



Spokane Fire Department

2019 ANNUAL REPORT







TABLE OF CONTENTS

TABLE OF CONTENTS	2-3
MESSAGE FROM THE FIRE CHIEF	4-5
ABOUT SPOKANE FIRE	6-7
EVERY SECOND COUNTS	8-9
COMBINED COMMUNICATIONS CENTER	10-11
FINANCE	12-13
EMERGENCY MEDICAL SERVICES	14-15
SPECIAL OPERATIONS	16-17
HEALTH CARE INNOVATION	18-21
LEARNING	22-23
FIRE PREVENTION	24-25
COMMUNITY RISK REDUCTION	26-27



MESSAGE FROM THE FIRE CHIEF



MESSAGE FROM FIRE CHIEF BRIAN SCHAEFFER

2019 was an incredible year for the City of Spokane and our Fire Department. In 2019, we were able to secure sustainable funding through a mixture of general fund contributions, EMS Levy, special pension board approved contributions, and funds from voter supported Proposition 1 funding. The mix of these funding streams supports the current and future staffing plans for at least the next five years.

The diversity of funding methodology allows the department to staff Station 5 with a three-person ALS Engine, Stations 11 and 13 with four-person ALS Quint apparatus, a City-Wide Safety Officer, and maintain Alternative Response units (ARU) at Station 1, Station 3, and Station 15.

We made substantial improvements to the Fire Department Fleet in 2019 with three Pierce PUC Engines delivered and two additional Engines and Quint ordered. Numerous improvements have been made across all divisions in capital equipment, technology, and processes.

This Annual Report outlines many other accomplishments from 2019, and I know the City's continued reinvestment in the SFD will yield enormous dividends for our community, visitors, and our members in 2020 and beyond.



ABOUT YOUR SPOKANE FIRE DEPARTMENT

AGENCY OVERVIEW

The Spokane Fire Department (SFD) has existed as a fire protection agency within the State of Washington since 1884. The fire department is a unit of the City of Spokane general government as required of first class cities under Chapter 35.22 RCW. The City of Spokane is the second largest city in the State of Washington, located adjacent to the Idaho border, and has a Washington Survey and Rating Bureau (equivalent to the Insurance Services Office) rating of three (3).

The Spokane Fire Department's service area is approximately 69.5 square miles and consists of a mix of urban, suburban, industrial, and wildland areas.

The primary services provided by the Spokane Fire Department include:

- Fire Suppression
- First Response Basic Life Support (BLS) Emergency Medical Services
- First Response Advanced Life Support (ALS) Emergency Medical Services
- Community Risk Reduction
- Fire Prevention (Inspection, Fire Protection Engineering Services)
- Fire Investigation/Special Investigations
- Hazardous Materials "Specialist Level" Response
- Special Rescue (Marine, Technical, and USAR)

MISSION

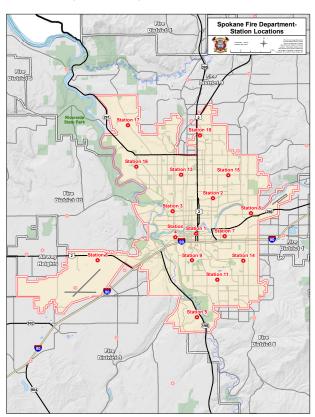
We enhance your quality of life, always earning your trust, by saving lives, preventing harm and protecting property with compassion and integrity.

VISION

To empower our members to exceed the expectations of our citizens in an intricate and dynamic environment.

VALUES

Trust - Mutual Respect - Integrity - Empathy - Transparency - Equality









EVERY SECOND COUNTS

CASCADE OF EVENTS

The Commission on Fire Accreditation International (CFAI) has defined response time elements as a cascade of events. This cascade is similar to that used by the medical community to describe the events leading up to the initiation, mitigation, and ultimate outcome of a cardiac arrest. It is imperative to keep in mind that certain intervals described, such as turnout and travel time, can be directly influenced by the fire service via station locations and design, staffing levels, as well as local rules and procedures for response. Other factors, such as the alarm interval, can be influenced indirectly through public education and engineering initiatives. The fire service can also influence the call-processing interval through its ability to define standards and compel performance by its dispatch centers.

TIME TEMPERATURE STANDARD

The "time-temperature curve" standard is based on data from the National Fire Protection Association (NFPA) and the Insurance Services Organization (ISO), which have established that a typical point source of ignition in a residential house will "flash over" at some time between five and ten minutes after ignition, turning a typical "room and contents" fire into a structural fire of some magnitude.

TIME TEMPERATURE CURVE

The utility of the time-temperature curve for fire station placement is limited to a number of factors including:

• It does not account for the time required for the existence of a fire to be "discovered" and reported to the fire department via the 911 system.

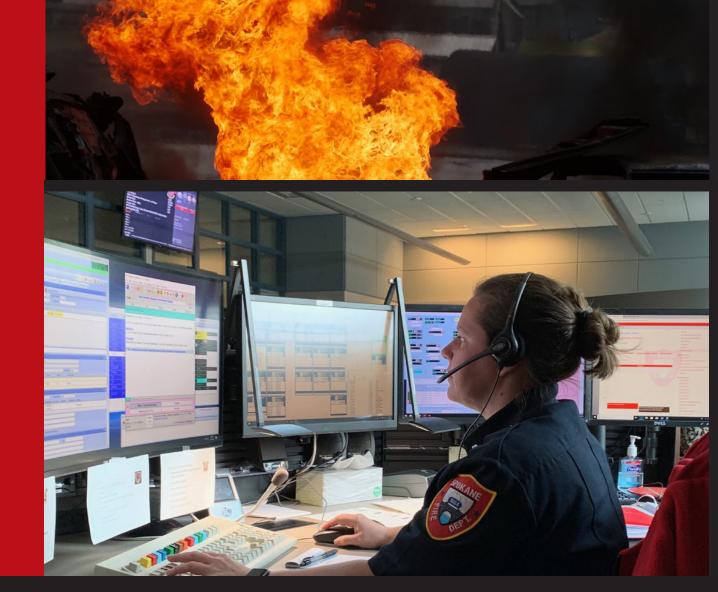
- The time from ignition to flashover varies widely (5-30 minutes depending on building characteristics); thus it cannot provide a valid basis for the allocation of resources.
- The curve is constantly shifting, given the numerous changes in building construction, built in suppression systems, the increased use of fire resistive materials for furniture, and other items typically found in the interior of occupied buildings.

CARDIAC ARREST SURVIVAL RATE

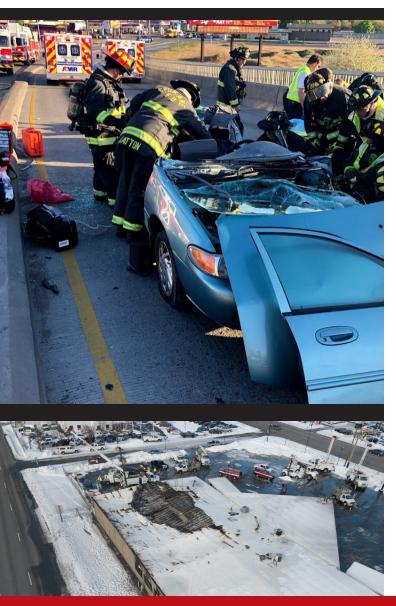
In communities where the fire service is the principal provider of Emergency Medical Services (EMS) first response, the goal is for basic life support (CPR and defibrillation) to be available to the victim of a cardiac arrest within four minutes of the event, and that advanced life support (paramedic service) should be available within eight minutes or less of the event. Early notification, distribution and concentration of emergency response services are thus paramount to successful resuscitation efforts.

THE GOLDEN HOUR STANDARD

In trauma events, the golden hour is the historic benchmark applied to victims with significant critical traumatic injuries. The golden hour reflects the concept that survivability decreases significantly if the patient isn't in the operating room within one hour of receiving a critical traumatic injury.



COMBINED COMMUNICATIONS & FIRE COMMUNICATIONS CENTER



COMBINED COMMUNICATIONS & FIRE COMMUNICATIONS CENTER

The Spokane Fire Combined Communications Center (CCC) provided fire service communications, dispatch and all-risk emergency coordination services to all local fire protection authorities in Spokane County until July 1, 2019. On average, the center received and dispatched over 200 emergency calls per day. For 2019 (through the end of June), the CCC processed and dispatched just over 31,196 incidents. The CCC provided services to 15 fire agencies, including the City of Spokane Fire Department, covering 1800 square miles and interfacing with neighboring county fire jurisdictions (Lincoln, Whitman County, etc.). The CCC employed 21 staff members that worked a combination of 12-hour, 24-hour and surge-related staffing/shifts.

On July 1, 2019, the CCC dissolved, leaving the Spokane Fire Department to continue operations on its own. Just as the CCC had done, SFD Dispatch continues to provide fire service communications, dispatch and all-risk emergency coordination services to the City of Spokane Fire Department with eight shift personnel. On average, the center receives and dispatches over 120 emergency calls per day. For 2019, SFD Dispatch processed and dispatched just over 45,136 incidents in the City of Spokane.

Fire Communication Specialists each receive 1000 hours of initial training. They are all EMT and EMD certified, making them highly trained and skilled to answer and provide instruction during medical emergencies. For 2019, the SFD Communications Specialists answered, triaged, and dispatched 37,060 EMS calls for the citizens and visitors of the City of Spokane, all while meeting the NFPA 1221 standard of dispatching critical calls in 64 seconds or less 90% of the time and urgent calls in 106 seconds or less, 90% of the time. The CCC averaged 96% on critical calls and 99% on urgent calls.



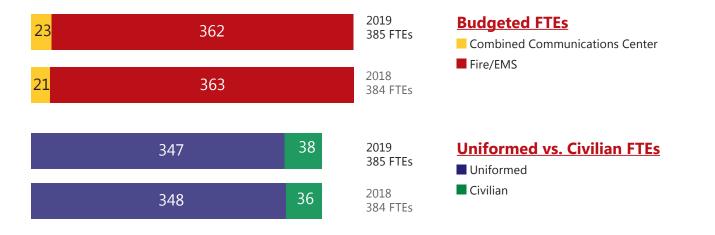




FINANCE











EMERGENCY MEDICAL SERVICES



EMERGENY MEDICAL SERVICES (EMS)

Spokane Fire Department Emergency Medical Technicians (EMT's) and Paramedics continue to provide quality care to people suffering from life-threatening conditions. This includes caring for people who suffer sudden cardiac arrest, heart attack, stroke and major trauma. The Spokane Fire Department works collaboratively with local hospital systems (Providence and Multi-Care) to provide patients experiencing these conditions with the best possible, evidence-based care.

In 2019, Spokane Fire Department EMS providers provided care to over 2,000 citizens experiencing one of these life-threatening conditions. Spokane's emergency care system is regarded as a leader in providing care to patients with these conditions and the contribution that Spokane Fire Department EMS providers provide is instrumental in improving patient outcomes from these conditions. The Spokane Fire Department administers, and participates in, several innovative programs that provide our citizens with care and resources that improve quality of life focusing on addressing the social determinants of health that affect quality of life.



SPECIAL OPERATIONS

HAZARDOUS MATERIALS

The mission of the SFD Hazmat Team is to respond to incidents involving Hazardous and suspected Hazardous Materials located, not only within the City of Spokane, but also anywhere within the region when the appropriate requests are made. The Spokane Hazmat Team will conduct operations to remove endangered people, conduct rescue operations, stabilize the incident, and act as technical advisors to Incident Commanders of Hazmat Incidents using properly trained team members, safe work practices/equipment, and adhering to the following priorities:

- To Preserve Life
- To Protect the Environment
- To Protect Property
- Incident Stabilization

Hazardous Materials are defined as chemical, biological, radiological and nuclear releases that pose threats to people, the environment and property. All personnel assigned to the team undergo rigorous training upon assignment, as well as ongoing training to maintain proficiency and increase efficiency and safety at Hazardous Materials incidents. The Hazmat Team is staffed daily by three fire station. SFD's Hazmat Team is a member of the Inland Empire Hazmat Task Force, which is comprised of the Spokane Fire Department, Fairchild AFB Hazmat Team and Kootenai County Fire and Rescue Hazmat Team. These resources have the capabilities and training to work together to stabilize large-scale, regional hazmat incidents.

TECHNICAL RESCUE

The Spokane Fire Department's Technical Rescue Team was established in the early 1990's. The team responds to rescue situations beyond the capabilities of the standard fire company within the City of Spokane and throughout Spokane County. The team has responded to many challenging and high profile incidents in its 20 plus years of existence. These extreme rescue situations include building collapse, confined-space rescue, trench / excavation emergencies and machinery rescue as well as high and low angle rope rescue operations. The team is made

up of 40 personnel with highly specialized training and equipment responding from Station 15 and Station 4. The Captains of Station 15 and 4 manage the team with program administration managed by a Battalion Chief, under the supervision of the Deputy Chief of Operations.

WATER RESCUE

The SFD Water Rescue Team provides first response rescue capabilities for all types of water related incidents. The Spokane Fire Department Water Rescue Team also responds to emergencies throughout Spokane County in conjunction with the Spokane Valley Water Team and Spokane County Sheriff's Dive Team. In addition to providing swift water rescue on the Spokane River the team will respond to pond, ice, and flooding incidents. Forty highly trained technicians, responding from Station 2, located in the Logan Neighborhood, and Station 16, located near Joe Albi Stadium utilize a variety of equipment to include a jet boat, catarafts, and kayaks to conduct rescue operations. The team is also supported by the SFD Drone Unit, which is based out of Station 17. The Captains of Stations 2 and 16 manage the water rescue team with program administration handled by a Battalion Chief, under the supervision of the Deputy Chief of Operations.

RESCUE TASK FORCE

The Spokane Fire Department's Rescue Task Force is a specialty team within the SFD that is tasked with the responsibility of providing medical care during mass casualty acts of violence or other active threat situations. RTF Teams are made up of specially trained Firefighter/ EMTs and Firefighter/Paramedics from Stations 3, 13, and 14. They are part of a work group made up of Firefighters and Law Enforcement Officers that have the common goal of treating and rescuing victims from an active threat area. RTF Teams are designed to operate in the "warm zone" of active threat situations, where they work in areas that are clear but not secure. As the law enforcement objectives of identify, confine, and eliminate threats are proceeding, RTF Teams can be provided a separate security detail and enter the area to provide wound care for victims. The RTF Team's main goal is to access, stabilize, and evacuate victims from these hostile environments.

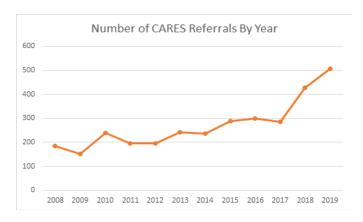


HEALTH CARE INNOVATION

COMMUNITY ASSISTANCE RESPONSE (CARES) PROGRAM

The Spokane Fire Department's CARES Program completed its eleventh year of operation in 2019. The CARES Team is the Fire Department's social response team. Many times, Fire Department personnel encounter an individual who has significant needs apart from their physical health needs. When they encounter these situations, Fire Department EMS providers make a referral to the CARES Team requesting a follow-up visit. The CARES Team Manager then assigns a team comprised of Social Work students to visit the clien't referred by the firefighters. The Team makes contact with the client and completes a thorough social service needs assessment. The Team develops a plan for connecting the client with community resources that address their needs. The CARES Team advocates on behalf of the client and assures that connections are in place to help the client improve their quality of life. The primary goal of the program is to improve quality of life and reduce unnecessary use of the emergency health care system through addressing needs based on the social determinants of health. In 2019, the **CARES Team:**

- Received 506 referrals from Spokane Fire Department EMS providers. This represents an 18% increase in the number of referrals managed by the CARES Team in comparison to 2018.
- Ensured that 387 individuals had sufficient community resources and support.
- Provided resources that allow vulnerable citizens in our community to remain in their home in a stable, safe and healthy environment.
- In 2019 data shows a 67% reduction in use of the emergency care system by CARES clients when they work with the team to address the social determinants of health needs and connect to community and social resources



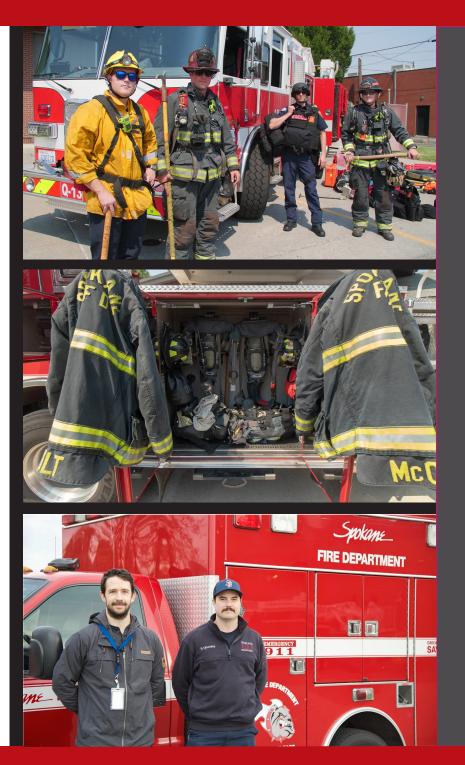
911 Call Reductions								
	Average 911 Calls	Average 911 Calls	Reduction in					
	Pre-CARES	Post-CARES Closure	Calls					
2018 Quarter 4	3.98	1.61	60%					
2019 Quarter 1	4.18	1.39	67%					
2019 Quarter 2	3.67	1.59	57%					
2019 Quarter 3	4.24	0.73	83%					

Note: 911 Call Reductions are tracked 3 months post- closure date. Data on cases closed in Quarter 4 will be tracked during the 2020 Quarter 1.

Snapshot of CARES Referrals			
Average Age	70 years old		
Gender	52% Female 40% Male		
Top 3 Reasons for CARES Referral	Assistance with medical needs Fall Prevention Caregiving needed to assist with Activities of Daily Living		
Zip Code with the Highest Number of Referrals	99205 16% of the total 2019 referrals were from 99205		

SPOKANE FIRE DEPARTMENT & FRONTIER BEHAVIORAL HEALTH BEHAVIORAL RESPONSE PARTNERSHIP PROGRAM

The Spokane Fire Department and Frontier Behavioral Health operate an innovative program that pairs a Spokane Fire Department Paramedic and Frontier Behavioral Health Mental Health Counselor that respond to people experiencing behavioral health concerns. This innovative program leverages the expertise of these two professionals to connect the individual to appropriate behavioral health treatment facilities and avoid admission to local hospital emergency departments. In 2019, the BRU responded to nearly 250 people experiencing behavioral health issues and successfully connected nearly half of them with more appropriate care resources including behavioral and substance use treatment.



Call Processing Time	Year	% Met	<u>Emerge</u>	ncy Call Volume		
(Urgent)	2019	97.1%	Spokane Fire Department calls from 911			
Fire Dispatch call pickup to first unit assigned	2018	98.4%	,			
	2017	98.4%	Emergency Calls Year Responded to by SFD Units		% Increase	
	2016	99.1%	2019	45,393	2.4%	, 0
			2018	44,323	4.3%	, 6
Call Processing Time	Year	% Met	2017	42,499	5.0%	
(Critical)	2019	94.2%	2016	40,480		
Fire Dispatch call pickup to first unit assigned	2018	94.8%		,		
	2017	92.2%		Emergency Calls		
	2016	95.1%	Year	In Spokane City Limits	% Incre	ease
			2019	43,259	2.5%	, 0
Critical EMS Turnout Time		% Turnout	2018	42,187	4.6%	6
Time unit assigned to en route	Year	Time Met	2017	40,329	3.2%	6
3	2019	28.5%	2016	39,095	1.8%	6
	2018	30.9%				
	2017	25.1%				
	2016	28.0%				
			Full Fie	st Alarm Assignment		% Response
Critical Fire Turnout Time	V	% Turnout	Met	st Alaini Assignment	Year	Time Met
Time unit assigned to en route	Year 2019	Time Met 67.5%		assigned to on scene	2019	90.9%
			Spokane Fire Department response time standard for full first alarm response (14	2018	92.5%	
	2018	65.6%		2017	89.8%	
	2017	55.7%	firefighters) when responding to a fire is 11 minutes, 90% of the time.		2016	83.8%
	2016	53.8%				
Critical Turnout Time		% Turnout	Basic I	ife Support Unit		% Response
	Year	Time Met		ed by Fire Dispatch to on scene	Year	Time Met
Time unit assigned to en route	2019	67.0%	Spokane Fire Department response time standard for the arrival of the first unit to a Non-Life Threatening Incident is 11 minutes, 90% of the time.	2019	85.3%	
	2018	69.4%		2018	87.4%	
	2017	62.6%		2017	90.9%	
	2016	65.8%		2016	90.2%	
First Arriving Engine At Fire		% Response	<u>Adva</u>	nced_		% Response
Fire Dispatch call received to on scene	Year	Objective Met	<u>Life S</u>	Support Unit	Year	Time Met
Spokane Fire Department response time	2019	93.2%	Call rec	eived by Fire Dispatch to on scene	2019	94.7%
standard for the first arriving engine at a fire response is 8 minutes 30 seconds, 90% of the time.	2018	94.6%	Spokane Fire Department response time		2018	95.3%
	2017	95.3%	standard for the arrival of the first unit to a Life Threatening Incident is 8 minutes 30	2017	94.1%	
	2016	93.7%	second	seconds, 90% of the time.	2016	94.4%







TRAINING CENTER

TRAINING CENTER

The SFD Training Center is comprised of both civilian and uniformed members of SFD, responsible for Fire & EMS training, the CARES program, the Behavioral Response Unit (BRU), comprehensive audiovisual products, and management of the Quartermaster program.

The SFD Training Division launched an aggressive training initiative during the 2019 year. After graduation of a 9-member recruit school early in the calendar year, the Training Division focused much of their work in incumbent operations level training. Remaining compliant with state & federal mandates, SFD conducted fixed facility and acquired structure live fire training; numerous Multi-Company Operations training scenarios such as a multi-jurisdictional down firefighter rescue incident in an acquired structure; extrication awareness training; conventional forcible entry and vertical ventilation training; hose deployment clinics; fireground search lectures; CPR Pit Crew; monthly paramedic training; numerous online training requirements; Airport Rescue Fire Fighter (ARFF) awareness and hands-on training; and joint training with Spokane Police department. This was accomplished while navigating a packed training calendar shared with Special Operations teams.

The Training Division also aids in the rehabilitation process of injured firefighters through light duty assignments and facilitating time needed to attend doctor's appointments. These members contribute to projects and emerging programs throughout the course of their recovery.

During 2019, the Training Division launched a fitness-wellness pilot initiative that yielded significant increases in functional capacity for our industrial athletes. Eastern Washington University collaborated in the pilot by analyzing detailed performance metrics that match studies undertaken in other departments with results yielding a steep decline in injury, increase in performance, and a healthier department. These results save our taxpayers significant costs for short & long-term disability costs. The successful and popular pilot transitioned into a program designed to reduce firefighter injury, increase demand capacity, and integrate functional fitness concepts and techniques under the watchful eyes of elite trainers.

The Training Division also facilitates a myriad of local, regional, and national training. Personnel have attended courses offered at the National Fire Academy in Emmitsburg, MD, fire service training conferences, and certification-level training aimed at producing professionally accredited fire officers and specialists.







FIRE PREVENTION

FIRE PREVENTION DIVISION

The Spokane Fire Department Fire Prevention Division consists of one Fire Marshal, one Assistant Fire Marshal, five Deputy Fire Marshals, one Fire Protection Engineer, Office Manager, and two outstanding administrative staff. Responsibilities of the Prevention Bureau include education, engineering, code enforcement and special inspections for temporary special events. The Bureau currently utilizes the 2015 International Fire Code as adopted by the State of Washington and the City of Spokane. This provides the legal requirements for the protection of property from the hazards of fire, explosion or dangerous conditions in new and existing buildings, as well as providing a minimum level of life safety for the public and emergency responders during emergency operations.

In 2019, the Bureau conducted 11,539 inspection activities requiring site visits or the review and approval of submitted reports. Of that number, there were seven different types of service reports reviewed totaling 6,670 activities, consisting of private hydrant reports, range hood service reports, fire alarm and sprinkler system reports, standpipe service reports, extinguishing system reports and paint/spray booth service reports.

Additionally, 1,881 Deputy Fire Marshal site visits were conducted to renew annual operating permits for activities involving more hazardous operations, 293 special event evaluations were conducted, 850 plan review approvals by the Fire Protection Engineer, and 705 construction-related sign offs. The Bureau also monitors the end life dates for multiple single wall underground storage tanks in Spokane and notifies property owners when those tanks need to be removed. In 2019, 32 tanks were removed, reducing the potential for contamination of the Spokane aquifer, our sole source of drinking water.

SPECIAL INVESTIGATION UNIT

The primary responsibility of the Special Investigation Unit is to conduct fire origin and cause investigations utilizing the Scientific Method in accordance with NFPA 921 Guide for Fire and Explosion Investigations. Investigators are called to investigate structure fires, vehicle fires, wildland fires, rubbish fires, and attempted fire starts. These investigations involve conducting a fire scene examination, witness and victim interviews, evidence collection, origin and cause investigation, testing and research, and report writing to determine a cause of the fire.

When a fire is determined to be a criminal act, SFD works in conjunction with Spokane Police Detectives, Spokane County Prosecuting Attorney Office, the United States Bureau of Alcohol, Tobacco, Firearms, and Explosives Special Agents to identify and prosecute the person or persons responsible.

The Special Investigation Unit also conducts internal investigations, internal accident investigations, burn injury investigations and offers assistance to neighboring agencies requesting fire investigation services.

The Unit currently staffs three full-time Fire Investigators, one Captain and two Lieutenants, with four supplemental Fire Investigators assigned on weekends or as needed.







COMMUNITY RISK REDUCTION



COMMUNITY RISK REDUCTION

Educational programming provides data driven, fire and life safety information to our community. Various community programs are offered with increased emphasis placed on the national Community Risk Reduction priority populations: older adults, people living with disabilities, immigrants and refugees, families with young children and low income households. Examples of programming include; smoke alarm installation, home safety visits for low income households, preschool and grade school fire safety curriculum, first responder interaction for refugees and immigrants, and fire and fall prevention programming for older adults.

NOTABLE COMMUNITY EQUITY EDUCATIONAL EVENTS

Kids Jr Fire Academy

Open to the public, the event provided an opportunity for kids to have positive interactions with first responders, practice hands only CPR, participate in a junior combat challenge, and sit in a firetruck.

Preschool Program

Spokane Fire Department works with preschool providers to help the community better recognize the higher risk status to children under the age of five. We provide an age-appropriate lesson on the sound of a smoke alarm, tools for adult's vs toys for kids, hands off matches & lighters and the chance for the children to see a firefighter slowly put on their gear. This positive interaction with first responders helps children feel more comfortable if they are ever in an emergency situation.

STATISTICS

- **6,891** Youth reached through children's safety programs
 - **56** Presentations and community events organized through the Community Risk Reduction office
- 775 Smoke and CO alarms installed
- **345** Preschoolers participated in the preschool fire safety program



MISSION

We enhance your quality of life, always earning your trust, by saving lives, preventing harm and protecting property with compassion and integrity.

Chapter 35.103 RCW: Revised Code of Washington Chapter 35.103 was passed into law during the 2005 legislative session (House Bill 1756). This law mandated certain response criteria be established and measured by fire departments across the State of Washington beginning in 2007 with an analysis of responses in 2006. The requirement was passed and is now the law for all substantially career fire departments. The purpose of this law is to report to the Governing Body of each fire jurisdiction, as well as to the residents of any given area, how the fire department is doing in meeting its established emergency response standards. These standards take into consideration a number of response types: A) Fire Suppression, B) Emergency Medical Services - Basic Life Support (BLS), C) Emergency Medical Services - Advanced Life Support (ALS), D) Special Operations (i.e. Hazardous Materials response and Technical Rescue response), E) Aircraft rescue and firefighting, F) Marine rescue and firefighting, G) Wildland firefighting.

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