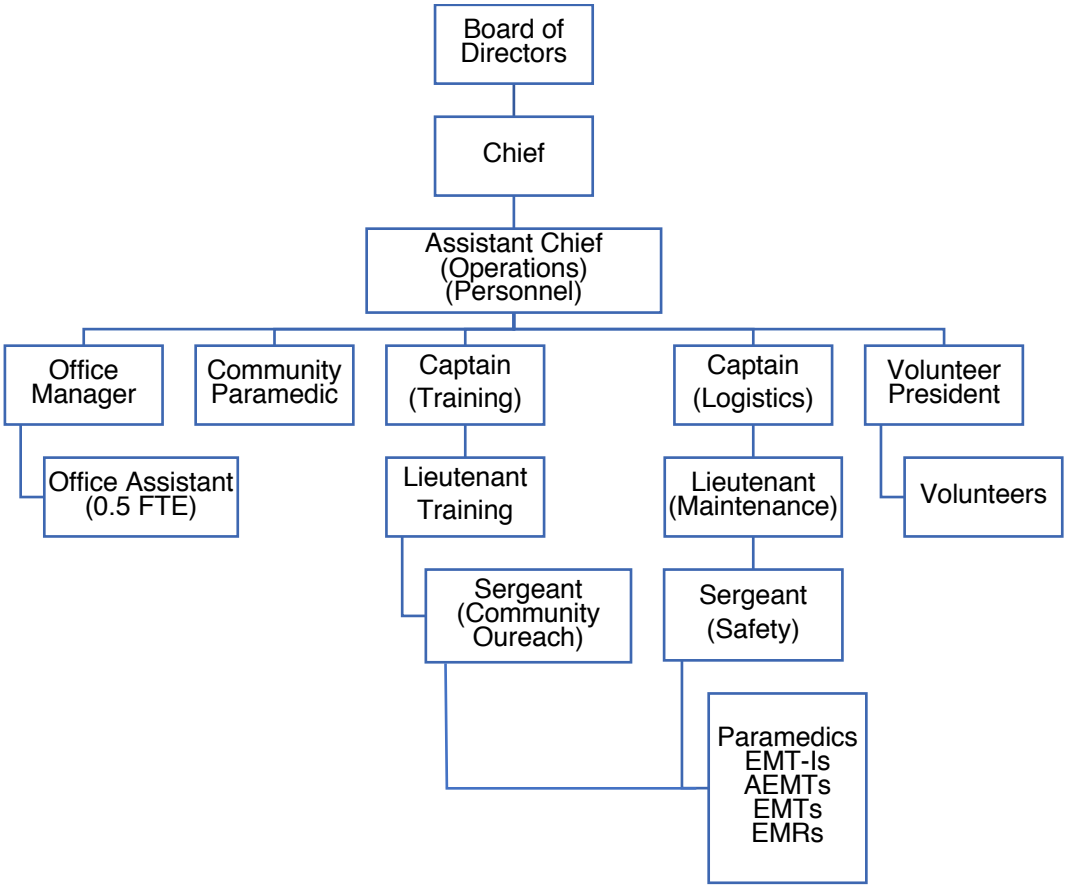
The District currently employs thirteen and one half (13.5) full time equivalents that operate from the single station located in Madras. These personnel include the Chief, Office Manager, Office Assistant/EMT (part-time), two (2) Captains, two (2) Lieutenants, two (2) Sergeants, one (1) Community Paramedic (grant funded), and two (2) EMT's, Staffing also includes 10 part-time EMT's and Paramedics to fill two (2) full-time equivalents (FTE). The District covers approximately 1,200 square miles that includes a population of approximately 16,000 residents. Also included in the response area is an area of Wasco County in the southeastern part of that county. Antelope and the Washington Family Ranch.

The EMS District operates 24 hours per day and staffs two (2) ambulances at all times. Personnel work two days on followed by three days off. The schedule is 12 hours on duty, followed by 12 hours on standby. A third ambulance is available Monday through Friday as a backup as needed. Volunteer personnel staff an ambulance for EMS standby events.

The mission of the JCEMS is to respond, treat and transport all equally with compassion and respect during their medical emergencies; and to promote safety and encourage good health.

The following organizational chart of the JCEMS. The District operates as a combination department with a mixture of career and volunteer personnel. The EMS District provides emergency medical response and transportation, non-emergency inter-facility transportation, public education programs to the communities in their service area.

JEFFERSON COUNTY EMS DISTRICT



2. Physical Resources

The EMS District operates from a single facility in the City of Madras and uses a second facility in the City of Culver for the storage of a reserve ambulance. The station in Madras is owned by the EMS District and the apparatus bay in Culver is leased from the City of Culver. The apparatus type indicates ALS (advanced life support) and BLS (basic life support) equipped vehicles. The tables below depict the stations and the assigned apparatus.

Madras Station **Facility Location:** 360 SW Culver Highway					
Description of Use	The single station of the EMS District serves as its main offices, apparatus bays and living quarters				
Apparatus Space	Three bays capable of holding four ambulances				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	2173	2016	Dodge D3500 / Braun	ALS Ambulance	2
	2174	2016	Dodge D3500 / Braun	ALS Ambulance	2
	2172	2010	GMC G3500 / Braun	ALS Ambulance	2
	2170	2002	Ford E350 / Horton	BLS Ambulance	2
	2191	2017	Ford Escape	Community Paramedic	1

Culver Station **Facility Location:** 200 First Avenue					
Description of Use	A single leased bay at this facility for the storage of one reserve ambulance				
Apparatus Space	Single leased bay.				
Assigned Apparatus	Unit ID	Year	Description	Type	Staffing
	2171	2010	GMC G3500 / Braun	BLS Ambulance	

Two advanced life support (ALS) ambulances are staffed 24 hours a day 7 days a week as shown in the tables above. A community paramedic uses the Ford Escape to visit patients during the week. The third ALS ambulance is used if a third crew is needed and available. Both BLS ambulances are staffed by volunteers and are primarily used for special events such as rodeos and circel track races.

(1) Apparatus

As noted previously the replacement of apparatus has been the topic of discussion on the national level for many years within the emergency services. The National Fire Protection Association (NFPA) and ISO has addressed the fire apparatus replacement for many

years and most departments use age as the primary factor. Ambulances are somewhat different as their usage is higher than fire apparatus resulting in higher mileage rates and potentially more maintenance issues.

(2) Apparatus Replacement Program

The JCEMS does not have a replacement program in place. However, the fleet is relatively new with the two oldest ambulances at seven years of age. Following the example in the previous section establishing benchmarks for replacement allows the EMS District to have a formal plan for the scheduled replacement of their fleet. In general terms, the life expectancy of an ambulance is 8 to 12 years depending on the type of chassis and the use of the apparatus. This establishes the expected life for purposes of depreciation and the funds that will to be available for the eventual replacement.

The replacement guideline uses a point system to determine when the unit should be replaced. It utilizes a variety of factors to score the apparatus. The table on the following page identifies those factors and the recommended point system to use.

Replacement Guidelines	
Factor	Points
Age	One point for each year of chronological age.
Mileage / Engine Hours	One point for each 10,000 miles or 1,000 engine hours.
Type of Vehicle	Points are based on Chassis Type 5 points - Type III (Van style chassis) 3 Points - Type II (Van, Sprinter or Transit Style) 2 points - Type I (Pickup truck style) 1 Point - Type I (Medium or Heavy-Duty Chassis)
Reliability	Points are based on the frequency a vehicle is in the garage for repair 5 points - Two or more times per month (average) 3 Points - Two times every three months (average) 1 point - Once every three months (average)
M & R Costs	Maintenance and repair costs on the total life of the vehicle, excluding accident damage. 5 points - M&R costs equal to or greater than original purchase price 4 points - M&R costs 75% to equal to the original purchase price. 3 points - M&R costs 50% to 75% of the original purchase price 2 points - M&R cost 20% to 50% of the original purchase price. 1 point - M&R costs 20% or less than original purchase price.
Condition	Consideration given to body condition, rust, interior condition, accident history, anticipated repairs, etc. 5 points - Poor Condition 4 points - Fair Condition 3 points - Good Condition 2 points - Very Good Condition 1 point - Excellent Condition

This system uses the major components typically considered in evaluating vehicles and then puts a numeric value to the vehicle. It can be adjusted to fit the local perspective. For example, if the reliability is a more important factor then adjusting the number of times a vehicle is unavailable will provide a higher weight to that category.

The table below outlines the total score and the expected outcome of that score.

Replacement Guideline Scoring

Point Range	Condition
Fewer than 18 points	Condition I – Excellent
18 to 22 points	Condition II – Good
23 to 27 points	Condition III - Qualifies for Replacement
28 points and above	Condition IV - Needs Immediate Consideration

Another component to this type of system is the collaboration between the EMS District and the Fleet Mechanic. Both should discuss the results of the survey to determine the needs of the apparatus in terms of mechanical issues. It is possible there is a unit or units that will need major repairs that would influence the decision to replace the apparatus.

The investment in ambulances is a significant endeavor for the district and as previously noted the JCEMS does not have a formal apparatus replacement program. Changes in the standards by which these vehicles are built and the performance standards by which they are tested continue to evolve and has resulted in rapidly increasing costs for ambulances. The EMS District may borrow the funds to purchase the apparatus or will have set funds aside based on the depreciation of the current apparatus and planned replacement schedule. Without an effective program for planned replacement of apparatus, the District could very easily and quickly find itself in a position of having to replace several units at once and relying on reserve apparatus in the event of critical vehicle failures. A replacement program will allow the district to plan for the eventual replacement and the mechanism to fund the endeavor.

Recommendation:

The EMS District should adopt a program for ambulance replacement that contains benchmarks and measurable components.

3. Financial Resources

This section will examine the financial resources available to the JCEMS.

(1) Consumer Fees and Permits

In the emergency medical services arena user fees are typically tied to transportation of the sick and injured with some fees based on the care provided such advanced life

support versus basic life support. Health insurance generally provide for the use of emergency medical services in the group and individual policies. Medicare and Medicaid have set charges for transportation and typically do not cover the full cost of providing the services to the residents. The current Medicare and Medicaid fee schedule has what is referred to as the "super-rural" increase. This allows the fee schedule to increase by 22.6% in the super-rural areas such as Jefferson County. However, JCEMS reports the Medicare amount was lowered by $85 for these advanced life support calls. Acceptance of Medicare and Medicaid payments precludes the JCEMS from seeking the remaining balance from the recipient meaning the JCEMS accepts the Medicare and Medicaid payment as full payment for services rendered. JCEMS reports that about 75% of the calls for emergency medical services are Medicare and Medicaid. Additionally, according to JCEMS the interfacility transfers are not guaranteed pay as Medicare may decline and certain call types are not reimbursed by the hospital. The table below illustrates the current fee schedule the JCEMS.

Jefferson County Emergency Medical Service		
Description	**Charge**	
General Services		
Blood Draw	$150	
Mileage	$25	per mile
ALS Non-Emergency	$1,400	
ALS Emergency	$1,400	
BLS Non-Emergency	$1,050	
BLS Emergency	$1,050	
ALS 2	$1,650	
Treatment/Non-Transport	$250	
Non-Transport	$250	
Blood Draw (JCSO)	$125	
Hospice Services		
Mileage	$8	per mile
BLS Hospice Transport	$100	
Specialty Services		
Specialty Care Transport	$3,000	
Specialty Mileage	$25	per mile

These fees represent the fees charged by the JCEMS and are not to be confused with the Medicare and Medicaid fees which are typically lower.

(2) Financial Analysis

This section will examine the financial history and provide a projection for seven years.

The table below provides a summary of the fund balance including operating revenues and expenditures.

JCEMS District Fund Balance Summary							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Beginning Net Working Capital	$576,626	$657,161	$575,954	$629,226	$976,553	$456,275	$396,635
Current Revenues	$846,368	$841,676	$992,018	$1,166,244	$1,154,143	$1,333,485	$1,230,604
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$370,000	$0	$0	$0
Sale of Fixed Assets	$0	$438	$1,458	$546	$4,500	$848	$840
Operating Expenditures	$723,077	$806,331	$895,910	$1,117,277	$1,221,451	$1,266,639	$1,141,958
Capital and Debt Service	$42,756	$116,990	$44,294	$72,186	$457,470	$127,334	$145,122
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$657,161	$575,954	$629,226	$976,553	$456,275	$396,635	$341,000
Changes to Net Working Capital	**$80,535**	**($81,207)**	**$53,272**	**$347,327**	**($520,278)**	**($59,640)**	**($55,636)**

The table below displays the revenues for the EMS District for the past six (6) years along with the FY19 budget.

JCEMS District Revenue							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Operating Revenues							
Interest Earned	$6,104	$8,012	$3,609	$3,704	$2,281	$951	$790
User Fees (Net)	$783,275	$795,162	$951,988	$1,118,080	$1,107,085	$1,124,764	$1,096,851
Pro Med Sales	$31,395	$30,665	$29,550	$27,440	$24,606	$18,330	$20,000
Refunds Received	$1,700	$6,992	$4,762	$4,779	$4,093	$7,923	$7,923
Grants Received	$20,069	$0	$600	$0	$11,500	$5,267	$0
Community Paramedic	$0	$0	$0	$0	$0	$139,860	$100,000
Eclipse Income	$0	$0	$0	$0	$0	$30,000	$0
CPR/ACLS Training	$0	$0	$0	$4,108	$558	$1,036	$0
Uncategorized Income	$3,825	$845	$1,509	$8,133	$4,020	$5,354	$5,040
	$846,368	**$841,676**	**$992,018**	**$1,166,244**	**$1,154,143**	**$1,333,485**	**$1,230,604**

The table below illustrates the change in the line items over the past six years.

JCEMS Change in Revenue					
	FY 2013 Actual	FY2018 Actual	Six Year Change	Pct. Change	Avg. Annual Change
Operating Revenues					
User Fees (net)	$783,275	$1,124,764	$341,489	43.6%	7.3%
Pro Med Sales	$31,395	$18,330	($13,065)	-41.6%	-6.9%
Refunds Received	$1,700	$7,923	$6,223	366.1%	61.0%
Interest Earned	$6,104	$951	($5,153)	-84.4%	-14.1%
Grants	$20,069	$5,267	($14,802)	-73.8%	-12.3%
Community Paramedic	$0	$139,860	$139,860		
CPR/ACLS Training	$0	$1,036	$1,036		
Eclipse Income	$0	$30,000	$30,000		
Uncategorized Income	$3,825	$5,354	$1,529	40.0%	6.7%
Total Revenues	**$846,368**	**$1,333,485**	**$487,117**	**57.6%**	**9.6%**

The table below displays the expenditures for the past six (6) years along with the FY 19 budget.

JCEMS District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Personnel Services							
Salaries and Wages	$410,214	$438,296	$460,848	$604,139	$665,250	$555,132	$541,620
Community Paramedic	$0	$0	$0	$0	$0	$0	$64,500
Payroll Taxes	$14,039	$14,237	$22,181	$19,009	$16,089	$14,411	$40,000
Payroll Taxes - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$2,200
Worker's Comp. (SAIF)	$22,822	$9,403	$17,217	$28,445	$19,747	$27,231	$23,000
State Unemployment (SUIOR)	$6,026	$5,888	$7,030	$11,956	$14,846	$12,738	$0
Retirement	$30,808	$47,470	$49,154	$58,552	$101,975	$88,993	$79,371
Retirement - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$7,404

JCEMS District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Health Insurance	$104,032	$123,820	$132,944	$157,017	$163,178	$169,865	$125,522
Health Insurance - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$13,748
Dental	$0	$0	$0	$0	$0	$0	$4,000
Dental - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$2,000
Disability - Comm. Paramedic	$0	$0	$0	$0	$0	$0	$340
Life. S/T Disability	$0	$0	$0	$0	$0	$0	$2,960
	$587,941	**$639,114**	**$689,374**	**$879,118**	**$981,085**	**$868,370**	**$906,665**
Materials and Services							
Grant Expenses	$0	$0	$0	$1,639	$11,639	$93,262	$0
Bank Fees	$0	$0	$0	$0	$2,216	$1,150	$0
Bond Fees	$0	$0	$0	$18,166	$0	$0	$0
First Aid/CPR/ACLS/Stop the Bleed	$0	$0	$0	$0	$0	$0	$5,100
Credit Card Fees	$0	$0	$0	$0	$0	$0	$1,500
Patient Care Supplies	$13,065	$25,423	$31,332	$37,591	$50,208	$45,723	$35,000
Office Supplies	$5,364	$9,428	$10,368	$10,340	$9,230	$18,797	$12,000
Uniform and Laundry	$1,035	$870	$4,622	$2,196	$4,776	$6,424	$3,500
Legal Expenses	$2,705	$5,641	$3,419	$4,031	$3,070	$8,590	$4,500
Vehicle Maintenance	$0	$15,546	$17,043	$12,382	$10,375	$9,969	$11,000
Audit Expenses	$9,550	$9,800	$10,100	$10,400	$10,750	$15,250	$17,000
Accounting	$0	$1,460	$14,128	$11,543	$11,149	$0	$0
Contract Services	$0	$0	$0	$0	$0	$21,088	$14,000
Solar Eclipse	$0	$0	$0	$0	$0	$29,793	$0
Building Maintenance	$3,080	$2,948	$2,916	$7,211	$3,115	$6,297	$7,000
Utilities	$8,661	$11,402	$10,673	$9,791	$9,812	$12,522	$12,000
Phone Service	$1,741	$1,839	$1,977	$1,847	$1,886	$2,194	$0
Insurance	$11,055	$11,783	$13,406	$12,694	$17,814	$32,231	$17,382
Radio Maintenance	$2,396	$2,480	$1,958	$2,620	$2,236	$2,738	$2,500
Rents	$0	$0	$0	$0	$0	$0	$200
Computer Maintenance	$0	$3,647	$957	$2,433	$0	$2,371	$1,000
Training and Education	$1,877	$3,075	$3,981	$4,007	$5,561	$4,231	$5,000
Dispatch Services	$41,947	$28,367	$47,752	$54,886	$55,018	$56,943	$59,001
Pro Med Expenses	$955	$573	$1,454	$1,898	$0	$0	$500

JCEMS District Expenditures							
	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget
Dues and Subscriptions	$1,823	$4,373	$6,463	$6,942	$6,845	$3,859	$4,000
Vehicle Fuel	$19,875	$12,316	$11,565	$8,886	$10,308	$13,670	$17,000
Medical Equip. Maintenance	$7	$4,371	$274	$1,060	$0	$0	$5,000
Elections	$2,758	$0	$1,309	$0	$3,036	$0	$3,000
Community Outreach/Morale	$0	$0	$0	$0	$0	$0	$2,000
Volunteer Awards	$1,253	$2,630	$3,489	$2,070	$651	$1,774	$2,000
Volunteer Contract	$1,672	$2,237	$1,270	$711	$585	$2,813	$500
Miscellaneous Expenses	$2,988	$5,004	$4,449	$10,799	$9,758	$5,742	$4,000
Travel Expenses	$0	$0	$0	$0	$0	$0	$4,300
Vaccinations	$1,271	$0	$539	$1,332	$328	$748	$1,000
Community Paramedic Expenses	$0	$515	$0	$0	$0	$0	$6,810
Advertising	$58	$1,489	$1,092	$684	$0	$90	$500
	$135,136	**$167,217**	**$206,536**	**$238,159**	**$240,366**	**$398,269**	**$258,293**
Total Operating Expenditures	$723,077	$806,331	$895,910	$1,117,277	$1,221,451	$1,266,639	$1,164,958
Capital and Debt Service							
Fund Transfers/Contingency		$0	$0	$0	$0	$0	$84,799
Capital Investments	$25,443	$95,045	$22,829	$30,346	$436,875	$64,553	$0
Debt Service	$17,313	$21,945	$21,465	$41,840	$20,595	$62,781	$60,323
	$42,756	**$116,990**	**$44,294**	**$72,186**	**$457,470**	**$127,334**	**$145,122**
Total Expenditures	**$765,833**	**$923,321**	**$940,204**	**$1,189,463**	**$1,678,921**	**$1,393,973**	**$1,310,080**

The table below illustrates the change in the expenditures over the past six (6) years.

JCEMS Change in Expenditures					
	FY 2013 Actual	FY2018 Actual	Six Year Change	Pct. Change	Avg. Annual Change
Operating Expenditures					
Salaries and Wages	$410,214	$555,132	$144,918	35.3%	5.9%
Payroll Taxes	$14,039	$14,411	$372	2.6%	0.4%
Worker's Comp. (SAIF)	$22,822	$27,231	$4,409	19.3%	3.2%
State Unemployment (SUIOR)	$6,026	$12,738	$6,712	111.4%	18.6%
Retirement	$30,808	$88,993	$58,185	188.9%	31.5%
Health Insurance	$104,032	$169,865	$65,833	63.3%	10.5%
Total Personnel Services	**$587,941**	**$868,370**	**$280,429**	**47.7%**	**7.9%**
Materials and Services	**$135,136**	**$398,269**	**$263,133**	**194.7%**	**32.5%**
Total Operating Expenditures	**$723,077**	**$1,266,639**	**$543,562**	**75.2%**	**12.5%**

The average annual increase in the revenues was 9.6% with the refunds received providing a larger increase. The eclipse income is a one-time income, which increased the average annual change by 0.6%. Pro Med sales has declined an average of 6.9% per year and interest earned has also declined over this period. User Fees have increased an average of 7.3% over the past five years.

On the expenditures the average annual increase was 12.5%. Retirement increased an average of 31.5% and the health insurance increased an average of 10.5%. Patient care items and vehicle maintenance make up the largest increase in the materials and supplies section.

The table below projects the revenues for the next seven years.

JCEMS Revenue Projection									
Annual Change	Line Item	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	User Fees (net)	$1,096,851	$1,118,788	$1,141,164	$1,163,987	$1,187,267	$1,211,012	$1,235,232	$1,259,937
	Sustainable Revenues	**$1,096,851**	**$1,118,788**	**$1,141,164**	**$1,163,987**	**$1,187,267**	**$1,211,012**	**$1,235,232**	**$1,259,937**
	Pro Med Sales	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
	Refunds Received	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923
	Interest Earned	$790	$790	$790	$790	$790	$790	$790	$790
	Grants	$0	$0	$0	$0	$0	$0	$0	$0
	Community Paramedic	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
0.8%	Uncategorized Income	$5,040	$5,080	$5,121	$5,162	$5,203	$5,245	$5,287	$5,329
	Unsustainable Revenues	**$133,753**	**$133,793**	**$133,834**	**$133,875**	**$133,916**	**$133,958**	**$134,000**	**$134,042**
	Total Revenues	**$1,230,604**	**$1,252,581**	**$1,274,998**	**$1,297,862**	**$1,321,183**	**$1,344,970**	**$1,369,232**	**$1,393,979**

Sustainable revenues are those revenues that are consistent from year to year. Line items such as grants, interest, and the Pro Med program are variable in nature and do provide a consistent source of revenue. The annual growth for the user fees was set at 2% which is more conservative and is based on the slower economy in 2013 and changes that were made in the billing process. The growth from FY17 to FY18 is about to 1.6% and the FY19 budget has the user fees decreasing by about 2.4% over the FY18 amount.

The table below projects the expenditures for the next seven years. For purposes of the projections, the annual change used is the percentage that Jefferson County anticipates the increases to be for the next seven years.

JCEMS Expenditure Projection

Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries and Wages	$541,620	$552,452	$563,501	$574,771	$586,267	$597,992	$609,952	$622,151
	Community Paramedic	$64,500	$64,500	$64,500	$64,500	$64,500	$64,500	$64,500	$64,500
	Sick Leave	$0	$0	$0	$0	$0	$0	$0	$0
2.0%	Payroll Taxes	$40,000	$40,800	$41,616	$42,448	$43,297	$44,163	$45,046	$45,947
2.0%	Payroll Taxes - Comm. Paramedic	$2,200	$2,244	$2,289	$2,335	$2,381	$2,429	$2,478	$2,527
	FICA	$0	$0	$0	$0	$0	$0	$0	$0
	Medicare	$0	$0	$0	$0	$0	$0	$0	$0
	SUIOR	$0	$0	$0	$0	$0	$0	$0	$0
10.0%	Retirement	$79,371	$87,308	$96,039	$105,643	$116,207	$127,828	$140,611	$154,672
	Retirement - Comm. Paramedic	$7,404	$7,404	$7,404	$7,404	$7,404	$7,404	$7,404	$7,404
	SAIF	$23,000	$23,000	$23,000	$23,000	$23,000	$23,000	$23,000	$23,000
5.0%	Health Insurance	$125,522	$131,798	$138,388	$145,307	$152,573	$160,201	$168,211	$176,622
5.0%	Health Insurance - Comm. Paramedic	$13,748	$14,435	$15,157	$15,915	$16,711	$17,546	$18,424	$19,345
5.0%	Dental	$4,000	$4,200	$4,410	$4,631	$4,862	$5,105	$5,360	$5,628
5.0%	Dental - Comm. Paramedic	$2,000	$2,100	$2,205	$2,315	$2,431	$2,553	$2,680	$2,814
5.0%	Disability - Comm. Paramedic	$340	$357	$375	$394	$413	$434	$456	$478
5.0%	Life. S/T Disability	$2,960	$3,108	$3,263	$3,427	$3,598	$3,778	$3,967	$4,165
	Total Personnel Services	**$906,665**	**$933,707**	**$962,148**	**$992,090**	**$1,023,644**	**$1,056,933**	**$1,092,089**	**$1,129,254**
3.0%	Materials and Services	$258,293	$266,042	$274,023	$282,244	$290,711	$299,432	$308,415	$317,668
	Total Operating Expenditures	**$1,164,958**	**$1,199,749**	**$1,236,171**	**$1,274,333**	**$1,314,355**	**$1,356,366**	**$1,400,504**	**$1,446,922**
	Fund Transfers/Contingency	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799
	Debt Service	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323
	Capital Improvements	$0	$0	$0	$0	$0	$0	$0	$0
	Total Expenditures	**$1,310,080**	**$1,344,870**	**$1,381,292**	**$1,419,455**	**$1,459,477**	**$1,501,487**	**$1,545,626**	**$1,592,044**

There is no projection for capital improvements contained in this table.

The table below illustrates the revenues and expenditures based on the projections and provides an overall view of the financial health.

JCEMS District Fund Balance Summary Projection								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$396,635	$318,000	$234,488	$145,701	$51,220	($49,398)	($156,618)	($270,932)
Sustainable Revenues	$1,096,851	$1,118,788	$1,141,164	$1,163,987	$1,187,267	$1,211,012	$1,235,232	$1,259,937
Unsustainable Revenues	$133,753	$133,793	$133,834	$133,875	$133,916	$133,958	$134,000	$134,042
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$840	$840	$840	$840	$840	$840	$840	$840
Operating Expenditures	$1,164,958	$1,191,812	$1,219,503	$1,248,062	$1,277,519	$1,307,909	$1,339,265	$1,371,621
Capital and Debt Service	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323
Fund Transfers OUT	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799
Ending Net Working Capital	$318,000	$234,488	$145,701	$51,220	($49,398)	($156,618)	($270,932)	($392,856)
Recommended Ending Fund Balance	$291,240	$297,953	$304,876	$312,015	$319,380	$326,977	$334,816	$342,905
Changes to Net Working Capital	**($78,636)**	**($83,512)**	**($88,787)**	**($94,481)**	**($100,618)**	**($107,221)**	**($114,314)**	**($121,924)**

Sustainable revenues represent those revenues that are consistent from year to year, which in this instance is user fees that are collected. Line items such as grants, pro med sales, and interest earned are the variables and do not necessarily provide a consistent source of revenue and are shown as unsustainable revenue. The ending fund balance or reserve fund represents unencumbered funds the organization can use for emergency repairs or to sustain operations if a revenue source becomes unavailable. Included in the table above is a transfer to a contingency fund of $84,799 each year. Without this transfer the ending Net Working Capital would remain positive until FY2023. The Financial Accounting Standards Board is responsible for establishing Generally Accepted Accounting Principles and they indicate there no single method that is correct for all non-profit organizations. However, the group suggests the appropriate amount for operating reserves is about 25% of the annual expenses. In the table above, the recommended ending balance is 25% of the current years' budgeted

expenses. The Changes to the Net Working Capital represents the net change in the fund balance for that year. For example, for FY 2020 there is a net negative change of $83,512 to the projected fund balance.

The EMS District is funded primarily through fees collected for service and does not have any ability to assess a tax unless approved by the voters. The Pro Med sales has been declining an average of 6.9% over the past five years. According to the fee schedule used by the District an advanced life support call is charged at $1,400.00. In 2017 the total expenditures for the District was $1,678,921 to handle 2,301 calls for service. This results in a cost per call of $729.65. Adjusting the fee schedule is not necessary especially with 75% of calls paid from the Medicare and Medicaid fee schedule. The EMS District has an outstanding debt that matures in 2026 and based on the declining fund balances it does not appear the District cannot absorb any further debt.

The table below illustrates the apparatus that should be replaced based on the age of the apparatus. The table uses a ten year life span for the apparatus.

Replacement by Age									
Year	Description	Type	2019	2020	2021	2022	2023	2024	2025
2002	Ford E350 / Horton	BLS Ambulance	✓						
2010	GMC G3500 / Braun	ALS Ambulance		✓					
2010	GMC G3500 / Braun	BLS Ambulance		✓					
2016	Dodge D3500 / Braun	ALS Ambulance							
2016	Dodge D3500 / Braun	ALS Ambulance							
2017	Ford Escape	Community Paramedic							

(3) Change in Billing Practices

During the course of this study, the JCEMS began to change the methodology in their billing practices. Essentially, the coding used in the past was not fully capturing the amounts due for services and supplies to the JCEMS. Beginning in the middle of 2018 the JCEMS began using different billing codes to secure the proper amounts due for services and supplies. The JCEMS accountant supplied a review of revenues and expenditures comparing a six-month period. The table below illustrates this comparison related to the revenue.

JCEMS Six Month Revenue Comparison		
Line Item	**July 2017 - January 2018**	**July 2018 - January 2019**
Special Event Services	$1,775.00	$0.00
CSI Financial	$321.52	$0.00
General Revenue	$1,012.25	$207.37
Interest Earned	$577.87	$881.65
Sale of Supplies	$848.45	$0.00
User Fees		
Recovered Bad Debts	$0.00	$35.00
User Fees - Other	$663,707.07	$906,462.91
Pro Med Sales	$15,144.63	$6,912.50
Refunds Received	$7,923.00	$8,469.00
Grant Income		
Community Paramedic	$102,970.43	$76,481.55
Grant Income - Other	$1,885.00	$0.00
Eclipse Income	$30,000.00	$0.00
Miscellaneous Income	$320.80	$5,198.52
CPR/ACLS Training	$90.00	$1,191.81
Credits		
Reimbursement Contract	($6,244.52)	($2,318.54)
Refund Overpayment	($8,623.00)	($14,192.15)
Credits - Other	$0.00	($0.88)
Cost of Goods Sold	$0.00	$1,356.50
Total Income	$811,708.50	$990,685.24
Total Expenses	$870,529.83	$860,548.00
Net Difference	($58,821.33)	$130,137.24

The comparison illustrates there is a significant increase in the user fees or those fees collected from billing for services. In the six-month period , there was an increase of $242, 756 or approximately 37%. The JCEMS accountant indicates this increase is sustainable given the short history of the new billing techniques. Annualizing this six-month collection would indicate the user fees would be about $1,812,925 which is an increase of about $716,074 over the current 2019 budget figure previously used in the revenue projection.

To illustrate the difference, the table below shows the fund balance using the updated user fees while all other line items remain the same.

JCEMS District Fund Balance Summary Projection WITH UPDATED USER FEES								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$396,635	$1,034,074	$1,680,957	$2,337,174	$3,002,596	$3,677,080	$4,360,463	$5,052,565
Sustainable Revenues	$1,812,925	$1,849,184	$1,886,167	$1,923,891	$1,962,368	$2,001,616	$2,041,648	$2,082,481
Unsustainable Revenues	$133,753	$133,793	$133,834	$133,875	$133,916	$133,958	$134,000	$134,042
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$840	$840	$840	$840	$840	$840	$840	$840
Operating Expenditures	$1,164,958	$1,191,812	$1,219,503	$1,248,062	$1,277,519	$1,307,909	$1,339,265	$1,371,621
Capital and Debt Service	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323	$60,323
Fund Transfers OUT	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799	$84,799
Ending Net Working Capital	$1,034,074	$1,680,957	$2,337,174	$3,002,596	$3,677,080	$4,360,463	$5,052,565	$5,753,185
Recommended Ending Fund Balance	$291,240	$297,953	$304,876	$312,015	$319,380	$326,977	$334,816	$342,905
Changes to Net Working Capital	**$637,439**	**$646,884**	**$656,217**	**$665,422**	**$674,484**	**$683,383**	**$692,102**	**$700,620**

As illustrated, the ending fund balance improves significantly with the updated user fee billing techniques and continues to increase each year. While noteworthy, this is based on six-months of financial data and lacks a historical perspective of sustainabliltiy. The JCEMS should remain cautiously optimistic this will continue and would benefit from monitoring its progress.

6 Cooperative Agreement

This chapter presents the projects team's analysis of creating a cooperative intergovernmental agreement between the Jefferson County Fire District and Jefferson County Emergency Medical Services District.

1. Cooperative Agreement Overview

Oregon Revised Statutes, Chapter 190, provide a mechanism to allow units of local government to enter into written agreements with other units of local government to provide service or the performance of a function. Functions include joint construction or leasing of facilities or equipment and the provision of adminstrative officers and functions.

Agreements between units of government must specify the functions or activities to be performed and the means they will be performed. Financial considerations must be addressed, in detail, in these agreements to identify responsibilities of each organization in providing funds to support the agreement. In addition, to identify any revenue that may be derived from the function of the agreement. Transfering personnel and property needs to be addressed in the agreement as well as the preservation of employment benefits. The duration of the agreement can have a set term or may be perpetual.

2. Governance and Finance

There is no specific requirement for the establishment of a Board of Directors for or through the intergovernment agreement. This would require the existing Boards to remain intact to manage the organizations as they currently exist. Assuming the agreement would create a common adminstrative structure for the overall management of the Districts this could prove to be problematic as eacdh Board could provide opposing views and direction to the administrative officers.

Financially the two districts could realize some savings by having a combined staff for the administration of the organizations. This would be limited to the Chief and office staffing. Essentially, there would need to be an Assistant Chief to oversee the fire division and one to oversee the EMS division. In the office staffing, the current staffing includes a combined 2.5 FTE which could be reduced to 2.0 FTE allowing for the EMS billing and fire administrative duties.

3. Creation of an Intergovernmental Agreement

The creation of an intergovernmental agreement is allowable by State Statute and can be acomplished with relative ease. It could provide for a combined administrative function between the Districts that could streamline some of those operations. As noted, the statute does not require the establishment of another Board of Directors for this function. This could be problematic for the administration trying to respond to two separate Boards. The cost savings would likley be the loss of 0.5 FTE in the clerical staff would not be a significant savings for the organizations. With the lack of significant financial savings and the potential conflicts of the administration responding to two Baords, the project team does not recommend this course of action.

Recommendation: Do not pursue an intergovernmental agreement for the administrative function of the two Districts.

7 Consolidation of Emergency Services

This chapter presents the projects team's analysis of consolidating the Jefferson County Fire District and Jefferson County Emergency Medical Services District into a single organization.

1. Organization Overview

Consolidating the two organizations into a single entity will mean a restructuring of the administration and operations of the organizations.

Administratively there will be an adjustment in the career positions in terms of titles and responsibilities and this does not increase the number of career personnel. The table below displays a comparison of the current organizations and the proposed organization changes for career personnel.

Career Position Consolidation				
	JCFD	JCEMS	Total	JCES
Chief	1	1	2	1
Deputy Chief	0	0	0	1
Administrative Assistant II	0.575	0	0.575	1
Administrative Assistant	0.575	0	0.575	1
Office Manager	0	1	1	0
Office Assistant	0	0.5	0.5	0
Captain	3	2	5	5
Lieutenant	1	2	3	0
Engineer	0	0	0	3
Sergeant	0	1	1	0
Paramedics	0	6	6	7
			19.65	19

The current organizations have 19 career positions between them and those positions are maintained in the new organization although some personnel may not remain in the same position in the new organization. The goal with the full-time positions was to ensure the current personnel were not adversely affected by the consolidation of the two organizations. The Chief would remain as FLSA exempt as the primary duty would be to manage the District. The Deputy Chief may be FLSA exempt, however, there are a number of other work related duties that will influence the final status, especially given the limited number of employees responding to calls for service. All employees, except

the administrative assistants, would be considered a part of the Police and Fire retirement system.

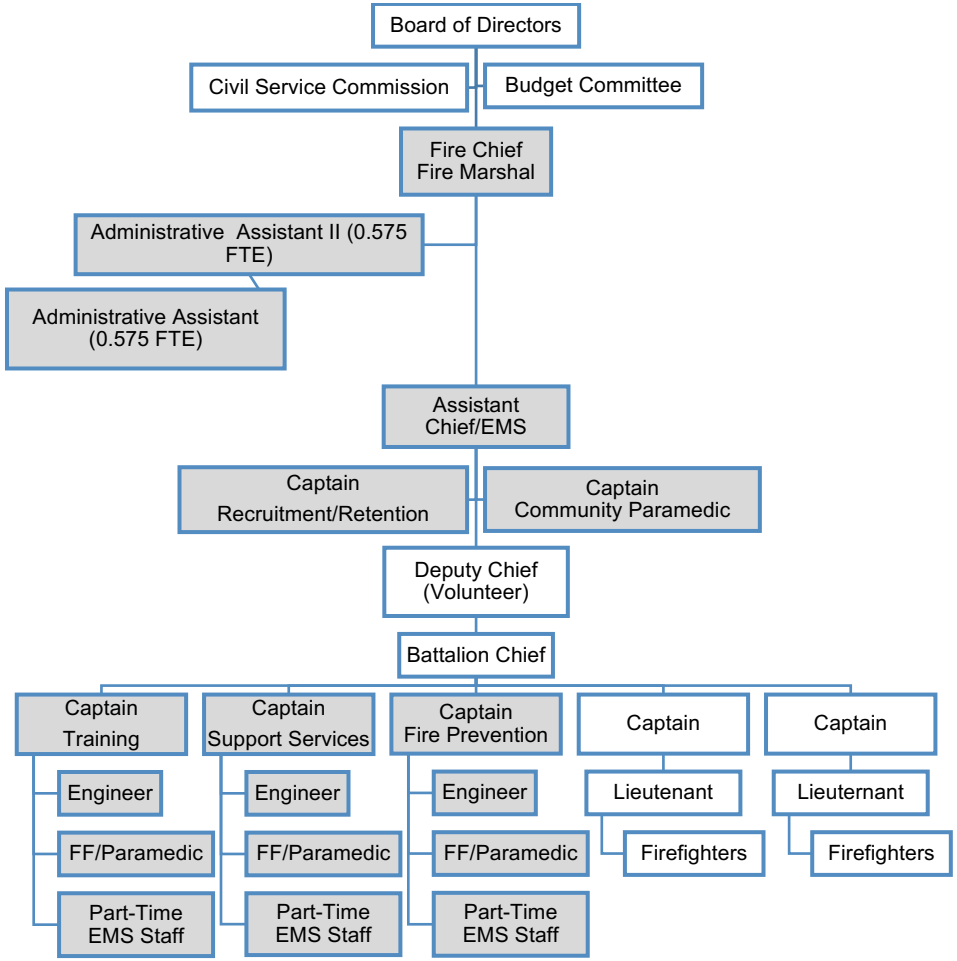
The current JCEMS system has two ambulances staffed 24 hours a day 7 days a week using a combination of career and part-time personnel. The Fire District staffs an engine company during the daytime hours of the normal work week using volunteer staffing overnight and weekends. With the new organization, the positions of Captains and below would be placed on a 24 hour on duty and 48 hour off duty schedule using the same combination of career and part-time staffing. This would allow for two ambulances and an engine company to be staffed 24 hours a day 7 days a week. The exception is the grant funded Captain in the Fire District would remain on a 40 hour work week as would the Community Paramedic position. The JCEMS has indicated the part-time staff is beginning to decline and it is becoming more difficult to provide the operational support needed though the use of part-time personnel. Making these positions available for volunteer firefighters to fill may help to increase the pool of part-time personnel.

This will require some individuals to receive additional training and certification in firefighting and others will need emergency medical technician training and certification. This additional training will provide all personnel on the shift to be dual certified and able to meet any role needed on the shift. A long term goal would be to add enough personnel to staff an engine company and both ambulances.

The following organizational chart provides a visual mechanism to understand this change in the administration and organization. The shaded positions are career or paid positions. The volunteer staff are not shaded.

The shaded positions are career, while non-shaded are volunteer positions.

Proposed Organization Chart Jefferson County Emergency Services



As illustrated above, we are recommending the existing career Lieutenant positions be reclassifed as engineer positons as there is not a need for two supervisors on each shift. A new job description should be developed as well as a salary schedule for the new position. Existing Lieutenants should continue to recieve their current salary with any pay changes take effect through normal attrition.

Currently each organization has five (5) members on their Board of Directors. The new organization would have five (5) Board members elected on an at large basis. The Board members would serve staggered four (4) year terms. This reduces the total number of Board members by five (5) members.

2. Financial Resources

The table on the next page illustrates the revenues as a consolidated projection using the 2019 budget as a starting point. Sustainable and unsustainable revenues are shown separately.

Jefferson County Emergency Services Revenue Projection									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
-1.8%	Previously Levied Taxes	$35,000	$34,373	$33,757	$33,152	$32,558	$31,974	$31,401	$30,839
-14.2%	Out of District Alarms	$3,500	$3,002	$2,575	$2,209	$1,895	$1,625	$1,394	$1,196
	Miscellaneous and Street Signs	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
3.4%	Contractual Services	$120,000	$124,131	$128,405	$132,826	$137,399	$142,130	$147,023	$152,085
3.0%	Taxes Collected in Year Levied	$870,000	$896,100	$922,983	$950,672	$979,193	$1,008,568	$1,038,825	$1,069,990
2.0%	User Fees (net)	$1,096,851	$1,118,788	$1,141,164	$1,163,987	$1,187,267	$1,211,012	$1,235,232	$1,259,937
	Sustainable Revenues	**$2,135,351**	**$2,186,395**	**$2,238,884**	**$2,292,847**	**$2,348,311**	**$2,405,310**	**$2,463,876**	**$2,524,047**
	Pro Med Sales	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
	Refunds Received	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923
	Interest	$6,790	$6,790	$6,790	$6,790	$6,790	$6,790	$6,790	$6,790
	Donations	$500	$500	$500	$500	$500	$500	$500	$500
	Grants	$472,000	$37,900	$37,900	$37,900	$37,900	$37,900	$37,900	$37,900
	Community Paramedic	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
	Circle Track	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
0.8%	Uncategorized Income	$5,040	$5,080	$5,121	$5,162	$5,203	$5,245	$5,287	$5,329
	Unsustainable Revenues	**$615,253**	**$181,193**	**$181,234**	**$181,275**	**$181,316**	**$181,358**	**$181,400**	**$181,442**
	Total Revenues	**$2,750,604**	**$2,367,588**	**$2,420,118**	**$2,474,121**	**$2,529,627**	**$2,586,668**	**$2,645,276**	**$2,705,489**

With the new organization an administrative restructing will occur and will have an effect on the salaries and related expenses. There are two goals in the determination of the pay scales. First, to ensure the career staff do not have their pay reduced. The second was to stay in the range that is affordabe to the proposed District. A review of pay scales in the area, the percentage difference averaged about 20% between ranks. The table below shows the career positions and their related salaries.

Proposed Compensation of Personnel

Position	Salary	Number of Positions	Total Salary Cost
Chief of Department	$108,864	1	$108,864
Deputy Chief	$90,720	1	$90,720
Captain	$75,600	5	$378,000
Engineer	$63,000	3	$189,000
Firefighter/Paramedic	$52,500	7	$367,500
Admin Asst. II	$45,000	1	$45,000
Admin Asst.	$36,000	1	$36,000
		19	$1,215,084

With the restructuring of the administrative section, the table on the next page illustrates the consolidated expenditure projection for the new organization. Assumptions made for the consolidated personnel costs included in the FY2019 budget are listed below:

- Workers Compensation is calculated at 3.9%. This represents a percentage of the total workers compensation line item against the total salaries and wages line item. This percentage was carried through the projection.

- Health Insurance premiums for the Fire District is $14,166 per employee and for the EMS District is $14,181. The average cost between the two Districts is $14,173.50. The proposed number of personnel is 19 making the first year budget amount $269,297. This ensures there is enough funding for all employees.

- Retirement funding for the FY2019 budget was calculated using 15.71% of the total salaries and wages which represents the current rate of contribution for the Fire District. For FY2020 and beyond the projections were calculated using 17.97% which will be the new rate for the Fire District. The new rate is effective through June 2021. Rates beyond that are unknown. To compensate for potential increases, an additional 10% has been added to the retirement amounts beginning in FY2022.

- Payroll Taxes is calculated at 9.0%. It represents a percentage of the total payroll taxes line item against the total salaries and wages line item. This percentage was carried through the projection.

Jefferson County Emergency Services Expenditure Projection									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries and Wages	$1,215,084	$1,239,386	$1,264,173	$1,289,457	$1,315,246	$1,341,551	$1,368,382	$1,395,750
	Part Time Pay	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
2.0%	Overtime	$35,000	$35,700	$36,414	$37,142	$37,885	$38,643	$39,416	$40,204
	Workers Comp	$47,388	$48,336	$49,303	$50,289	$51,295	$52,320	$53,367	$54,434
5.0%	Health Insurance	$269,297	$282,762	$296,900	$311,745	$327,332	$343,699	$360,884	$378,928
10.0%	Retirement	$190,890	$222,718	$227,172	$234,033	$238,713	$243,487	$248,357	$253,324
	Payroll Taxes	$109,358	$111,545	$113,776	$116,051	$118,372	$120,740	$123,154	$125,617
5.0%	Dental /Other Insurance	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178
	Total Personnel Services	**$1,992,017**	**$2,066,696**	**$2,115,300**	**$2,167,657**	**$2,219,231**	**$2,272,347**	**$2,327,062**	**$2,383,435**
3.0%	Materials and Services	$661,693	$681,544	$701,990	$723,050	$744,741	$767,084	$790,096	$813,799
	Total Operating Expenditures	**$2,653,710**	**$2,748,240**	**$2,817,290**	**$2,890,707**	**$2,963,972**	**$3,039,431**	**$3,117,158**	**$3,197,234**
	Debt Service	$88,323	$85,323	$85,323	$85,323	$85,323	$85,323	$85,323	$85,323
	Capital Improvements	$399,000	$0	$0	$0	$0	$0	$0	$0
	Total Expenditures	**$3,141,032**	**$2,833,562**	**$2,902,613**	**$2,976,030**	**$3,049,295**	**$3,124,753**	**$3,202,481**	**$3,282,556**

Within the materials and services line item there may be some savings realized once the organizations consolidate. These savings could be in areas such as audits, legal services, supplies, and liability insurance. For purposes of this examination, the two line items were added together. There is no projection for capital improvements in this table.

The call pay line was eliminated as the new schedule will provide an officer on-duty as a part of the 24 hour shift. Overtime and the part-time pay remains in the budget and projections to ensure there is sufficient funding for these costs.

The table below illustrates the revenues and expenditures based on the projections and provides an overall view of the financial health.

Jefferson County Emergency Services Fund Balance Summary Projection								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,103,063	$479,428	($193,226)	($885,295)	($1,595,122)	($2,323,367)	($3,070,732)
Sustainable Revenues	$2,135,351	$2,186,395	$2,238,884	$2,292,847	$2,348,311	$2,405,310	$2,463,876	$2,524,047
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,653,710	$2,748,240	$2,817,290	$2,890,707	$2,963,972	$3,039,431	$3,117,158	$3,197,234
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,103,063	$479,428	($193,226)	($885,295)	($1,595,122)	($2,323,367)	($3,070,732)	($3,837,959)
Recommended Ending Fund Balance	$663,427	$687,060	$704,323	$722,677	$740,993	$759,858	$779,290	$799,308
Changes to Net Working Capital	**($388,088)**	**($623,634)**	**($672,655)**	**($692,068)**	**($709,827)**	**($728,245)**	**($747,365)**	**($767,228)**

The ending fund balance begins a downward trend in the first year and is depleted in the third year. The operating expenses outpace the revenues from the start of the organization. Adding any career staffing to the new District to increase the availabilty of services is not financially feasible without additional funding. It should be noted the Fund Transfer of $84,799 that was included in the JCEMS financial data was not carried forward to the new District as those policies would need to be determined by the new Board of Directors.

This table assumes the apparatus is replaced according to the needs previously outlined. There is an immediate need to replace 6 apparatus at a cost of $1,600,000. Amortized over ten years the cost would be $160,000 per year. In 2021 another replacement will be needed at a cost of $325,000 amortized over ten years adds $32,500 to the capital improvements. Then again in 2024 another replacement is scheduled adding another $32,500 to the capital improvement line item. In 2025 a

Type 1 Engine will need to be replaced at a cost ranging from $600,000 to $750,000 depending on the manufacturer and configuration. As well, two ambulances will need to be replaced in FY2026.

The table below uses the same data as the previous table, however it includes the local option tax previously shown in the Fire District financial analysis.

Jefferson County Emergency Services Fund Balance Summary Projection WITH LOCAL TAX OPTION								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,103,063	$479,428	$627,377	$780,530	$941,280	$1,109,730	$1,285,961
Sustainable Revenues	$2,135,351	$2,186,395	$2,238,884	$2,292,847	$2,348,311	$2,405,310	$2,463,876	$2,524,047
Local Option Tax	$0	$0	$820,603	$845,221	$870,578	$896,695	$923,596	$951,304
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,653,710	$2,748,240	$2,817,290	$2,890,707	$2,963,972	$3,039,431	$3,117,158	$3,197,234
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,103,063	$479,428	$627,377	$780,530	$941,280	$1,109,730	$1,285,961	$1,470,037
Recommended Ending Fund Balance	$663,427	$687,060	$704,323	$722,677	$740,993	$759,858	$779,290	$799,308
Changes to Net Working Capital	**($388,088)**	**($623,634)**	**$147,948**	**$153,153**	**$160,750**	**$168,450**	**$176,231**	**$184,076**

The addition of the local option tax puts the organization in a better financial position. The local option essentially increases the property tax rate from the existing $1.1847 per $1,000 valuation to $2.1847 per $1,000 valuation. The current expenditures will outpace the sustainable revenues until the local option tax is established. The ending fund balance continues to build providing additional ballast to balance the budget. Included in the projection is the immediate capital needs of the Fire District to replace aging apparatus over the next seven years. The EMS District will

need to replace two ambulances in about FY2026 at a cost of approximately $300,000. Once these immediate capital needs are met, the financial resources will be become more stable.

As noted previously, in 2017 the total expenditures for the EMS District were $1,678,921 to handle 2,301 calls for service. This results in a cost per call of $729.65. The current fee schedule used by JCEMS is $1,050.00 for a basic life support call plus $25 per mile. For a call requiring advanced life support procedures the base fee is $1,400.00 plus $25 per mile. JCEMS reports approximately 75% of their calls are insured and paid by Medicare or Medicaid. These programs do not allow the provider to balance bill the patient for any difference between the cost to provide the service and the Medicare/Medicaid rate. Once the two districts merge to become a single district, the new single district becomes the provider and therefore will be required to accept the Medicare/Medicaid payment as payment in full regardless of the response. Private healthcare insurers will typically pay for transportation. The certificates of coverage provide definition for coverages, for example:

United Health Care states the following:

- Emergency ambulance transportation by a licensed ambulance service to the nearest hospital where emergency health services can be performed.

Anthem Blue Cross and Blue Shield states the following:

- We provide benefits for local transportation by a licensed vehicle that is specially designed and equipped to transport the sick and injured. This service is covered only when used locally to or from a hospital when other transportation would endanger your health.

Billing for the response to an emergency medical call by fire units is not feasible given the definitions contained in the various policies and with the single district being the primary provider, however billing for the response to auto accidents or other types of calls is feasible. The current fee schedule for the Fire District includes these types of fees and is tied to the Oregon Fire Service Mobilization Plan rates that could change annually.

3. Employee Rights and Unfunded PERS Liability

Oregon State law stipulates that a public employee can not be deprived of employment solely because of a merger or consolidation of districts. The salary may not be reduced and there are provisions to transfer sick leave and vacation leave. For health care benefits, the receiving employer must arrange for a waiver for any waiting period in coverage of preexisting conditions. The creation of a new district as a result of the dissolution of the two existing districts would cause the new district to adhere to the regulations contained in ORS 236.

The Oregon Employees Retirement System has specific laws and regulations that must be followed upon the split, consolidation, or merger of districts. The two districts are required to enter into a written agreement that addresses the manner in which any unfunded liability or surplus of the transferring employee will be paid or credited. This agreement must by filed with the Public Employees Retirement Board not later than sixty (60) days after the merger or consolidation. Failure to to deliver this agreement adressing the unfunded liabilities in a manner satisfactory to the Board, the Board will decide the manner in which the unfunded liabilities or surpluses will be allocated. The table below illustrates the unfunded liability as of December 31, 2017 according to the Public Employees Retirement Board.

PERS Unfunded Liability	
District	Unfunded Liability
JCEMS	$1,073,605
JCFD	$404,828
Total	$1,478,433

Many states have “right to work” laws as a part of their statutory codes or in their consitution. These laws prohibit employers and unions from requiring employees to become members of a union. In Oregon, there is no “right to work” statute or consitutional provision in place. Therefore, if a union is formed all employees would be required to be a member of the union. According to ORS 663.105 there is nothing prohibiting a supervisor from becoming or remianing a member of a union. It further stipulates the employer is not compelled to treat supervisors, as defined by the statute, as employees for the purposes of collective bargaining.

4. Additional Staffing Using Career Staff

The above staffing and financial analysis is using the existing career staffing model for the proposed new District. It would conitnue to rely on part-time staffing for the EMS, which has been identified as a continuing issue to provide the necessary coverage. The staffing model above provides for two personnel to staff one ambulance and two personnel to staff one fire apparatus for a total of four personnel per shift. Part-time and volunteer staff would supplement these career positions.

To increase the available ambulances from one to two units and to increase the staffing of the fire apparatus to three personnel would require seven personnel per shift. The table below illustrates the changes.

Proposed Compensation of Personnel

Position	Salary	Number of Positions	Total Salary Cost
Chief of Department	$108,864	1	$108,864
Deputy Chief	$90,720	1	$90,720
Captain	$75,600	5	$378,000
Engineer	$63,000	3	$189,000
Firefighter/Paramedic	$52,500	7	$367,500
Addt'l. Career Personnel	$52,500	8	$420,000
Admin Asst. II	$45,000	1	$45,000
Admin Asst.	$36,000	1	$36,000
		27	$1,635,084

This increases the salaries by $420,000 and provides career personnel to staff two ambulances and a fire apparatus with three personnel seven days a week. This will reduce but not eliminate the need and use of part-time personnel.

The table below illustrates the expenditures with the additional career staffing.

Jefferson County Emergency Services Expenditure Projection WITH ADDITIONAL CAREER STAFF									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries and Wages	$1,215,084	$1,239,386	$1,635,084	$1,667,786	$1,701,141	$1,735,164	$1,769,868	$1,805,265
	Part Time Pay	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
2.0%	Overtime	$35,000	$35,700	$36,414	$37,142	$37,885	$38,643	$39,416	$40,204
	Workers Comp	$47,388	$48,336	$63,768	$65,044	$66,345	$67,671	$69,025	$70,405
5.0%	Health Insurance	$269,297	$282,762	$421,910	$443,005	$465,155	$488,413	$512,834	$538,475
10.0%	Retirement	$190,890	$222,718	$293,825	$302,698	$308,752	$314,927	$321,226	$327,650
	Payroll Taxes	$109,358	$111,545	$147,158	$150,101	$153,103	$156,165	$159,288	$162,474
5.0%	Dental /Other Insurance	$25,000	$26,250	$39,150	$41,108	$43,163	$45,321	$47,587	$49,966
	Total Personnel Services	**$1,992,017**	**$2,066,696**	**$2,737,308**	**$2,806,883**	**$2,875,544**	**$2,946,304**	**$3,019,243**	**$3,094,440**
3.0%	Materials and Services	$661,693	$681,544	$701,990	$723,050	$744,741	$767,084	$790,096	$813,799
	Total Operating Expenditures	**$2,653,710**	**$2,748,240**	**$3,439,298**	**$3,529,933**	**$3,620,285**	**$3,713,388**	**$3,809,339**	**$3,908,239**

The increase in staffing is shown in FY2021 and coincides with the creation of the new District and increase in the permanent tax rate from the current 1.1847 to the proposed 2.1847. The salaries were increased based on the 2% annual increases along with the increases for each of the benefits. Additonal considerations include:

- Health insurance rates were increased by the 5% annual change to $15,626 for 27 employees in the FY2021 projection.
- For FY2020 and beyond the retirement projections were calculated using 17.97% which will be the new rate for the Fire District. The new rate is effective through June 2021. Rates beyond that are unknown. To compensate for potential increases, an additional 10% has been added to the retirement amounts beginning in FY2022.

The table below compares the revenues with the expenditures and includes the local option tax to illustrate the proposed tax increase. The expenditures include the additional staff as illustrated above.

Jefferson County Emergency Services Revenue / Expenditure Comparison WITH LOCAL TAX OPTION and ADDITIONAL CAREER STAFF								
Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,103,063	$479,428	$5,369	($480,704)	($976,267)	($1,481,774)	($1,997,723)
Sustainable Revenues	$2,135,351	$2,186,395	$2,238,884	$2,292,847	$2,348,311	$2,405,310	$2,463,876	$2,524,047
Local Option Tax	$0	$0	$820,603	$845,221	$870,578	$896,695	$923,596	$951,304
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,653,710	$2,748,240	$3,439,298	$3,529,933	$3,620,285	$3,713,388	$3,809,339	$3,908,239
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,103,063	$479,428	$5,369	($480,704)	($976,267)	($1,481,774)	($1,997,723)	($2,524,652)
Recommended Ending Fund Balance	$663,427	$687,060	$859,825	$882,483	$905,071	$928,347	$952,335	$977,060
Changes to Net Working Capital	**($388,088)**	**($623,634)**	**($474,060)**	**($486,073)**	**($495,563)**	**($505,508)**	**($515,949)**	**($526,929)**

Increasing the tax rate by $1.000 per $1,000 assess valuation does not improve the sustainable revenues enough to outpace the expenditures incurred by adding new staff. Including the unsustainable revenues and the fund balance does provide support to the budget, but is continues to decrease and in FY2022 it is projected to become negative, therefore additional revenue sources should be examined.

5. Additional Staffing using Part-Time Staff

As noted in the previous section the use of full-time staffing to increase the staffing of each shift to seven (7) personnel to staff two ambulances and a fire unit is not feasible within the framework of a $2.1847 per $1,000 valuation tax rate.

Another option is to utilize part-time personnel to fill the additonal positions necessary to complete the staffing model. With this model there would be some limitiations in the number of hours each employee would be able to work each week and the availability of these individuals in the area. The JCEMS has indicated they are struggling to maintain a cadre of part-time staff to fill their positions.

To increase the available ambulances from one to two units and to increase the staffing of the fire apparatus to three personnel would require seven personnel per shift. The table below illustrates the changes.

Proposed Compensation of Personnel			
Position	Salary	Number of Positions	Total Salary Cost
Chief of Department	$108,864	1	$108,864
Deputy Chief	$90,720	1	$90,720
Captain	$75,600	5	$378,000
Engineer	$63,000	3	$189,000
Firefighter/Paramedic	$52,500	7	$367,500
PT Firefighter/Paramedic	$49,640	8	$397,120
Admin Asst. II	$45,000	1	$45,000
Admin Asst.	$36,000	1	$36,000
		27	$1,612,204

This increases the salaries by $397,120 and provides enough personnel to staff two ambulances and a fire apparatus with three personnel seven days a week. The calculation for the part-time staffing above is based on the number of positions and not the number of personnel. This system will rely heavily on the use of part-time staffing.

The table below illustrates the expenditures with the additional career staffing.

Jefferson County Emergency Services Expenditure Projection WITH ADDITIONAL PART-TIME STAFF									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries and Wages	$1,215,084	$1,239,386	$1,612,204	$1,644,448	$1,677,337	$1,710,884	$1,745,101	$1,780,003
2.0%	Overtime	$40,000	$40,800	$41,616	$42,448	$43,297	$44,163	$45,046	$45,947
	Workers Comp	$47,388	$48,336	$62,876	$64,133	$65,416	$66,724	$68,059	$69,420
5.0%	Health Insurance	$269,297	$282,762	$296,900	$311,745	$327,332	$343,699	$360,884	$378,928
10.0%	Retirement	$190,890	$222,718	$289,713	$298,462	$304,432	$310,520	$316,731	$323,065
	Payroll Taxes	$109,358	$111,545	$145,098	$148,000	$150,960	$153,980	$157,059	$160,200
5.0%	Dental /Other Insurance	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178
	Total Personnel Services	**$1,897,017**	**$1,971,796**	**$2,475,970**	**$2,538,178**	**$2,599,162**	**$2,661,877**	**$2,726,383**	**$2,792,742**
3.0%	Materials and Services	$661,693	$681,544	$701,990	$723,050	$744,741	$767,084	$790,096	$813,799
	Total Operating Expenditures	**$2,558,710**	**$2,653,340**	**$3,177,960**	**$3,261,228**	**$3,343,904**	**$3,428,961**	**$3,516,479**	**$3,606,541**

The increase in staffing is shown in FY2021 and coincides with the creation of the new District and increase in the permanent tax rate from the current 1.1847 to the proposed 2.1847. The salaries were increased based on the 2% annual increases along with the increases for each of the benefits. Additonal considerations include:

- Health insurance rates were increased by the 5% annual change to $15,626 for 19 full time employees in the FY2021 projection. This is a reduction form the previous option.
- For FY2020 and beyond the retirement projections were calculated using 17.97% which will be the new rate for the Fire District and all employees who are eligible for this benefit. The new rate is effective through June 2021. Rates beyond that are unknown. To compensate for potential increases, an additional 10% has been added to the retirement amounts beginning in FY2022.
- Dental insurance is calculated based on 19 full-time employees.

The table below compares the revenues with the expenditures and includes the local option tax to illustrate the proposed tax increase. The expenditures include the additional staff as illustrated above.

Jefferson County Emergency Services Revenue / Expenditure Comparison WITH LOCAL TAX OPTION and ADDITIONAL PART-TIME STAFF								
Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,198,063	$669,328	$456,607	$239,239	$20,058	($201,022)	($424,112)
Sustainable Revenues	$2,135,351	$2,186,395	$2,238,884	$2,292,847	$2,348,311	$2,405,310	$2,463,876	$2,524,047
Local Option Tax	$0	$0	$820,603	$845,221	$870,578	$896,695	$923,596	$951,304
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,558,710	$2,653,340	$3,177,960	$3,261,228	$3,343,904	$3,428,961	$3,516,479	$3,606,541
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,198,063	$669,328	$456,607	$239,239	$20,058	($201,022)	($424,112)	($649,343)
Recommended Ending Fund Balance	$639,677	$663,335	$794,490	$815,307	$835,976	$857,240	$879,120	$901,635
Changes to Net Working Capital	**($293,088)**	**($528,734)**	**($212,721)**	**($217,368)**	**($219,181)**	**($221,080)**	**($223,089)**	**($225,231)**

Increasing the tax rate by $1.000 per $1,000 assess valuation does not improve the sustainable revenues enough to outpace the expenditures incurred by adding new part-time staff. Including the unsustainable revenues and the fund balance does provide support to the budget, but is continues to decrease and in FY2024 it is projected to become negative, therefore additional revenue sources should be examined.

6. Increasing Staffing and Revenues

The previous two options did not provide enough funding to sustain a staffing model to include two ambulances and a fire unit. Although using the part-time staffing model appears to be the better of those the two options.

Increasing revenues through property taxes is a means to provide a sustainable source of funds to support the emergency services. The table below illustrates the projected tax revenues based on different tax rates.

Jefferson County Emergency Services Potential Property Tax Rates						
	Rates	1.1847	2.1847	2.5000	2.7000	3.0000
Year	Valuation					
2019	$796,702,070	$943,853	$1,740,555	$1,991,755	$2,151,096	$2,390,106
2020	$820,603,132	$972,169	$1,792,772	$2,051,508	$2,215,628	$2,461,809
2021	$845,221,226	$1,001,334	$1,846,555	$2,113,053	$2,282,097	$2,535,664
2022	$870,577,863	$1,031,374	$1,901,951	$2,176,445	$2,350,560	$2,611,734
2023	$896,695,199	$1,062,315	$1,959,010	$2,241,738	$2,421,077	$2,690,086
2024	$923,596,055	$1,094,184	$2,017,780	$2,308,990	$2,493,709	$2,770,788
2025	$951,303,936	$1,127,010	$2,078,314	$2,378,260	$2,568,521	$2,853,912
2026	$979,843,054	$1,160,820	$2,140,663	$2,449,608	$2,645,576	$2,939,529

The valuation shown for 2019 represents the valuation as of October 2018. Increases to the valuation is 3% per year which is the limit based on Oregon Statutes.

Using the expenditures shownn using the part-time staffing model, the table below compares the revenues with the expenditures. The line item Additional Tax Revenue is the amount of additional taxes projected to be generated using a new permanent tax rate of $2.5 per $1,000 valuation. For perspective, this would increase the property tax on a $100,000 home by $131.53 per year.

Jefferson County Emergency Services Revenue / Expenditure Comparison WITH NEW TAX RATE of $2.5 per $1,000 and ADDITIONAL PART-TIME STAFF								
Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,198,063	$669,328	$747,723	$830,204	$919,868	$1,016,898	$1,121,463
Sustainable Revenues	$2,135,351	$2,186,395	$2,238,884	$2,292,847	$2,348,311	$2,405,310	$2,463,876	$2,524,047
Additional Tax Revenue	$0	$0	$1,111,719	$1,145,071	$1,179,423	$1,214,805	$1,251,250	$1,288,787
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,558,710	$2,653,340	$3,177,960	$3,261,228	$3,343,904	$3,428,961	$3,516,479	$3,606,541
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,198,063	$669,328	$747,723	$830,204	$919,868	$1,016,898	$1,121,463	$1,233,715
Recommended Ending Fund Balance	$639,677	$663,335	$794,490	$815,307	$835,976	$857,240	$879,120	$901,635
Changes to Net Working Capital	**($293,088)**	**($528,734)**	**$78,395**	**$82,482**	**$89,664**	**$97,030**	**$104,564**	**$112,252**

Increasing the permanent tax rate from $1.1847 per $1,000 valuation to $2.5 per $1,000 valaution improves the ending fund balance in a more positive direction. The increases from year to year provides a modest increase year to year and keeps the fund balance above the recommended fund balance. With the increasing fund balance, any dips in the growth can be absorbed easier and planning for the future becomes more positive.

7. Physical Resources

With the apparatus replacement outlined previously and the burdens financial resources needed for that replacement, the physical facilties will continue to be used for at least the next seven to ten years as funding will be limited. Once funding is available the two Madras Stations could be consolidated. The tables below reiterate the physical resources available to the new District.

JCEMS Madras Station **Facility Location:** 360 SW Culver Highway				
Description of Use	The single station of the EMS District serves as its main offices, apparatus bays and living quarters			
Apparatus Space	Three bays capable of holding four ambulances			
Assigned Apparatus	Unit ID	Year	Description	Type
	2173	2016	Dodge D3500 / Braun	ALS Ambulance
	2174	2016	Dodge D3500 / Braun	ALS Ambulance
	2172	2010	GMC G3500 / Braun	ALS Ambulance
	2170	2002	Ford E350 / Horton	BLS Ambulance
	2191	2017	Ford Escape	Community Paramedic

JCEMS Culver Station **Facility Location:** 200 First Avenue				
Description of Use	A single leased bay at this facility for the storage of one reserve ambulance			
Apparatus Space	Single leased bay.			
Assigned Apparatus	Unit ID	Year	Description	Type
	2171	2010	GMC G3500 / Braun	BLS Ambulance

JCFD Madras Station Facility Location: 765 SE Fifth Street				
Description of Use	Serves as Headquarters and includes Administration, Fire Prevention, Training, with primary coverage of the City of Madras and surrounding area.			
Apparatus Space	Six drive-through bays			
Assigned Apparatus	Unit ID	Year	Description	Type
	1721	2000	E-One	Type 1 Engine
	1722	1995	Pierce/Freightliner	Type 1 Engine
	1730	2008	Freightliner	Water Tender
	1740	2006	Ford F-550	Quick Attack
	1742	2009	Ford F-550	Quick Attack
	1744	1998	Stewart/Stevens	Type 4 Engine
	1750	1985	Pierce Arrow	Telesquirt
	1760	2000	E-One	Light Rescue
	1790	1991	Ford F-250	Utility
	1792	2014	Ford F-350	Utility
	1793	1994	Ford Van	Utility
	1795	2014	Ford F-150	Command
	1796	1998	Ford Expedition	Utility

JCFD Culver Station Facility Location: 200 First Avenue				
Description of Use	Serves as the second station for the Fire District with primary coverage of the City of Culver and surrounding area. Station is a part of the Culver City Building.			
Apparatus Space	Five drive-through bays			
Assigned Apparatus	Unit ID	Year	Description	Type
	1724	2000	E-One	Type 1 Engine
	1731	2006	Freightliner	Water Tender
	1741	2003	Ford F-350	Quick Attack
	1745	1971	6x6 Military Surplus	Type 6 Engine
	1746	1993	AMG 6x6	Type 6 Engine

The apparatus replacement program outlined previously continues to maintain the same number and style of apparatus. The two Type 6 Engines which are also 6x6 style vehicles might be available as military surplus, thus reducing the cost estimates. Given the type of terrain and types of calls for service, the current inventory of apparatus works well for the provision of services.

6. Creation of an Emergency Services District

Oregon Revised Statutes (ORS) provide for the formation of a fire protection district through Chapter 198 – "Special Districts Generally" and Chapter 478 – "Rural Fire Protection Districts". There are three methods a district may be formed.

1. Consent of all the property owners within the area of the proposed district. This method requires all the owners of real property in the area of the proposed district to petition the county board to form a district.

2. By order of the County Board of Commissioners. Using this method, the County Board of Commissioners initiates and pays the cost of the formation of a district that is located entirely within the county. This is done with the county board adopting an order stating its intention to initiate the formation of a district.

3. The filing of a petition with the County for formation. This method uses a group of petitioners, presumably landowners, to initiate and pay for the formation of a district.

Voters in the proposed district have a right to approve or disapprove the district if a permanent tax rate is to be set regardless of the method used to establish a district. A complete guide to the formation of a Fire District is included in Appendix A of this report.

The Project Team examined each of these alternatives and determined that the petition method, the third method illustrated above, would best meet the needs of the current Districts in the formation of an Independent Emergency Services District.

There are several required steps to form this District in this manner and the Districts should plan on the process lasting approximately 16 months. The timing is largely due to the Legislative mandated requirements for putting the measure on the ballot.

Once voters approve the Emergency Services District, it becomes a separate taxing authority and will be controlled by a Board of Directors elected at large within the District.

(1) An Ad Hoc Committee Should be Established to Petition Voters for The Fire District to Be on a Ballot

A steering or ad hoc committee should be established as a first step in the formation of the district. This group serves as the chief petitioner for the process of getting enough signatures for the initiative to be placed on a ballot. While there no specific requirements for the makeup of this group it should contain individuals within the proposed district boundaries. This group will need some financial support from the existing Districts or County to move forward with the process.

Costs to establish the emergency services district will include but may not be limited to obtaining a bond to accompany the formation petition, possible election costs and the printing of materials. The costs for these items are refundable if the district is actually formed. If the district is not formed the existing Districts, County, or whoever provides the funds for their activities will absorb the associated costs.

This ad hoc group will develop a proposal to outline some or all the needs for the fire district and its formation. Items to be included in the proposal are:

- The probable area to be served. The current JCFD #1 would continue to provide fire suppression services to its existing service area and the JCEMS would continue to provide services to its current service area with no expansion of services for either District.

- The assessed value of the property in the area

- The anticipated revenue that could be derived from a reasonable tax.

With this information a formal plan should be developed for the funding of operations and capital expenditures of the Emergency Services District. Other questions which should be addressed will center around the delivery of services from the District. There will be an improved staffing model that will provide a more stable workforce.

Before any funds are expended for petitions and filing of same, the group will need to determine if there is enough public support for the idea of creating the emergency services district. There are any number of ways to inform and educate the public about the advantages of a fire district, these include:

- Public presentations and meetings to provide an avenue to speak with those interested in the formation of the district

- Utilization of the State Fire Marshal and insurance industry representatives
- Printed brochures and materials to explain the desire and benefits of forming an Emergency Services District
- Information on websites to provide additional details to the registered voters.

These mechanisms allow for the public to ask questions and receive accurate information. It also allows the committee to determine the amount of interest in the district formation.

To initiate the district by petition ORS 198.800 outlines the information needed either in the petition or attached to the petition as follows:

- Statement that the petition is filed pursuant to ORS 198.705 to 198.755
- Statement of the names of all affected districts and all affected counties
- Statement of the nature of the proposal, whether formation of a district or change of organization and the kind of change proposed
- Statement whether the territory subject to the petition is inhabited or uninhabited
- Statement that district board members are or are not to be elected and, if so, the number of members on the board
- Proposed permanent tax rate is sufficient to support the services and functions described in the economic feasibility statement and a declaration of the rate of taxation necessary to raise an amount of revenue equal to the proposed permanent tax rate. The permanent tax rate must be expressed as a total dollar amount and the tax rate must be expressed as a rate per thousand of assessed valuation. These rates must be calculated for the latest tax year for which information is available
- Statement of the proposed terms and conditions, if any, to which a proposed formation is to be subject
- Statement or indication opposite each signature on the petition whether the signers of the petition are landowners within the district or electors registered within the district, or both
- Request that proceedings be taken for formation of the district.

The petition to form the Emergency Services District must be signed by a minimum of 15% of the electors or 100 electors, whichever is greater, signers must be registered voters in the area to be included in the proposed district. Another signature method is to have 15 landowners or the owners of 10% of the acreage in the proposed Emergency Services District; whichever is greater, within the area to be included in the proposed district. An additional step required for Madras is for the governing body of the City to pass a Resolution approving the formation of the Emergency Services District in the City limits as ORS 198.720(1) and 478.010(2)(a) do not permit the territory in the City to be included unless a resolution approving the inclusion is passed by the governing body of that city. The resolution does not necessarily provide approval or support to the formation of a district but does approve the City being included in the district if approved by the voters.

Prior to circulation of any petition, the petitioners must file with the County Clerk of the principal county a prospective petition. The prospective petition must include a description of the boundaries of the territory proposed to be included in the Emergency Services District. For this district, the boundaries will be the existing boundaries of the two districts.

(2) An Economic Feasibility Statement is Required to be Developed as Part of the Formation of the Fire District

ORS 198.749 requires an Economic Feasibility Statement to be developed as a part of the formation. This document must contain the following:

- Description of the services and functions to be performed or provided by the proposed district
- Analysis of the relationships between those services and functions and other existing or needed government services
- Proposed first year line item operating budget and a projected third year line item operating budget for the new district that demonstrate its economic feasibility.

Once the feasibility statement is completed it must be attached to the petition when it is filed with the county and before it is circulated for signing. While the funding requirements for the emergency services district have yet to be determined, it is important to understand the revenue sources and how it will be generated. A district once formed must establish a permanent tax rate just like any other taxing authority. Should any additional areas want to become a part of this district during this time, the Districts and those areas would need to further discuss those opportunities.

(3) Additional Requirements to Form the Emergency Services District

Once the information above has been collected, analyzed and put into the proper form, the petition will need to be filed with the County Clerk. A petition for formation of the Emergency Services District may not be accepted for filing by the County unless the petition is accompanied by a bond, a cash deposit or other security deposit as outlined below.

- A bond must be in a form and in an amount approved by the county board not to exceed $100 for each precinct in the affected district and any territory to be included in the district, up to a maximum of $10,000. The bond must be conditioned that, if the attempted formation is not completed, the chief petitioners will pay the costs thereof

- A cash deposit must be in an amount approved by the county board not to exceed $100 for each precinct in the affected district and any territory to be included in the district up to a maximum of $10,000. The cash deposit must be accompanied by a form prescribed by the Secretary of State. The form must include the names and addresses of all persons and organizations providing any part of the cash deposit and the amount provided by each, and a statement signed by the chief petitioners that if the costs of the attempted formation exceed the deposit, the chief petitioners will pay to the county the amount of the excess costs

- A security deposit other than a bond or cash deposit shall be of a kind and in an amount approved by the county board not to exceed $100 for each precinct in the affected district and any territory to be included in the district up to a maximum of $10,000. The security deposit must be accompanied by a form prescribed by the Secretary of State. The form must include the names and addresses of all persons and organizations providing any part of the security deposit and the amount in mind provided by each, and a statement signed by the chief petitioners that if the costs of the attempted formation exceed the security deposited, the chief petitioners shall or will pay to the county the amount of the excess cost.

The signed petition is required to be delivered to the clerk of the principal county of the proposed Emergency Services District. The County Clerk has ten (10) days from the date the petition is received to review and determine whether it has been signed by the required number of qualified signers. If there are sufficient signatures the petition is filed. If there are insufficient signatures the chief petitioners are notified, and the petition is

returned.

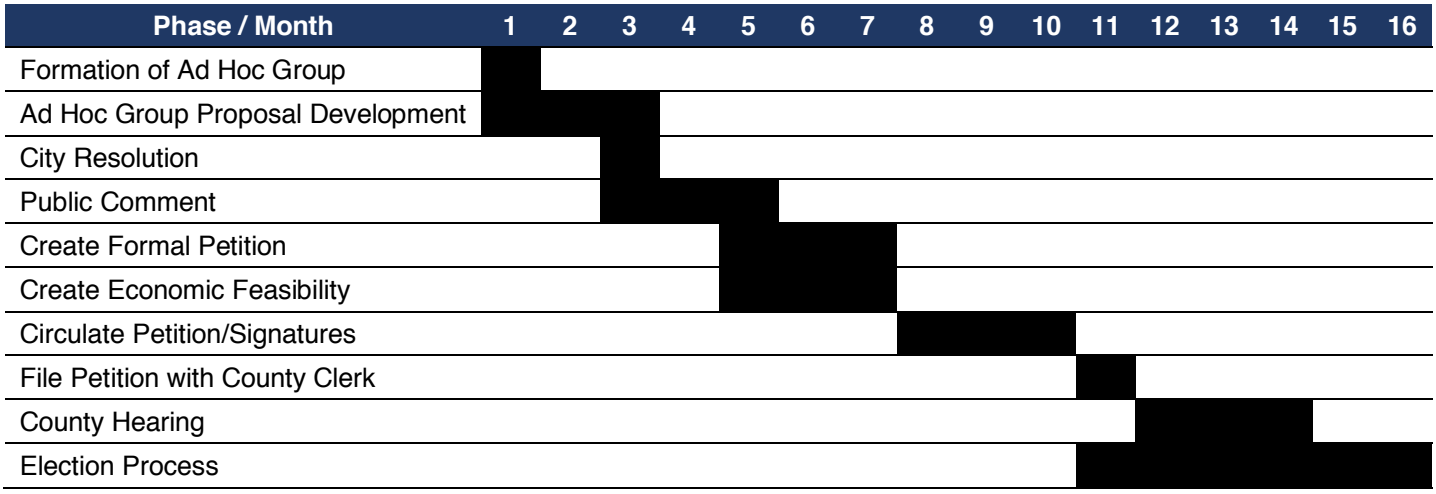
The petition should provide sufficient space for each signer to sign his or her name, print his or her name, date the signature and provide a current address. No more than three persons should be designated as “chief petitioners” with their names and mailing addresses included in the petition. In addition, the petition must be filed within six months of the date the first signature is secured.

A permanent tax will be included for the emergency services district. This will require the petition to be filed a minimum of 180 days before the date of the next regular statewide primary or general election.

Once the petition has met all the requirements and has been certified by the county clerk the County Board is required to set a date for a hearing on the petition.

(4) Timeline for District Formation

The chart below outlines a suggested timeline for bringing the District forward for voter approval. This timeline is for illustrative purposes; certain phases may not take as long while others may take longer than expected. The project team estimates the process will take 16 months to complete.



(5) Dissolution of a District

Once the new district is formed the existing districts will need to be dissolved. Oregon Revised Statutes (ORS) provide for the dissolution of a district through Chapter 198 –

"Special Districts Generally". According to ORS Section 198.920 there are three mechanisms to initiate the dissolution procedure:

- By petition of the electors requesting dissolution and filed with the County Board.
- By resolution of the District Board and filed with the County Board

- By resolution of the County Board if at the time of the regular district election has not elected district board members.

Oregon Revised Statutes (ORS) through Chapter 198 – "Special Districts Generally" provides for the districts that merge or consolidates must enter into an agreement to address any unfunded Public Employees Retirement System liabilities. ORS Section 198.608 further identifies Section 238.231 as applicable to the unfunded liabilities. This section also outlines the procedure to transfer employees from one district to another with unfunded liabilities.

The dissolution of the existing districts and the formation of the new district can occur simultaneously. Each District would need to file a Notice of District Election with the County Clerk as well as the filing for the new District. In Umatilla County two fire districts disolved and created a new district. Below is The Notice of District Measure Election creating the new district:

> **NOTICE OF DISTRICT MEASURE ELECTION**
> Notice is hereby given on February 18, 2016 that a measure election will be held in Umatilla County Fire Dist. #1, located in Umatilla County, Oregon on May 17, 2016. The following is the final ballot title of the measure to be submitted to the district's voters.
>
> Caption: Formation and Permanent Rate of Umatilla County Fire District #1.
>
> Question: Shall the Umatilla County Fire District #1 be formed with a permanent tax rate of $1.75/$1,000 beginning FY2016-17?
>
> Summary: A "Yes" vote forms Umatilla County Fire District #1, effective July 1, 2016, and establishes a permanent tax rate of $1.75 per $1,000 of assessed value. The district will provide fire protection, rescue and emergency medical services to residents in Hermiston, Stanfield, and rural areas in west Umatilla County.
>
> The Hermiston and Stanfield Fire Districts will operate until June 30, 2016, when equipment would be turned over to the new district. On July 1, 2016, the Umatilla County Fire District #1 would begin providing emergency services. Property taxes will generate approximately $3,500,000 annually. Taxes will pay for the current

> career and volunteer staff, operational expenses, and capital reserve fund. The proposed budget includes additional funds to pay for staffing the fire station on Diagonal Road and to purchase new equipment and apparatus.
>
> This measure will take effect only if Measure # ___ and Measure # ___ are also approved by the voters.

Of note is the last sentence that stipulates the measure will only take effect if the other two measures are also pased by the voters. In this particular scenario, Measure 30-108 formed the new district and Measures 30-109 and 30-110 dissolved the other two districts. It should be noted this was the second time the district issue was put on the ballot, the first attempt failed as Stanfield Fire District approved the measures but Hermiston Fire Dsitrict did not vote in favor. It took approximately two years to get the new district approved.

The financial projection for the JCEMS indicates the District will likely be operating at a deficit in the next three years. The primary funding source for the JCEMS is user fees and according to the EMS District those fees are becoming more dependent on Medicare and Medicaid which caps the cost regardless of the actual cost. This issue will continue to become increasingly prevalent with the population getting older and more dependent on Medicare.

Likewise the JCFD will likely be operating at a deficit in the next six years unless the local option tax is approved. This additional revenue will provide the financial stability to the Fire District for the foreseeable future.

The consoldiation of the two Districts does not allow for the addition of career staffing to staff two ambulances and an engine company. It does allow the two Districts to combine and provide a more financially stable emergency services organization with the increase to the permanent tax rate. The consolidated organization would need to use the existing staffing model to continue operations.

Recommendations:

The Jefferson County Fire District and the Jefferson County Emergency Medical Services District should move forward with seeking voter approval to form a single emergency service district.

A permanent tax rate of $2.1847 per $1,000 assessed value will be needed to adequately fund the new district.

A permanent tax rate of $2.50 per $1,000 assessed value will be needed to fund the new district with enough personnel to staff two ambulances and one fire apparatus twenty-four hours a day seven days a week.

A Community Survey

The Matrix Consulting Group conducted an online survey of the community of the Jefferson County Fire District #1 and the Jefferson County Emergency Medical Services in order to gauge the sentiments of the residents on a variety of issues. There were 179 responses to the survey and all results are confidential.

1. SURVEY OVERVIEW

The survey was designed to measure the community's view of services, satisfaction of the services provided, the value of those services, and the quality of the services provided by the departments. The respondents were also asked what services area of the district they were located.

The survey outlined 14 services and 5 quality statements to be rated. The responses for the services section included "extremely important", "very important", "somewhat important", and "not important". For the quality statements the responses included "excellent", "good", "fair", and "poor".

Each of the sections allowed the respondent to comment regarding the particular area being addressed. At the end of the survey the respondents were provided space to provide any additional comments or information they wished to share.

2. DEMOGRAPHIC IDENTIFIERS

While the responses are confidential, respondents were asked to provide information about their service area. The table below outlines the breakdown by service area.

Demographics		
Service Area	Number	Percent
City of Madras	96	53.6%
City of Metolius	3	1.7%
City of Culver	12	6.7%
Three Rivers Area	3	1.7%
Unincorporated County Area	65	36.3%

The survey was conducted on an online system and available to all residents. A total of 179 responses were received.

The next section describes the responses related to the services provided by the Jefferson County Fire District #1 and the Jefferson County Emergency Medical Services.

3. SERVICES PROVIDED

The following sections describe the responses to the services provided by the Fire District #1 and Emergency Medical Services. The first section illustrates the responses to rating the importance of the service provided while the second section identifies the community's satisfaction of these services.

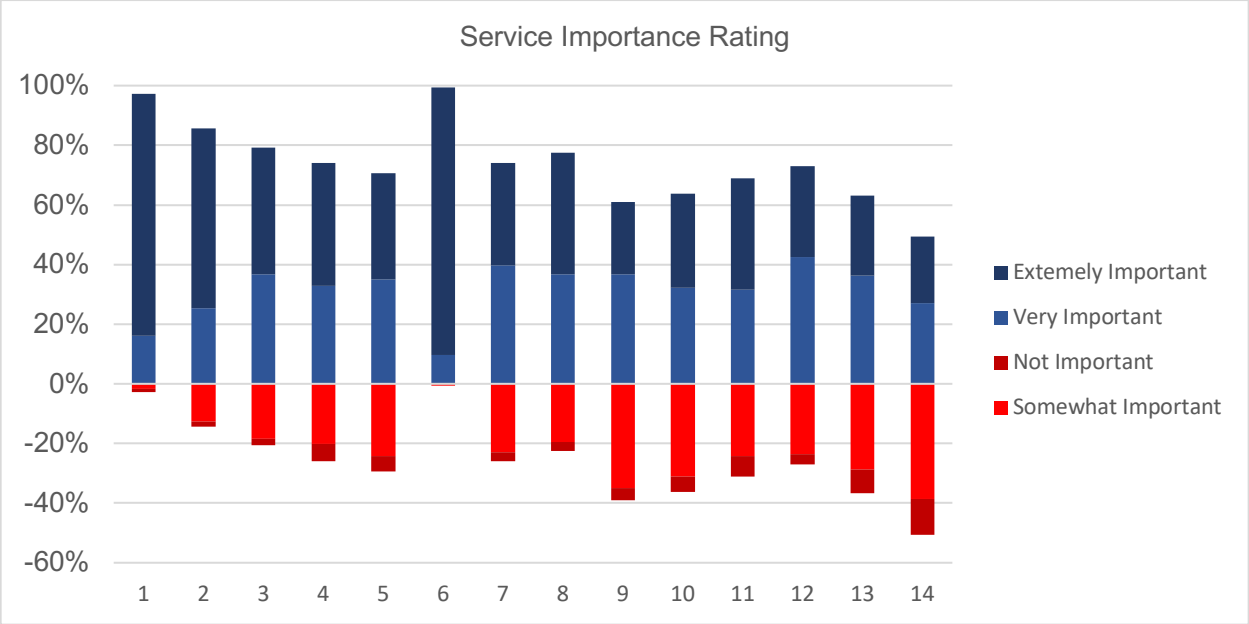
(1) IMPORTANCE OF SERVICES

The following chart outlines the responses regarding the services provided to the community by the fire department and EMS services. The statement, "For each of the services listed below, please select a response indicated whether the service is extremely important to you, very important, somewhat important, or not at all important."

Service Importance Rating				
Service	Extremely Important	Very Important	Somewhat Important	Not Important
1. Structural Firefighting	81.0%	16.1%	1.7%	1.2%
2. Wildland Firefighting	60.3%	25.3%	12.6%	1.7%
3. Technical Rescue	42.5%	36.8%	18.4%	2.3%
4. Search and Rescue	41.4%	32.8%	20.1%	5.8%
5. Hazardous Materials Response	35.6%	35.1%	24.1%	5.2%
6. Emergency Medical Services	89.7%	9.8%	0.6%	0.0%
7. Fire Prevention Services	34.5%	39.7%	23.0%	2.9%
8. Emergency Preparedness	40.8%	36.8%	19.5%	2.9%
9. Public Fire Education Programs	24.1%	36.8%	35.1%	4.0%
10. Public EMS Education Programs	31.6%	32.2%	31.0%	5.2%
11. Community Paramedicine	37.4%	31.6%	24.1%	6.9%

Service Importance Rating				
Service	Extremely Important	Very Important	Somewhat Important	Not Important
12. EMS Standby at Public and Community Events	30.5%	42.5%	23.6%	3.5%
13. Business Fire Safety Inspections	27.0%	36.2%	28.7%	8.1%
14. Home Fire Safety Inspections	22.4%	27.0%	38.5%	12.1%

The following graph provides a visual representation of the number of respondents that perceive the services as extremely or very important (blue) and those that are somewhat or not important (red) to each service.



Please note the following points:

- **Statement #1:** *"Structural Firefighting."* This service received an overwhelming majority of extremely important responses.
- **Statement #2:** *"Wildland Firefighting."* Respondents were overwhelmingly supportive of this service as well.
- **Statement #5:** *"Hazardous Materials Response."* The respondents found this service to be important but there were a fair number that found it to be less important.

- **Statement #6:** *"Emergency Medical Services."* This service received an overwhelming majority of extremely important responses and the highest marks of importance of all the services.

- **Statement #7:** *"Fire Prevention Services."* The respondents found this service to be important but there were a fair number that found it to be less important.

- **Statement #8:** *"Emergency Preparedness."* The respondents found this service to be important but there were a fair number that found it to be less important.

- **Statement #9 and #10:** *"Education Programs."* These services received mixed responses. Many respondents felt these services are important but there were a fair number that found them to be less important.

- **Statement #12:** *"EMS Standby at Public and Community Events."* Most of the respondents found this service to be very important but there were a fair number that found it to be less important.

- **Statement #13 and #14:** *"Safety Inspections."* The respondents found these services to be important but there were a fair number that found it to be less important.

The respondents clearly indicated Emergency Medical Services, Structural Firefighting, and Wildlife Firefighting are very important services for the department. Safety Inspections and Education Programs were identified by respondents as less important than other services.

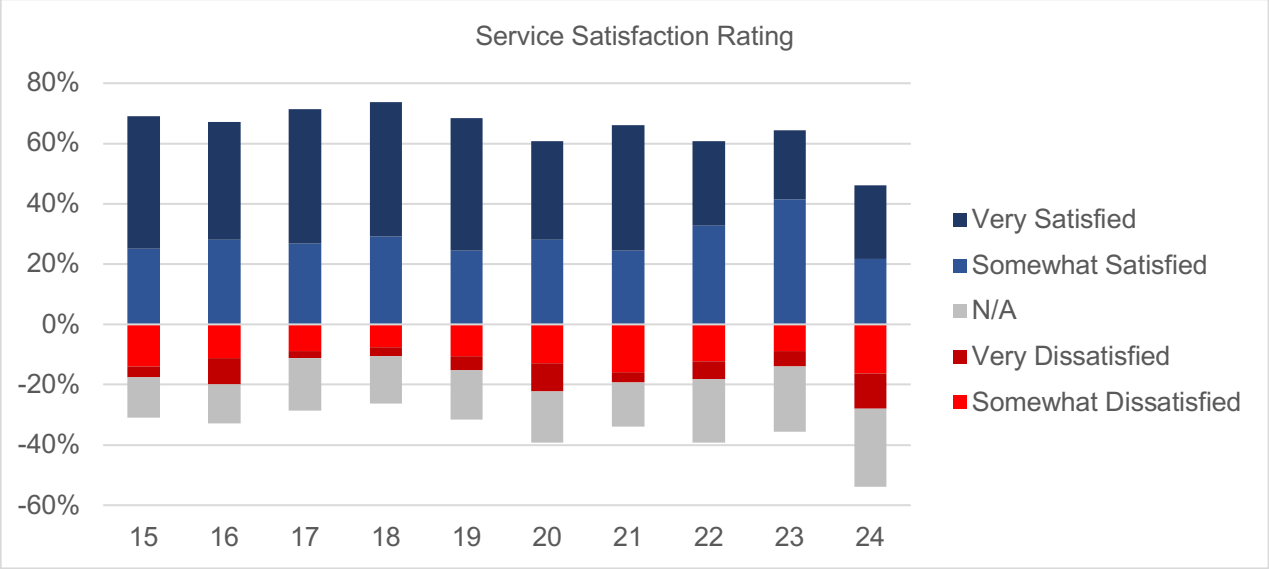
(2) SERVICE SATISFACTION

The following chart outlines the responses about service satisfaction of the services provided by Fire District #1 and EMS services. The statement, "For each of the services listed below, please select a response indicating how satisfied you are with the current service provided in your area of the County."

Service Satisfaction Rating					
Service	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	N/A
15. Overall Response to Emergency Calls by the Fire District	43.86%	25.15%	14.04%	3.51%	13.45%
16. Overall Response to Emergency Calls by County EMS	39.18%	28.07%	11.11%	8.77%	12.87%
17. Response to Structure Fire Emergencies	44.44%	26.90%	8.77%	2.34%	17.54%

Service Satisfaction Rating					
Service	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	N/A
18. Fire Response to Automobile Accidents	44.44%	29.24%	7.60%	2.92%	15.79%
19. EMS Response to Automobile Accidents	43.86%	24.56%	10.53%	4.68%	16.37%
20. Fire Response to Medical Emergencies	32.75%	28.07%	12.87%	9.36%	16.96%
21. EMS Response to Medical Emergencies	41.52%	24.56%	15.79%	3.51%	14.62%
22. Emergency Preparedness	28.07%	32.75%	12.28%	5.85%	21.05%
23. Public Fire Education Programs	22.81%	41.52%	8.77%	5.26%	21.64%
24. Public EMS Education Programs	24.56%	21.64%	16.37%	11.70%	25.73%

The following graph provides a visual representation of the number of respondents that are satisfied with the services as very or somewhat satisfied (blue) and those that are somewhat and very dissatisfied (red) to each service. Additionally, there were a number of respondents that didn't know or had no opinion (gray) in regard to the service.



Please note the following points:

- **Statement #15:** *"Overall Response to Emergency Calls by the Fire District."* This service received 69% well satisfied responses but 17% of respondents were dissatisfied with response to emergency calls by the Fire District.

- **Statement #16:** *"Overall Response to Emergency Calls by County EMS."* 67% of respondents were well satisfied with the response to emergency calls by EMS, while 20% were dissatisfied and 13% had no opinion.

- **Statement #18:** *"Fire Response to Automobile Accidents."* Respondents were well satisfied with this service with 74% of respondents satisfied with fire response times to automobile accidents while about 16% had no opinion.

- **Statement #21:** *"EMS Response to Medical Emergencies."* 66% of respondents were satisfied with EMS response times to medical emergencies.

- **Statement #23:** *"Public Fire Education Programs."* 64% of respondents were satisfied with this service, only 15% were dissatisfied, and 21% of respondents had no opinion.

- **Statement #24:** *"Public EMS Education Programs."* Over 25% of respondents had no opinion for this service, 28% were dissatisfied, and only 46% of respondents were satisfied with public EMS education programs.

Respondents were mostly satisfied with the services provided by the Fire District #1 and Emergency Medical Services. An average of about 17% of respondents had no opinion on the services provided. An average of about 6% of respondents were very dissatisfied with the services and 12% were somewhat dissatisfied, while the average for somewhat satisfied is about 28% and very satisfied is about 37%.

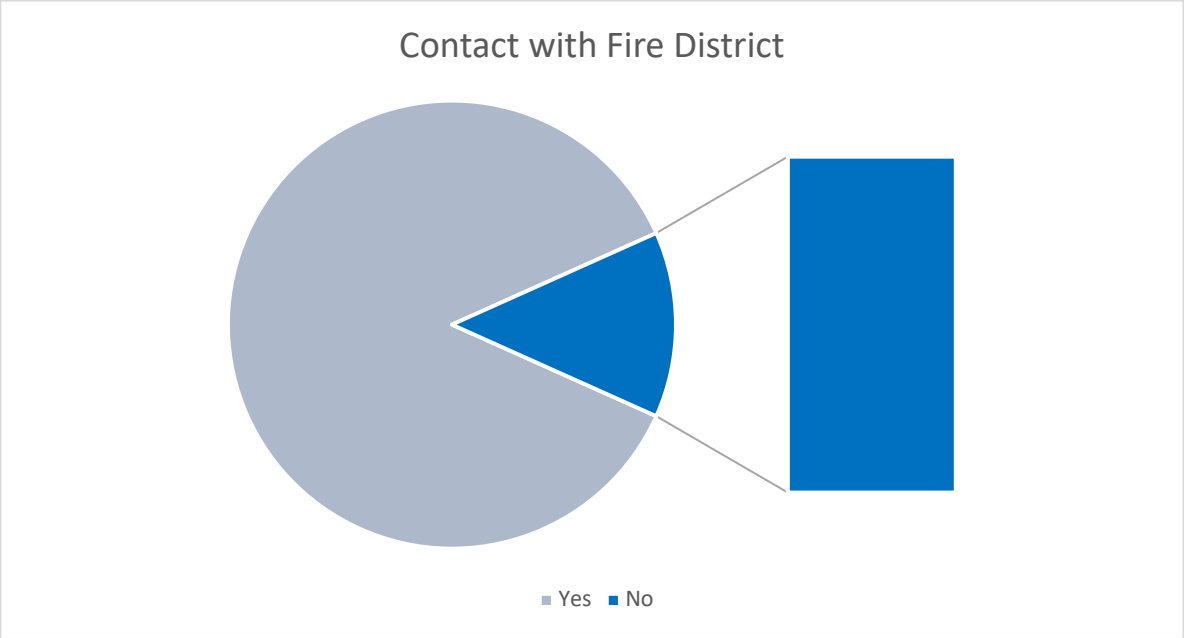
4. QUALITY OF SERVICE

The following sections describe the responses to the services provided by the Fire District #1 and Emergency Medical Services. The first section discusses the quality of the services provided and the second section illustrates how interested respondents are in service level changes.

(1) QUALITY OF SERVICES

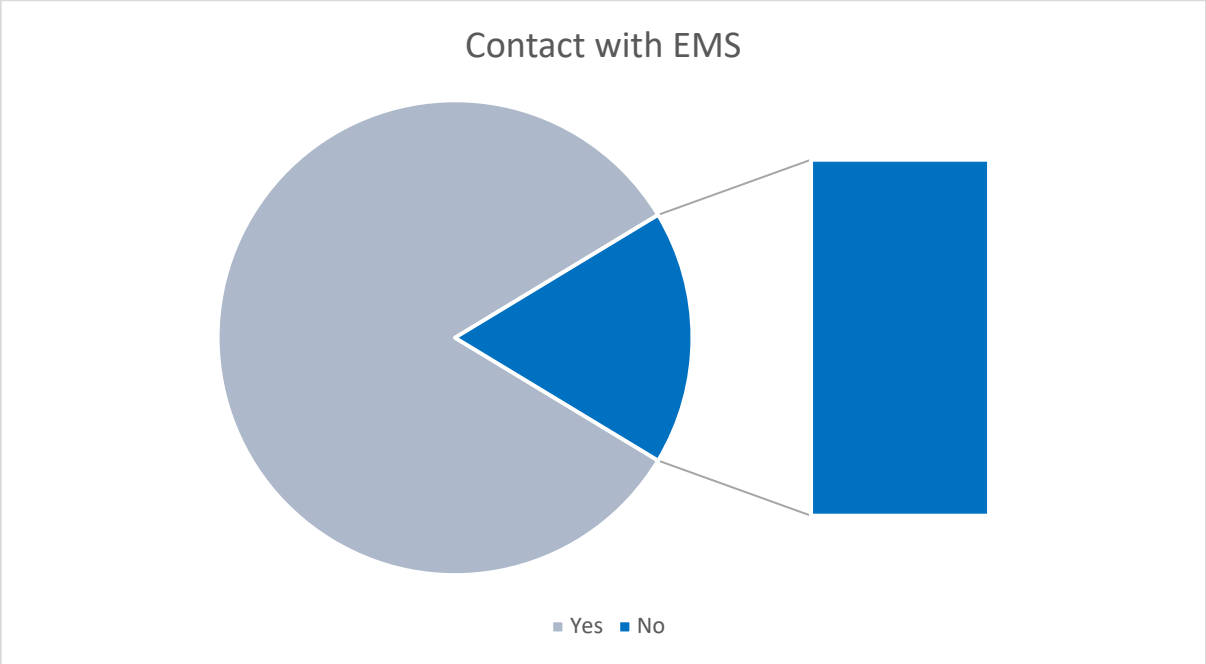
The community was asked about the quality of services from Jefferson County Fire District #1 and Emergency Medical Services.

The first question is "Within the last three (3) years have you interacted with an employee or member of the Jefferson County Fire District #1?"



Approximately 87% of the respondents have had some contact or have interacted with a member of the Jefferson County Fire District #1.

The second question is “Within the last three (3) years have you interacted with an employee or member of the Jefferson County Emergency Medical Services?”



Approximately 83% of the respondents have had some contact or have interacted with a member of the Jefferson County Emergency Medical Services.

The final statement for this section was for the overall quality of the Jefferson County Fire and EMS services. The following chart illustrates the responses to the statement, "Please rate the following statements by selecting excellent, good, fair, or poor based upon your perception of the quality of Fire and EMS services."

Overall Quality				
	Excellent	Good	Fair	Poor
25. How effectively would you rate the overall quality of the fire suppression services provided in your area of the County?	38.65%	42.33%	16.56%	2.45%
26. How effectively would you rate the overall quality of the emergency medical services provided in your area of the County?	35.98%	29.27%	22.56%	12.20%
27. How effectively would you rate the overall fire prevention services provided in your area of the County?	25.47%	45.34%	24.84%	4.35%
28. How effectively would your rate the overall public education services provided by the Fire District in your area of the County?	20.37%	43.21%	28.40%	8.02%
29. How effectively would you rate the overall public education services provided by Jefferson County EMS in your area of the County?	22.98%	24.84%	32.30%	19.88%

(2) SERVICE LEVEL CHANGES

The community was asked about their interest in consolidating the Jefferson County Fire District #1 and EMS services. The question, "How interested are you in seeking alternative methods to provide fire and EMS services in the County, such as consolidation of Jefferson County Fire District #1 and Jefferson County EMS?" The following chart illustrates this response.

Service Level Changes				
	Extremely Interested	Very Interested	Somewhat Interested	Not Interested
How interested are you in seeking alternative methods to provide fire and EMS services in the County, such as consolidation of Jefferson County Fire District #1 and Jefferson County EMS?	45.12%	18.29%	15.85%	20.73%

5. COMMENTS

The final section prompted the respondent to provide any additional information for the survey. There were 84 comments left in this section. Themes that appeared in multiple responses are outlined below:

- Consolidate/Combine Fire District #1 and EMS (41 responses)
- Cost Issues (11 responses)
- Response Times (12 responses)
- Staffed Hours (6 responses)

The overall themes for this section of the survey show that many respondents are in favor of consolidating and many are worried about the costs to the community if they were merged. The community is also concerned with the response times for emergency services and expect prompt service when called. There are opportunities for the department to educate the community about the services being provided and the associated costs to perform these services.

B Public Safety Response Time Analysis

1. Introduction

As a supplement to the Fire and EMS consolidation study, the project team was tasked with the review of call data and a response time review for all public safety agencies in the County. This appendix is the result of that review.

(1) Study Scope of Work

A periodic review of response time is essential to ensure the services for each public safety organization are being met and are comparable to industry best practices. The focus of this response time study is to review the call data, response to those calls and the response time to those calls. The scope of this project included a detailed analysis of the 2017 computer aided dispatch data.

(2) Methodology Used in the Study

The computer aided dispatch data was analyzed to illustrate three elements of the response time continuum.

- Call Processing Time – The time taken by the dispatch center to process emergency calls and dispatch the appropriate resources.
- Turnout Time – The time from dispatch of the call to the response of emergency personnel.
- Travel Time – The time from initial response to arrival at the emergency scene.

This data is compared to industry best practices where applicable to determine how the different agencies are performing and providing opportunities for improving the response the emergency calls for service.

2. Fire and EMS Response Time Analysis

This section presents the projects team's analysis of the response time for the fire suppression and emergency medical services in Jefferson County.

(1) Response Time

Response time is divided into three segments for evaluation; call processing, turnout time, and travel time. Each of these components represent a different point in the response time continuum and through their measurement and evaluation areas for improvement can be identified. Below are the definitions for the three components:

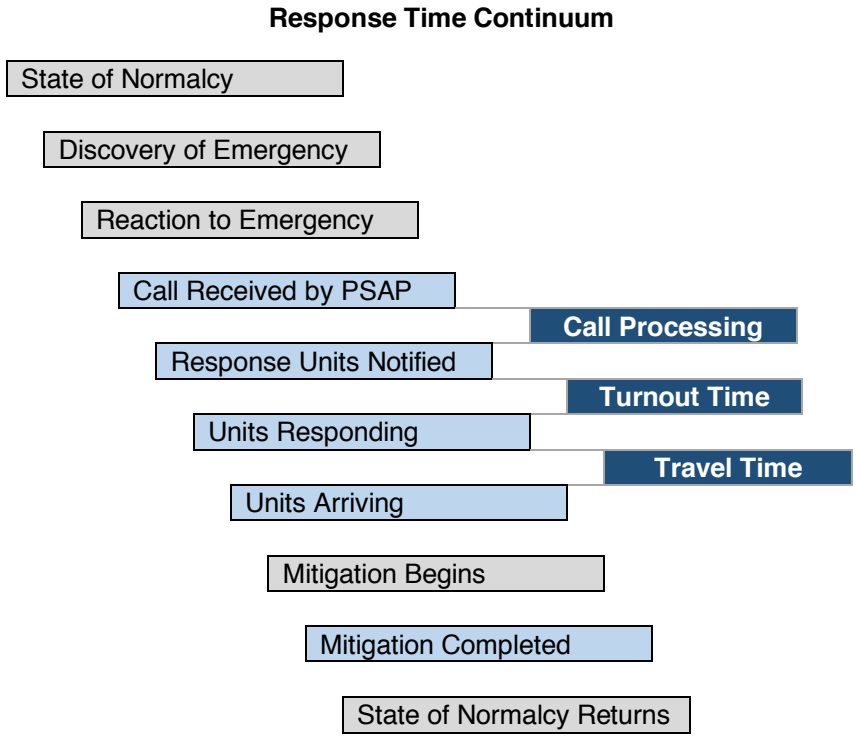
- Call Processing is defined as beginning when the call taker answers the call and ends with the dispatching of appropriate emergency services.

- Turnout Time is defined as beginning when the emergency service receives the call and is on the apparatus responding (wheels rolling) to the call.

- Travel Time is defined as beginning when the apparatus and personnel begin the response (wheels rolling) and ends once on location of the emergency (wheels stopped).

The expression of response time has changed. In years past the measurement was expressed as an average of time. This essentially represents how the system or department is performing 50% of the time and is not a true reflection of how a department is performing. With the research that has been performed in developing performance standards and practices the use of fractal time has become the best practice in the measurement and presentation of response time components. Fractal response time measures how often (as a percent of calls) a department can perform within each response time component.

Response time to an emergency or call for assistance has been further broken down into measurable and non-measurable segments. The response time continuum begins when the state of normalcy changes to a recognizable emergency. The following chart outlines the cascade of events that occurs once an emergency starts or is recognized. Those highlighted points represent hard data or that which is quantitative versus soft data or that which is subjective and unknown.



Each of the three organizations provide a reference point for communities and civic leaders to follow. The NFPA is only one that currently offers any specificity to benchmarks derived from the basic research previously described. These include the following (taken from the NFPA Standards as noted):

- One minute four seconds (64 seconds) for the processing of an incoming emergency phone call, including the completion of the dispatching of fire response units. (NFPA 1221 Section 7.4.2)

- "One minute (60 seconds) for turnout time for EMS calls." This component is for staffed stations only. This is also called reflex time, reaction time, "out-the-chute" time, etc. This is the time that elapses between dispatch and when the units are actively responding. (NFPA 1720 Section 4.3.3)

- "One minute thirty seconds (90 seconds) for turnout time for fire and special operations calls." This component is for staffed stations only. This is also called reflex time, reaction time, etc. This is the time that elapses between dispatch and when the units are actively responding. (NFPA 1720 Section 4.3.3)

- "Nine minutes (540 seconds) or less for the deployment of a full first-alarm assignment at a fire suppression incident in an urban area." (NFPA 1720 Section 4.3.2)

- "Ten minutes (600 seconds) or less for the deployment of a full first-alarm assignment at a fire suppression incident in a suburban area." (NFPA 1720 Section 4.3.2)

- "Fourteen minutes (840 seconds) or less for the deployment of a full first-alarm assignment at a fire suppression incident in a rural area." (NFPA 1720 Section 4.3.2)

- Table 4.3.2, NFPA 1720 identifies the performance objective for each demographic at not less than 90 percent for urban areas and 80 percent for suburban and rural areas.

- CFAI, by contrast, identifies the performance objective at less than 90 percent regardless of the demographic.

It is also critical to note that these time objectives apply to emergency calls for service – there is nothing in the NFPA documents (nor in any other objective) that suggests that communities cannot establish a differential response to calls for service determined to be non-emergency in nature.

Previously the Center for Public Safety Excellence had defined benchmark and baseline response times for each of the three components. They have since determined they are not a standard making organization and decided to leave the establishment of response time standards to others. However, their body of work is significant and has been used by numerous communities across the country to establish performance objectives. As such, this work will be used in the following analysis of response time performance for the Fire and EMS Districts.

The performance objectives outlined in NFPA 1720 are further defined by population densities. The following table illustrates those definitions for each of four demographics.

Demographic Risk Categories

Risk Category	Definition
Urban	An area with a population density greater than 1,000 people per square mile
Suburban Area	An area with a population density of 500 - 1,000 people per square mile
Rural Area	An area with a population density of less than 500 people per square mile

Remote Area	Travel Distance greater than 8 miles.

(2) Response Time Analysis

Computer Aided Dispatch (CAD) data is used in the analysis of the fire suppression and emergency medical services in terms of response time for the County. However, the data is not without issues such as coding problems, transcription errors, and equipment failures. The project team has developed the following mechanism to address these issues.

Only qualified data is used to calculate call processing, turnout time, travel time, and call duration. To be considered the data must meet the following criteria:

- The incident must have been unique.
- The incident must have involved at least one fire department unit being dispatched to the call.
- Calls that are missing data are not used in the computations for call processing, total response time, or call duration.
- Any call with usually long times or times sorted incorrectly (arrived before dispatch time) were removed.
- Non-emergency responses are removed, only emergency responses are included.

After filtering the data using the methodology outlined above, the remaining incidents represent the response time for calls for service handled by the Fire Department. The performance is illustrated for call processing, turnout time (time from dispatch to units responding) and travel time (time from unit going enroute to arrival at the scene). The tables below illustrate the average time and the 90% fractal time for each component.

The table below illustrates the call processing performance for 2017 for each of the three districts.

System Performance – Call Processing			
		2017	
		Performance	Deviation
Jefferson County EMS	90% Fractal	1:29	0:25
	Average	0:41	
Jefferson County Fire District	90% Fractal	2:19	1:15
	Average	1:04	
Lake Chinook Fire District	90% Fractal	2:06	1:02
	Average	0:54	

The tables below illustrate the turnout time performance for 2017 for each of the three districts.

System Performance – Turnout Time			
Jefferson County EMS		2017	
		Performance	Deviation
Daytime	Benchmark	4:18	3:18
	Baseline		1:18
	Average	2:18	
Nighttime & Weekends	Benchmark	5:50	4:50
	Baseline		0:50
	Average	3:02	

System Performance – Turnout Time			
Jefferson County Fire District		2017	
		Performance	Deviation
Daytime	Benchmark	3:41	2:11
	Baseline		0:41
	Average	1:52	
Nighttime & Weekends	Benchmark	5:50	4:20
	Baseline		0:50
	Average	2:57	

System Performance – Turnout Time			
Lake Chinook Fire District		2017	
		Performance	Deviation
Daytime	Benchmark	7:04	5:34
	Baseline		4:04
	Average	2:52	
Nighttime & Weekends	Benchmark	4:41	3:11
	Baseline		- 0:19
	Average	1:37	

Staffing for the Jefferson County Fire District and Jefferson County Emergency Medical Services differ between daytime and nighttime as well as the weekends. As a result, the turnout time shown as daytime is Monday through Friday from 8:00 am to 5:00 pm. Nighttime and weekends is overnight through the week and all hours on the weekend. All three districts were shown in the same manner.

The tables below illustrate the travel time performance for 2017 for each of the three districts.

System Performance – Travel Time			
Jefferson County EMS		2017	
		Performance	Deviation
Daytime	Benchmark	11:15	1:15
	Baseline		- 1:45
	Average	6:10	
Nighttime & Weekends	Benchmark	11:42	1:42
	Baseline		- 1:18
	Average	6:07	

System Performance – Travel Time			
Jefferson County Fire District		2017	
		Performance	Deviation
Daytime	Benchmark	11:07	1:07
	Baseline		- 1:53
	Average	6:01	
Nighttime & Weekends	Benchmark	12:14	2:14
	Baseline		- 0:46
	Average	6:12	

System Performance – Travel Time			
Lake Chinook Fire District		2017	
		Performance	Deviation
Daytime	Benchmark	27:10	17:10
	Baseline		14:10
	Average	10:12	
Nighttime & Weekends	Benchmark	34:41	24:41
	Baseline		21:41
	Average	10:28	

These tables illustrate the travel time using the same parameters as the turnout time with breakouts for daytime and nighttime and weekends.

Recommendation: The communications center should establish call processing time benchmark performance objectives of 64 seconds for emergency calls for service.

Recommendation: Work with the communications center to ensure the time stamp data is accurately collected for analysis.

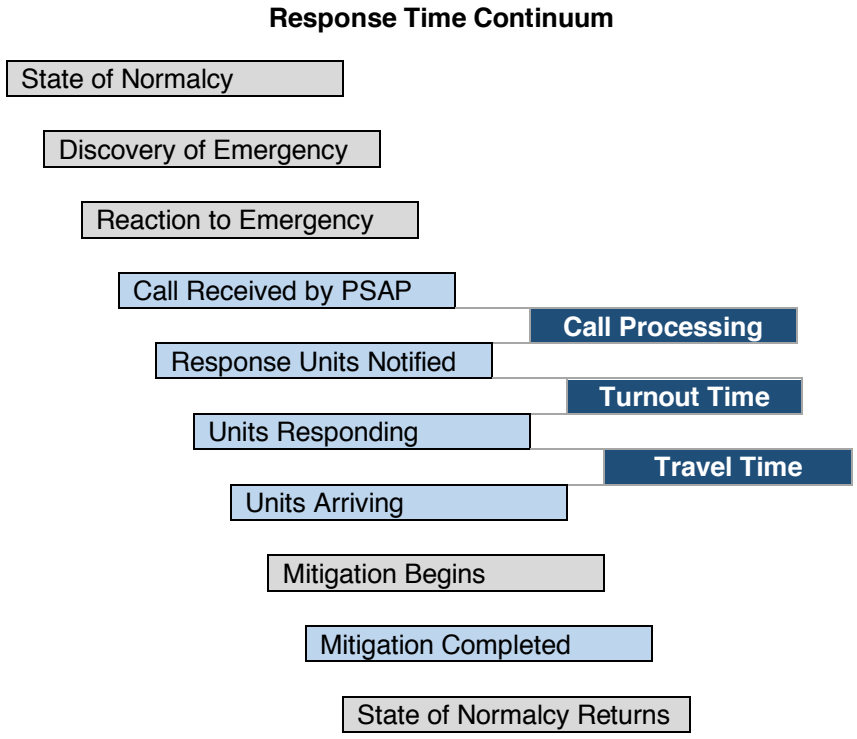
3. Law Enforcement Response Time Analysis

This chapter presents the projects team's analysis of the response time for the law enforcement services in Jefferson County.

(1) Response Time

There are no national standards for law enforcement response times. This can be attributable to the differences between fire operations and police operations. Law enforcement performance metrics are typically directed to other measurable objectives such as crime prevention, community-oriented policing, and clearance rates.

However, law enforcement agencies do respond to calls involving imminent danger or life-threatening emergencies. These types of calls should take a priority and the response could be likened to the same response time continuum as the fire and emergency medical services. The response time continuum begins when the state of normalcy changes to a recognizable emergency. The following chart outlines the cascade of events that occurs once an emergency starts or is recognized. Those highlighted points represent hard data or that which is quantitative versus soft data or that which is subjective and unknown.



(2) Calls for Service

The calls for service for the Madras Police Department (MPD) and the Jefferson County Sheriff's Office (JCSO) are shown in the tables below. These calls represent the top ten (10) call types for 2017.

Jefferson County Sheriff's Office		
Call Type	Number of Calls	Pct of Total
Vehicle Stop	2,027	13.3%
Civil/Paper Service	1,795	11.7%
Call Back Request	1,437	9.4%
Driving Complaint	921	6.0%
Follow Up	814	5.3%
Dog Complaint	744	4.9%
Suspicious Circumstances	541	3.5%
Abandoned Call	400	2.6%
Information	386	2.5%
House Check	354	2.3%
Total Calls 2017	15,282	

Madras Police Department		
Call Type	Number of Calls	Pct. of Total
Vehicle Stop	2,039	16.1%
Follow Up	1,870	14.7%
Call Back Request	1,246	9.8%
Suspicious Circumstances	703	5.5%
Dog Complaints	414	3.3%
Abandoned Call	364	2.9%
Driving Complaint	332	2.6%
Disturbance/Verbal Argument	325	2.6%
Unwanted	324	2.6%
Theft	309	2.4%
Total Calls 2017	12,681	

The calls were further separated by the nature of the calls or those calls that pose an immediate danger or life-threatening situation. The table below illustrates these calls for each agency and the percentage of the total call volume.

Law Enforcement Emergency Calls				
	JCSO		MPD	
	Number of Calls	Pct. of Total	Number of Calls	Pct. of Total
Burglary	66	0.4%	61	0.5%
Disturbance/Verbal Argument	161	1.1%	325	2.6%
Domestic Violence	81	0.5%	124	1.0%
Fire Related Calls	79	0.5%	34	0.3%
Hit and Run	36	0.2%	88	0.7%
Medical Emergency	92	0.6%	136	1.1%
Motor Vehicle Accident	326	2.1%	184	1.5%
Panic/Fire/Burglar Alarm	110	0.7%	295	2.3%
Shots Fired	46	0.3%	33	0.3%
Suicide/DOA	53	0.3%	42	0.3%
Total	1,050	6.9%	1,322	10.4%

These calls will be used in the response time analysis for emergency calls. Burglary, hit and run, and alarm calls were included in this group as there is the potential for in progress crimes or injuries in each of these categories. To provide some prospective on these emergency calls, the table below illustrates the time of day these calls are occurring.

Emergency Call for Service by Time of Day

Call Type	CFS	12am	4 am	8 am	12 pm	4 pm	8 pm
Burglary	127						
Disturbance/Verbal Argument	486						
Domestic Violence	205						
Fire Related Calls	113						
Hit and Run	124						
Medical	228						
Motor Vehicle	510						
Alarms	405						
Shots Fired	79						
Suicide/DOA	95						

The disturbance and domestic violence calls are occurring more in the early evening hours with the burglary and alarm calls being reported during the morning hours.

(3) Response Time Analysis

Computer Aided Dispatch (CAD) data is used in the analysis of law enforcement in terms of response time for the County. However, the data is not without issues such as coding problems, transcription errors, and equipment failures. The project team has developed the following mechanism to address these issues.

Only qualified data is used to calculate call processing, turnout time, travel time, and call duration. To be considered the data must meet the following criteria:

- The incident must have been unique.
- The incident must have involved at least one fire department unit being dispatched to the call.
- Calls that are missing data are not used in the computations for call processing, total response time, or call duration.
- Any call with usually long times or times sorted incorrectly (arrived before dispatch time) were removed.
- Non-emergency responses are removed, only emergency responses are included.

After filtering the data using the methodology outlined above, the remaining incidents were used to illustrate the response for law enforcement units. The first table below outlines emergency and non-emergency calls as it relates to the recording of time stamps for the response time segments.

CAD Time Review		
Time Stamp Points	Number of Calls	Pct. Of Total
Dispatch Time Recorded	22,383	80.0%
Enroute Time Recorded	4,215	15.1%
Arrival Time Recorded	16,523	59.1%
Cleared Time Recorded	21,123	75.5%
Total Calls	27,964	

Of the 27,964 calls recorded, only 4,215 calls or 15.1% of the calls had an enroute time recorded. Similarly, 16,523 calls or 59.1% of the calls had an arrival time recorded.

The table below illustrates the same data using only those emergency calls previously identified.

CAD Time Review Emergency Calls		
Time Stamp Points	Number of Calls	Pct. Of Total
Dispatch Time Recorded	2,030	85.5%
Enroute Time Recorded	1,299	54.7%
Arrival Time Recorded	1,470	61.9%
Cleared Time Recorded	1,914	80.7%
Total Calls	2,373	

Of the 2,373 calls recorded, 1,299 or 54.7% of the calls had an enroute time recorded. As well, 61.9% or 1,470 calls had an arrival time recorded.

The tables below display the response time components of call processing, turnout time, and travel time for each agency. These times are based on those identified as emergency responses.

Law Enforcement Response Time		
Call Processing		**2017 Performance**
JCSO	90% Fractal	20:21
	Average	09:18
MPD	90% Fractal	09:27
	Average	05:21

Law Enforcement Response Time		
Turnout Time		**2017 Performance**
JCSO	90% Fractal	03:25
	Average	02:29
MPD	90% Fractal	01:45
	Average	01:30

Law Enforcement Response Time		
Travel Time		2017 Performance
JCSO	90% Fractal	30:06
	Average	13:00
MPD	90% Fractal	06:08
	Average	03:22

Recommendation: Work with the communications center to ensure the time stamp data is accurately collected for analysis.

Recommendation: Consider installing mobile data terminals in the police cars to enable the capture of time stamps electronically and to enhance communication ability between field units and the emergency communication center.

C New User Fee Assessment

1. Introduction

This appendix is the result of additional information and changes to the financial data that was originally presented to the project team. During the course of this study, the JCEMS began to change the methodology in their billing practices. Essentially, the coding used in the past was not fully capturing the amounts due for services and supplies to the JCEMS. Beginning in the middle of 2018 the JCEMS began using different billing codes to secure the proper amounts due for services and supplies. The JCEMS accountant supplied a review of revenues and expenditures comparing a six-month period.

This information was presented in Chapter 5 Independent EMS District but was not included in the discussion in Chapter 7 Consolidation of Emergency Services. It was not included and no recommendations were derived as the financial data is only for six months. This presents a question of sustainability for the project team. However, the accountant and the JCEMS management team believes this is a sustainable funding source now and into the future. As a result, the revised revenues are presented here in the context of the consolidated emergency services.

2. Revenues

The table below Illustrates the revenues for the combined organization with the new user fee collections. This does not include a local option tax.

Jefferson County Emergency Services Revenue Projection									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
-1.8%	Previously Levied Taxes	$35,000	$34,373	$33,757	$33,152	$32,558	$31,974	$31,401	$30,839
-14.2%	Out of District Alarms	$3,500	$3,002	$2,575	$2,209	$1,895	$1,625	$1,394	$1,196
	Miscellaneous and Street Signs	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
3.4%	Contractual Services	$120,000	$124,131	$128,405	$132,826	$137,399	$142,130	$147,023	$152,085
3.0%	Taxes Collected in Year Levied	$870,000	$896,100	$922,983	$950,672	$979,193	$1,008,568	$1,038,825	$1,069,990
2.0%	User Fees (net)	$1,812,925	$1,849,184	$1,886,167	$1,923,891	$1,962,368	$2,001,616	$2,041,648	$2,082,481
	Sustainable Revenues	**$2,851,425**	**$2,916,790**	**$2,983,887**	**$3,052,750**	**$3,123,413**	**$3,195,913**	**$3,270,292**	**$3,346,591**
	Pro Med Sales	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
	Refunds Received	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923	$7,923
	Interest	$6,790	$6,790	$6,790	$6,790	$6,790	$6,790	$6,790	$6,790
	Donations	$500	$500	$500	$500	$500	$500	$500	$500
	Grants	$472,000	$37,900	$37,900	$37,900	$37,900	$37,900	$37,900	$37,900
	Community Paramedic	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
	Circle Track	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
0.8%	Uncategorized Income	$5,040	$5,080	$5,121	$5,162	$5,203	$5,245	$5,287	$5,329
	Unsustainable Revenues	**$615,253**	**$181,193**	**$181,234**	**$181,275**	**$181,316**	**$181,358**	**$181,400**	**$181,442**
	Total Revenues	**$3,466,678**	**$3,097,983**	**$3,165,121**	**$3,234,025**	**$3,304,729**	**$3,377,271**	**$3,451,692**	**$3,528,033**

The increase in the user fees amounts to about $716,074 in 2019 and continues to increase over the next seven years.

3. Expenditures

The table below illustrates the expenditures for the consolidated organizations as shown in Chapter 7. It is shown here as a reference.

Jefferson County Emergency Services Expenditure Projection									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries and Wages	$1,215,084	$1,239,386	$1,264,173	$1,289,457	$1,315,246	$1,341,551	$1,368,382	$1,395,750
	Part Time Pay	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
2.0%	Overtime	$35,000	$35,700	$36,414	$37,142	$37,885	$38,643	$39,416	$40,204
	Workers Comp	$47,388	$48,336	$49,303	$50,289	$51,295	$52,320	$53,367	$54,434
5.0%	Health Insurance	$269,297	$282,762	$296,900	$311,745	$327,332	$343,699	$360,884	$378,928
10.0%	Retirement	$190,890	$222,718	$227,172	$234,033	$238,713	$243,487	$248,357	$253,324
	Payroll Taxes	$109,358	$111,545	$113,776	$116,051	$118,372	$120,740	$123,154	$125,617
5.0%	Dental /Other Insurance	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178
	Total Personnel Services	**$1,992,017**	**$2,066,696**	**$2,115,300**	**$2,167,657**	**$2,219,231**	**$2,272,347**	**$2,327,062**	**$2,383,435**
3.0%	Materials and Services	$661,693	$681,544	$701,990	$723,050	$744,741	$767,084	$790,096	$813,799
	Total Operating Expenditures	**$2,653,710**	**$2,748,240**	**$2,817,290**	**$2,890,707**	**$2,963,972**	**$3,039,431**	**$3,117,158**	**$3,197,234**
	Debt Service	$88,323	$85,323	$85,323	$85,323	$85,323	$85,323	$85,323	$85,323
	Capital Improvements	$399,000	$0	$0	$0	$0	$0	$0	$0
	Total Expenditures	**$3,141,032**	**$2,833,562**	**$2,902,613**	**$2,976,030**	**$3,049,295**	**$3,124,753**	**$3,202,481**	**$3,282,556**

4. Fund Balance

The table below illustrates a revised fund balance that includes the revised user fees in the sustainable revenues.

Jefferson County Emergency Services Fund Balance Summary Projection								
	FY 19 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,819,137	$1,925,898	$1,998,246	$2,066,082	$2,131,356	$2,193,714	$2,252,765
Sustainable Revenues	$2,851,425	$2,916,790	$2,983,887	$3,052,750	$3,123,413	$3,195,913	$3,270,292	$3,346,591
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,653,710	$2,748,240	$2,817,290	$2,890,707	$2,963,972	$3,039,431	$3,117,158	$3,197,234
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,819,137	$1,925,898	$1,998,246	$2,066,082	$2,131,356	$2,193,714	$2,252,765	$2,308,081
Recommended Ending Fund Balance	$663,427	$687,060	$704,323	$722,677	$740,993	$759,858	$779,290	$799,308
Changes to Net Working Capital	**$327,986**	**$106,761**	**$72,349**	**$67,835**	**$65,274**	**$62,358**	**$59,051**	**$55,316**

With the revised user fees, the ending fund balance improves significantly.

5. Additional Staffing

In Chapter 7 the staffing model provided two options for staffing using career and part-time employees. The staffing model also provided for a staffed engine company of three (3) personnel and two (2) staffed ambulances with two (2) personnel each. With the additional revenues generated through the user fees, the table below illustrates a staffing model that would provide a staffed engine company of three (3) personnel and three (3) staffed ambulances with two (2) poersonnel each.

Proposed Compensation of Personnel			
Position	Salary	Number of Positions	Total Salary Cost
Chief of Department	$108,864	1	$108,864
Deputy Chief	$90,720	1	$90,720
Captain	$75,600	5	$378,000
Engineer	$63,000	3	$189,000
Firefighter/Paramedic	$52,500	7	$367,500
PT Firefighter/Paramedic	$49,640	10	$496,400
Admin Asst. II	$45,000	1	$45,000
Admin Asst.	$36,000	1	$36,000
		29	$1,711,484

The table below illustrates the expenditures for the consolidated organization with the additional personnel costs noted above beginning in 2021.

Jefferson County Emergency Services Expenditure Projection WITH ADDITIONAL 10 PART-TIME STAFF									
Annual Change	Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
2.0%	Salaries and Wages	$1,215,084	$1,239,386	$1,711,484	$1,745,714	$1,780,628	$1,816,241	$1,852,565	$1,889,617
2.0%	Overtime	$40,000	$40,800	$41,616	$42,448	$43,297	$44,163	$45,046	$45,947
	Workers Comp	$47,388	$48,336	$66,748	$68,083	$69,444	$70,833	$72,250	$73,695
5.0%	Health Insurance	$269,297	$282,762	$296,900	$311,745	$327,332	$343,699	$360,884	$378,928
10.0%	Retirement	$190,890	$222,718	$307,554	$316,842	$323,179	$329,642	$336,235	$342,960
	Payroll Taxes	$109,358	$111,545	$154,034	$157,114	$160,257	$163,462	$166,731	$170,065
5.0%	Dental /Other Insurance	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178
	Total Personnel Services	**$1,897,017**	**$1,971,796**	**$2,605,898**	**$2,670,886**	**$2,734,525**	**$2,799,947**	**$2,867,214**	**$2,936,390**
3.0%	Materials and Services	$661,693	$681,544	$701,990	$723,050	$744,741	$767,084	$790,096	$813,799
	Total Operating Expenditures	**$2,558,710**	**$2,653,340**	**$3,307,888**	**$3,393,936**	**$3,479,266**	**$3,567,030**	**$3,657,310**	**$3,750,189**

With the expenditures established, the following table illustrates the fund balance projection. This table includes the revised revenues and the increased staffing for three ambulances and a fire unit.

Jefferson County Emergency Services Revenue / Expenditure Comparison WITH LOCAL TAX OPTION and ADDITIONAL PART-TIME STAFF								
Line Item	FY2019 Budget	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Beginning Net Working Capital	$1,491,151	$1,914,137	$2,115,798	$2,518,152	$2,927,979	$3,348,537	$3,779,991	$4,222,486
Sustainable Revenues	$2,851,425	$2,916,790	$2,983,887	$3,052,750	$3,123,413	$3,195,913	$3,270,292	$3,346,591
Local Option Tax	$0	$0	$820,603	$845,221	$870,578	$896,695	$923,596	$951,304
Unsustainable Revenues	$615,253	$181,193	$181,234	$181,275	$181,316	$181,358	$181,400	$181,442
Fund Transfers IN	$0	$0	$0	$0	$0	$0	$0	$0
Loan Proceeds	$0	$0	$0	$0	$0	$0	$0	$0
Sale of Fixed Assets	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Operating Expenditures	$2,558,710	$2,653,340	$3,307,888	$3,393,936	$3,479,266	$3,567,030	$3,657,310	$3,750,189
Capital and Debt Service	$487,323	$245,323	$277,823	$277,823	$277,823	$277,823	$277,823	$277,823
Fund Transfers OUT	$0	$0	$0	$0	$0	$0	$0	$0
Ending Net Working Capital	$1,914,137	$2,115,798	$2,518,152	$2,927,979	$3,348,537	$3,779,991	$4,222,486	$4,676,152
Recommended Ending Fund Balance	$639,677	$663,335	$826,972	$848,484	$869,817	$891,758	$914,327	$937,547
Changes to Net Working Capital	**$422,986**	**$201,661**	**$402,354**	**$409,827**	**$420,558**	**$431,454**	**$442,495**	**$453,665**

The table above also includes the local option tax as previuosly discussed. Eliminating that tax would reduce the ending fund balance in 2021 to $1,697,549 and that downward trend would continue until 2025 when the ending fund balance would be depleted.

With the increased user fees and the local tax option, three staffed ambulances and a staffed fire unit is possible. However, this is based on six-months of increased user fees, the project team is cautiously optimistic on the sustainability of these new rates.

Attachment Fire District Formation Guide

Fire District Formation and Dissolution

Introduction

This Guide contains information included in the Oregon Statutes, but it should not be used as a legal guide for forming a special district. Members are strongly recommended to read the Oregon statutes pertaining to district formation and to contact an attorney for legal advice if they decide to proceed with the formation process.

- Applicable Oregon Revised Statutes -

The formation of most types of special districts is covered in Oregon Revised Statute (ORS) Chapter 198 - "Special Districts Generally." Rural Fire Protection Districts have additional requirements for formation that are found in ORS Chapter 478.

Summary

Interested citizens should think through all aspects of forming a rural fire protection district. Areas that must be considered are the probable area to be served, the assessed valuation of the area, the revenue that could be provided by a reasonable tax, and where money needed to purchase equipment and a suitable station will be obtained. The source of funding for formation and election costs must also be considered. Because of legal land description requirements, these may be significant.

It is useful to have solid information for an economic feasibility study before irretrievable amounts of resources are used on something with little chance of survival or public approval. This includes projections of operating costs, permanent levies, and the use of bond issues or local option levies for funding capital purchases. Analyzing current local government taxes imposed in the proposed district and the impact of desired new taxes must be evaluated in light of the Oregon constitutional requirements embodied in Ballot Measures 5 (adopted in 1990) and 50 (adopted in 1996) respectively. It is advisable to employ an attorney familiar with rural fire protection district laws.

There are three ways a fire district can be formed:

1. A fire district may be formed by the filing of a petition for formation.
2. A fire district may be formed by the consent of all property owners within the area of the proposed district.
3. A fire district may be created by initiation and order of the county board of commissioners.

Suggested Initial Steps

The following steps are general guidelines to follow in the initial attempt to form a rural fire protection district. Although the following steps in this section are not required by law, they are recommended as a good basis for creating interest and support in the formation of a district.

Committee formed: Dedicated and resourceful citizens should form an unofficial or "ad hoc" committee.

Before proceeding further, the committee should determine whether voters in the area to be served will vote once to create the proposed district and vote a second time to fund it. The committee will also find it helpful to consult with the State Fire Marshal, the insurance industry, other fire district officials, and possibly an attorney. The State Fire Marshal's office is required by law to assist in the formation of rural fire protection districts. The insurance industry and other parties who have gone through the process of formation should be contacted in order to gain additional insight, information, and help. 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 actually formed. Whoever provides the money must carry the loss if the district is not formed.

Formation Proposal Developed: In developing the proposal 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 reasonable tax
- Whether the district will provide its own fire protection or contract with an available agency
- The level of protection that will be provided by a reasonable tax
- The possibility of annexation to an existing district
- A plan of how to fund the newly created district (both operational and capital costs).

Promotional Materials Developed: Promotional materials, such as a handbill, should be developed and distributed as widely as possible. Special attention should be paid to making all property owners within the proposed district aware of the proposal. Available news media should be utilized. 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.

Public Meeting Held: At the public meeting, the committee should estimate community interest. It should also:

- Present its recommendations
- Introduce any resource people available, such as an attorney, or a representative of the State Fire Marshal or the insurance industry
- Show comparative fire insurance costs of protected versus unprotected areas

- If the proposed district is to provide its own fire protection, show estimates for initial outlay and continuing costs for a minimum level of protection
- If the proposed district will contract for fire protection, present local city or district fire officials from the contracting entity.
- After time has been given to answer questions from the floor, 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 circulating a petition for district formation.

Included Territory

The territory to be included in the 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. ORS 198.720(1) and ORS 478.010(2)(a).
- It cannot include the territory in another fire protection district, unless withdrawal of that territory is simultaneous and approved by both districts. ORS 198.720(2)
- 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. ORS 198.720(3)
- It cannot include territory that is within a water supply district authorized to supply its own fire protection. ORS 478.010(2)(b)
- It cannot include land within forest protection districts and railroad right-of-ways, unless by consent of owner, or include ocean shore lands 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 forest lands.

Economic Feasibility Statement

ORS 198.749 requires that an economic feasibility study be conducted by those people designated as chief petitioners (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 formation and local option levies at that time.

Formation

A special district may be formed from contiguous or noncontiguous territory located in one or more adjoining counties. Exceptions to this may exist in individual principal acts that govern the formation and authorities of specific types of districts. A district may also include territory within a city if the city governing body consents to the formation. Territory within another district performing the same services as the proposed district may not be included in a new district unless the territory is withdrawn, either by a simultaneous withdrawal proceeding or automatically by statute, from the former district. The boundaries of a new district may only include territory that can be reasonably served by the facilities or services of the proposed district.

If two or more counties are affected by a formation proposal, the notices, proceedings, orders and any other act required of a county board or county clerk must be given or taken to the person holding those offices in the principal county. The principal county is the county in which the greatest portion of the assessed valuation of all taxable property in the district is located. Officers of any other affected county must cooperate with the officers of the principal county and must furnish such records and certificates as may be required. Once the principal county is determined, it will remain the county with jurisdiction over the special district for all purposes thereafter.

As mentioned previously, there are three procedures that may be used to form a special district: the filing of a petition for formation; the consent of all property owners within the area of the proposed district; or initiation and order of the county board. Following is an analysis of each of those procedures:

Initiation by Petition

Pursuant to ORS 198.800, formation of a special district may be initiated by a petition filed with the county board of the principal county. 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 petition must contain the following information:

- A statement that the petition is filed pursuant to ORS 198.705 to 198.755.
- A statement of the names of all affected districts and all affected counties.
- A designation of the principal act of each affected district.
- A statement of the nature of the proposal, whether formation of a district or change of organization and the kind of change proposed.
- A statement whether the territory subject to the petition is inhabited or uninhabited (uninhabited territory means territory within which there reside less than twelve (12) electors who were residents within the territory thirty (30) days prior to the date a proceeding is commenced to form the district).
- A statement that district board members are or are not to be elected and, if so, the number of members on the board.
- A proposed permanent tax rate sufficient to support the services and functions described in the economic feasibility statement and a declaration of the rate of

taxation necessary to raise an amount of revenue equal to the proposed permanent tax rate.
- A statement of the proposed terms and conditions, if any, to which a proposed formation is to be subject.
- A statement or indication opposite each signature on the petition whether the signers of the petition are landowners within the district or electors registered within the district, or both.
- A request that proceedings be taken for formation of the district.
- A permanent tax rate and tax rate need not be included in the petition if no tax revenues are necessary to support the services and functions described in the economic feasibility statement. The permanent tax rate, if any, must be expressed as a total dollar amount and the tax rate must be expressed as a rate per thousand of assessed valuation. These rates must be calculated for the latest tax year for which information is available.

The petition must be signed by at least:

- 15% of the electors or 100 electors, whichever is more, registered in the territory to be included in the proposed district; or
- 15 landowners or the owners of 10% of the acreage, whichever is greater, within the territory to be included in the proposed district.

Before circulating the petition for formation of a district, the persons designated on the petition as the chief petitioners must complete an economic feasibility statement for the proposed district. That feasibility statement forms the basis for any proposed permanent tax rate. The feasibility statement must contain:

- A description of the services and functions to be performed or provided by the proposed district;
- An analysis of the relationships between those services and functions and other existing or needed government services;
- A proposed first year line item operating budget and a projected third year line item operating budget for the new district that demonstrates its economic feasibility.
- The economic feasibility statement must be attached to the petition when it is filed with the county and before it is circulated for signing.
- Prior to circulation of any petition, the petitioners must file with the county clerk of the principal county a prospective petition. The prospective petition must include a description of the boundaries of the territory proposed to be included in the district.
- A petition for formation of a district may not be accepted for filing by the county unless the petition is accompanied by a bond, a cash deposit or other security deposit.
- A bond must be in a form and in an amount approved by the county board not to exceed $100 for each precinct in the affected district and any territory to be included in the district, up to a maximum of $10,000. The bond must be conditioned that, if the attempted formation is not completed, the chief petitioners will pay the costs thereof.
- A cash deposit must be in an amount approved by the county board not to exceed $100 for each precinct in the affected district and any territory to be included in the

district up to a maximum of $10,000. The cash deposit must be accompanied by a form prescribed by the Secretary of State. The form must include the names and addresses of all persons and organizations providing any part of the cash deposit and the amount provided by each, and a statement signed by the chief petitioners that if the costs of the attempted formation exceed the deposit, the chief petitioners will pay to the county the amount of the excess costs.

- A security deposit other than a bond or cash deposit shall be of a kind and in an amount approved by the county board not to exceed $100 for each precinct in the affected district and any territory to be included in the district up to a maximum of $10,000. The security deposit must be accompanied by a form prescribed by the Secretary of State. The form must include the names and addresses of all persons and organizations providing any part of the security deposit and the amount in mind provided by each, and a statement signed by the chief petitioners that if the costs of the attempted formation exceed the security deposited, the chief petitioners shall or will pay to the county the amount of the excess cost.
- After circulation of the petition, the clerk of the principal county has ten (10) days from the date the petition is received to review the petition and determine whether it has been signed by the requisite number of qualified signers. If the clerk determines there are sufficient signatures, the clerk files the petition. If the clerk determines there are insufficient signatures, the clerk notifies the chief petitioners and may return the petition to the petitioners.
- The petition should provide space for each signer to sign his or her name, print his or her name and add the date of signing. The petition should also provide that if the person is signing the petition as an elector, the person shall add after the signature the person's place of residence, giving street and number or a designation sufficient to enable the place of residence to be readily ascertained. If the signer is signing the petition as a landowner, the number of acres of land owned by the signer and the name of the county whose assessment role is used for the purpose of determining the signer's right to vote must be stated in the body of the petition or indicated opposite the signature. If the signer is a legal representative of the owner of the property, the signature must be accompanied by a certified copy of the signer's authority to sign as a legal representative. A signer may withdraw his or her name from the petition up until the time of filing with the county, but may not withdraw the name after such filing.
- A petition must designate not more than three (3) persons as "chief petitioners," setting forth their names and mailing addresses.
- A petition may consist of a single document or separate documents.
- A petition may not be accepted for filing by the county unless the signatures have been secured within six (6) months of the date on which the first signature on the petition was obtained. Nor may a petition be accepted for filing if it is not accompanied by the economic feasibility statement required under ORS 198.749.
- If the petition for formation of a district includes a permanent tax rate for the proposed district, the petition must be filed not later than 180 days before the date of the next regular statewide primary or general election at which the petition for formation may be voted upon.
- A petition may not be filed unless the certificate of the county clerk or the district secretary is attached thereto certifying that the county clerk or district secretary has compared the signatures of the signers with the appropriate records and that the

county clerk or district secretary has ascertained the number of qualified signers appearing on the petition and that the petition is signed by the requisite number of qualified signers.

After a petition satisfying all the statutory requirements has been filed, the county board must set a date for hearing on the petition and will give notice of the hearing by posting and publication as specified in ORS 198.730 and 198.800(2). Chief petitioners are advised to keep in constant contact with the county clerk and the board of county commissioners to assure that the functions required of the county by the statutes are actually performed in a timely manner.

Formation by Consent of Property Owners

A special district may be created by consent of all property owners within the area of the proposed district. The owners of all real property within an area may petition the county board to form a district. The petition must contain all the information required by ORS 198.750 and must state the names of the person who will serve as members of the first district board, and must contain the written acceptance of each person agreeing to serve as a board member, ORS 198.830(1). The petition must include an affidavit of one of the petitioners that the petitioner believes that the signers of the petition comprise all the owners, at the time of the verification, of all the land included within the proposed district.

The county board then holds a hearing on the petition. If the county board finds that all property owners within the proposed district have joined in the petition and that the area could be benefited by formation of the district, the board will adopt an order approving formation of the district. If the formation is approved, any election otherwise required by law is dispensed with. The board shall enter an order creating the district, and the persons nominated by the petition and accepted nomination as members of the board shall constitute the first board of the district.

Initiation by County Board

A county board may initiate and pay the cost of the formation of a district to be located entirely within the county by adopting an order stating the county board's intention to initiate formation of the district, identifying the principal act, describing the name and boundaries of the proposed district, and setting a time, date and place for a public hearing on a proposal. If any of the territory to be included within the proposed district is within the boundaries of a city, a certified copy of the city governing body's resolution approving the order must be attached to the order.

Notice of the hearing set by the board order must be posted in at least three public places and published by two insertions in newspaper. In addition, the notice must state that the county board has entered an order declaring its intention to initiate formation. The hearing and election on the proposal, and the election of the initial board members, is to be conducted pursuant to ORS 198.800 to 198.825.

Hearing

Once proper petitions have been filed with the principal county and have been approved by endorsement by any agency required by the principal act, the county is required to set a hearing on the petition. The hearing must be held between 30 days and 50 days after the date the petition is

filed. Notice of hearing must be posted in at least three places and published by two insertions in a newspaper. The notice must include:

- The purpose for which the district is to be formed.
- The name and boundaries of the proposed district.
- The time and place of the hearing on the petition.
- A statement that all interested persons may appear and be heard.

On or before the date set for any hearing on the petition, any person interested in the proposed formation of a district may appear and present written statements for or against the granting of the petition. At the hearing on the petition for formation, the county board may receive oral or written testimony favoring or opposing the district formation. Any written statement objecting to the formation must clearly identify the error, omission or defect which is the basis for the objection. If the written objection is not timely filed, the objection is considered waived.

Upon conclusion of the hearing, the county board must evaluate the formation petition by applying the criteria in ORS 199.462. That statute requires consideration of local comprehensive planning for the area, economic, demographic and sociological trends and projections pertinent to the proposal, past and prospective physical development of land that would directly or indirectly be affected by the proposed district and the statewide goals. The board may modify the boundaries of the proposed district to include or exclude territory considering the benefit the proposed district will have to territory in or out of the district. The board may not modify the boundaries to exclude land that could be benefited by the district formation and may not include land that will not be benefited. If the county board determines that land has been improperly omitted from the proposed district and the owner has not appeared, the county board must continue the hearing and order notice to be given to the nonappearing owner in the manner required by
ORS 198.805.

If the county board approves the formation of the petition, the board adopts an order identifying the name and boundaries of the proposed district and setting a time and place, between 20 and 50 days from the date of the order, for a final hearing on the petition. The order must also state that if no written requests for an election are filed, the board will adopt an order creating the district at the final hearing. Notice of the final hearing is given by publication.

Election

If the approved petition includes a permanent tax rate, an election on the question of formation of a special district is required. An election is also required if the county board receives requests for an election filed by at least 15% of the electors or 100 electors,

whichever is less, on or before the date of the final hearing, even if the petition for formation includes no permanent tax rate.

If a sufficient number of requests for an election are filed with the county on or before the date of the final hearing, or if the petition for formation includes a permanent tax rate for the proposed district, the board provides by an order for the holding of an election to submit to the electors the question of forming the district. The board must cause notice of the election to be published by two insertions in a newspaper. If requests for an election are filed by less than the required number of persons and no permanent tax rate is included in the petition, the county board shall dismiss the requests for an election and enter an order creating the district. Nevertheless, the county board must order an election for the purpose of electing the first members of the district board. The procedure for nominating and electing first board members is provided in ORS Chapter 255.

If no permanent tax rate is proposed, the only question before the electors is whether the proposed district should be formed. When the proposal for formation includes a permanent tax rate for the proposed district, the ballot title shall clearly indicate that a single question is being proposed which is:

- Whether the proposed district should be formed.
- Whether the permanent tax rate specified in the ballot title should be adopted as the initial permanent tax rate of that district.

The county board has thirty (30) days after the date of the election to canvass the votes and adopt an order regarding the proposed formation. If a majority vote favors formation of the district, the board adopts an order creating the district. After the date of the formation order, the inhabitants of the territory within the new district become a municipal corporation with all the powers conferred by the principal act. The new district pays the costs of forming the district and the county clerk refunds any cash deposit or other form of security to the persons who post the security with the county.

If a majority votes against formation of the district, the county board will adopt an order dismissing the petition. The county clerk reimburses the county for the costs of the attempted formation from the security deposit posted by the chief petitioners and refunds any remaining portion of the security deposit to the chief petitioners. If the costs of the attempted formation exceed the amount of the deposit, the chief petitioners must pay the amount of the excess costs.

Challenges to District Formation

Pursuant to ORS 198.785, any citizen of the affected district or territory may initiate proceedings to challenge the county clerk's refusal to accept and file a petition for formation or the county board's refusal to call a special election on the question of formation within ten (10) days of such refusal. Such citizen may file in circuit court of the principal county for a writ of mandamus to compel the county clerk to accept and file the petition or to compel the county board to call an election. If the circuit court finds that the petition for formation is legally sufficient and the requisite number of signatures is attached, the circuit court will direct the county board to call the election. The courts

are required to handle and decide such suits as quickly as possible and the circuit court's decision is appealable.

In addition, proceedings to challenge the validity of a formation of a district may be brought by filing a writ of review pursuant to ORS 33.710 or ORS 34.010 to 34.100.

Steps for District Formation

1. Establish a working committee.
    a. Set up community meetings and contact local agencies.
    b. Draft maps and research property values.

2. Review estimated costs and boundaries at public meetings.

3. Draw up petitions. Submit prospective petition to county clerk. Begin preparing Economic Feasibility Statement.

4. Circulate petitions. Obtain resolutions from any affected cities.

5. Submit petitions, Economic Feasibility Report, and security deposit 180 days prior to election to County Clerk and Surveyor for review.

6. County schedules hearing date and bond posted.

7. County holds initial hearing.

8. County holds second hearing.

9. County enacts formation resolution or schedules election date.

10. Formation materials submitted to Department of Revenue.

11. Submit formation to Assessor's Office.

12. Hold levy and Board election (Permanent tax rate elections may only be held in May or November of even numbered years).

    Note: If there is a formation election held, the permanent tax rate, if any, must be included in that election.