Public Safety Overtime

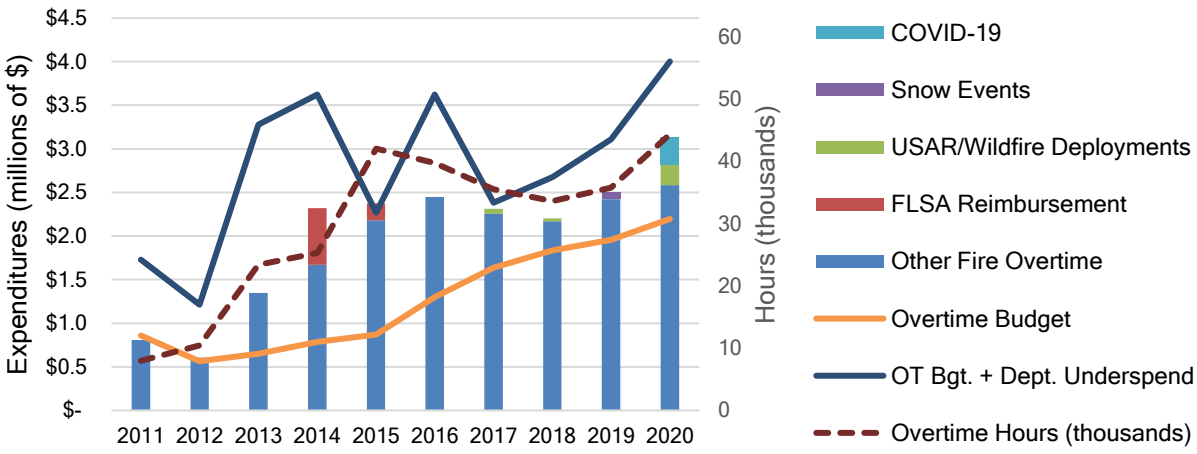
The analysis below provides an overview of public safety overtime drivers. Although both are within the umbrella of public safety, the characteristics of overtime differ significantly between fire and police services and are discussed separately.

The analysis of fire and emergency medical services (EMS) overtime reviews minimum staffing requirements, overtime drivers related to shift personnel, and a comparison of costs of hiring additional personnel and overtime staffing. As the police service does not have the same sort of staffing requirements as fire and EMS, its discussion focuses primarily on the reasons that overtime occurs.

Fire Department

Fire overtime has been problematic to budget since 2013. However, the department has remained within budget on a biennial basis over this time due to personnel vacancies and underspending in other areas of the Department's budget.

FIGURE 1 – FIRE OVERTIME VS. OVERTIME BUDGET AND DEPT. UNDERSPEND



For simplicity, the analysis below focuses on fire suppression and basic life support (BLS) services supported by the General Fund and Public Safety Levy. However, the principles and conclusions of this analysis apply to advanced life support (ALS) shift personnel whose costs are fully reimbursed by King County with Medic One Levy funds.

Fire & EMS Minimum Staffing Requirements

Fire and BLS services are provided by 107 full-time equivalents (FTEs) as follows:

FIGURE 2 – FIRE SUPPRESSION/BASIC LIFE SUPPORT 2021-2022 FTE BUDGET

Positions	Budget	2021	2022	2021-2022
3 Battalion Chiefs 24 Company Officers • 7 Captains, 17 Lieutenants 21 Driver/Engineers 59 Firefighters	**Reg. Salaries**	$12,792,016	$13,178,289	**$25,970,305**
	Reg. Benefits	$4,418,951	$4,525,722	**$8,944,673**
107 Full Time Equivalents	**Total**	**$17,210,967**	**$17,704,011**	**$34,914,978**

Personnel are spread evenly across three 48-hour shifts[1] and are based at seven fire stations throughout Redmond and Fire District 34. When fully staffed, there are 35 or 36 personnel scheduled on each shift. At a minimum, 25 personnel are always on duty as follows:

FIGURE 3 – FIRE SUPPRESSION/BASIC LIFE SUPPORT MINIMUM STAFFING

Location	Minimum Staffing	Equipment
Fire Station 11 (Headquarters/Downtown)	6 Total: 1 Battalion Chief, 1 Company Officer, 1 Driver/Engineer, 3 Firefighters	Engine (dedicated staff) Aid Car (dedicated staff) Battalion Chief Response
Fire Station 12 (Overlake)	5 Total: 1 Company Officer, 1 Driver/Engineer, 3 Firefighters	Engine (dedicated staff) Aid Car (dedicated staff)
Fire Station 13 (FD 34: Bear Creek)	3 Total: 1 Company Officer, 1 Driver/Engineer, 1 Firefighter	Engine and Aid Car (cross-staffed) Hazmat Response
Fire District 14 (FD 34: Union Hill)	3 Total: 1 Company Officer, 1 Driver/Engineer, 1 Firefighter	Engine and Aid Car (cross-staffed) Wildland Response
Fire Station 16 (Southeast Redmond)	3 Total: 1 Company Officer, 1 Driver/Engineer, 1 Firefighter	Ladder Truck, Rescue Truck, and Aid Car (cross-staffed)
Fire Station 17 (North Redmond)	2 Total: 1 Company Officer, 1 Driver/Engineer	Aid Car Engine (reserve)[2]
Fire Station 18 (FD 34: Redmond Ridge)	3 Total: 1 Company Officer, 1 Driver/Engineer, 1 Firefighter	Engine and Aid Car (cross-staffed)
Total:	**25 Personnel -** 1 Battalion Chief, 7 Company Officers, 7 Driver/Engineers, and 10 Firefighters	

[1] Technically, each 24-hour period starting and ending at 8 a.m. is a shift. However, every two consecutive shifts are organized into rotating 48-hour tours referred to as A Shift, B Shift, and C Shift.
[2] A common staffing configuration when staffing levels are above minimum is to assign an extra firefighter to Station 17 to make a reserve engine located there available for response.

Contributors to Overtime

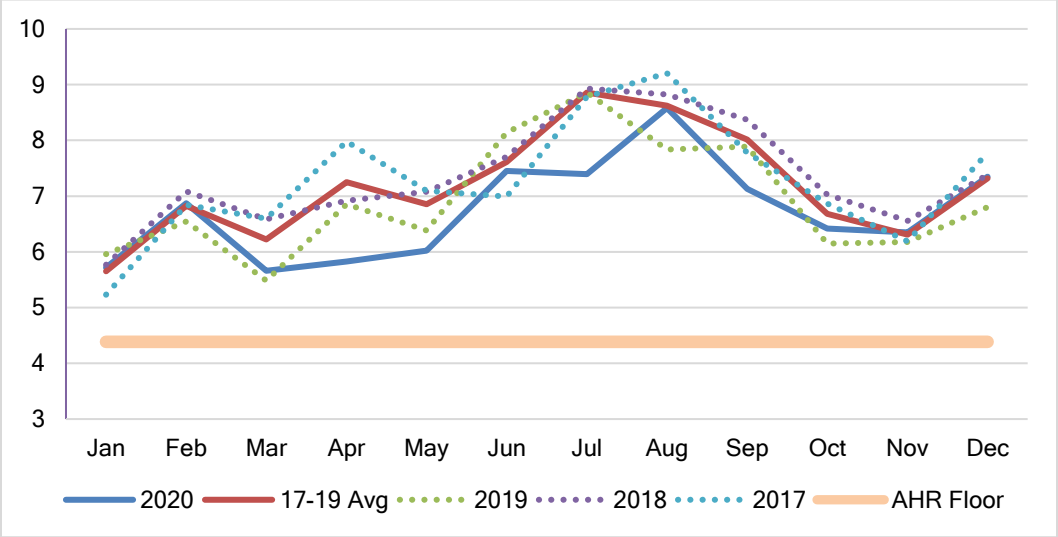
Planned Absences – Annual Hour Reduction, Vacation, and Holidays

Based on the three-platoon configuration described above, each position required to meet minimum requirements must be staffed for 2,922 hours per year[3]. To reduce the annual number of hours worked to the 2,538 hours per year specified in the Fire Uniformed collective bargaining agreement (CBA)[4], all line personnel are either scheduled or choose to be off work for 16 24-hour annual hour reduction (AHR) shifts each year[5]. In addition, line personnel accrue 4 to 12 24-hour shifts of vacation leave based on seniority and 5½ 24-hour shifts of holiday leave each year.

The CBA also includes a formula that determines the maximum number of personnel assigned to a shift that can be out on planned absences on any given day, currently 9. When fully staffed and healthy, this can reduce the number of personnel available for a shift to 26 or 27 on any given day. However, this leaves only a small buffer to accommodate other overtime incurred by other drivers below.

As the chart below depicts, the daily use of planned absences is uneven throughout the year, ranging from 6 to 9 on most days, with peak usage during the summer months. Due to the scheduling of AHR shifts, it is unlikely that average daily planned absences will ever fall far below 4½. 2020 is portrayed separately from the years covered in this analysis, as many planned absences were canceled following the onset of the Covid-19 pandemic.

FIGURE 4 – AVG. PLANNED ABSENCES PER DAY BY MONTH OF YEAR



Unplanned Absences, Vacancies, and Temporary Day Assignments

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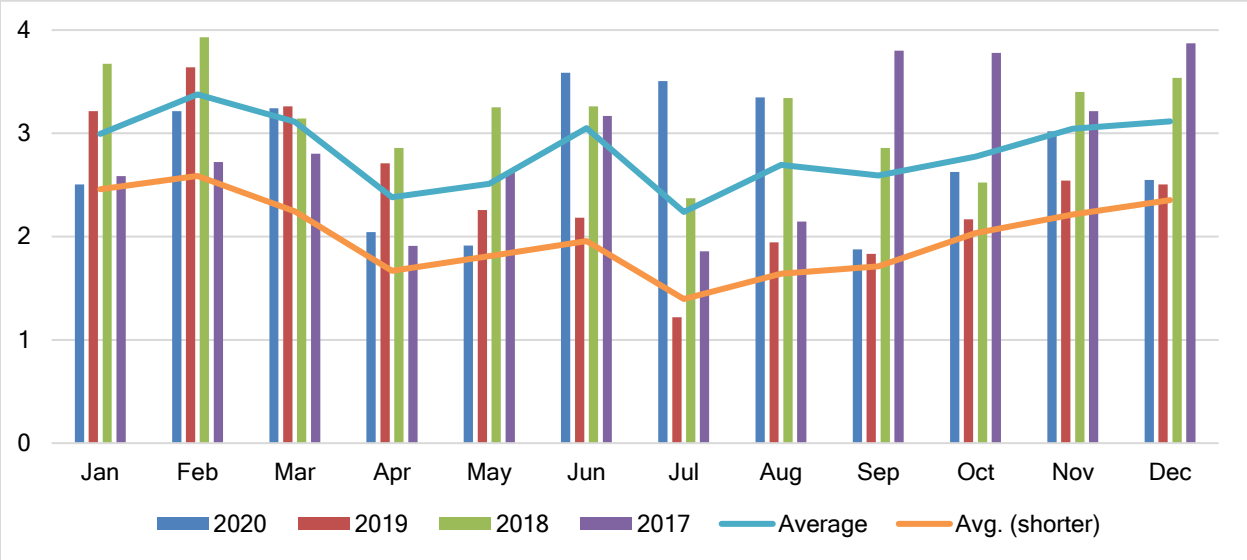
[3] Four-year average of 2,920 hours in 365-day years and 2,928 hours in 366-day (leap) years.
[4] 2020-2023 Collective Bargaining Agreement between City of Redmond and International Association of Fire Fighters No. 2829 Union representing the represented Uniformed Employees in the Fire Department, approved October 6, 2020.
[5] 6 or 7 annual hour reduction shifts are automatically scheduled based on a work cycle pattern outlined in the CBA. These are referred to as *work cycle breaks*. Remaining shifts are selected by line personnel, known as *Kelly Days*.

In addition to the above, staff has access to sick leave for use when they are sick, injured, or caring for ill family members. Other unplanned leave that occur infrequently include bereavement, emergency, military, and jury duty leaves. These leaves can become a significant overtime driver if they become concentrated within one of A, B, or C Shifts.

To examine annual patterns, daily averages of unplanned absences are depicted in Figure 4 below. Two averages are presented. The average of shorter leaves largely represents illness, care of a family member, or short-term injuries and varies from 1.4 to 2.6 absences per day with a cyclical pattern that coincides with flu season. The full average includes leaves that tend to become extended and usually involve injuries, particularly those involving workers' compensation claims. Outliers in 2020 also include a period when precautionary quarantines due to potential Covid-19 exposure were at a high point for the year. These do not have an annual cycle and explain much of the year-to-year variance in unplanned absences.

FIGURE 5 – AVG. UNPLANNED ABSENCES PER DAY BY MONTH OF YEAR



The number of personnel available can also be reduced by vacant positions. When positions become vacant, typically by retirements, there is a considerable lag before they can be refilled as the process starting from recruitment and culminating with academy graduation can take many months to complete.

However, there are instances when staff in line positions are assigned to temporarily work on day assignments and are unavailable to serve in a capacity that satisfies minimum staffing needs at during that time. New firefighters attending the fire academy are the most common occurrence of this. Staff who are injured or otherwise unable to perform line duty are sometimes assigned to modified duty as well. In these instances, there is not a salary and benefit offset from a vacant position.

Other Overtime Drivers and Considerations

While planned absences and sick leaves are responsible for most overtime costs, there are also additional smaller drivers of overtime costs.

For some activities, particularly during and following major events, the Fire department can incur reimbursable overtime costs. Significant recent examples include responses to major incidents such as Covid-19 response activities[6] and Urban Search and Rescue (USAR) deployments. Some activities such as federally funded trainings and fire academy instruction are reimbursable as well.

However, not all events will qualify for reimbursement. The Fire Department has upstaffed for several inclement weather events in recent years, but these have not been of such a size that they became eligible for reimbursement. Other minor drivers of overtime include specialty unit activities, trainings that cannot be conducted during shifts, hiring and promotional testing, and project meetings.

When examining overtime costs, it is also important to consider that scheduling for planned absences occurs just once per year for the entire following calendar year. Should there be a concentration of injuries, for example, within one of A, B, or C Shifts, the ability of the department to adapt to the situation through shift changes is limited as current practice is such that doing so prompts rescheduling of absences in a manner that allows the staff person to maintain a schedule as close to what was originally selected as possible.

Another point of the CBA to remember is that unused holiday leave is paid out near the end of the year. Use of holiday leave that prompts overtime costs is offset by a reduced holiday payout.

Estimating Line-Available Staff Time Needed to Offset Overtime

Based on a review of aggregated annual scheduling and payroll data from 2017 to 2020, we are able to make estimates of the total amount of overtime needed to fill absences by rank[7] and the average number of hours served on line duty per staff person each year.

These can be used to create an estimate of the amount of line-available staff time, summarized as full-time equivalents, needed to offset overtime costs created by absences based on annual averages if staffing could offset overtime on an hour-for-hour basis. However, with leave usage fluctuating throughout the year on a seasonal pattern, this will not occur. When absences are at their lowest, there will be additional days when staffing levels are above minimum. When absences are at their highest, additional hiring will be insufficient to fully offset overtime costs.

Even so, the annual average of regular hours worked per FTE in Figure 6 provide a helpful input for the cost-benefit analysis of hiring versus overtime that follows.

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[6] These include Covid-19 dedicated aid car staffing, testing, mass and mobile vaccination, infection control, and replacement staffing for personnel potentially exposed to Covid-19.

[7] Further refinement of this estimate can be made as the periods of analysis are made ever shorter, down to each 24-hour shift. The ability to perform this analysis is anticipated to become more streamlined as Workforce Management implementation continues and consolidates scheduling, timekeeping, and payroll into an integrated system.

FIGURE 6 – ABSENCE BACKFILL AND HOURS WORKED BY RANK

Rank	Est. Total Annual Absence Backfill	Average Reg. Hours Worked Per FTE	FTEs to Offset Absence Backfill
Battalion Chief	1,097 hours	1,937 hours[8]	0.6
Company Officer	3,683 hours	1,984 hours	1.9
Driver/Engineer	4,414 hours	1,997 hours	2.2
Firefighter	7,731 hours	2,111 hours	3.6
Total Line-available FTEs Needed to Offset Absence Backfill			**8.3**

Cost-Benefit of Hiring Additional FTEs vs. Staffing with Overtime

Although overtime pay costs 50% more than regular time per hour in salaries, a different picture emerges when comparing total personnel costs per hour worked on regular time and overtime.

Benefits

The employer contribution of some benefits is based on a percentage of total salaries paid, about 13.12% altogether. These share the same 50% premium of the overtime rate. They include:

- Municipal Employees Benefit Trust (MEBT) contributions
- Law Enforcement Officers' and Fire Fighters Retirement Fund (LEOFF) contributions
- Medicare taxes
- Paid Family and Medical Leave (PFML) premiums

Other benefits are paid at fixed amounts each month. As the costs of these benefits do not increase with each overtime hour worked, they are only included in the cost of a regular employee. These include:

- Medical, dental, and vision insurance
- Workers' compensation insurance
- Basic life and accidental death and disability insurance
- Employee Assistance Program subscriptions

Although contributions to MEBT, LEOFF, Medicare, and PFML scale along with total pay, the premium in benefit costs when working overtime is small compared to the cost of benefits such as health insurance. When burdening both regular and overtime rates with benefit costs, the premium of overtime falls from 50% to a range between 17 and 36% depending on one's rate of pay and the level of medical, dental, and vision coverage elected.

Additional Per-FTE Compensation and Operating Costs

The value of unused holiday leave is paid out annually to shift personnel near the end of each year. As the value of holiday leave does not increase when overtime is worked, it reduces the overtime premium further, from 16 to 31%.

[8] The four-year average includes an unusual year during which the number of regular hours worked by personnel of this rank is substantially lower than the rest. The average presented excludes that year as it makes a significant impact on the cost-benefit analysis below.

There are also incremental onetime and ongoing operating costs to consider in the cost of adding FTEs. These include but are not limited to the initial purchase of bunker gear and other protective equipment, uniforms, and academy fees as well as ongoing costs for equipment replacement and software licenses common to all City staff. As budgeting for these costs falls outside of the personnel costing process, they are not reflected in this analysis. Nevertheless, few, if any, of these costs increase with overtime worked and would further diminish the overtime premium.

Comparison of Regular and Overtime Rates Based on Hours Worked

The final step of this cost-benefit analysis considers that staff work fewer hours on regular duty than they are paid. Each shift FTE comes with its own leave accruals and incrementally contributes to the number of shifts that personnel will be able to take off per the days-off formula in the CBA. Figure 6 provides annual averages of regular hours worked by rank, with the balance of the 2,538-hour work-year paid through one form of leave or another.

The implication of this is that regular and overtime rates are not directly comparable. Every overtime hour paid is an hour worked while regular hours are paid regardless of whether one is working or on leave. To make a truer comparison, the fully burdened average regular rate is inflated to reflect hours worked instead of hours paid.

The result is that hiring new FTEs and staffing with overtime result in similar costs. A visual breakdown of the discussion above is provided in the following charts, one for each rank, which illustrate approximate ranges of hourly costs per hour worked:

- The “Low” cost per hour worked represents Step A salary, employee-only medical, dental, and vision coverage, the lowest seniority premium currently paid, and a high-end estimate for regular hours worked[9].
- The “Median” cost per hour worked represents the median salary step currently paid[10], median medical, dental, and vision coverage elected, average seniority premium currently paid, and the average of regular hours worked by rank.
- The “High” cost per hour worked represents the top salary step, Employee, Spouse, and Children medical, dental, and vision coverage, the highest seniority premium currently paid, and a low-end estimate for regular hours worked[11].

[9] High-end estimate: 2,538 hours less the lowest level of vacation currently accrued, ¼ of sick leave accrued, and assuming no use of holiday leave. Ranges from 2,178 to 2,370 regular hours worked per year depending on rank.
[10] In all cases, the median salary step is also the top step in the classification.
[11] Low-end estimate: 1,830 regular hours worked per year. Based on the use of all leave accrued in a year at the highest accrual levels outlined in the CBA.

FIGURE 7 – COST PER HOUR WORKED: FIREFIGHTER

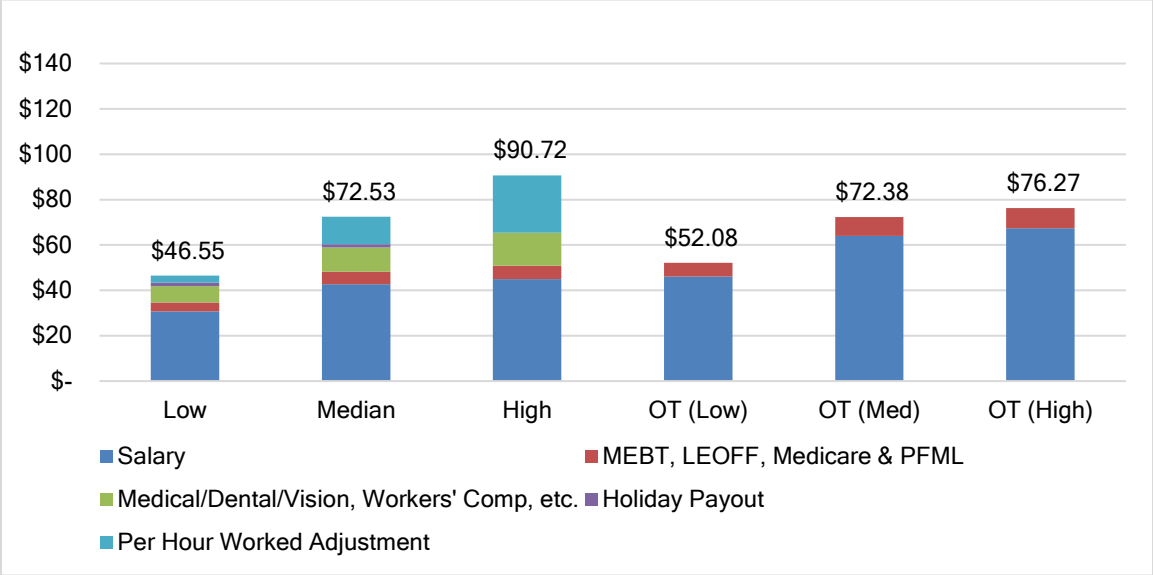


FIGURE 8 – COST PER HOUR WORKED: DRIVER/ENGINEER

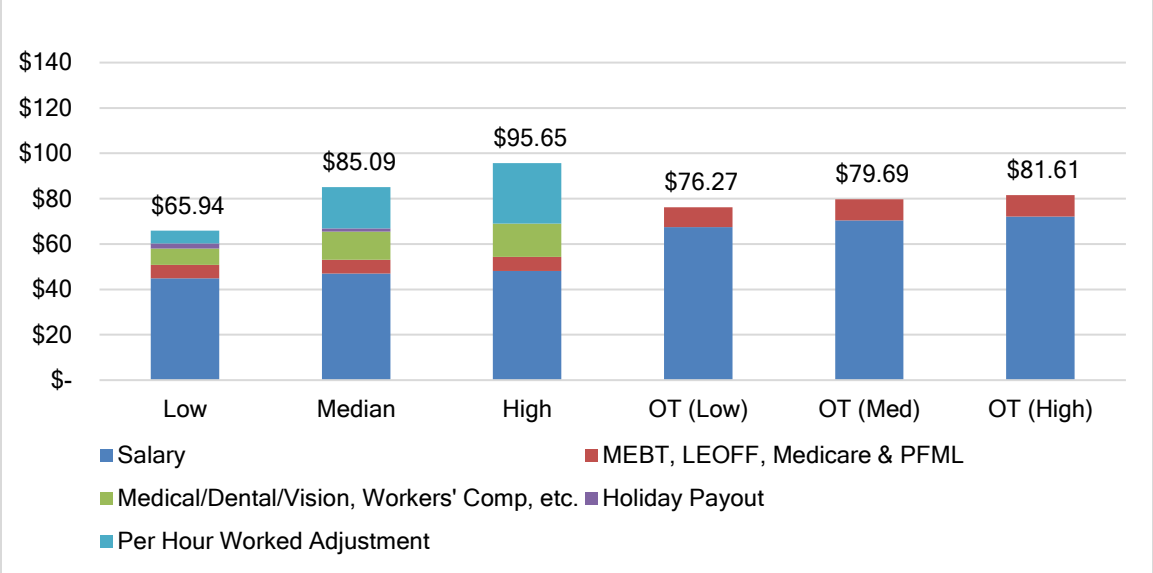


FIGURE 9 – COST PER HOUR WORKED: FIRE LIEUTENANT

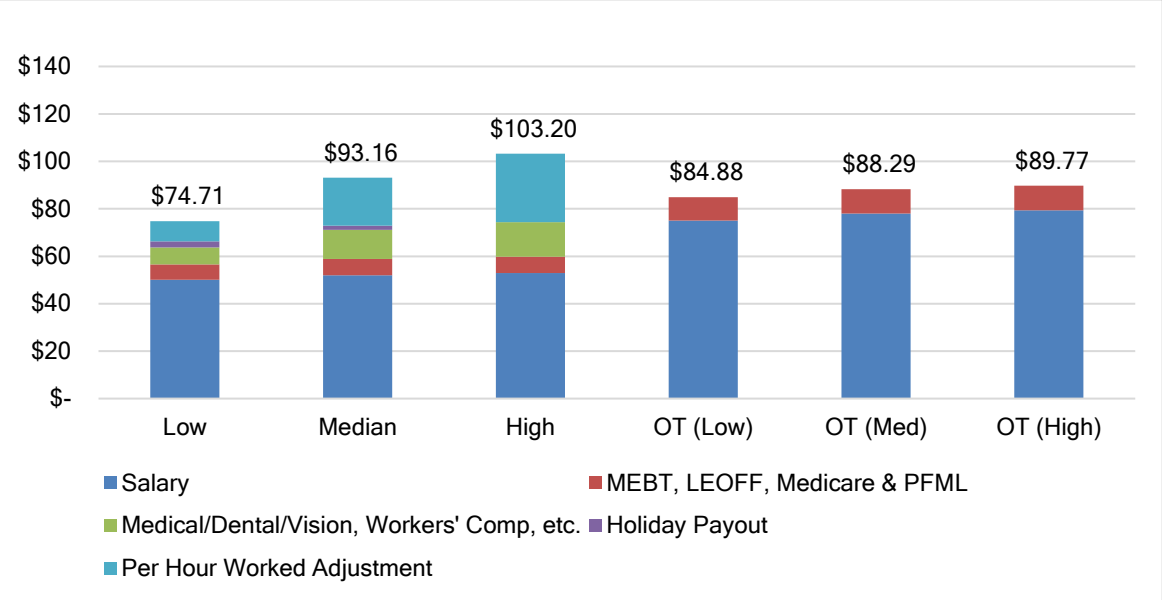


FIGURE 10 – COST PER HOUR WORKED: FIRE CAPTAIN

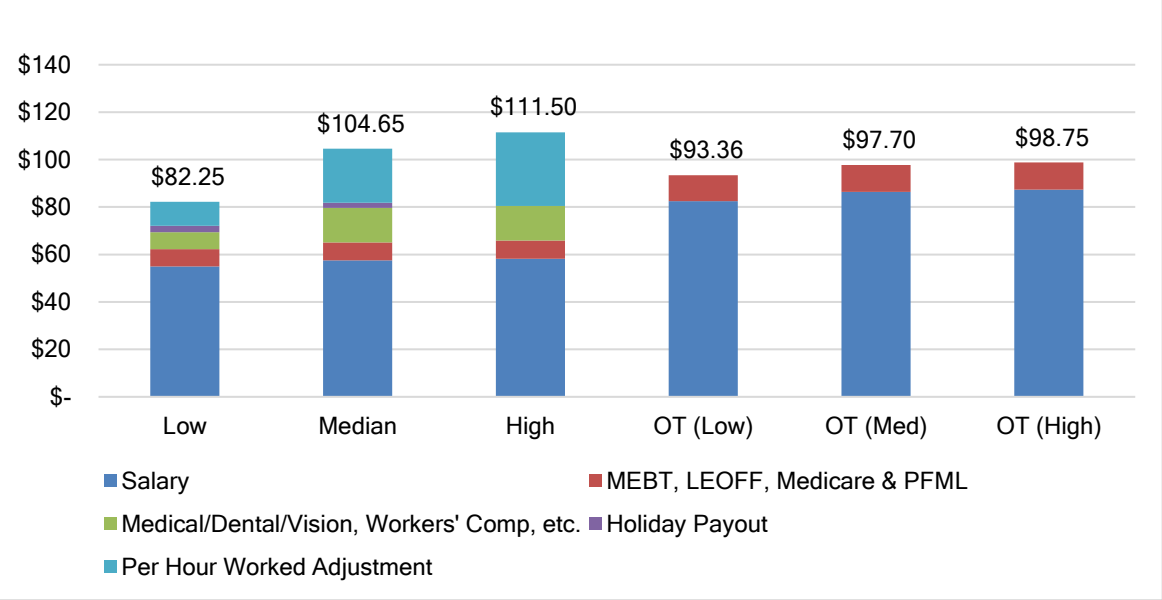
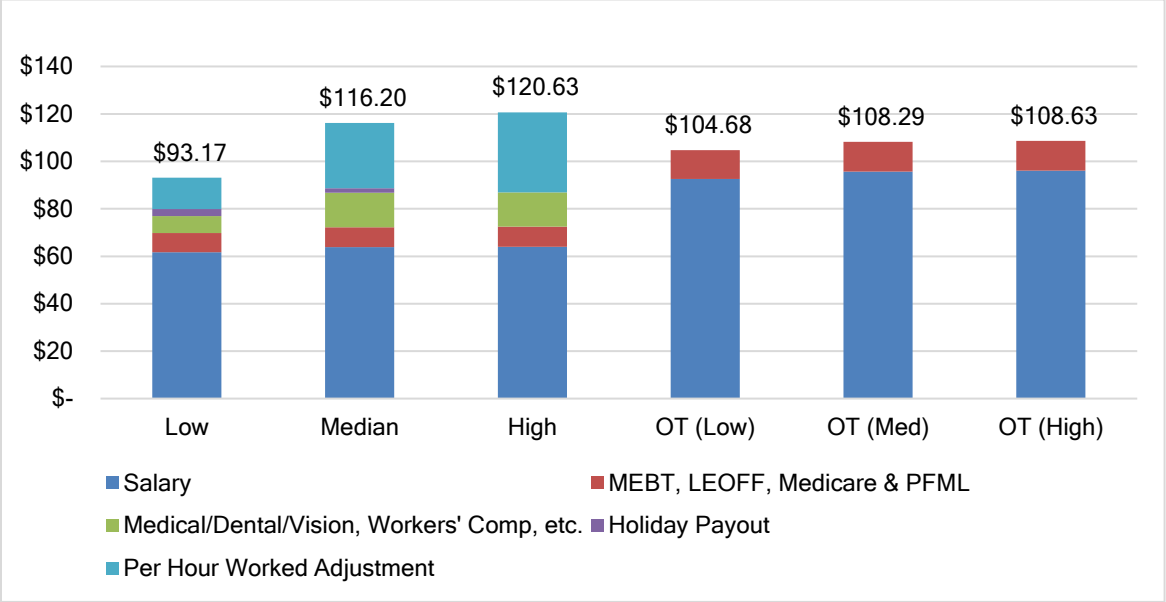


FIGURE 11 – COST PER HOUR WORKED: BATTALION CHIEF



Conclusions and Further Considerations

Cost considerations are just one of several factors to weigh when determining appropriate staffing levels and overtime budgets. While overtime allows for flexibility to meet staffing needs as absence levels and line personnel fluctuate throughout a biennium, additional staffing may be needed to:

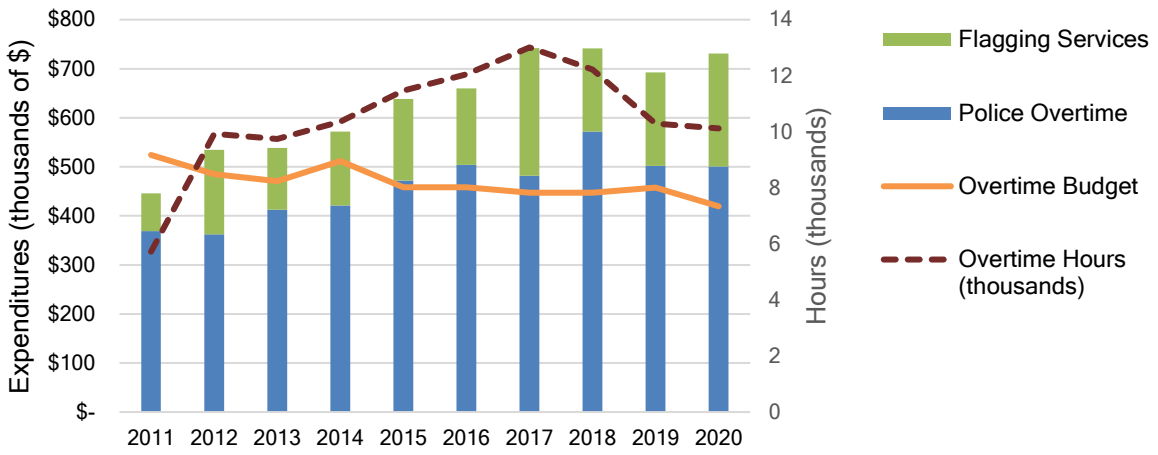
- Meet increasing service demand.
- Avoid overworking staff.
- Adapt to changes in staff mix, variable benefit and other operating costs, or changes in future CBAs.

It is recommended that further analysis and deliberation on this matter continue within the Fire Department's development of its master, strategic, and functional plans.

Police Department

Police overtime was on an increasing trend from 2011 to 2017, stabilizing afterwards. Most of this growth can be attributed to increasing demand for flagging services and coincides with the pace of development activity within the City. The remainder of overtime costs grow at a pace like that of regular salaries.

FIGURE 12 – POLICE OVERTIME VS. OVERTIME BUDGET



Police overtime functions in a fundamentally different manner than Fire overtime in that it is not subject to the same sort of minimum staffing requirements.

Contributors to Overtime

As a result, Police overtime spending tends to be situational in nature. Generally, it occurs in the following ways:

- Extension of Shift: An officer is on a call that goes beyond the end of their assigned shift.
- Backfill: An officer is either called in or their shift is extended to cover another officer who is unavailable due to reasons such as training, illness, or vacation.
- Call-Out: An officer may also be called in to cover an officer called out to an assignment such as detective, SWAT, K-9, Court, or another specialty unit.
- Mutual Aid: Staff are sometimes deployed to neighboring jurisdictions at their request or called in to support interlocal mutual aid agreements.
- Events: Staff can also be called in for planned events such as Derby Days or unplanned events such as protests or large gatherings.
- Flagging: The Police Department also provides traffic control services, mostly to construction projects. These costs are reimbursed in full by the entity requesting staffing, estimated at $340,000 for the 2021-2022 biennium.

Budgeting Considerations

The current police overtime budget was calculated based on usage in the prior two biennia following an analysis of overtime usage in each police division. As the City's personnel budgeting process incorporates the costs associated with each authorized FTE, but the Department anticipates vacancies over the course of the biennium, the Police Department reduced its overtime budget by 30% in the 2021-2022 biennium.

By doing so, the department retains the ability to hire for vacant positions if more qualified candidates are successfully recruited than anticipated. If the department's vacancy assumptions hold true, the result will appear as an overbudget overtime line, but similarly underbudget in regular salaries and within budgeted amounts for the department.