

# 2021 Performance Report

Author:

Edward Dunbar, Deputy Chief Pasco Fire Department

# **Table of Contents**

PURPOSE	3
STRATEGIC PLAN AND PRIORITIES	4
2020-2021 CITY OF PASCO COUNCIL GOALS	6
BACKGROUND	8
FIRE DEPARTMENT ORGANIZATION	
OPERATIONAL READINESS	15
COMMUNITY WELLNESS	
COST CONTAINMENT	60
PERFORMANCE	64
QUALITY	71
RESULTS SUMMARY	74
RECOMMENDATIONS	76
APPENDIX A	78



The purpose of the annual performance report is to outline the metrics and associated performance of the Pasco Fire Department. The department continues to use the Pillars of Excellence as the basis for the report, which help identify areas of improvement while maintaining the ability to be fiscally responsible to the community while managing the growth of the department.

The Pasco Fire Department (PFD) adopted the "All Hazards" approach to operating at and responding to the community's requests for services. We continue to provide response to a variety of emergent events including: emergency medical services (EMS), technical rescue (high/low angle rope, trench and confined space, water, vehicle and machinery, hostile environment (active shooter), collapse), hazardous materials, aircraft rescue and firefighting (ARFF) and hostile fire environments, including; wildland, urban-interface, vehicle, and structural. The special team responses often require additional costs for equipment and training, and ultimately increase personal and corporate liabilities to the authority having jurisdiction. PFD continues to identify and address the unique set of challenges as the community continues to grow and adapt its resources to meet and fulfill the needs of the community we serve.

This report outlines the performance against the metrics as identified in Resolution 2938 as well as many other aspects of the daily operations affecting the fire department. Several changes to the department occurred in 2021, including the opening of two replacement fire stations and relocation of the administrative staff to the new Station 84. The overall performance of the department continued to show improvement, while identifying some impacts of the continued growth of the city.

# STRATEGIC PLAN AND PRIORITIES

The Department's strategic plan was updated in 2020. The effort began in 2019 with a Battalion Chief that was temporarily assigned to day shift for four months. BC Garrett Jenks worked with Emergency Services Consulting International (ESCI) to schedule meetings with the public, City staff, other fire agencies and Pasco Fire Department personnel to gather information to update the plan. The plan was put together with input from the groups and new objectives identified, along with the anticipated time frame for completion of the objectives. While the earlier plan identified more external and performance measures regarding the department, the updated strategic plan leaned more heavily toward internal issues and addressing growth issues with personnel and planning for the future from a training and community interaction perspective.

The Strategic Plan identified four different initiatives with associated goals and objectives. The updated plan was based on information gathered during meetings with external (community members, other agency fire department leadership) and internal stakeholders (representatives from each shift and IAFF 1433). The initiatives were developed by the working groups and priorities assigned to each goal. The current mission statement was validated, and the vision and values were updated again based on input from the meeting participants.

The table below represents the summary status of the four initiatives and associated goals and objectives. As objectives are completed or changed based on viability, the strategic plan guides the follow-on tasks and objectives that need to be implemented and provides information for the upcoming work to create the next version of the Strategic Plan. Some of the goals are ongoing and will not ever be completed, but specific scope to support the overall goal can be developed, refined and tracked.

Initiative	Goals	Objectives			
		Total	Completed	Ongoing	Future
l - Department Cohesion	4	17 (7, 4, 2, 4)	5	6	6
2 - Community Outreach	3	18 (6, 4, 8)	0	2	16
3 - Operational Readiness	6	20 (4, 2, 3, 2, 5, 4)	2	11	7
4 – Professional Development	4	17 (9, 3, 3, 8)	1	6	16

The four initiatives with specific goals as outlined in the updated Strategic Plan are listed below:

1 - Department Cohesion

- Promote department solidarity
- Improve the quality of shift change interactions

- Facilitate a more accurately informed body
- Conduct cross shift training
- 2 Community Outreach
  - Enhance communications and interactions with our community
  - Celebrate fire service traditions with community involvement
  - Increase/enhance communications and interactions with non-English speaking (or English as a Second Language (ESL) groups

#### 3 – Operational Readiness

- Update the technology of critical infrastructure relied upon by PFD
- Ensure the technical competence of all personnel
- Improve response times in PFD
- Maintain an appropriate fleet for fire and EMS responses
- Maintain PFDs Public Protection Class 3 (PPC-3) rating from the Washington Surveying and Rating Bureau (WSRB)
- Update the 2016 PFD Master Plan to address growth identified in the Pasco Comprehensive Land Use Plan (Comp Plan)
- 4 Professional Development
  - Create a succession plan
  - Develop continuing educations requirements for all officers
  - Improve the PFD personnel evaluation process
  - Improve paramedic retention and job satisfaction

# 2020-2021 CITY OF PASCO COUNCIL GOALS

Every two years, the Pasco City Council establishes specific goals designed to guide the work of the City. The Council held a goal-setting retreat in September 2020 following two community forums and adopted the 2020-2021 goals late in 2020 due to the COVID19 meeting restrictions. With the Council recently updating its goals for 2022-2023, the fire department will review them and develop and adapt programs that directly support and emphasize the achieve of obtaining the Council goals. The revised draft goals that the Council identified in 2022 are at a much higher level with less detail than the ones discussed below. Since the goals listed below were in place during 2021, this report will use them as the basis for performance.

The 2020-2021 Council goals that apply specifically to Pasco Fire are listed below.

#### QUALITY OF LIFE

• Ongoing efforts to improve efficiency and effectiveness of public resources in the delivery of municipal services, programs, and long-term maintenance and viability of public facilities.

#### FINANCIAL SUSTAINABILITY

- Regular evaluation of services and programs to confirm importance to community, adequacy, and cost-benefit.
- Continuation of cost of service and recovery targets in evaluating City services.
- Ongoing evaluation of costs, processes and performance associated with delivery of City services including customer feedback and satisfaction, staffing, facilities, and partnership opportunities.
- Instilling and promoting an organizational culture of customer service across all business lines.

#### COMMUNITY SAFETY

- Working to achieve and maintain target fire response times through operational improvements and long-range strategic planning of facilities and staffing.
- Focusing on the long-term goal of sustaining a Washington State Rating Bureau Class 3 community rating.
- Leveraging and expanding partnerships to maintain and enhance behavioral health services to community members in crisis being assisted by police and fire.

#### COMMUNITY IDENTITY

- Providing opportunities for community engagement through boards, commissions, volunteer opportunities, social media, forums, and other outlets.
- Enhanced inter-agency and constituent coordination developed during the pandemic.
- Continued efforts of the community identity/image enhancement campaign to include promotion of community and organizational successes.

While it may appear that the only goals the Fire Department has a role in is Community Safety, there are several other goals that we support either directly or indirectly. The department has the opportunity to interact with the community positively daily and provide a positive interaction with the public on many levels. Providing excellent service to the community starts with being well trained and prideful in the status of the department. After all, we are here for the community and our mission statement is to "Honorably Protect and Serve the Community". By being fiscally responsible and looking to ways to improve effectiveness and efficiencies and identify alternate funding streams,

working with outside agencies to reduce citizen reliance on emergency services, and promoting the partnerships every day, the Pasco Fire Department embodies many of the Council Goals.

One of the key goals is to maintain the WSRB Fire Protection Class 3 rating that was achieved in 2018. In support of this goal, the strategic plan was reviewed and updated to ensure that efforts to maintain the Class 3 rating were addressed. As part of that plan, it was identified that our 2016 Master Plan needed to be updated. The updated Master Plan is expected to be presented to Council in July 2022. The update will identify programs and funding options to maintain the WSRB Class 3 rating along with other operational and administrative aspects that support maintaining the rating.

The City Council continues to have the goal of: "Working to achieve/maintain target fire response times through operational improvements and long-range planning of facilities and staffing."

This goal is addressed by projects to replace Temporary Station 84 and relocate Station 83 which the City Council secured funding for in 2019. The construction of Station 83 was completed in early 2021, with crews moving in on January 18, 2021. The impact of response time to one of our busiest regions is already being noticed. The construction of the new headquarters attached to Station 84 on Court Street was completed and crews and administrative staff moved in on September 28, 2021.

Planning for additional stations has also been a focus for the Fire Department. Land has been purchased for Station 85 located across from Maple Drive on Road 100 to address the upcoming development in the western area of the city, including the Broadmoor area. With the move of Station 83 north of Interstate 182, the area to south of the interstate was impacted regarding response times and Station 85 will address those impacts. Land for Station 87 has also been identified and the city continues to work with Autozone in the King City area to place the station on the northwest corner of their property to handle the growth in the industrial area as well as that associated with the plans the Colville Tribe has for the area. Lastly, with the initial development ideas for the Broadmoor area, locations are being studied for Station 86 to address the response times in yet to be developed areas.

In all, there are several aspects of performance that are discussed throughout this report that directly support the 2020-2021 Council goals. As the City changes and grows, the Fire Department must address those changes and growth to maintain the high level of service delivery expected by the community.

# BACKGROUND

The Pasco Fire Department is a municipal all hazards career department which serves the 80,000 member community of Pasco. The department utilizes a framework referred to as "Pillars of Excellence", for the creation and monitoring of Key Performance Indicators (KPI's), that when combined provide a holistic and multi-dimensional overview of the health, performance, and effectiveness of the organization.

In short, the Pillars are the key subject areas as defined by the Strategic Plan, Master Plan and Council goals. For example, this might include cost containment, operational readiness, and customer satisfaction or quality. By identifying and establishing these pillars, and acknowledging their interrelationships and dependencies amongst one another, we can compile a meaningful list of metrics associated with each pillar that gauge not only the quantity of work performed in a given category, but also the overall value and quality of that work to the organization and community. These metrics and pillars, when combined, present opportunities for the organization to examine its direction and momentum; they enable decisions and policies to be exercised with confidence, with the sole goal of consistently working toward organizational excellence.

The Pasco Fire Department has identified the following Pillars of Excellence:



The Pasco Fire Department has worked diligently to establish and monitor metrics proven to directly impact the service level and value provided by each respective pillar. This process is viewed as an ever evolving and adapting, dynamic effort; by no means are the current metrics deemed as comprehensive or representative of department service, health, or value in totality. The opportunity to review the metrics for applicability and/or changes continues. The current Records Management System (Image Trend Elite) has been in place for just over three years. The system has a dynamic

and responsive reporting capability allowing better and consistent monitoring of the metrics. The dynamic reporting capabilities of Image Trend allows for very quick review and evaluation of our metrics which allows issues and performance to be addressed quickly. This allows for better feedback to crews inputting data to ensure good data integrity, which results in better evaluation of the metrics. Many iterations of the reports and metrics are still in review to measure and guide the decision process for operations and better customer service – which is foundational to our service. The use of an online dashboard program that gathers data directly from our dispatch software (computer automated dispatch - CAD) and then translates it into easily visualized information in a website that allows instantaneous drill down ability of the data provides immediate feedback. This system, known as NFORS, is one of the key elements in the management and analysis of performance metrics. This system has assisted in identifying data anomalies and immediate feedback on overall system performance.

The following chapters of this report review in detail the latest approach in metric collection, inclusive of the respective results and analysis for 2021, set forth by the five primary pillars of excellence as identified specific to the City of Pasco. Using the pillars of excellence and the enhanced reporting capabilities of the records management system (RMS), this report outlines how well the data support and prove the worth of each of the specific areas of performance. The other important aspect of this report is the suggested areas for improvement and incorporation of changes outlined in the Strategic Plan and the updated Master Plan. The key to understanding the current level of performance is understanding the inputs and what impacts the ability of the department to achieve excellence. With the enormous and continued growth the city is experiencing, the challenge is to manage the performance of the department without getting left behind by the growth.

# FIRE DEPARTMENT ORGANIZATION

#### Page 11

### ORGANIZATIONAL OVERVIEW

Core Purpose:

Identify and define the scope and missions of the fire department

### Page 11

#### PERSONNEL OVERVIEW

Core Purpose:

Identify and define administrative and operational positions within the fire department

# Page 13

#### **APPARATUS**

#### Core Purpose:

An overview of existing apparatus, locations, and minimum/maximum staffing

#### Organizational Overview

The Pasco Fire Department is an all-hazards career response force that provides Fire (urban structural, wildland and vehicle), Advanced Life Support Emergency Medical Services (EMS) care and transport, Hazardous Materials, Technical Rescue (high and low angle rope, confined space, trench, swift-water, structural collapse, and vehicle/machinery), and Aircraft Rescue and Fire Fighting (ARFF) services to the community. The fire department responds from four fire stations to an average of 6116 calls for service per year (2017-2021) (a 7.8% increase over the previously reported 5670 average calls for 2016-2020). The city is divided into four primary station response areas. Each response area is further sub-divided into both emergency service zones (variable due to station location) and static fire management zones.

It is important to note that most uniformed members of the department are cross qualified in other disciplines such as incident command, technical rescue, aircraft rescue and firefighting, hazardous materials, public education, fire investigation or hostile response. The U.S. Fire Department Profile – 2019, completed by the NFPA Fire Analysis and Research shows in table 6 the median rates of career firefighters per 1,000 people by region and population protected. The West Region (13 states) for the cities with a protected population of 50,000 to 99,999 has a median rate of 1.05 firefighters per thousand population. The current ratio of line firefighters to population served in the City of Pasco is 0.94 firefighters, which is a slight decrease from 2020 by 0.03 driven by the population growth for the city. No positions were added to line staff during 2021, but there was reduction due to retirements. This ratio should be monitored as the city continues to grow so not to allow a slide backward in staffing compared to population.

PFD earned a Public Protection Class 3 from the Washington Surveying and Rating Bureau (WSRB) in 2018 – achieving and surpassing a key City Council Goal. The rating is the benchmark for many insurance companies in determining their insurance premiums for privately insured properties. The higher the rating, the greater likelihood of insurance premium increases. The WSRB rates four major categories: Fire Department (40% of total score), Water Supply (35% of total score), Fire Safety Control (16% of total score) and Emergency Communications (9% of total score). Each major category contains several subcategories. The total points issued in these areas is combined to provide a rating of a scale of 1 to 10, in which 10 is equal to being without fire protection and 1 representing the best fire protection available. The next rating update is scheduled in 2023.

#### **Personnel Overview**

Organizationally, the department is divided into two distinct divisions: Administrative and Operations. The Administrative Division staff typically work Monday through Friday while the Operations Division staffs fire stations 24 hours a day. The organizational structure of PFD is shown below. Specific information for each position can be found in Appendix A.



The Operations Division is managed and supported by the Administrative staff. The Operations Division employs 75 qualified all-hazards line personnel (the Port of Pasco provides six of these personnel for coverage of the airport via a contract for ARFF). These personnel are divided into three operational shifts (A, B and C Shift) of 25 personnel each working a 48 hour on-duty, 96 hour off-duty rotation (48/96). A separate D Shift consisting of 2 Firefighter positions can be staffed if personnel are available. The purpose of D Shift is to account for low staffing occasions that would normally result in overtime; however, this shift was not filled in 2021. The firefighters are provided 15 (1 per pay cycle) annual Kelly Days to maintain an average 49-hour work week and comply with the Fair Labor Standards Act (FLSA) 7K standard. An on-duty Battalion Chief manages each shift and is supported by the administrative staff. All suppression employees from the Battalion Chief down through the ranks are covered in a collective bargaining agreement (represented by IAFF Local 1433). The span of control is within the industry standards of 1:6.

The department is organized into the following groups – 1: Planning and Administration and 2: Operations and Logistics. The Planning and Administration Chief oversees Community Risk Reduction (including the Pasco Resource Navigator Program), Fire Investigations, Cooperative Agreements, Strategic Planning, Computer systems (hardware and software), Budget preparation and reporting and Performance Reporting. The Operations and Logistics Chief oversees Training, EMS, Special Operations, ARFF, Daily Shift Operations, Safety and Logistics. The fire department functions in the scalar command structure for emergency operations and is functionally project-oriented for day-to-day routine operations. The functional program management structure is circular in that the process owner (administration) is in the center, surrounded by the many routine program activities required to maintain emergency operational readiness. The department defines programs as "on-going activities/tasks with regular budgetary considerations". Examples of programs are: Training, EMS, Hazardous Materials, Technical Rescue, Aircraft Rescue and Firefighting (ARFF), etc. Projects are defined as "limited in time duration and may or may not be supported by budget". Examples of projects may include deployment plan updates, pre-fire planning, ladder and hose testing, recruit academy, etc. Senior mid-level managers are typically assigned to program and project management and have authority of scope, schedule, and budget for the program/project. The processes are interdependent allowing for better and faster decisions and subsequent implementation.

Chief Officers and senior Captains usually manage "programs" and are responsible for the scope, schedule, and budget of the program. Mid – level managers (Captains and Lieutenants) or subject matter experts (SME's) usually manage "projects" and are supervised by Chief Officers. Project managers are responsible for schedule and budget.

#### Apparatus

The PFD operates a wide variety of apparatus to deliver emergency services to the community. The table below outlines by station the apparatus and staffing associated with each station at the end of 2021. The relocated Station 83 and relocated Station 84 has resulted in several apparatus and specialty team moves in September 2021. To meet the basic response requirements, a minimum daily staffing of 19 personnel is required. There are two dedicated personnel of the 19 each day to provide aircraft rescue and firefighting (ARFF) delivery out of Station 82 under contract with the Port of Pasco at the Tri-Cities airport.

Due to the variety of apparatus and equipment, dedicated staffing for all apparatus is not possible, nor required for all types of incidents. Cross staffing of apparatus allows the flexibility within daily operations to meet the needs of the community based on the type of incident response required while considering budget impacts and resource availability. Cross staffing of apparatus indicates that a crew will take the appropriate apparatus for the incident type. An example is the Ladder and Rescue Truck at Station 84. For any fire related incidents (structure, dumpster, vehicle), the crew responds in the Ladder, leaving the Rescue Truck in the station.

Station	Apparatus	Staffing	Max/Min Staffing
Station 81	l Type l Engine	1 Captain & 1 Firefighter	Minimum = 4
310 Oregon Ave	l Type 2 ALS	l EMT & l Paramedic	Maximum = 7
	Ambulance (Medic)		
	1 Type 6 Engine	Cross Staffed	
	1 Type 4 Rescue Boat (in	Cross Staffed	
	Marina)		
	I Type 4 Spill Response	Cross Staffed	
	Boat (in Marina)		
Station 82	l Type l Engine	l Captain & l Firefighter	Minimum = 6
3502 Varney Lane	1 Type 2 ALS	1 EMT & 1 Paramedic	Maximum = 7
Airport Station	Ambulance (Medic)		
_	2 Type 1 ARFF (Port of	l Lieutenant & l	
	Pasco)	Firefighter	

		Connel ADEE in succes	
		Second ARFF IS Closs	
		statied	
	1 Type 2 Water Tender	Cross Staffed with	
		Engine	
Station 83	l Type l Engine	l Captain & l Firefighter	Minimum = 4
7510 Sandifur Blvd	1 Type 2 ALS	1 EMT & 1 Paramedic	Maximum = 6
	Ambulance (Medic)		
	1 Type 6 Engine	Cross Staffed	
	1 Type 2 ALS		
	Ambulance (Reserve)		
Station 84	1 Command Vehicle	1 Battalion Chief	Minimum = 5
4920 W Court St	l Type l Ladder	1 Captain & 1 Firefighter	Maximum = 7
	1 Type 2 ALS	1 EMT & 1 Paramedic	Staffing does
	Ambulance (Medic)		not include
	1 Type 3 Heavy Rescue	Cross Staffed with	Administrative
		Ladder	Staff
	Staff Vehicles	Fire Chief	
	l Type l Engine	2 Deputy Chiefs	
	(Reserve)	Training Officer*	
	1 Type 2 ALS	EMS Officer	
	Ambulance (Reserve)	CRR Officer	
		Administrative Assistant	
		EMS & Training	
		Assistant*	
		Resource Navigator	
Fire Training	l Type l Engine	Training Officer*	No staffing
Facility	(Reserve used for	EMS & Training	requirements
1011 E Ainsworth St	Training)	Assistant*	
	Staff Vehicles		

\* The Training Officer and the Assistant Training/EMS Officer are listed at both Station 84 (Administration) and the Fire Training Facility due to splitting time between the locations depending upon the activities scheduled.

# **OPERATIONAL READINESS**

### Page 16

## TECHNICAL COMPETENCE

#### Core Purpose:

Ensure staff is properly trained, healthy, and capable of peak performance at all times. Measure and monitor personnel qualifications to Washington Surveying and Rating Bureau (WSRB) standards for the achievement of 2020-2021 Council Goals.

#### Metrics Measured:

International Fire Service Accreditation Congress (IFSAC) Qualifications, Training hours, Length of Employment, Retirement Eligibility

### Page 21

### APPARATUS RELIABILITY

#### Core Purpose:

Ensure fleet and equipment is capable of meeting performance demand. Monitor the availability and condition of assets, anticipate and plan for future needs.

Metrics Measured: Fleet Age, Maintenance Costs, Out of Service Time, Unit Utilization Costs

# Page 26 CALL VOLUME/TEMPORAL TRENDING

Core Purpose: Monitor event type trends, recurrence, and location, to improve resource allocation and training needs.

Metrics Measured: Call Volume and Types, Geo-Spatial Concentrations, Temporal Statistics

# TECHNICAL COMPETENCE

#### Member Qualifications



The Pasco Fire Department utilizes standards set forth by the International Fire Service Accreditation Congress (IFSAC), recognized by the WSRB and the Washington State Fire Marshall's Office, as a benchmark for measuring individual professional qualifications. The completion of the IFSAC certification process, from Firefighter I through Fire Officer II, represents over 700 hours of instructed training and associated third party evaluated testing of knowledge, skills and abilities. Most of the effort of obtaining the Firefighter I and II certifications is occurring in recruit academy, as those certifications are obtained during academy and prior to assignment to shift. There are only minimal active personnel without those certifications and over the next few years will retire. The ongoing effort continues to be at the Fire Officer level – Fire Officer I & II – and will be part of the officer development program being developed. Fire Officer certification is required for promotional testing, so the incentive for those advancing their careers is in place. The reduction in the Fire Officer II and limited gains in Fire Officer I are related to personnel that retired during 2021 and are no longer in the base counts. At this point, there remain only 2 personnel of the 50 line firefighters that have not obtained Firefighter II certification. Those two individuals have additional training requirements to meet the WSRB minimum.

## Annual Training Hours Completed by Shift



# Average Training Hours Per Staff Member



Training hours is one of the key performance metrics, not only because it can easily be tracked by employee, but it also directly affects the WSRB rating. WSRB requires 240 hours of training per year per employee to achieve maximum rating. These training hours shown in the charts on the previous page include the all-hazard service delivery elements, i.e. technical rescue, EMS, wildland, etc. as well as firefighting skills. The total number of hours is indicative of a department that prides itself on doing the best job possible and maintaining operational excellence.

Another item to consider with training hours was the number of hours for new hires. The charts for this year were updated to remove the recruit school hours from the shift training hours, as the recruit school does not occur based on shifts. This dropped the total hours and the average hours per member, but the data still shows a very high level of training occurring by all shift personnel. By removing the recruit school training hours, the metric is more representative of daily operational training for line personnel. The typical recruit completes approximately 580 hours of training during the 16 weeklong recruit academy.

The expected baseline for training hours established by WSRB is 240 hours (20 hours per month), which does not include any special operations or EMS elements. The hours can be reduced by a percentage based on IFSAC certifications to 120 hours per year (10 hours per month) if the firefighter holds a Firefighter II certification. By reducing the required basic firefighting training hour requirements, additional special operations training can be completed allowing for a wide variety of service delivery while maintaining the basic skills of firefighting. The target hours per staff member is set at 200, based on the lower end of the WSRB hours and other specialty training outside of the WSRB requirements. With the 95% of line staff having Firefighter II certifications, the target could be set as low as 120 hours per year, but that would miss the specialty team training and EMS training that WSRB does not factor into the training requirements. No adjustment in the target should be made at this time due to the lack of trend based on the performance over the last 3 years.



#### Pasco Fire Department Length of Employment

The length of employment remains concentrated at the 10-year or less mark, which is a slight increase over the past few years where the concentration had been at the 5 year mark. Contributing

factors include new-hire staff increases associated with the opening and staffing of Station 84 four years ago and replacement of retiring staff. Pasco Fire has hired 21 people in the last 4 years, resulting in the tilt towards a lower length of employment. What this chart does not represent is the individual firefighter's years of firefighting experience due to lateral/experienced firefighters being hired, it does represent the potential for lack of intricate knowledge of the city and its associated characteristics and operations. This also demonstrates the potential for losing knowledgeable personnel in the future as longer tenured members begin to retire, especially as those over 20 years become eligible for retirement. The transfer of information from long term employees to new employees is key to maintaining operational effectiveness and situational awareness and is a constant struggle throughout the fire service. On a financial impact consideration, the number of personnel with larger accrued leave payouts available continues to be monitored during budgeting processes.



#### Department Age Grouping

The above graph represents a healthy normal curve, indicating a good blend of staffing regarding age and experience, department wide. There are discussions about lowering the minimum age to 18 instead of 21, which would impact the bottom end of the profile. The profile of our department is consistent with the NFPA Survey of Fire Departments for U.S. Fire Experience, 2019 when looking at mostly career departments protecting a population of 50,000 to 99,999. PFD has a slightly lower percentage of the 20 -29 age group (11% versus 21%) and a slightly higher percentage of the 50 -59 age group (20% versus 18%). With the expected retirements and additional staffing needs driven by growth, a shift of the curve towards the center to left over the next five years is predicted.



#### Eligibility for 2022 Retirement



The planning of replacing key personnel, either by position or by specific knowledge, is very important. To minimize transition strain, review of the potential for pre-retirement hiring/training and succession planning is key. As part of the Strategic Plan update, succession planning was identified as a key initiative. This initiative will help the department prepare the future leaders of the department by identifying and providing training and experience for those individuals ready to move up the leadership ranks. A review of the level of leadership and staff eligible for retirement reveals that several key positions are currently eligible to retire, including: Fire Chief; 2 Deputy Chiefs; 2 Battalion Chiefs; 3 Captains; and 1 Lieutenant. Statistically stated, 100% of the Uniformed Administrative Chiefs, 67% of the Operational Chiefs, 25% of the Station Captains, and 11% of the

Company Officers are eligible for retirement. In addition, there are 4 firefighters eligible for retirement, which will increase over the next few years.

With the current retirement eligibility and looking at the next five years, there are about 30% of the will be able to retire. This is being planned for along with the increased need for staffing for growth management. The department is putting together a recruitment effort to ensure that enough quality applicants are informed of upcoming hiring. Additionally, several officers are working on an officer development program to prepare both current and future officers are prepared for the challenges that will be encountered with the growth of the department.

## APPARATUS RELIABILITY



#### Cumulative Fleet Age versus Total Fleet Life Expectancy

The overall age of the fleet remained relatively stable in 2021. The wildland apparatus status did improve in 2021 as the unit scheduled for replacement in 2020 was completed, although it was late in the year due to delivery delay of some critical parts. The pandemic also slowed the replacement of the Battalion Chief vehicle (part of the Utility/Staff) planned in 2020, and this has not happened in 2021. The replacement this vehicle in 2022 will occur in June due to inability to purchase vehicles without significant delays. Pasco Fire has taken an aggressive stance towards fleet management and identifying options to maintain an effective fleet. In 2021, efforts to review the fleet replacement schedule and management has been key piece to keeping up with growth and maintaining the WSRB rating. One option that is being reviewed for both staff/utility vehicles and engines is the lease option. A plan was put together in early 2022 to replace many of the staff vehicles with leased

vehicles that will ensure both adequate and in service vehicles. The option to lease engines is in review and a plan has been put together to address the additional engines for new stations is in place.



Maintenance and Fuel Cost by Vehicle Category and Type

The costs associated with maintaining and fueling apparatus by category is shown in the chart above. The apparatus remained consistent for 2021. The concern identified by this information is the high costs associated with the Engines. This is due to a series of events and resulting repairs on one front line engine, as there was about \$55,000 in costs associated with replacing the motor. Removing that single cost for that engine, the remaining cost is similar to the other front line engines (average of \$28K/engine annually). The costs encountered in 2021 across the fleet were not out of line with expectations, with the motor replacement removed. It is anticipated that the costs will remain about the same with increases as the fleet grows in conjunction with the addition of stations. One thing to note is the lack of costs associated with the ARFF apparatus. Since these costs are managed by the Port of Pasco via the Tri-Cities Airport, this element is not reported. Since City personnel do operate the ARFF units, we do have some impact on the maintenance of the apparatus. The relationship between the Port /Airport and the city is key to ensuring the reliability of the ARFF apparatus.



#### Vehicle Utilization in Miles versus Cost per Mile

Change in mileage represents effective use of apparatus. The graph's secondary axis - cost per mile - is calculated by material, labor, and fuel costs for a given year, per vehicle. A greater cost per mile and lesser change in mileage represents either inadequate use or a deteriorating effectiveness of a given apparatus. The expectation is to trend the cost per mile over time and at a certain threshold replace an apparatus when repairs outweigh the reliability of the apparatus. The two charts above show the cost per mile versus maintenance cost, allowing a year to year comparison. The chart does show two very high cost per mile units - E2861 and T2822. The planned replacement of E2861 in 2021 with a new vehicle should reduce that cost per mile in 2021. T2822 shows a high cost per mile, but that apparatus has such a low annual mileage increase, any cost will remain higher than "normal" and does not indicate it should be replaced any time soon. The overall maintenance of apparatus is part of ongoing discussions between Public Works (who supervise the City Shops) and Fire and address expectations and better communication between the department groups. The relationship between the City Shops and line staff has been assigned to a single Battalion Chief, facilitating better communication. Streamlining maintenance requests using the records management system (RMS) Image Trend, allows better reporting of issues along with accountability for both City Shops and Fire personnel, with status of the maintenance requests being updated on a consistent, almost daily, basis.

In the above chart, the apparatus is identified by the radio call sign, i.e., E2811. Units that start with an "E" are engines, "M" are medics (or ambulances). L2814 is the Ladder truck. "CH" and "BC" are chief officers and battalion chief, while the "UT", "TO", "MO", "PIO" and "PRN" are staff vehicles used by day shift or other staff assignments.



#### Apparatus Out-of-Service (Maintenance) Time

The above chart indicates a significant increase in maintenance hours associated with Fire Apparatus maintenance. The cause of the increase is based on the amount of work that was done back in the City Shops, as there was a significant amount of work that was outsourced to vendors due to a variety of issues in 2020. There is still a certain amount of work that is outsourced, but Shops has been able to complete much of the work in 2021. As apparatus systems become more complex with additional electrical and emission controls, additional hours troubleshooting issues is required as well as outsourcing to qualified personnel working on specific systems.

#### **Unit Hour Utilization**



Unit hour utilization measures the amount of time (by percentage of the day) a unit is committed to an incident. Historically, a Unit Hour Utilization (UHU) greater than 25% indicates a potential for employee exhaustion issues and negatively affects station and unit reliability. The Center for Public Safety Excellence/Commission on Fire Accreditation and the Pasco Fire Department Master Plan suggests a need for additional equipment and staffing support as UHU rates reach 25%. The chart above shows the changes over the four prior years. With the new Fire Station 84 apparatus assignments were changed between Station 82 and 84. E2812 is shown for 2021 and represents the commitment time from September 28 to the end of the year. The same is true for L2814 and R2834, as they moved to Station 84 from Station 82. The combined commitment time of L2814 and R2834 is used for the basis of comparison to the 25% action level, as these are cross staffed units. At this point, none of the apparatus has reached the level of any action, with the highest UHU at just under 14%. The UHU metric is a supporting element to response times, which should be looked at in addition to concurrent calls (where other stations cover the initial station call).

# CALL VOLUME/TEMPORAL TRENDING

#### Call Volume by Call Type



Pasco Fire reports its incident response data monthly to the National Fire Incident Reporting System (NFIRS) via the Washington State Fire Marshall. Reporting to NFIRS is one of the requirements to receive Federal Grant monies such as the Staffing for Adequate Fire and Emergency Response (SAFER) and Assistance to Firefighters Grants (AFG) programs that Pasco has been awarded and applies for each year. The chart above shows the general categories of responses grouped by NFIRS category. The Pasco Fire Department statistically aligns with national and regional ratios for departments that operate an Emergency Medical Service (EMS). Historically, responses to EMS calls (NFIRS Codes 321 and 322) comprise 75-80% of Pasco's emergent call volume (an in-depth study of these event types is discussed later in this report). While not shown in the EMS portion in the chart above, a portion of the Service Calls (550 and 554) are related to EMS responses – community health (PRN calls) and lift assists. Fires and other emergencies represent between 20-25% of total call volume. The total number of incidents during 2021 was 7342, which represents a 18.5% increase over 2020. The 18.5% increase is unprecedented, and a similar increase was seen by agencies in our area. The underlying cause of the increase is not clear, although it may be related to the public coming out of the COVID restrictions.

EMS and Fire calls represent the highest cost risk of emergency service provisions within the City of Pasco. EMS drives cost by volume, while Fire response by resource demand. The fire department continues to monitor these specific event types (and others) to identify trends, costs, and alternative strategies. Based on trends observed other programs are put in place to attempt to influence the

community actions either by prevention or direction to other resources. These programs are discussed later in the report.



#### **Call Volume Concentration**

The 2021 Call Volume Concentration heat map above identifies call locations for incidents that Pasco Fire Department was dispatched to in the map area. The legend indicates the number of calls in a specific area relative to the size and color of the circle. The larger and darker the color of the circle, the higher number of calls in that area. The large purple circle in the center of the city represents two of the retirement/assisting living facilities. Those occupancies drive a large number of calls at two individual addresses, unlike the spread out calls in the northwest portion of the city. The concentration of calls in the downtown area is shown by the larger circles, as there is a higher population density driving additional calls for service. The heat map is from the NFORS data visualization program that gathers data from our dispatch center. NFORS is a web-based program that is interactive, so information can be drilled down interactively for further analysis using near real time data. Efforts continue to build additional reporting visualizations to aid in quickly identifying and responding to trends, either positive or negative.

A different chart of incidents is shown in the figure below. This information is from the dispatch center and shows the Emergency Response Zones associated with each station. The takeaway from both the call volume charts indicate there are two distinct areas of incident concentration – one in the northwest portion of the city and one in the south-central area. Continually analyzing the call volume concentration in combination with the earlier Unit Hour Utilization performance drives placement of stations and associated staffing.



With the relocation of Station 83, the areas north of Interstate 182 have been better served with shorter response times at the slight expense of response times in the areas south of the interstate (labeled as 852 in the map). The lack of road infrastructure crossing Interstate 182 limits the routes from the relocated Station 83, which also provided an issue prior to the move. As the City of Pasco updates the Traffic Improvement Plan (TIP), the Fire Department is consulted for recommendations to address response impacts and limitations. The 2022 TIP includes a Road 76 overpass which will assist in response times to the south of the interstate.

Land has been purchased for future Station 85 located near the intersection of Maple Lane and Road 100 and design of the station has been awarded to TCA Architecture, who also designed Stations 83 and 84. Additionally, other improvements in support of future Station 85 are in progress. In anticipation of growth, a SAFER grant request was submitted for staffing at Station 85 in both 2020 and 2021. The 2020 SAFER grant was unsuccessful, and to date there have been no awards for the 2021 grant cycle. The SAFER grant awards will begin in July 2022. Further analysis of call volume versus occupancy at locations will determine when additional resources (stations or apparatus/crews) are needed, especially as growth continues.

#### **Population Density**

#### **Population Density**



Sources: US Census Bureau 2020; US Census Bureau ACS 5-year 2016-2020

Population densities, as referenced in the visual map above, are represented by darker shading, the darker the shading, the higher the density. The map above comes from a product that Pasco Fire subscribes to called mySidewalk. The interactive website is used for Community Risk Reduction as discussed later in the report. The latest population information from Washington Office of Financial Management (OFM) reflects a City population of 78,700 with a density of 2317.5 people per square mile, continuing the year over year increase. The OFM data shows Pasco at 16<sup>th</sup> in Population Rank of Washington cities, which has been consistent since 2012, and 87th in Population Density Rank.

Geospatial analysis of both data sets indicates higher call volume occurring in areas experiencing increased population movement, and secondarily, areas of greater static population density. The chart below shows incident count by the census blocks, which was from the NFORS dashboard application. The incidents by Census Block have remained consistent over the last three years with the south central portion of the city (the darkest shaded area) being the highest incident volume. This is consistent with a higher population density. Additional information can be found using NFORS for further analysis and can be combined with other information discussed below.



2021 Incidents by Census Block

There is also information provided regarding Social Vulnerability Index (SVI) in both the NFORS and mySidewalk programs, as shown in the figure below. Social Vulnerability Index is a measure developed by the Centers for Disease Control (CDC) that primarily uses relevant fields from the American Community Survey (ACS) to identify census tracts where the population is vulnerable to disasters. SVI is measured on a scale from 0 to 1 with 0 being the least vulnerable and 1 being the most vulnerable. The chart below shows the SVI for Pasco. The darker shades of indicate a more vulnerable population.



#### Housing and Transportation Social Vulnerability Within the State

Sources: CDC ASTDR SVI 2018

This dataset represents the relative housing and transportation social vulnerability of a census tract/county, ranking them against all census tracts/counties within a state. The values are percentile rankings on a scale from 0 to 1, where values near 1 indicate high housing and transportation social vulnerability and values near zero indicate low housing and transportation social vulnerability.

Data from NFORS and mySidewalk will be used to update the Community Risk Assessment (CRA) which was last updated in 2017. The updated CRA will then provide a path forward for the CRR programs.

#### Call Volume Temporal Trending

The charts shown below are more for general interest and comparison between years only. The call volume is something beyond the control of the fire department, except for implementing programs to prevent incidents from occurring which are discussed later in the report. There are elements of the temporal trending that can be used for analysis of peak demand staffing or supplemental staffing during certain times of the year, especially when used in conjunction with other data elements. To date, none of the trends have identified the need to implement these programs. One interesting element is the lower call volume for Saturday relative to other days, where Tuesday has been the busiest day of the week.







Call volume is concentrated during times of significant population activity and movement, typically during daylight and evening hours and warmer months. While the information presented in these charts are interesting, this information, the Unit Hour Utilization and response times should be the basis for determining peak staffing requirements and implementing corresponding programs. One aspect of operation that can be identified is the use of a "Peak Demand Unit" (PDU) that is staffed during peak call volumes. If this were implemented, the time between 9 am and 10 pm would likely be the time for the unit to be in service. A PDU consists of an ambulance with a paramedic and EMT to assist with the concurrent calls. The call volume by hour chart above uses the military time stamp (0000 equals midnight, 0100 equals 1:00 am, etc.).

#### Overlapping Call Volume versus Total Call Volume

Overlapping calls are calls that occur while primary response units (the units that are normally assigned to the station area) are engaged on a prior emergency. Overlapping calls lead to longer response times, challenging the ability to meet the Council Goal of maintaining the 6 minute travel time. Overlapping call volume percentage is displayed on the graph's secondary axis, in combination with total calls represented on the primary axis. As the overlapping calls increase, the impact on the remainder of the city increases to the point where service delivery is diminished. With the ability to use automatic aid to assist in responding to the overlapping incidents, some capability is maintained. As mentioned earlier, though, other agencies also experienced increased call volume indicating that the reliability of those units is less than ideal.





Call volume continues trending upward year over year with 2021 showing a very high 18.5% increase over 2020 and just over a 50% increase during the last 5 years. The continued increase in call volume will result in additional overlapping incidents as is shown on the chart above. The second chart shows the incidents per capita, which remained steady or minimal increase for four years and then a marked increase in 2021. As additional stations are added and call volume increases, the likelihood

of the overlapping calls continues to grow. The key is monitoring the locations of overlapping incidents and associated out of service resources and add either apparatus and staffing to current locations or additional stations as growth occurs. If the overlapping calls are concentrated in a specific area, then adding additional resources to the station that covers that area will assist with response time issues. Using overlapping incidents in conjunction with Unit Hour Utilization metrics will assist in identifying target points to add the resources to stations if the location is within coverage areas of existing stations. With the increased overlapping incidents, response times for first arriving units can be affected as well. This becomes an issue when first due stations are busy, and a second call happens in their area. The second due station has a longer response time, affecting the performance related to the 6-minute travel time goal.



## Response Time by Fire Management Zone





2020 Response Time Data by Fire Management Zone



2021 Response Time Data by Fire Management Zone
The images on the previous page show the percent compliance to the 6-minute travel time based on guarter section areas of the city (Fire Management Zones, or FMZs). The areas of red indicate meeting the 6-minute travel time less than 70% of the time, while yellow indicate 70 to 89.9% and green 90% or greater. The overall goal is to achieve the 6-minute travel time 90% of the time throughout the city. The central portion of the city continues to be covered well as shown by the green areas. Several of the yellow areas in the central part of the city are on the cusp of making the 90% metric, with only a few of the incident travel times outside of the 6 minute limit. Many of the areas on the cusp of compliance can be related to the lack of a well-connected transportation system. Getting units from Station 81 to the west is tricky due to the railway that bisects the city. The currently in construction Lewis Street overpass will have a positive impact as it will have a greater capacity for traffic compared to the current underpass/tunnel, allowing a better response route. The west area of Pasco continues to experience delayed response due to longer travel distances from existing stations as well as longer apparatus response distances from other three fire stations. The overlapping incidents typically drive the need for stations to cover each other, resulting in longer response time. The overlapping incidents continue to be an area of concern and remain at a high level as discussed earlier in the report.

With the relocation of Station 83 from Road 68 and Argent to Road 76 and Sandifur in January 2021, the response time to incidents above Interstate 182 has already decreased, as the concentration of the red areas is greatly decreased. However, there was a significant increase in response time to the south of Interstate 182, as response routes from Road 76 and Sandifur is either to Road 100 or via Road 68 south. One is a problem due to distance, while the other is impeded by traffic volume. While visually not desired, the impact is lowered since the overall number of incidents south of Interstate 182 is less than compared to north of Interstate 182. This impact will be addressed by future Station 85, as it will be in the middle of the red area east of the intersection of Maple Drive and Road 100. For the northeast portion of the city, Station 87 will be located on Capitol Avenue on the northwest corner of the Autozone property to assist with travel distances in the industrial area, as that area is well outside of the 6-minute travel time. With the increased development planned in the industrial area and northeast portion of the city limits, the new station will allow the central and east (current Station 81 area) to remain covered.

The goal for the six-minute travel time is one of the key metrics that serves as the guiding principle as more development occurs. Fire Administration staff has worked with the GIS department to maintain drive time maps and identified areas of concern and best locations for stations as infrastructure is planned based on growth. Staff will continue to analyze travel and response times by Fire Management Zones (which remain unchanged) to quickly identify areas of concern quickly and address issues by adjusting response plans and station coverage areas. Fire Staff will also work with the planners to consider how to best maintain response routes.

# COMMUNITY WELLNESS

## Page 40

## PATIENT DEMOGRAPHY

### Core Purpose:

Understand community demographics and inherent target risks to better plan and prepare effective programs and emergency responses.

Metrics Measured: Resident Age, Average Patient Age

## Page 40

## MEDICAL EMERGENCY

### Core Purpose:

Measure, analyze, and adapt operational processes to achieve and maintain optimal outcomes. The Pasco Fire Department, in cooperation with the WaCARES program, report and annually develop survival statistics for Cardiac Events. Review reports provided by Washington EMS Information System (WEMSIS) for patient care reporting.

### Metrics Measured:

Cardiac Events and Outcomes, Behavioral/Mental Health Response, Drug and Alcohol Emergencies, EMS Responses, WEMSIS quality improvement measures

## Page 52

## FIRE EMERGENCY

### Core Purpose:

Measure, analyze, and adapt operational processes to achieve and maintain optimal performance. The Pasco Fire Department reports all fire activities using the National Fire Incident Reporting System (NFIRS).

### Metrics Measured:

Structural Fire Occurrences and response, Structural Fire Cause, Fires by Type (Natural Cover, Vehicle), Special Operations Responses (Water Rescue, Technical Rescue, Hazardous Materials, ARFF)

## Page 58

## COMMUNITY RISK REDUCTION

### Core Purpose:

Promote Community wellness, safety education, and transparency between Citizens and Department. Develop a community assistance referral and education services (CARES) program to provide community outreach and assistance to residents of its jurisdiction to improve population health and advance injury and illness prevention within its community. Determine impact of Pasco Resource Navigator program on high utilizers of EMS resources.

Metrics Measured: Community Outreach Activities, Navigator (PRN) Client Contact

## PATIENT DEMOGRAPHY

The City of Pasco is home to approximately 78,700 residents, per 2020 Census data. Broken out by age group, we find Pasco is comprised of a significant youth population (59% less than 35), but a relatively small retirement and older population ( $\sim 9\%$ ). The trend of direct correlation of call volume to patient age continued in 2021 as it did in prior years. As patient age increases, the calls per resident within the given age group also increase. In other words, about 2% of Pasco residents under the age of 19 will require emergency medical services per year; about 4% of residents under the age of 64; however, just over 25% of the population over the age of 65 will require EMS in a given year, on average.



The information shows continued dependency of the 65+ population on 911 services for low risk incidents, often considered routine care. High cost of service to such a small demographic segment generally requiring non-emergent care indicates a significant opportunity for proactive community paramedicine programs. The percentage of the 65+ population using EMS in 2021 increased from 22% to 25%, which had been constant between 2019 and 2020. PFD continues to work with several organizations (Adult Long Term Care (ALTC), Senior Life Resources – Meals on Wheels, and Consistent Care) to refer the high users of 911 to a supportive agency addressing the true needs of the patients. In 2019, Pasco Fire teamed with Consistent Care and established the Pasco Resource Navigator (PRN) program, with one person dedicated to the program for 2020 and 2021. The idea behind the program is to identify the high utilizers of 911 for the "routine" care or other issues and work with them individually to get the resources to them that will address the issues. This program will be discussed in additional detail later in the report.

## MEDICAL EMERGENCY

### **Cardiac Arrests**

Cardiac emergencies are on average the costliest emergency medical service provided in Pasco, with an average full-cardiac arrest scenario totaling about \$2,000 (transport fees not included) based on the equipment and drugs used in patient treatment and care. The Pasco Fire Department

continues to monitor the frequency, cost basis, and demographics of cardiac events. The charts below show information on cardiac arrest events by gender, age grouping and location. The location of most cardiac arrests occurred in the home/residential setting, which is in line with what is experienced in Washington State. One interesting note is the drop in the events for the 50 - 59 age group. This appears to be an anomaly for this year, as previous years show higher events in this age group.







The Pasco Fire Department utilizes the Utstein Survival matrix to measure the success of medical interventions for cardiac events. The Utstein matrix uses the following criteria to measure cardiac outcomes:

- Witnessed by bystander and found in a shockable rhythm (ventricular fibrillation or ventricular tachycardia)
- Received some bystander intervention (CPR and/or AED application)

Non-Traumatic Etiology Survival Rates			
Overall	15.7%		
Bystander Witnessed	22.7%		
Unwitnessed	4.5%		
Utstein	33.3%		
Utstein Bystander	40.0%		





The citizens of Pasco benefit from a higher survival rate for cardiac events compared to national average (as reported by the American Heart Association). As can be seen in the above chart, the success rate varies widely from year to year. This is based on the criteria that is used to determine which metric applies, as it is very complex and has many variables. One notable statistic that supports many of our programs is the CPR intervention percentages, although it dropped by about 20 points over the last two years. This may be due to the location of the patient being in the home setting and people not able or willing to do CPR on their family. The higher the CPR intervention, the better the outcomes of patients. Due to this, the continuation of the "Hands Only" CPR program for all City of Pasco Employees and general public is recommended so that even if the event occurs in a home, someone has been trained and can take action. With the COVID restrictions limiting public activities, the efforts to conduct additional CPR training will be emphasized in 2022. The use of the PulsePoint phone application, championed by several organizations locally, should continue to be supported by Pasco. The purpose of PulsePoint is to get citizens involved regarding sudden cardiac arrests in public locations to get willing people to start the survival process – early CPR and defibrillation.

### Behavioral/Mental Health Related Response Metrics

Following up on the initial look at some patient metrics started in 2018, the information provided below is part of what we review on a periodic basis and use to determine if there are operational impacts, both from budgetary and resource use points of view. As we move forward with the earlier described Pasco Resource Navigator (PRN) program, some of the statistics and other metrics will be further refined to measure the impact of the program. As reported last year, the specific information on homeless patients and alcohol and drug related emergencies is shown in the charts below after the data related to falls. The reason for the tracking of patients that have fallen is of interest is that falls, especially in the elderly population, can lead to a significant change in life status due to injuries that occur during a fall. In some cases, a fall resulting in a broken bone (typically a hip or femur) for an elderly patient can ultimately lead to their death.



As shown in the above chart, there are several patients that experience injuries related to falls. Comparing the last three years of data, the only trend that is obvious is the injuries related to falls in older individuals increases. The number of patients encountering injuries related to falls increased again from 157 in 2020 to 201 in 2021. The older patients incur the fall related injuries due to loss of balance or weakness, which may be because of other medical conditions. With the obvious trend, this set of data may be the basis for additional research which may lead to other metrics for future reporting. The relevance of the trend is that patients are referred to the PRN program to assist in preventing future injuries and for assistance to both prevent future fall related injuries or to address issues associated with recovering from those injuries.

In addition to the injuries related to falls, there were another 252 (down from 283 in 2020) responses for "Lift Assists". Of these 252 responses, 10% (24) were in assisted living facilities, which was an increase of over 50% from 2020. While not a large percentage of the responses currently, the call volume for these types of calls is monitored to ensure the facilities are not using the 911 system to supplement their staffing and associated work. These Lift Assists responses are to assist individuals that have either fallen or are too weak to move from one location to another. While not considered medical incidents, they sometimes are related to either previous fall injuries or other medical conditions resulting in the weakness. Again, working with the PRN person, appropriate resources are often identified to prevent the individual from using the 911 system for future help and assistance.



Looking at the data in the above chart of primary impression of the homeless patients, there was a significant increase in the number of homeless patients encountered – 269 versus 143 and 114. While many of the reported issues are related to pain, either due to chronic issues or immediate injuries, there were significant increases in the neurological and behavioral issues. The issue of pain management leads to the next series of information on drug and alcohol use/abuse to deal with the pain. Many of the other categories have additional patient information referring to either substance abuse or behavioral issues. There was a large increase in 2021 of the Gastrointestinal issues seen and is assumed to be directly related to removal of precautions related to COVID transmission. Additional analysis is needed to determine what avenues are available to address the issues the homeless population is encountering. One area that was explored, and remains a high priority, is obtaining low barrier housing for the homeless population to assist them with substance abuse issues and, in many cases, the associated behavioral issues. There are several groups that Pasco Fire is working with to support housing opportunities and a low barrier housing complex is planned on being built in 2022 which should address some of the patient's wellbeing.

### Drug and Alcohol Use

The information listed below follows our reporting of similar statistics from 2018. With the impact of the COVID restrictions and associated behavioral issues resulting in increased drug and alcohol use, the review of use of those substances is monitored for trends. PFD continues to work with Pasco Police in supplying Narcan kits to PPD officers for quicker treatment of opioid overdoses, as the quicker the Narcan is given, the better the patient outcome. Efforts to track and evaluate this program continue, but no determinate metrics have been validated.

The chart below shows data of the alcohol and drug use indicators as recorded during patient treatment. The data represent indicators based on standards identified at both the national and state

levels. The indicators can then be used to identify trends over time, allowing resources to be applied to address the corresponding/underlying issue for the patient. As trends are identified with specific patients and help is requested, the patients are referred to the PRN program to direct them to the proper resources needed. In some cases though, the patient refuses any help until the situation is difficult to resolve.



The department responded to 338 drug/alcohol related incidents in 2021, which was up significantly over the 219 in 2020. Of those 338 incidents, 64 of them had multiple indicators of use (i.e., patient admitted use and paraphernalia was found at scene) This information matches other reports that drug overdoses were up due to the pandemic and associated lockdowns. The average age for these patients was 40.2 years old with the youngest patient being 14 and the oldest patient being 90. Males continue to be the patients by a 2 to 1 factor for alcohol/drug related incidents (62% male versus 38% female).

### Other Emergency Medical Response

As part of the Records Management System (RMS) for incident reporting, there are several reports that can be generated that show a variety of variables. Several representative reports are shown below to show the capability of the system. With a full three years of data in the system, there should be some reports and trending of data that become the standard for analyzing performance and establishing changes. Some of the reports assist with our reporting to the National and Washington State EMS information system (NEMSIS and WEMSIS), ensuring the data shared is correct and reivewed prior to submission. With our current EMS officer retiring in June, the new EMS officer will have input on the types of reports that should be reviewed on a regular basis to assist with better patient care and outcomes and will be an area of focus for 2022.





Incident Year 2019 2020 2021



Average Incident Unit Notified By Dispatch To Unit Arrived On Scene In Minutes

Average Incident Unit Arrived On Scene In Minutes to Unit Left Scene





Average Incident Unit Left Scene To Patient Arrived At Destination In Minutes Average

Average Incident Patient Arrived At Destination to Unit Back In Service In Minutes



### COVID 19 Impact

Entering 2021, the impact of COVID continued to be felt, as the extra requirements for personal protective equipment (PPE) added stress to the crews and staff managing the stock/supplies. The changes in protocols and tracking of exposures added to the workload of the EMS division. Tracking of the everchanging case counts and variants provided additional information to keep the crews safe and the public protected. Overall, Pasco Fire fared well during the pandemic with several of our staff contracting the virus but none resulting in known long term issues. This is not to say that there may not be future issues that arise, but this will be monitored as part of their annual physical evaluation. As for the vaccination status, Pasco Fire did lose two employees because of the requirement to be vaccinated. There were several others that were granted exemptions and continued to be vigilant with testing and reporting to continue to serve in their roles.

Overall, Pasco Fire transported 1102 COVID positive or presumed COVID positive patients in 2021. This made up a little less than a quarter of the 4641 transports for the year. With the number of variants and changes to protocols, some of the extra PPE worn by EMS providers is now standard precaution, just as gloves were implemented in the HIV/AIDS era. Additional equipment is now also included in our base treatment that might not have been available without the changes in practices and equipment provided through the COVID response funding.

### WEMSIS Data Quality Improvement

As part of the data quality improvement at the state level, Washington Department of Health provides updates to EMS agencies based on information gathered through the Washington EMS Information System (WEMSIS). One of the main purposes of reporting the data is to ensure the continued improvement of patient care and outcomes as well as identifying issues that can be addressed in training or protocol changes. Quarterly reports are sent to agencies outlining the point deductions for missing information. This information can be used to assist in gathering better data and improving reporting, both at the local (individual patient) level and the regional/state level. Pasco works with other agencies that use the same EMS reporting system to ensure the area is meeting the standards as required by WEMSIS.

The table below shows the average score for EMS reports for each quarter. The goal is 100% score with the 97% reported being consistent for the year. Additional information in other charts provide the basis for improvement to achieve the 100% goal.

	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
Your	07.0		07.4	07.4	07.4
score	97.2	97.2	97.1	97.1	97.4
Average score in your region	97.7	97.8	97.9	97.0	96.2

The table below is from the fourth quarter of 2021 and identified the top five data elements with the most point deductions (number of records times the individual point deduction).

Identified data element	Total point deductions from Q4 2021 records	Number of records with deductions
Cardiac Arrest (eArrest.01) is a recommended field when patient contact is made.	716	179
Cause of Injury is a recommended field when there is a possible injury.	244	61
Time of Symptom Onset is a recommended field for treated stroke, TIA, and seizure patients.	100	25
Recent Travel is a recommended field when an impression includes infectious disease.	40	40
Recent Exposure to Infectious Disease is a recommended field when patient has a suspected infectious disease.	40	40

Based on this feedback, the EMS reporting system (Image Trend) rules are reviewed to ensure the data is being collected and working properly. The EMS reporting system allows local rules to be implemented to require personnel to enter data before being able to complete the report. This forces the data to be collected for situational circumstances, allowing for the reduction in point deductions.

The table below is data from the 4<sup>th</sup> quarter of 2021, which shows the point deduction for the reports for the quarter. After reviewing the quarterly report, the same five elements are still causing issues in the EMS reporting system. The RMS Committee is working with Image Trend (software company) and Washington Department of Health WEMSIS personnel to ensure the rules are working as intended in Image Trend, as it appears no resolution has been achieved yet.

Identified data element	Total point deductions from Q4 2021 records	Number of records with deductions
Cardiac Arrest (eArrest.01) is a recommended field when patient contact is made.	716	179
Cause of Injury is a recommended field when there is a possible injury.	244	61
Time of Symptom Onset is a recommended field for treated stroke, TIA, and seizure patients.	100	25
Recent Travel is a recommended field when an impression includes infectious disease.	40	40
Recent Exposure to Infectious Disease is a recommended field when patient has a suspected infectious disease.	40	40

### Pasco Resource Navigator Program

The Pasco Resource Navigator (PRN) Program was initiated in 2019. The initial program used a part time Consistent Care employee working directly with Pasco Fire Department to assist patients referred by field units. As mentioned earlier, the program is designed to reduce the use of 911 for "routine" or non-emergency issues as well as identifying the high utilizers of the EMS system and directing them to the proper resources to address their needs. There continues to be a certain population that relies on emergency services for medical care, often related to one of several conditions, including drug use, mental illness, and poverty among others. In 2021, the PRN Program remained staffed with one full time position. However, Pasco Fire worked with Consistent Care (the agency that Pasco Fire has teamed with to staff the PRN program) to apply for an intern position via the Greater Columbia Accountable Community of Health (GCACH). The \$50,000 grant was awarded to Consistent Care and Pasco agreed to cover the costs associated with benefits for the full time intern

position. Unfortunately, due to some staffing changes, the intern was unable to start in the 2021. The intern did start in 2022 and will continue until July 2023.

The following data is based on patient referrals and overall outcomes of the situation. While most end positively, there are still some people that refuse the help the program offers and still rely on emergency services. Active cases are ongoing efforts to connect appropriate resources with the individual, where the closed cases represent successful connection of those resources in creating a stable environment for the person, although some cases do get closed due to the death of the client.

In 2021, there were 119 referrals, which is an increase of 105% over the 58 in 2020. The increase in referrals shows the great need for the program to continue and the reason the grant was requested. Disqualification is based on being an invalid referral, unable to contact the client or residency requirements, as they do have to "live" within Pasco. The charts below outline some of the information of the referrals for 2021.



There are occasions that referrals either chose not to participate or are not able to be contacted. This results in closing out of the referral with the understanding that additional attempts may be made in the future. The "Other" reason for disqualification for participation is based on the individuals wanting a specific type of assistance that is not readily available (cash request for rent) or other agencies (such as Habitat for Humanity) had already addressed the issue.

Other aspects of success of the PRN program include the growth of the program into Richland, as Consistent Care is working with Richland Fire and Emergency Services to hire a Navigator to work on Richland specific cases. As that program is put in place in 2022, Pasco Navigators will work with them on lessons learned. It is anticipated that Richland and Pasco Navigators will occasionally come across the same client due to them moving based on personal needs and capabilities.

Additional data collection regarding patients and outcomes continues to be worked on in Image Trend. Image Trend does have a Community Health module, which can be used to assist in tracking data related to the PRN program. As this module is more fully implemented, additional reporting information will be provided. The full implementation of the Community Health module is planned for 2022. Additional information regarding reduction in calls to 911, avoidable emergency room visits, and Medicaid dollars avoided will be gathered to show the impact of the PRN program, as outlined in the CARES legislation (RCW 32.21.930).

## FIRE EMERGENCY



### Residential Structural Fire Event Type

Analysis indicates a significant portion of Fire call volume in both types of residences is false alarms, many related to smoke alarm activation due to cooking (burned food). The False Alarms in both multifamily and single family residences dropped slightly compared to 2020. The cooking fires and structure fires decreased compared to 2020, but not significantly. One of the surprising increases were the Trash/Other fires in single family residences increased significantly, although still a relatively small number of total incidents. This may be attributed to people not understanding the burning regulations in the city limits that allows only blown in tumbleweeds to be burned. The expectation is that the crews educate the occupants regarding the burning regulations and only involve enforcement if problems are encountered.

With the decreases in the cooking and structure fires, the importance of remaining vigilant with the Community Risk Reduction program is highlighted. The programs discussing cooking fires and working smoke alarms in the residences continue to pay dividends as the number of residences continue to increase in the city, but the number of incidents continues to decline. As discussed previously, the emphasis on outdoor burning regulations might be an area to emphasize in 2022 versus waiting for incidents to occur and then providing the education.

### Response Time Standard outlined in City of Pasco Resolution 2938 for 1<sup>st</sup> Arriving Engine:

The Pasco Fire Department has adopted a response/travel time standard of 6 minutes for the arrival of the first engine company to a fire suppression incident, which the department should meet 85% of the time.

### Actual Department Performance for 2021

The Pasco Fire Department met the Response/Travel Time Performance Objective 69.9% of the time.

90% of the fire department incidents experienced a 1st unit response time of 8:27 minutes or less.

### Response Time Standard outlined in City of Pasco Resolution 2938 for Full 1st Alarm Response:

The Pasco Fire Department has adopted a response/travel time standard of 12 minutes for the arrival of the full complement of a 1st alarm assignment to a fire suppression incident, which the department should meet 85% of the time. Further, the Pasco Fire Department has adopted a 1st alarm response of 11 firefighters and or 2 engine companies (if applicable), 2 aid units, 1 ladder truck and 1 Command Officer (if applicable).

### Actual Department Performance for 2021

The Pasco Fire Department met the standard of 11 or more personnel arriving on scene in 12 minutes or less 81.8% (higher than the 76.3% for 2020) for residential structure fires where 11 or more personnel were initially dispatched. The 90th percentile arrival time for 11 or more arriving was 12:35 minutes (less than the 14:29 minutes for 2020).

The Full 1<sup>st</sup> Alarm Response standard should be changed to match the current NFPA 1710 standard (2020 edition) performance, which is 16 (17 if an aerial device is used) personnel arriving at a single-family house fire within 8 minutes. NFPA 1710 outlines a response to a typical 2000 ft<sup>2</sup>, two-story single-family dwelling without a basement and no exposures as a basis for deployment. Additional personnel are required for other occupancies, including open-air strip shopping center, apartment

(1200 ft<sup>2</sup> in a three-story garden style), and a high-rise (building with the highest floor 75 feet above the lowest level of vehicle access).

Compared to the NFPA 1710 standard, Pasco met the standard of 17 personnel in 12 minutes 38.9% of the time in 2021. Since Pasco responds with an aerial device, the 17 personnel benchmark should be used instead of the 16 personnel.



### Natural Cover Fires

The wildland fire season usually occurs between May 1<sup>st</sup> through October 31<sup>st</sup> (dependent upon weather, fuel moistures, etc.) of each year. PFD responded to a total of 76 grass/natural cover fires during the fire season of 2021, a 1% increase compared to 2020. Natural cover fires require the response of specialized Type 6 engines (located at Station 81 and 83), in addition to specialized personnel training. It is anticipated that 2021 will mirror 2020 based on predictions to date.

### **Response Time Standard outlined in City of Pasco Resolution 2938:**

The Pasco Fire Department has adopted a response/ travel time standard of 6 minutes for the arrival of the first unit with appropriately trained and equipped Wildland Firefighting personnel on board to a wildland fire incident, which the department should meet 85% of the time.

Actual Department Performance for 2021:

The Pasco Fire Department met the Wildland Firefighting Performance objective, 72.1% of the time, which is a reduction from 86.5% in 2020.

90% of the fire department wildland incidents experienced a Wildland Firefighting response time of 8:29 minutes or less, which was an increase of 2 minutes over 2020.

### **Vehicle Fires**



PFD responded to 40 vehicle fires throughout 2021, which was an 9% decrease from 2020 and continues a downward trend since 2019. As noted in the chart above, a large majority of vehicle fires were passenger vehicles. One area of interest is the three year decrease in Road Freight/Transport fires. These incidents include pickup trucks in addition to larger commercial vehicles. The cause of the decrease is not apparent based on review of the fire reports. Vehicle fires require the response of one Type 1 engine and an ambulance. There is no specific metric that can attribute to the decrease in the number of vehicle fires.





The Pasco Fire Department water rescue program was established with the goal to develop a focused preparedness and response program for water related safety and incidents. With 13 river miles along the Columbia and Snake Rivers, the possibility of water related incidents is certain. The number of Boat responses outlined in the above chart shows fewer responses for 2021 by over 20%. The decrease may be related to people returning to work and "normal" schedules after COVID restrictions were lifted. The spring and summer months continue to be the busiest times, following the typical river activities based on weather patterns. The program works collaboratively with Columbia Basin Dive Rescue, Benton, Franklin, and Walla Walla Sheriff's Offices and the US Coast Guard – Kennewick. The water rescue program continues to provide a key resource to the area and the examination of actual responses should be reviewed to ensure best training and resource deployment based on potential hazards located along and in the river. A new spill response boat funded by a Department of Ecology grant was ordered and is being put into service to address oil spills on the Snake and Columbia Rivers is still in process. Additional training and use of the spill response boat and trained personnel will be completed in 2022 to ensure that response to hazardous materials spills is coordinated with current resources and agencies.

### ARFF

In 2020, PFD responded to 40 emergencies at the Tri-Cities Airport (PSC), displayed in the chart below. This was a 67% increase in calls to the airport. The significant increase can be directly attributed to the loosening of restrictions for the COVID pandemic. Travel and passenger volume through the airport was dramatically started to increase to normal but was still down from 2019 levels (PSC enplanements 2019 – 438,123; 2020 – 188,959, 2021 – 346,503).

Data is shared with the airport personnel on a quarterly basis and outlines basic response data, i.e. how many types of calls were handled at the airport. Each year, the Federal Aviation Administration (FAA) conducts an audit of the airport operations, including reviewing ARFF training and response. PFD continues to meet the requirements outlined by the FAA, and CFR Part 139. The PFD and Port of Pasco continue to work collaboratively to improve the ARFF program each year. A review of the

ARFF program began in late 2019 and identified elements of the training program to better address Pasco Airport specific knowledge. With the changes implemented in 2020, additional improvements were made for 2021 continuing the improvement of the ARFF training program. This effort has changed the ARFF program into a premier program within the department and will support the planned growth and passenger count that is expected by the airport once travel returns from COVID19 pandemic restrictions. A key element of the training program was to work with the Pasco Airport management/directors and the local Federal Aviation Administration (FAA) representatives to identify areas of improved communication and training. In addition to the local coordination, Walla Walla Fire District 4 personnel were trained at the Pasco Airport with Pasco personnel. Having outside agencies permits additional opportunities for program improvement. This will continue in the future and additional outreach to Yakima Fire was completed as well, resulting in a plan of them training at Pasco in 2022.



### **Response Time Standard outlined in City of Pasco Resolution 2938:**

The Pasco Fire Department has adopted a response/travel time standard of 3 minutes for the arrival of the first unit with appropriately trained and equipped Aircraft Rescue and Firefighting personnel on board to an aircraft incident, which the department should meet 100% of the time. This standard is adopted to meet Federal Aviation Administration requirements, 14 CFR Parts 121 and 139.

Actual Department Performance for 2021

The Pasco Fire Department met the Aircraft Rescue and Firefighting performance Objective 85.7% of the time, an increase over the 77.9% in 2020.

90% of the fire department incidents experienced an Aircraft Rescue and Firefighting response time of 3:37 minutes or less, which is a significant decrease from 2020 which was 4:42 minutes or less.

The performance for 2021 included a small incident sample – 8 total incidents, which indicates a single incident could have a major impact on performance. Additionally, the times associated with the response are difficult to capture, as the FAA Tower contacts Station 82 directly using a "Crash" phone system to alert on duty ARFF personnel. That time is not captured in the dispatch system (CAD – computer aided dispatch), so actual performance is difficult to analyze.

## COMMUNITY RISK REDUCTION

During 2021, the Community Risk Reduction (CRR) program focused on the two primary areas of concern – smoke alarms and the repeat users of 911 (high utilizers), since COVID restrictions were still in place and limited public events through much of the year. The number of smoke alarms replaced and serviced are shown in the chart below. With the COVID impact, the number of events was significantly reduced, but there were a limited number of events that occurred later in the year. In the absence of more personal events, these events were necessary for us to keep safety messaging in front of the public.



### **Community Risk Reduction Outreach Tasks**

### Number of outreach sessions conducted by Month

The chart below shows the CRR programs by month, which shows several months with no sessions. The overall number of events was down even from 2020 (75) to 20. Several of the sessions were related to press events regarding the pandemic and how Pasco Fire was supporting the response to with the community testing site and the vaccination site. There also were a few sessions/interactions with businesses that were captured relating to installation of protective Knox Caps on fire systems. While these were more fire protection rather than public education, we took advantage of the time to educate businesses on the importance of proper maintenance of the fire protection systems.



### Additional Community Risk Reduction Commentary

In 2019, PFD was awarded a Fire Prevention and Safety (FP&S) grant from the Federal Emergency Management Agency to measure the overall effect of our school education programs. The grant period was extended into 2021 and was closed out in early 2022. Since we could not get into schools, more emphasis was done into working with older adults in the smoke alarm program. While the goal of the grant did change and the scope was different than originally planned, the ability to get into older adults' homes and ensure smoke alarms were properly installed and working did accomplish the fire safety goal the grant is supposed to achieve.

A goal of the CRR program is to update the Community Risk Assessment, as the last one was completed in 2017. The plan is to update the CRA in 2022 and continue develop and improve programs identified in the CRA.

## **COST CONTAINMENT**

## **BUDGETARY CONSIDERATIONS**

### Core Purpose:

Page 61

Ensure fiscal responsibility as a department by monitoring expense and budget, monthly. Encourage application and use of applicable Grant opportunities, subsidies, and other expense reimbursement programs.

### Metrics Measured:

Funding, Budget Performance, Variance

## Page 62

## **OVERTIME & SICK LEAVE**

### Core Purpose:

Monitor liability, appropriate staffing levels, and leave consumption to gauge workload balance.

### Metrics Measured:

Overtime Cost by Year Trend, Sick Leave Utilization

## **BUDGETARY CONSIDERATIONS**

### PFD Funding Sources – 2021/2022 Biennium

Pasco began using a biennial budget in 2019, with the 2021/2022 biennium being the second time that the 2 year budget has been implemented. Since 2021 was the first year, there were budget adjustments made at the "mid-year point", i.e., at the end of 2021. While technically reporting is done on an annual basis, the 2 year process does allow some additional flexibility to the budget management process. The different funding mechanisms for Pasco Fire are discussed below.

General Fund – Primarily derived from property and sales tax monies. The General Fund pays for availability and demand costs for fire service aspect. For the 2021/2022 biennium, general fund budget is 46% of the fire department total budget. There were two positions moved from General Fund to Ambulance Utility in 2021 due to the stability of funding discussed below.

Ambulance Utility – The Revised Code of Washington (RCW) Section 35.21.766 allows all cities and towns the authority to establish an ambulance service to be operated as a public utility. The Ambulance Utility supports the availability cost of the ambulance service, while demand costs are recuperated through fees for services provided. Additional funding from the Ground Emergency Medical Transport (GEMT) program via Washington State continued to be received in 2021. The impact of the GEMT revenue greatly offset the total costs associated with Medicaid patients versus the revenue. With the previous changes to the calculation of ambulance utility rates (Equivalent Residential Units, ERU) and GEMT, the contribution to the overall fire department budget from Ambulance was 54%.

Contracts – Contracts provide cost reimbursement for services. Contracts may be with private, local, or state entities such as the Department of Natural Resources. The largest contract for service is with the Port of Pasco to provide ARFF services at the Tri-Cities Airport. The ARFF contract provides for 2 personnel at the airport fire station for 24 hours a day, seven days a week, as well as training for maintaining qualifications related to ARFF.

Alternative – includes one-time funding such as grants. A Fire Protection & Safety (FP&S) grant was awarded in 2019 and the budget was adjusted and spread out into 2021. The reason for the adjustment was the lack of ability to get into schools due to COVID restrictions. The grant was finished in 2022.

### Ambulance Utility Rate History

During the most recent budget cycle, which is now based on a biennial budget, rates were set at \$16.20 for 2020 and remained the same for 2021. Any rate increases are based on increased cost for personnel, equipment, vehicle, and medical supplies. With the GEMT funding and revised ERU method for Ambulance Utility billing, the overall stability of the Ambulance Funding has been greatly increased. Based on this stability, the 2021 ambulance utility rate was not increased from the 2020 rate. A review of the Ambulance Utility Rate been initiated with Finance to ensure the rate accounts for growth and associated costs of delivering transport service.

### **Budget Performance Discussion:**

With the implementation of a two-year budget planning cycle, the overall management of the 2021/2022 budget was still a little challenging due to the budget amendment process and understanding expectations. With the ability to do adjustments at the mid-point of the budget cycle, there was a chance to correct for issues that arose during the first year and address any changes for the second year budget that were not anticipated.

Since 2021 is the first of the two year budget, any analysis will be done for the entire biennial budget. The budget adjustments made at the mid-point did address overtime costs, some capital budget changes, and increased costs associated with apparatus maintenance, which were discussed earlier.

## **OVERTIME & SICK LEAVE**

The constant struggle to contain costs associated with the overtime usage continued in 2021. As sick leave is used, the result is costs associated with overtime to maintain the minimum staffing. Minimum staffing is approached not only to keep the proper number of staff on duty, but also addresses the specialty teams in service. The trend of sick leave use has increased over the last few years. With the impact of the pandemic and exposure to a highly contagious pathogen, the sick leave use and potential impact to operations was a concern. Plans were put in place for addressing the potential of having a significant number of staff unavailable to work, thereby putting a strain on the system. Fortunately, the worst case scenario did not play out. Both sick leave use and overtime costs are constantly reviewed to ensure impacts to delivery of services are not diminished but costs are kept reasonable as well.



### Overtime Cost by Year - Trend

The five-year trend shows that overtime costs has risen after a drop in overtime in 2019 and 2020. The overtime cost per employee has gone up over the 2018 costs after a two year decline. The overtime hours per employee in 2021 was 236 versus 199 in 2020, which works out to about one and half shifts more of overtime per employee. Even with the addition of one person to each shift that began in late

2020, with several personnel on long term leave or other assignments, additional overtime was needed. Additionally, the overtime for specialty team training ramped back up this year, as the COVID restrictions eased, allowing regular team training to resume. Other impacts were the use of saved up vacation that did not get used in 2020 and early 2021 resulted in staffing impacts as well. The management of overtime costs remains a high priority, as it accounts for a significant portion of the budget.



### Sick Leave Utilization

2021 department sick leave usage totals 14,163 of 17,237 available hours (82% utilization). Average sick leave used per employee: 188.8 hrs. Annual allotment per employee is 234 hours. A portion of this sick leave was FMLA Sick leave, which is typically long term. There was a total of 3,797 hours of FMLA Sick Leave, which is just under 1.5 FTE of a firefighter position. Taken across the board, that means that if shifts are at minimum staffing (19) with Kelly Days, Vacation and other approved leaves, the shift must call in overtime to meet minimum staffing even before other personnel call in sick. While there is not much that can be done about sick leave, efforts to reduce illnesses related to exposure are addressed by the Safety Committee.

# PERFORMANCE RESPONSE TIMES

## Page 65

### Core Purpose:

Measure against response time goals established in Council Resolution #2938.

### Metrics Measured:

Total response times for all event types 2018

## Page 69

## PERFORMANCE EFFICIENCY

### Core Purpose:

Monitor Notification of Alarm to Fire Controlled Time by Occupancy Classification to identify trends, training needs and response criteria and identify process or procedural failures.

### Metrics Measured:

Notification of Alarm to Fire Controlled Time in Minutes by Occupancy Classification

## **RESPONSE TIMES**

### Total Response Time (in seconds)



The response time target is outlined in NFPA 1710, which is the basis for performance outlined in the SAFER grant that was awarded in 2018 and finalized in January 2021. NFPA 1710 outlines the response time for a residential structure fire full first alarm assignment or ALS unit arrival on a medical call as 480 seconds (8 minutes). The response time information is based on only incidents within Pasco city limits. Since the calls outside of the city typically are longer responses, these calls were not part of the response time evaluation. The NFPA response times are more stringent than the standard as adopted by City Council in Resolution 2938 in February 2006 (these response times were addressed earlier in the report by specific type of incident response).

Total response times are the sum of three distinct time factors:

- Call processing time: caller interrogation + unit notification
- Turnout time: unit notification to apparatus responding (enroute)
- Travel time: apparatus enroute to arrival at incident scene

Of those three time periods, only the turnout time is fully controlled by the fire department – which is how quickly the crews can get to the apparatus and respond. Call processing time is dependent on dispatch efficiency, currently managed by an external agency in the case of Pasco. Roadways, traffic congestion, and weather impacts affect the travel time and are outside of fire department control, except for safe driver training.

Increasing response times generally increase incident complexities, which drive resource demands and negatively impact incident outcomes.

EMS calls typically place a relatively low resource demand on the department as most EMS calls require the response of only one to two units but place a high strain on resources due to incident volume. With increasing call volumes, the over-lapping of calls negatively impacts unit availabilities and may pull a primary apparatus out of its response zone, which affects next-call response times. In addition to increased response times, the greater risk to the community is the cascading resource drawdowns which occur with increased service demand and decreased unit availability.

As a summary, and recap from earlier sections of the report, the response time goal and performance by specific incident type as outlined in Resolution 2938 are listed in the table below:

Performance	Goal	2021 Performance	
Metric	85% of the time unless noted		
The second stress of	2 minutes	Pasco Incidents Only	84.7% met 2 minutes 2:14 or less 90% 15,969 apparatus responses
Turnout time		All incidents	84.3% met 2 minutes 2:15 or less 90% 16,564 apparatus responses
First Engine Arrival	6 minutes		69.9% met 6 minutes 8:27 or less 90%
First Full Alarm Arrival (11 personnel)	12 minutes		81.8% met 12 minutes 12:35 or less 90%
BLS Unit Arrival	6 minutes		83.3% met 6 minutes 6:44 or less 90%
ALS Ambulance Arrival	6 minutes		83.9% met 6 minutes 6:40 or less 90%
Hazardous Materials	6 minutes		60.5% met 6 minutes 7:51 or less 90%
Technical Rescue Incident	6 minutes		60.4% met 6 minutes 15:11 or less 90%
ARFF Incident (FAA Requirements)	3 minutes 100% of the time		85.7% met 3 minutes 3:37 or less 90%
Wildland Incident	6 minutes		72.1% met 6 minutes 8:29 or less 90%

### **Response Times by Station and Shift**



The above chart shows the three important times that are benchmarks for performance regarding response to an emergency – turnout, travel, and total response. This data is for only those calls in the stations area and are reported at the 90<sup>th</sup> percentile to remove any outliers. There are no obvious trends when reviewing this data when looked at by shift, however it does provide information for crews to see how they are performing. If all elements were equal between shifts, there would be little deviation in the times. One area of concern is the Station 83 total response time consistently over 10 minutes for all shifts, which was observed in 2019 and 2020 as well. Even with the Station 83 relocation to north of Interstate 182, the 2021 data did not show a lesser response time. Since Station 83 has the most call volume the second due crews for concurrent calls have a longer response time to Station 83's area, resulting in the longer response time which may drive the results seen.

Looking at the turnout time, which is the time between the station being alerted and the apparatus going enroute, it is fairly consistent across all shifts and stations. The 2021 turnout time did show a reduction by about 5 to 10 seconds across all stations and most shifts. This was a result of extra attention by crews and the implementation of the station alerting system (Locution) that is done via internet protocol (IP) and is quicker than the radio dispatching.



### Auto/Mutual Aid Summary 2021 (measured in hours)



As seen in the above charts, PFD provides much more mutual aid than it receives. The total hours of aid received was just under 205 (up from 150), while PFD provided over 407 hours of aid (up from the 321 in 2020). This does not include the state mobilization hours, which were longer duration assignments by staff. The 2021 wildland season was active, and Pasco sent resources to about 17

incidents across the state. The charts show the largest contributors for mutual aid received was Franklin Fire District 3, which is the county area surrounding Pasco. Their agency provides us an apparatus on almost all structure fires to provide Pasco with breathing air. The remainder of the aid received is typically from agencies that back Pasco up when all our resources are committed on other incidents.

Reviewing the hour comparison of aid provided versus given, Pasco is in line with the other two cities and Franklin FD #3, i.e., hours provided are close to hours received. Two other agencies end up on the benefit side from Pasco – Walla Walla FD #5 (WWFD 5) and Franklin County Hospital District (FCHD). Pasco maintains contracts for EMS transport with both WWFD 5 and FCHD due to the onesided performance. The overall ratio of received versus provided has leveled off somewhat due to some changes in apparatus and staffing in the other agencies.

## PERFORMANCE EFFICIENCY

Time (in Minutes)	Single Family	Multi-Family	Business	Percentage
	Residence	Residence		
0-9	4	1	3	22%
10-19	11	4	2	46%
20-29	5	1	1	16%
30-39	3			11%
40-49	2			5%
50-59				0%
60 +				0%

### Alarm Time to Fire Controlled Time

One of the most important metrics to monitor is the amount of time elapsed from alarm notification to cessation of hostile fire activities – fire controlled time. This metric speaks to the ability of the department to process the call, respond, and then determine and initiate proactive steps to extinguish the fire. The shorter the time to control, the more efficient the department. The benchmarking of time controlled for each fire was an area of emphasis in 2020 and 2021 to ensure that data is collected for review. The "Fire Controlled" time was recorded on 39 incidents in 2021 compared to 38 in 2020.

The data shows that only there were no fires that took longer than an hour to control. The longest it took to control a fire was 47 minutes. Looking at the Single Family Residences, the performance was similar to 2020, with a majority of the fires under control in less than 20 minutes. None of the Multi-Family or Business fires took longer than 30 minutes to control in 2021, which was better than in 2020. There were no fires requiring a second alarm to handle either. This speaks to the quick reporting of fires followed by a quick response of the fire units. The longer it takes to report a fire, the more fire growth occurs resulting in additional damage and longer extinguishment times.

Considering the Alarm time starts the clock and PFD's goal is to arrive in 8 minutes 90% of the time (2 minutes turnout time plus 6 minutes travel time), most of the fires are controlled within that first 20 minutes. When managing fire incidents, the fire service generally considers the 20 minutes mark a key indicator of changing tactics from offensive to defensive. This is based on how modern building construction stands up to fire and when buildings begin to lose their integrity, requiring crews to change to defensive tactics.

There are many factors to consider when developing this metric such as occupancy classification, percent of fire involvement upon arrival, extenuating factors such as immediate rescue, unforeseen hazards (hazardous materials, electrical, etc.), total time for assembly of a full-effective force to mitigate the situation, response and travel times, etc.

This metric clearly needs to be further developed and refined to account for the factors listed above, especially the amount of involvement upon first arriving unit. The metric will provide insight to operational effectiveness and efficiencies and should be monitored into the future.

# **QUALITY** PUBLIC SATISFACTION

## Page 72

### Core Purpose:

Evaluate community feedback mechanisms to improve service levels and improve department satisfaction.

### **Metrics Measured:**

Approval Rating by Service Type, Annual Approval Rating – Trend, Cost/Response/Staffing evaluation

## PUBLIC SATISFACTION

### 2021 Community Survey

The Community Survey was updated in 2021. For Fire Department related items in the survey, there was a sharp decline in the overall satisfaction of the services identified in the survey. The chart below shows the decline over the past two iterations of the survey.



The results of the survey do indicate a potential problem with how the community sees the fire department services, especially seeing a decline for two surveys in a row. While the survey results don't provide specific information about the reason the rankings declined, the overall indication that the participants feel safe from "fire, flood, or other natural disaster" is still 82, even though it dropped slightly from 88% int the previous survey. It is uncertain if the pandemic had an impact on the results or not, but the review of the information indicated that much of the benchmark data was collected prior to the pandemic.

The chart below does show that there are some bright spots in the data, indicating that fire services is still in the majority of an Excellent or Good rating. The areas of concern are the "Poor" rating, and they all remain at 10% or lower.


# **RESULTS SUMMARY**

2021 saw an unprecedented increase in call volume for Pasco Fire. This had some unintended impacts across the board in our performance metrics. While some would argue that an increase in call volume is what is desired, the overall safety of the community is impacted the busier the fire department is. By understanding what drives the increase in call volume, adjustments in prevention can be attempted, knowing that not everything can be avoided. The large amount of growth that Pasco, and the region, is experiencing will result in some increase in calls. The planning effort to keep up with the growth is key to managing the performance and consistent delivery of high quality services.

As part of the adjustment to the growth and changes, two new fire stations were built to replace older ones. One was moved into an area of concern for response time, while the other replaced an inadequate facility and allowed the administration to move closer to the center of the city. The planning effort continues, as the performance metrics indicate areas that need to have additional fire stations to meet the standards the city has agreed to maintain. As Pasco continues to grow, so will the fire department and the need for additional performance management. An update to our Master Plan in 2022 will guide the department through the changes and reinforce what performance standards should be in place going forward.

## **Operational Readiness**

The Pasco Fire Department maintains a high level of operational readiness. While the call volume increased, our staff managed to complete even more training than in past years, while also increasing Fire Officer certification, with higher ranks obtaining needed certification. Future issues with increased growth and adding personnel to keep up with that growth will lead to additional concerns about addressing incoming personnel replacing an aging workforce with several retirements and loss of knowledge and experience in addition to adding to the bottom scale of experience. The total training hours per personnel remains at a high level and will positively contribute to response times and service availability. Apparatus reliability improved slightly with recent purchases, but the preventive maintenance program needs work in the future especially as the fleet continues to grow.

## **Community Wellness**

Pasco remains a fairly young city in terms of patient demographics, but the changes with growth could have significant impacts if additional people retire to our city. The challenge remains the ability to identify changes in programs that have a positive impact on patient outcomes. In the EMS world, the performance metrics are still being identified not only within Pasco Fire, but regionally. Pasco Fire delivers excellent results for those patients that have cardiac arrest with much higher success rate of resuscitation than the national average. Our performance on the Fire side is very good as well, with half of the structure fires brought under control in less than 20 minutes, limiting damage and saving property. Both the EMS and Fire performance is tied to the Operational Readiness above by having adequate resources in the stations and keeping them highly trained.

The Pasco Resource Navigator program continued to be a successful program. The ability to staff the position full time allowed additional patients to be helped and directed to resources, resulting in better lives for those individuals. The success of the program from a few referrals in 2019 to 159 in 2021, indicates the program is achieving the desired results. Performance metrics still need to be identified, but anecdotally the program is filling a needed gap for our community. The other portions of the Community Risk Reduction program continue to be well received and have positive impacts in the community. As our CRR Manager updates the Community Risk Assessment in 2022, additional performance metrics will be identified and measured.

## **Cost Containment**

With the change to a biennial budget process, there is additional flexibility to address program needs especially with ability to adjust budget mid-year. The Finance Department continues to develop budget and cost management tools to assist in real time reporting, which is key to understanding budget performance. Programs such as GEMT and the revisions to the ambulance utility fee have stabilized funding, allowing for better planning. Discretionary leave (overtime, sick, holiday, etc.) use is being monitored in an objective manner that allows for more quantitative basis for hiring practices and effective management decisions to ensure proper staffing while managing the cost impact.

## Performance

While 2021 showed a slight uptick in the response time, the 18.5% increase in calls and high level of concurrent calls drive the longer response times. As the PRN continues to address the high utilizers from the emergency response system, the performance might have been impacted more. While the time to fire controlled showed another increase in performance, the effort needs to be made to study as similar situations as possible to validate that as a performance metric.

As mentioned earlier, the ability to analyze the vast amount of data needs to be reviewed moving forward. The data is being collected in a very robust and capable records management system with very good reporting capabilities. The effort should be continued by continuing to analyze the data to identify trends that can address decreased response times and better patient outcomes while maintaining the overall safety of the fire department and those in our city.

## Quality

The feedback on the results from the 2021 Community Survey showed a decline in satisfaction with fire and ambulance services. While the survey did not identify specific reasons, it is obvious that work needs to be done in the community to ensure they believe the services are what they desire. In the update to the Strategic Plan, several action items revolved around getting out into the community or having the community come inside the fire department world. Those tasks should be revisited to ensure proper actions are planned.

# **RECOMMENDATIONS**

With the current revision of the Strategic Plan, there are plenty of objectives that tie to each of the pillars of excellence that will be addressed in the next 3 to 5 years. With the significant predicted growth of the city, the planned update of the Master Plan will set the path for helping achieve the desired performance outcomes, including maintaining the current level of the WSRB Protection Class rating. The Master Plan should set the stage for monitoring the appropriate performance metrics moving forward.

## **Technical Competence**

The department will continue to monitor training performance against previous figures, with a baseline target of 240 hours, which appears to be appropriate and achievable and meets the requirements of WSRB. The subject allocation of training hours is recommended as follows:

180 to 240 hours - Fire specific training (FFI, and non-credentialed, respectively)
24-36 hours specialty training per qualification (TRT, WRT, ARFF, Extrication)
36 hours EMS training
20 hours apparatus/operator training

With a young and less experienced workforce on the leading edge of growth, emphasis should be placed on career path management and professional development. The opportunity to capture a vast wealth of knowledge and experience should be captured now to pass along to new employees to assist in understanding the goals of the department and the city.

## **Apparatus Reliability**

The formal implementation of a true preventive maintenance program coordinated with City Shops continues to be a high priority. Understanding the resources available and meeting the true intent of preventive maintenance should be reviewed to ensure the intent of keeping apparatus in good working order to avoid future costs and maintain reliability.

Unit hour utilization and mileage versus cost rates should continue as a prime metric to determine both optimal percent utilization range and apparatus replacement. Plan for adding apparatus to fleet as growth continues, especially to maintain reserve apparatus to support maintenance and repair of frontline apparatus.

## **Call Volume Metrics**

Call volume continues to be driven by population centers. As additional population is added, the expectation of additional calls is certain. The ability to keep up with the call volume while maintaining the response time goal will be determined by key trigger points that should be identified using the appropriate performance metrics. Those triggers should be known well in advance, as the long lead time for hiring staff, building of facilities and procurement of apparatus may result in poor performance.

Temporal trending, specifically call volume by hour, indicates the presence of peak demand times between 8:00AM and 8:00PM. Modeling of unit hour utilization with call type, in combination with temporal trending during peak demand times may unveil staffing and response efficiency

opportunities, such as mobile integrated healthcare or peak demand units. This information along with the PRN program information on high utilizers of the system should be used to predict and manage call volume and associated response times.

#### **Response Times**

Technological improvements such as AVL (automatic vehicle location), traffic control technology (signal pre-emption devices), automated vehicle routing software and consistently updated and accurate mapping will improve response performance.

Station design is a contributing factor to turnout times. With the relocation of two of our stations, the performance of personnel in those stations will be reviewed against prior data to ensure the design had the desired impact on turnout times.

As indicated earlier in the report, travel response times are a primary cause for total response time overruns. Travel response is largely dependent on infrastructure (roads) and traffic. An emphasis on cross departmental planning efforts regarding future expansion and infrastructural planning is of paramount importance as the City continues to grow at such a rapid pace.

## **Community Wellness**

Current metrics within the Pillar of Community Wellness are intended to serve as a monitor of community needs that will ultimately act as a guiding tool for the focused delivery of specific programs and responses. By continually evaluating primary event types, patient demographics, and respective outcomes, the department stands to better define and deliver operational value.

The core intent of the community risk reduction program is to provide collaborative efforts with community social services to intervene and mitigate potential emergencies before reactionary emergency response becomes necessary. As the program matures and implements aspects such as PRN, measuring outcome relation to variables will guide the ultimate direction and development of additional program efforts.

## **Cost Containment**

With the first biennial budget completed, the ability to spend time managing and implementing programs was emphasized over a continual planning process. The requirement of training on managing the two-year budget cycle should be done with all program managers to assist in maintaining the high degree of proficiency of the budget and cost management process.

Identification and solidification of alternative funding mechanisms must remain a high priority. Additional revenue streams should be identified to assist with the anticipated growth of the city, resulting in both the availability and demand of resources.

## Quality

The implementation of the objectives as outlined in the Strategic Plan will allow the Pasco Fire Department to become more active in the community and hopefully drive the level of service to a higher level.

# APPENDIX A

#### Personnel and Position Information

The Pasco Fire Department (PFD) was established by council action on July 16, 1908 after a series of fires destroyed portions of the town. The current service area incorporates approximately 37.5 square miles. The department is led by the fire chief who is an at will position that is appointed through a competitive process by the city manager.

The Fire Chief (Chief) is accountable to the City Manager for the overall operations of the Fire Department and implementation of policy. As the department director, the chief serves and maintains working relationships with the other departments within the city. The chief is responsible for the development and support of collaborative relationships with other fire and emergency services agencies, and the public.

The Administrative Assistant is accountable to the Fire Chief. This position provides direct clerical support to the fire chief and prepares correspondence, reports, and manages departmental accounting.

The Deputy Chief (2 total) is accountable to the Fire Chief and is responsible for day-to-day program management and operations within the fire department. This position may be delegated the authority and responsibilities of the fire chief in the event of the chief's absence. With two Deputy Chief positions, the workload and programs were split between the two positions – one overseeing Operations and Logistics and the second overseeing Planning and Administration. Direct program management include Aircraft Rescue and Firefighting, Safety, Operations, Hazardous Materials, and Public Information. The overall split of programs was outlined in a table earlier in the report.

The Training Officer is accountable to the Deputy Chief of Operations. This position is responsible for the management and record-keeping of the department training program. The training officer manages shift-level instructors and subject matter experts and is responsible for the scope, schedule and budget of the department's training programs. With the addition of the training facility in 2018, the management and scheduling of the training facility also falls within the Training Officer's responsibility.

The Emergency Medical Services (EMS) Officer is accountable to the Deputy Chief of Operations. This position is responsible for the management, inventory, record-keeping and Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliance of the EMS program. The EMS Officer is responsible for the scope, schedule, and budget of the department's EMS program. Additionally, the EMS Officer serves as the Infectious Disease Control Officer, which is a key element to the safety of our employees.

The Community Risk Reduction (CRR) Officer is accountable to the Deputy Chief of Administration. This position is responsible for the development and updating of an overall community risk assessment, risk mitigation programs for the community and public information. The CRR Officer is responsible for the scope, schedule and budget of the department's Public Education and Community Risk Reduction program.

Battalion Chief (3 total/1 per shift) is accountable to the Deputy Chief of Operations. This position provides management and supervision of the day-to-day and combat operations of each shift. The Battalion Chief works a rotating 48/96 shift. The Battalion Chief serves as the initial incident

commander for all-hazards incidents within the city with a complexity of up to a Type 4 (the lower the number, the more complex the incident is). Each Battalion Chief has direct program management responsibilities for one of the following department programs: Apparatus Maintenance, Facilities Maintenance, Equipment Maintenance, Special Operations (includes Technical Rescue, Water Rescue, and Hazardous Materials response). Battalion Chiefs may also manage programs such as fire investigation, or equipment procurement and maintenance.

Station Officers (12 total /4 per shift) are ranked as a Captain within the organization. The station officer is accountable to the Battalion Chief and may be delegated the responsibilities of the Battalion Chief in their absence dependent upon qualifications. The station officer is responsible for the day-to-day operations of the station crew (typically an engine company and ambulance crew). The station officer may have program responsibilities and/or project responsibilities.

Company Officers (9 total /3 per shift) are ranked as Lieutenant within the organization. The company officer is accountable to the Station Officer and may be delegated the responsibilities of the Captain in their absence dependent upon qualifications. The company officer is responsible for project management, including scope, schedule and budget of minor programs or tasks associated with larger programs. Due to the high potential and risk, one company officer per shift is assigned as the ARFF Lieutenant at Station 82, located at the Pasco Airport.

Firefighter/Paramedics are responsible for the delivery of advanced life support (ALS) pre-hospital emergent care, fire suppression and the day-to-day routine maintenance of the facilities, apparatus and equipment to which they are assigned. Officers may also be Paramedics, but their primary role is personnel and incident management and not delivery of EMS.

Firefighters are responsible for the delivery of basic life support (BLS) EMS, fire suppression activities and the day-to-day routine maintenance of the facilities, apparatus, and equipment to which they are assigned. Firefighters may also assist with programs and projects depending upon their area of expertise (i.e., subject matter experts) and ability to affect and implement changes in day-to-day operations.