West Thurston Regional Fire Authority
(WTRFA)

2020 ANNUAL REPORT
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A MESSAGE FROM YOUR CHIEF

The year 2020 will go down in history as a challenging year, but also provided an opportunity for our department to display resiliency in the face of challenging times. I am proud of the West Thurston Regional Fire Authority employees for continuing to accomplish our mission of providing high quality services by prioritizing what is important; preserve lives and properties through prevention, management, and mitigation of emergency incidents. That’s exactly what we did even when we had to modify how we did it.

While our environment was a far cry from normal because of a global pandemic, we refused to lose sight of our goals which are always centered around community, operations, safety, education and being fiscally conscious. During 2020, we worked to ensure equipment standardization and strived to improve service delivery by acquiring the tools needed to achieve positive outcomes. We acquired a new fire engine, upgraded our firefighting capacity by securing state of the art fire hose to match high caliber nozzles that ensure fire knockdown power with highly trained personnel. The capability of our personnel, I am convinced, is equal to or better than performance shown from fire departments three times our size in this county. Our citizens should have high confidence in our ability to protect and serve.

On behalf of the West Thurston Regional Fire Authority employees, I want to thank our community for their continued support.
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 75 exceptional professionals both career (30) and volunteer (45). Our proud professionals respond to an average of 3,000 emergency 911 service calls each year.
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
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.
SERVICE AREA

THE RFA RESPONSE ZONES:

Zone 1: Grand Mound
Zone 3: Rochester
Zone 5: Michigan Hill
Zone 2: Littlerock
Zone 4: Scott Lake
Zone 6: Maytown
Zone 7: Interstate 5
Zone 8: Bordeaux-Mima-Gate
INCIDENT RESPONSE

In 2020, WTRFA staff responded to 2,830 total calls. Call volumes for the year declined slightly as compared to 2019 numbers. This was not surprising to see given the challenges faced by communities and healthcare systems due to the global pandemic.

Calls are for emergency medical service continued to dominate call volume, comprising three out of every four responses by WTRFA staff. In 2020, the team responded to 2,120 emergency medical calls.

Responses to fires totaled 89 calls, approximately 3.14% of total calls.
INCIDENT ANALYSIS

Annual Responses

Annual Responses by Category

- Rescue & Emergency: 75.19%
- Hazardous Condition (No Fire): 4.31%
- Service Call: 7.24%
- False Alarm & False Call: 11.98%
- Special Incident Type: 0.53%
- Good Intent Call: 0.04%
- Overpressure, Rupture, Explosion: 0.11%
INCIDENT ANALYSIS

Incidents Per Station

Average Turnout Times (MM:SS) - Dispatch to Enroute
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 2020, WTRFA met the response target 59% of the time, which is relatively consistent with prior years.
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 shown in Figure B 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 “Chance of Survival from Cardiac Arrest” graphic also reinforces this concept. Early notification, distribution and concentration of emergency response services are thus paramount to successful resuscitation efforts.
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**SERVICE LEVEL - Fire Flashover**

The time-temperature curve in the graph displayed from FEMA 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.
STANDARD OF RESPONSE IMPROVEMENTS

- Our experience has taught us that the need for additional technical rescue, fire suppression, and incident command training to provide improved outcomes for our citizens continues to be in sharp focus. We will continue to fine-tune our training in 2021.

- Recruitment and retention of volunteers is in need of improvement to increase available personnel for response needs and times. Also, development of a Resident Program will need to continue to increase breadth of service. With increased call volume anticipated in the future due to light industrial development in our county by tribal properties, which is an untaxable revenue source, it creates increased demand on the system. Because of this evident changing nature of service demand, there is a need to hire additional career personnel to match the needs of our 158 mile service area with the existing 4 station staffing model.

- Aging equipment will need to be replaced to keep pace with the change in material used in building construction and vehicles, and due to lack of performance. Auto extrication equipment we have lacks material cutting power for current day vehicles. We will continue replacing this equipment using creative replacement schedules and sound planning to fund this project.

- 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 are strong, but future service improvements by 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.
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 2020, focused attention was given to developing our members in technical rescue training to include operations level rope rescue training and reimaging our surface water rescue techniques and resource management.

Our senior leadership team including the Fire Chiefs, Shift Commanders, EMSO and Training Captain participated in an extensive High Performance Leadership and Coaching Academy through Kelly Walsh Consulting.

Despite the challenges of a global pandemic, our personnel completed 4,414 hours of fire based training, over 500 hours of EMS based training that does not include countless hours of COVID-19 specific training.
LOGISTICS

2020 logistics was a busy year. We secured new apparatus, respiratory testing equipment and personal protective equipment to keep our employees safe and healthy.

We acquired and placed into service a new fire engine replacing a 25 year old engine.

Through formation of the Operations and Equipment Committee, in 2020 we finalized standardization of the equipment on our fleet of engines and began upgrading the water tank capacities on our brush trucks to maximize efficiency on the emergency fireground.

To assist with securing required SCBA Mask Fit Testing annual requirements, we purchased a Quantifit testing machine that allows more timely in-house testing which will also assist with the NFPA 1582 annual medical physical requirement of our personnel.
WILDLAND OPERATIONS

Wildland exposures commonly exist due to the nature of our rural communities encompassing a large part of our response area. The entire western end of our district bumps up against 60,000 plus acres of forestland. Constituting a large part of our response volume during the summer months, wildland firefighting readiness is a primary focus of our operations. With wildland urban interface as a standard backdrop to our communities, we take pride in our response capabilities with our Wildland Operations.

As wildland firefighting is somewhat technical in nature, and we have specific skill sets to these types of incidents, we regularly respond to other jurisdictions under the Washington State Mobilization Plan when the need arises with not only our partners in the region, but across the state and into other states on the West Coast, including Alaska, Oregon and California.

When traveling to other jurisdictions to assist, we have personnel trained at various levels in wildland tactics. Our Task Force Leaders, Strike Team Leaders and Engine Bosses have developed as a reputational asset in our region and are often looked to as leaders in the field of wildland firefighting tactics.

For the expertise we offer, this program is one of the only recuperating revenue generating programs our department has. The program provides additional funding to maintain staffing, maintenance on equipment and apparatus. Not only is the program self-sustaining, but experience gained assisting other jurisdictions has positively effected our ability to handle similar emergencies within our own jurisdiction.
September 8, 2020

The morning of September 8, 2020 started with a wide swath of Red Flag conditions across much of the state, including the Bordeaux Ranch Community area. At approximately 2:00pm a downed power line sparked a grass fire that spread rapidly due to unfavorable weather conditions. As fire raged through the community, evacuation orders were issued prompting 70 residents to flee the area. After an approximate 3 hour battle, the fire was controlled with 290 acres burned, one residential home lost and several outbuildings burned. This community is one example of numerous communities where wildland urban interface is prevalent. Events of this size have become more commonplace in the past 5 years.
SPECIAL OPERATIONS (SORT)

The Thurston County Special Operations Rescue Team (SORT) is a county-wide technical rescue group. These dedicated personnel respond to specialized rescue needs such as high angle rope rescue, confined space emergencies, trench rescues and structural collapse situations. Their specialized skills have expanded in the last few years to include tree rescue and a partnering relationship with a dedicated water rescue team in-county.

West Thurston RFA maintains three highly dedicated personnel with this team. Firefighter/EMT Hans Cooke, Lieutenant Nathan Drake and Lieutenant Mike Morales are our dedicated team members. The training regularly conducted by the team to maintain and improve their skills is unparalleled.

In 2020, West Thurston RFA hosted trench rescue training on the grounds at Station 1-2. The training exposed our department members to take a great interest in the technical aspects of this specialized training. As a result, development of additional personnel in support roles was planned with a rope rescue operations two days training conducted during the Summer of 2020. The training was well attended by ten members with the intention to roll-out regular training of this nature in the future.
PUBLIC SAFETY & PREVENTION

Our Public Safety & Prevention Division, led by our PIO/EMSO Captain Lanette Dyer, is a priority objective. While 2020 blunted our ability to engage the public as we normally would, we were able to carry out some community activities safely. For example, Soup Day at the Sharing spot in the Fall of 2020. While this is a wonderful community presence, our support for these events will always continue.

PUB ED PROGRAMS AND EVENTS:
- Spring Easter Egg Hunt(s) and Injury Prevention Safety Fair
- Fall Fire Prevention Week Safety Fair
- Emergency Preparedness Events
- Swede Day Events
- High school anti-drunk driving mock crash events
- Elementary school fire prevention education
- Juvenile Fire Setters Program
- K-12 prevention programs

COMMUNITY SERVICE AND FUND-RAISING EVENTS
- Breakfast with Santa
- Firefighters Association and Firestones benevolence activities: Fill-the-Boot
West Thurston Regional Fire Authority

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