



West Thurston Regional Fire Authority (WTRFA)

2022 ANNUAL REPORT



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A MESSAGE FROM YOUR CHIEF



Rob Smith, CFO

Fire Chief

As Fire Chief I am pleased to present the annual report for West Thurston Regional Fire Authority. Covering the reporting period of 2022, this provides an overview of our activities in a year of challenges.

Our department has been committed to providing excellent fire and emergency services to our community. We have worked hard to ensure that we have the necessary resources, personnel, and equipment to respond to any emergency that may arise. During this reporting period we faced a number of challenges but were able to successfully overcome them with the support of dedicated staff and community members. Our department responded to 3,391 emergency incidents in 2022.

We also conducted a number of public education activities to raise awareness about fire safety and prevention. Our goal is to help our community members stay safe and prevent fires from occurring in the first place.

I am proud of the work our department did in 2022. We look forward to continuing to provide effective and efficient emergency services to our community in the coming year. Thank you for your continued support of our fire department and the important work that we do.

Sincerely,

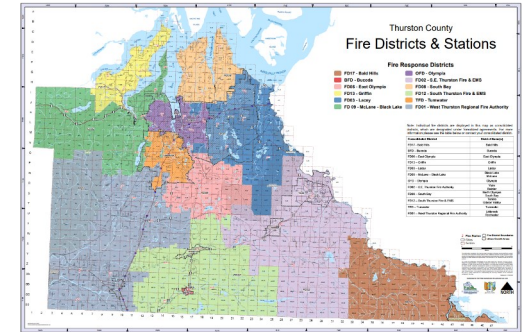
A handwritten signature in black ink, appearing to be "RS" or "Rob Smith".

YOUR FIRE DEPARTMENT

West Thurston Regional Fire Authority is located just south of Olympia, Washington. The 158 square mile response zone stretches approximately 12 miles east and west along Interstate Five from the city limits of Tumwater to the Lewis County Line. The RFA began from the partnership between Thurston County Fire District 1 and Thurston County Fire District 11. The goal of the partnership was to maximize efficiencies and improve service delivery to the citizens of the region. The successful partnership created the fourth Regional Fire Authority (RFA) in the state of Washington.

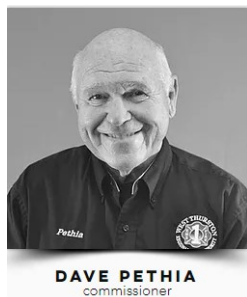
West Thurston RFA delivers comprehensive emergency services including Fire Protection, Rescue and Emergency Medical Services and Patient Transport. The Regional Fire Authority serves approximately 30,000 residents in the communities of Bordeaux, Delphi, Gate, Grand Mound, Littlerock, Maytown, Michigan Hill, Rochester, and Scott Lake. The diverse service area includes industrial, commercial, residential, and forest land.

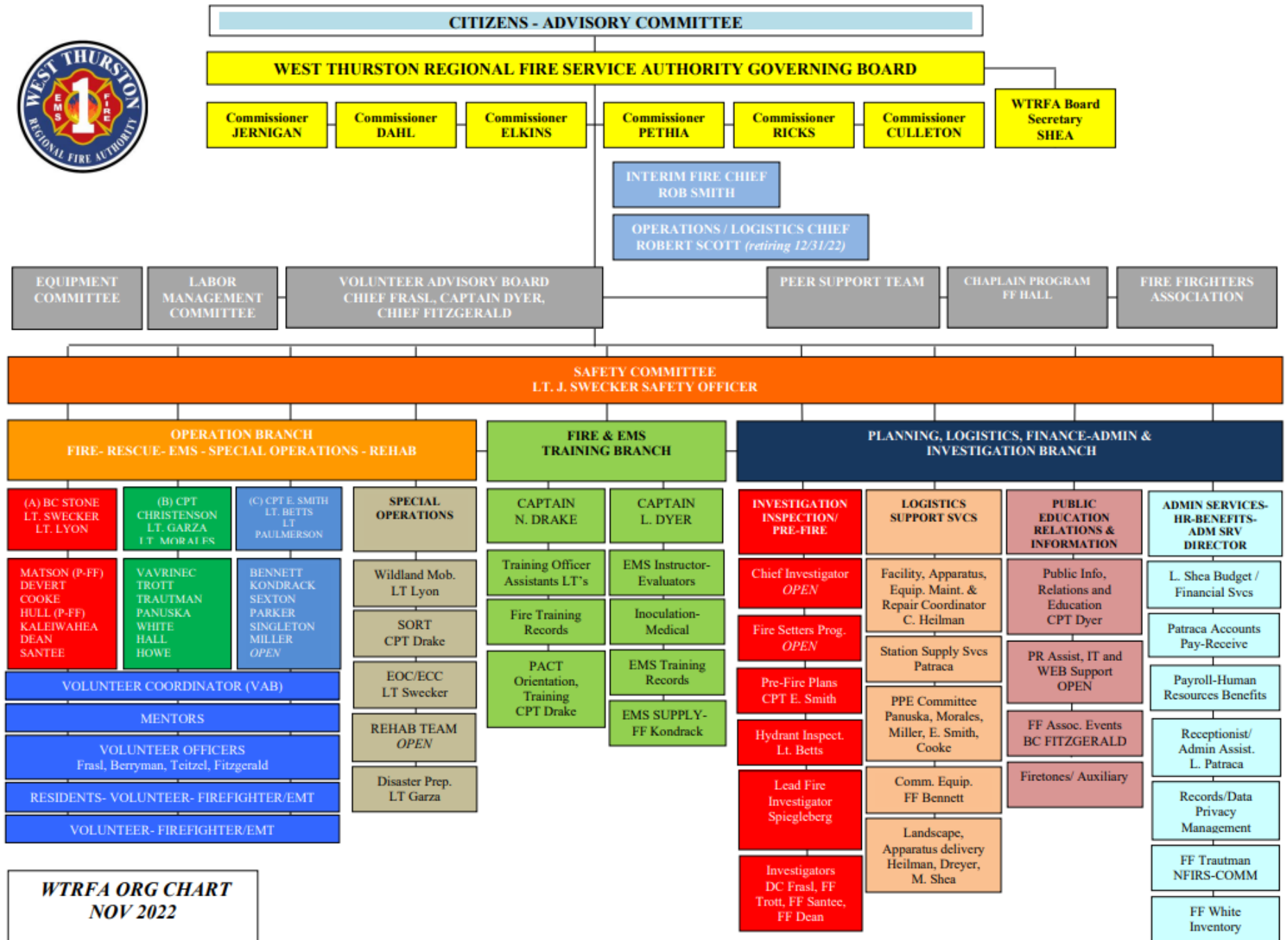
The Regional Fire Authority delivers exceptional service with state-of-the art fire, rescue and emergency medical apparatus and equipment through 61 exceptional professionals both career (36) and volunteer (25). Our proud professionals respond to an average of 3,000 emergency 911 service calls each year.



ORGANIZATION COMMISSIONERS

West Thurston Regional Fire Authority is a special purpose district created by the vote of the people residing in the district with direction provided by a duly elected Board of Fire Commissioners under the RCW 52.26.030. As West Thurston RFA was formed and established in 2009 by two fire protection jurisdictions, the governing board carries out the business of the district according to the strategic plan adopted.





FORMATION

West Thurston Regional Fire Authority exists to provide fire suppression, emergency medical, technical rescue, and hazardous materials response. Additionally, the WTRFA provides public information, education, investigation, and risk reduction inspections services to preserve and protect lives and property within the communities of Bordeaux, Delphi, Gate, Grand Mound, Littlerock, Maytown, Michigan Hill, Rochester, and Scott Lake.

In 2004 the Washington State Association of Fire Chiefs (WSAFC) led legislative efforts to provide fire districts, municipalities, and tribal nations with the ability to "formally" join under the provision of fire and emergency services. This ability had formally been available through mergers (between fire districts), and annexations (cities into fire districts or other unincorporated territory protected by a fire district) using inter-local agreements or contractual consolidations. This new formation, adopted by the State Legislature in 2004, allowed municipalities and fire districts to create a "Regional Fire Authority" (RFA). An RFA is a municipal corporation that is not bound by strict guidelines for which entities can join. An RFA, organized under Title 52 of the Revised Code of Washington (RCW), is similar to a fire district in many ways, but also has a few distinct differences, mainly a planning committee for the formation and a funding model related to taxation and a benefit charge. The approval of an RFA required a public vote with a super majority (60% + 1). Voters in the communities of Littlerock, Maytown, Rochester, Grand Mound and surrounding communities approved Proposition 1 in August of 2008, and the West Thurston RFA was officially established on January 1, 2010, effectively becoming the fourth Regional Fire Authority in Washington State.

Effective January 1, 2010, by vote of citizens under RCW 52.26 and under Resolution 2009-04 (TCFD #1) and 2009-442 (TCFD #11), West Thurston Regional Fire Authority was created.

MISSION

It shall be the mission of West Thurston Regional Fire Authority to develop, operate and manage resources granted by the people of the region to preserve lives and property in our communities by providing services directed toward prevention, management and mitigation of fire, emergency medical, rescue, and disaster incidents.

VISION

To be recognized by our community as an agency that is responsive to the community's needs and concerns, we must be a model of excellence in providing services through education, prevention and mitigation in addition to fostering an environment of involvement, trust and cohesion: West Thurston should be a community service leader.

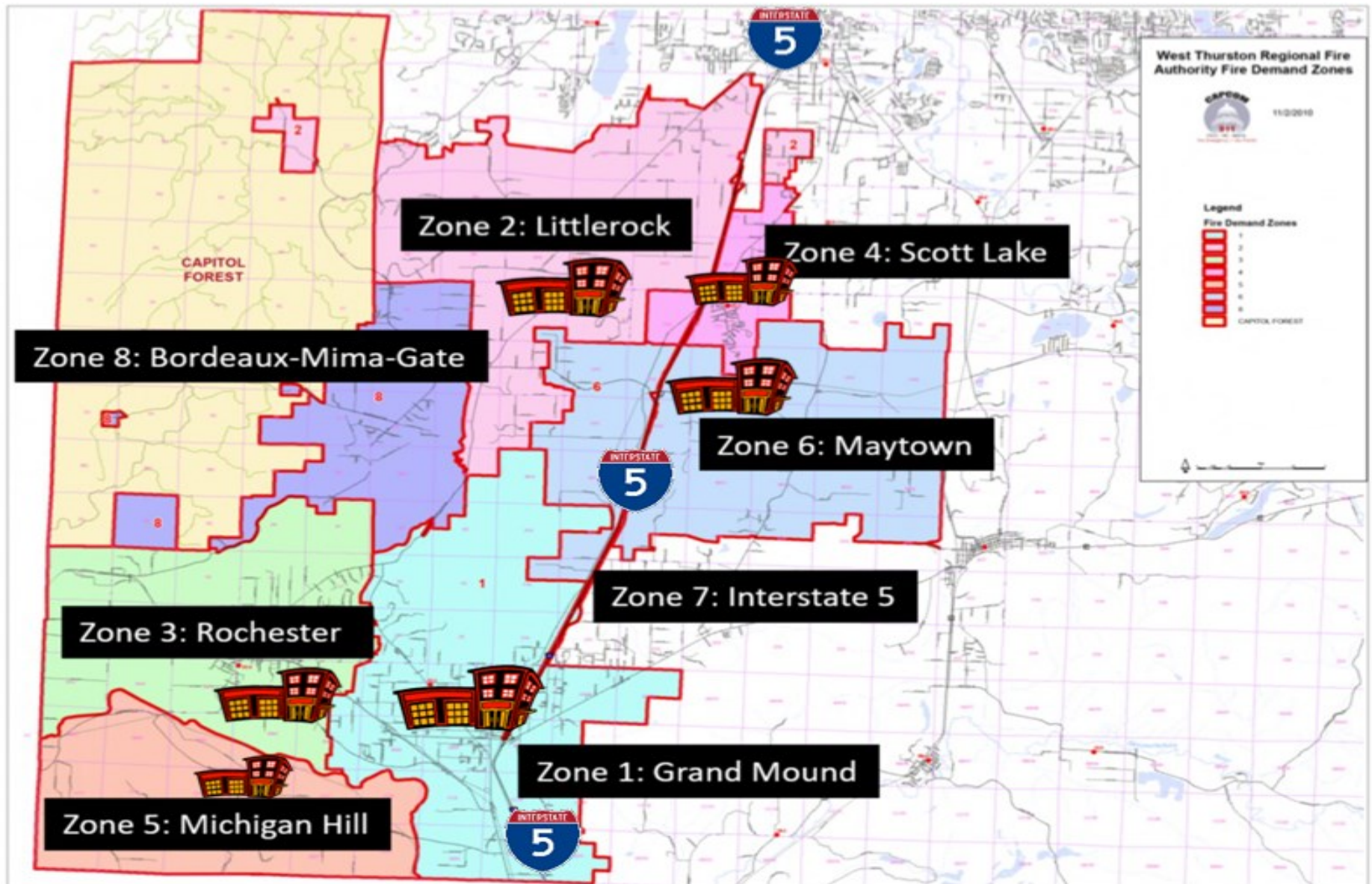
VALUES

- **Integrity** - we value honesty, a high work ethic, and adherence to our policies, procedures and guidelines.
- **Accountability** - we stand ready to prove; we do what we say. We will be accountable for our individual actions.
- **Efficiency** - we will manage and direct our resources for maximum service impact and effectiveness.
- **Responsiveness** - we will respond to the needs of our community appropriately, and in a timely manner.
- **Service** - we will always promote public service over self-service



SERVICE AREA

THE RFA RESPONSE ZONES:



INCIDENT RESPONSE and MODELING

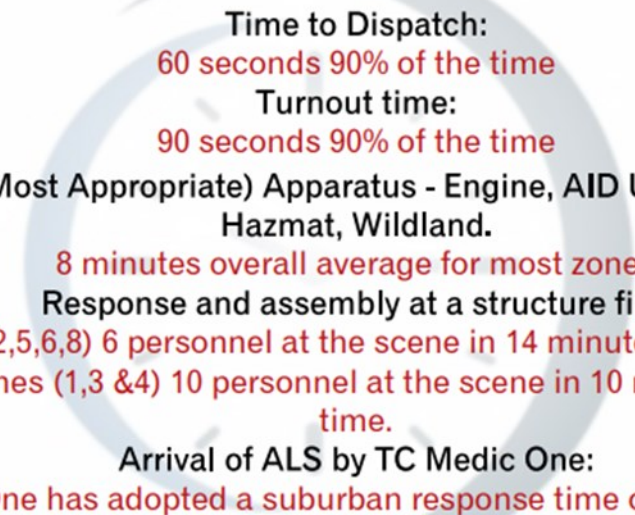
Operational Highlights

Emergency Response:

Our Fire Department responded to a total of 3391 emergency incidents during the reporting period, including fires, medical emergencies, hazardous material incidents, and rescues. Our response time to emergencies remained outside our target, averaging 8 minutes and 5 seconds for most zones. Of all responses, 1274 or 37.57% of the time we experienced two or more calls at one time. Through prompt and efficient actions, we were able to protect lives, property, and the environment.

To provide the quickest response possible, we evaluate statistics and place limited resources in the most likely location of where the next emergency will be. If you can imagine how major league baseball uses the “shift” as a defensive strategy which the defense overloads players to one side of the field based on the analysis of each batter. We use a minimal, two-person, cross-staffing model at each station to ensure efficiency and timeliness. We expect the current trend in call volume and overlapping calls to continue particularly as we see growth and expansion of industry in our area. The expected growth will add pressure to not only our response system model, but also has a domino effect on our mutual aid partners. Our response system model is based, in part, on a National Fire Protection Association (NFPA 1720 hybrid) recommendation that ensures quality response within eight minutes, which is tied to positive outcomes.

INCIDENT RESPONSE and MODELING: STANDARDS



Time to Dispatch:
60 seconds 90% of the time

Turnout time:
90 seconds 90% of the time

Arrival of 1st (Most Appropriate) Apparatus - Engine, AID Unit (EMT), Rescue, Hazmat, Wildland.
8 minutes overall average for most zones

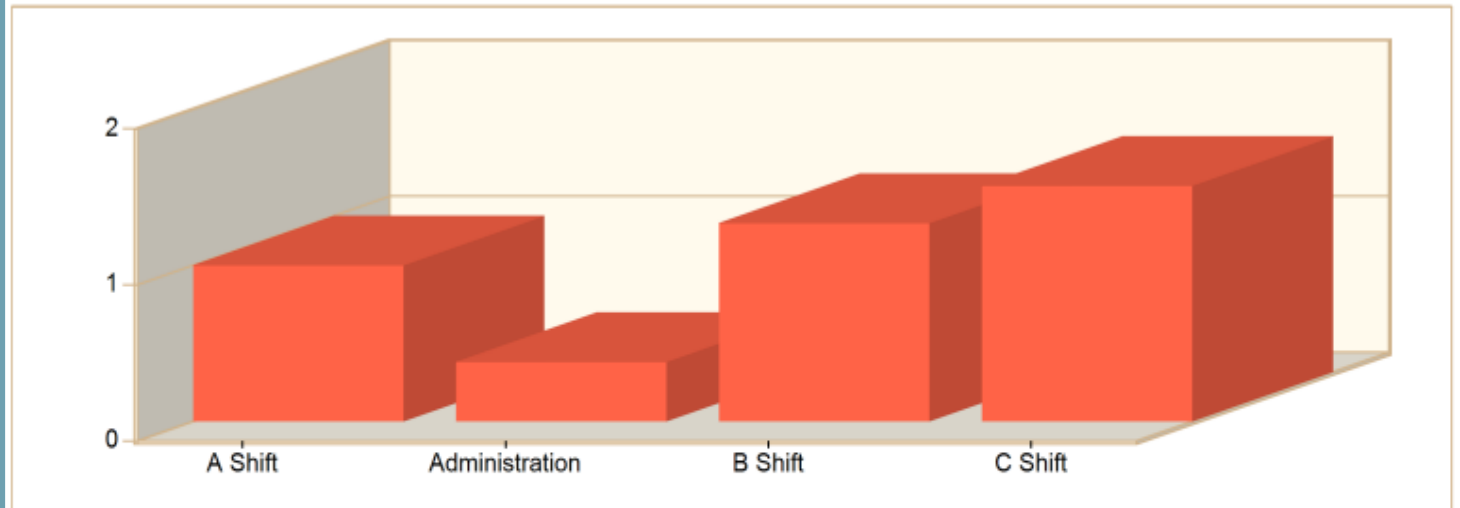
Response and assembly at a structure fire:
Rural Zones (2,5,6,8) 6 personnel at the scene in 14 minutes, 90% of the time;
Suburban Zones (1,3 &4) 10 personnel at the scene in 10 minutes 90% of the time.

Arrival of ALS by TC Medic One:
Medic One has adopted a suburban response time of 20 minutes.

INCIDENT ANALYSIS-TURNOUT TIME

Average Turnout Time per Shift for Date Range

Start Date: 01/01/2022 | End Date: 12/31/2022



SHIFT	AVERAGE TURNOUT TIME as MM:SS (Dispatch to Enroute)
A Shift	1:00
Administration	0:23
B Shift	1:16
C Shift	1:30

SERVICE LEVEL STANDARDS - RESPONSE

Given West Thurston Regional Fire Authority's unique makeup of rural and suburban populated areas, and career and volunteer staffing, we measure our emergency response performance annually using a benchmark established by policy that is a hybrid of NFPA recommendations, but closely resembles NFPA 1720. WTRFA has an 8 minute response target for all calls within the district 90% of the time.

In 2022, WTRFA met the response target 53% of the time, which is relatively consistent with prior years but with a slightly lower compliance percentage.

INCIDENTS: PERCENTILE REPORT

West Thurston Regional Fire Authority | Last Refresh: 5/18/2023 8:00 PM

3,391

Incidents Filtered

3,035

Incidents w/a Response

1,618 (53%)

Incidents Meeting Goals

SETTINGS


Response Time

Effective Response Force: 2

Time Goal: 8 min 0 sec

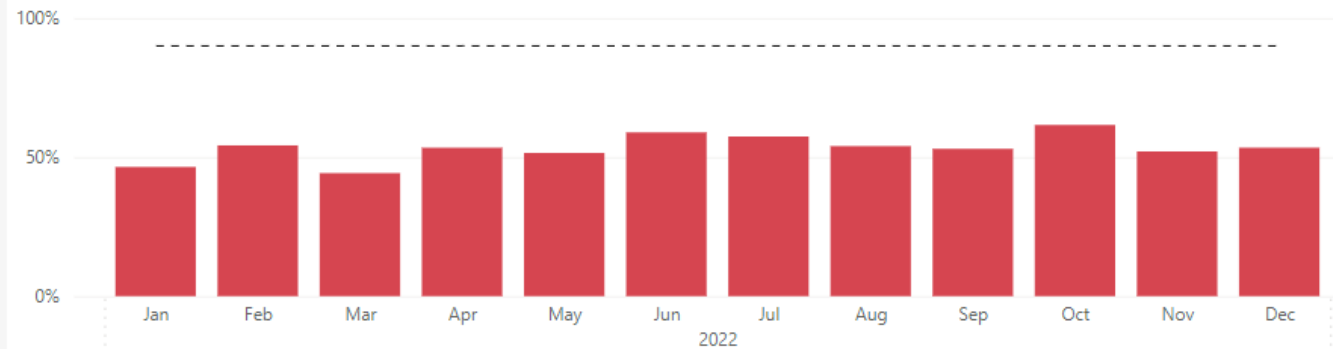
Percentile Goal: 0.90

(Updates to settings may take up to one minute to apply)

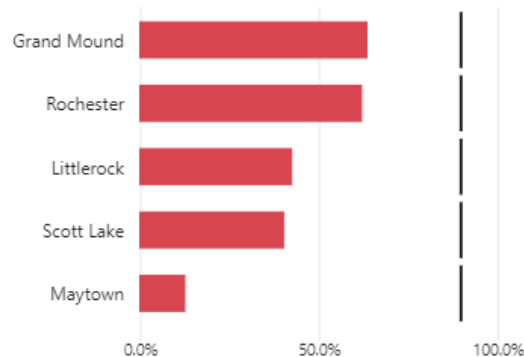
 Definitions

1,618 (53%) of incidents are meeting the Response Time goal of 8 min and 0 sec with an effective response force of 2 personnel

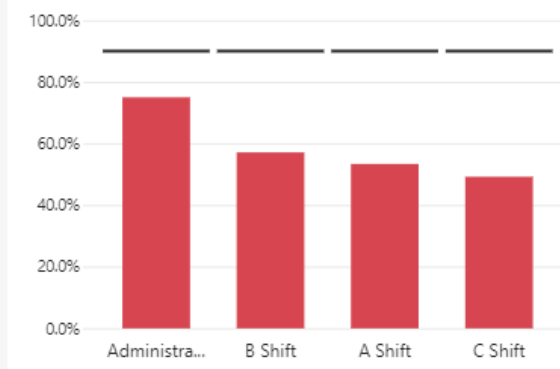
% of Incidents Meeting Goals



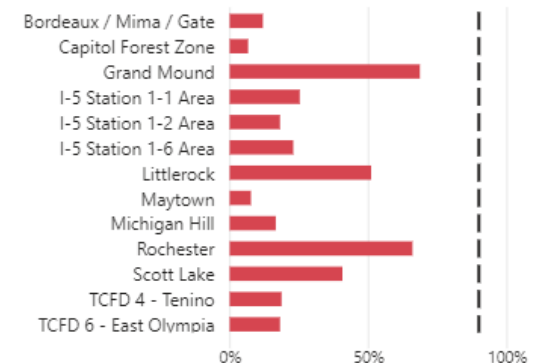
% by Station



% by Shift

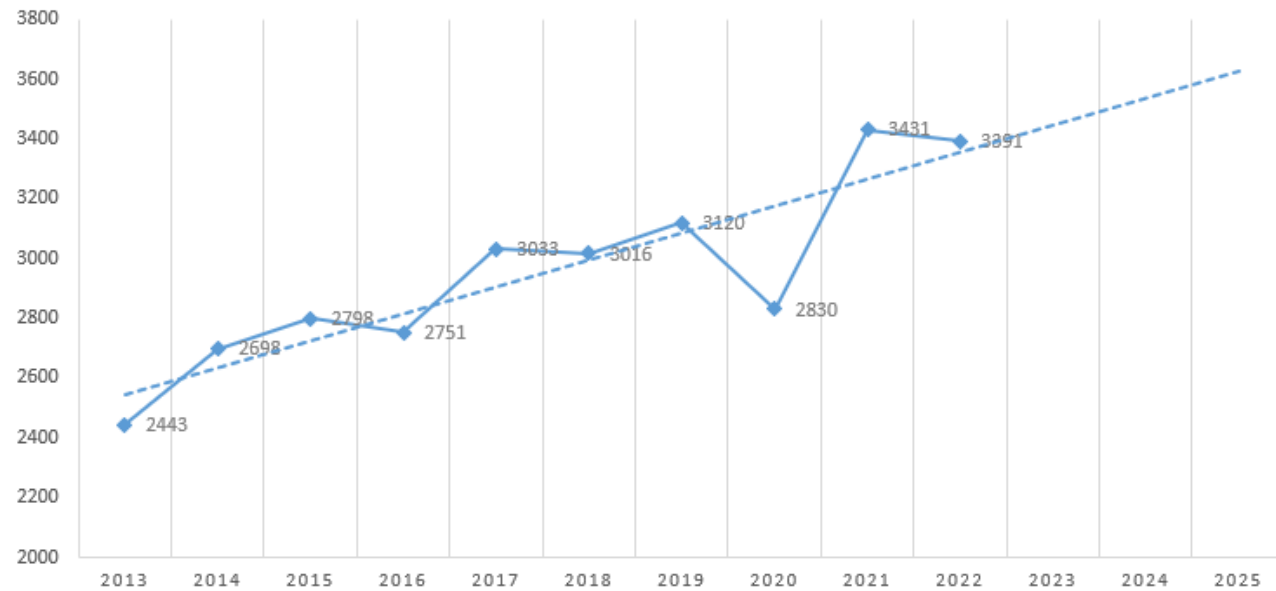


% by Zone

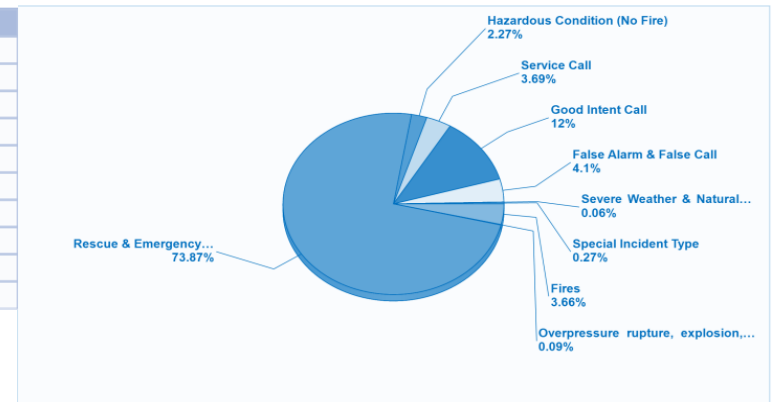


INCIDENT ANALYSIS-VOLUME & MAJOR TYPES

WTRFA INCIDENT COUNTS

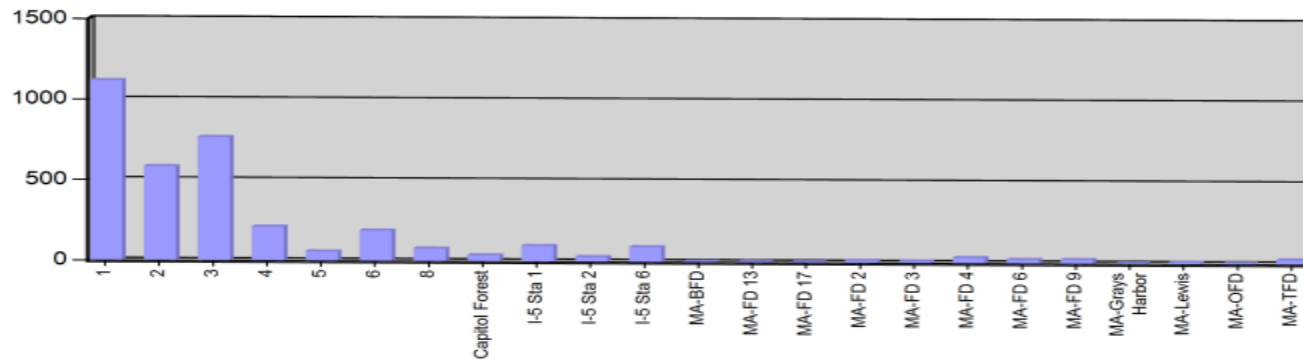


MAJOR INCIDENT TYPE	# INCIDENTS
Fires	124
Overpressure rupture, explosion, overhear - no fire	3
Rescue & Emergency Medical Service	2505
Hazardous Condition (No Fire)	77
Service Call	125
Good Intent Call	407
False Alarm & False Call	139
Severe Weather & Natural Disaster	2
Special Incident Type	9
TOTAL	3391



RESPONSE ZONE-ANALYSIS

Incident Count per Zone for Date Range
Start Date: 01/01/2022 | End Date: 12/31/2022



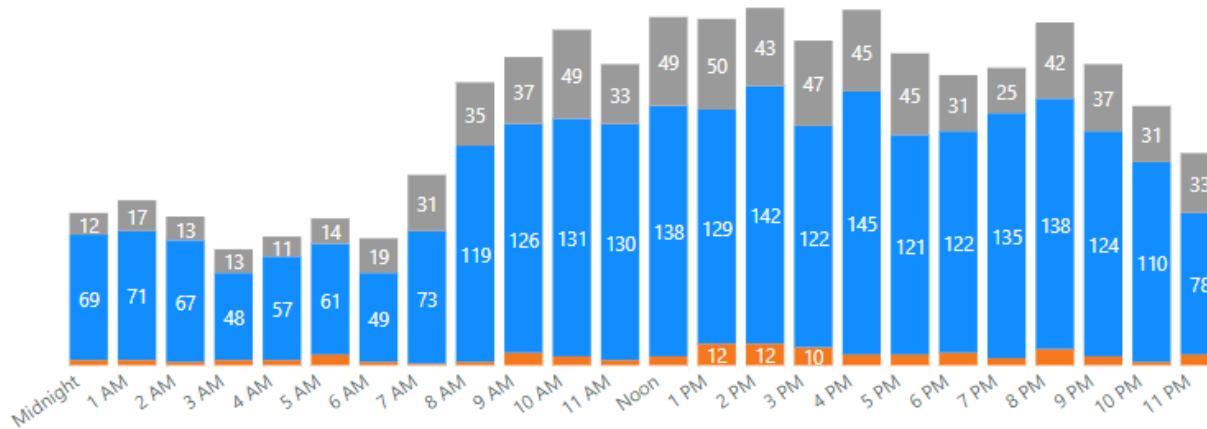
ZONE	# INCIDENTS
1 - Grand Mound	1116
2 - Littlerock	583
3 - Rochester	765
4 - Scott Lake	209
5 - Michigan Hill	56
6 - Maytown	187
8 - Bordeaux / Mima / Gate	77
Capitol Forest - Capitol Forest Zone	36
I-5 Sta 1 - I-5 Station 1-1 Area	96
I-5 Sta 2 - I-5 Station 1-2 Area	29
I-5 Sta 6 - I-5 Station 1-6 Area	91
MA-BFD - Bucoda FD	2
MA-FD 13 - TCFD 13 - Griffin FD	2
MA-FD 17 - TCFD 17 - Bald Hills Fire	1
MA-FD 2 - TCFD 2 - Yelm / Rainier	12
MA-FD 3 - TCFD 3 - Lacey FD	10
MA-FD 4 - TCFD 4 - Tenino	32
MA-FD 6 - TCFD 6 - East Olympia	22
MA-FD 9 - TCFD 9 - McLane / Black Lake	23
MA-Grays Harbor - Grays Harbor County	2
MA-Lewis - Lewis County	9
MA-OFD - Olympia FD	5
MA-TFD - Tumwater FD	26

TOTAL: 3391

FIRE SUPPRESSION-ANALYSIS

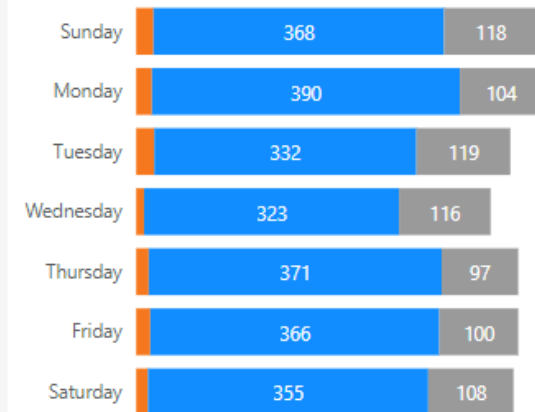
of Incidents by Hour of the Day

Incident Category ● Fire ● EMS ● Other

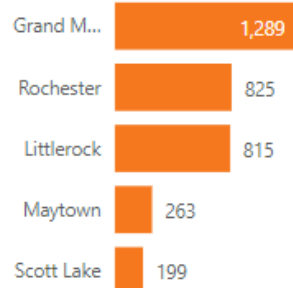


of Incidents by Weekday and Incident Category

● Fire ● EMS ● Other



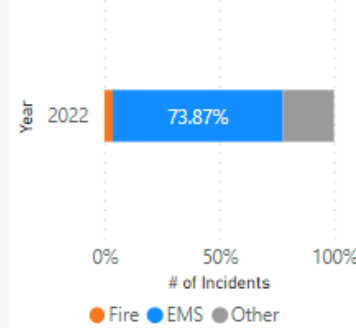
Top Stations by # of Incidents



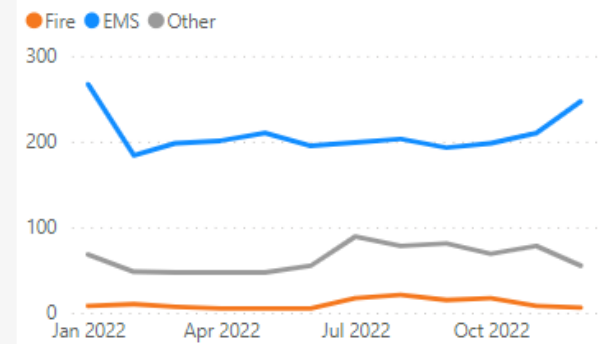
of Incidents by Shift



of Incidents by Category



of Incidents over Time



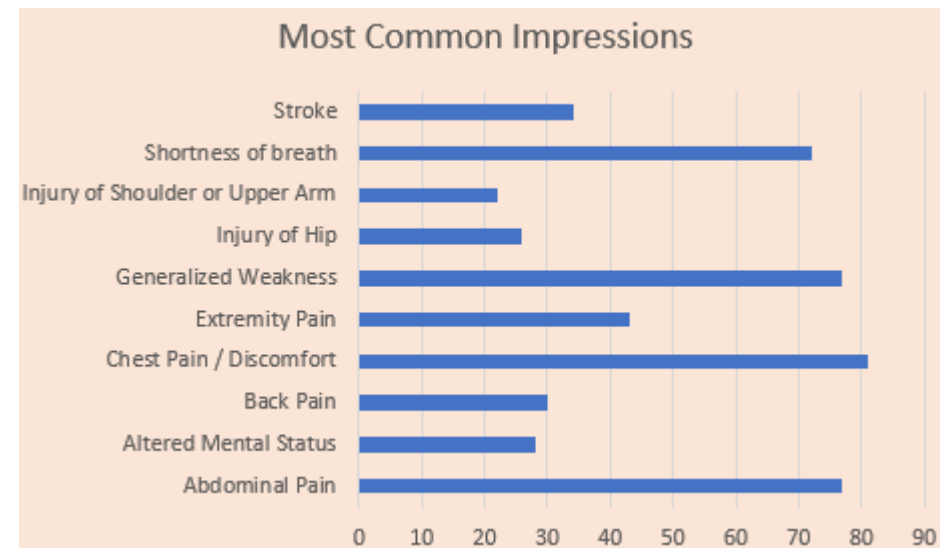
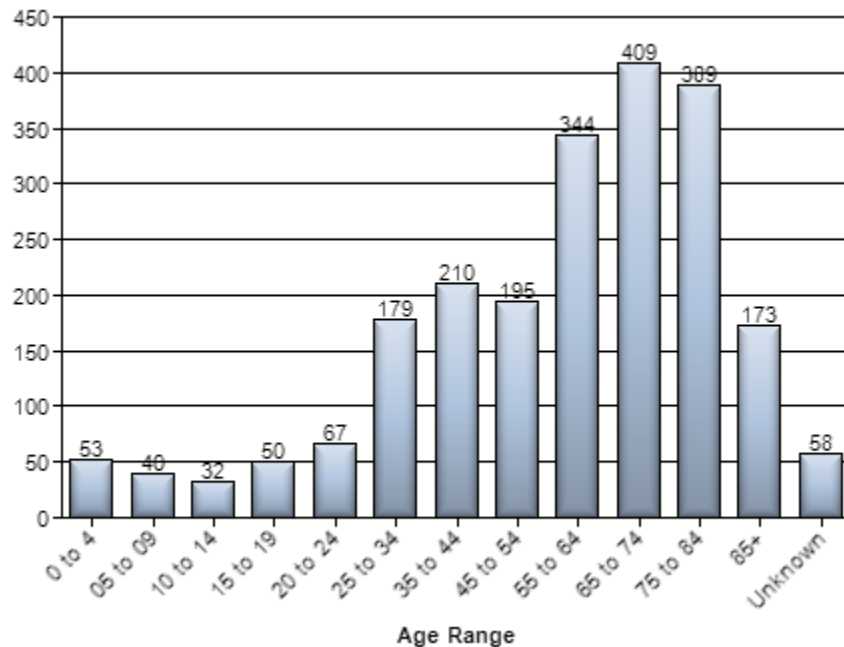
EMS

West Thurston provides transport services. We responded to a total of 2,505 EMS incidents.

West Thurston Fire had 1,033 transports; 798 BLS and 235 ALS.



A1-1	303
A1-2	258
A1-3	231
A1-6	6
Medic Unit	235





WILDLAND AT HOME

West Thurston places a strong emphasis on wildland firefighting readiness and takes pride in its response capabilities in the wildland urban interface. Given the nature of our rural communities and the proximity to vast forested areas, wildland exposures make up a significant portion of our response volume during the summer months.

We actively participate in the Washington State Mobilization Plan, collaborating with other jurisdictions and partners in the region and beyond when the need arises. By providing assistance to other states on the West Coast, such as Alaska, Oregon, and California, our personnel attain specialized training in wildland tactics and contribute their expertise to help combat wildfires in different regions.

Our Task Force Leaders, Strike Team Leaders, and Engine Bosses have established a reputable presence in the field of wildland firefighting tactics. Being regarded as leaders in this area not only highlights the professionalism and skill level of our personnel but also positions our department as a valuable resource in times of need.

Furthermore, it's significant to note that the program of providing expertise and assistance to other jurisdictions serves as a revenue-generating initiative for our department. The additional funding acquired through this program plays a crucial role in maintaining staffing levels, equipment, and apparatus, which ultimately strengthens our overall operational capabilities. Additionally, the experience gained from assisting other jurisdictions positively impacts our department's ability to handle similar emergencies within our own jurisdiction, further enhancing our readiness and response capabilities.

Overall, our department's focus on wildland firefighting readiness, collaborative approach with neighboring jurisdictions, and the revenue-generating program based on expertise demonstrate a proactive and effective approach to mitigating wildland fire risks and serving the community.



SPECIAL OPERATIONS RESCUE TEAM (SORT)



The Thurston County Special Operations Rescue Team (SORT) provides specialized technical rescue services within Homeland Security Services Region 3 (Thurston, Grays Harbor, Lewis, Mason and Pacific Counties). The team, which provides USAR, Rope, Trench, Confined Space, Tree, REMS, and Ice rescue services, was established in 2007.

West Thurston RFA maintains three highly dedicated personnel on this team. Firefighter/EMT Hans Cooke, Captain Nathan Drake and Firefighter/EMT Aaron Hall are our dedicated team members. The training regularly conducted by the team to maintain and improve their skills is unparalleled. In 2022, SORT was activated to respond to a building collapse, ATV accident involving low angle rescue and two separate parachute jumpers stuck in a tree.

The commitment shown by the West Thurston RFA to support and enhance the capabilities of the SORT team reflects the organization's dedication to providing effective technical rescue services. By investing in training and expanding the expertise of their personnel, the department ensures that they are well-prepared to handle specialized rescue situations, ultimately enhancing the safety and well-being of the community they serve.

TRAINING



Training and Professional Development

Investing in our personnel's professional growth and expertise remains a priority. Our firefighters and staff participated in numerous training programs, enhancing their skills in firefighting techniques, emergency medical services, hazardous materials response, and incident command. We also encouraged cross-training initiatives to improve our department's overall capabilities.

Our personnel completed 4,136 hours of fire based and EMS training in 2022.



The goal of the training division is to provide quality training to our firefighters, so they are prepared for routine emergencies and catastrophic events in an all-hazards environment. To meet these ever-present challenges, we use shift-based training, online platforms, multiple agency and outside training to meet the requirements of WAC 296-305 Safety Standards for Firefighters.



In 2022, focused attention was given to developing our members with the new G1 Self-Contained Breathing Apparatus (SCBA). In addition, we have refocused on incident command training led by our Training Officer, Nathan Drake. Captain Drake completed an arduous Blue Card Instructor Training Program that allows in-house recertification to our department certified incident commanders which also results in a more organized emergency scene, and saves costs associated with hiring outside instructors to provide continuing education requirements. Lastly, we bolstered our Emergency Operations Center performance through exacting application to real events and additional training opportunities due prevalence of flooding, wildland and wind events experienced in 2022.

PUBLIC SAFETY & PREVENTION

PUB ED PROGRAMS AND EVENTS

- Spring Easter Egg Hunts
- Emergency Preparedness Events
- Swede Day Events
- Littlerock 4th of July Parade
- Elementary school fire prevention education
- Scott Lake Fishing Derby
- Beacon of Hope Safety Fair
- Smugglers Run

COMMUNITY SERVICE AND FUND-RAISING EVENTS

- Christmas Pictures with Santa
- Littlerock Elementary BBQ
- Littlerock Elementary Welcome Back to School
- Christmas Families

Fire Prevention and Education:

We continued our proactive efforts in fire prevention and public education programs to raise awareness and reduce fire-related incidents. We also organized many community outreach events, providing valuable fire safety information to schools, businesses, and community groups.



CRITICAL COMPONENTS

The critical mission of emergency response is often measured using two key scientifically studied (industry accepted) benchmarks. These benchmarks drive many other aspects of operations and emergency response standards.

- Pre-hospital time-to-defibrillation
- Fire Flashover

SERVICE LEVEL - Pre-hospital time-to-defibrillation

Golden Hour Metric

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.

Cardiac Arrest Survival Standard

In communities where the fire service is the principal provider of EMS first response, the "chain of survival" standard was developed by the American Heart Association. It is often used to provide guidance for the distribution of resources. The chain of survival suggests that basic life support (CPR and defibrillation) should be available to the victim of a cardiac arrest within 4 minutes of the event, and that advanced life support (paramedic service) should be available within 8 minutes or less of the event. The "Cardiac Arrest Survival" graphic also reinforces this concept. Early notification, distribution and concentration of emergency response services are thus paramount to successful resuscitation efforts.

Cardiac Arrest Survival



0 Minutes

BREATHING STOPS; THE HEART WILL SOON STOP BEATING

4-6 Minutes

POSSIBILITY OF LONG-TERM BRAIN DAMAGE

6-10 Minutes

HIGH PROBABILITY OF LONG-TERM BRAIN DAMAGE

Over 10-15 Minutes

CERTAIN IRREVERSIBLE BRAIN DAMAGE RESULTING IN DEATH

CRITICAL COMPONENTS

The critical mission of emergency response is often measured using two key scientifically studied (industry accepted) benchmarks. These benchmarks drive many other aspects of operations and emergency response standards.

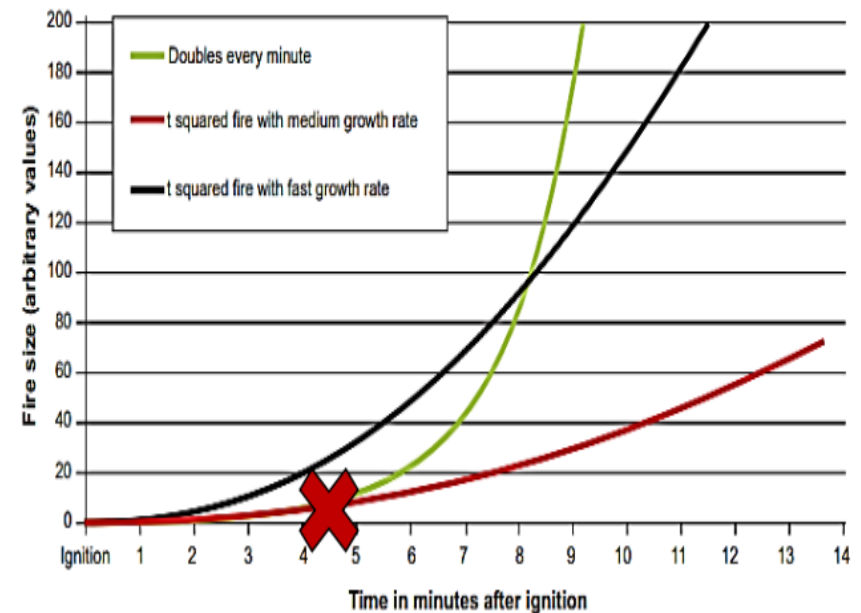
- Pre-hospital time-to-defibrillation
- Fire Flashover

SERVICE LEVEL - Fire Flashover

The time-temperature curve in the graph displayed is based on data from various national engineering and standards organizations including the National Institute of Safety and Technology. As ceiling temperature reaches 500° to 600°C (932° to 1112°F) fire conditions change dramatically as there is a rapid transition to a state of total surface involvement of all combustible materials within the compartment. When the fire reaches flashover, flames extend out compartment openings such as a doorway leading to an adjacent compartment. In modern buildings with open floor plans, reaching flashover can rapidly spread from the compartment of origin to other compartments. The graph represents a typical point source of ignition in a residential house which will “flash over” at some time between 7 and 10 minutes after ignition, turning a typical room and contents fire into an untenable environment that leaves the room of origin. Flashover is a significant event for two reasons. First, the chance of survival for anyone (including firefighters in full protective clothing and self-contained breathing apparatus) in a room when flashover occurs is unlikely. Second, a flashover creates an exponential growth in the energy released by combustion, which in turn requires a greater amount of water and resources to control the fire.

The utility of the time-temperature curve for fire station placement is limited by several factors. 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, thus alone, 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. With increased use of plastic and synthetic materials in residential construction and home furnishings, flashover can occur as fast as 3 minutes.

Fire Growth



RECOGNITION & RETIREMENTS

Firefighter of the Year:
Ricardo Santee



EMT of the Year:
Brent Devert



Officer of the Year:
Nathan Drake



Volunteer of the Year:
Chris Heilman



The Board Award:
Isaac Garza



Fire Chief Russell Kaleiwahea—25 Years



Operations Chief Robert Scott—36 Years



RECOGNITION & RETIREMENTS

Firefighter/EMT Mike Peoples —20 Years



Lieutenant/Lead Fire Investigator Bob Maser —19 Years





STANDARD OF RESPONSE IMPROVEMENTS

- As a special purpose district, our funding is limited to two major sources; the regular property tax and Maintenance & Operations (M & O) taxation. Due to the failed M & O levies in 2022 leading to a financial shortfall, we have been pushed to rely on reserves to fund personnel in order to maintain the current level of services and response capabilities. As such, the challenge will be managing multiple emergency incidents at once with less human and capital resources.
- Recruitment and retention of volunteers is in need of improvement to increase available personnel for response needs and times. With increased call volume anticipated in the future due to light industrial development in our county it creates increased demand on the system. Because of this evident changing nature of service demand and lack of authorized funding, the expectation remains to continue matching the needs of our 158 mile service area with the existing 3 station staffing model. Restoration of our regular property tax from current levels is a temporary funding patch, but long term funding options will need to be considered to maintain the health of our organization.
- Our apparatus fleet is aging with some engines near 25 years of age needing replacement. As the average age of our fleet increases, our survey rating bureau scores will decline leading to increases in property insurance premiums.
- Current mutual or automatic aid agreements remain strong, but future service improvements by operational partnering with our mutual aid neighbors should be considered.
- Isolated communities in our jurisdiction with difficult topography, such as the Bordeaux, Gate, and Capital Forest will be the focus for opportunities to build a facility to house apparatus in an area with water supply to improve service in those areas. Success with recruitment and retention of staff will be key in the future.
- Possible consequences in terms of service delivery when needed when not enough staffing or equipment is available could include; Large fire loss due to inadequate staffing, inability to perform rapid fire attack or rescue operations, or inability to mitigate hazardous materials incidents within a credible period of time.

WEST THURSTON REGIONAL FIRE AUTHORITY 2022





2022—Events to Remember/Year in Review





West Thurston Regional Fire Authority

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Olympia, WA 98512

360-352-1614

<https://www.westthurstonfire.org>