Emergency Medical Services
Master Plan

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Executive Summary

Emergency Medical Services (EMS) within the Lewis and Clark Valley are provided by a number of agencies beginning with receipt of a call for service at one of several Public Safety Answering Points (PSAP); response by community personnel in first responder roles; followed by response by one of two Advanced Life Support (ALS) transport agencies, which transport patients to local medical facilities. This report identifies each of the components that comprise the EMS system serving the Lewis and Clark Valley and provides an evaluation of each of the agencies providing service to the region with particular focus on the transport providers.

This report is segregated into three primary sections: Evaluation of Current Conditions, Future System Demand Projections, and Future Delivery System Models. Each section will be summarized here individually.

The Evaluation of Current Conditions section provides the reader with a general overview of each agency involved in this project and includes an evaluation of planning, financing, human resources and staffing, administrative functions, capital assets, and service delivery and performance. The EMS system serving the Lewis and Clark Valley is complex and involves the participation of a variety of emergency services providers. The key service providers within the system include:

- Asotin County Fire District 1 (ACFD1), Washington – BLS (basic life support) first response and transport
- City of Clarkston, Washington (CFD) – BLS and ILS (intermediate life support) first response and transport
- City of Lewiston, Idaho (LFD) – BLS and ALS first response and transport
- Culdesac Quick Response Unit – BLS first response
- Lewiston Police Department (LPD) – Local emergency communications center for the City of Lewiston
- MedCor, Idaho – BLS first response within the Clearwater Paper Corporation facility
- Nez Perce County Sheriff’s Office (NPCSO) – Local emergency communications center serving as PSAP for Nez Perce County.
Whitcom, Washington – Regional emergency communications center for Asotin County (including Clarkston) and Whitman County, Washington

Serving a population of over 60,888 (39,265 in Nez Perce County, ID and 21,623 in Asotin County, WA) and covering an area of over 1,477 square miles, the system covers a majority of Nez Perce County, Idaho, and Asotin County, Washington, as well as Whitman County Fire District 14 in Washington. Although several first responder agencies supplement the transport providers, the two primary EMS transport providers are Clarkston Fire Department and Lewiston Fire Department; they are the focus of much of the analysis contained within this report. In addition, JK Ambulance and Genesee Ambulance serve small portions of northern Nez Perce County and Clearwater County Ambulance serves a small portion of eastern Nez Perce County.

One of the major concerns for local governments in today’s economy is the cost of operations. In evaluating the cost of EMS for the Lewis and Clark Valley, it was determined that the per capita cost of service delivery varied between the two primary transport providers. Without the consideration of revenue generated from transports, Clarkston realized a per capita cost of $125.70 while Lewiston realized a per capita cost of $45.92. When revenue was considered, Clarkston and Lewiston’s per capita costs decreased to $92.50 and $8.00, respectively—a significant difference. When each agency’s budget was evaluated for cost per call, analysis revealed that Clarkston saw a cost per call of approximately $662.30 while Lewiston’s cost per call calculated to be approximately $474.58.

In regard to staffing, each agency employs a mix of career, part-time/reserve and/or volunteers to effectively provide emergency services to the region. The table below summarizes the total medically trained personnel within the system based on employment status.
Medcor, the provider for Clearwater Paper Corporation, is included here to indicate a resource that is available within the region should the need arise for additional personnel. Likewise, ACFD1 is included as the district has been working recently with the City of Asotin to establish medically trained personnel within that area and has been supplementing LFD’s transport ambulance within the district’s primary response area.

When compared to national and regional averages, while LFD is significantly below the average number of volunteers when compared to departments serving similar populations, both CFD and ACFD1 enjoy higher levels of volunteerism than the national and regional averages. In regard to career personnel, both LFD and ACFD1 are below the national and regional averages while CFD is slightly above those same measures.

In addition to the administrative and personnel functions, ESCI also conducted a review of capital assets currently employed by each agency, with specific attention to that equipment utilized for EMS. The system operates from a total of five facilities (three in Lewiston, one in Clarkston, and one in Asotin County). In addition, Clearwater Paper Corporation has a station located within its industrial complex. These stations house a total of 23 apparatus, including 14 ambulances, 7 engines, and 2 rescue vehicles. Of those apparatus, 6 were considered to be in excellent condition, 14 in good condition, and 3 in fair condition.

Perhaps the most public component of any emergency services delivery system is that of response performance. Response to emergency incidents begins when a citizen calls 9-1-1 to report an occurrence. A true EMS system will initiate a response upon answering that initial report, beginning with taking appropriate information from the caller and dispatching the appropriate resources in a timely manner. The Lewis and Clark Valley is served by three public
safety answering points: Lewiston Police Department (LPD), Nez Perce County Sheriff’s Office (NPCSO), and Whitcom. These agencies serve as the entry point of all EMS incidents occurring within Asotin or Nez Perce Counties, as well as Whitman County Fire District 14 (WCFD14). The components of response time that were evaluated for this project included call processing (the time required for a dispatcher to answer a call, process the information, and dispatch the appropriate resources); turnout time (the time between when a unit is dispatched and when the unit is actually en route to the incident); and overall response time (the elapsed time between when a unit is dispatched and when the unit actually arrives on the scene of the incidents). The following table summarizes the response performance of the current system.

<table>
<thead>
<tr>
<th></th>
<th>Call Processing</th>
<th>Turnout</th>
<th>Overall Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarkston FD</td>
<td>N/A</td>
<td>2:00</td>
<td>6:00</td>
</tr>
<tr>
<td>Lewiston FD</td>
<td>N/A</td>
<td>4:00</td>
<td>14:42 (10:05 within city)</td>
</tr>
<tr>
<td>Lewiston PD</td>
<td>3:26</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Whitcom</td>
<td>Unable to determine based on data submitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFPA 1221 Standard</td>
<td>0:60</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NFPA 1710 Standard</td>
<td>N/A</td>
<td>0:60</td>
<td>6:00</td>
</tr>
</tbody>
</table>

The primary issue of note in regard to response performance is the high degree of inconsistency between LPD and Whitcom in the manner by which incidents are tracked. While the LFD unit that is housed within ACFD1’s station is dispatched by Whitcom, the remainder of the incident is tracked by LPD without regard for the initial dispatch time or incident information obtained from the initial dispatcher.

The next section of the report evaluates potential future service demand. This is achieved by analyzing population history throughout the region combined with historical service demand that translates into a per capita usage rate. Certain demographic and socio-economic indicators are also used to assist in the final determination of future service demand potential. The current total population served by the EMS system is 60,888 according to the 2010 census data. This represents relatively flat growth for the region as a whole. The last decade saw a 0.2 percent rate of growth for the region. Long-term population projections indicate that the
region could see as many as 97,880 persons by the year 2030. Based on this projection, ESCI estimates that incident volume will continue to rise, topping 8,500 EMS incidents by 2030.

Based on the evaluation of current conditions combined with the future service demand projections, ESCI was able to develop future delivery system models that identified the critical issues currently facing the system and provided recommendations to address those issues moving forward. ESCI identified the following critical issues that are discussed in more detail within the body of the report:

1. Fragmentation and inefficiency of current EMS delivery system
2. EMS service delivery conflicts and challenges
3. Inability to maintain adequate staffing
4. Lack of coordinated oversight

Any change in deployment of resources must be viewed from a holistic perspective. When evaluating a true EMS system for efficiencies, no single location can be viewed as critical. Rather, the appropriate deployment of resources throughout the entire system must be considered. That, combined with the appropriate research and empirical data, should be used to develop a deployment plan that achieves services that are commensurate with the expectations of the communities served. With this in mind, ESCI makes the following resource deployment recommendations.

**Clarkston Fire Department** – The City of Clarkston should consider discontinuing the current transport ambulance and operate an ALS first response unit.

**Lewiston Fire Department** – The City of Lewiston should continue to operate one ALS transport unit from LFD Station 1. Station 2 should continue to operate one ALS transport unit, and LFD Station 4 should continue to operate an ALS engine as a first response unit.
Asotin County Fire District 1 – ACFD1 should continue to allow one LFD ALS transport unit to respond from its station.

City of Asotin – The City of Asotin and Asotin Fire Department should evaluate the potential for contracting for ALS first response services through either the City of Clarkston or the City of Lewiston due to the long potential response times from the closest ALS unit (ACFD1).

Lapwai/Culdesac Area – The Nez Perce Tribe should work with the City of Lewiston and Nez Perce County to ensure adequate ALS coverage for the area through the implementation of an ALS first response unit.

Governance models are also discussed within the body of the report, including the alternatives of an intergovernmental agreement or creation of a joint powers agreement. Likewise, funding alternatives are discussed that focus on long-term funding based on an allocation of cost based on area, assessed value, service demand, population, fixed rate fee, or a combination of these alternatives.

In addition to the long-term strategies discussed, ESCI provides 11 short and mid-term recommendations to assist the agencies in enhancing their current service delivery, improving efficiency, and increasing consistency and cooperation. These recommendations include:

- ACFD1 should develop and display an organizational chart to assure that all personnel are informed of reporting responsibilities and lines of authority.
- Each agency should compose, adopt, and institutionalize a single regional vision by which the agencies are able to plan for and provide effective EMS service delivery throughout the study area.
- LFD, CFD, and ACFD1 should undertake a Strategic Planning process.
- Clarkston and Lewiston municipal budgets for fire and EMS should account for in-direct charges.
- Lewiston should evaluate the potential for transferring all EMS dispatch functions to Whitcom.
In the absence of transferring EMS dispatch functions to Whitcom, the system should evaluate the potential for implementing a CAD-to-CAD transfer interface between Whitcom and LPD.

The City of Lewiston should investigate the possibility of implementing a system whereby field units can enter individual unit times without dispatcher interaction.

The region should consider implementing a CAD-to-CAD interface that allows Whitcom to transfer incident data to LPD for improved consistency in data recording, tracking, and reporting.

In the absence of future cooperative efforts, the cities of Clarkston and Lewiston should establish a practice of annually reviewing and modifying as needed the fees for service charged by CFD and LFD for EMS services.

In the absence of future cooperative efforts, the cities of Clarkston and Lewiston should consider adopting a single uniform fee for service schedule for CFD and LFD EMS services.

A coordinated effort through a single billing agency (whether internally or through a contract provided) should be initiated.

Aside from the evaluation and recommendations provided, ESCI provides discussion of implementation and how to move forward with implementation of system changes. The section includes discussion of potential challenges to implementation, the plan of implementation, policymaker visioning sessions, establishment of a joint implementation committee, development of an implementation strategic plan, and formation of working groups such as: governance, finance, legal, operations, support services and logistics, labor and communications.

The ESCI project team began collecting information concerning the emergency services for Nez Perce County, Idaho (including the City of Lewiston), and Asotin County, Washington (including the City of Clarkston, the City of Asotin, and Asotin County Fire District 1), in April 2011. The team members recognize that the report contains a large quantity of information and ESCI would like to thank the elected officials of each organization involved as well as the officers, employees, and volunteers of the three fire departments for their tireless efforts in bringing this project to fruition. ESCI would also like to thank the various individuals and external organizations for their input, opinions, and candid conversations throughout this process. It is
ESCI’s sincere hope that the information contained in this report is utilized to its fullest extent and that the emergency services provided to the citizens of Lewis and Clark Valley, as well as the surrounding areas, are improved by its implementation.
Introduction

The Lewis and Clark Valley of Idaho and Washington is an area of diverse topography and demographics. The area is also home to several governmental units that receive basic life support (BLS), intermediate life support (ILS), and advanced life support (ALS) emergency medical services from a combination of several providers. Historically, the City of Lewiston has been the sole provider of trauma-verified ALS ambulance transport services supported by both BLS and ILS first responders through the use of quick response units (QRU). As well, Asotin County Fire District 1 is a BLS-verified service that supports the ALS operations of Lewiston Fire Department. Over the past several years, however, at least one QRU was discontinued (within the City of Lapwai) while the City of Clarkston converted its QRU into a full transport ALS unit.

In 2008, the City of Lewiston, in an attempt to recoup a larger portion of the cost of operating the ambulance service within Lewiston Fire Department, requested that the City of Clarkston, Asotin County, Whitman County, and Nez Perce County each contribute financially to the system. During these negotiations and discussions, an extremely high level of friction and distrust was generated that created an invisible barrier between the City of Lewiston and the other entities.

On October 5, 2009, the Lewiston City Council voted 6-1 to sever mutual aid with Clarkston pursuant to the published plan of operation as it pertained to ambulance transport. Based on information provided by the City of Lewiston, the policy decision to sever the agreement was based upon the probability of financial subsidy to address unsustainable goals of Clarkston’s ambulance business plan. Clarkston was made aware of this policy decision and chose to move forward nonetheless. On October 26, 2009, the City of Asotin and Asotin County entered into an agreement with the City of Lewiston to provide ALS transport services beginning on January 1, 2010. The Lewiston Fire Department placed an ALS transport unit in the Asotin County Fire District 1 station located to the south of the City of Clarkston in an area known as ‘The Heights.’ Simultaneously, the City of Clarkston instituted its ambulance transport service with Clarkston Fire Department.
Although this project is focused on the delivery of emergency medical services to the Lewis and Clark Valley, the fact that EMS is delivered through a fire-based model makes it difficult, if not impossible, to separate EMS response and operations from fire response and operations. For example, LFD has personnel dedicated to ambulance units; but if a major fire is dispatched, those same personnel could be moved to a fire apparatus and used in suppression activities. Likewise, CFD uses the same personnel to staff both ambulances and suppression apparatus.

During stakeholder interviews, it became apparent to the project team that the relationship between the City of Lewiston and the City of Clarkston (including their respective fire departments as well as their elected and appointed officials) had deteriorated over the past several years and a lack of effective communication was the result. The project team did, however, discover that this degradation in relations did not entirely filter down to the rank and file members of the fire departments. The direct service providers that come to work each day for LFD and CFD and work for the betterment of patient care and service delivery are becoming increasingly frustrated by the lack of cooperation between the cities and have a real concern that customer service has suffered as a result.

Although ESCI prides itself on providing observations and recommendations based on data and analysis of empirical information, this particular project required a higher level of subjectivity than normal, based on stakeholder interviews and anecdotal information. ESCI forms no opinion as to future strategies based on this subjective information, but those in positions of policy direction should be aware of how those actively involved in delivery of service perceive the current situation. It is important to appreciate the position in which people feel they have been placed due to policy decisions at the administrative and elected official levels.

The agency evaluations and subsequent recommendations that follow are based on empirical data and information; but, where appropriate, subjective observations are also provided to assist policy makers in their complete understanding of the current conditions.
Section I – Current EMS System Analysis

Emergency Medical Services (EMS) within the Lewis and Clark Valley are provided by a number of agencies, beginning with receipt of a call for service at one of several Public Safety Answering Points (PSAP); response by community personnel in first responder roles; and followed by response by one of two Advanced Life Support (ALS) transport agencies, which transport patients to local medical facilities. This section of the report identifies each of the components that comprise the EMS system serving the Lewis and Clark Valley and provides an evaluation of each of the agencies providing service to the region with particular focus on the transport providers.

Organizational Overview

The EMS system serving the Lewis and Clark Valley is complex and involves the participation of a variety of emergency services providers. The key service providers within the system include:

- Asotin County Fire District 1 (ACFD1), Washington – BLS first response and transport
- City of Clarkston, Washington (CFD) – BLS and ALS first response and transport
- City of Lewiston, Idaho (LFD) – BLS and ALS first response and transport
- Culdesac Quick Response Unit – BLS first response
- Lewiston Police Department (LPD) – Local emergency communications center for the City of Lewiston
- LifeFlight Network, Idaho – Scene response and interfacility air transport
- MedCor, Idaho – BLS first response within the Clearwater Paper Corporation facility
- Nez Perce County Sheriff’s Office (NPCSO) – Local emergency communications center serving as PSAP for Nez Perce County.
- St. Joseph’s Hospital, Idaho – Definitive care facility with specialties in pediatrics, OB/GYN and trauma
- Tri-States Hospital, Washington – Definitive care facility with specialty in dialysis care
- Whitcom, Washington – Regional emergency communications center for Asotin County (including Clarkston) and Whitman County, Washington

Three other organizations provide emergency medical services within Nez Perce County: Juliette-Kendrick EMS (BLS), Genesee Ambulance (BLS) and Clearwater County Ambulance
(BLS). Cul de Sac Quick Response Unit is a private non-profit 501(c)(3) non-transport provider also operating within the area. Although each of these agencies maintains some primary response area within the study region, the amount of land area and service demand covered is extremely small. Therefore, these agencies are not included in the overall system evaluation. The following map displays the entirety of the study region.

**Figure 1: Regional Service Area**

The study area covers an enormous land mass including all of Asotin County, Washington (including the City of Clarkston), all of Nez Perce County, Idaho (including the City of Lewiston and excluding small portions to the north and northeast), and a portion of Whitman County, Washington (Whitman County Fire District 14). Due to the size of the coverage area, the
removal of this report will utilize maps that focus on particular areas of coverage rather than display the entire service area.

System History

EMS service delivery was initiated in the study area in 1961 when the City of Lewiston Fire Department (LFD) first initiated ambulance transport services to its citizens, along with those of the City of Clarkston and surrounding unincorporated areas. In addition to the two cities, LFD provided transport services to all of Asotin County, inclusive of Clarkston, a portion of Whitman County falling within Fire District 14, most of Nez Perce County, and the Clearwater Paper Company site immediately adjacent to the Lewiston city limits.

First responder services have historically been provided in support of LFD’s ambulance transport. Clarkston Fire Department and each of the other agencies listed above as receiving ambulance services from Lewiston elected over the years to supplement LFD’s Advanced Life Support crews with varying levels of Basic Life Support initial response, based on individual agency capabilities and staffing capacities.

The Lewiston Fire Department continued the practice of serving as the sole provider of ambulance transport services from its inception until December 31, 2009. At that time, the City of Clarkston Fire Department began providing ambulance transport services within its city limits only and is licensed by the State of Washington as a transport provider and an ILS Aid Car. The assumption of those services by Clarkston has been controversial and has strained relationships between the two fire departments.

Governance and Lines of Authority

Lewiston Fire Department

The Lewiston Fire Department is a departmental subdivision of the City of Lewiston. LFD provides fire suppression, aircraft rescue and firefighting (ARFF), rescue, hazardous materials, public education, code enforcement, and both basic and advanced life support EMS first responder and ambulance services to the city and surrounding communities. A population of
31,894\(^1\) is served within the City and an additional 14,394 in the unincorporated portions of Asotin County and the City of Asotin. The portion of Nez Perce County served by LFD constitutes an additional 7,371 and, similarly, 1,200 citizens in Whitman County. The total service population is just over 54,000. Although listed separately, the population of Clarkston (7,229) is also served by LFD for transport of trauma patients.

The department responds from three stations located in throughout the City of Lewiston. Emergency responses in 2010 totaled 6,488, of which 5,469 were reported to be emergency medical in nature (both emergency and non-emergency) and 144 were fire related. Distribution by incident type will be discussed later in this report.

The City of Lewiston operates under the direction of a seven-member City Council, one of whom serves as Mayor, having been elected by the balance of the Council. The Mayor and Council hire a City Manager to overseer the day-to-day operations of the City. The City Manager selects and supervises the Fire Chief, who is hired as an at-will employee. The Fire Chief does not have hiring and firing authority over fire department personnel but is able to make recommendations to the City Manager regarding personnel actions.

The authority of the Lewiston city government is defined by the Lewiston City Charter. The Lewiston Fire Department receives additional authority with regard to mutual aid, fire prevention, and related subject areas from Idaho State Code, Title 31.

**City of Clarkston**

The City of Clarkston also operates under the direction of a seven-member City Council; however, an additional position of Mayor is independently elected. Clarkston does not hire a City Manager; instead it operates under a strong mayor form of government.

The Clarkston Fire Department (CFD) has direct responsibility for response to emergency incidents within the city limit, which is just less than two miles in area. A small area of the Port

\(^1\) Based on 2010 U.S. Census Bureau data.
of Wilma, adjacent to the city and consisting of 0.34 square miles, is also served via contract by CFD. The 2010 service population was reported to be 7,229\(^2\).

The department responds from a single station located in central Clarkston. Emergency responses in 2010 totaled 1,390, of which 1,177 were reported to be emergency medical in nature (both emergency and non-emergency) and 213 were fire related. Distribution by incident type will be discussed later in this report.

The Clarkston Fire Department Fire Chief is an employee of the City Council and serves on an at-will basis, absent an employment contract. The Fire Chief is hired by the Mayor and City Council. The Council’s authority is defined by the Clarkston Municipal Code. The fire department receives further authority from the Revised Code of Washington, RCW Title 52.

**Asotin County Fire District 1**

In contrast to the city government subdivisions discussed above, the Asotin County Fire District 1 (ACFD1) is fire protection district, as defined by Revised Code of Washington, Title 52. ACFD1 responds to a 118-square mile services area populated by 13,000 citizens.

The District is governed by a three-member Board of Commissioners (BOC) elected at large from within the District’s service area. The BOC selects and supervises a Fire Chief to manage departmental operations. Both the Fire Chief and Assistant Chief serve by contract with the District.

The department responds from a single station located in what is known as ‘The Heights’, to the south of Clarkston. Emergency responses in 2010 totaled 1,042, of which 990 were reported to be emergency medical in nature (both emergency and non-emergency) and 26 were fire related. Distribution by incident type will be discussed later in this report.

\(^2\) Ibid.
The Chief serves as a paid, full-time employee, as does one Assistant Chief. All other departmental staffing consists of volunteer personnel, of which there are 52 members on the roster.

ACFD1 delivers services from a single fire station. The Chief and Assistant Chief staff the station during business hours; after hours the station is unmanned, with response provided by volunteers coming from home or work. However, through a cooperative agreement with Lewiston Fire Department, ACFD1 provides living quarters for a two-person LFD ambulance crew in the station. The LFD crews staff an ALS ambulance on a 24-hour shift schedule, providing EMS response coverage to the ACFD1 service area including the City of Asotin and all of Asotin County (excluding the City of Clarkston). District volunteers are also dispatched to medical emergencies as first responders in support of the LFD ambulance personnel.

City of Asotin Fire Department
The Asotin Fire Department (AFD) is a departmental subdivision of the City of Asotin. The AFD response area includes the city limits, which encompass just under one square mile of southern Asotin County. A population of 1,129 citizens is served by the department.

The department responds to emergencies from a single fire station that is staffed by an all-volunteer response force. AFD’s 2010 incident reporting lists 91 total incidents, of which 57 were reported to be response to outside agencies on a mutual aid basis.

Clearwater Paper Fire Department
The Clearwater Paper Fire Department (CPFD) is a private fire department operated by MedCor, Incorporated, via contract with the Clearwater Paper Corporation, and occupies 960 acres of land adjacent to the City of Lewiston. CPFD maintains a staff of 14 response personnel serving 1,600 employees of the Clearwater Paper facility. The department responds to fire and other incidents on the site, including Basic Life Support EMS response with EMT-Basic trained personnel. While CPFD has one ambulance in its fleet, transport of EMS patients is usually provided by Lewiston Fire Department.
Whitman County Fire District 14

Whitman County Fire District 14 (WCFD14) is a fire protection district based in Colton, Washington, north of Clarkston and Asotin County. An area encompassing 158 square miles of the District receives ambulance transport services from Lewiston Fire Department and serves in a first response, Basic Life Support role during medical emergencies.

Washington State reporting for 2010 lists 54 total emergency incidents during the year by WCFD14.3

Nez Perce County Rural Fire Department

Lewiston Fire Department also provides ambulance transport services to an area of 687 square miles4 in Nez Perce County, Idaho, in support of the Nez Perce County EMS contract agreement, located east of the Lewiston city limits. LFD reported 512 EMS incidents in Nez Perce County in 2010.

Organizational Structure

Lewiston Fire Department

The Lewiston Fire Department works under the authority of the Fire Chief under a typically configured top-down hierarchy, as detailed in the figure below.

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4 As provided by LFD.
The organizational chart reflects an acceptable span of control for the fire chief and subordinates. The department’s work force totals 6 administrative staff and 45 operational responders along with 17 reserve firefighters, functioning as part-time employees on an as needed basis.

LFD provides services from three fire stations within the city and a fourth station staffed with an ambulance crew as a cooperative effort with Asotin County Fire District 1. A Battalion Chief oversees each of three 24-hour shifts, supervising three Captains, one of whom is assigned to each LFD station.

Three fire engines are staffed on a daily basis under the direction of a Captain. One engine company also includes one Engineer and one Firefighter as a minimum staffing level while the
other two engine companies are staffed with one Engineer only. Ambulance (Medic) units are housed at Stations 1 and 2 only, staffed by one Engineer and one Firefighter/Paramedic. The LFD ambulance that is stationed at ACFD1, Medic 73, is staffed by one Engineer and one Firefighter/Paramedic.

LFD clerical and administrative support services are provided by two Administrative Secretaries. The two are the only administrative support, sharing duties as needed with regard to financial, training, operations, prevention, and logistics needs. The Administrative Secretaries report directly to the Fire Chief.

**Clarkston Fire Department**

The Clarkston Fire Department is configured under the operational command of the Fire Chief. A traditional, top-down organizational structure is employed to identify lines of authority and reporting, as detailed in the following figure.

![Figure 3: CFD Organizational Structure](image)

The fire chief supervises one Administrative Assistant, ten career responders, and five reserve personnel who serve as part time firefighters when needed. In addition, 27 volunteer firefighters are reported to be on the roster, providing on-scene support during emergency incidents and when simultaneous calls occur.
At full staffing levels, three personnel will be on duty at Clarkston’s single station during a 24-hour shift. At minimum staffing levels, due to sick, vacation, and other leaves, only two career personnel may be on duty but a constant staffing of three is maintained by the use of part-time reserve staffing.

During an emergency incident, the on-duty career staff members are the first to respond. Volunteer members are notified by pager of the emergency and respond as available. Part-time and off duty career personnel are also recalled to duty for larger incidents when available.

**Asotin County Fire District 1**

ACFD1 is a primarily volunteer organization, with only two command staff members on the roster as full-time employees. The Fire Chief directly supervises the Assistant Chief and the volunteer Captains, Lieutenants, and Firefighters. Members of the organization understand the organizational hierarchy from a functional standpoint; however, an organizational chart has not been developed. ESCI recommends that the District compose a chart that details reporting responsibilities and lines of authority in the organization.

Emergency response is accomplished by the use of 29 volunteer personnel that serve on an on-call basis. The department assigns two EMS personnel to work 12-hour shifts to provide 24-hour coverage. Additional fire and EMS volunteers respond when they are available to do so. Personnel are notified by radio pager of incidents, at which time they proceed to the fire station to staff response vehicles. The Fire Chief and Assistant Chief are also on call outside of business hours and respond to emergencies in an incident command capacity.

**Recommendations:**

- ACFD1 should develop and display an organizational chart to assure that all personnel are informed of reporting responsibilities and lines of authority.

**Industry Trends and Environmental Issues**

There are three primary types of EMS delivery models throughout the United States:
1. Fire-based First Response with a Third Service transport agency (8.6%)
2. Fire-based First Response with Fire-based Transport (67.2%)
3. Fire-based First Response with Private/Commercial transport agency (11.6%)

The percentages noted above indicate the percentage of the U.S. population served by each type of delivery system. The EMS delivery system in the Lewiston and Clarkston areas is one configuration type of the three that EMS systems utilize throughout the country.

The genesis of the system can be traced as far back as 1961, when the City of Lewiston Fire Department elected to start providing ambulance transport services. At the time, EMS in the United States was considered to be in its infancy. In fact, prior to the implementation of the Emergency Medical Services Systems Act of 1973, patient transports in many jurisdictions were provided by local mortuaries. The EMS Act defined the essential elements of an EMS system.

During this same period, the role of the fire department has dramatically changed and today is recognized as the single largest provider of pre-hospital care in the country both in terms of its first-responder role and from the perspective of providing patient transport services. Today more than 90 percent of career and combination fire departments deliver emergency medical care services.\(^5\)

In 1995, the *EMS Agenda for the Future* was published by the National Highway Traffic Safety Administration. At the time of its publication, the document was considered to be a visionary blueprint for EMS system development. One of its visions is that “EMS will be integrated with other health care providers and public health and public safety agencies.”\(^6\)

EMS systems are comprised of a number of disparate components that must be carefully coordinated to ensure that patient outcomes are optimized. Coordination typically involves creating goals and objectives, establishing and implementing a system-wide plan, monitoring

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that plan, and making improvements. Most states, including Idaho and Washington, have authorizing statutes allowing local regulation of EMS although few local jurisdictions provide the necessary oversight to provide appropriate safeguards for citizens.

The Cities of Lewiston and Clarkston, as well as ACFD1, participate actively in the EMS system as providers of both BLS and ALS services to their respective communities, albeit at different levels. Each agency provides first responder services and both LFD and CFD provide patient transport. The other agencies subject to this report provide first responder level support. Clarkston entered into the transport field in 2010.

EMS delivery programs that serve multiple communities within a common geographic area are best designed and administered systematically and collaboratively. An effective EMS system is cooperative in nature, with decisions made based on how the best possible care can be delivered to medical emergency patients. In the study area, various agreements and practices are in place regarding service delivery; but they are disparate, absent an effective system-wide approach based on regional needs. Due to the lack of a formal collaborative process, there exist differing opinions in regard to critical components and functions such as scene management, cooperative deployment, funding, and regulatory oversight of the system within the jurisdictions.

Local policy makers often seek to implement regulatory oversight of at least some components of EMS. Though services are best provided only through the combined efforts of system providers and regulators, few systems have the all-inclusive oversight necessary to manage the interdependence of multiple, autonomous EMS organizations. In many cases, allowing the marketplace and historical precedence to craft optimal EMS systems is largely unsuccessful. Part of those failures result from the inability of participants to coordinate autonomous organizations and concurrently manage their independence. That is why strong, governmental, regulatory oversight is necessary.
In the City of Lewiston, an Emergency Medical Services Advisory Board (EMSAB) is in place to address EMS-related issues. EMSAB, however, serves in an advisory capacity only and its membership is appointed by the Lewiston City Council, focusing primarily on issues that are directly related to EMS issues within the City of Lewiston.

Asotin County is located within the East Region EMS and Trauma Care Council operated by the State of Washington Department of Health. The council is tasked with providing planning and implementation of programs, which provides for a timely and appropriate delivery of emergency medical treatment. The vision of the council is to have all EMS agencies trauma-verified and all hospitals trauma-designated at the appropriate levels. The council is responsible for development of regional patient care protocols. In addition to the regional council, the Asotin County EMS Trauma Council serves as an advisory group to the regional council and makes recommendations on minimum and maximum numbers of providers within its respective area.

Absent any other form of coordinated system oversight, a regionalized vision, and systematic approach to service delivery, the concept that was outlined in the EMS Agenda for the Future, has not occurred. Instead, critical decisions about how medical emergencies will be handled are made on an individual local level, in some cases collaboratively but in others competitively. A need exists for leadership that will move the current approach toward a single, coordinated system that will operate under a regionalized vision.

**Recommendation:**

- Each agency should compose, adopt and institutionalize a single regional vision by which the agencies are able to plan for and provide effective EMS service delivery throughout the study area.
Planning for Emergency Medical Services

Emergency services agencies exist in a rapidly changing environment. Tools and methods used to provide service are constantly changing, leading to increased regulation of tasks and activities. An organization must continuously monitor the internal and external EMS and fire protection environment in order to stay ahead of these challenges. When change occurs, the organization must also make course corrections in order to maintain an appropriate level of service.

ESCI begins with a review of current planning process as they apply generally to all of the services provided by the three primary response agencies, inclusive of EMS service delivery. A subsequent discussion will focus on planning specific to Emergency Medical Services.

Current Planning Processes

The agencies participating in this study have recognized the need for enhanced planning efforts by pursuing this Emergency Medical Services Master Plan and are commended for their foresight. The process of preparing for the future requires both discipline and organization. In order to be truly effective, an emergency services agency should consider planning on four distinct levels - operational, tactical, strategic, and master or long-range planning, as defined below:

1. Operational planning is the preparation for ongoing agency activities and their integration into other regional response networks.
2. Tactical planning is the practical preparation of incident strategies for potential emergencies.
3. Strategic planning supports the department’s mission and sets short-term departmental goals.
4. Master or long-range planning is preparation for the agency’s future service delivery effectiveness based on projections of the future service delivery environment.

None of the participating EMS response agencies have adopted a formalized planning process. They have, however, completed some of the above listed planning steps, as summarized below.
Operational Planning

Of the three primary EMS response agencies involved in this review, all have undertaken operational planning in the form of dispatching response protocols. A “run card” system is in place at both of the involved dispatch centers. The system specifies how many and what types of emergency crews are to be alerted based on the nature of an incident reported. On-scene operations are managed under a regionally adopted Incident Command System, consistent with national standards and best practices for emergency incident management.

An essential component of operational planning is that of the effective use of mutual aid practices. Based on mutual aid agreements, fire departments are able to share critical manpower and equipment resources by responding into each other’s jurisdictions in the event of major incidents. No single fire department in the study area has the resources to effectively and safely handle a major emergency on its own.

Tactical Planning

Tactical planning, generally pertaining to fire response more so than EMS incidents, is accomplished by the development of pre-incident plans specific to identified locations and emergency types. In terms of fires and hazardous materials incidents, tactical plans may be developed based on identified specific hazards that exist in the community. The Lewiston and Clarkston Fire Departments have established pre-incident plans for identified target hazards. Asotin County Fire District 1 has not.

Strategic Planning

Strategic planning is the process of analyzing organizational strengths, weaknesses, opportunities, and challenges based upon which organizational goals, objectives, and action plans are established. These processes give decision-makers targets by which the organization’s service delivery can be measured and performance can be quantified.

The agencies have not undertaken a strategic planning process. Lewiston Fire Department, however, has established an organizational Mission Statement which is one key component.
Clarkston Fire Department also has a Mission Statement and it is contained within the Standard Operating Procedures manuals, which new recruits receive as part of their introductory package. All three agencies would benefit from undergoing the process of developing a strategic plan for their organizations.

**Master Planning**

Master Planning processes evaluate long-range service demand needs and challenges and provide direction by which organizations can prepare to meet future needs. This Emergency Medical Services Master Plan represents the first comprehensive long-range planning process that has been conducted by the area agencies. Although this study focuses specifically on planning for EMS delivery, many components of the report are applicable to the full spectrum of services delivered by the agencies. Expanding the current planning process to encompass all aspects of emergency services delivery as a continuation of the EMS Master Planning effort is recommended.

*NFPA 450 Guide for Emergency Medical Services and System* states, “Based on the comprehensive system analysis and the identified system priorities, the system should develop a plan for ongoing system design and improvements.”

In general, Idaho and Washington state statutes regulating ambulance services provide minimum requirements for system planning; however, agencies participating in an EMS system should develop plans for creating ongoing improvements to their systems to maintain service levels that are both effective and appropriate, to identify environmental changes, and to forecast future needs. The plan components work to ensure the system provides the appropriate balance between high quality patient care and system funding. This is not to say that no system improvements have been made. Placement of an ALS unit in the ACFD1 station reduced response times to the area south of Clarkston and has improved overall delivery of care to that region.

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7 *NFPA 450 Guide for Emergency Medical Services: 5.7 EMS System Planning.*
The planning process for EMS systems is a critical component to safeguarding the ongoing success of those systems and to ensure that patient outcomes continually improve. While the mission and the vision statements of the authority overseeing EMS provide the strategic direction, the EMS plan provides the foundation by which the goals of the system can be achieved. Importantly, planners must be able to look over the horizon in identifying environmental changes prior to those changes impacting the system. In doing so, planners should create written EMS plans, regularly review those plans, and report on the effectiveness of those plans. Plan components should, at a minimum, include:

1. Needs and resource analyses
2. Data collection processes
3. A process by which data can be analyzed and evaluated to monitor the performance of the EMS system

**Recommendation:**
- Each EMS provider operating with the region should undertake a Strategic Planning process.

**Critical Issues Facing the Current System**

It is important that there is a clear understanding of critical issues facing each of the involved agencies. Without such an understanding, department leadership cannot be prepared to face these issues. In addition, the enunciation of critical issues to employees and members increases their awareness of the organization’s priorities and assists them in becoming focused on solutions.

**Internal Critical Issues**

A further exploration of critical issues should be completed during strategic planning processes; but for now, the following issues should be given serious consideration for inclusion in the final list. These are items that have been identified by the officers of the departments as issues with significant potential for impacting the success of the organization and the effectiveness of its
service with regard to Emergency Medical Services. The following critical issues were listed by the Lewiston, Clarkston, and Asotin County Fire District 1 representatives:

1. Inability to maintain adequate staffing
2. Inadequacy of current and future funding
3. EMS service delivery conflicts and challenges
4. Inability to effectively communicate what we do politically
5. Difficulty in keeping pace with community growth and increasing service demand

It is important for any agency to have an appropriate level of future thinking. This permits an agency to identify what external challenges may present themselves to the organization in the coming years. This awareness of future challenges ensures that the department does not miss out on opportunities or blindly stumble into crisis unprepared.

**External Challenges**

Further exploration of future challenges should be part of a complete strategic planning process, but the following items have been identified by the officers of the departments as external challenges likely to be faced by the agencies in the coming few years.

1. Fragmentation and inefficiency of current EMS service delivery system
2. Need for more effective communication with the community
3. Ability to meet ongoing training needs
4. Ability to maintain adequate staffing due to financial limitations
5. Medicaid and Medicare reimbursement issues

**Future Planning Needs**

Planning for the future is an ongoing process, continually reviewed and modified as dynamics change. The participating agencies have engaged in long-range planning only on a limited basis and will need to become more adept at looking toward the horizon if they are going to be able to forecast future needs and meet them. This EMS Master Planning project represents one of the most significant planning undertakings that have taken place in the study area. The process needs to start here, not end here.
Upon completion of this study, the results must be carefully weighed and decisions made about how to proceed. The results need to be adopted formally and implemented. Additional follow up Master Planning, applied not only to EMS service delivery but to the full spectrum of services provided by the fire departments, is advisable.

As stated earlier, Strategic Planning is essential. Until an organization takes the time and puts forth the effort to identify what its challenges are and to set organizational goals and objectives with which to determine where it needs to go, it has no way of knowing how it will get there.

The adage “If you fail to plan, plan to fail” is accurate. ESCI encourages the participating agencies to establish a defined planning process.
System Financing

This overview of system financing provides the reader with background information on budgets, funding, fees, taxation, financial resources, and cost recovery efforts of the EMS system. These facts will be the basis for the financial analysis of service delivery options.

Budgeting

The budget year for Nez Perce County and the City of Lewiston is October 1 through September 30. Asotin County Fire District 1, Whitman County FD 14, and the cities of Asotin and Clarkston have a financial year based on the calendar year January 1 to December 31. Variation in fiscal years between Washington and Idaho is but one of the elements that can make direct comparisons difficult. Whenever possible, an association is made of comparators to show a direct relationship. In those instances where a direct association was not possible, ESCI has added a comment or footnote of explanation. Financial data for Clearwater Paper Fire Department is considered proprietary and was not disclosed for this study.

In Washington, the budget process is set by state law (Chapter 35.33) for first (under 300,000) and second class municipalities and towns, and Chapter 35A.33 Revised Code of Washington (RCW) for cities under the optional municipal code (Chapter 35.32A RCW applies to cities with populations over 300,000). For most of municipalities, including Clarkston, budgeting is done annually.

A proposed budget for Lewiston is presented for public input and adoption in August of each year. Monies to fund fire, rescue, and EMS for the Lewiston FD is from revenue received by the City of Lewiston. The largest sources of municipal revenue are fees for service and property taxes. These two categories accounted for approximately 64 percent of Lewiston’s revenue in fiscal year 2010.

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8 The City of Lewiston has implemented a two-year budget; however, only one year at a time may be adopted per Idaho Code.
Revenue History and Funding

Because of the differing methods for calculating property tax in Washington and Idaho, we will look at them separately and make comparisons when applicable.

For many cities and towns, property tax is a significant source of general fund revenue. In Washington the maximum regular property tax levy rate for most cities is $3.375 per $1,000 assessed valuation (AV).\(^\text{10}\) Some cities have a Firemen’s Pension Fund; these cities can levy an additional $0.225 per $1,000 AV, resulting in a maximum levy of $3.60 per $1,000. For cities that are overlaid by a fire district and/or a library district, the rules are a little more complex. Ostensibly they have a maximum rate of $3.60 per $1,000 AV, but can never collect that much because the levy of the special districts must be subtracted from the $3.60.\(^\text{11}\) A history of assessed valuation and property tax revenue begins with Figure 8.

The passage of Initiative 747 in 2001 limited taxing jurisdictions in Washington with a population of less than 10,000 to an increase of 1 percent in their levy, plus taxes on new construction and increases in state-assessed utility valuation. An exception to the 1 percent rule is the levy lid lift. Taxing jurisdictions with a tax rate that is less than their statutory maximum rate may ask the voters to “lift” the levy lid by increasing the tax rate to an amount equal to or less than their statutory maximum rate.\(^\text{12}\) Jurisdictions have the option of asking for voter approval of a single or multi-year levy lid lift.

As a major source of general fund revenue for Lewiston, property taxes include levies against property located in the city. In Idaho, some property owners are eligible for property tax reduction through the Circuit Breaker Program. The Property Tax Reduction (Circuit Breaker) program reduces property taxes for qualified applicants who apply between January 1 and April 15 of each year. A basis for the reduction is total household income for the previous calendar

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\(^{10}\) RCW 84.52.043(1)(d).
\(^{11}\) RCW 27.12.390 and RCW 52.04.081.
\(^{12}\) RCW 84.55.050.
year. Qualified property owners receive a reduction of as much as $1,320 for a home and up to one acre of land. Program qualification requirements for property owners include:

1. Owned and lived in a house or mobile home in Idaho that was their primary residence;

2. Total household income for the prior year was $28,000 or less after deduction:
   a. Medical expenses not reimbursed by Medicare or other insurance
   b. Business and farm losses
   c. Capital gains; and

3. The property owner meets one or more of the following categories as of January 1:
   a. Age 65 or older
   b. Widow(er) of any age
   c. Blind
   d. Fatherless or motherless child under 18 years of age
   e. Former prisoner of war/hostage
   f. Veteran with at least 10 percent service connected disability or receiving VA pension for a non-service connected disability
   g. Disabled as recognized by the Social Security Administration, Railroad Retirement Board, or Federal Civil Service

The State of Washington also allows some eligible property owners to apply for tax exemptions and deferrals. There are four exemptions and deferral programs available as described below.\(^\text{13}\)

**Property tax exemption program for senior citizens and disabled persons** - Taxpayers who are, on December 31 of the year before the taxes are due, at least 61 years of age or older; or retired from regular gainful employment by reason of disability; or a veteran of the armed forces of the United States with 100 percent service-connected disability. The qualifying applicant receives a reduction in the amount of property taxes due. The amount of the reduction is based on the applicant's income, the value of the residence, and the local levy rates.

**Property tax deferral program for senior citizens and disabled persons** – Taxpayers who are, on December 31 of the year before the taxes are due, at least 60 years of age or older; or retired from regular gainful employment by reason of disability. For the qualifying applicant, the laws governing this program allow payment of property taxes and special assessments for

current and delinquent years. The deferred amount accrues 5 percent simple interest until repayment is complete. Deferrals must be repaid when the home is sold, the applicant passes away, or the home is no longer used as the primary residence.

**Property tax deferral program for homeowners with limited income** – Homeowners with combined disposable income of $57,000 or less. For the qualifying applicant, the laws governing this program allow deferment of payment of the second half property tax installment due in October of the current year. Applications are due by September 1. The deferred amount accrues simple interest until repayment is complete. The interest rate varies and is based on an average of the federal short-term rate plus 2 percent. The application form provides the rate for the current year. Deferrals must be repaid when the home is sold, the applicant passes away, or the home is no longer used as the primary residence.

**Property tax assistance program for widows or widowers of veterans** – A widow or widower of a veteran who died as a result of a service-connected disability; or was rated 100 percent disabled by the veterans administration for ten years prior to death; or was a former prisoner of war and rated 100 percent disabled for one year prior to death; or died in active duty or training status. The widow/widower must be at least 62 years of age by December 31 of the year the taxes are due or be retired from regular gainful employment by reason of disability. The qualifying applicant receives assistance for payment of property taxes in the form of a grant. The assistance amount is based on the applicant’s income, the value of the residence, and the local levy rates. The grant does not have to be repaid as long as the applicant continues to live in the residence until at least December 15 in the year a grant is received.

Similar to property taxes, sales tax may be a portion of general fund revenue for municipalities, counties, and states. Taxable sales include most retail sales of personal property to Washington state residents. Items that are exempted from sales tax in Washington include prescription drugs and foods consumed off premises. Groceries (except foods prepared by the store) are
not taxed; restaurant food and drinks are taxed. Figure 4 lists the effective retail sales/use tax rates for the area.

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<th>City of Lewiston</th>
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</table>

Voters of Nez Perce County authorized a 0.5 percent local option sales tax which has been in effect since October 1, 2004. This tax is in addition to the current Idaho State sales tax rate of 6.0 percent. All counties in Washington levy a 0.5 percent basic sales tax. A local option transit sales tax of 0.2 percent was approved for funding the PTBA and a 0.3 percent optional sales tax was approved in 2007 (effective January 1, 2008) for supporting operations and maintenance of the Asotin County Aquatic Center. The PTBA sales tax is voter approved; the optional sales tax was implemented by the Board of County Commissioners. Clarkston opted into the 0.3 percent optional sales tax in 2008; it contributes part of the optional sales tax revenue to the Aquatic Center and uses the rest for other city expenses.

If purchases are made out-of-state by a Washington resident and the sales tax paid is less than the rate being levied in the resident’s city, state law requires that a use tax be calculated and paid to make up the difference. For example, if you purchase a washing machine in Oregon, where there is no sales tax, and the rate in your city of residence is 8.2 percent, you owe a use tax at the rate of 8.2 percent on the purchase price. Virtually no one pays the tax unless the purchase is of a car or truck where a use tax must be paid before licensing the vehicle. This also applies to Idaho residents in the same manner.

For a city that charges sale tax, when a store is opened in a neighboring city it may represent "sales tax leakage" to the first municipality. Sales tax that may have been collected by the first

\(^{14}\) Sales and use tax rates, Department of Revenue, State of Washington, Confirmation Code 915AB15214.
city isn’t any more and can affect that city’s ability to fund its infrastructure. Where both the State of Washington and Idaho have similar sales tax rate structures there should be little leakage to each other. Oregon and Montana do not have retail sales taxes, but the distance negates most or all of the cost avoidance from purchases that might be made by Washington and Idaho residents in these states.

In 2009, the City of Asotin took in $34,143 in sales tax revenue while the City of Clarkston received $1,245,993 and the City of Lewiston $2,682,928. A historical summary of sales tax revenue for the cities from 2006 to 2010 is provided in Figure 5.

<table>
<thead>
<tr>
<th>Year</th>
<th>Asotin</th>
<th>% of Change</th>
<th>Clarkston</th>
<th>% of Change</th>
<th>Lewiston</th>
<th>% of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>29,519</td>
<td>-3.96%</td>
<td>636,358</td>
<td>6.24%</td>
<td>3,033,938</td>
<td>-3.71%</td>
</tr>
<tr>
<td>2007</td>
<td>28,351</td>
<td>-3.96%</td>
<td>676,036</td>
<td>6.24%</td>
<td>3,033,938</td>
<td>-3.71%</td>
</tr>
<tr>
<td>2008</td>
<td>36,928</td>
<td>30.25%</td>
<td>926,805</td>
<td>37.09%</td>
<td>3,033,938</td>
<td>-8.16%</td>
</tr>
<tr>
<td>2009</td>
<td>34,143</td>
<td>-7.54%</td>
<td>1,245,993</td>
<td>34.44%</td>
<td>2,682,928</td>
<td>-2.39%</td>
</tr>
<tr>
<td>2010</td>
<td>29,434</td>
<td>13.79%</td>
<td>1,483,066</td>
<td>19.03%</td>
<td>2,618,672</td>
<td>-2.39%</td>
</tr>
</tbody>
</table>

Sales tax revenue to the City of Asotin has fluctuated but essentially remained static over the past five years. During the same period the City of Clarkston has seen a significant increase in sales tax revenue while the City of Lewiston has experienced a steady decrease over the past four years.

Cities and counties in the state of Washington that are not levying the optional half-cent sales tax under RCW 82.14.030(2) have the option of levying an additional 0.5 percent real estate excise tax (REET). These receipts are not designated for capital projects; they are a general fund revenue source for city operating expenditures. Since both Asotin County and Clarkston have the 0.3 percent optional sales tax, they do not have the option of levying an additional 0.5 percent REET. A sundry of other taxes are available to cities for revenue include:

- General business and occupation (B&O) taxes
• Utility B&O taxes
• Hotel/motel tax
• Emergency medical services
• Gambling tax
• Real estate excise taxes
• Leasehold excise tax in lieu of a property tax
• Admission tax
• State-shared revenue

To compare current revenue and to gauge future revenue from property taxes, ESCI reviewed the historical assessed valuation, tax values, tax rates, and taxes levied.

<table>
<thead>
<tr>
<th>Levy Year</th>
<th>Fiscal Year</th>
<th>Asotin County EMS</th>
<th>% of Change</th>
<th>Clarkston</th>
<th>% of Change</th>
<th>Lewiston</th>
<th>% of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2006</td>
<td>264,436,231</td>
<td></td>
<td>1,350,199,916</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>2007</td>
<td>283,307,611</td>
<td>7.14%</td>
<td>1,367,554,131</td>
<td>1.29%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>2008</td>
<td>313,677,935</td>
<td>10.72%</td>
<td>1,535,190,035</td>
<td>12.26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2009</td>
<td>733,639,720</td>
<td>5.53%</td>
<td>1,653,435,118</td>
<td>7.70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>2010</td>
<td>774,542,000</td>
<td>5.58%</td>
<td>1,673,000,000</td>
<td>1.18%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The total taxable value of the two cities and EMS district in fiscal year 2010 was approximately $2.8 billion, an increase of 3.61 percent from 2009 ($2.7 billion). Each agency has seen increases in taxable value during each of the previous four years. Figure 7 lists the history of the property tax levy amount for the cities of Asotin and Clarkston and Asotin County from fiscal year 2006 to 2010.\(^{15}\) As expected, tax levies have increased slightly in each of the five years for all three government agencies.

---

\(^{15}\) Taxes are levied in September for the Calendar Year, but are collected in the following fiscal year. The fiscal year is from January 1 through December 31.
A comprehensive history of tax levy, revenue, and delinquent tax collections from property tax revenue for the City of Lewiston for fiscal year 2001 to 2010 is summarized in Figure 8.

With the exception of tax year 2001, the amount collected in property tax by the City of Lewiston increased in each subsequent year. Between 2000 and 2009 the average annual growth in property tax collected was 3.85 percent. The following chart illustrates the sources of revenue by percentage for the City of Lewiston for the fiscal year ending September 30, 2010.

---

16 Taxes are levied in September for the Calendar Year, but are collected in the following fiscal year. The fiscal year is from October 1 through September 30.
Total municipal revenue for Lewiston in fiscal year 2010 was approximately $57.3 million, with 26.02 percent from property tax.

In Asotin County, there are three EMS districts: City of Asotin, City of Clarkston, and Asotin County. Beginning in 2010, the Asotin County and City of Asotin EMS levies were no longer used to fund Rescue One EMS services. Instead, they were used to fund the response and transport contracts with ACFD1 and the City of Lewiston. The following three tables afford a historical review of the assessed value, levy rate, and revenue for the cities and county. Figure 10 lists the historical taxable assessed value from 2006 through 2011 for each of the three entities under the Rescue One program, Asotin County, and the cities of Asotin and Clarkston.
Figure 10: Assessed Value, Asotin County Rescue One EMS, 2006 – 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>City of Asotin</th>
<th>Asotin County</th>
<th>City of Clarkston</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>46,305,869</td>
<td>539,755,952</td>
<td>263,030,731</td>
</tr>
<tr>
<td>2007</td>
<td>51,608,552</td>
<td>595,980,736</td>
<td>281,584,881</td>
</tr>
<tr>
<td>2008</td>
<td>58,026,077</td>
<td>663,911,228</td>
<td>308,884,975</td>
</tr>
<tr>
<td>2009</td>
<td>72,030,848</td>
<td>773,643,627</td>
<td>325,891,294</td>
</tr>
<tr>
<td>2010</td>
<td>774,542,000</td>
<td></td>
<td>362,146,907</td>
</tr>
<tr>
<td>2011</td>
<td>832,672,374</td>
<td></td>
<td>381,048,967</td>
</tr>
</tbody>
</table>

While much of Washington and the nation has experienced a marked decrease in real estate value and assessed valuation over the past three years, Asotin County has proven to be an exception. For the years 2006 to 2011, assessed value has increased 54.27 percent.

Assessed value has a bearing on property tax revenue, but the voter approved levy amount will determine the amount of revenue. Figure 11 shows the historical EMS levy rate in Asotin County and the cities of Asotin and Clarkson from 2006 through 2011.

Figure 11: Levy Rate, Asotin County Rescue One EMS, 2006 – 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>City of Asotin</th>
<th>Asotin County</th>
<th>City of Clarkston</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0.33276</td>
<td>0.61890</td>
<td>1.14481</td>
</tr>
<tr>
<td>2007</td>
<td>0.36962</td>
<td>0.55674</td>
<td>1.27278</td>
</tr>
<tr>
<td>2008</td>
<td>0.37797</td>
<td>0.53516</td>
<td>1.24648</td>
</tr>
<tr>
<td>2009</td>
<td>0.30612</td>
<td>0.50916</td>
<td>1.23038</td>
</tr>
<tr>
<td>2010</td>
<td>0.50000</td>
<td>1.14270</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>0.50000</td>
<td>1.21730</td>
<td></td>
</tr>
</tbody>
</table>

The amount of revenue (dollars) generated from the three EMS levies in Asotin County from 2006 to 2011 is shown in Figure 12.
Funding for EMS services from the three levies in Asotin County has increased each year. During the study period, EMS proceeds for Asotin County grew 24.62 percent.

Among the contracts for service that Lewiston FD maintains, one is with Asotin County and the City of Asotin for EMS services. Figure 13 gives a review of the most recent three-year account for Asotin County and the contract amount for EMS services.

While the levy amount has increased, the amount of contract revenue has decreased slightly during its three-year history (1.10 percent).
Expenditures

The total cost of resources used to provide a service is made up of two elements: direct costs and in-direct costs. Direct costs are clearly identifiable and readily attributable to the service being charged. In-direct costs are not readily attributable to a service or department because they are shared with other services or, as in the case of Clarkston and Lewiston, multiple city departments. Fire districts are single or dual purpose agencies that provide direct accounting for all support services such as risk management, information technology, vehicle maintenance, human resource functions, legal counsel, and other services. Cities will generally provide these necessary functions through a larger infrastructure that serves the entire entity. The degree to which the costs of these functions are distributed to individual municipal departments often will vary widely. In many cases the cost is not fully apportioned and is budgeted as an administrative overhead or administration. When comparing fire department revenue and expenditures, ESCI attempts to capture and codify costs that may not be listed but are ascribed to fire and EMS budgets. We use the term in-direct charges when identifying these costs.

Fiscal Year 2011 Budgets

Each of the fire and EMS organizations budget differently, in part due to differing budgeting laws between the two states. Another aspect is the degree of involvement in EMS by each department: fire response only, contracting out for EMS transport, first response and EMS transport, or providing the complete cadre of services internally, as is the case for Lewiston FD externally.

The cities and districts in this study are unique and have independent methods of budgeting. For this reason it is necessary to create a means of comparison, a baseline. The fiscal year 2010 – 2011 annual budgets of the fire departments were reformatted. We categorize the line item accounts of each into three major classifications: personnel services, materials and services, and capital outlay. The classifications are further sub-divided to permit the tracking of program costs (such as fringe benefits, maintenance, and grants). With those caveats, each of the EMS budgets for fiscal year 2011 is shown in the following tables.
Emergency Medical Services Master Plan

The AFD (Asotin Fire Department) budget for fiscal year 2011 is shown below in Figure 14. As a department of the City of Asotin, the AFD budget is prepared following applicable RCW and is based on the calendar year.

Figure 14: City of Asotin Fire Department Budget, Fiscal Year 2011

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries &amp; Wages</td>
<td>0</td>
</tr>
<tr>
<td>Personnel Benefits</td>
<td>0</td>
</tr>
<tr>
<td>Materials</td>
<td>12,930</td>
</tr>
<tr>
<td>Services</td>
<td>10,115</td>
</tr>
<tr>
<td>Volunteers</td>
<td>14,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>4,250</td>
</tr>
<tr>
<td>Debt</td>
<td>0</td>
</tr>
<tr>
<td>Contingency Fund</td>
<td>0</td>
</tr>
<tr>
<td>% of Municipal Overhead</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td><strong>41,295</strong></td>
</tr>
</tbody>
</table>

No in-direct charges are applied to the fire department budget by the City of Asotin. Budget items for fire, EMS, and other fire department services are consolidated in a single document. This is seen by ESCI as a prudent and practical method of budgeting for AFD.

For the fiscal year ending December 31, 2011, the combined fire and EMS budget for the Clarkston FD is approximately $1.8 million. Of that total, roughly $0.94 million or 51.64 percent is for the ambulance/EMS fund.

Figure 15: CFD EMS Budget, Fiscal Year 2011

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries &amp; Wages</td>
<td>464,330</td>
</tr>
<tr>
<td>Overtime</td>
<td>40,000</td>
</tr>
<tr>
<td>Personnel Benefits</td>
<td>228,995</td>
</tr>
<tr>
<td>Materials</td>
<td>31,935</td>
</tr>
<tr>
<td>Services</td>
<td>128,110</td>
</tr>
<tr>
<td>Volunteers</td>
<td>26,500</td>
</tr>
<tr>
<td>Maintenance</td>
<td>16,150</td>
</tr>
<tr>
<td>Capital Replacement</td>
<td>3,500</td>
</tr>
<tr>
<td>Contingency Fund</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td><strong>939,520</strong></td>
</tr>
</tbody>
</table>

The City of Lewiston uses a budgeting method for fire and EMS similar to that used by the City of Clarkston. For the fiscal year ending September 30, 2011, the combined fire and EMS budget
for the Lewiston FD is approximately $7.8 million. Of that total, roughly $2.8 million or 30.64 percent is budgeted for EMS.

Figure 16: LFD EMS Budget, Fiscal Year 2011

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries &amp; Wages</td>
<td>1,577,110</td>
</tr>
<tr>
<td>Overtime</td>
<td>77,670</td>
</tr>
<tr>
<td>Personnel Benefits</td>
<td>891,040</td>
</tr>
<tr>
<td>Materials</td>
<td>158,270</td>
</tr>
<tr>
<td>Services</td>
<td>50,976</td>
</tr>
<tr>
<td>Volunteers</td>
<td>0</td>
</tr>
<tr>
<td>Maintenance</td>
<td>41,090</td>
</tr>
<tr>
<td>Capital Replacement</td>
<td>0</td>
</tr>
<tr>
<td>Contingency Fund</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td><strong>2,796,156</strong></td>
</tr>
</tbody>
</table>

During on-site interviews ESCI learned that not all personnel, material, services, and maintenance costs are allocated to the fire and EMS budgets. EMS billing software (TriTech Emergency Medical Systems) in the amount of $6,736 is appropriated in the finance department budget.\(^7\) There are two finance personnel with responsibility for EMS transport billing. Clearly if these and other in-direct charges are applied to the fire and EMS budgets the cost of service would be higher than currently budgeted. This should be taken into consideration in charts and figures in the following sections of this report. Although it is impossible to determine the actual impact of in-direct costs on LFD’s EMS budget, it is likely that some increase in overall cost of services would result.

**Recommendation:**
- Clarkston and Lewiston municipal budgets for fire and EMS should account for in-direct charges.

\(^7\) 2011 annual licensing fee of $6,736 for EMS billing software (TriTech Emergency Medical Systems) is calculated in the baseline financials.
Financial Obligations

The table below summarizes the financial obligations for EMS by agency.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACFD1</td>
<td>ACFD1 has no financial obligations in the form of bonded indebtedness, leases, or other debt related to EMS.</td>
</tr>
<tr>
<td>City of Asotin FD</td>
<td>Asotin FD has no financial obligations in the form of bonded indebtedness, leases, or other debt related to EMS.</td>
</tr>
<tr>
<td>CFD</td>
<td>An interfund loan budgeted for $150,000 in fiscal year 2011. This is an increase from $100,000 in fiscal year 2010 but a decrease from $190,000 in 2009.</td>
</tr>
<tr>
<td>LFD</td>
<td>LFD has no financial obligations in the form of bonded indebtedness, leases, or other debt related to EMS.</td>
</tr>
</tbody>
</table>

Revenues

City of Asotin

No EMS revenue was reported for the Asotin Fire Department.

Asotin County Fire District 1

Asotin County Fire District 1 budgeted for $45,000 in revenue related to ambulance/emergency services in fiscal year 2011. This is not an actual revenue amount but rather an estimated cost reimbursement through an agreement with Asotin County for ACFD1 responses to EMS incidents.

City of Clarkston

The City of Clarkston chose to begin providing ambulance transport services January 1, 2010, within its city limits with the Clarkston Fire Department. While a long revenue history has yet to be realized, a view of 2010 fees for transport service is available.

Based on calculations completed by ESCI, collections to EMS total billings are running approximately 48 percent in fiscal year 2010. CFD provided data that indicate the current collection rate is 57.36 percent, with 33.86 percent disallowed, 2.63 percent uncollected, and 6.15 percent pending. The collection percentage will likely increase as medical receipts can have a long lag time between billing and payment.
In fiscal year 2010 the CFD EMS budget was $901,535 compared to EMS transport revenue of $242,397. EMS transport revenue is equal to approximately 27 percent of the annual budget. User fee charges were $500,550 for Clarkston FD EMS transport services. The majority of billable responses (78 percent) were billed to Medicare and Medicaid. A review of the payer mix for 2010 shows that only 21 percent of the billing was for insurance and private billings.

Revenue data for EMS transport services is forecast to increase year-to-year but less than the budgeted amount in 2010. The budgeted transport fees in 2010 were $407,000 and are budgeted for $360,000 in 2011. Data in the first quarter of 2011 supports the forecasted increase as call volume and billings have both experienced growth. EMS transports are up approximately 13.00 percent in the first quarter of 2011 over 2010 with billings up 26.35 percent during the same period.

**City of Lewiston**

LFD receives revenue from several sources for funding and to off-set some of the cost of operations. A portion of the funds to operate the LFD and the EMS system is from revenue in the form of fees for service. A breakdown of fees for EMS from 2007 to 2011 for LFD is provided in Figure 18.

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011&lt;sup&gt;18&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG-Emergency Medical Services</td>
<td>24,956</td>
<td>115,144</td>
<td>23,701</td>
<td>17,186</td>
<td>24,000</td>
</tr>
<tr>
<td>NPC-Contract</td>
<td>16,100</td>
<td>16,750</td>
<td>17,420</td>
<td>73,530</td>
<td>96,500</td>
</tr>
<tr>
<td>Special Event Standby</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6,440</td>
<td>5,200</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td>2,641,324</td>
<td>2,924,675</td>
<td>3,257,786</td>
<td>3,021,971</td>
<td>3,446,500</td>
</tr>
<tr>
<td>Washington EMS Contract</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>381,745</td>
<td>386,708</td>
</tr>
<tr>
<td>Whitman County FD14 EMS Contract</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3,750</td>
<td>5,200</td>
</tr>
<tr>
<td>Reimbursements</td>
<td>0</td>
<td>0</td>
<td>14,250</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Revenue Reductions</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Not reported</td>
<td>(1,100,000)</td>
<td>(1,200,000)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,682,380</td>
<td>3,056,569</td>
<td>3,313,157</td>
<td>2,309,186</td>
<td>2,767,400</td>
</tr>
</tbody>
</table>

<sup>18</sup> Fiscal years 2007 to 2010 are revenue collected. For fiscal year 2011 revenue figures are proposed amounts.
EMS revenue for the LFD has increased approximately 48 percent between fiscal 2007 and 2011. Figure 19 shows a breakdown of EMS revenue for fiscal year 2011 for the LFD.

**Figure 19: LFD EMS Revenue Percentage by Source, Fiscal Year 2011**

![Pie chart showing EMS revenue percentages for fiscal year 2011]

Emergency medical services are budgeted at 86.87 percent of the revenue for the fiscal year ending September 30, 2011. Including forecasted revenue reductions of $1.2 million, EMS accounts for approximately 81 percent of revenue.

The next series of figures show the annual expenditure history information provided by Clarkston and Lewiston for EMS. Amounts for fiscal year 2010 are based on estimates and for fiscal year 2011 on budgeted amounts. Annual operational expenditures are inclusive of personnel services, materials and services, and capital outlay. Figure 20 lists the historical operational expenditures by the City of Clarkston and the CFD for EMS from fiscal year 2007 through 2011.

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19 EMS revenue increase percentage excludes revenue reductions.  
20 Ibid.  
21 Note: In some cases the number of years of historical financial data varied according to the data provided by each agency.
EMS expenditures by the CFD have increased an annual average of 9.24 percent during the most recent five-year period. For the same period of time, EMS revenue has been increasing approximately 11 percent annually.

**Expenditures**

Expenditures by the City of Lewiston and LFD for EMS are shown in the following figure. EMS expenses for 2010 and 2011 include a sub-account for services in the State of Washington.

---

22 Increased expenditures in 2008 and 2009 are related to receipt of grant funds and purchase of capital.

23 Ibid.
Figure 22: LFD Ambulance Charge Summary, Fiscal Year 2010

<table>
<thead>
<tr>
<th>Service</th>
<th>Quantity</th>
<th>Total Charges</th>
<th>Percent of Total Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Rate</td>
<td>1,753</td>
<td>901,966.35</td>
<td>29.34%</td>
</tr>
<tr>
<td>Interfacility Transport - ALS1</td>
<td>243</td>
<td>169,797.06</td>
<td>5.52%</td>
</tr>
<tr>
<td>Interfacility Transport</td>
<td>922</td>
<td>311,608.88</td>
<td>10.14%</td>
</tr>
<tr>
<td>ALS1</td>
<td>1,621</td>
<td>1,140,085.04</td>
<td>37.09%</td>
</tr>
<tr>
<td>ALS2</td>
<td>32</td>
<td>24,044.30</td>
<td>0.78%</td>
</tr>
<tr>
<td>1 – Hour</td>
<td>15</td>
<td>1,365.30</td>
<td>0.04%</td>
</tr>
<tr>
<td>45 – Minutes</td>
<td>7</td>
<td>477.96</td>
<td>0.02%</td>
</tr>
<tr>
<td>30 – Minutes</td>
<td>13</td>
<td>591.76</td>
<td>0.02%</td>
</tr>
<tr>
<td>15 – Minutes</td>
<td>11</td>
<td>250.36</td>
<td>0.01%</td>
</tr>
<tr>
<td>Second Attendant</td>
<td>1</td>
<td>196.47</td>
<td>0.01%</td>
</tr>
<tr>
<td>Mileage</td>
<td>50,732</td>
<td>523,561.46</td>
<td>17.03%</td>
</tr>
</tbody>
</table>

Approximately 37 percent of the calls for service are for advanced life support (ALS) and another 5 percent from ALS interfacility transports.

Figure 23 is used to compare the number of billable to non-billable calls for service by the different areas served by the LFD ambulance.

Figure 23: LFD Number of Billable and Non-billable Calls by Area, Fiscal Year 2010

<table>
<thead>
<tr>
<th>Location of Call</th>
<th>Number of Billable Calls</th>
<th>Non-billable Calls</th>
<th>Total Calls</th>
<th>Non-billable Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALS</td>
<td>BLS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asotin</td>
<td>15</td>
<td>15</td>
<td>17</td>
<td>47</td>
</tr>
<tr>
<td>Asotin County</td>
<td>224</td>
<td>233</td>
<td>247</td>
<td>704</td>
</tr>
<tr>
<td>Clarkston</td>
<td>105</td>
<td>354</td>
<td>205</td>
<td>664</td>
</tr>
<tr>
<td>Lewiston</td>
<td>1,315</td>
<td>1,919</td>
<td>1,062</td>
<td>4,296</td>
</tr>
<tr>
<td>Nez Perce County</td>
<td>186</td>
<td>113</td>
<td>176</td>
<td>475</td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
<td>54</td>
<td>20</td>
<td>111</td>
</tr>
<tr>
<td>Total</td>
<td>1,882</td>
<td>2,688</td>
<td>1,727</td>
<td>6,297</td>
</tr>
</tbody>
</table>

The City of Lewiston had the lowest percentage of non-billable calls for service (24.72 percent) in fiscal year 2010 and Nez Perce County the highest (37.05 percent).

24 Rates are effective as of October 1, 2010. Non-resident is anyone not living with the City of Lewiston.
25 City of Lewiston, March 2, 2011.
26 LFD’s fiscal year runs October 1 through September 30 whereas CFD’s fiscal year follows the calendar year. Thus the information contained in the figure overs three months where LFD was responding into Clarkston and nine months where CFD was providing transport services on their own.
27 Excludes calls classified as Other. Other is defined as “all other locations other than the five primary locations.”
approximately 68.22 percent of the calls occurred in the City of Lewiston and only 7.54 percent in Nez Perce County.

LFD provided ESCI with three years of historical data on the number of ALS and BLS calls by response area that included the number of non-billable calls. Figure 24 shows the calls by fiscal year 2008 through 2010 and the percent of calls that were non-billable.

Between fiscal year 2008 and 2010 the percent of non-billable calls increased approximately 4.19 percent. The area with the greatest percentage of increase in non-billable calls is Nez Perce County at 8.64 percent.

**Service Rates and Fees**

Beginning with Figure 25 the EMS rate schedule for Clarkston, Lewiston, and the Medicare reimbursement schedules for Washington and Idaho are presented.
City of Clarkston

Figure 25: City of Clarkston Ambulance Rates

<table>
<thead>
<tr>
<th>Service</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency</td>
<td></td>
</tr>
<tr>
<td>Basic Life Support (BLS)</td>
<td>420.00</td>
</tr>
<tr>
<td>Advanced Life Support (ALS)</td>
<td>555.00</td>
</tr>
<tr>
<td>Advanced Life Support (ALS) 2</td>
<td>655.00</td>
</tr>
<tr>
<td>Local Interfacility</td>
<td></td>
</tr>
<tr>
<td>Basic Life Support (BLS)</td>
<td>240.00</td>
</tr>
<tr>
<td>Advanced Life Support (ALS)</td>
<td>365.00</td>
</tr>
<tr>
<td>Out-of-Area Transport</td>
<td></td>
</tr>
<tr>
<td>Basic Life Support (BLS)</td>
<td>450.00</td>
</tr>
<tr>
<td>Advanced Life Support (ALS)</td>
<td>575.00</td>
</tr>
<tr>
<td>Non-resident Transport</td>
<td></td>
</tr>
<tr>
<td>Non-residents of the City of Clarkston</td>
<td>100.00</td>
</tr>
<tr>
<td>Mileage</td>
<td>10.50 per Mile</td>
</tr>
<tr>
<td>Oxygen</td>
<td>35.00</td>
</tr>
<tr>
<td>Stand By Time</td>
<td>92.00 per hour</td>
</tr>
<tr>
<td>Special Standby Event</td>
<td>92.00 per hour</td>
</tr>
<tr>
<td>Supplies</td>
<td>Actual cost plus 10%</td>
</tr>
</tbody>
</table>

---

## City of Lewiston

Figure 26: City of Lewiston Ambulance Rates

<table>
<thead>
<tr>
<th>Service</th>
<th>Charges</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COL Resident – BLS</td>
<td>450 + O^2</td>
<td>480.00</td>
</tr>
<tr>
<td>COL Resident – ALS</td>
<td>625 + O^2</td>
<td>655.00</td>
</tr>
<tr>
<td>Non-COL Resident – BLS</td>
<td>625 + O^2</td>
<td>655.00</td>
</tr>
<tr>
<td>Non-COL Resident – ALS</td>
<td>800 + O^2</td>
<td>830.00</td>
</tr>
<tr>
<td><strong>Non-Emergency – Local</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COL Resident – BLS</td>
<td>250 + O^2</td>
<td>280.00</td>
</tr>
<tr>
<td>COL Resident – ALS</td>
<td>425 + O^2</td>
<td>455.00</td>
</tr>
<tr>
<td>Non-COL Resident – BLS</td>
<td>425 + O^2</td>
<td>455.00</td>
</tr>
<tr>
<td>Non-COL Resident – ALS</td>
<td>600 + O^2</td>
<td>630.00</td>
</tr>
<tr>
<td><strong>Out of Area Transport</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COL Resident – BLS</td>
<td>450 + O^2</td>
<td>480.00</td>
</tr>
<tr>
<td>COL Resident – ALS</td>
<td>625 + O^2</td>
<td>655.00</td>
</tr>
<tr>
<td>Non-COL Resident – BLS</td>
<td>625 + O^2</td>
<td>655.00</td>
</tr>
<tr>
<td>Non-COL Resident – ALS</td>
<td>800 + O^2</td>
<td>830.00</td>
</tr>
<tr>
<td><strong>Sit Up Patient</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mileage</strong></td>
<td>Per Mile</td>
<td>11.00</td>
</tr>
<tr>
<td>Stand Alone ALS</td>
<td></td>
<td>175.00</td>
</tr>
<tr>
<td><strong>Oxygen</strong></td>
<td></td>
<td>30.00</td>
</tr>
<tr>
<td>Stand By Time</td>
<td>1 – Hour</td>
<td>100.00</td>
</tr>
<tr>
<td>Stand By Time</td>
<td>45 – Minutes</td>
<td>75.00</td>
</tr>
<tr>
<td>Stand By Time</td>
<td>30 – Minutes</td>
<td>50.00</td>
</tr>
<tr>
<td>Stand By Time</td>
<td>15 – Minutes</td>
<td>25.00</td>
</tr>
<tr>
<td><strong>Extrication</strong></td>
<td></td>
<td>125.00</td>
</tr>
<tr>
<td><strong>Second Attendant</strong></td>
<td></td>
<td>200.00</td>
</tr>
<tr>
<td><strong>Equipment Charges Bundled into the Base Rate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EZIO</td>
<td></td>
<td>100.00</td>
</tr>
<tr>
<td>CPAP (Circuit Tubes)</td>
<td></td>
<td>30.00</td>
</tr>
<tr>
<td>Defibrillation Pads</td>
<td></td>
<td>30.40</td>
</tr>
</tbody>
</table>

*Rates are effective as of October 1, 2010. Non-resident is anyone not living with the city limits of Lewiston.*
Figure 27 lists the Medicare Fee Schedule for the State of Washington.\(^ {30} \)

<table>
<thead>
<tr>
<th>HCPCS(^ {31} )</th>
<th>Base Rate(^ {32} )</th>
<th>RVU(^ {33} )</th>
<th>GPCI</th>
<th>Urban Base Rate/Urban Mileage</th>
<th>Rural Base Rate/Rural Mileage</th>
<th>Rural Base Rate/Lowest Quartile</th>
<th>Rural Ground Miles 1 – 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0425</td>
<td>6.74</td>
<td>1.00</td>
<td>1.085</td>
<td>$6.87</td>
<td>$6.94</td>
<td>n/a</td>
<td>$10.41</td>
</tr>
<tr>
<td>A0426</td>
<td>209.65</td>
<td>1.20</td>
<td>1.085</td>
<td>$271.88</td>
<td>$274.55</td>
<td>$336.59</td>
<td>n/a</td>
</tr>
<tr>
<td>A0427</td>
<td>209.65</td>
<td>1.90</td>
<td>1.085</td>
<td>$430.48</td>
<td>$434.70</td>
<td>$532.94</td>
<td>n/a</td>
</tr>
<tr>
<td>A0428</td>
<td>209.65</td>
<td>1.00</td>
<td>1.085</td>
<td>$226.57</td>
<td>$228.79</td>
<td>$280.49</td>
<td>n/a</td>
</tr>
<tr>
<td>A0429</td>
<td>209.65</td>
<td>1.60</td>
<td>1.085</td>
<td>$362.51</td>
<td>$366.06</td>
<td>$448.79</td>
<td>n/a</td>
</tr>
<tr>
<td>A0430</td>
<td>2845.14</td>
<td>1.00</td>
<td>1.085</td>
<td>$2,966.06</td>
<td>$2,449.09</td>
<td>n/a</td>
<td>$4,449.09</td>
</tr>
<tr>
<td>A0431</td>
<td>3307.89</td>
<td>1.00</td>
<td>1.085</td>
<td>$3,448.48</td>
<td>$5,172.71</td>
<td>n/a</td>
<td>$5,172.71</td>
</tr>
<tr>
<td>A0432</td>
<td>209.65</td>
<td>1.75</td>
<td>1.085</td>
<td>$396.49</td>
<td>$400.38</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>A0433</td>
<td>209.65</td>
<td>2.75</td>
<td>1.085</td>
<td>$623.06</td>
<td>$629.17</td>
<td>$771.36</td>
<td>n/a</td>
</tr>
<tr>
<td>A0434</td>
<td>209.65</td>
<td>3.25</td>
<td>1.085</td>
<td>$736.34</td>
<td>$743.56</td>
<td>$911.61</td>
<td>n/a</td>
</tr>
<tr>
<td>A0435</td>
<td>8.07</td>
<td>1.00</td>
<td>1.085</td>
<td>$8.07</td>
<td>$12.11</td>
<td>n/a</td>
<td>$12.11</td>
</tr>
<tr>
<td>A0436</td>
<td>21.53</td>
<td>1.00</td>
<td>1.085</td>
<td>$21.53</td>
<td>$32.30</td>
<td>n/a</td>
<td>$32.30</td>
</tr>
<tr>
<td>A0425</td>
<td>6.74</td>
<td>1.00</td>
<td>0.988</td>
<td>$6.87</td>
<td>$6.94</td>
<td>n/a</td>
<td>$10.41</td>
</tr>
<tr>
<td>A0426</td>
<td>209.65</td>
<td>1.20</td>
<td>0.988</td>
<td>$254.46</td>
<td>$256.95</td>
<td>$315.02</td>
<td>n/a</td>
</tr>
<tr>
<td>A0427</td>
<td>209.65</td>
<td>1.90</td>
<td>0.988</td>
<td>$402.89</td>
<td>$406.84</td>
<td>$498.78</td>
<td>n/a</td>
</tr>
<tr>
<td>A0428</td>
<td>209.65</td>
<td>1.00</td>
<td>0.988</td>
<td>$212.05</td>
<td>$214.13</td>
<td>$262.52</td>
<td>n/a</td>
</tr>
<tr>
<td>A0429</td>
<td>209.65</td>
<td>1.60</td>
<td>0.988</td>
<td>$339.27</td>
<td>$342.60</td>
<td>$420.03</td>
<td>n/a</td>
</tr>
<tr>
<td>A0430</td>
<td>2845.14</td>
<td>1.00</td>
<td>0.988</td>
<td>$2,828.07</td>
<td>$2,424.10</td>
<td>n/a</td>
<td>$4,242.10</td>
</tr>
<tr>
<td>A0431</td>
<td>3307.89</td>
<td>1.00</td>
<td>0.988</td>
<td>$3,288.04</td>
<td>$4,932.06</td>
<td>n/a</td>
<td>$4,932.06</td>
</tr>
<tr>
<td>A0432</td>
<td>209.65</td>
<td>1.75</td>
<td>0.988</td>
<td>$371.08</td>
<td>$374.72</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>A0433</td>
<td>209.65</td>
<td>2.75</td>
<td>0.988</td>
<td>$583.13</td>
<td>$588.85</td>
<td>$721.92</td>
<td>n/a</td>
</tr>
<tr>
<td>A0434</td>
<td>209.65</td>
<td>3.25</td>
<td>0.988</td>
<td>$689.15</td>
<td>$695.91</td>
<td>$853.18</td>
<td>n/a</td>
</tr>
<tr>
<td>A0435</td>
<td>8.07</td>
<td>1.00</td>
<td>0.988</td>
<td>$8.07</td>
<td>$12.11</td>
<td>n/a</td>
<td>$12.11</td>
</tr>
<tr>
<td>A0436</td>
<td>21.53</td>
<td>1.00</td>
<td>0.988</td>
<td>$21.53</td>
<td>$32.30</td>
<td>n/a</td>
<td>$32.30</td>
</tr>
</tbody>
</table>

The fee schedule was updated July 1, 2010. These provisions had been scheduled to expire on December 31, 2010. Sections 106(a), 106(b), and 106(c) of the Medicare and Medicaid Extenders Act of 2010 enacted in December of 2010 extended payment provisions of previous legislation. This includes the Patient Protections and Affordable Care Act of 2010 (ACA) and the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) which increased Ambulance Fee Schedule amounts by 2 percent for services originating in urban areas (as

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\(^ {30} \) Updated July 1, 2010.

\(^ {31} \) Healthcare Common Procedure Coding System (HCPCS) code. This field has the full range of HCPCS services payable under the ambulance fee schedule.

\(^ {32} \) The Base Rate is a nationally uniform “base” amount used to calculate each HCPCS’ payment amount.

\(^ {33} \) Relative Value Units (RVU). RVUs set a numeric value for ambulance services relative to the value of a base level ambulance service.
defined by the ZIP Code of the point of pickup) and by 3 percent for services originating in rural areas (again, as defined by the ZIP Code of the point of pickup).

The Medicare Fee Schedule for the State of Idaho\(^{34}\) is summarized in the following table:

<table>
<thead>
<tr>
<th>HCPCS</th>
<th>Base Rate(^{35})</th>
<th>RVU(^{36})</th>
<th>GPCI</th>
<th>Urban Base Rate/Urban Mileage</th>
<th>Rural Base Rate/Rural Mileage</th>
<th>Rural Base Rate/Lowest Quartile</th>
<th>Rural Ground Miles 1 – 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0425</td>
<td>6.74</td>
<td>1.00</td>
<td>0.942</td>
<td>$6.87</td>
<td>$6.94</td>
<td>n/a</td>
<td>$10.41</td>
</tr>
<tr>
<td>A0426</td>
<td>209.65</td>
<td>1.20</td>
<td>0.942</td>
<td>$246.19</td>
<td>$248.61</td>
<td>$304.79</td>
<td>n/a</td>
</tr>
<tr>
<td>A0427</td>
<td>209.65</td>
<td>1.90</td>
<td>0.942</td>
<td>$389.81</td>
<td>$393.63</td>
<td>$482.59</td>
<td>n/a</td>
</tr>
<tr>
<td>A0428</td>
<td>209.65</td>
<td>1.00</td>
<td>0.942</td>
<td>$205.16</td>
<td>$207.17</td>
<td>$253.99</td>
<td>n/a</td>
</tr>
<tr>
<td>A0429</td>
<td>209.65</td>
<td>1.60</td>
<td>0.942</td>
<td>$328.26</td>
<td>$331.48</td>
<td>$406.39</td>
<td>n/a</td>
</tr>
<tr>
<td>A0430</td>
<td>2845.14</td>
<td>1.00</td>
<td>0.942</td>
<td>$2,762.63</td>
<td>$4,143.95</td>
<td>$4,143.95</td>
<td>n/a</td>
</tr>
<tr>
<td>A0431</td>
<td>3307.89</td>
<td>1.00</td>
<td>0.942</td>
<td>$3,211.96</td>
<td>$4,817.94</td>
<td>$4,817.94</td>
<td>n/a</td>
</tr>
<tr>
<td>A0432</td>
<td>209.65</td>
<td>1.75</td>
<td>0.942</td>
<td>$359.03</td>
<td>$362.55</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>A0433</td>
<td>209.65</td>
<td>2.75</td>
<td>0.942</td>
<td>$564.19</td>
<td>$569.72</td>
<td>$698.48</td>
<td>n/a</td>
</tr>
<tr>
<td>A0434</td>
<td>209.65</td>
<td>3.25</td>
<td>0.942</td>
<td>$666.77</td>
<td>$673.31</td>
<td>$825.48</td>
<td>n/a</td>
</tr>
<tr>
<td>A0435</td>
<td>8.07</td>
<td>1.00</td>
<td>0.942</td>
<td>$8.07</td>
<td>$12.11</td>
<td>n/a</td>
<td>$12.11</td>
</tr>
<tr>
<td>A0436</td>
<td>21.53</td>
<td>1.00</td>
<td>0.942</td>
<td>$21.53</td>
<td>$32.30</td>
<td>n/a</td>
<td>$32.30</td>
</tr>
</tbody>
</table>

**Contracts for Service**

Public entities usually have broad authority under law to the joint exercise of powers to enter intergovernmental agreements (IGAs) for the purpose of cost and service efficiency. Idaho is no different in this regard. The laws of the State of Idaho address the issue, allowing intergovernmental contracts for any lawfully authorized function, service, or facility. By Statute, intergovernmental agreements are permitted under Title 67, Chapter 23, Section 67-2328. In Washington, authority for interagency cooperation is defined in the Revised Code of Washington.

*RCW 39.34.080, Contracts to perform governmental activities which each contracting agency is authorized to perform. Any one or more public agencies may contract with any one or more other public agencies to perform any governmental service, activity, or undertaking which each public agency entering*  

\(^{34}\) Ibid.  
\(^{35}\) Ibid.  
\(^{36}\) Ibid.  
\(^{37}\) Ibid.
into the contract is authorized by law to perform: PROVIDED, That such contract shall be authorized by the governing body of each party to the contract. Such contract shall set forth fully the purposes, powers, rights, objectives, and responsibilities of the contracting parties.

Under these applicable statutes and codes, governmental entities may elect to cooperate or contract for any lawful purpose. IGAs allow individual organizations to share resources, improve service, and save money at the program level. Most commonly, fire departments enter partnering agreements for programs such as firefighter training, fire prevention, closest force response, and administrative/support services. In many cases, this is sufficient to accomplish objectives that agencies have in common.

Each of the EMS service providers participating in this study have chosen to contract for certain services that may be more efficiently or cost effectively provided by another agency. Agreements provided to ESCI by the project agencies are discussed below.

**Asotin County Fire District 1 and Asotin County EMS Levy Agreement**

In an agreement reached between Asotin County and Asotin County Fire Protection District 1 on June 14, 2011, the District assumes responsibility for providing EMS within the Asotin County EMS District. Terms of the agreement allow ACFD1 to either provide the service directly or through contracts with other providers. ACFD1 agreed to submit to the voters an EMS levy or a lid lift to increase its regular levy in an amount sufficient to fund EMS at the same level funded by the County EMS District levy. ESCI believes that this agreement will serve its intended purpose of streamlining oversight of EMS by eliminating a level of governance.

**Asotin Fire Department and Asotin County FD 1**

Fire Chief services for the Asotin Fire Department are provided through a contractual arrangement with ACFD1. The ACFD1 chief officer has authority and responsibility for responding to emergency incidents, assumes command and may also be assigned for the assist with other fire department programs.
Asotin County (Whitcom Communications)

Asotin County Fire District 1 and the City of Clarkston have contracted for E 9-1-1 and non-emergency dispatch services with Asotin County (Whitcom Communications). The five-year agreement includes an option for an additional five-year extension.

Figure 29: Whitcom Communications Contract Amounts, 2010 - 2014

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>ACFD1</th>
<th>Clarkston</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>7,500</td>
<td>194,500</td>
</tr>
<tr>
<td>2011</td>
<td>7,725</td>
<td>196,525</td>
</tr>
<tr>
<td>2012</td>
<td>7,957</td>
<td>198,611</td>
</tr>
<tr>
<td>2013</td>
<td>8,195</td>
<td>200,759</td>
</tr>
<tr>
<td>2014</td>
<td>8,441</td>
<td>202,971</td>
</tr>
</tbody>
</table>

Asotin County arrived at the cost using the total call volume divided by the number of calls generated by the Asotin County Sheriff’s Office, City of Clarkston, City of Asotin, and Asotin County Fire District 1 to the cost of services provided by Whitcom.39

Asotin County Fire District 1 and the City of Lewiston

ACFD1 contracts with the City of Lewiston to staff and operate an advanced life support ambulance from the ACFD1 station located just to the south of Clarkston. LFD provides ALS response to all of unincorporated Asotin County comprising the Asotin County EMS District. The levy funds generated from the District are transferred to the City of Lewiston for the provision of EMS within this area.

Clarkston and the Port of Wilma Volunteer Fire Department (Port of Whitman County)

The City of Clarkston and the Port of Wilma Volunteer Fire Department have an agreement whereby the Clarkston FD will provide:

- Emergency medical services (EMS)
- Structure, vehicle, and wildland fire response
- Hazardous materials response under Washington State Patrol guidance
- Annual fire inspection, annual flowing of hydrants, and annual submission of incident reports to the State as necessary

38 Fiscal year begins July 1 and ends June 30.
39 Contract for E 9-1-1 and Non-emergency Dispatch Services between Asotin County and the City of Clarkston, January 15, 2010.
Additional fire inspections upon discovery of serious threat to life or fire code violation

In consideration for these services, the Port of Wilma Volunteer Fire Department pays the City of Clarkston according to the following scale:

**Figure 30: Clarkston Agreement with the Port of Wilma Volunteer Fire Department**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS Response of Rescue One</td>
<td>$300 per call</td>
</tr>
<tr>
<td>Fire Response (less than 60 minutes)</td>
<td></td>
</tr>
<tr>
<td>For any combination of one or two engines, ladder truck or tender plus the first six responders</td>
<td>$300 per call</td>
</tr>
<tr>
<td>Emergency Wildland (brush trucks) With two firefighters</td>
<td>$125 per call</td>
</tr>
<tr>
<td>Fire Response (greater than 60 minutes)</td>
<td></td>
</tr>
<tr>
<td>For each engine, ladder truck or tender plus the first three responders</td>
<td>$175 per hour</td>
</tr>
<tr>
<td>Fire Service Administrative Fee</td>
<td>$7,000 annually</td>
</tr>
<tr>
<td>Increased June 1, 2009, from $5,000</td>
<td></td>
</tr>
<tr>
<td>Additional (follow up) fire inspections or after 32 hours are expended on annual fire inspections</td>
<td>Actual personnel costs</td>
</tr>
</tbody>
</table>

The three-year term of the agreement was set to end on May 31, 2011. CFD’s agreement with the Port of Wilma Fire Department benefits both parties. It takes away the need for both agencies to have individual fire suppression and fire prevention programs. Separately the two fire departments could not provide an equivalent level of service at the current cost.

**City of Clarkston and Clearwater Paper Corporation**

CFD maintains a contract with Clearwater Paper Corporation to support fire operations in the event of a large scale incident based on a per incident basis. Information related to financial components of the contract was not provided.

**City of Lewiston 9-1-1 Communications**

Communications 9-1-1 call answering and dispatching for the LFD is a function of the Lewiston Police Department. Information regarding what portion of communications center expenses are directly related to EMS calls was not provided.
Cost of EMS Service

When thinking about the calculated cost of a service and comparable, a figure most people are familiar with is population served. LFD serves an approximate residential population of 60,888 and Clarkston serves 7,229. What is not counted in residential population is the dynamics of transient population. Demographic analysis can be used to estimate the actual population served. However, according to a study prepared by Jonathan M. Yearsley, present methods of analysis of transient population are still in the early stages of being developed.

Factors that can contribute to large swings in population are visitors to the area, commerce and business activities, and schools.

The following chart (Figure 31) shows the comparison of fire protection budgeted spending per capita by the service area for EMS services by agency in fiscal year 2011.

![Figure 31: EMS Cost per Capita, Fiscal Year 2010](chart)

Budgeted amounts and the static populations served were used in calculating the cost per capita. For the next figure budgeted EMS revenue was included in the calculation.

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40 Total population includes the 7,229 residents of the City of Clarkston.
When EMS revenues are included in the calculation, the cost per capita for the area served by LFD is approximately $0.54. For the City of Clarkston the decrease is approximately $33.20 to $92.50 per capita.

Cost per call is another measure that is familiar to most people. The EMS cost per call for fiscal year 2010 is shown below in Figure 33.

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42 Based on incident volume contained within response data obtained from Whitcom.
Calls for service and revenue in the City of Clarkston have shown an increase in the first quarter of fiscal year 2011 (January to March), which will have an impact on the cost per call.

In fiscal year 2010 LFD charged a total of $3,073,944 for emergency medical services (EMS) and ambulance transports. (Figure 22 summarizes for each EMS-related service provided by LFD the fees, total dollars charged, and percentage of the total.)

Fire department staffing can vary widely with the number and types of services provided. CFD and LFD provide fire protection, EMS transport, and a variety of other services and are successful in using a wide variety of sources to capture non-tax revenue. Figure 34 compares the personnel services cost and non-tax revenue per EMS employee for CFD and LFD budgeted for the fiscal year ending 2011.

While the cost per employee is in a range that would be expected when compared to other municipal fire departments in Idaho and Washington, the non-tax revenue is atypical. In ESCI’s experience, $55,385 (CFD) and $153,744 (LFD) per EMS employee in non-tax revenue is above that of most other fire departments providing like services.43

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43 CFD EMS personnel numbers were derived from City of Clarkston memorandum from Fire Chief Steve Cooper to Mayor Donna Engle, July 1, 2009. LFD EMS personnel numbers were obtained from the 2011 LFD Budget.
The Influence of Economic Factors on Future Cost

Many factors influence the amount of revenue (and thus the dollars available for expenditures) associated with the operation of the cities, including fire and EMS departments. Some of the factors include unemployment, the fluctuating cost of petroleum products, the potential for decreased revenue from property taxes based on the current housing crisis, inflation (CPI-U), and the impact of development in the cities and districts. While many causes have a detrimental impact, new development is generally positive. As a caveat, actually achieving a benefit from new development requires planning.

Annual Unemployment Rate

The U.S. Department of Labor, Bureau of Labor Statistics produces an assortment of data sets and reports that are useful for economic analysis and trending. One such data set (the Local Area Unemployment Statistics program) produces monthly and annual employment, unemployment, and labor force data for census regions and divisions, states, counties, metropolitan areas, and many cities by place of residence. Estimates in these reports are considered key indicators of local economic conditions. Unemployment is one gauge of economic health and is a statistic that is familiar to almost everyone.

Unemployment statistics are based on persons aged 16 years and older who had no employment during the reference week, were available for work (except for temporary illness), and had made specific efforts to find employment during the four-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classed as unemployed. The following figures show a ten-year historical review and annual average of the rate of unemployment for the Lewiston, ID-WA Metropolitan Statistical Area.⁴⁴

Unemployment has averaged 5.36 percent over the ten-year period 2001 through 2010. For 2010, unemployment in the Lewiston area increased approximately 9.72 percent over 2009. According to most recent report released by the Bureau of Labor Statistics (March 2011), figures show that the unemployment rate for the area now stands at 8.7 percent.

**Annual Inflation Rate**

Inflation is also an important consideration when forecasting cost. For the purpose of this analysis, we use the average Consumer Price Index for all urban consumers (CPI-U) reported for the 2001 through 2010 period for the West Urban, Statistical Area as compiled by the U.S. Department of Labor.  

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The historical ten-year average CPI-U for the Western Urban area between 2001 and 2010 was 2.39 percent.

The following figure uses the historical CPI-U data to forecast the impact on the fire and EMS department budgets through 2021. This rate is used for analysis purposes during the forecasting of future costs (the actual CPI-U for any given year could be higher or lower).
The annual average CPI-U increase can be applied to each category of the fiscal year 2011 budgets to forecast the impact on the future financial stability of fire and EMS services. Figure 38 depicts the CFD EMS budget impact in each year through 2021.

Figure 38: CFD CPI-U Budget Impact Forecast, 2012 – 2021

In 2021 the CFD EMS budget is forecast to be $1.14 million compared to the $0.90 million in fiscal year 2011.

Figure 39 depicts the impact of applying the annual average CPI-U increase on the LFD EMS budget in each year through 2021.
In 2021 the LFD EMS budget is forecast to be $3.54 million compared to $2.80 million in fiscal year 2011.
Human Resources

Human resources, or personnel management, is a critical component in the overall delivery of emergency medical services to the community. Although having sufficient equipment is also a critical component, without adequate staff to operate and utilize that equipment, its usefulness cannot be realized. The human resources function varies from community to community in that some are responsible for municipal personnel while others are predominantly concerned with a voluntary membership structure. In either case, or a combination thereof, a well-designed and properly functioning human resources system must be a part of the organization. This section of the report evaluates the human resources function within each participating agency including staffing resources (both administrative and operational), scheduling, personnel qualifications and health and wellness initiatives.

Staffing Resources

Staffing resources consist of a variety of models including career, part-time, reserve, paid-on-call and volunteer. Each of the four primary agencies involved in this project utilize different methodologies in staffing response units with a varying mix of those types of personnel indicated above. In addition, each agency staffs administrative and support functions differently. This section is intended to describe the various staffing methodologies in use as well as provide comparison against national and regional benchmarks as well as industry standards.

Administrative and Support Staffing

Administrative and support personnel are those that are tasked with primarily non-operational responsibilities. Although in today’s emergency services environment, many personnel wear a variety of hats depending upon the situation at hand, for the purposes of this report, ESCI has attempted to separate out administrative personnel from those dedicated to an operational role.

Asotin County Fire District 1

ACFD1 is a mostly volunteer department. The District has two career personnel: the Fire Chief and Assistant Chief. The roles of these two positions are not unlike a standard career
department in that the Chief and Assistant Chief are tasked with overseeing the day-to-day operations of the department and ensuring that both personnel and physical resources are appropriately utilized in order to maintain a high level of service to the community. Although also involved in operations if the need arises, such as a major medical or fire incident, these personnel focus primarily on administrative functions.

**Clarkston Fire Department**

CFD is a combination fire department; career staff is on duty 24 hours a day with reserve personnel utilized to supplement the system to maintain constant staffing levels. A strong volunteer staff comprises the majority of the total workforce. The only administrative positions within CFD are the fire chief and a 0.75 FTE (full-time equivalent) administrative assistant. Both positions work during normal business hours and the chief is available by pager if needed for emergency responses.

**Lewiston Fire Department**

LFD is a mostly career fire department; although reserve personnel are utilized to supplement the system, the department is staffed with predominantly career personnel. The administrative functions within the department are the responsibility of the Fire Chief, two Division Chiefs (one position is currently vacant), and two Administrative Assistants. These personnel are on duty during normal business hours, and the Fire Chief is available by cellular phone if needed for emergency responses.

**MedCor**

MedCor is a career industrial fire department. Although additional personnel from within the industrial complex are trained and can be utilized in certain situations, most functions of the department are handled with dedicated career personnel. Administrative functions are the responsibility of the Fire Chief. No other administrative personnel are assigned to the department but additional administrative needs are completed at the corporate level.

The following table provides a summary of administrative and support personnel within the area’s four primary service providers.
Figure 40: Summary of Administrative and Support Personnel

<table>
<thead>
<tr>
<th></th>
<th>ACFD1</th>
<th>CFD</th>
<th>LFD</th>
<th>MedCor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Chief</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Assistant Chief</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division Chief&lt;sup&gt;46&lt;/sup&gt;</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td>0.75</td>
<td>2.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2.00</td>
<td>1.75</td>
<td>4.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Percentage to Total Staff</strong></td>
<td>5.1%</td>
<td>3.8%</td>
<td>5.9%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

**Emergency Operations Staffing**

Without sufficient personnel that are adequately trained and educated to deliver core services to a community, no emergency services organization can be effective. Personnel must be adequately distributed throughout the system as well in order to provide the timeliest response when an incident is reported. Although geographic distribution of resources will be addressed within the service delivery section of this report, it is worth mentioning here how staff are deployed and in what manner they are utilized.

**Asotin County Fire District 1**

ACFD1 is a mostly volunteer organization. Emergency operations personnel are utilized on an ‘as needed’ basis; if an incident is reported, volunteers are notified by tone-activated pager to alert them of the need. In addition to the volunteer component, two EMS personnel are assigned 12-hour shifts to provide 24-hour coverage. LFD staffs two personnel within the ACFD1 station 24 hours per day providing ALS transport services to the entirety of the District. When this unit is dispatched, volunteers are notified that personnel are needed to ‘fill in’ at the station until the career unit returns to service. If additional incidents are reported, those volunteers, along with the career Chief and Assistant Chief (as needed), respond in additional vehicles, in conjunction with dispatched LFD units, to ensure continuity of services.

<sup>46</sup> LFD currently has no Division Chiefs but has one individual (Battalion Chief) serving in an administrative role while on light duty to oversee the EMS function within the department.
Clarkston Fire Department

CFD provides responses to emergency and non-emergency incidents with a combination of career and volunteer personnel. The figures below illustrate the distribution of medically trained personnel across the employment categories.

**Figure 41: Career Medically Trained Personnel - CFD**

<table>
<thead>
<tr>
<th>Station 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paramedic</td>
</tr>
<tr>
<td>Advanced EMT</td>
</tr>
<tr>
<td>EMT</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

**Figure 42: Reserve and Volunteer Medically Trained Personnel - CFD**

<table>
<thead>
<tr>
<th>Station 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paramedic</td>
</tr>
<tr>
<td>Advanced EMT</td>
</tr>
<tr>
<td>EMT</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Minimum staffing for CFD is three personnel on each of the three shifts with vacancies created by vacation or other benefit leave filled with reserve personnel. At least one paramedic is on duty 24 hours per day.

Lewiston Fire Department

LFD responds to emergency and non-emergency incidents with predominantly career personnel. Vacancies within the career ranks are filled by reserves and call-back personnel. The department staffs three stations within the City of Lewiston. Also, LFD staffs one ALS transport ambulance in the ACFD1 station in Asotin County. The following table illustrates staff distribution throughout the LFD response area in regard to medically trained personnel.
In addition to the full-time staff noted above, LFD employs a total of 17 reserve personnel, which includes 2 paramedics, 3 advanced EMT personnel, and 12 EMTs.

It is understandable that not all personnel will be on duty at all times. The table below indicates the minimum staffing for LFD by station.

<table>
<thead>
<tr>
<th>Station</th>
<th>Paramedic</th>
<th>Advanced EMT</th>
<th>EMT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 1</td>
<td>14</td>
<td>2</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Station 2</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Station 4</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>ACFD1</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

MedCor

MedCor responds to incidents within the confines of the Clearwater Paper Corporation complex with on-duty career personnel supplemented by other trained employees scattered throughout the facilities. The department staffs a single station located near the main entrance to the complex. Although personnel provide services within the complex, patients are not transported outside the facility. Rather, patients needing medical attention can be transported to the on-site clinic where external resources are then utilized for transport to a definitive care facility.

MedCor’s operational personnel consist of 3 Captains and 8 full-time firefighter/EMTs supplemented by 13 additional part-time firefighters to fill vacancies created by benefit leave time or other circumstances. The following figure summarizes the available medically trained personnel within each agency.
Figure 45: Summary of Medically Trained Personnel by Agency

<table>
<thead>
<tr>
<th></th>
<th>ACFD1</th>
<th>CFD</th>
<th>LFD</th>
<th>MedCor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medical Tech</td>
<td>27</td>
<td>15</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>EMT-Intermediate/Advanced EMT</td>
<td>7</td>
<td>6</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>EMT-Paramedic</td>
<td>1</td>
<td>8</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>29</strong></td>
<td><strong>62</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

In addition to those personnel noted in the figure above, ACFD1 has 21 volunteers with EMT status pending and one additional volunteer with Paramedic status pending. As noted previously, each agency utilizes a variety of personnel types to fulfill its mission. The following table summarizes how those personnel are distributed across the various types including both medically trained and non-medical personnel.

Figure 46: Summary of Total Personnel by Status

<table>
<thead>
<tr>
<th></th>
<th>ACFD1</th>
<th>CFD</th>
<th>LFD</th>
<th>MedCor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career</td>
<td>2</td>
<td>11</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Part-Time</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reserve</td>
<td>0</td>
<td>5</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Volunteer/Paid-on-Call</td>
<td>33</td>
<td>27</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>43</strong></td>
<td><strong>62</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

The following figure provides a comparison of staffing resources based on national and regional benchmarks. MedCor is not considered here since the comparisons utilized are based on municipal or other governmental service departments rather than industrial fire departments.
The preceding figure illustrates that both CFD and ACFD1 have above average numbers of volunteer/reserve personnel based on similarly populated areas. Since LFD is a mostly career department, its number of career personnel per 1,000 population is close to both the national and regional averages for similarly populated areas, while ACFD1 is significantly below the averages. Of note here, though, is the fact that LFD staffs personnel 24 hours per day within the ACFD1 facility and those personnel were not included in the total number of personnel for ACFD1. Although slightly higher than the averages, CFD is more in line with career personnel resources.

**Personnel Qualifications and Certification Requirements**

Individuals that perform emergency medical services functions are required to have a much higher level of training than non-medical emergency services providers. Within EMS, there are several levels of operation: Emergency Medical Technician (EMT), Advanced EMT, and Paramedic. Each level requires specific and progressive levels of training and education and continuing educational requirements are different.
The State of Idaho and the State of Washington each have specific initial training and recertification requirements individuals must meet to obtain initial and ongoing credentialing. For initial licensure, the State of Idaho requires that personnel submit:

- Proof of successful completion of the National Registry of Emergency Medical Technicians (NREMT) examination appropriate for level of licensure.
- Proof of affiliation with an EMS agency licensed by the EMS Bureau.

For re-licensure, the State of Idaho requires that personnel meet the following:

- Completion of all continuing education and skills proficiency requirements.
- Proof of affiliation with an EMS agency licensed by the EMS Bureau:
  - EMT – 48 hours of continuing education and skills proficiency biannually
  - Advanced EMT – 54 hours of continuing education and skills proficiency biannually
  - Paramedic – 72 hours of continuing education and skills proficiency
  - Completion of Landing Zone Officer Training.

The State of Washington requires the following for initial certification:

- Complete an approved Washington State EMS training course specific to the level of certification.
- Proof of successful completion of the National Registry of Emergency Medical Technicians (NREMT) examination appropriate for level of licensure.
- Proof of affiliation with an EMS agency licensed by WA Department of Health.

The State of Washington Department of Health states that EMS personnel may complete recertification educational requirements by completing either the Continuing Medical Education method or through a Department of Health and County Medical Program Director approved Ongoing Training and Evaluation Program (OTEP). Each level of EMS certification has specific requirements that must be met prior to recertification.

Each of the agencies involved in this project have established formal OTEP programs for re-credentialing of departmental personnel.
Administrative Functions

Aside from the street-level service delivery that will be discussed later in this report, each organization provides additional support functions within their respective department that are critical to overall success. This section provides an overview of what functions each agency is providing as well as to what level in comparison to one another.

Training Programs

Without proper training, personnel cannot provide quality services. In the case of emergency medical services, particularly at the ALS level, quality initial and ongoing educational programs are essential. The following paragraphs describe the initial training requirements and ongoing programs within each organization.

Asotin County Fire District 1

Initial medical training for ACFD1 follow the requirements prescribed in Washington Administrative Code (WAC) 246-976-021. Recertification requirements for EMS personnel are contained with WAC 246-976-161.

ACFD1’s Ongoing Training and Education Program (OTEP) follows a two-year formal schedule and is well documented. The department has identified a single point of contact responsible for administering the OTEP and this individual also serves as the department’s EMS Chief. ACFD1 is currently training to the Emergency Medical Technician and Advanced EMT levels and is assisting the City of Asotin Fire Department with upgrading personnel skills to supplement medical first response in that area.

Clarkston Fire Department

CFD is required to follow the same initial and recertification training set forth in WAC 246-976-021 and 246-976-161. The department has adopted an OTEP based on an annual schedule and the program is administered by a career Captain reporting to the Fire Chief. In addition, the department conducted a 40-hour paramedic refresher course in late fall 2010.
Emergency Medical Services Master Plan

**Lewiston Fire Department**

Emergency Medical Services initial training and recertification requirements are set forth in Idaho Code §56-1011 to §56-1017 under the Rules of the Idaho EMS Physician Commission and the Rules Governing Emergency Medical Services (IDAPA 16.02.03 and 16.02.03 respectively). Since LFD also operates within the State of Washington, the rules governing initial training and recertification within Washington also apply to LFD.

The department operates under an OTEP as outlined within Standard Operating Procedures based on a two-year schedule and maintains three separate OTEPs: EMT, Advanced EMT, and Paramedic. All three programs are administered by an EMS Battalion Chief.

**MedCor**

Although MedCor is a private industrial fire department, the EMS rules for the State of Idaho still apply to those that practice medical skills. Initial training and recertification requirements must adhere to state rules. The department currently requires full-time personnel to have attained at least an Emergency Medical Technician credential prior to employment. Personnel are required to attend EMS training every quarter with a 24 hour refresher course at the end of every recertification period.

**Medical Direction and Quality Assurance/Quality Improvement Programs**

*NFPA 450* recommends that a single medical authority should be in place within every EMS System. The medical authority should provide oversight for the EMS system; however, the medical authority in some cases may be the same person as the medical director. ESCI notes that the term “medical authority” is distinct from medical director because a medical authority may be comprised of multiple physicians (or other medical personnel in some states) while medical director is typically one person.

Like many states, both Idaho and Washington require that personnel functioning within an EMS system do so under the direction of a state licensed physician.
Asotin County Fire District 1
ACFD1 is a Verified Ambulance Service as defined by the State of Washington Department of Health at the BLS level and is licensed in Idaho as a BLS transport ambulance service. The district receives medical direction from Dr. Frank Reiser, a board-certified physician employed by the State of Washington Department of Health, who is employed and directed by the State of Washington Department of Health and acts as medical director for all of Asotin County.

Clarkston Fire Department
Although several CFD personnel are dual certified through both Idaho and Washington, the department itself is only licensed within the State of Washington. CFD is a Trauma Verified Aid service as defined by the State of Washington Department of Health as well as a Licensed Ambulance Service. Thus, trauma incidents require LFD to respond along with CFD resources. CFD receives medical direction from Dr. Frank Reiser.

CFD operates an in-house QA/AI program and Dr. Reiser is notified of any protocol violations or questions. All (100 percent) charts are reviewed by Dr. Reiser.

Lewiston Fire Department
LFD contracts with Dr. Jay Hunter for medical direction in Idaho. Dr. Frank Reiser, employed and directed by the Washington Department of Health, acts as medical director in Asotin County. Dr. Hunter is a board certified physician within the State of Idaho and is an active participant in the quality assurance program of LFD. LFD personnel complete a 100 percent chart review daily as part of the overall QA/QI program, and Dr. Hunter participates in monthly chart reviews of specified incidents. No formal remediation program is in place within LFD and Dr. Hunter; although required to sign off on recertification, Dr. Hunter does not have an active role in initial selection or testing of new personnel.
Emergency Medical Services Master Plan

Capital Assets

Although a well-trained and sufficiently staffed workforce is required to make any system effective, dependable and quality physical resources are necessary for those personnel resources to carry out their task. This section serves as a review of the general distribution and condition of physical assets throughout the Lewis and Clark Valley.

Facilities

Appropriate housing of personnel and apparatus is critical to an organization’s overall effectiveness. Particularly in climates where temperatures and weather conditions can be extreme, proper housing of organizational assets is essential. Facilities must be distributed effectively and contain efficient designs so that equipment and personnel can make an effective response. This includes placing facilities in the appropriate locations, offering design elements that allow for an efficient response of personnel and apparatus and provide spaces that ensure privacy when necessary as well as common areas that are both efficient and comfortable. A brief description of each agency’s facilities is provided below.
Asotin County Fire District 1

ACFD1 maintains a single facility located in ‘The Heights’ just south of the City of Clarkston.

ACFD1’s single station is well-located in the Clarkston Heights area south of the City of Clarkston. The station is staffed during daytime hours with a Chief and Assistant Chief as well as LFD personnel 24 hours per day. The department also schedules duty volunteers to supplement paid staff and to back-fill for multiple incidents. The station was remodeled in 2009 to accommodate LFD personnel and additional staff. Facilities are limited and space is cramped but functional.
**Clarkston Fire Department**

CFD maintains a single facility located very close to the center of the department’s response area.

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**Comments:**

CFD’s single station is well-located in the center of Clarkston, which gives quick access to much of the service demand within the primary service area. The station has been remodeled several times to accommodate staffing and staff facilities. Staff quarters are located upstairs with no secondary means of egress. Apparatus areas are sufficient but staff areas are cramped. A current remodel project is underway that will expand staff areas and develop a room dedicated to training and adds a second set of egress stairs from the second floor quarters.
**Lewiston Fire Department**

LFD maintains three facilities plus an administrative office building throughout the City of Lewiston.

<table>
<thead>
<tr>
<th>LFD Station 1</th>
<th>300 13th Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built 1964</td>
<td>4 double-deep drive-thru apparatus bays</td>
</tr>
<tr>
<td><strong>Owned by:</strong> City of Lewiston</td>
<td></td>
</tr>
<tr>
<td><strong>Condition:</strong> Acceptable for current use</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:** LFD Station 1 is located centrally within the City of Lewiston’s primary business district. Two buildings actually occupy the property, with administration located in a building adjacent to the primary station. The facility is adequately sized for current operations and provides for comfortable staff quarters.

<table>
<thead>
<tr>
<th>LFD Station 2</th>
<th>1533 Grelle Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built 1992</td>
<td>2 double-deep apparatus bays</td>
</tr>
<tr>
<td><strong>Owned by:</strong> City of Lewiston</td>
<td></td>
</tr>
<tr>
<td><strong>Condition:</strong> Acceptable for current use</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:** LFD Station 2 is located on the east side of the city in a predominantly residential area. The department houses both an engine and an ambulance and can respond back into the central core of the city if necessary. The facility is marginally adequate in size for current use and has little room for expansion.
| **LFD Station 4**  
| **424 Burrell Avenue**  
| **Built 1974**  
| **2 double-deep drive-thru apparatus bays**  

**Owned by:** City of Lewiston  
**Condition:** Acceptable for current use

**Comments:**  
LFD Station 4 is located on the south side of the city and serves a predominantly residential area as well as the Nez Perce County airport. The facility houses both an engine and ambulance that is jump-staffed based on incident; it is limited in terms of staff facilities based on the age of the structure. Although adequate for current use, there is limited room for expansion.
MedCor

MedCor maintains a single facility located within the Clearwater Paper Corporation industrial site.

| MedCor
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Built</strong></td>
</tr>
<tr>
<td><strong>4 double-deep drive-thru apparatus bays</strong></td>
</tr>
<tr>
<td><strong>Owned by:</strong> Clearwater Paper Corporation</td>
</tr>
<tr>
<td><strong>Condition:</strong> Acceptable for current use</td>
</tr>
</tbody>
</table>

**Comments:**

MedCor’s fire station is located near the main entrance to the Clearwater Paper Corporation complex. The facility is adequately sized for current operations and has an extremely generous space for apparatus and staffing.
Apparatus and Vehicles

Apparatus and vehicles are the means by which personnel respond to emergency and non-emergency incidents. Vehicles that are unreliable pose a threat to the agency’s ability to provide effective and efficient service. Departments must ensure that the organization maintains a fleet of sufficient vehicles and apparatus to meet the demands of their respective community while also ensuring sufficient maintenance and upkeep to provide for the most efficient lifespan of the vehicle. This section evaluates the primary medical response vehicles in use within the current system. Note that not all department apparatus are identified but rather focus is applied to those pieces of equipment that are likely to be involved in emergency medical primary response.

Asotin County Fire District 1

ACFD1 maintains a fleet of three transport-capable ambulances and one Engine licensed as an aid car. The following figure is a summary of those assets.

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Year</th>
<th>Make/Model</th>
<th>Mileage</th>
<th>General Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>M61</td>
<td>2002</td>
<td>Ford/Horton</td>
<td>65,000</td>
<td>Good</td>
<td>BLS Transport</td>
</tr>
<tr>
<td>M62</td>
<td>2003</td>
<td>Ford/Horton</td>
<td>94,000</td>
<td>Good</td>
<td>BLS Transport</td>
</tr>
<tr>
<td>M51</td>
<td>1994</td>
<td>Ford/Lifeline</td>
<td>30,000</td>
<td>Fair</td>
<td>BLS Transport</td>
</tr>
<tr>
<td>E61</td>
<td>2004</td>
<td>Pierce</td>
<td>15,900</td>
<td>Excellent</td>
<td>BLS First Response</td>
</tr>
</tbody>
</table>
Clarkston Fire Department

CFD maintains a fleet of three transport-capable ambulances. The following figure is a summary of those assets.

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Year</th>
<th>Make/Model</th>
<th>Mileage</th>
<th>General Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>M81</td>
<td>2008</td>
<td>Ford/Med Tech</td>
<td>18,846</td>
<td>Excellent</td>
<td>ALS Transport Ambulance</td>
</tr>
<tr>
<td>M82</td>
<td>2002</td>
<td>Ford/Wheeled Coach</td>
<td>49,825</td>
<td>Excellent</td>
<td>ALS Transport Ambulance</td>
</tr>
<tr>
<td>M83</td>
<td>2002</td>
<td>Ford/Wheeled Coach</td>
<td>69,591</td>
<td>Excellent</td>
<td>ALS Transport Ambulance</td>
</tr>
<tr>
<td>R81</td>
<td>2002</td>
<td>Ford</td>
<td>36,556</td>
<td>Good</td>
<td>BLS First Response</td>
</tr>
<tr>
<td>E81</td>
<td>2001</td>
<td>Pierce</td>
<td>19,714</td>
<td>Good</td>
<td>ALS First Response</td>
</tr>
<tr>
<td>E82</td>
<td>1992</td>
<td>Pierce</td>
<td>25,750</td>
<td>Fair</td>
<td>BLS First Response</td>
</tr>
</tbody>
</table>
**Lewiston Fire Department**

LFD maintains a fleet of seven transport-capable ambulances. The following figure provides a summary of those assets.

**Figure 50: LFD EMS Vehicle Summary**

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Year</th>
<th>Make/Model</th>
<th>Mileage</th>
<th>General Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M71</td>
<td>2011</td>
<td>Ford</td>
<td>16,134</td>
<td>Excellent</td>
<td>ALS Transport Ambulance</td>
</tr>
<tr>
<td>M76</td>
<td>2004</td>
<td>Ford</td>
<td>65,130</td>
<td>Good</td>
<td>Spare Transport Ambulance</td>
</tr>
<tr>
<td>M77</td>
<td>2003</td>
<td>Ford</td>
<td>119,435</td>
<td>Fair</td>
<td>Spare Transport Ambulance</td>
</tr>
<tr>
<td>E71</td>
<td>1998</td>
<td>HME</td>
<td></td>
<td>Good</td>
<td>ILS First Response</td>
</tr>
<tr>
<td>R71</td>
<td>1999</td>
<td>Pierce</td>
<td>56,582</td>
<td>Good</td>
<td>ILS Rescue</td>
</tr>
<tr>
<td>Station 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M72</td>
<td>2008</td>
<td>Ford</td>
<td>6,988</td>
<td>Good</td>
<td>ALS Transport Ambulance</td>
</tr>
<tr>
<td>M75</td>
<td>2008</td>
<td>Ford</td>
<td>71,297</td>
<td>Good</td>
<td>Spare Transport Ambulance</td>
</tr>
<tr>
<td>E72</td>
<td>2006</td>
<td>Pierce</td>
<td>39,644</td>
<td>Good</td>
<td>ILS First Response</td>
</tr>
<tr>
<td>Station 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M74</td>
<td>2006</td>
<td>Ford</td>
<td>69,220</td>
<td>Good</td>
<td>ALS Transport Ambulance</td>
</tr>
<tr>
<td>E74</td>
<td>2006</td>
<td>Pierce</td>
<td>32,708</td>
<td>Good</td>
<td>ILS First Response</td>
</tr>
<tr>
<td>ACFD1 Station</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M73</td>
<td>2009</td>
<td>Ford</td>
<td>3,292</td>
<td>Excellent</td>
<td>ALS Transport Ambulance</td>
</tr>
</tbody>
</table>
MedCor

MedCor maintains a single transport-capable ambulance. The following figure provides a general description of that asset.

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Year</th>
<th>Make/Model</th>
<th>General Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>M91</td>
<td>1996</td>
<td>Ford/Wheeled Coach</td>
<td>Good</td>
<td>BLS Transport Ambulance</td>
</tr>
<tr>
<td>E92</td>
<td>1993</td>
<td>GMC</td>
<td>Good</td>
<td>BLS First Response</td>
</tr>
</tbody>
</table>

Regional Information

Unlike the fire service, there is no ‘Standards of Cover’ in place for EMS system whereby a national standard suggests the appropriate number of facilities and/or vehicles to serve specific areas. In the fire service, the Insurance Services Office (ISO) or similar state regulated rating agencies dictate how fire stations should be distributed throughout a given area. This distribution assists insurance companies in determining property insurance rates bases on fire department resources and capabilities. NFPA standards address distribution of physical and personnel resources that are necessary to effectively mitigate fire and medical emergencies and only address EMS when delivered as part of an integrated fire-based EMS system, such as in the Lewis and Clark Valley.

NFPA 1710 states that the deployment of EMS resources be such that a first responder unit (regardless of level) be able to arrive on the scene of an emergency in four minutes or less and that advanced life support resources arrive in eight minutes or less, where this service is also provided by the fire department. Both of these objectives are based on a 90\textsuperscript{th} percentile measure. The United States Fire Administration publishes a report each year detailing how various departments around the country are resourced, including such measures as stations per 1,000 population, engines per 1,000 population, and aerial devices per 1,000 population. This report is based on a survey of fire departments across the country and should only be used as a
benchmark by which to compare departments serving similar populations; it should not be considered a standard or industry best practice.

What the report does not detail is the number of ambulances per 1,000 population or per square mile. Although historically, anecdotal information has suggested that a benchmark should be established that deployed one ambulance per 10,000 population, there is no scientific data to support this recommendation. When drawing comparisons between the provision of fire suppression services and emergency medical services, what must remain in perspective is that fire risk is relatively static while emergency medical risk is dynamic. Fire departments protect physical structures and the risk of that structure rarely changes. Conversely, however, emergency medical risk is dependent upon human activity. An office building that is empty at night poses little risk but, when filled with workers during business hours, the medical risk (as well as the fire risk) increases. In other words, vacant property cannot produce a medical risk.

Nonetheless, ESCI felt it worthwhile to present information related to the deployment of physical resources throughout the Lewis and Clark Valley. The figure below illustrates how physical resources are deployed based on population.

**Figure 52: Comparison of Ambulances per 10,000 Population**
The figure above shows that CFD has deployed 1.394 staffed ambulances per 10,000 population while LFD has deployed 0.558 ambulances per 10,000 population. This graphic only accounts for the ambulances that are staffed while each department is at minimum staffing and, for Lewiston, includes all areas serviced in both Nez Perce and Asotin counties. Since large areas of both Nez Perce and Asotin counties are extremely rural or wilderness in nature and population density, ESCI felt that presenting a comparison of resources per square mile would not be effective.
Service Delivery and Performance

The delivery of emergency medical services by any organization is no more effective than the sum of its parts. It requires efficient notification of an emergency, rapid response from well-located facilities in appropriate vehicles, and sufficient, well-trained staff following a well-practiced plan of action. This section of the study evaluates these various components and provides observations of the elements that make up the delivery of the most critical core services provided within the Lewis and Clark Valley.

Communications and Dispatch Capabilities

Three primary communications centers, or Public Safety Answering Points (PSAP), are active within the region: Nez Perce County, Lewiston PD, and Whitcom. All three serve as PSAPs for specific geographic areas. Requests through the 9-1-1 system within Nez Perce County, excluding the city limits of Lewiston, are answered by the communications center located at the Nez Perce County Sheriff’s Office. If the request is for EMS, the call is processed, Emergency Medical Dispatch (EMD) protocols are followed, and the appropriate QRU is dispatched dependent upon area, then LPD is contacted for dispatching of the transport unit. Although worth mentioning as one component of the overall system in place within the region, no specific analysis was conducted on the operations of the Nez Perce County communications center.

Lewiston Police Department Communications Center

Lewiston PD serves as the PSAP for the entirety of the City of Lewiston in regard to all requests through the 9-1-1 system. Calls received by LPD that specifically request EMS resources are processed and dispatched by certified Emergency Medical Dispatch (EMD) personnel and incidents are tracked using a Spillman® computer aided dispatch (CAD) system. The radio system is Z-Tron and the telephone system is provided by 911 Inc. The center has four dedicated 9-1-1 trunk lines coming into the center along with four business lines and the system is Phase II Wireless 9-1-1 compliant. In addition to those lines, the center has a separate ambulance line and an airport ring-down line.
LPD maintains a minimum staffing of two personnel 24 hours per day (one police dispatcher and one fire/EMS dispatcher) plus one front desk person during daytime hours. The communications center can staff up to four positions but typically only uses a maximum of three at any given time. Personnel work eight-hour shifts on a four-month rotation.

LPD serves as the 9-1-1 backup for Whitcom and LPD’s backup rings to the Emergency Operations Center (EOC) located in the police department. Busy calls ring to business lines when necessary.

**Whitcom**

Whitcom is a consolidated regional dispatch center serving as the PSAP for all of Asotin County (Washington) including the City of Asotin and the City of Clarkston, Whitman County), the City of Pullman, Washington State University, and the City of Moscow (Idaho). Requests received through the 9-1-1 system in the designated areas served by Whitcom that specifically request EMS resources are processed and dispatched by certified EMD personnel within a Spillman® CAD. For the purposes of this study, the jurisdictions of Asotin County (including the City of Asotin and the City of Clarkston) and Whitman County Fire District 14 will be the geographies of focus.

Whitcom maintains a minimum staffing of three personnel during overnight hours and a minimum of four personnel during the day. From 11:00 a.m. to 1:00 p.m. the center is staffed at five personnel as a minimum. The center has a capability to staff ten positions with expansion capability for ten additional positions. Personnel work a variety of shifts based on coverage need. The center has six incoming 9-1-1 trunk lines as well as 12 additional business lines. Although LPD serves as the center’s 9-1-1 backup, Whitcom does not have an off-site dispatch backup in place.

Whitcom’s dispatching of CFD is relatively straightforward since they serve as CFD’s only dispatch agency. Whitcom dispatches and tracks each CFD unit throughout each incident. For LFD, however, these services are a bit more convoluted. Since LFD staffs one EMS unit within
Asotin County at ACFD1’s station, EMS incidents occurring within Asotin County are dispatched by Whitcom and responded to by LFD. Once dispatched, Whitcom has no responsibility to track the LFD unit throughout the remainder of the incident. Instead, when the LFD unit checks en route to the incident, Lewiston PD assumes the responsibility for timekeeping and unit management. This creates a disconnect for EMS incidents occurring within Asotin County (outside the City of Clarkston) in that LPD does not maintain ‘call received’ or ‘call dispatched’ timestamps. Those timestamps are maintained by Whitcom. However, LPD does maintain all other unit times to include ‘en route’, ‘on scene’, ‘transport’, ‘arrival at hospital’ and ‘unit clear’ times. With this disconnect, there is no continuous record of the incident from call receipt to call completion.

Two potential solutions exist to rectify this disconnect: consolidate all dispatching of EMS resources to Whitcom or implement a CAD-to-CAD transfer software interface since both communications centers are using Spillman® software. It is not the intent of this study to evaluate the feasibility of consolidating communications and dispatch into the already established regional center but, from the perspective of EMS resource dispatch, tracking and reporting, implementing a process by which each EMS unit is tracked throughout each incident will serve to enhance the future efficiency of the system as a whole.

**Recommendations:**

- Lewiston should evaluate the potential for transferring all EMS dispatch functions to Whitcom.
- In the absence of transferring EMS dispatch functions to Whitcom, the system should evaluate the potential for implementing a CAD-to-CAD transfer interface between Whitcom and LPD.

**System Demand**

In order to complete this component of service delivery analysis, ESCI was provided with both National Fire Incident Reporting System (NFIRS) from each agency involved and computer-aided dispatch (CAD) data from both Whitcom and Lewiston PD. Given the fact that two primary
communications centers have dispatch responsibilities for LFD resources, a comparison of both datasets was necessary to validate the information.

**Lewiston Fire Department**

LFD has been providing transport ambulance services throughout the Lewis and Clark Valley since the 1960s. The following figure illustrates the overall EMS workload experienced by LFD over the last three years.

*Figure 53: Historical EMS Workload - LFD*

It is also useful to examine workload temporally in order to determine if resources are being utilized effectively based on certain periods of time. The following figure shows how LFD’s EMS workload is distributed across each month of the year.
This analysis indicates that EMS workload has been historically higher during the spring and summer months as well as slight increases mid-winter. Since EMS workload is a direct result of human activity, this pattern would be expected in an area such as Lewiston. The following figure evaluates workload specific to hour of the day.
EMS workload within the LFD response area begins to increase by 6:00 a.m. and tails off at roughly 8:00 p.m. This trend follows the national workload distribution for fire departments operating transport EMS resources.

In further analyzing the workload for LFD, ESCI evaluated the provided data to determine how well distributed workload was across the available units. The figure above shows the results of that analysis.

The department’s EMS workload is well distributed across the three primary response units. The remaining four units are maintained in reserve status and can be utilized by additional on-duty personnel or by call-back personnel during times of uncommonly high service demand. The following figure illustrates to what types of incidents LFD responded during calendar year 2010.
The figure above is based on the basic Emergency Medical Dispatch categories with some additions based on the method of recordkeeping currently utilized by the department. As illustrated, non-emergency transfers comprise the largest volume of service demand for LFD with ‘sick person’ and ‘fall’ as the next highest categories of response.

When evaluating service demand geographically, it is evident that LFD is responding to EMS incidents throughout the region. The following figure illustrates the 2010 service demand by jurisdiction.
As expected, the majority of the department’s EMS service demand is within Lewiston. At least a portion of those incidents coded as occurring in Clarkston fell within the ACFD1 response area.

**Clarkston Fire Department**

CFD has been providing intermediate life support (ALS) first response services to the City of Clarkston and much of Asotin County since the 1980’s. Beginning January 1, 2010, CFD obtained a transport license from the State of Washington and is licensed as an ILS Aid Car. The following figure illustrates the overall EMS workload experienced by CFD over the last 2.5 years.
Prior to January 1, 2010, CFD responded to incidents in the City of Clarkston as well as much of Asotin County as first responder for transport ambulances responding from Lewiston Fire Department. Implementation of the transport unit within CFD in 2010 resulted in Asotin County contracting with LFD for transport ambulance services, leaving CFD to cover only the area within the city limits of Clarkston. This substantially reduced the department’s workload. Extrapolation of the 2011 partial year data indicates that workload for the current calendar year will be similar to that experienced in 2010.

It is also useful to examine workload temporally in order to determine if resources are being utilized effectively based on certain periods of time. The following figure shows how CFD’s EMS workload is distributed across each month of the year.
This analysis indicates that EMS workload has been historically higher during the winter and spring months, trailing off during late spring and summer through the fall. The following figure evaluates workload specific to hour of the day.
EMS workload within the CFD response area begins to increase by 6:00 a.m. and tails off at roughly 8:00 p.m. This trend follows the national workload distribution for fire departments operating transport EMS resources.

In further analyzing the workload for CFD, ESCI evaluated the provided data to determine how well distributed workload was across the available units. The figure below shows the results of that analysis.

The department’s EMS workload is focused on the primary transport ambulance (M81). Rescue 1 was the first response unit that was used prior to implementing the transport ambulance and, as expected, the workload for that unit has disappeared. The other transport ambulances housed at CFD, M82 and M83, can be staffed by call-back or other available personnel should the need arise. Analysis indicates that those units were staffed a total of 180 times during 2010 and were staffed a total of 120 times between January 1 and May 30, 2011. The following figure illustrates to what types of incidents CFD responded during calendar year 2010.
The figure above is based on the basic Emergency Medical Dispatch categories with some additions based on the method of recordkeeping currently utilized by Whitcom. Additional categories that did not relate to EMS were removed. As illustrated, non-emergency transfers comprise a large volume of service demand for CFD with ‘fall’, ‘breathing problems’, and ‘sick person’ as the highest categories of response.

**Regional Comparisons**

Considering that this study is an EMS system master plan, it is necessary to indicate how each agency compares to the other as well as illustrate where within the region incidents are occurring. The following figure illustrates the total EMS incident history for the region (excluding Culdesac, J&K Ambulance, or other agencies that respond within the region for mutual aid).
Data provided by CFD covered the data period 2009, 2010, and a partial year 2011.

The 2010 decrease in LFD’s EMS workload can be attributed to the fact that CFD began operating an independent transport ambulance on January 1, 2010. The following section provides a more general illustration of EMS service demand density.

**Reliability**

Reliability of resources is a measure of how busy a given unit is in general and, therefore is a measure of how likely the unit will be available for the next incident. One measure of reliability is that of unit hour utilization. Unit Hour Utilization (UHU) is an economic measure developed to measure the efficiency of EMS units. The measure is based on the assumption that each incident occupies one hour of the unit’s time. This, of course, is not the case in reality as some incidents take much less than one hour as some take much more. The one hour average is the industry accepted measure for calculating UHU.

There are several deviations for measuring UHU in that economic efficiency is based on the ability of the unit to bill for a call. Thus, $UHU_t$ is a measure of utilization based on the number of transports a given unit completes during the given time period. Understanding that not all
incidents result in a transport, another measure of utilization based on the total number of incidents is presented as UHU. Still yet, other tasks occupy the time of EMS units in addition to incident response such as unit check-off, cleaning, mechanical failure, fire response (suppression roles), administrative duties, etc. Therefore, UHU is not to be considered a measure of total workload but only that of actual incident activity. The higher the UHU, the busier the unit is.

In most fire-based EMS systems, a UHU of 0.25 to 0.35 is considered typical. There is some evidence to suggest that a UHU of approximately 0.42 represents the optimum utilization for responding to emergency calls, balancing availability, and productivity. Too far above 0.42 and personnel are arguably overworked, and the unit availability is low (i.e., often busy when a call arrives). Too far below 0.42 and the cost-effectiveness of the unit could be questioned. The figure below summarizes the UHU for both CFD and LFD.

![Figure 65: Comparison of UHU, for 2010](image-url)

As illustrated above, each of the active units within the system is at or below the 0.25 to 0.35 range for fire-based EMS units and substantially below the 0.42 UHU referred to as the

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optimum. This suggests that the units within the system currently could absorb at least some level of increased workload without substantially reducing their reliability. This does not, however, take into consideration call concurrency or multiple simultaneous incidents. That analysis was outside the scope of this particular study.

**Concurrency**

Concurrency is a measure of how often simultaneous incidents are occurring within a specific geographical area or primary response territory. When simultaneous incidents occur, units from adjacent response territories must respond out of their primary area. Multiple simultaneous incidents will cause a domino effect throughout the entire system as resources are depleted. As concurrency increases, the availability of resources throughout the region decreases.

It is important to analyze the effect of concurrency on current resources to determine if those resources are sufficient to handle the concurrent workload occurring within the system. The following figure provides the concurrency analysis of both CFD and LFD resources from an EMS perspective.

<table>
<thead>
<tr>
<th>Concurrency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.21%</td>
</tr>
<tr>
<td>2</td>
<td>33.92%</td>
</tr>
<tr>
<td>3</td>
<td>15.75%</td>
</tr>
<tr>
<td>4</td>
<td>5.87%</td>
</tr>
<tr>
<td>5</td>
<td>1.67%</td>
</tr>
<tr>
<td>6</td>
<td>0.44%</td>
</tr>
<tr>
<td>7</td>
<td>0.11%</td>
</tr>
<tr>
<td>8</td>
<td>0.02%</td>
</tr>
<tr>
<td>9</td>
<td>0.01%</td>
</tr>
<tr>
<td>10</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

The concurrency analysis indicates that 91.9 percent of all incidents occurring within the region can be handled by three units (three concurrent incidents).
Resource Distribution

Resource distribution is a term used to identify how physical resources are distributed throughout a given response area, particularly in relation to service demand and established response performance objectives. This section of the report evaluates how well physical resources are distributed throughout the study area and will be used to evaluate future service delivery strategies in subsequent sections.

Lewiston Fire Department

LFD provides service from three static locations within the City of Lewiston. The following maps illustrate the department’s travel time capabilities from each of these facilities based on four, six, and eight minutes of travel.

Figure 67: LFD Station 1 Travel Time Capability
From LFD Station 1, the department can reach a large portion of the populated areas within eight minutes of travel.

Responses from LFD Station 2 can cover those areas outside the eight-minute travel from Station 1 while providing limited overlap into the downtown core of Lewiston.
LFD Station 4 can reach nearly all areas within Lewiston within the eight-minute travel model and provides limited overlap between Stations 1 and 2 based on the four-minute travel model.
The following figure shows that the four-minute travel model from ACFD1’s station provides excellent coverage throughout the general area but also shows that coverage of the City of Clarkston from this facility falls within the six and eight-minute travel models.

Figure 70: LFD/ACFD1 Travel Time Capability
Clarkston Fire Department

CFD provides service from a centrally located facility within the City of Clarkston. Based on the central location of the facility, coverage from this location is very good as illustrated in the following figure.

Figure 71: CFD Travel Time Capability

CFD can reach the entirety of the City of Clarkston within four minutes of travel without significant overlap with LFD or ACFD1 areas within the four-minute travel model.

City of Asotin

Although the City of Asotin does not currently provide EMS transport services, an agreement with ACFD1 has been entered into that provides for BLS first response from the City of Asotin.
Fire Department facility to supplement the ALS response from ACFD1’s station by a LFD unit. The following figure illustrates the travel time capability from the AFD facility.

Figure 72: City of Asotin Travel Time Capability

The placement of BLS resources within the AFD station is advantageous to the system as a whole since previous travel time models exclude the City of Asotin as well as the developed areas along the Snake River within eight minutes of travel from any other facility.

**Regional Comparisons**

When building comparisons in distribution, it is critical to establish a mechanism whereby each agency is compared equally. Within the Lewis and Clark Valley, the areas and populations served by the two transport providers are vastly different. For instance, CFD serves a population of 7,229 within two square miles with one staffed ambulance and two in reserve.
These values produce ratios of one staffed ambulance to every 7,229 people or one potentially available ambulance for every 2,410 people. Additionally, there is a ratio of one staffed ambulance for every two square miles and a ratio of one potentially available ambulance per 0.666 square miles.

Likewise, for LFD those same ratios would equate to one staffed ambulance for every 19,666 people and one potentially available ambulance for every 8,428 people as well as one staffed ambulance for every 567 square miles and one potentially available ambulance for every 242 square miles.

Although these comparison show that CFD’s overall distribution of ambulances (both staffed and potentially available) is very different than LFD’s, the population density of the area covered, as well as the geographic service demand density and unit utilization as discussed previously, must be taken into consideration.

**Response Performance**

Total response time is the amount of time a resident or business waited until a unit arrived at the scene of an emergency beginning when they first called 9-1-1. This section illustrates the response time frequency for each agency over the three-year period January 2008 through December 2010.48

Based on the information presented in this section of the report, it appears that the system as a whole is functioning well below national standards in regard to response performance. This may, however, not be the case. As mentioned at the beginning of this section, data analysis was conducted under the caveat that actual timestamps for call receipt and dispatch were manipulated such that each incident had all the necessary timestamps. The potential for inaccuracy in data collection, recording, and reporting is extremely high. Additionally the dispatching and tracking of all units (including Police, Fire, and EMS) may cause individual

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48 Mutual aid calls, non-emergent calls, and interfacility transfers were removed from response time analyses as they were found.
workload to be such that times are entered well after the actual element occurred. For example, if a dispatcher is busy with another incident and a unit checks en route or on the scene of an incident, that dispatcher may either not hear the radio traffic or not be able to immediately enter that information. This would produce unusually high en route and overall response times.

One method to combat this issue is the implementation of mobile data terminals with unit status buttons. This type of system would link electronically with the CAD system and allow field units to ‘check’ themselves en route, on scene, en route to the hospital, out at a hospital, or back in service without the need for the dispatcher to manually enter that information. A number of vendors supply this type of system, including Spillman® with the implementation of the Mobile Office: Voiceless CAD™ module.

**Average vs. Fractile Performance Measures**

Throughout this document, certain descriptive statistical measures are utilized which may not be familiar to all readers. In an effort to reduce confusion or the drawing of inaccurate conclusions, this section seeks to provide a brief explanation of these measures. The measures most often used which require clarification are the use of “average” and “percentile” measures.

**Average**

The ‘average’ measure is a commonly used descriptive statistic also called the mean of a data set. It is a measure which is a way to describe the central tendency, or the center of a data set. The average is the sum of all the points of data in a set divided by the total number of data points. In this measurement, each data point is counted and the value of each data point has an impact on the overall performance. Averages should be viewed with a certain amount of caution because the average measure can be skewed if an unusual data point, known as an outlier, is present within the data set. Depending on the sample size of the data set, this skewing can be either very large or very small.
As an example, assume that a particular fire station with a response time objective of six minutes or less had five calls on a particular day. If four of the calls had a response time of 8 minutes while the other call was across the street and only a few seconds away, the average would indicate the station was achieving its performance goal. However, four of the five calls, or 80 percent, were beyond the stated response time performance objective.

The opposite can also be true where one call with an unusually long response time can make otherwise satisfactory performance appear unacceptable. These calls with unusually short or long response time have a direct impact on the total performance measurements and the farther they are from the desired performance, the greater the impact.

The reason we do compute the average is because of its common use and ease of understanding that is associated with it. The most important reason for not using averages for performance standards is that it does not accurately reflect the performance for the entire data set. As illustrated above, one extremely good or bad call skewed the entire average. While it does reflect all values, it does not really speak to the level of accomplishment in a strong manner.

**Percentile**

With the average measure, it is recognized that some data points are below the average and some are above the average. The same is true for a median measure which simply arranges the data set in order and finds the value in which 50% of the data points are below the median and the other half are above the median value. This is also called the 50th percentile.

When you deal with percentages, the actual value of the individual data does not have the same impact as it did in the average. The reason for this is that the fractile is nothing more than the ranking of the data set. The 90th percentile means that 10 percent of the data is greater than the value stated and all other data is at or below this level.
Higher fractile measurements are normally used for performance objectives and performance measurement because they show that the large majority of the data set has achieved a particular level of performance. This can then be compared to the desired performance objective to determine the degree of success in achieving the goal.

**Lewiston Fire Department**

The data provided by LPD for this analysis must be presented with certain caveats. The fact that LFD units are dispatched by two separate communications centers (LPD and Whitcom) creates a situation where certain times are not captured by both centers. As discussed previously, Whitcom dispatches the LFD unit stationed within the ACFD1 facility and then tracking of that unit transfers to LPD, thus no call receipt or accurate dispatch times are captured by LPD. To this end, the call processing and turnout times for LFD had to be manipulated to generate times for each incident. For example, for incidents where no call receipt or dispatch times were recorded within the dataset, the first time entered was utilized for both missing timestamps. This type of manipulation will cause a certain amount of skewing of the data. The following figure illustrates both the average and 95\textsuperscript{th} percentile\textsuperscript{49} call processing times for the January 2008 to December 2010 data period.

\textsuperscript{49} The 95\textsuperscript{th} percentile is used for this analysis in accordance with *NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*. 
The average call processing time was calculated at 2:56 (2 minutes 56 seconds) for 2010 with a 95th percentile measured at 3:26. For the purposes of this analysis, no incidents were removed from the dataset. This allows for a true representation of the overall call processing time for incidents without the LPD communications center. NFPA 1221 recommends that incidents be dispatched within 60 seconds of call receipt when measured at the 95th percentile. LPD is missing this mark by more than two minutes. The following figure illustrates how call processing time varies by hour of the day.
Call processing times with the LPD communications center are relatively stable throughout all hours of the day with only slight variations during the overnight hours primarily.

Turnout time is the period of time between when a unit is dispatched and when the unit is actually en route to the incident. The following figure represents LFD’s turnout time over the last three full years of data.
For 2010, LFD’s turnout time for emergency incidents was calculated to be 2:22 with a 90th percentile turnout time of 4:00. **NFPA 1710** recommends that fire departments be en route to EMS incidents within 60 seconds of dispatch. LFD is missing this mark by more than three minutes. The following figure illustrates how the department’s turnout time varies by time of day.
Both average and 90th percentile turnout times are longer during the overnight hours but are longer than recommended turnout times throughout every hour of the day. This suggests that the department should make adjustments to policies that govern response turnout and perhaps begin tracking and posting turnout times to encourage friendly competition between shifts or even between stations. The following figures analyze overall response performance over the previous three years. Overall response includes the time between when the unit is dispatched and when the unit arrives on the scene of the incident.
The most frequently recorded response time for EMS incidents is within the fifth minute while the average for 2010 calculated to 7:46 with 90 percent of all incidents being responded to in 14:42 or less throughout the entire region. However, when analyzed separately, LFD is able to respond to incidents within the City of Lewiston within 8:04 on average or 10:50 when measured at the 90th percentile. NFPA 1710 recommends that fire departments respond to all
emergency incidents within a total response time of six minutes of less when measured at the 90th percentile. LFD is missing this mark by over eight minutes. The following figure illustrates how overall response time varies by hour of the day.

**Figure 79: Response Time by Hour - LFD**

LFD’s overall response time varies throughout each hour of the day with some of the longest response times during the mid-day hours based on the 90th percentile. Assessing the average overall response time indicates that response times are longer during the overnight hours. Variations such as this could be caused by increased workload that creates incident concurrency (multiple simultaneous incidents), traffic issues, or other issues that slow response.

**Clarkston Fire Department**

Clarkston Fire Department is dispatched by Whitcom Regional Communications and Dispatch Center. Whitcom provided unit level incident data for calendar years 2009, 2010, and January 1 through May 30, 2011. Although CFD is dispatched by a single communications center, the data
provided indicated that several critical timestamps were being omitted. As discussed previously, the response time continuum begins when a call is answered in the PSAP, continues through call processing, dispatch of resources, and response by appropriate units to the arrival of those units on the incident scene. The data provided by Whitcom, although comprehensive, did not include call receipt time. Thus, call processing time (call receipt to unit dispatch) could not be determined as was the case with LFD’s dispatch data.

Additionally, 631 incidents did not include ‘dispatch’ time. These incidents were removed from the overall analysis in order to more accurately calculate turnout and overall response time. Another 523 incidents records did not include ‘en route’ time but some of these instances could have been the result of incident cancellations prior to any units going en route. These incidents were removed prior to turnout and response time analyses. Other instances of missing timestamps were also removed so as not to skew the analysis.

Turnout time is the period of time between when a unit is dispatched and when the unit is actually en route to the incident. The following figure represents CFD’s turnout time over the last three full years of data.
For 2010, CFD’s turnout time for emergency incidents was calculated to be 55 seconds with a 90th percentile turnout time of 2:00. NFPA 1710 recommends that fire departments be en route to EMS incidents within 60 seconds of dispatch. CFD is missing the recommended response performance measure by one minute when measured at the 90th percentile. The following figure illustrates how the department’s turnout time varies by time of day.
Both average and 90th percentile turnout times are generally longer during the overnight hours. This suggests that the department should make adjustments to policies that govern response turnout and perhaps begin tracking and posting turnout times to encourage friendly competition between shifts. The following figures analyze overall response performance over the dataset provided. Overall response includes the time between when the unit is dispatched and when the unit arrives on the scene of the incident.
The most frequently recorded response time for EMS incidents is within the fourth minute while the average for 2010 calculated to 3:30 with 90 percent of all incidents being responded to in 6:00 or less. NFPA 1710 recommends that fire departments respond to all emergency incidents within a total response time of six minutes of less when measured at the 90th.
percentile. CFD is meeting this recommended performance objective. The following figure illustrates how overall response time varies by hour of the day.

**Figure 84: Response Time by Hour - CFD**

CFD’s overall response time varies throughout each hour of the day with some of the longest response times during the overnight hours based on both the average and 90th percentile measurements. The department should evaluate station conditions that might be slowing response during the overnight hours such as location of crew quarters and personal hygiene facility adequacy.
Regional Summary

The following figure is provided as a summary of the information presented above and compares actual agency performance against the appropriate national standard as defined by NFPA.

Figure 85: Response Performance Summary - 2010

<table>
<thead>
<tr>
<th></th>
<th>Call Processing</th>
<th>Turnout</th>
<th>Overall Response 90th %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarkston FD</td>
<td>N/A</td>
<td>2:00</td>
<td>6:00</td>
</tr>
<tr>
<td>Lewiston FD</td>
<td>N/A</td>
<td>4:00</td>
<td>14:42 (10:05 in city)</td>
</tr>
<tr>
<td>Lewiston PD</td>
<td>3:26</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Whitcom</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NFPA 1221 Standard</td>
<td>0:60</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NFPA 1710 Standard</td>
<td>N/A</td>
<td>0:60</td>
<td>6:00</td>
</tr>
</tbody>
</table>

Recommendations:

- The City of Lewiston should investigate the possibility of implementing a system whereby field units can enter individual unit times without dispatcher interaction.
- The region should consider implementing a CAD-to-CAD interface that allows Whitcom to transfer incident data to LPD for improved consistency in data recording, tracking, and reporting.
Section II – Future System Demand Projections

Previous sections of this report have provided an overall evaluation of the participating providers of EMS within the region. A master plan, however, is intended to look as much as 20 years into the future and offer strategies to meet the projected future service demand by identifying potential relocated or additional facilities, alteration of personnel deployment, and relocation or additional response vehicles. This section of the report evaluated population and history and uses a mathematical formula based on a calculated usage rate to project future service demand based on population and demographic changes within the region.

Population Growth Projections

Population growth projections can come from a variety of resources including the U.S. Census Bureau and local or regional planning consortiums. For the Lewis and Clark Valley, ESCI researched population history and growth projections from all available resources. The results of that research are provided below.

Population History

According to the 2010 U.S. Census, the population for the entire service area, including all of Asotin and Nez Perce counties and the Cities of Asotin, Clarkston and Lewiston, equals 60,888. The average annual population growth rate this decade has been 0.2 percent across the region with Asotin County seeing a 0.1 percent rate of growth while Nez Perce County saw a 0.3 percent rate of growth. Overall the growth rate has fluctuated between -0.1 and 0.4 percent as illustrated in the following figure.
How this population is composed by age group can have a significant effect upon EMS services. The following chart distributes the population into age groups based on available U.S. Census information.
Approximately 18 percent of the population is 65 years of age or older and 6 percent of the population is under five years of age, placing a total of 24 percent of the area’s population within the significant target age groups that pose the highest risk for fatalities in residential fire incidents and pose the highest likelihood of utilizing emergency medical services.

The following chart examines the housing by occupancy types in the area. Numerous rentals and vacancies can signal negative economic conditions, which correlate with higher rates of emergency incidents.
The high level of owner-occupied housing indicates a stable economic environment that would attract higher income wage earners and could result in a lower per capita emergency services usage rate than those areas that are experiencing depressed economic conditions.

**Population Growth Projections**

The U.S. Census Bureau uses a linear projection model to estimate future population based on historical decennial census counts and annual population estimates. In contrast, local development organizations utilize historic trends to project future population estimates. Nez Perce County prepares population projections through the year 2020 using several alternative projections methodologies and only provides estimates within the community’s comprehensive plan for the years 2000, 2005, 2010, and 2020 with a population total in 2020 ranging between 37,586 and 46,367 based on method used.
The Washington Office of Financial Management publishes population projections for growth management. This publication, updated in 2007, provides historical and projected county population growth on five-year intervals through 2030. For the purposes of this report, ESCI has evaluated each of the population projection sources of data and constructed an overall regional population projection based on that information. The figure below illustrates both of these population projections through the year 2030.

Based on the figure above, regional estimates have population potentially reaching as much as 68,000 by the year 2030.

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Service Demand Projections

In evaluating the deployment of facilities, resources, and staffing, it is imperative that consideration be given to potential changes in workload that could directly affect such deployment. Any changes in service demand can require changes and adjustments in the deployment of staff and resources in order to maintain acceptable levels of performance.

For this study, ESCI utilized population projections as discussed previously and multiplied these by a forecast incident rate derived from a five-year history of incident per capita rates to identify workload potential through the year 2030. The results of the analysis are shown in the following figure.

Figure 90: Projected Regional Service Demand

Based on the forecast per capita usage rate, the system as a whole should see service demand increase over the next two decades - likely reaching over 8,500 EMS incidents annually by the year 2030.
Section III – Future Delivery System Models

The information contained in this report provides an in-depth analysis of the EMS system providing service to the citizens of Asotin County, Washington, and Nez Perce County, Idaho. In the evaluation section, ESCI described the findings and provided a review of conditions or issues that require the attention of the organizations. In many cases, these issues require relatively short-term effort or corrective action.

A master plan, however, is intended to provide strategies that are long term in nature. Its purpose is to identify the most critical issues the agency will face over the long haul, projected out as much as 20 years in the future. ESCI initiated that process in the previous section with a review of community growth, identified risks, and evaluated service demands. Now, the information collected, as well as the evaluation of future service demand, will be used to provide a recommended long-term strategy for the growth and development of a healthy EMS system, capable of providing the services that are valued most by the community in the most efficient and effective manner.

Development of Deployment Plan

ESCI has evaluated the EMS system within the Lewis and Clark Valley as just that—an EMS system. The initiatives undertaken to develop a high-quality, integrated, emergency medical system require all participants to set aside personal viewpoints in an effort to grow and enhance this vital community program.

As the system continues to mature, pressures have emerged that require modification to the current system design. As such, these recommendations do not fundamentally change the vision for the current system or the foundation of its structure. Rather, ESCI’s recommendations are designed to:

1) Provide for an appropriate governance structure to oversee the provision of EMS throughout the entire system.

2) Enhance the operational efficiency of what is already in place.
3) Ensure that those charged with system oversight can monitor the system’s performance over time.

4) Provide for appropriate planning so that backup systems and surge capacity exist to protect providers and citizens.

Once these are accomplished, the individual providers, regardless of level of service delivered, can be confident that the provision of EMS in the region remains a quality, valued and efficient public service.

Any changes to the system in the absence of establishing an appropriate governance structure will lead to substandard performance, reduced provider safety, and degraded patient outcomes. The current governance structure is fractured in that there is little coordination between the primary care providers, Lewiston Fire Department and Clarkston Fire Department. The governance structure therefore should include a comprehensive oversight mechanism with real authority to ensure that patient-centered performance standards exist and that appropriate system efficiencies are imbedded in the system design.

The current performance structure limits the ability of system participants to improve performance. That is why ESCI believes that economic, financial, response time, and medical performance criteria must be carefully monitored. For the purposes of this report, both cities should consider how each of the recommendations will affect the current system and how those changes will affect patient care. However, they must also consider the difficulties in monitoring and evaluating the system once the changes are made. The strategic recommendations, their descriptions, and their primary system impacts are described more fully below.

If one or both of the cities elect not to pursue the master plan recommendations established herein, the system will remain with the status quo. The “status quo” assumes that the City of Lewiston will continue as the primary EMS provider for all of Nez Perce County, Idaho, and all of Asotin County, Washington, outside the City of Clarkston. Simultaneously, the City of Clarkston
will continue to provide service singularly within the municipal boundaries and contracted areas along the Snake River. However, “status quo” is probably a misnomer. It is not possible in the long term to support the current inefficient structure of the system when the local ambulance demands for revenue increases exceed the system’s ability to support those demands. As such, ESCI does not believe that the status quo is sustainable.

The status quo will most likely require that additional resources be applied to the system so that response times and accountability can be improved as the system continues to witness increased demand as the community grows. It will also require that significant adjustments occur in ratepayer and taxpayer subsidies to account for the additional costs the system will incur, particularly in Clarkston with its limited response area.

The model that is currently employed in the system is fractured in that there is no comprehensive system oversight, there is no structured system planning, there is no method of ensuring performance criteria or standards, and there is limited collaboration between the entities providing service. The system should be structured toward a more fully integrated EMS system design, operating for the best interest of the larger community and utilizing all response agencies to the greatest extent possible.

ESCI’s patient-centric design recommendations are intended to ensure that the patient receives coordinated services from first response to ambulance transport—high quality medical care throughout the incident until arrival at the hospital or tertiary care facility. This continuity provides EMS systems with better tracking of quality assurance issues. In adopting these recommendations, the system should be able to ensure that all scene responders are integrated into an appropriate incident command system and that the on-scene resources are centrally coordinated.

That means that the system administrators must carefully balance multiple independent agencies and assist them in functioning as if they are one. Convincing agencies to surrender
some of their autonomy in favor of the benefits of a larger system is no small task. However, given the commitment that the fire agencies and elected officials have shown to date, ESCI believes that there are opportunities to continue to develop the current system and to make improvements.

Assuming that both cities implement some or all of the master plan improvements listed below, each agency must continue to coordinate its levels of first response.

**Identification of Critical Issues**

In evaluating the potential changes to the system, EMS participants should consider how critical issues will affect the current system and how changes to address those issues will affect patient care. As has been previously noted, any changes to the system in the absence of establishing performance criteria will limit the ability of the system participants to make substantive improvements. The following critical issues have been identifies as priorities.

**Critical Issue 1. Fragmentation and inefficiency of current EMS delivery system**

The Institute of Medicine reports that even though states largely consider emergency medical services an essential government service, EMS systems have not received the same level of support as other services deemed a public necessity. A report issued by the Office of Performance Evaluations for the Idaho Legislature states that EMS system problems such as absence of a collaborative framework, inconsistent levels of emergency response, conflicting medical direction, and funding disputes limit the ability of Idaho’s EMS agencies to deliver optimal patient care.

Over the past two years, the Cities of Lewiston and Clarkston have moved separately regarding the delivery of emergency medical services to their respective communities. To a certain degree, the fact the each city is located in a different state may play a part

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in this critical issue. Although both Idaho and Washington allow counties to levy a tax for the provision of emergency medical services, only Asotin County, Washington, has chosen to do so. The EMS system within Nez Perce County, Idaho, is funded solely from the general fund, user fees, and contracts for service.

RCW 84.52.069(5) states that,

*Any tax imposed [regarding EMS levies] shall be used only for the provision of emergency medical care or emergency medical services, including related personnel costs, training for such personnel, and related equipment, supplies, vehicles and structures needed for the provision of emergency medical care or emergency medical services.*

Although the intent of this study is not to evaluate the legality of the use of tax dollars, it would appear that the City of Clarkston is, in part, funding its fire suppression system with funds dedicated to emergency medical services. While it is true that personnel are staffing the CFD station and functioning in EMS roles when called to do so, the potential exists that those same personnel would be called to the Clearwater Paper Corporation complex to provide contracted mutual aid services, thereby potentially removing all EMS components from the Clarkston primary response area.

The statute does not specifically address how agencies utilize the EMS funds and does not strictly prohibit organizations from using cross-trained personnel on cross-staffed units. One could argue that since EMS comprises a vast majority of all fire department workload in the current environment, personnel are dedicated to EMS and have ancillary duties for fire suppression only when necessary.

Idaho Code §31-3901 allows Idaho counties to levy a property tax to establish an ambulance service fund intended to fund the EMS function within counties. Idaho Code §31-3908(4) allows a county to establish an ambulance service district to fund EMS services. As of 2010, 24 Idaho counties (54.5 percent) had established ambulance service districts and 11 counties (25.0 percent) used an ambulance service fund to meet
the funding requirements of their respective EMS systems. Nine counties (20.4 percent) utilize neither an ambulance fund nor ambulance service district for EMS funding. Although LFD is currently dedicating staff to transport ambulances separately from fire suppression apparatus, involved structure fires would result in all personnel participating in suppression activities.

An EMS ‘system’ is an organized delivery of pre-hospital services that ensures appropriate and timely responses to medical emergencies within a geographical area by adequately trained responders. The system can be operated by a single entity or can be an integrated group of independent entities working for the greater good of the community or communities receiving the services. Common components of successful EMS systems include:

- Uniform medical oversight
- Standardized accountability
- Data-driven quality assurance and improvement
- Sufficient funding based on community expectations
- An appropriate delivery of care

The current EMS system within the Lewis and Clark Valley is lacking four of the five essential components. Although the level of care currently delivered within the region is at the paramedic level, a more efficient use of those resources could be accomplished based on newly published research.
Critical Issue 2.  EMS service delivery conflicts and challenges

Currently, CFD is a trauma-verified aid provider through the State of Washington, while LFD is a trauma-verified transport provider. What this essentially means is that for every trauma incident dispatched within the CFD primary response area, LFD is also dispatched for transport services. During the data period evaluated for this project, LFD was dispatched to approximately 160 incidents within the City of Clarkston but ESCI was unable to determine how many of this total actually resulted in a transport. These incidents were due to the difference in trauma verification.

In addition, the angst that exists between the two EMS providers has expanded to include fire protection. Although this study is not an evaluation of the fire suppression delivery system within Asotin and Nez Perce Counties, the fact that EMS is an integrated component of the fire system within the area suggests that there is some collateral damage that is incurred by the system as a whole due to the differences between EMS operations. The result is further fragmentation of a system that is already suffering for resources.

Critical Issue 3.  Potential inability to maintain adequate staffing

While CFD maintains that it is able to staff three ambulances, this is only true when personnel are available. At minimum staffing (three personnel), CFD is only able to deploy one transport ambulance. Although the occurrence of multiple simultaneous calls is low and the department does have the ability to call back full-time personnel as well as request volunteers for addition support, there is no guarantee that these additional personnel will be available. Historically, this has not been an issue as concurrent incident rates are low within the CFD primary response area but should be considered as time progresses.
Critical Issue 4. Lack of Coordinated Oversight

Although LFD is based in Idaho while CFD in Washington, an issue that will require at least some level of separate governance regardless of future system implementation, the agencies delivering services on both sides of the river should be able to function under a common set of medical protocols and operational guidelines. While all LFD personnel are currently licensed to operate within the State of Washington, few CFD personnel are credentialed in the State of Idaho, which would hamper any future attempts at total consolidation of the system.

Currently, LFD contracts with a physician for Idaho and utilizes the same physician ACFD1 and CFD use under the direction of Washington Department of Health. Oddly enough, however, the same physician that serves CFD also serves ACFD1, which houses and supplements an LFD transport ambulance. A third physician serves as medical director for Clearwater Paper Corporation.

CFD and LFD, as well as ACFD1 and Clearwater Paper Corporation, operate internal ongoing training and education programs for medically trained personnel. Each program follows the individual state requirements for training. This leads to various levels of instruction and inconsistent levels of end training. These inconsistencies will inevitably carry over into the field setting. Personnel that may work for more than one provider must maintain multiple trainings and could perform skills or procedures allowed and practiced in one agency while working for another where those same skills and or procedures may be prohibited. The result could be a quality control issue across the system.

The above noted issues have been determined by ESCI to be the most critical to future system success. Each of the identified critical issues will be addressed in the forthcoming recommendations for system improvement.
Current Capabilities Compared to Service Demand

EMS resources are currently deployed throughout the Lewis and Clark Valley by each agency singularly without regard to the deployment of other agencies’ resources. This is changing somewhat as ACFD1 has taken over operational control of the City of Asotin Fire Department and plans are underway as of the writing of this report to deploy a BLS first response unit within the Asotin Fire Department station to serve as a first response to the ALS transport unit that would respond from either ACFD1 or LFD Station 1.

Of the six emergency services facilities currently in operation within the Lewis and Clark Valley, only four (soon to be five) staff EMS resources. Although LFD Station 4 houses a transport ambulance and staffs medically trained personnel, that unit is typically not utilized for EMS responses. Within each facility housing an EMS unit, each unit is staffed with at least one Paramedic and is often staffed with two Paramedics.

As illustrated in the following figure, historic EMS service demand is clustered around existing facilities.
When this service demand distribution is compared against the travel time models presented earlier, a large percent of all historic service demand is within eight minutes of an existing fire station. Although LFD Station 4 does not staff a full-time ALS transport ambulance, a minimum of two ALS personnel are on duty at all times that could provide an ALS level of first response ahead of responding ALS transport units from LFD Stations 1 or 2.

All of the City of Clarkston is within the eight-minute travel model from LFD Station 1 as well as within the eight-minute travel model from ACFD1. Thus, if CFD were staffed with an ALS first response unit, as was the case prior to January 1, 2010, and transport services were provided by LFD Station 1 or ACFD1, then the deployment of personnel would be more closely matched to that recommended in the recent research.
Unfortunately, the City of Asotin is outside the recommended response performance objectives. Although the population density suggests that this area should receive an urban level of service, ALS resources are greater than an eight-minute travel time from the nearest facility, ACFD1. As mentioned previously, placement of BLS resources in the Asotin fire station will improve the service currently being delivered to the area; however, the lengthy response of ALS resources remains an issue.

Likewise, the service demand within the Lapwai and Culdesac areas (both located on the Nez Perce Reservation) is extremely low when compared to that within Clarkston and Lewiston. In addition, the area is served by the Culdesac Quick Response Unit, a BLS first response unit, as well as JK Ambulance and Genesee Ambulance, BLS transport providers to the extreme north. However, there is no ALS coverage close to the area.

Levels of Effective Response

As has been previously noted, any changes to the system in the absence of establishing performance criteria will limit the ability of the system participants to improve performance. ESCI believes that financial resources, response time, and medical performance must be carefully monitored irrespective of which future service delivery option is selected. While each of the options has both advantages and disadvantages, there may be additional options and considerations other than those articulated in this report.

A recent report published by the National Institute of Standards and Technology states,

...crews with one ALS provider on the engine and one on the ambulance completed all tasks faster and started later tasks sooner than crews with two ALS providers on the ambulance. This suggests that getting ALS personnel to the site sooner matters.53

This new research also indicates that first responder units arrive prior to ambulances in approximately 80 percent of all responses.54 This suggests that a comprehensive system that

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54 Ibid. 19.
utilizes both BLS and ALS in both first response and transport roles operates more efficiently. Thus, ensuring a quick BLS response followed by ALS personnel appears to be the most efficient model based on the most current research.

With this in mind, ESCI suggests that the system serving the Lewis and Clark Valley deploy resources such that at least 90 percent of the historic and projected service demand is covered by BLS resources within an appropriate travel time, followed by ALS resources and transport units deployed in accordance with formally adopted response performance measures, to be discussed later.

**Response Zones and Response Time Objectives**

The National Fire Protection Association, as well as the Centers for Public Safety Excellence, identifies several different response zones and response time objectives based on population density. Areas with a population density of greater than 1,000 per square mile are considered urban; 500 to 999 are considered suburban; less than 500 are considered rural; and areas that are greater than eight road miles from a response location are considered remote. However, *NFPA 1710*, the standard that applies to career fire departments, does not distinguish between these densities. LFD, although protecting a large urban core, also covers a large area of suburban and rural areas within both Nez Perce and Asotin Counties (ACFD1). CFD, a combination department with full-time on duty staffing supported by a force of volunteer and reserve EMT/Firefighters, protect a totally urban density area.

The question then exists as to what response performance objective would be appropriate for the various densities, whether provided by individual providers operating singularly or from a system perspective. ESCI recommends that, due to the large land area covered, that the system adopts a tiered response performance objective based on a hybrid of the *NFPA 1710* and *1720* standards as follows.
The times noted above are not inclusive of call processing times. Although NFPA has established performance standards for communications centers that dispatch fire and emergency services resources, fire departments typically do not have much influence over that function. Thus, only the response performance from the time of dispatch is included in the recommended response performance objectives noted here.
Recommended Long-Term Strategy

Based on the preceding sections regarding the evaluation of current conditions combined with the information pertaining to critical issues, current capabilities, effective response and response performance objectives, ESCI makes the following long-term strategy recommendations.

**Resource Deployment Recommendations**

Any change in deployment of resources must be viewed from a holistic perspective. When evaluating a true EMS system for efficiencies, no single location can be viewed as critical. Rather, the appropriate deployment of resources throughout the entire system must be considered. That, combined with the appropriate research and empirical data, should be used to develop a deployment plan that achieves services that are commensurate with the expectations of the communities served. With this in mind, ESCI makes the following resource deployment recommendations.

**Clarkston Fire Department** – The City of Clarkston should consider discontinuing the current transport ambulance and operate an ALS first response unit. This would effectively return CFD to its primary mission of fire suppression and EMS first response as was the case prior to January 1, 2010. Although personnel would still be responding to medical incidents, their availability would increase dramatically due to the relinquishment of transport responsibilities. Personnel would hand over care to the transport unit (presumably from Lewiston) and return to service.

Based on this recommendation, the City of Clarkston could lose as much as $360,000 in EMS transport revenue. Since, based on the analysis, a large portion of the revenue is generated from interfacility non-emergency transports, it is feasible that this service could continue with part-time personnel to recoup some of the lost revenue.
If CFD continues with the current model, a more efficient use of resources region-wide would require that CFD obtain trauma-verified status with the East Region EMS Council and the State of Washington. This would allow LFD to discontinue automatic response into Clarkston for trauma incidents.

**Lewiston Fire Department** – The City of Lewiston should continue to operate one ALS transport unit from LFD Station 1, capable of responding into the LFD Station 4 response area as a follow-up to ALS first response from that station, Clarkston as a follow-up to CFD ALS first responders, and Clearwater Paper Corporation as a follow-up to CPC BLS first responders. LFD Station 2 should continue to operate one ALS transport unit, capable of responding into the LFD Station 4 response area as a follow-up to ALS first response from that station. LFD Station 4 should continue to operate an ALS engine as a first response unit for the transport unit responding from LFD Stations 1 and 2.

**ACFD1** – ACFD1 should continue to allow one LFD ALS transport unit to respond from its station, capable of responding into Clarkston as a follow-up to ALS first responders from CFD. ACFD1 should also continue supporting the efforts of Asotin Fire Department through the implementation of BLS first response resources.

**City of Asotin** – The City of Asotin and Asotin Fire Department should evaluate the potential for contracting for ALS first response services through either the City of Clarkston or the City of Lewiston due to the long potential response times from the closest ALS unit (ACFD1).

**Lapwai/Culdesac Area** – The Nez Perce Tribe should work with the City of Lewiston and Nez Perce County to ensure adequate ALS coverage for the area through the implementation of an ALS first response unit.

**Governance**

In order for the provision of emergency medical services to the Lewis and Clark Valley to fully function as a seamlessly integrated system, the governance and oversight of the system must
be singular. As noted previously, the issues of turf, power, politics and control must be set aside in favor of implementing a truly efficient system that works for the betterment of the community. Several options exist for the elected officials regarding how to structure the governance and oversight of the EMS system.

**Intergovernmental Agreement**

Although technically a joint powers agreement is a type of intergovernmental agreement (IGA), for the purposes of this project, IGAs are discussed outside the scope of joint powers agreements in order to identify the other alternatives available to the participating municipalities.

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

**Joint Powers**

By definition a joint powers entity means,

> ... an operating entity created by two or more governmental units entering into an agreement as provided by statute for the joint exercise of governmental powers. An intergovernmental agreement will be deemed to create a joint powers entity if the agreement establishes a board with the effective power to do any of the following, regardless of whether the specific consent of the constituent governmental units may also be required:

1. To receive and expend funds
2. To enter contracts
3) To hire employees
4) To purchase or otherwise acquire and hold real or personal property
5) To sue or be sued

Although this reference comes from the League of Minnesota Cities, the intent here remains. Title 67, Chapter 23 (67-2328) of the Idaho Statutes allows public agencies to exercise and enjoy jointly with other public agencies any power, privilege, or authority authorized by the Idaho Constitution, Statue, or Charter which both public agencies hold. Likewise, RCW 39.34.030 allows Washington counties to exercise any power or powers, privileges or authority jointly with any other public agency. Nothing in either statute specifically prohibits governmental units from entering into JPA’s with a governmental unit from another state. ESCI suggests that the respective governing bodies from each of the study municipalities seek legal counsel on this specific issue.

The governing board of a joint powers agreement typically consists of a representative of each party to the agreement. By allowing representation from each participating government entity, the board is held accountable to the communities at large for their decisions and actions.

The purpose of most JPAs is to provide a service in a more efficient manner through cost saving objectives. This, however, is not always the case. Control and input can be the driving force behind entering into such an agreement. In determining if a JPA is the most appropriate use of funds, local jurisdictions must consider the cost of providing the service.

The primary advantage to a JPA over an intergovernmental agreement (IGA) is that each represented entity has a seat at the table and direct input into the decisions made regarding the services provided. Although an IGA can be promulgated with specific language that gives the receivers of service an opportunity for input, a JPA actually puts those receivers of service in a position of authority over the operation of the system. Rather than having a single

government entity controlling the service, the board of the JPA would make the decisions regarding service delivery.

There are two types of JPAs: Joint Powers Agreements and Joint Powers Entities. A Joint Powers Agreement is an agreement entered into by two or more governmental entities to jointly deliver a service. A governing board is generally not required and the ability to make decisions regarding the service remains with the governing body of each participating entity.

A Joint Powers Entity is a separate entity created by two or more governmental bodies relinquishing control of a function to the new entity. This, in effect, creates a new and distinct governmental entity. The JPE operates autonomously from its member units and has the ability to:

- Receive and disburse funds
- Enter into contracts
- Hire and fire employees
- Own property, equipment, and vehicles

In regard to funding, several options are available to the participating municipalities much in the same way as was discussed in the section on intergovernmental agreements.

**Jurisdictional Structure**

A number of options exist regarding jurisdictional structure depending on the type of cooperative effort the various players move forward with. In the event of an intergovernmental agreement or contract for service, the most likely structure would be what currently exists. One governmental unit contracting with another and providing supportive or supplementary services would, in all likelihood, maintain their respective structures.

In the event a JPA was entered into between the key players, two primary jurisdictional structures could exist: member governments could provide representation or directors could be elected outside the existing governmental units. For example, since the primary service
providers within the current geography are Lewiston and Clarkston, a board overseeing the JPA could consist only of representatives from those two agencies. Conversely, since the entire area served also involves two counties, another city, an independent fire district and tribal lands, the board could consist of a member from each of those units.

Development of a jurisdictional structure that is representative of the area serviced is crucial to the success of the cooperative organization and should be one of the first elements discussed if implementation moves forward.
Fiscal Analysis of Options

Financial analysis is an important part of the analysis of service delivery alternatives. To this end, ESCI develops a computer-driven model budget for each department. A modeled budget is designed to impartially represent the monetary policies of each agency equally, to neutralize the normal differences usually found in unilateral fiscal practices, and to account for any financial peculiarities (such as budgetary back loading). The modeling technique assures that an “apples to apples” comparison is made of the agencies, which allows an estimation of the public cost of each department’s operation and provides a means for financial evaluation of the outcome of integration. The modeled budget yields a baseline estimate of the public cost of service; in addition, the methodology provides the ability to calculate the cost of the partnering strategies.

Long-Term Funding

While purely economic considerations may suggest that those who benefit from a service should pay in direct proportion to the level of benefit (the “benefits received” principle), social and political concerns may also enter into the price-setting process. Therefore, the task of apportioning the cost of an allied emergency services system among partner agencies will likely require a fair amount of analysis and negotiation. The process should be approached with the recognition that any agreed upon allocation formula must fit the local situation, it should serve the best interests of the partners over the long-term, and everyone (especially the public) should easily understand it. It is also essential that the process be maintained completely transparent at the governance level. ESCI generally advises clients to keep cost apportionment formulas fair, simple, and intuitively logical to assure that the public accepts and supports the endeavor. The typical factors included in cost allocation formulas include:

- Area
- Assessed Value (currently in use through EMS levy in Clarkston and Asotin County)
- Service Demand
- Fixed Rate
- Population
Each option is summarized by the concept, its advantages and disadvantages, and other factors that should be considered. Regardless of the option(s) chosen to share the cost of emergency services, the resulting inter-local agreement needs to address the issues of full cost versus marginal cost and should be clear about the inclusion of administrative or overhead cost. In addition, service contracts often must reconcile the exchange of in-kind services between the participating agencies.

**Area**

**Concept:**
The cost of emergency service can be apportioned based on the geographic area served relative to the whole. Apportionment founded on service area alone may work best in areas that are geographically and developmentally homogeneous.

**Pro:**
Service area is easily calculable from a variety of sources.

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

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

**Assessed Value**

**Concept:**
The assessed value (AV) of municipalities is established by the local tax assessor under laws of the state. Usually, higher-valued structures and complexes carry a greater risk to the community from loss by fire; consequently, assessed value also tends to approximate the property at risk within a municipality. Emergency services agencies are charged with being sufficiently prepared to prevent loss of life and property. Therefore, the cost of contracted
service may be apportioned relative to the assessed value of the jurisdictions. Typically, AV is used to apportion cost of shared service by applying the percentage of each partner’s AV to the whole.

**Pro:**
AV is updated regularly helping to assure that adjustments for changes relative to new construction, annexation, and inflation are included. Because a third party (the assessor) establishes AV in accordance with state law, it is generally viewed as an impartial and fair measurement for cost apportionment. Although the provision of emergency medical services is not typically considered a *property-related service*, apportionment tied directly to property value has merit.

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

**Consider:**
Some states discount AV depending on the class of property (commercial, residential, or agricultural), which may skew the overall proportion of those properties compared to risk. As an additional consideration, assessors usually establish the AV in accord with the property tax cycle, which can lag somewhat behind the budget cycle of local agencies and the time when service contracts are reviewed or negotiated.

**Service Demand**

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

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

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

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

**Concept:**
The use of fixed fees or rates (such as a percentage) to calculate allocation of shared cost is more common between municipalities and independent districts. Occasionally, fixed-rate contracts involve the exchange of in-kind services.

**Pro:**
The concept is simple and straightforward. A menu of service options and the fees corresponding to those alternatives can be developed by the contractor agency. The contracting agencies can tailor a desired level of service based on risk and community expectation by choosing from the various menu items.

**Con:**
Partnering communities may change (i.e., population, jobs, commerce, structures, and risk) at divergent rates causing disconnection between the rationale used to establish the fee and the benefit received. A fixed-rate contract may be difficult to coherently link to the services provided and/or received, which can lead to a lack of support by officials and the community.

**Consider:**
Partnering agencies need to assure that provision for rate adjustment is included in the agreement, including inflation. The agreement should address the issue of full cost versus marginal cost. The inclusion or non-inclusion of administrative and/or overhead cost also requires statement, as does the reconciliation of in-kind service exchange. The ownership and/or depreciation of capital assets should be addressed, as should rent, utilities, and liability insurance. In the case of a fixed fee, the agreement should establish how the participation of other public agencies in the partnership would affect cost.

**Population**

**Concept:**
Payment for service can be based on the proportion of residential population to a given service area. This variable is easily determined and can be adjusted annually based on U.S.
Census population estimates. It is a known fact that human activity generates service demand for emergency services providers. Areas of higher population (urban and suburban) will see higher service demand rates than areas of lower population (rural). Basing cost allocation on population places more of the cost on the areas where incidents are more likely to occur.

**Pro:**

Residential population is frequently used by governmental agencies to measure and evaluate programs. The U.S. Bureau of Census maintains an easily accessible database of the population and demographics of cities, counties, and states. Estimates of population are updated regularly. Laypersons intuitively equate residential population to the workload of fire departments. 56

**Con:**

Residential population does not include the daily and seasonal movement of a transient population caused by commerce, industry, transport, and recreation. Depending on the local situation, the transients coming in (or going out) of an area can be very significant, which can tend to skew community risk. Residential population does not statistically link with emergency workload; rather, human activities tend to be the linchpin that connects people to requests for emergency assistance.

For example, if residential population actually determined emergency workload, emergencies would peak when population was highest within a geographic area. However, in many communities where the residential population is highest from about midnight to about 6:00 a.m. (bedroom communities), that time is exactly when the demand for emergency response is lowest. It turns out that emergency demand is highest when people are involved in the activities of daily life — traveling, working, shopping, and recreating. Often, the persons involved in such activities do not reside in the same area.

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56 The average citizen may easily associate population to emergency workload, but no statistical link can be made between the two.
Consider:

Some areas experience a daily or seasonal influx of people who are not counted as residential population. This transient population can be estimated by referring to traffic counts, jobs data, hotel/motel occupancy rates, and, in some cases, state or national park administrators. Residential population plus transient population is referred to as *functional population*. Where functional population is significantly different from residential population, service agreements based on population should be adjusted to account for it.

Each of the funding options discussed above can be used singularly or in combination with one or more other variables. The paragraphs below evaluate the multiple-variable allocation method and provide some examples of how this methodology can be used.

**Multiple-Variable Allocation**

Frequently, even though everyone may agree on the benefit of allied emergency services, officials find it difficult to reach an accord on the cost. The differences between community demographics and/or development, along with changes that occur within the system over the long term, can cause the perception of winners and losers. This can be especially prevalent when a single variable is used to apportion cost. A service contract based on more than one allocation determinate may help solve these problems.

By apportioning the costs over more than one variable, the members of the alliance will be able to reach a long-term agreement that fits the diversity of the partnering agencies. When choosing a cost-sharing strategy for partnered services, it is important to keep any apportionment formula fair, simple, and intuitively logical to assure that the public accepts and supports the endeavor.

The information provided above serves as a detail of each funding alternative presented. Given the lengthy discussion provided with each alternative, ESCI has compiled the information into a summary table illustrating how each funding alternative would be distributed among the
member jurisdictions. In addition to the individual funding alternatives, several multiple-variable scenarios are also provided as an example of how this type of methodology can be applied and modified. WCFD14 is not included here since they are served by contract and lie outside Nez Perce and Asotin counties.

**Figure 93: Summary of Alternative Funding Models**

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Area</th>
<th>Assessed Value</th>
<th>Service Demand</th>
<th>Population</th>
<th>Multiple Variable #1</th>
<th>Multiple Variable #2</th>
<th>Multiple Variable #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asotin County</td>
<td>12.1%</td>
<td>22.4%</td>
<td>12.8%</td>
<td>30.3%</td>
<td>20.2%</td>
<td>19.3%</td>
<td>20.2%</td>
</tr>
<tr>
<td>City of Asotin</td>
<td>0.1%</td>
<td>1.2%</td>
<td>0.6%</td>
<td>1.6%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Clarkston</td>
<td>0.2%</td>
<td>6.0%</td>
<td>18.0%</td>
<td>10.7%</td>
<td>9.1%</td>
<td>11.2%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Lewiston</td>
<td>1.8%</td>
<td>28.1%</td>
<td>65.1%</td>
<td>48.1%</td>
<td>37.7%</td>
<td>44.6%</td>
<td>50.1%</td>
</tr>
<tr>
<td>Nez Perce County</td>
<td>85.8%</td>
<td>42.0%</td>
<td>1.9%</td>
<td>7.1%</td>
<td>31.1%</td>
<td>22.9%</td>
<td>14.4%</td>
</tr>
<tr>
<td>Lapwai/Culdesac</td>
<td>0.1%</td>
<td>0.2%</td>
<td>1.6%</td>
<td>2.2%</td>
<td>0.8%</td>
<td>1.1%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

In addition to the funding methods noted above, both Idaho and Washington statutes allow for the levying of a specific EMS tax. As noted previously, Asotin County, Washington, currently
levies an EMS tax whereas Nez Perce County, Idaho, does not. If the governing bodies determine that integration of services into a single system is the appropriate pathway, representatives of each municipality should work together to determine the most appropriate funding mechanism.

**Cost Recovery**

Clarkston and the Lewiston fire departments operate primarily from the general fund of their respective cities. Other common funding sources for fire departments are dedicated cost recovery, enterprise funds, or revenue accounts that are supported from services like EMS (first response), ambulance transport, and fire safety inspection fees. Cost recovery, like other revenue sources, helps provide a measure of funding stability. Significant cost recovery alternatives are limited primarily to emergency medical services (EMS), where charges tend to be underwritten by health insurance providers and Medicare. Revenue reductions from uncollected EMS billings and the difference between the billable amounts allowed under Medicare and Medicaid may effectively limit this source of funding.

**Recommendations:**

- In the absence of future cooperative efforts, the cities of Clarkston and Lewiston should establish a practice of annually reviewing and modifying, as needed, the fees for service charged by CFD and LFD for EMS services.
- In the absence of future cooperative efforts, the cities of Clarkston and Lewiston should consider adopting a single uniform fee for service schedule for CFD and LFD EMS services.
- A coordinated effort through a single billing agency (whether internally or through a contract provided) should be initiated.

In addition to revenue generated through billing for EMS services, the agencies involved should use the visioning session described later in this report to lay out a plan for funding the system that is serving the entire region without regard to political jurisdiction. Although there is nothing with either state’s statutes, rules, and/or regulations that specifically guide local
governments on how to spend any collection EMS levy, the primary concern should be funding the EMS system as a whole.

**Short and Mid-Term Recommendations**

Throughout this report, ESCI has provided a number of recommendations that are intended to be implemented in the short and mid-term ranges rather than in the long-term. These recommendations are meant to improve and/or enhance the delivery of the current levels of service within the current deployment model. Recommendations have been prioritized based on a scale from one to five. A description of each priority is provided prior to the recommendations associated with that level.

- ACFD1 should develop and display an organizational chart to assure that all personnel are informed of reporting responsibilities and lines of authority.................................................. 28
- Each agency should compose, adopt and institutionalize a single regional vision by which the agencies are able to plan for and provide effective EMS service delivery throughout the study area. ................................................................................................................................. 31
- Each EMS provider operating with the region should undertake a Strategic Planning process.................................................................................................................................................. 35
- Clarkston and Lewiston municipal budgets for fire and EMS should account for indirect charges.................................................................................................................................................. 51
- Lewiston should evaluate the potential for transferring all EMS dispatch functions to Whitcom.................................................................................................................................................. 98
- In the absence of transferring EMS dispatch functions to Whitcom, the system should evaluate the potential for implementing a CAD-to-CAD transfer interface between Whitcom and LPD.................................................................................................................................................. 98
- The City of Lewiston should investigate the possibility of implementing a system whereby field units can enter individual unit times without dispatcher interaction. ....... 132
- The region should consider implementing a CAD-to-CAD interface that allows Whitcom to transfer incident data to LPD for improved consistency in data recording, tracking, and reporting.................................................................................................................................................. 132
- In the absence of future cooperative efforts, the cities of Clarkston and Lewiston should establish a practice of annually reviewing and modifying, as needed, the fees for service charged by CFD and LFD for EMS services. ......................................................... 166
- In the absence of future cooperative efforts, the cities of Clarkston and Lewiston should consider adopting a single uniform fee for service schedule for CFD and LFD EMS services.................................................................................................................................................. 166
- A coordinated effort through a single billing agency (whether internally or through a contract provided) should be initiated.................................................................................................................. 166
Potential Challenges to Implementation

In ESCI’s experience working with emergency services providers across the U.S. and Canada, the most common challenges to implementing any type of cooperative effort are always the same: Turf, Power, Politics, Control, and Money.

It is not uncommon for municipalities to attach at least some level of ownership to their local fire departments or other emergency services providers. Throughout history, the local fire department served as the focal point for many communities much like the churches and schools. The fire service also has a history of brotherhood and camaraderie that is unmatched in most governmental entities. In today’s economic climate, however, the ownership of that service cannot take precedence over doing the right thing for the community. Most citizens are ill-informed about the services they receive from their government unless they receive those services frequently or have an intimate knowledge of those activities through a family member or other personal experience.

In fact, it is anecdotally suggested that roughly 10 percent of the general population will be exposed to fire or emergency services during their lifetime. It should be no surprise that when those citizens are exposed to those services, there is a high probability that it is at one of their worst moments. As such, it is reasonable to assume that most users of emergency services wouldn’t care about the color of the vehicle, or what the words on the side of the vehicle were, or what patch was worn on the sleeve of the responders; as long as someone responded quickly and was able to help when they arrived. Thus, the issues of turf, power and control should be set aside for the good of the community served.

The issues of politics and money are a bit more complicated as they are difficult to quantify. Although money is tangible, it is not always the driving factor behind a modification to service models. In some cases, a consolidation of services results in a higher cost due to a variety of factors such as pay scales, benefits, contract requirements, etc. Other times, cooperative efforts result in significant savings but socially and culturally, implementation fails.
Politics, on the other hand, is not tangible and is highly variable. Political environments change and what started as an effort to work together could easily be derailed by a shift in political beliefs among the elected officials. Conversely, units of government that have historically been at odds can suddenly be forced into a process of collaboration based on the results of an election. Whatever the case, the elected officials of each unit of government involved must be able to set aside history and look to the future. From that, they should be able to determine what will best serve their constituents based on the analysis of available data and information.

**Plan of Implementation**

It is common for those in the emergency services to tout themselves, or their department, in terms such as “a pride-driven organization that is at their best every day,” or more simply, “the best.” The true mark of quality of the best emergency services providers however, is one that works continuously for measurable improvement in organizational performance. By undertaking this study, the leadership of the cities of Clarkston and Lewiston and the Asotin County Fire District 1 have begun the task of organizational and system evaluation that is necessary to plan for and reach the goal of truly being the best.

This is not to say that the current organizations are not already operating at a high level. In fact, ESCI is pleased to report all available evidence shows that the agencies consistently provide excellent service to the citizens of the protected communities. However, in keeping with the notion of continuous improvement wherein an unending loop of performance, measurement, and evaluation leads to system enhancements that would otherwise be impossible, ESCI offers recommendations to assist the region in implementing the strategies that will best benefit the public.

The success of adopting and implementing change, improvement, or cooperative opportunities depends on many things. In ESCI’s experience with dozens of functional, operational, and legal unifications, leadership is the single factor that most frequently determines success. Nearly always, a key staff, councilor, or board member champions the concept garnering the support
of the various affected groups (political, labor, member, and community). In addition, good leadership fosters an organizational culture receptive to planning, calculated risk taking, and flexibility. The manner in which leaders promote a trusting relationship between all groups and aid two-way communication between them is essential.

The remainder of this report describes a recommended process for moving forward with the potential implementation of a cooperative service delivery effort. The word potential is used here because a part of this process includes the policy decisions necessary to determine, based on the results of the study, whether there is sufficient desire among the political bodies of the organization to continue with the process or not. The implementation begins with that step.

**Conduct Vision Session(s) with Policy-Makers**

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

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

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

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

The term “vision session” is used here because the policy-makers will be determining their joint decision on a future vision toward which the additional work of implementation will be directed. In many cases, several legal, operational, or functional strategies are presented as being feasible in the study. These may involve various options for governance, finance, and organizational structure. Which one or ones should the entities pursue, if any? This will become the joint vision of the policy-makers.
One of the best methods for initiating this vision process is to begin with policy-makers sharing an open discussion of critical issues. Each entity’s representative can present a short description of those critical issues, service gaps, or service redundancies that might be concerning them relative to their provision of public safety services. As each entity takes its turn presenting these issues, a picture typically emerges of those shared critical issues that two or more of the entities have in common. This assists in focusing the discussion on which of the feasible options from the study best address those critical common issues and how.

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

This is also the time that communities may make the decision to opt out of further involvement. This may occur for a number of reasons. There may be legitimate concern that an individual community does not truly share an adequate number of common critical issues with the other communities. There may also be a legitimate concern that the feasible strategies do not do enough to benefit a given community and would leave it with too many remaining critical issues. And, of course, there is always the possibility that a given community will not feel that the projected financial outcome is within their ability or provides a cost-benefit that is better than their current situation. Any such decisions by one or more communities should not be considered a discouraging factor, for that is the very purpose of the vision sessions. In many cases, other remaining entities continue moving forward with a shared vision for cooperative service delivery even after one or more communities determine not to.
The goal of the vision session(s) is to develop a decision by the policy-makers on whether to continue with the next steps and, if so, what direction those steps should take. The vision should be sufficiently decisive as to be actionable by senior appointed officials and staff. While there will be many, many details to work out in the implementation process, the vision should clearly articulate the intention of the agreeing policy bodies on the desired outcome from the specified cooperative service strategy or strategies. Once this occurs, the real work begins.

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

**Establish a Joint Implementation Committee**

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

- City/District Manager (or equivalent) from each community
- Fire Chief from each community
- Finance Director from each community
- Labor Representative from each bargaining group involved
- Volunteer Representatives from each volunteer organization involved
- Community Representative from each community (Chamber of Commerce or similar)
The Joint Implementation Committee should select a chair or co-chairs to function as organizers and facilitators for the committee meetings. In addition, their first order of business should be to determine the rules and procedures of this committee. This should include such items as:

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

**Develop an Implementation Strategic Plan**

Once the ground rules have been set, the Joint Implementation Committee should schedule a strategic planning process. Consideration should be given to having this strategic planning process directed by neutral outside professionals trained in strategic planning facilitation. The strategic planning process should be held in a neutral setting away from the daily activities and noise of the usual office environment. It need not be an expensive retreat, but it should be organized in a way to focus energy and attention exclusively to the planning process for its duration. The purpose of the initial strategic planning session should be as follows:

- To further articulate and refine the joint vision set by the policy bodies.
- To identify critical issues that will be met as the implementation process unfolds.
- To identify potential impediments to implementation from:
  - Organizational culture
  - Availability of data and information
  - Lack of sufficient staff to carry through implementation processes
  - Outside influences and time demands
- To set the specific goals and objectives of the implementation process and the timelines for accomplishment.
- To establish the necessary Implementation Working Groups.
This process should result in the preparation of an implementation planning document that can be shared with the policy body, stakeholders, and others who will be involved in or affected by the implementation process. The document should provide the joint vision, describe the cooperative service strategy or strategies being pursued, the desired outcome, the goals that must be met in order for implementation to be achieved and the individual objectives, tasks, and timelines for accomplishment. When fully and adequately prepared, this document will serve as the master “road map” for the process and will help guide the next steps of developing working groups and assigning responsibilities.

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

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

**Governance Working Group**

This group will be assigned to examine and evaluate various governance options for the cooperative service effort. A recommendation and process steps will be provided back to the Joint Implementation Committee and the Policy-maker Group. Once approved, this working group is typically assigned the task of shepherding the governance establishment through to completion. The membership of this group typically involves one or more elected officials and senior city/district and agency management.
Finance Working Group

This group will be assigned to review the financial projections contained in the feasibility study and complete any refinements or updating necessary. The group will look at all possible funding mechanisms and will work in partnership with the Governance Working Group to determine impact on local revenue sources and options. Where revenue is to be determined by formula rather than a property tax rate, such as in a contractual cooperative venture, this group will evaluate various formula components and model the outcomes, resulting in recommendations for a final funding methodology and cost distribution formula. The membership of this group typically involves senior financial managers and staff analysts, and may also include representatives from the agencies’ administrative staffs.

Legal Working Group

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

Operations Working Group

This group will be responsible for an extensive amount work and may need to establish multiple sub-groups to accommodate its workload. The group will work out all of the details of necessary operational changes required by the strategy. This involves detailed analysis of assets, processes, procedures, service delivery methods, deployment, and operational staffing. Detailed integration plans, steps, and timelines will be developed. The group will coordinate closely with the Support Services and Logistics Working Group. The membership of this group typically involves senior agency management, mid-level officers, training staff, and labor
representatives. This list often expands with the complexity of the services being provided by the agencies.

**Support Services and Logistics Working Group**

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

**Labor Working Group**

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

**Communications Working Group**

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

**Meet, Identify, Challenge, Refine, and Overcome**

Once the working groups are established, meeting, and completing their various responsibilities and assignments, it will be important to maintain organized communication up and down the chain. The working group chairs should report regularly to the Joint Implementation Committee. When new challenges, issues, impediments, or opportunities are identified by the working groups, this needs to be communicated to the Joint Implementation Committee so that the information can be coordinated with findings and processes of the other working groups. Where necessary, the Joint Implementation Committee and a working group chairperson can meet with the policy-makers to discuss significant issues that may precipitate a refinement of the original joint vision.

The process is continual as the objectives of the strategic plan are accomplished one by one. When sufficient objectives have been met, the Joint Implementation Committee can declare various goals as having been fully met until the point comes when the actual implementation approval needs to be sought from the policy bodies. This formal “flipping of the switch” will mark the point at which implementation ends and integration of the agencies begins. The following flowchart is provided as an example of how the implementation of this process should work.
Figure 95: Example Implementation Flowchart
Conclusion

The ESCI project team began collecting information concerning the emergency services for Nez Perce County, Idaho (including the City of Lewiston), and Asotin County, Washington (including the City of Clarkston, the City of Asotin and Asotin County Fire District 1), in April 2011. The team members recognize that the report contains a large quantity of information and ESCI would like to thank the elected officials of each organization involved as well as the officers, employee and volunteers of the three fire departments for their tireless efforts in bringing this project to fruition. ESCI would also like to thank the various individuals and external organizations for their input, opinions, and candid conversations throughout this process. It is ESCI’s sincere hope that the information contained in this report is utilized to its fullest extent and that the emergency services provided to the citizens of Lewis and Clark Valley, as well as the surrounding areas, are improved by its implementation.