



# **City of Salem Fire Department**



Photo: Ron Cooper

# Orientation Manual 2024

# **Table of Contents**

Brief History	1
SALEM FIRE DEPARTMENT	3
Mission	3
Vision	3
Values	3
Cultural Beliefs-Big Six	3
Fire Department Overview	4
Department Divisions	4
Salem Fire Department Organization	5
Apparatus and Equipment	6
Fire and EMS Service Area	6
Inter-Agency Cooperation and Interaction	8
Fire Agency Agreement between the City of Salem and Chemeketa Community Colleg	<b>ge</b> 8
Salem Suburban Rural Fire Protection District	8
Mutual Aid Agreements	8
Oregon Fire Service Mobilization Plan (The State Conflagration Act)	9
Personnel Administration	9
Emergency Services	9
Emergency Response Resources	10
Emergency Response Effectiveness	13
Minimum Firefighting Personnel Needed	18
Based Upon Level of Risk	18
Resource Dispatched by Type of Incident	20
Type of Incident Assignment	20
Fire Suppression	21
Wildland/Urban Interface	21
Hazardous Materials Services	21
13 <sup>th</sup> Regional Hazardous Materials Response Team Area	22
Technical Rescue Teams	22
Emergency Pre-Hospital Care System	24
What is the difference between Basic Life Support and Advanced Life Support?	26
Aircraft Rescue Fire Fighting (ARFF)	27

Training	27
Fire and Life Safety Services	
Business Inspections	
Fire Investigation	
Plans Review	
Public Education/Information	
Fire Department Internet Web Site	
Emergency Management	
Increasing Call Volume	
Successor Training	
Firefighter Recruitment	
Strategic Planning and Standard of Cover	
Fire Foundation	
High-Performance CPR	
GLOSSARY	

# **Brief History**

Salem's first fire company, the Alert Hook and Ladder, was organized in 1857. Firefighters fought fire with leather buckets and basic hand tools. The first steam fire engine was placed in service in 1883.

Salem hired its first paid firefighters in 1893 and converted to a department staffed solely by paid employees in 1923.

By 1975, the City of Salem was served by seven fire stations, eight staffed fire engines, and three staffed ladder trucks.

In 1980, the Salem Fire Department became the sole ambulance provider for the City of Salem. This was the advent of the "dual role" system. The basic concept of the "dual role" system is that personnel assigned to medic units are utilized for firefighting and rescue duties, and engine company crews are used to provide advanced life support (ALS) emergency medical response. This system was the most efficient way to combine the fire suppression and emergency medical delivery systems.

The Battlecreek Fire Station (Station 9) was constructed in 1981 and staffed with personnel reassigned from the ladder truck. Fire Station 8 was opened on the campus of Chemeketa Community College through a cooperative agreement in 1982. The station was staffed with an engine formerly as a second engine and Fire Station 1.

In May 1998, the Salem Fire Department tripled the number of ALS response units available within the city. All nine engine companies were upgraded to ALS to supplement the four existing ALS transport ambulances. This enhancement reduced the response time of lifesaving equipment and intervention while providing needed efficiencies and flexibility.

In July 2005, the Salem Fire Department subcontracted ambulance services to Rural/Metro Ambulance and continues to provide paramedic-staffed ALS engine companies as first responders to emergency medical calls.

Engine 10 was placed in service in 2005 to improve response times. The ALS engine company was initially placed in service at Station 1. In May 2006, the engine began operating from its dedicated station (Station 10), which was opened as a temporary facility on a parcel of property.

A voter-approved bond issue passed in 2006 allowed the construction of two new and two replacement fire stations. One of the new stations replaced the temporary facility used by Engine 10. The other placed a second fire station in West Salem. Both new stations and the two replacement stations (Stations 5 and 7) were opened in 2009. The bond also replaced the department's fire apparatus fleet, provided funds to seismically strengthen other fire stations, install backup power generators, and complete other facility improvements.

In 2012, fire stations 8 and 11 were closed due to budget shortfalls. Both stations remained closed until funding was received during the FY 16-17 budget to re-open station 8. Funding to reopen station 11 was received during the FY 18-19 budget process and was opened in 2019. We currently have 11 fire stations, 11 staffed ALS engines, and two ALS ladders serving the City of Salem.

The City of Salem transitioned to a private ambulance service in July 2005 due to financial pressures, particularly low Medicaid and Medicare reimbursement rates. Currently, Falck Ambulance, the contracted provider, needs help to meet required deployment levels, causing the Fire Department to incur \$3.3 million in overtime since November 2021 to support EMS services. Despite this, Falck will continue as the Advanced Life Support Ambulance Provider until June 2025.

In response, the City is reassessing its service model, aiming to reinstate the Salem Fire Department as the primary provider of ambulance transport services. This transition is supported by recent fee increases, the availability of GEMT funds, and the introduction of single-role medics and basics within the department. A third-party study, with input from the Fire Department and Falck Ambulance, guided this strategic shift.

Following Council approval in March 2024, the City is moving forward with the Ambulance Operator Model, targeting a deployment on July 1, 2025.

### SALEM FIRE DEPARTMENT Mission, Vision, and Values

#### Mission

To protect lives, property, and the environment placing safety and service above all.

#### Vision

Provide excellent customer service and exceed the expectations of the people we serve. Be responsive to the changing needs of our customers. Be an organization of highly trained and motivated professionals. Be proactive in planning for our community's future. Be an organization highly respected by our peers.

#### Values

Integrity

Professional Excellence Community Service and Involvement Teamwork and Shared Leadership Health and Safety Effective Communication Innovation

#### **Cultural Beliefs-Big Six**

One Department- I promote teamwork, respect, and a common ground. I Trust- I commit to an environment of respect, honesty, and trust. Speak Up- I engage in honest and open communications by asking for and offering feedback. Be Empowered- I align my decisions with our shared values. Own It- I lead by example, as an innovator, challenging the status quo. Be Accountable- I serve with integrity and personal accountability.

# Fire Department Overview

The Salem Fire Department serves the City of Salem and neighboring Salem Suburban Rural Fire Protection District. The department delivers a full range of fire and life safety services to over 182,000 people and 79 square miles of territory.

246 personnel serve the community and are organized into five divisions.

#### **Department Divisions**

1) The <u>Administrative Division</u> provides administrative and management services to ensure proper and adequate budgeting, program and policy research, strategic planning, and department and community liaison services to further the fire department's mission.

Under the direction of the Deputy Chief of Administrative Services, the Emergency Management program manages the city's disaster preparedness and response activities. This includes staff training, disaster mitigation planning, city emergency management plan maintenance, and coordination with local, state, and federal partners.

- 2) The <u>Emergency Operations Division</u> provides for responding to and mitigating emergency incidents within the City of Salem and the Salem Suburban Rural Fire Protection District. This includes responses to potential or actual releases of hazardous materials to minimize environmental damage and injury or loss of life, ensures the capability to perform technical rescue emergencies such as trench rescue, confined space, rope rescue, structural collapse, responses to the airport and responses on the various bodies of water, and oversees health and safety programs for the department personnel.
- 3) The <u>Fire and Life Safety Division</u> provides public education and information to reduce the occurrence of fire and injuries. It enforces the city's fire prevention code (Salem Revised Code Chapter 58) by reviewing new development and construction plans and conducting business fire safety inspections. In addition, the division investigates fires for origin and cause.
- 4) The <u>Training and Emergency Medical Services (EMS) Division</u> conducts, supervises, and coordinates departmental training programs to enhance the quality of department staff and ensure that the department is prepared for any emergency to the best of its ability. The EMS division is a separate Enterprise Fund supported by emergency medical response of advanced life support emergency medical services. Additionally, this program provides training to maintain state certifications and medical skills of fire department personnel.
- 5) The <u>Communications Division</u> of the fire department oversees the city's radios and the 911 dispatch center (Willamette Valley Communications Center WVCC). Both play a critical role in ensuring effective communication and coordination during emergencies. This division is responsible for maintaining and updating radio equipment, providing training on its proper use, and ensuring interoperability with other agencies. They optimize radio coverage to address dead spots and signal issues. The dispatch center handles emergency calls, dispatches units, manages resources and facilitates communication between field units and other emergency

services. They oversee dispatch software and communication technologies, manage data from emergency calls, and ensure high service standards through training and quality control.



# Salem Fire Department Organization

The department's effective operation is accomplished using a designated chain of command and order of succession, as illustrated by the organizational chart above. The department's order of succession is listed below.

- 1. Fire Chief
- 2. Assistant Chief
- 3. Deputy Chief of Operations
- 4. Deputy Chief of Administrative Services
- 5. Deputy Chief of Training & EMS
- 6. Deputy Chief of Communications
- 7. Shift Commander
- 8. Assistant Shift Commander

Personnel assigned to each division include:

- Administration Division
  - (1) Fire Chief
  - (1) Deputy Chief of Administrative Services
  - (1) Emergency Preparedness Manager
  - o (2) Management Analyst I
  - o (1) Buyer
  - o (2) Staff Assistant I
- Emergency Operations
  - o (1) Assistant Fire Chief
  - (1) Deputy Chief of Operations
  - o (8) Battalion Chiefs
  - o (46) Fire Captains
  - o (48) Fire Apparatus Operator/Engineer
  - o (66) Firefighter-Paramedics
- Fire and Life Safety Division
  - (1) Fire Marshal
  - (5) Deputy Fire Marshals
- Emergency Medical Services and Training
  - o (1) Deputy Fire Chief/Training and EMS
  - (1) EMS Coordinator
  - (1) Emergency Medical Services Training Officer
  - (1) Fire Training Officer

#### Apparatus and Equipment

The current fleet of fire engines and ladder trucks was primarily purchased with funds from the 2006 Fire Bond. Simultaneously to the 2006 Fire Bond, Salem Suburban Rural Fire Protection District also proposed and passed a bond measure to purchase three grass rigs, two water tenders, and one fire engine. A rescue engine was purchased with a one-time federal grant of \$350,000. The State of Oregon provides the HAZMAT Team response vehicle.

Compared to other city vehicles, fire apparatus is not included in the funding and replacement schedule managed by Fleet Services. However, in November 2022, Salem residents approved the Salem Safety and Livability Bond Measure, allocating a portion of the \$300 million approved bond to replace the entire fire fleet, rebuild Fire Station #8, and construct Fire Station #12. The new fleet is expected to start arriving in Spring 2025.

#### Fire and EMS Service Area

This map depicts the Salem Fire Department's service area. Fire and Emergency medical services are provided to the City of Salem and by contract to Salem Suburban Rural Fire Protection District (SSRFPD). The Salem Fire Department is also responsible for ambulance transportation services within the Ambulance Service Area.



#### Inter-Agency Cooperation and Interaction

Sharing resources and maintaining a good working relationship with other agencies is fundamental to effectively and efficiently delivering public safety services. The following briefly describes some of those working relationships.

#### Fire Agency Agreement between the City of Salem and Chemeketa Community College

This long-standing Agreement allows the city to house an ALS engine company at the Chemeketa Community College (CCC) fire station and provide a fire protection student with an internship at this engine company. In return for offering the internship program, the city receives college tuition, fee waivers, and other training assistance when needed. With the passing of the Safety and Livability Bond, Fire Station #8 will be relocated off campus, but we will continue to support our partnership with the community college.

#### Salem Suburban Rural Fire Protection District

The Salem Suburban Rural Fire Protection District (SSRFPD) was created in January 1973. The Marion-Polk Boundary Commission merged four small fire districts to form the SSRFPD: Wallace Road, Eola Hills, South Canyon Hills, and Rosedale-Sunnyside. All four had contracts with the City of Salem for fire protection service at the time of the merger.

The SSRFPD area covers approximately 31 square miles and is divided by the Willamette River. One portion of the district is in West Salem, and the other is in South Salem. The closest fire stations to respond to SSRFPD are Station #5 (Glen Creek and Parkway) in West Salem, Station # 7 (Liberty Road South and Boone Road), Station #9 (Battle Creek and Kuebler Blvd.) and Station #4 (Commercial Street and Alice Street) in South Salem. Other stations respond when the primary station is committed to another emergency or assignment and when the type or severity of the incident requires a multi-company response.

The SSRFPD is directed by a five-member board of directors elected by the public and serving four-year terms. The Board meets every second Tuesday of the month at Fire Station #6.

The SSRFPD contracts with the City of Salem for its fire and life safety response and related services. It pays the city all but \$20,000 of the tax revenue it collects each year; \$1,198,750 was received in FY 2023-2024.

The current Intergovernmental Agreement (IGA) term will expire on June 30, 2033, reflecting the useful life of the SSRFPD-owned equipment. This Agreement also provides for the transfer of ownership of all equipment owned by SSRFPD to the City upon expiration of termination of this Agreement.

#### **Mutual Aid Agreements**

It is unreasonable to expect any jurisdiction to afford the staffing and resources to serve 100% of its emergencies. Forming reciprocal response agreements (known as mutual aid) between jurisdictions within the same geographical area has proven to be a successful and economically viable solution. The City of Salem has entered into mutual aid agreements with the Polk County Fire Defense Board (consisting of 21 local fire departments).

The main features of these agreements include:

- Each jurisdiction provides fire suppression and emergency medical assistance to participating local fire organizations when requested and if resources are available.
- No compensation or reimbursement for any cost incurred in the performance of the agreement.

• Each party to the agreement waivers all claims against the other parties for any loss or damage that may occur.

#### **Oregon Fire Service Mobilization Plan (The State Conflagration Act)**

The City of Salem Fire Department, like other fire departments throughout the State, participates in the Oregon Fire Service Mobilization Plan (OFSMP). The governor can activate the plan whenever the fire service resources are available anywhere in the state. Agencies providing resources are paid for their use by the state.

History shows only rare activation of the OFSMP for fires in urban areas. In recent years, Oregon has experienced frequent and severe wildland fires in the "wildland-urban interface." These are areas where homes have been built near or within the forest. The OFSMP has been used frequently for wildland-urban interface fires.

#### Personnel Administration

#### Civil Service System

The July 1, 1996, adoption of the City of Salem Charter continued the Civil Service Commission personnel system for the Salem Fire Department.

The three-person Civil Service Commission covers City Charter Sections 28 through 48. Most provisions are related to examinations, appointments, promotions, transfers, reinstatements, and disciplinary matters involving Civil Service positions. The Fire Chief, Assistant Fire Chief, Deputy Fire Chiefs, and administrative support employees are the only department members not covered by this system.

#### Collective Bargaining

There are two bargaining units representing fire department employees. The International Association of Firefighters (IAFF) represents the Fire Marshal, Deputy Fire Marshals, Battalion Chiefs, Captains, Apparatus Operators, Firefighters/Paramedics, and, soon to be added, Single-Role Paramedics and Basic EMTs. The American Federation of State County and Municipal Employees (AFSCME) represents non-management administrative support staff.

# **Emergency Services**

The Salem Fire Department provides emergency services to the City of Salem and the Salem Suburban Fire District. Based in eleven locations, the department staffs eleven advanced life support (ALS) fire engines and two ALS aerial ladder trucks 24 hours per day.

Ambulance transportation in Salem is primarily provided through a public/private partnership with Falck Ambulance. The Salem Fire Department typically keeps three unstaffed ambulances available to support the ALS system during high call volume periods. Until October 2021, these unstaffed ambulances facilitated around 340 transports yearly. However, in response to increasing demands and the struggle from our private provider, the Salem Fire Department began operating a 24-hour Medic Unit continuously. As a result, in the 2023-2024 period, the department handled 2,995 transports.

Over the past 30 years, the role of firefighter/paramedic has changed dramatically. While the primary function of these positions in 1975 was to protect citizens from fire, additional duties and responsibilities now include paramedic services, medical transports, wildland/urban interface fire protection, motor vehicle collision extrication, technical rescue, water rescue, and hazardous materials emergency response. Each of these specialties demands specific training to meet certification requirements. Today, all Salem Emergency Operations Division (EOD) personnel participate in training for one or more of these specialty service levels.

### Emergency Response Resources

Firefighters staff and operate several types of apparatus. Eleven fire engines and two ladder trucks are always staffed. Other specialty units are staffed as needed based on the nature of the emergency in progress. The following describes each of the response apparatus used by the fire department:

### Staffed Units

**ALS Engine Company:** An ALS engine company is the initial response vehicle for many types of calls for the fire department. Staffing consists of three personnel (captain, apparatus operator-paramedic, and firefighter-paramedic). Additional equipment includes hoses of various sizes for water transport and application, ground ladders, advanced life support medical equipment and pharmaceuticals, hazardous material containment equipment, and small forcible entry tools. Salem has eleven ALS engine companies daily, one assigned to each fire station.

**ALS Ladder Company:** An ALS ladder company comprises four personnel (captain, apparatus operator-paramedic, and two firefighter-paramedics). The ladder truck is a specialized vehicle carrying a 100-foot aerial platform, several ground ladders, heavy rescue and forcible entry tools (including a rescue tool system), ventilation fans, electrical generators for on-scene power and lighting, technical rescue equipment, salvage, and overhaul equipment. Two active ladder companies are Fire Station 2 at 875 Madison St. NE and Fire Station 4 at 200 Alice St. SE.

**Battalion Chief Units:** The commanding officers of the North and South battalions are provided with a vehicle to assist with emergency response. These two units allow battalion chiefs to be key in directing emergency activities at major incidents. Battalion chiefs are trained to be the primary incident commanders and are available 24 hours daily to provide general supervision and support to engines and ladder companies.

#### Un-Staffed Units

**ALS Medic Unit (Ambulance):** When staffed, two ALS firefighter/paramedics are assigned to an Advanced Life Support (ALS) medic unit. Medic Units are responsible for administering ALS and Basic Life Support (BLS) patient care procedures and transporting patients to the hospital. Fire department medic units are staffed when the demand for emergency medical response has depleted the availability of private ambulances. However, a fire engine must be removed from service to staff a medic unit.

*Aircraft Rescue Firefighting (ARFF) Truck:* The ARFF truck is a highly specialized apparatus that primarily extinguishes aircraft fires and assists in aircraft crash rescues. It can apply foam and/or dry chemicals during flammable liquid fires. Our current front-line ARFF truck is a 2023 Oshkosh Stryker. The current reserve ARFF truck is a 2008 Oshkosh T-1500 model.

*Water Tender:* Salem has two water tenders used exclusively for transporting water to fire scenes where hydrants are unavailable, or the hydrant water supply is insufficient to meet extinguishment needs. Each carries 3,000 gallons and can transfer water directly into a fire engine or to a portable dump tank.

**Brush Rigs:** Brush rigs are primarily used for fighting grass and natural cover fires. They are also used as suppression vehicles during ice or snow events. These vehicles are one-ton, four-wheel-drive trucks with a 300-gallon water tank and a small booster pump mounted in the bed. Salem has three grass rigs that have been upfitted to handle any terrain.

**Reserve ALS Engines:** Reserve engines remain unstaffed except when a front-line piece of apparatus is out of service for repair or maintenance. They may also augment the fleet during major alarm fires. Salem has four reserve engines.

**Rescue Boat:** The rescue boat is dispatched from Station 5 in West Salem and is used for surface water-based rescues. The Salem Fire Department has 4 members trained as rescue boat operators and 12 members trained as rescue swimmers.

*Air Support Vehicle:* Salem Fire Department has two air support vehicles. The primary air support vehicle was purchased with funds from the 2006 bond issue. It is dispatched from Station 1 and responds to all 2nd alarm and greater structure fires. It has an onboard air compressor and storage tanks used to refill the SCBA (air packs) used in structural firefighting. This unit also carries the firefighters' rehabilitation supplies (water & protein bars). It features a mobile restroom, scene lighting, and a large generator that can supply power for an extended period. The reserve air support vehicle is dispatched from station 7, is used to provide backup to the primary unit, and is available for mutual aid requests out of town.

**HazMat Vehicle:** There are two state-purchased hazmat vehicles. One is a 2023 Ford F-550 with a Pierce Work Box and then a 16x7' tandem axle enclosed trailer used to carry our mass casualty decontamination shelter and large amounts of absorbent materials for large spills. Our second hazmat vehicle, a 2023 Pierce Enforcer, has the latest communications and computer capability to allow better mitigation of hazardous material events.

A list of apparatus by fire station follows:

Station	Apparatus
Station One	Engine 1 (ALS engine)
	Air 1 (air supply and support)
	Medic 16
	Brush 1 (wildland engine)
	Ranger 1 (all-terrain vehicle)
	BC 1 (reserve)
	Engine 14 (reserve)
Station Two	Engine 2 (ALS engine)
	Ladder 2 (ladder truck)
	Battalion Chief 2
Station Three	Engine 3 (ALS engine)
	Engine 12 (reserve engine)
	Engine 13 (reserve engine)

#### Salem Fire Department Apparatus – Listed by Station

Station Four	Engine 4 (ALS engine)
	Ladder 4 (ladder truck)
	Battalion Chief 4
	Rescue 4 (technical rescue vehicle)
Station Five	Engine 5 (ALS engine)
	Boat 5 (rescue boat)
	Tender 5
	Brush 5
	Engine 15 (reserve)
	Boat 15 (reserve rescue boat)
Station Six	Engine 6 (ALS engine)
	Foam 6 (aircraft rescue and firefighting unit)
	Foam 16 (reserve aircraft rescue and firefighting unit)
Station Seven	Engine 7 (ALS engine)
	Brush 7 (wildland engine)
	Tender 7 (water transport vehicle)
	USAR Trailer (equipment transport for heavy rescue team)
	Air 7 (air supply and support)
	MCI Van (equipment transport for mass casualty events)
Station Eight	Engine 8 (ALS engine)
Station Nine	Engine 9 (ALS engine)
	Medic 18 (reserve medic unit)
Station Ten	Engine 10 (ALS engine)
	Medic 19
	BC 3 (reserve)
	Deployment trailer (equipment for state mobilizations)
Station Eleven	E-11
	HM-13 (hazardous materials response vehicle)
	Decon-13 (equipment transport for chemical decontamination)
	L-11 (reserve)

### **Incident Volume**

Between 1977 and 2023, the city has grown in geographical boundaries, population distribution, and population density. Accordingly, the volume of calls for service has also increased dramatically. In 1977, there were 3562 incidents. In 2023, the fire department responded to 32,040 incidents within the jurisdiction and a further 332 incidents in neighboring districts as mutual aid. When measured by number of calls, medical aid calls comprise, on average, 73% of calls for service.

Below is a summary of call volume statistics for 2003 through 2023.

Year	EMS	Fires	Other Responses	Total Calls	% Change	Average Calls / Dav	EMS Percentage
2003	11,503	623	4,108	16,234	5.8%	44.5	70.9%
2004	11,535	518	4,122	16,175	-0.4%	44.2	71.3%
2005	12,085	531	3,843	16,459	1.8%	45.1	73.4%
2006	12,682	611	3,909	17,202	4.5%	47.1	73.7%
2007	13,011	522	4,733	18,266	6.2%	50.0	71.2%
2008	12,734	502	4,871	18,107	-0.9%	49.5	70.3%
2009	12,835	443	3,923	17,201	-5.0%	47.1	74.6%

2010	12,560	383	3,736	16,679	-3.0%	45.7	75.3%
2011	13,076	391	3,443	16,910	1.4%	46.3	77.3%
2012	12,442	400	3,905	16,727	-1.1%	45.7	74.4%
2013	13,068	427	3,934	17,429	4.2%	47.8	75.0%
2014	14,259	417	4,286	18,962	8.8%	52.0	75.2%
2015	14,789	518	4,813	20,120	6.1%	55.1	73.5%
2016	16,381	451	5,214	22,046	9.6%	60.2	74.3%
2017	17,428	546	5,202	23,176	5.1%	63.5	75.2%
2018	18,797	564	6,070	25,431	9.7%	69.7	73.9%
2019	19,556	517	6,097	26,170	2.9%	71.7	74.7%
2020	18,878	586	6,335	25,799	-1.4%	70.5	73.2%
2021	21,037	925	8,063	30,025	16.4%	82.3	70.1%
2022	22,611	684	7,837	31,132	3.7%	85.3	72.6%
2023	23,162	777	8,101	32,040	2.9%	87.8	72.3%

#### Emergency Response Effectiveness

Delivering quality emergency response services requires that enough properly trained personnel, equipped with the right tools and equipment, arrive at an emergency early enough to effectively intervene in the event and prevent further harm to people, property, and the environment.

#### Dynamics of Fire in Buildings

Most fires within buildings develop predictably unless influenced by highly flammable material. Ignition, or the beginning of a fire, starts the sequence of events. It may take minutes or even hours from ignition until the flame is visible. This smoldering stage is very dangerous, especially when people sleep, since large amounts of highly toxic smoke may be generated.

Once flames do appear, the sequence continues rapidly. Combustible material adjacent to the flame heats and ignites, which, in turn, heats and ignites other adjacent materials if sufficient oxygen is present. As the objects burn, heated gases accumulate at the room's ceiling. Some of the gases are flammable and highly toxic. The spread of the fire continues quickly. Soon, the flammable gases at the ceiling reach ignition temperature. At that point, an event termed "flashover" occurs; the gases ignite, igniting everything in the room. Once a flashover occurs, damage caused by the fire is significant, and the environment within the room can no longer support human life.

Flashover occurs about five to eight minutes after flames appear in typically furnished and ventilated buildings. Since a flashover dramatically influences a fire event's outcome, any fire agency's goal is to apply water to a fire before a flashover takes place.

Perhaps as important as preventing flashover is the need to control a fire before it does damage to the structural framing of a building. Materials used to construct buildings today are often less fire-resistive than the heavy structural skeletons of older frame buildings. Roof trusses and floor joists are commonly made with lighter materials, but the effects of the fire more easily weaken them. "Lightweight" roof trusses fail after five to seven minutes of flame contact. This creates a very dangerous environment for firefighters.

In addition, today's buildings have a much greater potential for heat production than in the past.

The widespread use of plastics in furnishings and other building contents rapidly accelerates fire spread and increases the water needed to control a fire effectively. These factors make early water application essential to a successful fire outcome.

Several things must happen quickly to achieve fire suppression before flashover. The following figure illustrates the sequence of events.



The six parts of the continuum are:

- **1. Detection**: A fire may be detected immediately if someone is present or if an automatic system is functioning. Otherwise, detection may be delayed, sometimes for a considerable period.
- 2. **Report:** Today, most fires are reported by telephone to the 9-1-1 center. Call takers must quickly elicit accurate information about the nature and location of the fire from persons who are apt to be excited. A citizen well-trained in reporting emergencies can reduce the time required for this phase.
- **3. Dispatch:** The dispatcher must identify the correct fire units, subsequently dispatch them to the emergency, and continue to update information about the emergency while the units respond. This step offers several technological opportunities to speed the process, including computer-aided dispatch and global positioning systems.
- **4. Turnout:** Firefighters must don firefighting equipment, assemble it on the response vehicle, and begin to travel to the fire. Good training and proper fire station design can minimize the time required for this step.
- **5. Travel:** This is potentially the longest phase of the continuum. The distance between the fire station and the location of the emergency most influences reflex time. The quality and connectivity of streets, traffic, driver training, geography, and environmental conditions are also factors.

6. Set up: Last, once firefighters arrive on the scene of a fire emergency, fire apparatus are positioned, hose lines stretched out, additional equipment assembled, and certain preliminary tasks performed (such as rescue) before entry is made into the structure and water is applied to the fire.

As is apparent by the description of the sequence of events, applying water in time to prevent flashover is a serious challenge for any fire department. Using the continuum as a tool in designing the emergency response system is reasonably tough.

#### Emergency Medical Event Sequence

Cardiac arrest is generally used as the prototypical life-threatening medical event. A victim of cardiac arrest has mere minutes in which to receive definitive lifesaving care if there is to be any hope for resuscitation.

The American Heart Association (AHA) defines cardiopulmonary resuscitation guidelines designed to streamline emergency procedures for heart attack victims and to increase the likelihood of survival. The AHA guidelines include goals for applying cardiac defibrillation to cardiac arrest victims.

Heart attack survival chances fall by seven to ten percent for every minute between collapse and defibrillation. Consequently, the AHA now recommends the administration of cardiac defibrillation within five minutes of cardiac arrest.

As with fires, the sequence of events that lead to emergency cardiac care can be visually shown, as in the following figure.



Source: American Heart Association

The probability of recovery from cardiac arrest drops quickly as time progresses. The stages of medical response are very similar to the components described for a fire response. Research stresses the importance of rapid cardiac defibrillation and administering certain drugs to improve the chance of successful resuscitation and survival. An Oregon fire department recently studied the effect of time on cardiac arrest resuscitation. It found that nearly all its "saves" were within one and one-half miles of a fire station, underscoring the importance of quick response.

#### People, Tools, and Time

Time matters greatly in achieving an effective outcome in an emergency. However, time isn't the only factor. Delivering sufficient numbers of properly trained, appropriately equipped personnel within the critical period completes the equation. For medical emergencies this will vary based on the nature of the emergency. Many medical emergencies are not time-critical. However, for serious trauma, cardiac arrest, or conditions that may lead to cardiac arrest, response time can be crucial.

Equally critical is delivering sufficient personnel to the scene to perform all concurrent tasks required to deliver quality emergency care. For a cardiac arrest, this can be up to eight personnel: four in rotation to perform CPR, two to set up and operate advanced medical equipment, one to record the actions taken by emergency care workers, and one to direct and provide advanced patient care. Thus, for a medical emergency, the real performance test is the time it takes to provide the personnel and equipment needed to deal effectively with the patient's condition, not necessarily the time it takes for the first person to arrive.

Fire emergencies are even more resource-critical. Again, the true test of performance is the time it takes to deliver sufficient personnel to initiate water application to the fire. This is the only practical method to reverse the continuing internal temperature increase and prevent flashover.

The arrival of one person with a portable radio does not provide fire intervention capability and should not be counted as "arrival" by the fire department.

Industry standards and OSHA regulations require that at least four personnel be on the scene to conduct interior firefighting operations. The initial arrival of effective resources should be marked as the point when at least four properly trained and equipped personnel have assembled at the fire.

Effective operations at the scene of fire emergencies also depend on the arrival of sufficient trained personnel to perform all the duties and tasks required to control a fire event. Tasks must be broken down into two key components: life safety and fire flow. Life safety tasks are based on building occupants' number, location, status, and ability to take self-preservation action. Life safety tasks involve the search, rescue, and evacuation of victims. The fire flow component involves delivering sufficient quantities of water to extinguish the fire and creating an environment within the building that allows entry by firefighters.

The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat different fires. Without adequate personnel to perform concurrent action, the commanding officer must prioritize the tasks, completing some in chronological order rather than simultaneously reducing overall fire emergency effectiveness. These tasks include:

command fire attack ventilation scene safety water supply back-up search and rescue pump operation The following definitions apply to the chart:

**Low Risk** - Fires involving small sheds and other outbuildings, larger vehicles, and similar. Characterized by sustained attack, fire flows typically less than 250 gallons per minute.

<u>Moderate Risk</u> - Fires involving single-family dwellings and equivalently sized commercial office properties. Sustained attack fire flows range between 250 and 1,000 gallons per minute.

<u>**High Risk</u>** - Fires involving larger commercial properties with sustained attack fire flow between 1,000 and 2,500 gallons per minute.</u>

<u>Maximum Risk</u> - Fires in buildings with unusual hazards, such as high-rise buildings, hazardous materials facilities, large buildings, and high-life-risk properties (nursing homes, hospitals, etc.). Though they may not require large, sustained attack fire flows, they require more personnel to perform tasks required for effective control.

Based Upon Level of Risk				
Task	Maximum Risk	High Risk	Moderate Risk	Low Risk
Attack Line	4	4	2	2
Search and Rescue	4	2	2	
Ventilation	4	2	2	
Back-Up Line/Rapid Intervention	8	6	4	2
Pump Operator	1	1	1	1
Water Supply	1	1	1	
Utility Support	1	1	1	
Command/Safety	2	2	2	1
Forcible Entry	*			
Salvage	*			
Overhaul	*			
Communication	1*			
Operations Section Chief	1			
Logistics	1			
Planning	1*			
Staging	1*			
Rehabilitation	1			
Division/Group Supervisors	2*			
High Rise Evacuation	10*			
Stairwell Support	10*			
Totals:	53	19	15	6

#### **Minimum Firefighting Personnel Needed**

\* At maximum and high-risk fires, additional personnel may be needed.

#### See the definitions on the previous page.

#### Salem Fire Department Response Standard

In 1995, the City Council adopted an emergency response time standard, calling for the arrival of a fire department response unit within 5 minutes and 30 seconds of receiving the call at the 9-1-1 center at least 85% of the time. Response standards such as this are utilized by fire agencies across the country. While the actual time standards vary depending on geography and demographics, Salem's standard is consistent with agencies of a comparable size. The 5 minute 30 second standard is broken down as follows:

- Thirty seconds from receiving the call at the Willamette Valley Communication Center to notifying the fire department.
- Sixty seconds for the fire department to react to the notification and begin response to the incident and
- Four minutes from initiating a response to arrive at the incident scene.

Meeting this response time standard has been a challenge for the department. Increasing demand for service, geographic growth, and other factors have caused response times to

increase until recently. The following chart illustrates response time performance over the past 15 years based on the 5.5-minute standard.



From 2002 to 2004, the rapid decline in the number of times the fire department met the response time standard stabilized. Working with the Willamette Valley Communications 9-1-1 Center (WVCC), the Salem Fire Department implemented a "Pre-Alert" procedure designed to stabilize, if not slightly improve, the degradation of response times. During the "Pre-Alert," the 9-1-1 dispatcher broadcasts a pending incident's type and location over the radio as soon as the information is received. Since Salem fire crews monitor radio traffic at all times, they will recognize the location in their response district. They will proceed to the apparatus and go en route immediately upon dispatch.

Starting in 2005, response time performance improved dramatically. Two primary factors account for this:

- The implementation of the public/private ambulance partnership increased the number of response units in the field.
- Staffing of the tenth ALS engine company through the retention of firefighters/paramedics who previously staffed fire department ambulances.

However, 2007 saw a decline in response time performance from 71% through the middle of the year to 65% as of September 2007. Numerous factors were involved in this reduction, all of which have been addressed. The response time goal was met by 72% during 2009 and continued to improve in subsequent years with the addition of an 11<sup>th</sup> engine company. With the reduction of two engine companies because of station closures in 2012, the department experienced a decline in the ability to meet the response time standard, reaching the standard of 71.8% in 2013, 72.7% in 2014, and in 2015 the department was able to meet the standard

73% of all priority one call. With the reopening of Station 8 in July 2016, the Department has maintained a relatively flat annual response time percentage, even given the increase in call load. However, as call load increases roughly 5% annually, based on the average of the past 5 years, this percentage continues to show a downward trend.

Starting in 2024, the department will begin reporting the NFPA standard of dispatch to arrival, which aims to be 5 minutes 90% of the time. In 2023, the department met this standard 50.1% of the time.

#### **Resource Dispatched by Type of Incident**

All emergency incidents (fire, medical aid, etc.) have been assigned a pre-determined type and quantity of fire department personnel and apparatus to respond. These responses are programmed into the computer-aided dispatch system at Willamette Valley Communications Center.

<b>Type of Incident</b> Car fire, small grass/natural cover fire, public service call	Assignment One ALS Engine
Emergency medical aid, motor vehicle accident	One ALS Engine One ALS Medic Unit
House fire (structure fire)	Four ALS Engines One Ladder Truck One ALS Medic Unit One Battalion Chief
Grass/Natural Cover High-Risk Fire	Three ALS Engines Two Grass Rigs One Tender (in areas with no hydrant) One ALS Medic Unit One Battalion Chief
Motor Vehicle Accident with Entrapment	Three ALS Engines One Ladder Truck One ALS Medic Unit One Battalion Chief

Major emergencies may require additional resources. If so, the incident commander may call for a second alarm or greater. For example, two additional ALS engines, one ladder, one medic unit, and one battalion chief are dispatched to the scene of a second-alarm commercial fire.

During the day, it is common to have more than one emergency in progress at the same time and to have emergencies that require the response of personnel and apparatus from two or more fire stations. The dispatch center and on-duty battalion chiefs monitor available response resources constantly, particularly when concurrent or multiple unit response incidents occur. When the number of available ALS engines is reduced to four or fewer, the department moves to "zonal" coverage rather than "district" (fire station response area) coverage. Three zones (North, South, and West) must be covered by at least one ALS engine company per zone. The fourth available ALS engine covers other potential areas of need.

#### **Fire Suppression**

The extinguishment of hostile fire is the historic and traditional role of any fire department and remains a critical function, even as it delivers various other services. As discussed in a previous section (*Dynamics of Fire in Buildings*), the response system is designed to deliver sufficient personnel and equipment quickly enough to rescue trapped people and apply water to the fire environment to prevent "flashover."

A multitude of tasks must be completed nearly simultaneously to be successful. Personnel and apparatus must arrive quickly. The incident commander must assess the situation and make critical decisions about safely controlling the fire. A water supply (usually a hose connected between pumps and fire hydrants) must be established. Firefighters must don protective equipment, including self-contained breathing apparatus (SCBA). The fire atmosphere must be ventilated to remove heat from the structure. Hose lines must be extended to the point of attack. The building must be searched for people who may be inside. The fire must be attacked and extinguished and then carefully "overhauled" to ensure the fire is completely extinguished. Property conservation efforts are taken, such as covering undamaged furniture with tarps to minimize loss.

#### Wildland/Urban Interface

Over the past decade, this nation has seen some of the most disastrous and costly wildland fire seasons. Numerous wildland/urban interface fires have damaged or destroyed thousands of structures nationwide. Municipal fire departments often support wildland firefighting by protecting threatened structures. The City of Salem contains wildland/urban interface areas, particularly in West and South Salem.

#### **Hazardous Materials Services**

One component of the Salem Fire Department's mission is environmental protection. Salem's Hazardous Materials Team provides 24-hour emergency response services to hazardous materials incidents throughout the region. Teams of specialists ensure that the environment, public health, and safety are protected from hazardous material releases. This is accomplished by identifying unknown substances, assessing threats, coordinating multi-agency responses, and mitigating spills and releases.

In January 2004, the City of Salem and the Office of Oregon State Fire Marshal signed an intergovernmental agreement designating the Salem Fire Department as one of the state's 15 regional hazardous materials response teams. Salem's Region 13 Hazardous Materials Team comprises 24 technicians from the Salem Fire Department and 1 technician from the City of Salem Public Works Department. The region protected by the team encompasses 6,319 square miles throughout portions of seven counties. The large area includes several highway and railway transportation routes and a population of approximately 456,675 people.

The Hazardous Materials Team provides remediation and oversight to ensure safe and immediate recovery of the affected properties, declaring properties safe for re-occupancy and identifying parties responsible for cleanup costs. In addition, hazardous materials team members assist law enforcement at illegal drug lab sites, respond to biological, radiological, and chemical incidents, and investigate complaints from residential and non-industrial sources.

The Hazardous Material Team has proactively worked with local businesses to form strategies for dealing with specific situations at fixed-site facilities. This increases the effectiveness of responders by enabling them to become familiarized with premises and situations to which they

may potentially respond.

Training for a hazardous materials technician requires 80 hours of initial training, followed by regular, ongoing specialized training to maintain and acquire the skills necessary to perform safely and effectively. Due to the frequency of events and the potential consequences, it is imperative that personnel maintain efficiency and skill to minimize damage to the environment and loss of property or life.

Personnel entering the suspected or confirmed "hot zone" of contamination to perform rescue or fire suppression must be trained to the technician level. The designated team must also be properly equipped and operate within safety constraints. The Hazardous Materials Team, under the command of the fire department, takes appropriate action at hazardous materials incidents.



#### 13<sup>th</sup> Regional Hazardous Materials Response Team Area

#### **Technical Rescue Teams**

The City of Salem maintains a technical rescue team to ensure the safety of Salem residents. 24 technicians are available to safeguard victims and provide aid to unusual rescue situations beyond the capability of an average fire department response. Applying skills, knowledge, and equipment safely resolves unique or complex rescue situations. The dedicated service of the Salem Technical Rescue Team assures preparation for any life safety situation that may arise.

Highly trained rescue technicians extend the capabilities of fire and medical response to confined space rescue, high-angle rescue, trench/excavation rescue, water-related emergencies, structural collapse/emergency shoring, heavy extrication, and urban search and rescue.

#### Urban Search and Rescue

The Urban Search and Rescue (USAR) team maintains readiness for search, rescue, planning, and safety in major emergency responses. The Salem Fire Department is a charter member of the State of Oregon USAR team and remains active in its continual evolution. As a member of the statewide response team, Salem Fire Department personnel assist in rescue activities involving significant natural and manmade disasters.

Through combined efforts of the State Fire Marshal's Office and the Federal Emergency Management Agency (FEMA), funding has been secured to provide USAR team members with the training and equipment necessary to carry out highly technical rescues. Grant funds awarded from FEMA have been used to purchase specialized equipment, including thermal imaging cameras, a regional response trailer, and extrication equipment. Funds have also recently been obtained to allow USAR members to participate in advanced training courses and search classes. Salem has 7 team members trained in USAR. In 2011, the grant funds available to sustain this program through the Oregon State Fire Marshal's office were drastically reduced. The State Fire Marshal elected to disband the program. Several cities, including Salem, saw value in maintaining the program at the local level and requested the current cache of equipment valued at \$1.5 million be donated to the city teams. The Fire Marshal agreed, and an IGA to transfer this equipment to the Salem Fire Department has been completed.

#### Water Rescue

The Salem Fire Department maintains a 13-member Water Rescue Team capable of performing swift water and shore-based rescue. The team's mission is to respond to victims involved in water emergencies. In October 2004, West Coast Bank and International Association of Firefighters Local #314 raised money to purchase a water rescue boat for the City of Salem Fire Department. This addition has dramatically improved the capability of the water rescue team. Twelve department members have since been selected and trained as rescue boat operators.

The current rescue boat was purchased in 2022. We also have a reserve rescue boat that was refurbished and placed into service the same year.

#### SWAT Medics

The Salem Fire Department SWAT medic program was developed in 1993. Since then, four Salem Fire Department paramedics have worked alongside the Salem Police Department SWAT team to ensure the medical welfare of SWAT team members. Under normal circumstances, SWAT medics are limited to performing medical assignments and do not perform police functions.

SWAT medics receive specific training related to their duties, including counter-narcotics and terrorism operational medic support, known as CONTOMS. CONTOMS is regarded as one of the best tactical medical training programs available. SWAT Medics respond to a variety of encounters, such as high-risk warrants and barricaded individuals.

#### Emergency Pre-Hospital Care System

On a national level, the fire service's role and involvement in emergency medical services continue to grow. In 1990, the Federal Government estimated that up to 80% of pre-hospital medical care was provided by fire service personnel. In Salem, pre-hospital care most likely starts with an advanced life support (ALS) engine company.

An ALS engine company and a medic unit will respond to most emergency medical incidents. The ALS engine company has at least one paramedic assigned as a crewmember and is equipped with all the necessary medical equipment to provide advanced life support care. The ALS engine's response aims to begin basic and advanced life support procedures before the medic unit's arrival. Having advanced life support engine companies respond from geographically diverse locations increases the rapid care that citizens can provide.

Until 1980, the ambulance transport service in the Salem area was awarded by bid to private contractors. However, in December of 1979, the provider awarded the contract withdrew two weeks before assuming responsibility for the service. On January 1, 1980, the Salem Fire Department and Marion County Rural Fire Protection District # 1 assumed responsibility for ambulance transport in the greater Salem/Keizer area. This area incorporates over 200 square miles of Marion and Polk Counties. The Keizer Fire District added an ambulance to their organization in the mid-1980s. In July 2005, Salem Fire Department subcontracted ambulance services to Rural/Metro Ambulance and has maintained a public/private partnership since then. Salem Fire Department continues to provide ALS engine companies as first responders to emergency medical calls.

#### Financing

As staff prepared the Fiscal Year 2004-05 EMS budget, projections indicated that expenses would exceed anticipated revenues by approximately \$1.7 million. By fiscal year 2005-06, the EMS fund was projected to be in a deficit. This deficit is primarily due to the reduced Medicare reimbursements for ambulance transports.

An Ambulance Service Task Force comprised of appointed council and budget committee members convened in June 2004 to discuss options for dealing with the EMS fund shortfall and its impact on EMS and Fire Service Delivery.

The Task Force recommended that the city pursue a request for proposal (RFP) to subcontract ambulance services to a private provider while maintaining control of the Ambulance Service Area (see below). In July 2005, Rural/Metro Ambulance began providing ambulance services within the City of Salem under a five (5) year agreement. The agreement with Rural/Metro was renewed in 2010 for an additional five (5) years, with minor changes in remuneration. After completing the 10th year of the contract with RMA, the city was required to re-bid, and an RFP was completed. Falck Ambulance was awarded the contract and has been in service since July 1, 2015. In addition, the Task Force recommended that the city retain 15 firefighter paramedics currently assigned to ambulances.

Currently, Falck Ambulance, the contracted provider, struggles to meet required deployment levels, causing the Fire Department to incur \$3.3 million in overtime since November 2021 to

support EMS services. Despite this, Falck will continue as the Advanced Life Support Ambulance Provider until June 2025.

In response, the City is reassessing its service model, aiming to reinstate the Salem Fire Department as the primary provider of ambulance transport services. This transition is supported by recent fee increases, the availability of GEMT funds, and the introduction of single-role medics and basics within the department. A third-party study, with input from the Fire Department and Falck Ambulance, guided this strategic shift.

Following Council approval in March 2024, the City is moving forward with the Ambulance Operator Model, targeting a deployment on July 1, 2025.

#### <u>Rates</u>

The rates charged to patients transported by the Salem Fire Department are competitive with major ambulance systems in Oregon (see below). There have been several rate increases since 1980. The base fee for Advanced Life Support transports has ranged from a low of \$90 in 1980 (when the service was subsidized) to the current rate of \$2,409.00. Ambulance fees are billed and collected by a contracted vendor.

Fee Type	Description	Fee
Advanced Life Support 2	Dispatched as Emergency with increased level of Advanced Life Support procedures	\$ 2,409.00
Advanced Life Support 2 Bariatric	Dispatched as Emergency with increased level of Advanced Life Support procedures, transport requires bariatric gurney	\$ 2,409.00
Advanced Life Support Emergency	Dispatched as Emergency with Advanced Life Support procedures	\$ 2,409.00
Advanced Life Support Emergency Bariatric	Dispatched as Emergency with Advanced Life Support procedures, transport requires bariatric gurney	\$ 2,409.00
Advanced Life Support Non Emergency	Dispatched as Non-Emergency with Advanced Life Support procedures	\$ 2,409.00
Advanced Life Support Non Emergency Bariatric	Dispatched as Non-Emergency with Advanced Life Support procedures, transport requires bariatric gurney	\$ 2,409.00
Basic Life Support Emergency	Dispatched as Emergency, no Advanced Life Support procedures	\$ 2,409.00
Basic Life Support Emergency Bariatric	Dispatched as Emergency, no Advanced Life Support procedures, transport requires bariatric gurney	\$ 2,409.00
Basic Life Support Non Emergency	Dispatched as Non-Emergency, no Advanced Life Support procedures	\$ 2,409.00
Basic Life Support Non Emergency Bariatric	Dispatched as Non-Emergency, no Advanced Life Support procedures, transport requires bariatric gurney.	\$ 2,409.00
Advanced Life Support On- Scene Treatment	Dispatched as Emergency, Advanced Life Support procedures, no transport	\$ 917.00
Mileage	Fees for Mileage reflect the transport distance traveled rounded to the nearest tenth of a mile, beginning from the point of patient pickup to the point of patient's delivery destination.	\$ 47.00
Extra Attendant	When a patient's condition warrants the presence of additional medic personnel to assist crew during transport.	\$ 117.00
Wait Time	Per hour for waiting time for a patient at a medical facility; charged in half-hour increments after the first half hour	\$ 375.00

PREHOSPITAL EMERGENCY AND NON-EMERGENCY MEDICAL FEE SCHEDULE FY 2024-25 (25% Increase)

Each patient transported by ambulance is billed individually regardless of the number of patients per call.

The City Council approved the most recent ambulance rate increase in June 2024.

#### Salem Ambulance Service Area (ASA)

The City of Salem Fire Department has the exclusive franchise to provide emergency ambulance service to an Ambulance Service Area (ASA #1) in Marion County and ASA #1 in Polk County (encompassing West Salem). This area encompasses most of the City of Salem and the Salem Suburban Rural Fire Protection District.

#### Commonly Asked Medical Service Questions

#### Why does the fire engine also show up when I call for an ambulance?

The Salem Fire Department provides an integrated emergency medical service system. ALS engine companies are an important part of that system. ALS engine companies respond with the transporting ambulance to ensure the shortest time to arrival of care, assist with critical care situations, and provide triage and treatment for minor calls that do not result in ambulance transport. Depending on the circumstances, many tasks must be performed during an Emergency Medical Aid incident, including medical history, airway and cardiac management, spinal stabilization, wound management, intravenous therapy initiation and maintenance, and communication with the hospital. This may be in addition to scene management, traffic control, extrication of patients, and fire and hazardous material containment.

There are eleven staffed fire stations strategically placed throughout the City of Salem. Operational practices are designed to maximize the availability of ALS engines throughout the city. In a medical emergency, the arrival time of life-saving treatment by paramedics tremendously impacts patient outcomes. Statistics indicate that ALS engine companies arrive approximately 68% of the time before medic units.

In situations such as cardiac arrest, the outcome may depend on the ability to accomplish lifesaving interventions quickly. Although these calls make up a small portion of the call volume, it is impossible to predict when and where they will occur.

Not all requests for medical assistance result in transportation. Certain types of ALS calls require treatment by a Paramedic but do not require transport to the hospital by ambulance. An example of this would be a diabetic patient who needs assistance stabilizing their blood sugar level. This, in turn, keeps the limited number of transporting units available to respond to other requests for help. Likewise, the engine can be restored when the ambulance arrives and takes over patient care.

This operational structure optimizes the resources of the Salem Fire Department. ALS engine companies responding with ALS ambulances provide the City of Salem with a highly integrated and effective emergency medical services system.

#### What is the difference between Basic Life Support and Advanced Life Support?

Basic Life Support (BLS) and Advanced Life Support (ALS) define the levels of care provided by EMTs and paramedics. BLS and ALS may also refer to the skills associated with training. Some EMS systems use engine companies and other first response units with personnel trained in EMT Basics as the initial responders. All the Salem Fire Department's engine companies and medic units can provide ALS and BLS care.

Basic Life Support care consists of what is commonly referred to as "first aid," plus Cardiopulmonary Resuscitation (CPR) and the use of Automated Electronic Defibrillators (AEDs).

Advanced Life Support functions are medical procedures performed in the field by highly trained paramedics. Common procedures include using a heart monitor/defibrillator, inserting airway tubes and intravenous lines, and injecting intravenous medications. The paramedics can also communicate by radio with the hospital emergency room for advice and direction from the emergency room physicians. In certain medical emergencies, the paramedics are authorized by Standing Medical Orders and Treatment Protocols from the Physician Advisor to initiate ALS treatment absent direct contact with the hospital.

<u>Ambulance Membership Program</u> Salem area ambulance providers started the ambulance membership program, Capital Fire Med, in 1987 as an ambulance affordability program. The concept is simple: for an annual \$70 membership, all household members receive unlimited emergency and most non-emergency ambulance services within the Capital Fire Med service area. Fire Med does not take the place of medical insurance. If the patient does not have medical insurance coverage that will reimburse medically necessary ambulance transport (private, Medicaid, Medicare, etc.), the cost of the transport is billed to the patient. There are currently 6,500 member families in the Salem/Keizer service area. The City's third-party ambulance provider presently administrates the program.

#### Aircraft Rescue Fire Fighting (ARFF)

The fire department is the first responder to all emergencies at Salem-Willamette Vally Airport, formerly known as McNary Field. The department must follow Federal Aviation Administration (FAA) regulations so that aircraft with 30 or more passengers and those operating scheduled service can arrive at and depart from the Salem Airport.

The FAA has strict requirements for the fire department and training to protect the airport and maintain certification adequately. The fire department's Training Division annually provides 40 hours of aircraft fire fighting and rescue training, which completes the FAA's requirement for firefighters who respond to aircraft emergencies. Station 6, adjacent to Salem-Willamette Valley Airport, houses the ARFF vehicle and is staffed with FAA-certified firefighters.

#### Training

The success of a fire department can be directly correlated to the success of its training program. An effective training program sets the tone for the department's operation. Training is an investment by the city to ensure quality service delivery and protect itself against allegations of wrongdoing. Successful training also establishes an expected level of performance for employees.

Fire departments face numerous mandates and recommended standards. Even voluntary standards arguably have the power of mandates if the department violates them, resulting in litigation. The recent trend in the fire service is towards safer and more accountable operations. The desired result is best achieved through adopting defensible policies and procedures, training, and the safe, effective use of all resources.

The Salem Fire Department has prioritized training needs based on mandates, risks, complexity, and frequency of performance. Some topics are covered annually, while others may only be once over several years. For example, OR-OSHA-required training on air-pack use is covered annually, while recertification for paramedics is completed over two years. Training priorities and requirements are reviewed on an annual basis.

All firefighter recruits are assigned to a twelve-week recruit academy. Once the academy is completed, lateral hires are assigned to a station and start functioning as a firefighter-paramedic. Entry-level recruits are assigned to the department's training engine for an additional two months, designed to provide an overview of the basic level of training to function in a line position as a firefighter-paramedic. Training includes firefighting techniques and procedures, paramedic emergency medical technician training, and various rescue and hazardous materials training disciplines. After completing the academy, recruits graduate to the probationary firefighter-paramedic level and complete another 9 months of on-duty supervised training and evaluation.

Newly promoted apparatus operators must complete two levels of certification requirements before promotion. The third level of training is accomplished within six months of promotion.

The Salem Fire Department Operations Division is divided into 39 work groups (13 total companies/crews per shift multiplied by four shifts). The training officer provides classroom training and drills, meeting State and Federal fire and rescue training mandates. The EMS Training Officer was transferred to the Training Division in 1998 to help keep EMT basics and paramedics current in the mandated training required by the Oregon State Health Division. The EMS Training Officer coordinates and conducts training all year.

#### Fire and Life Safety Services

The Fire and Life Safety Division is responsible for five major areas of activity.

- (1) Fire safety inspections of businesses and the public spaces of residential occupancies triplex and larger.
- (2) Investigations to determine the origin and cause of fires.
- (3) Review plans and inspection of all new construction and remodeling of commercial and residential properties triplex and larger for fire and life safety issues.
- (4) Public safety education and information.
- (5) City-wide emergency management and disaster preparedness.

ORS 476.030 provides that the Oregon State Fire Marshal shall enforce all fire prevention rules. This ORS also provides that if in the opinion of the State Fire Marshal, a governmental subdivision of the state has enacted adequate regulations generally conforming to state and national standards concerning fire prevention, fire safety measures, and building construction requirements for safety and if the governmental subdivision provides reasonable enforcement of its regulations, the State Fire Marshal may exempt the area subject to such regulation either partially or fully from the statues, rules, and regulations administered by the State Fire Marshal.

The City of Salem is now, and has been for many years, an "exempt" jurisdiction. This is beneficial to the community in that adoption and enforcement of fire safety regulations are done locally, considering local needs and conditions. The local administration also benefits the development community since all city departments involved in new development and construction can be coordinated, producing a more efficient process.

The Salem Fire Department's fire and life safety efforts, combined with initiatives at the state and national levels, have made a difference. As shown on the graph below, the number of fires continues to increase since the lowest point in 2014. The department continues providing fire and life safety information and education with available resources.



#### **Business Inspections**

There are nearly 12,000 commercial occupancies, including multi-family residential, in Salem. Each is categorized according to its risk to life, the structure, and the surrounding community should a fire occur in the building.

- (1) Complaints about situations immediately hazardous to life and property.
- (2) Facilities requiring a fire safety inspection to obtain a license (i.e. daycare)
- (3) Schools, nursing homes, and other institutional and education facilities
- (4) Businesses with high occupant loads (theaters, nightclubs, churches)
- (5) Facilities using large quantities of hazardous materials.
- (6) Downtown area businesses
- (7) Complaints that do not present an immediate hazard to life and property.
- (8) All other businesses

Current staffing does not allow fire safety inspections of the "all other businesses" category.

#### Fire Investigation

Fire and Life Safety division staff is also trained to conduct investigations of fires for origin and cause. Division staff assists Emergency Operations Division personnel any time they cannot determine the origin and cause and leads investigations when a large loss incident requires indepth research and documentation, an incident is of a suspicious or criminal nature, or a fire-related death or serious injury has occurred. Division staff coordinates the investigation with property owners, insurance investigators, and the appropriate law enforcement agency.

#### **Plans Review**

Fire department involvement in community development begins at the conceptual stage. Division staff reviews and comments on proposals for new development, such as subdivisions and commercial properties.

Fire and Life Safety Division personnel review construction plans for all commercial buildings and all multi-family residential properties. The review includes all fire and life safety elements such as exit ways, fire alarm systems, fire sprinkler systems, hazardous materials handling equipment, and firefighting water supply.

Once plans have been approved and the facility is in the building process, division staff conducts on-site inspections to ensure the building and internal systems are built and installed correctly.

#### Public Education/Information

Most structure fires occur in homes. The fire department's only opportunity to reduce the number of home fires is through public education. The Fire and Life Safety Division, strongly supported by the Emergency Operations Division, provides a public safety education program to help the community understand the fire risks, how to prevent fires, and how to respond appropriately should one occur. In addition, staff present injury prevention information, such as the importance of bike helmets and life jackets. Analysis of annual incident statistics directs ongoing updates to the educational effort.

Until a deputy fire marshal was lost due to budget reductions in 2008, the Salem Fire Department provided a comprehensive fire safety curriculum for children from kindergarten through grade twelve. Programs emphasized fire prevention (don't play with matches), response (stop, drop, and roll), and other information appropriate to the age level.

School teachers have been provided a curriculum to present fire life safety education in their classrooms.

The department continues to deliver some fire safety education:

- The youth fire prevention and intervention program helps identify behavioral patterns in children with fire-setting tendencies. The Salem Fire Department works with other agencies (mental health counselors, Juvenile Justice Department, etc.) to provide effective intervention. This program has received state recognition for its success.
- The smoke alarm program provides up to two working smoke alarms for every household inside the City of Salem of Salem Suburban Rural Fire Protection District that requests one. Studies have shown that working smoke alarms increase house fire survival rates by 50%.
- The bicycle safety program provides free bicycle helmets to children of families that cannot otherwise afford them.
- Engine companies conduct fire station tours. During these tours, attendees are introduced to fire safety concepts.
- Community members and the City of Salem provided access to personal floatation devices (PFDs) at Wallace Marine Park starting in 2017. The PFDs are

in service from Memorial Day to Labor Day in two locations in the park. They are available for day use only and are secured nightly when in service.

#### Fire Department Internet Web Site

With the increased popularity of the Internet as a source of information, efforts have been made to provide a department website that serves media organizations and the public with an up-to-date resource for information and education. The website has proven to be an invaluable tool for keeping the citizens of Salem informed of the fire department activities, events, fire safety, and general information. The department's website can be viewed by visiting the following page on the City of Salem website: <u>https://www.cityofsalem.net/fire</u>.

#### **Emergency Management**

Whenever a major emergency or disaster occurs in the community, look first to the city for assistance and direction. The City of Salem, through the Fire and Safety Division, operates a comprehensive emergency management program to ensure an effective response to disasters by all city departments.

Emergency management activities are divided into four phases-----Mitigation, Preparedness, Response, and Recovery—which is defined as:

*Mitigation Phase:* This phase includes activities aimed at eliminating or reducing the likely effects of a disaster.

*Preparedness Phase:* This phase aims to plan and organize the city resources to respond effectively and efficiently to a disaster.

*Response Phase:* Response is the first phase that occurs <u>after</u> the onset of an emergency. Planned and coordinated actions were implemented to prevent hazards to life and destruction of property.

*Recovery Phase*: Recovery activities continue beyond the response phase of an emergency to return all systems to normal. Short-term activities attempt to return vital human support systems to minimum operating standards, while long-term activities are intended to stabilize all systems.

#### Emergency Operations Center (EOC)

Under provisions of Oregon Revised Statutes (Chapter 401), the City of Salem Charter, and the Salem Revised Code (SRC 2.660- 2.680), the responsibility and authority for emergency management during a disaster is vested in the city manager or his/her designated successor. The city manager or designee determines when a state of emergency exists and authorizes the Emergency Operations Center (EOC) activation.

The EOC, housed in the Salem Police Department, has backup power and a separate telephone system to improve communications and control during an emergency. All essential departments of city government staff the EOC, plus other agencies or individuals selected because they are needed for specialized functions. During an emergency, the EOC operates according to the National Incident Management System (NIMS) under the direction of the EOC Director. City managerial and supervisory personnel establish the plans and procedures for dealing with a disaster, set priorities, gather and commit resources, and provide overall direction for the activities of field

response forces. The fire department organizes and provides training to EOC members.

#### Community Emergency Response Team (CERT)

CERT members are citizens trained by the City of Salem in the basics of emergency management to take on leadership and coordination roles in their neighborhoods during an emergency or natural disaster. Currently, over 1,500 trained CERT members are throughout the city, with training offered as needed and available.

#### Increasing Call Volume

In 2021, the department responded to over 30,000 calls for the first time. Since 2013, the department's call volume has increased 56.4%. The annual call volume increase from 2022 to 2023 was nearly 3%. Based on statistics from recent months, all indications are that there will be a similar increase in 2024. The average annual increase based on the call load over the last five years was 5.2%. If this trend continues the Salem Fire Department would expect to respond to an estimated 43,000 calls in 2029.

#### Successor Training

The Salem Fire Department is currently a "young" department. Forty-nine percent of all front-line staff have been hired in the last 10 years. This, coupled with the fact that approximately eleven percent of the workforce is eligible to retire, has made the need for successor training a priority for the department. Upcoming training will focus on identifying and mentoring the future leaders in our organization.

#### **Firefighter Recruitment**

The Training Division is responsible for recruiting entry-level and lateral firefighter/paramedics. Recently, the number of certified paramedic applicants has dropped significantly statewide, providing added challenges for the Salem Fire Department when competing for top-quality recruits.

#### Strategic Planning and Standard of Cover

The department updated the Strategic Plan in 2017. The strategic plan results from an in-depth examination of the Salem Fire Department's vision for the future and a road map of how it will arrive at its destination. Department staff clearly understands that while on the road to the future, they will be required under the policy direction of the City Council and consistent with the management direction and guiding principles of the city organization to react to challenges, decide on a correct path when faced with forks in the road, and embrace detours that may lead them in a whole new direction. The current Strategic Plan will be updated in FY 2025 with the arrival of the new Fire Chief.

The department's Standards of Cover report was updated in 2018 and fully complies with industry best practices in deployment analysis. The evaluation and analysis of data is based on nationally recognized guidelines and criteria, including recognized National Fire Protection Association (NFPA) standards, Insurance Services Office (ISO) schedules, any federal and state mandates relative to emergency services, and generally accepted practices within emergency services.

The Standards of Cover report is the written procedure determining the distribution and concentration of fixed and mobile resources. These procedures assist the department in ensuring a safe and effective response force for fire suppression. Emergency medical services and specialty response situations.

#### **Fire Foundation**

The Salem Fire Department has established the Salem Fire Foundation (SFF). SFF is a private, non-profit 501 (c)3 dedicated to assisting the Salem Fire Department to achieve its core mission of saving lives through the following programs:

Community outreach and engagement in CPR and AED training Employee recognition and development Fire prevention and risk awareness Service enhancements Assistance for injured firefighters and their families Special projects

The SFF's first major project is to achieve the nation's highest save rate for sudden cardiac arrest. In 2014, Salem's save rate for witnessed sudden cardiac arrests was 42.1%. The goal is to see that number climb to over 60% within the next 10 years. To do this, we must teach 5,000 people CPR each year and equip the community with additional public-access AEDs.

In FY 2015-16, the Salem Fire Foundation, with a matching grant from the EMS Fund, purchased 64 AEDs in Salem Police Department patrol cars and 50 public access AEDs that continue to be placed in the community through a Foundation grant program.

The Foundation also reimbursed the Salem Fire Department for the cost of teaching over 2,500 8<sup>th</sup> graders hands-only CPR and how to use an AED in FY 15-15, the department's initial year of implementing the program.

The department has also launched the PulsePoint Respond and PulsePoint AED (Automated External Defibrillator) smartphone applications, which currently have 4,686 registered devices. PulsePoint Respond alerts CPR-trained bystanders to cardiac emergencies in their immediate vicinity. This alert directs you to the exact location of the emergency and the closest AED to start lifesaving CPR. There have been two documented instances of this application notification saving a life.

In 2023, through a grant from the Hull Foundation, we have been able to deploy 69 AEDs to our paramedics to act as professional responders. A PulsePoint Professional Responder is a trained and certified emergency responder registered with the PulsePoint app, which connects individuals with life-saving skills to those experiencing sudden cardiac arrest nearby. These responders receive alerts through the app when a cardiac arrest occurs in their vicinity, allowing

them to provide immediate assistance using their CPR and AED training until emergency medical services arrive. Registered on the PulsePoint platform, their credentials are verified to ensure they can perform the necessary interventions. Working in collaboration with the Salem Fire Department, they enhance the community's emergency response capabilities and improve survival rates by reducing the time to first intervention. This rapid response optimizes resource use and strengthens community resilience by involving local professionals in life-saving efforts.

#### High-Performance CPR

In FY 14-15, all Salem Fire Department EMTs were trained to perform High-Performance CPR (HP-CPR). High-quality cardiopulmonary resuscitation has been determined as the primary component in influencing survival from cardiac arrest. High-performance Cardiopulmonary Resuscitation (HP-CPR) is an effective way to standardize and apply current American Heart Association (AHA) Advanced Cardiac Life Support Guidelines. The focus of HP-CPR is on continuous chest compressions. Continuous chest compressions of adequate rate and depth delivered with minimal interruption improve the heart's receptivity to defibrillator shocks and emergency cardiac drugs, thereby increasing the chance of survival.

High-performance CPR has been described as Choreographed CPR or the "pit crew" model of resuscitation. Its delivery entails a highly structured team strategy in which each provider focuses on a specialized role. Patient analysis and care delivery occur rapidly, with chest compressions interrupted every 2 minutes for less than 5 seconds to evaluate the patient's heart rhythm and check for pulses. A team of 8 highly skilled providers is required to accomplish these tasks.

# GLOSSARY

#### ACRONYMS, JARGON, AND DEFINITIONS

5 1/2 minute Response Standard	This includes the total reflex time elements of call processing (30 seconds), alarm tone to apparatus departure (1 minute), and driving response time (4 minutes).
ALS - Advanced Life Support	Advanced field medical procedures performed by Firefighter-paramedics.
ALS Engine Company	An engine company with at least one paramedic on the crew. Each Salem engine has at least one paramedic assigned daily.
Ambulance Service Area (ASA)	The County Health Division assigns the primary response area to an Ambulance Service Provider. The Salem Fire Department is responsible for two ambulance service areas, one in Polk County and one in Marion County.
Apparatus operator-paramedic(AO)	In the fire service, an "Equipment Operator," "Engineer," or "Driver" is responsible for driving and operating fire apparatus.
Apparatus	The term apparatus is used to signify the difference between vehicles and other fire equipment.
ARFF - Aircraft Rescue Firefighting	A discipline of firefighting specific to aircraft emergencies involves specialized training and equipment. To maintain the FAA rating for McNary Field, the Salem Fire Department must maintain a team of 16 ARFF-trained firefighters.
Assistant Chief	The title refers to the fire department officer charged with overseeing the Emergency Operations, Training and EMS, and Fire and Life Safety divisions.
BC - Battalion Chief	First chief officer and commander of one of the city's two fire battalions. The Battalion Chief is trained to be the primary Incident Commander. Each battalion has a complement of engine companies (five engines south, six engines north), and 2 ladder companies one north, one south).

BLS - Basic Life Support	Basic field medical procedures performed by fire or medic crews, including first aid, cardio-pulmonary resuscitation (CPR), clearing blocked airways, and use of automatic or semi-automatic heart defibrillators. This service is generally performed by the fire service nationwide regardless of whether the fire department also provides ALS care from engines or ambulances.
--------------------------	--

- CAD Computer Aided Dispatch A computer system to support the community's dispatching, records, and management information functions of the police and fire departments by increasing speed and accuracy of dispatch, reducing response times, improving information availability, maintaining location and timing information, and providing accurate record retrieval for reporting and management.
- Captain Also known as a company officer, a company officer is an individual responsible for directing a fire company, usually an engine or ladder crew.
- Chief Officer Any battalion officer, deputy, assistant, and fire chief rank.
- Civil Service Charter Sections 28 -<br/>48Defines persons subject to Civil Service and the terms<br/>and conditions under which Civil Service applies to the<br/>fire service.
- Civil Service Rules The personnel rules are separate from the City Human Resources Rules, which govern personnel situations for Civil Service employees in the fire department.
- CMS Center for Medicare and Medicaid Services.
- Community Right-to-Know State and Federal laws establish the public's right to know about hazardous materials in the community and workplace.
- Concentration A method of placing multiple fire engines in a specific area or station with an increased average call load. It helps improve response times in each area. (See also Distribution.)
- Condition I The department is in its normal operating mode. Resources are adequate to meet emergency requests for service needs and allow personnel and equipment to be taken out of service for training as needed.

Condition II	Due to existing alarms, fire and EMS resources are at minimum levels. Under Condition II, drills, training exercises, inspections, testing, work assignments, etc., are immediately canceled. Companies return to quarters to stand by. This may also be enacted during extreme inclement weather.
Conflagration and Conflagration Act	A large, disastrous fire that overwhelms local and regional resources. The Oregon Fire Service Mobilization Plan allows for drawing and allocating resources from all fire agencies throughout the state for a conflagration and sets up parameters for cost recovery.
Deputy Chief	The title refers to fire department officers who oversee the Division they are assigned to.
Deputy Fire Marshal	Fire and Life Safety Division employees are assigned to any or all the following: fire code inspections, fire cause investigations, examination of fire and life safety plans, and public safety education.
Distribution	Method of placing fire stations to cover the geographic boundaries of a fire response area adequately. (See also Concentration.)
EMD	Emergency Medical Dispatch.
EMS	Emergency Medical Service.
EMT	Emergency Medical Technician.
Engine	Often called a pumper. The primary vehicle for fire advanced and basic life support service delivery. Vehicle carries 750 gallons of water, a 1500 gpm pump, and a variety of fire hoses for water delivery. An engine company is generally the smallest increment of service allocated to a fire station. All of Salem's 11 fire stations contain one staffed ALS engine.
Enhanced 9-1-1	Automatically identifies the location and the telephone number of the calling party requesting emergency services through 9-1-1.

EOC - Emergency Operations Center	The EOC is instituted whenever an emergency or disaster occurs that is beyond the ability of normal city department resources to handle. The EOC centralizes major decision-making and resource priorities. When activated, fire department personnel, along with operational supervisors from Police, Public Works, and Administrative Services, participate in staffing the EOC 24 hours a day. The Fire Chief is the director of the EOC.
EOD	Emergency Operations Division.
FAA - Federal Aviation Administration	The federal agency that sets ARFF training and response standards.
Fire and Life Safety Division	The fire department Division is charged with fire prevention activities, public education and information, fire code inspections, fire investigations, fire and life safety building plan reviews, and city emergency management.
Firefighter-Paramedic	Civil Service position classification with combined fire- fighter and medic unit program duties. Incumbents must carry an advanced life support (EMT-P) classification.
Flashover	A phenomenon that describes the point in the growth of a fire where all combustible surfaces in the room ignite, and the room becomes completely involved in the fire.
Grass Rig	Specialized four-wheel drive firefighting apparatus that is designed for natural cover, wildland, or other fire- fighting where pumping while rolling or accessibility of terrain is a requirement. This vehicle may be used when a structure is atop a steep private drive or in snow and ice conditions.
HAZMAT	Hazardous Material.
HAZMAT - First Responder	Operational level of trained HAZMAT response that generally handles simple, straightforward HAZMAT incidents.
HMO	Health Maintenance Organization.
Incident Commander - "Command"	The term is given to the individual who assumes the authority to direct fire department operations at an emergency incident. This could be any department member; however, it is often someone of chief officer rank.

Insurance Services Office (ISO)	Evaluate city fire department, dispatching, and water supply for community fire insurance premium rate schedule. Salem currently is a Class 2 city on a scale of one to ten.
Keizer Rural Fire Protection District	Rural Fire Protection District is located in the north of Salem.
Ladder Truck	Specialized 100' aerial platform fire apparatus with a full complement of ground and roof ladders, heavy-duty generator, and forcible entry tool system. The crew is trained in ventilation, forcible entry, cutting electrical service, rescue, salvage and overhaul, and water tower use.
MCFPD #1	Marion County Fire Protection District #1, Fire Protection District is located east of Salem and North of Keizer.
Medic	Firefighter-paramedic of EMT-P certification who is assigned paramedic duties. Only an EMT-P is correctly called a paramedic. When the EMS system physician advisor gives standing orders, an EMT-P performs advanced field medical procedures.
Medic Unit	The ambulance included two paramedics and all ALS equipment required for patient transport.
Mutual Aid	Agreement through which fire departments assist neighboring departments during a major incident by either standing by to respond to subsequent alarms or by assisting at the actual incident. This helps all agencies cope in a major situation and avoid the extra costs of maintaining a larger staff and more equipment.
National Incident Management System (NIMS)	The command structure by which an emergency incident is managed. Previously referred to as the "Incident Command System" (ICS).
Natural Cover Fire	Synonymous with wildland fires or fires that occur in natural growth such as grass, brush, or trees.
NFPA	National Fire Protection Association.
OHP	Oregon Health Plan.
OMAP	Oregon Medical Assistance Program. More commonly known as the "Oregon Health Plan".

Oregon Fire Service Mobilization Plan (OFSMP)	The State Conflagration Act.
Paramedic, EMT P	Emergency Medical Technician certified for ALS care. Initial 1,100 and 24 biannual re-certification hours of education, training, and experience with emphasis on prenatal care and psychiatric emergencies. Certified by the Oregon State Health Division.
Pre-Hospital Care	A Salem Fire Department firefighter-paramedic rendered all emergency medical aid to a patient before delivery to hospital staff in the emergency room. Include care given by the first responding ALS engine company.
Reserve Apparatus	Fire apparatus are kept in reserve and pressed into service when front-line apparatus is unavailable; they may also be used for major incidents. Salem has 2 reserve engines.
SFD	Salem Fire Department. Responsible for incidents within the City of Salem and SSRFPD.
Shift	A period of staffing is currently a four-shift system (A, B, C, and D). Each shift begins at 8:00 a.m. and lasts for 24 hours.
SRC	Salem Revised Code.
SSRFPD	Salem Suburban Rural Fire Protection District. Rural fire district located to the west and south of Salem for which Salem Fire Department provides fire service by contract. Much of SSRFPD is within the Urban Growth Boundary.
Standards of Coverage	Defines the number of units and the methodology used to deploy those units to various emergencies.
International Fire Code (IFC)	A national code of minimum standards is designed to provide adequate fire department access, water supply, and fire protection features within buildings and maintain structures safely once they are built and occupied. The IFC is adopted at the state level as the Oregon Fire Code (OFC) and the local level as the Salem Fire Prevention Code through SRC 58.

Water Tender	Fire apparatus is primarily designed to carry water to fire scenes in un-hydranted areas or where the water distribution system volume is inadequate to meet fire flow or fire ground operational needs. Both Salem tenders carry 3,000 gallons of water.
Willamette Valley Communications Center (WVCC)	The WVCC is tasked with receiving 911 calls and dispatching appropriate emergency responders. It serves Salem and surrounding areas in Marion and Polk Lincoln counties. The WVCC is also referred to as "Dispatch."
Wildland Fire	Synonymous with natural cover fire. A fire occurs in natural growth such as grass, brush, or trees.
Wildland – Urban Interface	The area where natural vegetation fuels (forests and grasslands) and human-made fuels (structures) meet.