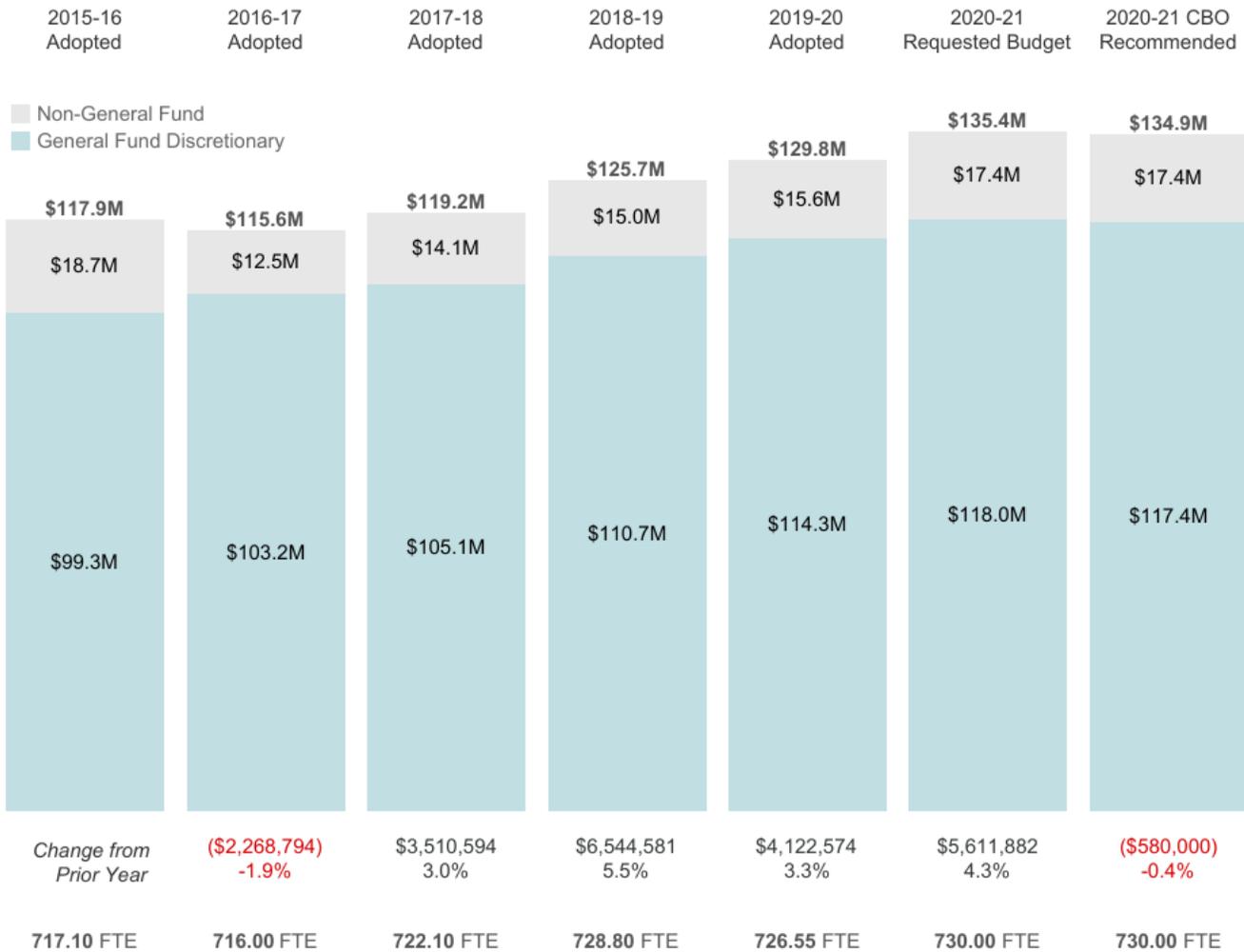




# Portland Fire & Rescue

*Analysis by Robert Cheney*

## Adopted Budget Revenues | 5-Year Lookback



## INTRODUCTION

Portland Fire & Rescue (PF&R) submitted a \$135.4 million requested budget that includes four capital set-aside requests for one-time General Fund resources totaling \$1.2 million. The Bureau’s ongoing General Fund appropriation for FY 2020-21 is \$116.8 million, a \$2.5 million, or 2.2%, increase from their FY 2019-20 Adopted Budget appropriation. The Bureau added four new ongoing, permanent positions using existing resources within their base budget, including a 2-person expansion of the Community Healthcare Assessment Team (CHAT) Program, a Senior Investigator within their Prevention Division, and a Health & Wellness coordinator position. Following the creation of the Capital Reserve Fund during FY 2019-20 budget adoption, PF&R also submitted a Capital Improvement Plan that outlays the operations &

maintenance, major maintenance, and lifecycle repair costs tied to their facilities, apparatus, equipment, and technological assets—in accordance with City Financial Policy 2.03.

## BASE BUDGET KEY ISSUES

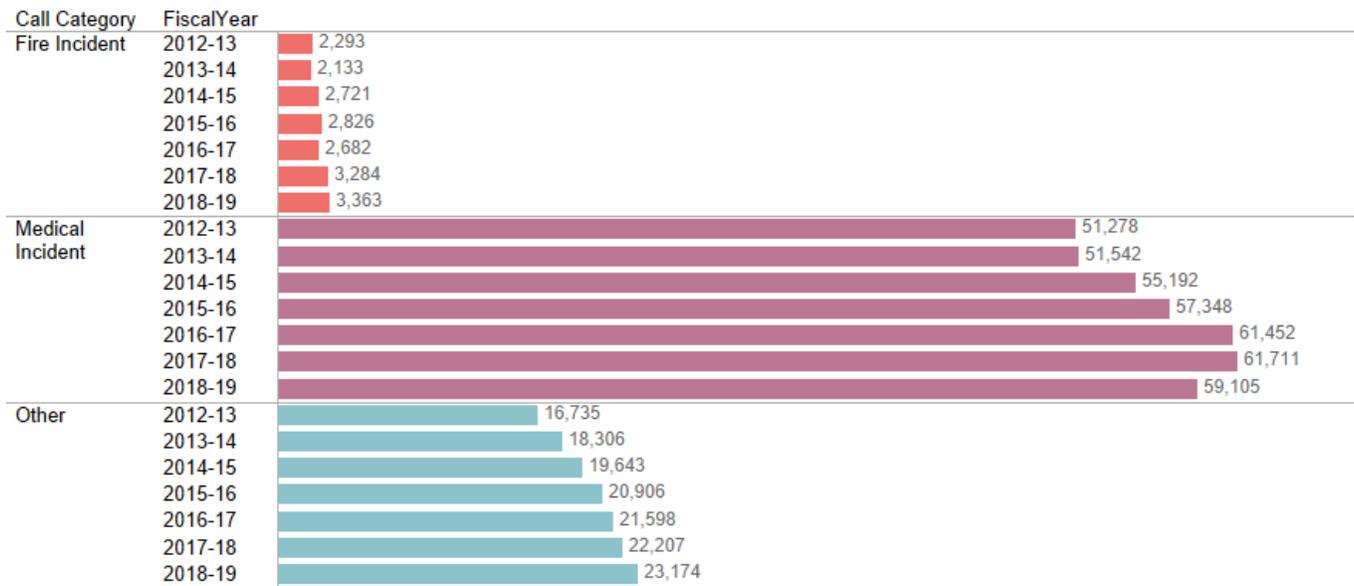
### Outcomes of Efforts to Reduce Call Volume

#### Total Incident Workload

Fiscal Year 2018-19 saw the first year-over-year reduction in total incident dispatches since FY 2012-13. As arrayed in the tables below, the decrease in calls was driven by a 4.2% reduction in medical incident dispatches, resulting in a year-over-year decrease of 1,560 calls or 1.79%, and just below FY 2016-17 numbers.

**Total PF&R Dispatches to All Calls from FY 2012-13 to FY 2018-19**

Stratified by Call Category



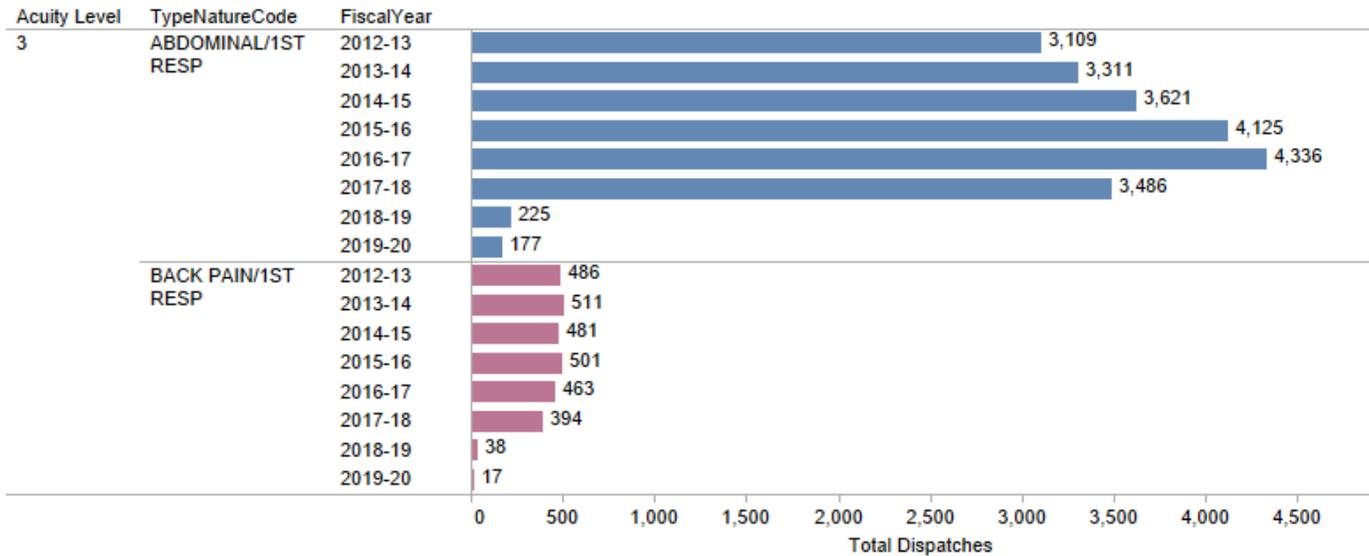
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Fire Incident	2,293	2,133 -160 -6.98%	2,721 588 27.57%	2,826 105 3.86%	2,682 -144 -5.10%	3,284 602 22.45%	3,363 79 2.41%
Medical Incident	51,278	51,542 264 0.51%	55,192 3,650 7.08%	57,348 2,156 3.91%	61,452 4,104 7.16%	61,711 259 0.42%	59,105 -2,606 -4.22%
Other	16,735	18,306 1,571 9.39%	19,643 1,337 7.30%	20,906 1,263 6.43%	21,598 692 3.31%	22,207 609 2.82%	23,174 967 4.35%
<b>Grand Total</b>	<b>70,306</b>	<b>71,981</b> 1,675 2.38%	<b>77,556</b> 5,575 7.75%	<b>81,080</b> 3,524 4.54%	<b>85,732</b> 4,652 5.74%	<b>87,202</b> 1,470 1.71%	<b>85,642</b> -1,560 -1.79%

This is likely attributable to a change in dispatch protocol, as the Fire Bureau stopped responding to medium-acuity back and abdomen pain medical calls in May of 2018. Through this effort, what was a 4,799 dispatchable incident obligation in FY 2016-17 was reduced to a 263-incident obligation in FY 2018-19.

Any reduction in total incident dispatches effectively increases bandwidth and availability of Fire Companies to respond to all other calls. The Fire Bureau's efforts to sustain service levels by altering

### Type 3 Back and Abdomen Dispatch Data Since FY 2012-13

PF&R Stopped sending 4-person companies to these calls in May 2018. (FY 2019-20 Data is through Feb. 26, 2020)



protocol to reduce demand—as opposed to increasing the number of firefighters and apparatus available—demonstrates a cost-effective way to mitigate the impacts of 19% incident growth and 11.2% population growth since 2012<sup>1</sup>. However, 26.6% growth in “Other” calls presents a risk to service levels as well, as these represent a growing portion of the calls companies respond to that are often non-emergent. “Other” Incidents include public service assistance, good intention calls, unauthorized burning, false alarms, and other accidental calls. PF&R companies responded to over 4,100 more False Call/Alarm, Good Intention, Unauthorized Burning, and Lift Assist calls in FY 2018-19 than they did in FY 2012-13. Ladle on top of that a 7,000-incident increase in calls cancelled “en route” or “at scene” and it becomes apparent that the growth in incident demand for PF&R services is not representative of organic growth in critical incidents like cardiac events and structure fires, but an outsized increase in non-emergent call types.

#### Impact on Response Times

PF&R responded to 90 percent of its high-priority calls within 7 minutes and 24 seconds in FY 2018-19, which was 5 seconds slower than the prior year and 4 seconds slower than the 7-year total of 7 minutes and 21 seconds (since 2012-13). This metric is perhaps the most fundamental way to measure the spirit behind the bureau’s mission to “proactively, safely, and aggressively protect life, property, and the environment” within an emergency response context. However, to present this metric as single datapoint is reductive and obfuscates the nuance of the performance data.

Disaggregating the data and considering other measures like mean and median paints a more complete picture of PF&R’s emergency response performance (emergency operations, after all, comprises 69.6% of their total operations, budgetarily speaking). Analysis shows that response times vary across Fire Management Areas, Call Categories (fire, medical, or other), and acuity levels across fiscal years.

At a high level the data show a response time to high-acuity “Code 3” calls of at least 7 minutes and 21 seconds 90 percent of the time. While this mark is two minutes slower than the NFPA standard of 5

<sup>1</sup> Portland State University Population Research Center data. <https://www.pdx.edu/prc/population-reports-estimates>

minutes and 20 seconds, further analysis shows that median response times (50<sup>th</sup> percentile) hover closer to the 5:20 mark (see charts on next page). This raises the question: what strategies can the bureau deploy and how much further investment in PF&R will allow them to bridge this gap and respond to high acuity calls within 5 minutes and 20 seconds 90 percent of the time?

Consideration should continue to be given to efforts to increase the capacity of the existing investment into PF&R, including efforts to reduce workload. To-date, the bureau has adjusted dispatch protocol, implemented fees on non-emergent lift-assists at commercial facilities, and developed the Community Healthcare Assessment Team (CHAT) program (discussed below). These efforts are in nascent stages, but early data indicates the potential for workload reduction outcomes that may help improve response times overall.

It’s also important to acknowledge the notable impact that exogenous factors such as traffic congestion—which is tethered to economic and population growth—have on response performance. While only one example, this fact underscores the effects of city, county, and regional policy, and the importance of boundary-spanning policy development to reduce emergency response performance.

Pursuing a system-wide metric of 5 minute and 20 second responses 90 percent of the time across all FMAs and call categories is an ambitious and noble pursuit, but characterizing the bureau’s performance as either “passing” or “failing” against this metric does not give policymakers the complete story of what investments are buying. Council will want to consider at a higher level of detail what service levels their existing investment produces, and the value proposition of what the next discretionary dollar spent on the emergency response continuum delivers given that public safety is a core City service and considering that the City is operating in a constrained budget environment with competing policy initiatives that could have

impacts in the public safety arena.

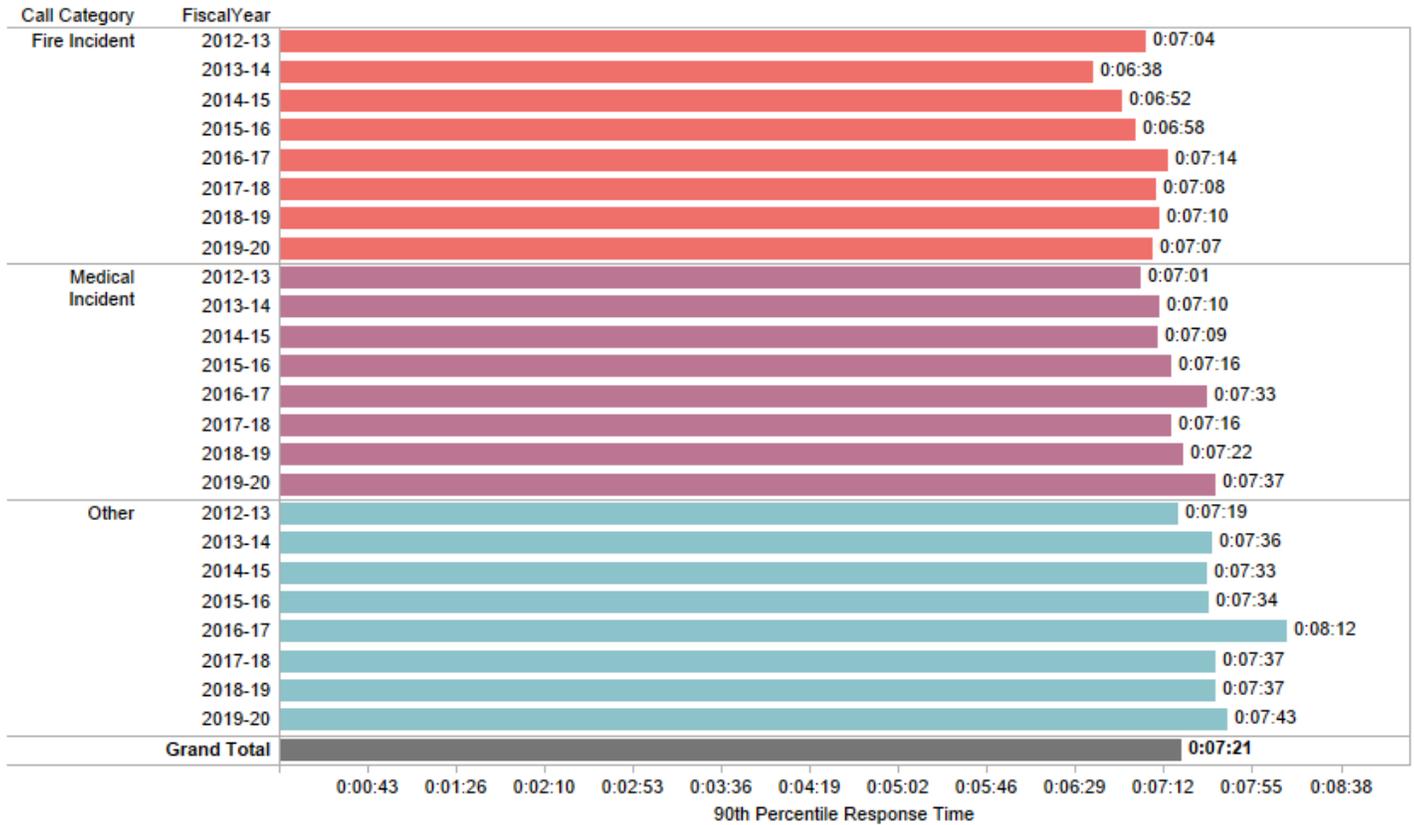
**Turnout and Travel Times vary across FMAs, Fiscal Years, and Call Categories**

But high-volume FMAs have sustained less-than-four minute travel times, despite increases in call volume and average turnout time.

		2012-13			2015-16			2018-19		
		Total Runs	Avg. Turnout Time	Avg. Travel Time	Total Runs	Avg. Turnout Time	Avg. Travel Time	Total Runs	Avg. Turnout Time	Avg. Travel Time
FMA 1 - Downtown Portland	Fire Incident	230	0:01:04	0:02:56	350	0:01:05	0:03:09	567	0:01:17	0:03:15
	Medical Incident	5,040	0:01:16	0:03:04	6,408	0:01:22	0:03:13	6,498	0:01:24	0:03:17
	Other	1,383	0:01:11	0:03:06	1,572	0:01:14	0:03:11	1,848	0:01:15	0:03:15
	<b>Total</b>	<b>6,653</b>	<b>0:01:15</b>	<b>0:03:04</b>	<b>8,330</b>	<b>0:01:20</b>	<b>0:03:13</b>	<b>8,913</b>	<b>0:01:22</b>	<b>0:03:17</b>
FMA 7 - SE 122nd	Fire Incident	551	0:00:55	0:03:22	677	0:00:58	0:03:09	456	0:01:02	0:03:26
	Medical Incident	4,930	0:01:11	0:04:01	5,481	0:01:16	0:03:47	5,380	0:01:28	0:03:51
	Other	1,070	0:01:04	0:03:48	1,282	0:01:07	0:03:49	1,201	0:01:19	0:03:47
	<b>Total</b>	<b>6,551</b>	<b>0:01:10</b>	<b>0:03:58</b>	<b>7,440</b>	<b>0:01:15</b>	<b>0:03:46</b>	<b>7,037</b>	<b>0:01:26</b>	<b>0:03:49</b>
FMA 23 - Clinton Triangle	Fire Incident	125	0:01:06	0:08:12	164	0:01:07	0:04:35	224	0:01:16	0:03:29
	Medical Incident	752	0:01:10	0:04:54	714	0:01:22	0:05:00	1,026	0:01:19	0:03:40
	Other	201	0:01:04	0:05:01	299	0:01:22	0:05:04	615	0:01:14	0:03:42
	<b>Total</b>	<b>1,078</b>	<b>0:01:09</b>	<b>0:05:05</b>	<b>1,177</b>	<b>0:01:21</b>	<b>0:04:59</b>	<b>1,865</b>	<b>0:01:18</b>	<b>0:03:40</b>
FMA 10 - SW Taylors Ferry & Terwilliger	Fire Incident	44	0:01:18	0:04:27	68	0:00:56	0:04:48	37	0:01:23	0:04:21
	Medical Incident	388	0:01:24	0:04:21	338	0:01:27	0:05:00	364	0:01:29	0:05:04
	Other	219	0:01:22	0:04:36	269	0:01:18	0:05:27	212	0:01:21	0:04:57
	<b>Total</b>	<b>651</b>	<b>0:01:23</b>	<b>0:04:25</b>	<b>675</b>	<b>0:01:23</b>	<b>0:05:08</b>	<b>613</b>	<b>0:01:27</b>	<b>0:05:00</b>
FMA 27 - NW Skyline	Fire Incident	66	0:01:16	0:05:57	49	0:01:10	0:04:48	10	0:01:23	0:04:55
	Medical Incident	117	0:01:25	0:06:36	145	0:01:27	0:07:39	142	0:01:20	0:05:49
	Other	76	0:01:16	0:05:59	112	0:01:26	0:06:24	88	0:01:16	0:05:51
	<b>Total</b>	<b>259</b>	<b>0:01:21</b>	<b>0:06:21</b>	<b>306</b>	<b>0:01:25</b>	<b>0:07:05</b>	<b>240</b>	<b>0:01:19</b>	<b>0:05:47</b>

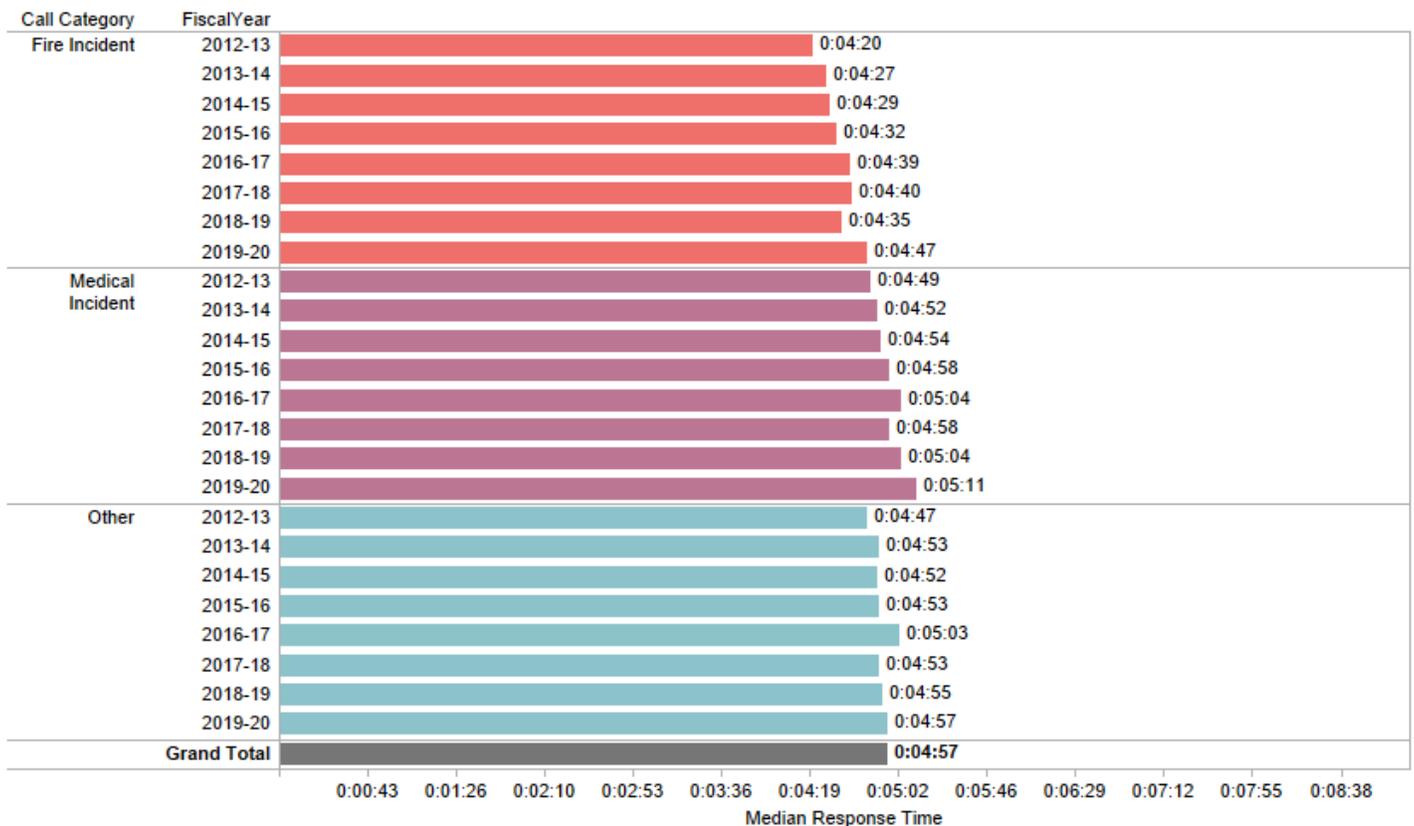
### 90th Percentile Response Times to Code 3 Calls, by Call Category

The National Fire Protection Agency (NFPA) sets a response goal of 5:20 to high-priority incidents at the 90th percentile.



### Median Response Times to Code 3 Calls, by Call Category

This data adds context by showing what PF&R Response times are half of the time



## Prior Year Reduction at Fire Station 23

As part of FY 2019-20 Budget Development, budget guidance directed bureaus to absorb a 1% reduction in their General Fund appropriation. PF&R submitted a reduction totaling \$798,468 and 6.0 FTE via the elimination of one Rapid Response Vehicle. Council determined that reduction unacceptable and directed PF&R to submit an alternative reduction package.

The package that was ultimately submitted and accepted by Council was a 2.0 FTE reduction from Station 23 (SE Powell and 13<sup>th</sup>), which reduced its staffing from a 4-person engine company on one shift and an RRV on the other two, to one RRV on all three shifts. This was in addition to a reduction to their External Materials & Services budget of \$20,341, resulting in a total reduction of \$302,832. The original RRV reduction was restored.

**An example of the Station 23 Schedule from June 2010 to November 2017**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Week 2	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Week 3	Closed	Closed	Closed	Closed	Closed	Closed	Closed

**An example of the Station 23 Schedule from November 2017 to January 10, 2018**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	RRV	RRV	RRV	RRV	RRV	RRV	RRV
Week 2	RRV	RRV	RRV	RRV	RRV	RRV	RRV
Week 3	RRV	RRV	RRV	RRV	RRV	RRV	RRV

**An example of the Station 23 Schedule from January 12, 2018 to June 30, 2019**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	RRV	RRV	4-Person Engine	RRV	RRV	4-Person Engine	RRV
Week 2	RRV	4-Person Engine	RRV	RRV	4-Person Engine	RRV	RRV
Week 3	4-Person Engine	RRV	RRV	4-Person Engine	RRV	RRV	4-Person Engine

**An example of the Station 23 Schedule after July 1, 2019**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	RRV	RRV	RRV	RRV	RRV	RRV	RRV
Week 2	RRV	RRV	RRV	RRV	RRV	RRV	RRV
Week 3	RRV	RRV	RRV	RRV	RRV	RRV	RRV

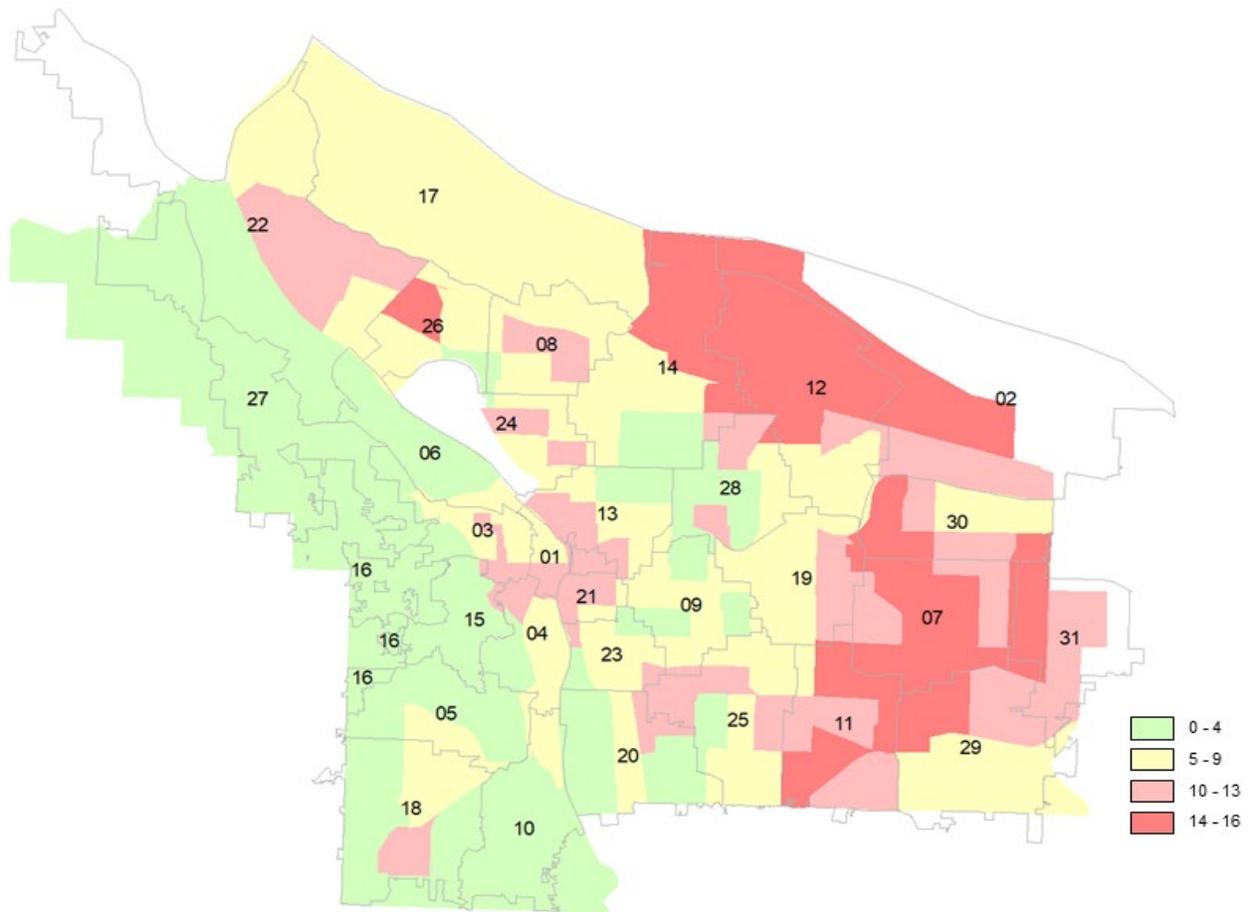
It is important to note that Fire Station 23 was closed from June 2010 through November 2017, until the Fire Bureau made an operational decision to re-open the station by redeploying the RRV that was formerly located in FMA 19 (Mount Tabor). In January 2018, PF&R reached an agreement with Gresham Fire to operate a 2-person RRV out of Station 31, essentially freeing up two PF&R firefighters. Those two positions were moved to Station 23 so that it could move one of the three shifts to have a 4-person engine response rather than a 2-person RRV response (the other two shifts remained a 2-person RRV response). Station 23 operated with a 4-person engine company on one shift for approximately 18 months – from January 11, 2018 until July 1, 2019.

An analysis of fire call data through February 26, 2020 shows that 90<sup>th</sup> percentile response times in FMA 23 have decreased for “Fire” and “Other” calls from the prior year. However, 90<sup>th</sup> Percentile response times for Medical calls have increased 10 seconds from the prior year—but remain 12 seconds faster than FY 2017-18 response times.

FMA 23 is readily served by adjacent FMAs, and still benefits from the RRV deployed out of its home station. These factors have seemingly allowed the bureau to sustain service levels in FMA 23. Nevertheless, the bureau has plans to conduct a full risk analysis of FMA 23 in the coming months to determine the optimal staffing of its Fire Station 23. For context, FMA 23 covers 1.6% of the population served by all FMAs and has a vulnerability risk index of 7.5 out of 16 (16 being most vulnerable) based on

a geospatial analysis using the Bureau of Planning & Sustainability's methodology for vulnerability risk analysis.<sup>2</sup>

*Fire Management Area (FMA) boundaries overlaid on BPS' Vulnerability Risk Index map visualizes FMA 23's aggregate score of 7.5*



<sup>2</sup> The BPS Vulnerability Risk methodology considers what proportion of the population that are renters, come from communities of color, are greater than 25 years old and do not have minimum educational attainment of a 4-year degree, and households at or below 80% of the median family income (MFI). A detailed description of the methodology can be found here: <https://beta.portland.gov/sites/default/files/2020-01/2012-vulnerability-analysis.pdf>

## 90th Percentile Response Times in Fire Management Area 23

FY 2019-20 Data is through February 26, 2020.



From June 2010 to November 2017 Fire Station 23 was CLOSED

From November 2017 through January 10, 2018, Fire Station 23 was staffed with an Rapid Response Vehicle ONLY

From January 11, 2018 through June 30, 2019 Fire Station 23 was staffed with an RRV on two shifts and a 4-person engine company on the other shift.

From July 2019 until today, Fire Station 23 has been staffed with an RRV ONLY

The dashed line represents the All FMA, All Calls average of 7:21 from July 1, 2012 through June 30, 2019.

## Expansion of the CHAT Program

### Program Background

The FY 2019-20 Requested Budget analysis by the City Budget Office recommended that PF&R examine the potential benefits for internally realigning a Community Healthcare Assessment Team (CHAT) program expansion due to its ability to reduce the number of 911 calls (and subsequent dispatches) from “high utilizers” — individuals who call 911 three or more times per month. While difficult to measure the counterfactual, prior analysis shows with medium confidence that the intervention of deploying 1.0 FTE to focus on CHAT work (using a case worker deployment model to meet with high utilizers to help coordinate care and educate them on the appropriate use of 911) reduces incident workload generated by high utilizers by 50%, or roughly 381 calls annually. Assuming straight-line scalability (1 CHAT member x 381 call reduction), the expansion to four positions has the potential to reduce the number of 911 calls (and subsequent dispatches) by 1,524 calls per year, a roughly 1% reduction in workload for four-person fire companies.

This initiative has grown from being a pilot program on the periphery of PF&R to a pillar of PF&R service delivery and a major initiative of Chief Sara Boone, who wishes to build out the bureau’s community health capacity. PF&R’s ability to provide pre-hospital care within their existing emergency response model lends them an interface with community members who may require a more tailored approach for

receiving healthcare. Thus, high utilizers are often referred to the CHAT program by firefighters who are dispatched to their calls.

The bureau has already internally realigned a firefighter position from the Training & Emergency Medical Services division and reclassified it as an EMS Specialist within the Chief's Office to add a second person dedicated to the program. PF&R's requested base budget for FY 2020-21 expands the CHAT program from 2.0 FTE to 4.0 FTE, allowing PF&R to deploy one CHAT member to each of its four battalions. The bureau was able to absorb this programmatic expansion by allocating strong revenue growth generated by the Prevention Division and reducing its external materials and services inflationary budget factor from 3.6% to 2.0%. It should be noted that currently one of these positions is working half their time on the Portland Street Response pilot and half the time working with high utilizers and the houseless community. The bureau anticipates that when the Portland Street Response pilot starts, it will be funded with the \$500,000 in policy set-aside for the program, and the bureau will have four dedicated CHAT positions.

### **Program Potential**

According to the bureau, one of the short-term goals of the CHAT program expansion is to provide a proof of concept that generates the interest, support, and financial investment of outside payers. By expanding this program within the bureau's existing resources, PF&R will be able to develop a strong business case using outcome data generated while the program scales up. Potential external revenue sources include:

- Proposed plans for contracts, partnerships, and collaborations with health care entities, insurance entities, and the business community.
- Value-based Payment (VBP) from
  - Medicaid funding in passed-through Coordinated Care Organizations (CCOs), and;
  - Medicare funding passed through Kaiser Permanente, Regency Blue Cross, Providence Health Plan, HealthNet, and UnitedHealthcare.
- Community Health grant opportunities.

CBO supports these efforts and looks forward to further data on outcomes and potential revenue sources.

## **Prevention Division Revenues and Addition of a Senior Investigator**

### **Prevention Division Revenue**

The Prevention Division, led by the Fire Marshal, houses all functions aimed at mitigating fire risk, including Fire & Life Safety Plan Review and Permitting, Code Enforcement, Harbor Master, Fire Arson and Investigation, and Public Education and Communications. The division has seen a substantial growth in workload since 2011-12, with plan reviews and permits alone rising over 25% in addition to the number of code enforcement inspections and re-inspections it conducts rising 35%, from 24,980 in FY 2015-16 to 33,775 in FY 2018-19.

PF&R projects that the division will generate \$5.5 million in revenue in FY 2019-20, \$900,000 higher than the budgeted amount of \$4.6 million. The revenue is generated from plan review, code enforcement, and special use permit fees (arrayed in the table below). The bureau has high confidence regarding these projections, citing the Bureau of Development Services' base-case scenario that assumes 2.7%, -3.0%, -

**Portland Fire & Rescue | Prevention Division Revenues**  
 FY 2011-12 through January of Current FY 2019-20

	2012	2013	2014	2015	2016	2017	2018	2019
<b>Construction Permits</b>	\$1,454,544	\$1,626,616	\$1,794,195	\$2,218,121	\$2,899,695	\$2,835,325	\$2,642,361	\$2,855,127
<b>Inspection Fees</b>	\$980,157	\$1,083,909	\$1,171,570	\$1,277,298	\$1,145,188	\$879,799	\$1,260,617	\$1,527,230
<b>Other Permits Penits</b>	\$434,823	\$451,004	\$507,728	\$510,812	\$564,933	\$620,387	\$642,301	\$612,342
								\$378,705

	2012	2013	2014	2015	2016	2017	2018	2019
<b>Revenues</b>								
Construction Permits	\$1,454,544	\$1,626,616	\$1,794,195	\$2,218,121	\$2,899,695	\$2,835,325	\$2,642,361	\$2,855,127
		\$172,072	\$167,579	\$423,926	\$681,574	(\$64,370)	(\$192,964)	\$212,766
		11.83%	10.30%	23.63%	30.73%	-2.22%	-6.81%	8.05%
Inspection Fees	\$980,157	\$1,083,909	\$1,171,570	\$1,277,298	\$1,145,188	\$879,799	\$1,260,617	\$1,527,230
		\$103,752	\$87,661	\$105,728	(\$132,110)	(\$265,390)	\$380,819	\$266,613
		10.59%	8.09%	9.02%	-10.34%	-23.17%	43.28%	21.15%
Other Permits Penits	\$434,823	\$451,004	\$507,728	\$510,812	\$564,933	\$620,387	\$642,301	\$612,342
		\$16,182	\$56,724	\$3,084	\$54,121	\$55,454	\$21,913	(\$29,959)
		3.72%	12.58%	0.61%	10.60%	9.82%	3.53%	-4.66%
<b>Grand Total</b>	<b>\$2,869,524</b>	<b>\$3,161,530</b>	<b>\$3,473,494</b>	<b>\$4,006,232</b>	<b>\$4,609,817</b>	<b>\$4,335,511</b>	<b>\$4,545,278</b>	<b>\$4,994,698</b>
		\$292,005	\$311,964	\$532,738	\$603,585	(\$274,306)	\$209,768	\$449,420
		10.18%	9.87%	15.34%	15.07%	-5.95%	4.84%	9.89%

1.0%, 4.2%, and 3.5% growth over the next five years, starting with FY 2020-21. The negative forecast numbers in Years 2 and 3 do not include anticipated major projects, such as the planned Portland Airport expansion, which will generate substantial plan review and permit revenues. Should projected revenue not be realized, the bureau would hold vacancies within the division to reduce costs accordingly.

**Addition of a Senior Investigator to the Fire Investigations Unit (FIU)**

Citing higher-than-anticipated revenues, the bureau is realigning existing resources within its base budget to add a Senior Investigator to the Fire Investigations Unit (FIU), which absorbed a staff reduction in 2013. The Senior Investigator will provide day-to-day oversight of the Fire Investigations Unit, which currently has seven permanently assigned team members. Adding this position will enable the FIU to more efficiently handle the day-to-day operations, including equipment procurement, project assignment, scheduling (including overtime), and vehicle maintenance. The addition of this investigator may also result in a reduction of overtime, as they are an additional resource available to respond to a fire scene or provide on-call coverage. The bureau created “Average number of cases per investigator” as a performance measure assigned to the Prevention Division program offer to measure the impact of this position.

## Health & Wellness Initiative

### Efforts to Date

PF&R received \$142,084 in one-time, General Fund discretionary resources and 1.0 FTE in position authority to hire a Health & Wellness coordinator in the FY 2018-19 Adopted Budget. The bureau's FY 2020-21 Requested Budget includes a base budget realignment to provide permanent funding to sustain this position. The Health & Wellness coordinator is responsible for planning, organizing, managing, and evaluating the bureau's Occupational Health & Wellness Program. The program includes scheduling and maintaining a database for all occupational health and fitness data such as blood pressure, muscular strength, endurance testing, flexibility and body composition (gathered by providing annual occupational health and fitness testing for firefighters); liaising with the Bureau of Human Resources' Benefits program; coordinating and administering the firefighter Wellness-Fitness Initiative assessments; coordinating and administering exercise equipment repairs and replacement; and counseling fire fighters on sensitive issues. The Health & Wellness coordinator is also the main interface and primary contact between the bureau and the OHSU-contracted medical director discussed below.

PF&R contracted with Oregon Health & Science University (OHSU) for the provision of Medical Director Services in accordance with the National Fire Protection Agency's standard on comprehensive occupational medical program for fire departments (NFPA 1582). Chapter 4 of this code states that "fire departments shall have an officially designated physician who shall be responsible for guiding, directing, and advising the members with regard to their health, fitness, and suitability for duty."<sup>3</sup> The NFPA code also lays out specific firefighter health examination parameters, which the medical director will administer (NFPA 1582, Chapter 7.4). The cost of the intergovernmental agreement with OHSU is \$60,000 per year, not to exceed \$225,000 over three years, which the bureau has absorbed into its base budget using increased Prevention revenues and reducing their external materials and services inflation factor. However, it is possible that the bureau may generate enough cost savings from this initiative to eventually fund the Occupational Health & Wellness program in its entirety. For context, in FY 2018-19 the bureau lost the equivalent of 11.0 FTE to on-duty injuries, up from 7.7 FTE the year prior and 5.0 FTE higher than the bureau's strategic target of 6.0 FTE.

### Potential Outcomes

PF&R anticipates that the contract with OHSU for Fire Department Physician Duties in accordance with NFPA 1582 as well as the addition of an internal health and wellness coordinator will result in improvements in firefighter health (tracked using metrics gathered during NFPA physicals); reductions in injuries and time lost to injuries (and ensuing overtime costs); reductions in the overall risk for cardiovascular disease and sudden cardiac death or injury; an increase in the number of firefighters with a designated primary care physician; and an annual medical screening rate greater than 90%. The development of a program like this demonstrates how a one-time investment can generate significant long-term savings while improving outcomes.

## Development of a Capital Improvement Program

### Citywide Policy

City Financial Policy 6.11<sup>4</sup> groups capital assets into "Tangible Assets" and "Intangible Assets" and requires all assets within these parameters to be capitalized. PF&R has many assets that fall under this

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<sup>3</sup> NFPA 1582, Chapter 4.1.3. <http://www.iaff140.org/Docs/NFPA%201582.pdf>. Page 10.

<sup>4</sup> City of Portland FIN 6.11. <https://www.portlandoregon.gov/citycode/article/130469>

definition, including apparatus, facilities, equipment, and computer software.

Furthermore, City Financial Policy 2.03<sup>5</sup> states that “Each bureau that owns or manages capital assets or equipment shall develop and maintain a Capital Improvement Plan (CIP) that identifies the individual capital acquisitions, projects or procurements necessary to meet planned levels of service.” In addition, the policy states that “At the time a new capital asset or equipment is planned in the CIP or requested through the Requested Budget, bureaus shall estimate the full operations and maintenance (O&M), major maintenance, and lifecycle replacements costs for that asset.<sup>6</sup> A funding plan for the O&M, major maintenance, and lifecycle replacement costs shall be included as part of the Adopted Budget.”

### **Fund Creation and Capital Improvement Plan Development**

As part of FY 2019-20 Budget Adoption, the bureau created the Fire Capital Fund (Fund 405). The fund enables the bureau to sequester resources from one-time or ongoing appropriation to fund the outlays related to its capital assets, which have been detailed in their Requested Budget document.

For example, in FY 2018-19 Portland Fire & Rescue received a total of \$4.5 million – including \$2.5 million in General Fund discretionary resources (including carryover) – to fund the replacement of the Self-Contained Breathing Apparatus (SCBA) equipment. The total cost of the procurement was just over \$4.5 million; however, the bureau received \$1.05 million in credit from the vendor for the trade-in of the existing equipment, bringing the total cost to roughly \$3.5 million and leaving \$307,000 in General Fund Discretionary resources available from the original appropriation<sup>7</sup>. In the FY 2019-20 Fall Supplemental Budget, Council approved setting aside this remaining funding to seed future lifecycle replacement costs of the SCBA equipment, in alignment with financial policy. Assuming a replacement cost of \$5 million (2% compounding interest based on \$3.86 million over a 14-year replacement cycle), and accounting for the \$307,000 reserved for the equipment, the bureau should reserve \$320,000 annually to fully fund the next replacement cycle. In their FY 2020-21 requested budget, the bureau is allocating \$75,000 of its existing, ongoing General Fund appropriation into this subfund to defray the cost of the future replacement. CBO lauds this initial effort and recommends the bureau look for ways to further supplement this reserve with incremental increases in ongoing allocations as well as one-time deposits into reserves which may be processed based upon anticipated year-end spending during the Spring BMP.

PF&R also has \$7.6 million set aside in the General Reserve Fund (Fund 210) to fund the replacement of all their engines, trucks, and other apparatus over the next ten years. The bureau plans to request this amount be moved from the General Reserve Fund to the Fire Capital Fund’s “Apparatus Replacement” subfund in the Spring BMP. This reserve was generated during the life of the Fire Apparatus Replacement GO Bond (2010 to 2015), a five-year period during which the bureau was able to use a local option levy to replace its emergency apparatus. During that time, the bureau sequestered its regular ongoing apparatus replacement allocation of \$1.8 million annually into the General Reserve subfund to extend the ability to fully fund apparatus replacement needs beyond the life of the Bond. By moving the cash from under OMF management in the General Reserve Fund and into PF&R’s portfolio of assets under management in the Fire Capital Fund allows the bureau to draw from this reserve without requiring Council approval. Because the bureau conducted and transposed the analysis necessary to forecast, plan, and manage its apparatus assets internally into a public Capital Improvement Plan, CBO again stands on the principle of FIN 2.03 in recommending this practice.

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<sup>5</sup> City of Portland FIN 2.03. <https://www.portlandoregon.gov/citycode/article/200789>

<sup>6</sup> City of Portland FIN 2.03.02 Operations and Maintenance Costs. <https://www.portlandoregon.gov/brfs/article/531021>

<sup>7</sup> The actual remainder was closer to \$1 million, of which Council appropriated roughly \$650,000 to other policy efforts during FY 2019-20 Approved Budget Adoption, leaving the balance of \$307,000.

The bureau projects \$1 million in unfunded annual major maintenance based on analysis of current assets and scheduled life-cycle replacement costs related to facilities (the bureau manages all its fire stations as well as a training, logistics, and prevention center) and personal protective equipment. This amount may compound in outyears if it goes unaddressed. The bureau notes that the trade-offs of funding a deficit of this magnitude would result in substantial reductions to current programs, such as a Rapid Response Vehicle or the CHAT program, which would likely inhibit the bureau from sustaining current service levels.

The bureau's CIP also assumes a General Obligation Bond to fund the replacement of its Code Enforcement Office (\$15.2 million), a Logistics Center Relocation (\$44.7 million), and a Training Center Upgrade (\$33.2 million) totaling \$93.1 million or 85% of the current \$109.1 million CIP plan. Should the revenues from such a bond not be realized, the bureau would experience a substantial increase in capital outlay obligations related to its aging facilities.

### **Portland Street Response**

Council approved a Portland Street Response pilot out of Fire Station 11 in the Lents neighborhood in November 2019. The pilot was projected to cost \$500,000, equivalent to the amount of one-time General Fund discretionary dollars the Council placed in Policy Set-aside as part of the 2019-20 budget adoption. Ongoing funding for this project has not yet been identified or appropriated.

Planning for the pilot is ongoing, including protocol development, training, and professional services procurement. It is unclear at this moment if the pilot will have secondary impacts on PF&R service delivery, such as reduced dispatches for four-person fire companies. The bureau anticipates that the larger share of calls for the pilot will be calls that would have normally resulted in a Portland Police Bureau dispatch.

### **Senate Bill 507**

Senate Bill 507<sup>8</sup> may increase disability claims for PTSD and Acute Stress Disorder to eligible fire fighters by shifting the burden of proof from the claimant to the insurer. FPDR anticipates increased costs related to claims under this new statute, but projects that these costs can be absorbed into the existing budget and five-year forecast for FPDR Fund. At this time, a formal analysis of potential costs related to claims that might be filed annually has not been feasible with existing data. FPDR notes that it would likely be able to absorb those higher costs within fund contingency (\$11.5 million) in FY 2020-21, assuming it utilizes its entire existing disability benefit budget of \$7.2 million.

However, to the extent that this new policy affects leave taken by sworn staff, there could be an impact on the Fire operating budget as it will have to back-fill this leave with overtime.

## **DECISION PACKAGES**

PF&R submitted four decision-packages for consideration as part of the Capital Set Aside process. Submitting and evaluating Capital Set Aside requests underwent a new pilot process this year whereby all requests were required to produce a business case analysis quantifying the comprehensive costs and benefits of the proposal. Each analysis produces a benefit-cost ratio and additional information to communicate and demonstrate the benefits of the proposal.

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<sup>8</sup> SB 507 "Relating to occupational diseases for purposes of workers' compensation for certain workers; and prescribing an effective date." Effective Date September 29, 2019.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SB507/Enrolled>

## Station 12 Roof Replacement (Capital Set-aside)

*FR\_9649, \$150,000, 0.00 FTE*

### Request Summary

The Fire Bureau is requesting \$150,000 in Capital-set aside General Fund resources to replace the roof at Fire Station 12. The roof has routine leaks and has required multiple repairs totaling more than \$50,000 over the last 10 years.

### Offset Summary

*Capital Set-aside requests did not require an offset.*

### CBO Analysis

The Fire Bureau has historically relied on funding from a 1998 Facilities general obligation bond and capital set-aside resources to fund roof replacements and other facilities requirements. The bureau currently has \$150,000 in Capital Outlay budget dedicated to this project, but also identified a \$1 million annual ongoing facilities maintenance deficit. Should the bureau not receive capital set-aside dollars for this project, the project would be funded by reductions in other parts of the bureau's Facilities Capital Improvement Plan, including building system replacements and other station improvements. Any additional allocation towards facilities maintenance would come at the expense of other Fire Service programs (such as a rapid response vehicle or CHAT program reduction).

The business case analysis provided by the bureau for this project communicates a benefit to cost ratio of 6.81 to 1. The benefits of this proposal are predominantly related to an average annual lives saved and average annual property value saved calculation. The bureau quantified an "avoided service disruption" benefit of \$806,000 in year 10, based on an analysis of the annual value of Station 12 to FMA 12 (based on the aforementioned value of human life and value of buildings in the area), assuming a 20% decline in service due to the delayed response times from other stations responding in the FMA. The bureau would also save approximately \$40,000 in avoided damages and emergency repairs.

CBO has identified the following criteria that make this a high-value request

- The project has a relatively low cost compared to other capital set-aside requests.
- The project has a high likelihood of being completed in the next fiscal year.
- The newly-installed roof would have a 20-year water-tight warranty, thus would reduce ongoing maintenance needs and thus generate cost savings for the bureau in outyears, reducing their \$1 million facilities maintenance deficit.

CBO recommends this request.

**CBO Recommendation: \$150,000 one-time**

## Training Pavement (Capital Set-aside)

*FR\_9651, \$580,000, 0.00 FTE*

### Request Summary

The Fire Bureau is requesting \$580,000 in one-time funds to repave the grounds at its Training Center. The asphalt at the training center is more than 40 years old and is subjected to heavy use from fire trucks, engines, and other equipment on a frequent basis.

The damage has allowed suppression chemicals used in training to seep through the pavement into the groundwater of the City's secondary water supply—circumventing the filtration system. An August 2018 groundwater analysis by BES showed elevated concentrations of contaminants.

### **Offset Summary**

*Capital Set-aside requests did not require an offset.*

### **CBO Analysis**

The business case analysis provided by the bureau for this project communicates a benefit to cost ratio of 2.13 to 1. The benefits of this proposal are predominantly related to avoided loss in training productivity, avoided injuries, avoided wear and tear to Fire apparatus, and improved runoff and watershed protection. The bureau's analysis assumes a public value of \$87,641 in the first year after the paving, driven primarily by a \$70,000 (79%) valuation of the improved watershed protection.

CBO acknowledges that both the training facility and the training grounds are in a state of disrepair and require substantial investment to be brought up to acceptable levels. PF&R has conducted consultant reports confirming that the bureau's needs exceed the current facility's capacity. To address this, PF&R has done polling to scope the feasibility of pursuing a GO Bond to develop new sites and facilities, due to the greater-than-\$100 million in need across their Training, Prevention, and Logistics facilities. The bureau cites this potential bond funding as the only feasible option to fully address their facilities needs and will likely pursue such an effort in the coming years.

While the bureau cites the potential for groundwater contamination (currently mitigated by not using harmful chemicals during training), injuries (none to date), and damage to apparatus (the bureau trains with end-of-lifecycle trucks and engines) the risks of not funding this project are relatively low. Additionally, there exists a high likelihood that the bureau will receive bond funding in the coming years to replace the facility. For these reasons, CBO does not recommend this request.

CBO recommends PF&R work with the Bureau of Transportation to determine the cost and feasibility of having PBOT conduct maintenance on the pavement, which may prove a more economical option, while the bureau pursues a permanent solution via GO bond.

**CBO Recommendation: \$0.00 one-time**

## **Generator Replacement (Capital Set-aside)**

*FR\_9653, \$375,000, 0.00 FTE*

### **Request Summary**

The Fire Bureau is requesting \$375,000 in one-time General Fund resources to replace generators that are past their lifecycle replacement dates across 15 different fire stations.

### **Offset Summary**

*Capital Set-aside requests did not require an offset.*

### **CBO Analysis**

The benefits of this proposal are again predominantly related estimated annual lives and property saved, estimated at 100 lives and \$500 million in property annually across all FMAs. The business case analysis provided by the bureau for this project communicates a benefit to cost ratio of 2.6 to 1 if the generators were all replaced in the next fiscal year. This was calculated by analyzing the cost of the project minus the cost of doing nothing and dividing it by the benefits of doing the project minus the benefits of doing

nothing. The Net Present Value (NPV) of conducting the project is \$4 million, while the NPV of doing nothing is \$3.7 million.

PF&R's business case evaluation for this request provides that this request must be viewed through a disaster-mitigation framework. The generators are used during blackouts, for which no quantifiable data exists (i.e. number of hours a generator at each station has been used).

The benefit-cost ratio of the generators during a blackout or other non-catastrophic event is low because blackouts are ephemeral in nature and the bureau can continue to operate during one, as garage doors can be lifted manually, and radios run on battery power. Therefore, the risks of not funding generator replacements do not have an outsize impact on fire service delivery.

The value of this project is in service delivery during a catastrophic event, the likelihood of which is difficult to forecast. The benefit-cost ratio of the generators in the event of a catastrophic disaster jumps to 2,492 to 1 (calculating only the value of human life, the value of property was withheld from this analysis as the Fire Service's ability to save property after a 9.0 earthquake is minimal). During such an event, electrical grid power would be suspended for an indefinite amount of time and fire stations would become hubs for community members to access first-aid and other services and resources—at which point the generators would be invaluable. Even if PF&R apparatus were unable to drive on damaged roads, PF&R services could be accessed at stations, which would require a secondary power-supply.

PF&R has identified a \$1 million ongoing facilities maintenance deficit and has a prior facilities bond funds being spent down in the current year, further reducing available resources available for facilities maintenance. Funding this project would also allow the bureau to re-allocate \$7,500 a year it currently spends on repairs above the annual maintenance contract to other facilities needs. Absent one-time investments from Capital set-aside or a General Obligation Bond, the bureau would have to reduce an RRV program or programmatic expansions like CHAT or Investigations to address this need.

For these reasons, and because the bureau has worked with the Bureau of Emergency Communications to develop a comprehensive Continuity of Operations Plan (COOP), CBO recommend this package.

**CBO Recommendation: \$375,000 one-time**

## **LED Lights (Capital Set-aside)**

*FR\_9654, \$100,000, 0.00 FTE*

### **Request Summary**

The Fire Bureau is requesting \$100,000 to replace bulbs and fixtures with LED lighting at the 25 fire stations that were not in the pilot for this project. The pilot demonstrated utility cost savings in the range of \$1,350 to \$2,100 per station annually, representing a net utility-cost decrease of 11.9% across the pilot stations.

### **Offset Summary**

*Capital Set-aside requests did not require an offset.*

### **CBO Analysis**

The business case analysis provided by the bureau for this project communicates a benefit to cost ratio of 1.47 to 1. The benefits of this proposal are predominantly related to reductions in utility expenses, replacement expenses, and renewable energy credit purchases, which total \$21,000 annually from years three through ten of the analysis, giving the project a net present value of \$52,515.

The risks to PF&R service delivery of not funding this initiative are minimal. The bureau would continue to operate as is, but at a higher cost. However, CBO has identified the following criteria that make this a high-value request

- The project has a relatively low cost compared to other capital set-aside requests.
- The project has a high likelihood of being completed in the next two fiscal years.
- The newly installed lights would generate cost savings for the bureau in outyears, reducing their \$1 million facilities maintenance deficit.

The benefit-cost ratio of this project is lower than other capital set-aside projects since PF&R service delivery will not be impacted if it is not funded. However, this project does present an opportunity to advance the City's climate goals. Completing this project within existing resources would further expand the bureau's \$1 million facilities maintenance deficit. Standing on the principle that this is a low-cost, one-year investment from an external resource that will produce cost savings that can be re-allocated to a known area of need within the bureau, CBO recommends this request.

**CBO Recommendation: \$100,000 one-time**

## SUMMARY OF REQUESTS AND RECOMMENDATIONS

Below is a summary of Portland Fire & Rescue’s total budget. It includes their General Fund budget and the Fire Capital Fund, which was created as part of FY 2018-19 Budget Adoption and has been seeded with General Fund resources, as stated in the Capital Improvement Plan. The bureau’s budget is 85.3% personnel services and 12.5% materials and services, with the remaining 2.2% going towards capital outlay. The bureau receives 87.0% of its total resources from the General Fund.

### Portland Fire & Rescue - All Funds

		2019-20 Adopted Budget	2020-21 Requested Base (A)	Bureau Decision Packages (B)	CBO Recommended Adjustments (C)	Total Recommended Budget (A+B+C)
Expense	Personnel	\$108,806,508	\$114,748,287	\$0	\$0	\$114,748,287
	External Materials and Services	\$8,083,520	\$8,039,021	\$0	\$0	\$8,039,021
	Internal Materials and Services	\$7,626,100	\$7,816,002	\$0	\$0	\$7,816,002
	Capital Outlay	\$5,311,000	\$3,168,000	\$1,205,000	(\$580,000)	\$3,793,000
	Debt Service	\$0	\$0	\$0	\$0	\$0
	Ending Fund Balance	\$0	\$0	\$0	\$0	\$0
	Fund Transfers - Expense	\$0	\$75,000	\$0	\$0	\$75,000
	Contingency	\$0	\$387,700	\$0	\$0	\$387,700
	<b>Total</b>	<b>\$129,827,128</b>	<b>\$134,234,010</b>	<b>\$1,205,000</b>	<b>(\$580,000)</b>	<b>\$134,859,010</b>
Revenue	Beginning Fund Balance	\$0	\$307,000	\$0	\$0	\$307,000
	Bond & Note Proceeds	\$0	\$0	\$0	\$0	\$0
	Charges for Services	\$1,738,800	\$2,238,000	\$0	\$0	\$2,238,000
	Fund Transfers - Revenue	\$500,000	\$75,000	\$0	\$0	\$75,000
	General Fund Discretionary	\$114,191,082	\$116,703,477	\$1,205,000	(\$580,000)	\$117,328,477
	General Fund Overhead	\$73,068	\$85,365	\$0	\$0	\$85,365
	Interagency Revenue	\$9,487,678	\$10,484,468	\$0	\$0	\$10,484,468
	Intergovernmental	\$638,500	\$675,000	\$0	\$0	\$675,000
	Licenses & Permits	\$2,963,000	\$3,455,000	\$0	\$0	\$3,455,000
	Miscellaneous	\$235,000	\$210,700	\$0	\$0	\$210,700
	Miscellaneous Fund Allocation	\$0	\$0	\$0	\$0	\$0
	<b>Total</b>	<b>\$129,827,128</b>	<b>\$134,234,010</b>	<b>\$1,205,000</b>	<b>(\$580,000)</b>	<b>\$134,859,010</b>