



CITY OF KIRKLAND

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MEMORANDUM

To: Kurt Triplett, City Manager

From: Joe Sanford, Fire Chief
George Dugdale, Senior Financial Analyst, Public Safety

Date: September 26 2016

Subject: FIRE OPERATIONS OVERTIME

As part of the 2009-10 Budget process the Fire Department produced an issue paper looking at fire overtime and strategies to reduce future liabilities. That issue paper made recommendations on the ideal staffing levels to cover overtime, as well as establishing a fire overtime reserve. While these measures helped to stabilize fire overtime costs in the short term, costs have increased again in the past few years. The table below shows overtime, adjusted to 2014 pay rates, for each of the past five years. This table excludes significant onetime costs, such as the temporary overtime staffing at station 25.

Fire Suppression Overtime, excluding one time costs

	2012	2013	2014	2015	2016 (Estimate)
Overtime (2014 dollars)	604,600	787,800	966,300	1,089,400	1,078,900

This issue paper will analyze the causes of fire overtime, and how they have contributed to the recent increase in fire overtime costs. In addition, this paper will make recommendations for actions that could help stabilize fire overtime, as well as areas of future study as the City prepares to staff the new Fire Station 24.

Analysis will focus mostly on the past two budget cycles, 2013-14 and 2015-16. This is because these years cover the period after annexation and beyond the temporary overtime reductions implemented as part of the recession recovery strategy. In addition, staffing levels in Fire Operations have remained consistent throughout this period,¹ and by normalizing pay rates between years, like for like comparisons can be made more easily.

Fire Operations Structure

Before looking at how and why overtime occurs, it is important to understand the shift structure of fire operations in Kirkland. The Kirkland Fire Department has a total of 97 firefighters. The vast majority of these (90) are assigned to operations and split evenly between three shifts

¹ In August 2016 Council added 5 FTE positions to fund the fourth firefighter at Fire Station 25 on an ongoing basis. These positions are excluded for the purpose of this analysis, as 2016 estimates are based on actual costs through June 30th 2016.

(A/B/C), with each shift lasting 48 hours, beginning and ending at 7:00 am. An example two week period from June 13, 2016 to June 26, 2016 is shown below. Shift A works from 7:00 am on Sunday the 13th until 7:00 am on Tuesday the 15th, at which point shift B takes over, and so on.

JUNE						
S	M	T	W	T	F	S
13	14	15	16	17	18	19
20	21	22	23	24	25	26

A Shift B Shift C Shift

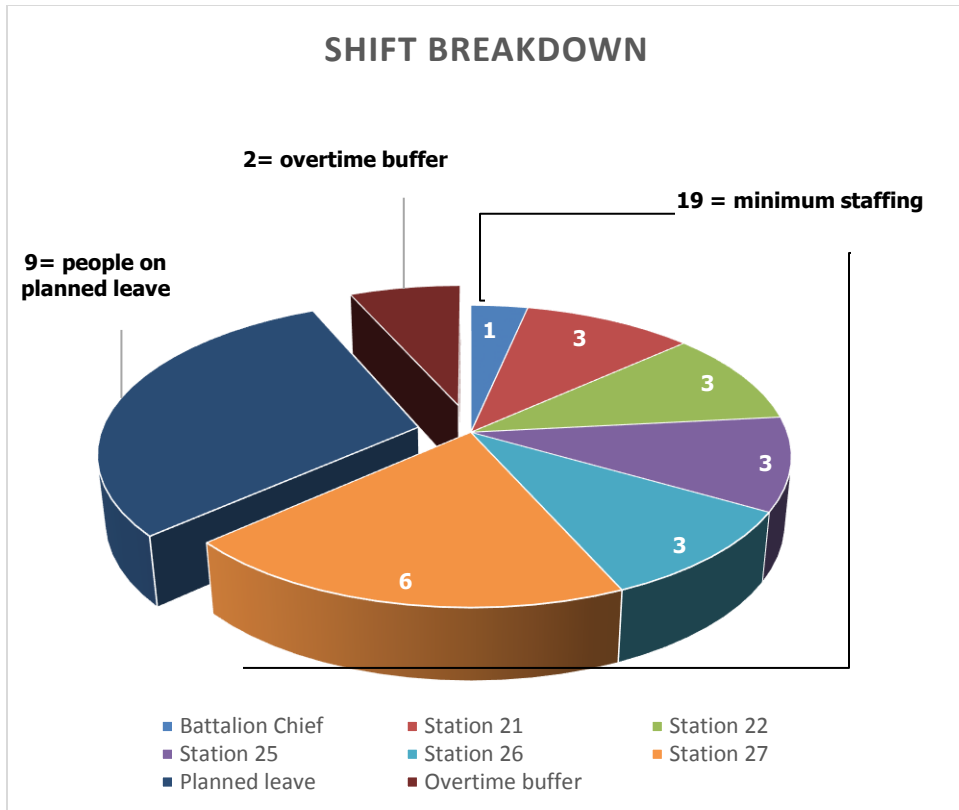
When the department is fully staffed, there are 30 firefighters assigned to each shift. On each day the minimum staffing is 19, made up of a three person crew at each station (21/22/25/26/27), plus a second crew at Station 27, and the Battalion Chief. That means that on any given day 11 members of the shift can be absent before overtime is needed.

This structure is important as the requirement for minimum staffing creates the possibility of large amounts of overtime, while the ratio of total staffing, allowable leave, and required minimum staffing dictates the amount of overtime. For example, as there must always be 19 firefighters on shift, as well as the requisite number of company officers (those in charge at each station), each absence brings the total number of staff available closer to the minimum. There are a wide variety of work absences, which are broadly broken down (by department policy and the labor contract) into two categories:

1. **Planned leave** – vacation, holiday and 'Kelly Days'²
2. **Other leave** –
 - a. **Overtime-causing leave** -including sick leave, Family Medical Leave (FMLA), on duty injury, light duty, training backfill and other leaves which are not part of the bidding process
 - b. **Vacancies** – generally occurring due to retirements

In order to ensure that firefighters can take the leave they are contractually entitled to, 'planned leaves' account for nine of the 11 available slots. This leaves two slots for other leave, known as the 'overtime buffer'. The chart below shows the assumed allocation of staffing when the department is operating at minimum staffing.

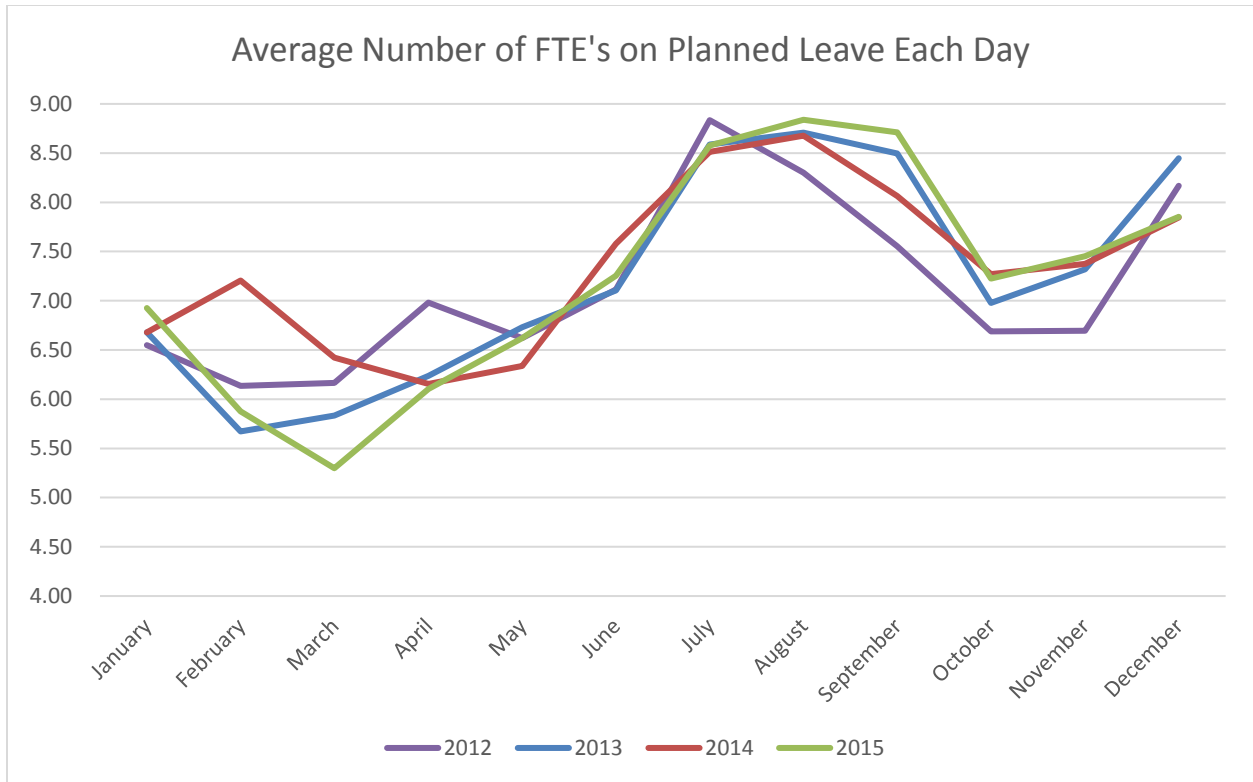
² Kelly leave is common in fire departments. It provides for additional time off to ensure a shift structure remains compliant with the Fair Labor Standards Act (FLSA) guidelines governing overtime. In the case of Kirkland, each firefighter receives one shift off after 6 shifts of work. This makes work hours 48 hours per week on an annualized basis.



1. Planned Leaves

As mentioned, nine of the 11 slots above the required minimum staffing fall into the category of planned leave. These are split between 'Kelly Days', vacation, and holiday, with most time being allocated through an annual bidding process, established in the collective bargaining agreement. Firefighters bid for Kelly Days annually, with a maximum of 5 people away on Kelly leave each day. Once Kelly Days have been issued there is a process of vacation and holiday bidding. Following this bid either all 9 slots are taken on a certain day, or the remainder are available for 'routine' vacation, which can be used as needed any time there is a spare planned leave slot.

For each individual, Kelly Days fall on the same two days throughout the year. For example, if a firefighter bids and receives Saturday and Sunday, they would be off each time their shift rotation would have them working Saturday and Sunday (shift A on the June 19/20 in the example shown above). As there are a maximum of 5 slots per day, this gives 35 slots per week per shift. Past experience has shown that all 5 slots tend to be taken around the weekend, with fewer in midweek. Because Kelly shifts are the same two days throughout the year, there is no seasonal peak.



There is a clear seasonal trend to vacation leave, with the lowest amounts taken in winter and early spring, and peaks in August and December. The chart above shows the average number of people on planned leave, including Kelly, vacation and holiday leave in each month from 2013-2015. The seasonal pattern is clearly visible in the chart. Each year in April, there were an average of six people on planned leave. This means if there are no vacancies, sickness or other unplanned leaves, there will be 24 firefighters available for work, five more than required for minimum staffing. However in August, the average number of people away on leave was over eight, which means if there were ever more than three people on any other leave overtime was required. This is significant as it creates times of the year that the City has a high risk of overtime being generated.

The impact of this risk is shown in the table below, which compares overtime cost (in 2014 dollars) during April and August for 2014-2016. Although there are large fluctuations between the years, the increase in overtime during the summer is consistent across years, and this is largely due to the increase in planned leaves during the summer months. There are also similar peaks around holiday periods, as overtime costs within a year mirror the seasonal pattern set out above.

Overtime pay in April and August

Month	2014	2015	2016
April	30,000	30,200	89,200
August	118,800	141,800	139,900
Difference	88,800	111,600	50,700

Current department practice works with the assumption that all nine planned leave slots can be filled without causing overtime. While this is true, the seasonal increases in leave do put pressure on the overtime buffer, helping to increase the amount of overtime in summer

months. Strategies to help smooth out the seasonal trend in leave, pushing more leave into the spring months, could reduce overtime. This would require changes to the bidding system and would need to be negotiated between labor and management.

In addition, there have been recent changes to vacation accrual for IAFF members which have contributed to the recent rise in overtime costs. The 2012-2014 collective bargaining agreement between the City and the IAFF provided each firefighter with 24 hours of additional leave per year. This contract was implemented in September 2013 and members of the bargaining unit were required to take their additional 2013 leave before the end of the year. The immediate impact of this can be seen in the steep increase between November and December 2013 in the chart above. The estimated impact of this additional leave was not considered as part of the base financial package in contract costing, but has caused an estimated impact of \$55,000 in 2013 and an annual impact of \$85,000 in 2014 and beyond.

2. The Overtime Buffer

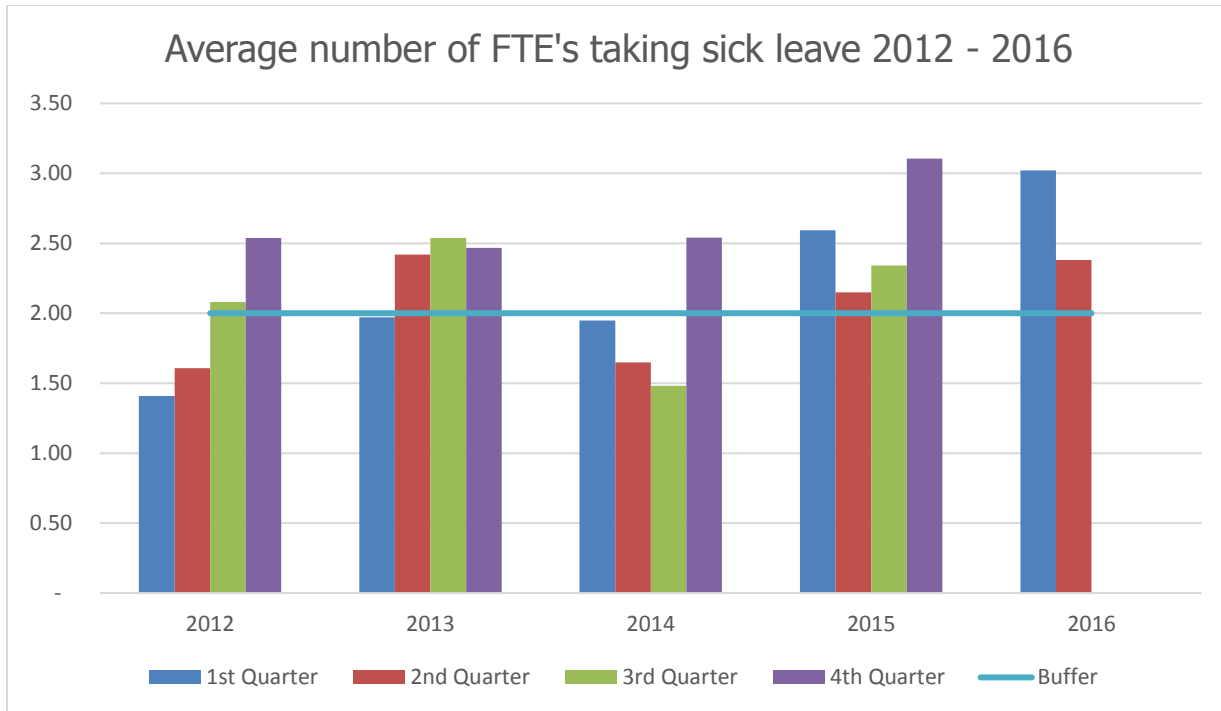
Under the current structure, if the maximum allowable number of firefighters are absent on planned leave, there are two remaining positions above minimum staffing. These slots constitute a buffer to protect the city from incurring overtime costs every time there is a vacancy, or use of any 'overtime-causing leave'. This overtime buffer is used in two major ways which are described below.

a) Overtime-Causing Leave

Current department practice and policy separates the planned leaves described above from 'overtime causing leave', which is essentially any leave that is not part of a bidding process³. The most significant of these categories is sick leave, which accounted for 72% of this leave between 2013 and 2015. However, this also includes a range of other leaves such as light duty, on duty injury, administrative, well child/FMLA, bereavement, and emergency leave.

The chart below shows the average number of people on sick leave per day, by quarter, between 2012 and 2016. As the differences between the years show, there is much less of a seasonal pattern in sick leave, although it tends to peak towards the end of the year. However, there has been an overall growth in sick leave in recent years, despite a decline in 2014. The 2014 decline was partly because there were a high number of vacancies in that year, so there were fewer firefighters on each shift, therefore fewer people to take sick leave.

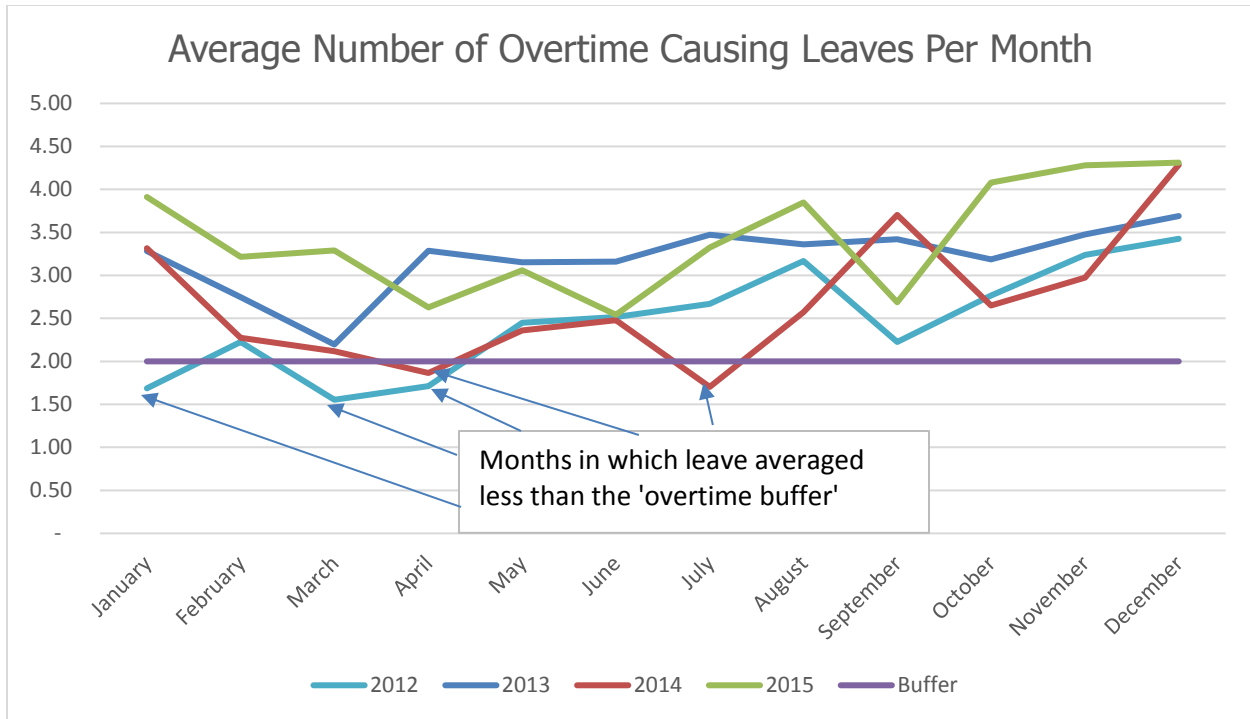
³ This is defined in Department policy 3.001



The line across the chart shows the 'overtime buffer', set at two, so each time the bar chart is above that line means that the average number of people on sick leave was at a level that leaves would cause overtime if all planned leave slots were taken. Since the fourth quarter of 2014, there have been seven straight quarters of data in which the average number of people on sick leave each day was above two. The reasons for this increase is something the department continues to analyze, but could be the product of chance, the age of the workforce, or some other factors. The previous issue paper on fire overtime also highlighted this issue, and suggested a long term wellness strategy, working with employees to reduce sick leave usage over time. This option could still be explored as the department moves forward with staffing and other planning.

The number of absences through other overtime-causing leaves is lower than sick leave, but has also been increasing from an average of 0.56 per day in 2012 to 0.89 per day in 2015. This increase has mostly been related to increases in workplace injury related leave (L&I) and well child/FMLA leave. Workplace injury leave has been particularly costly as it has disproportionately affected more senior positions and staff. For example, at certain points each Battalion Chief assigned to operations has been on long term leave. If this leave requires overtime the backfill is paid at a higher rate, as either another Battalion Chief is needed, or an eligible employee is paid at Battalion Chief rate.

The combined impact of all overtime-causing leave is shown in the chart below. Again the buffer against overtime is shown on the chart. When other unplanned leave is included there have only been five months since the start of 2012, and only two since the start of 2013, during which the average number of people away was lower than the buffer. These five months are highlighted on the chart below. In every other month sick and other unplanned leave combined to be higher, on average, than the intended 'overtime buffer'.



The table below compares overtime in the four months in which the average number of people absent on unplanned leave was lower than two, with the same month in which the number of people was highest. For example, in March 2012, the average number of absences was 1.55. This is compared with March 2015, during which there were an average of 3.29 people away.

To estimate the impact of the increase in sick leave in recent years the simplest method is to compare total overtime in 2012 and 2013. In other areas both years were similar with few vacancies and the same contract parameters, with the exception of November and December 2013. The biggest difference between the two years was that in 2012 a total of 905 days of 'overtime-causing' leave was taken and in 2013 this increased 265 to 1,170 days. This increase was in both sick leave, and across other categories. The chart above also shows that in every month 'overtime-causing' leave was higher in 2013 than 2012.

Overtime Costs in 2012 and 2013

	2012	2013	Difference
Total Overtime	604,600	787,800	183,200
Adjustment for additional planned leave	-	(55,000)	(55,000)
Comparable overtime	604,600	732,800	128,200

Once an adjustment has been made to account for the additional leave granted at the end of 2013, the estimated impact of the additional days of 'overtime causing' leave is \$128,200. This can be partially extrapolated further as 2014 almost matches 2012, while 2015 is higher than 2013. This means 'overtime causing' leaves have been a significant contributing factor to increased overtime in both 2013 and 2015.

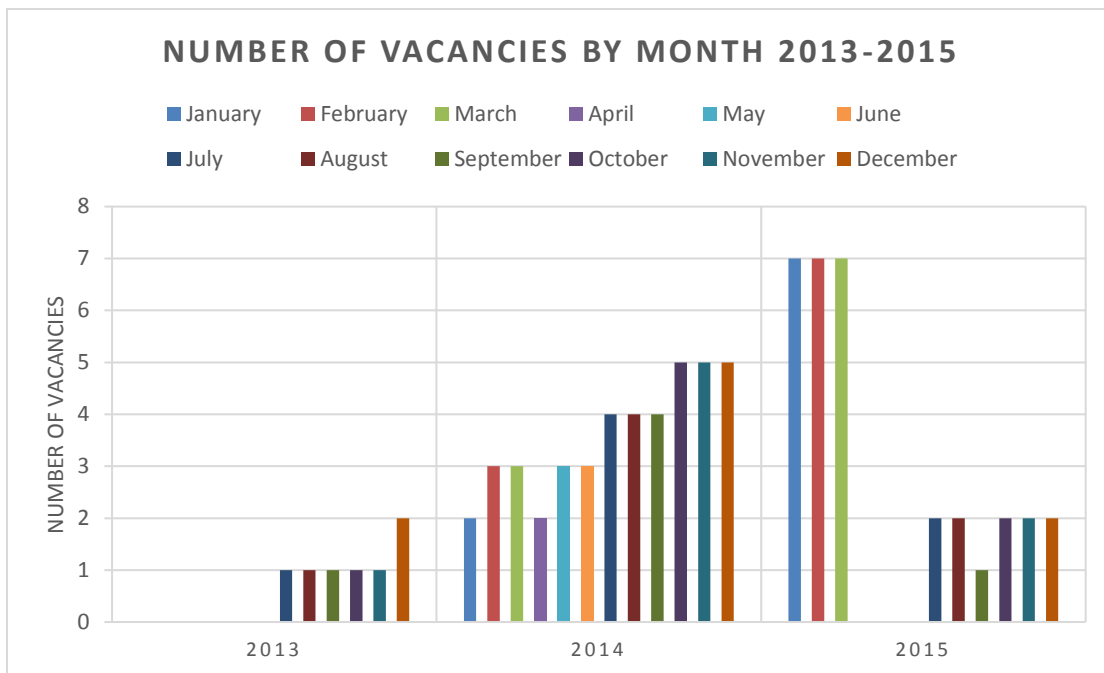
b) Vacancies

Although the impact of 'overtime causing' leaves in 2015 was significant, the largest single contributor to the increases in overtime in 2014 and 2015 has been vacancies. In the Kirkland

Fire Department the vast majority of vacancies are the result of retirements, which due to state retirement rules generally happen between January and June. In addition, for the past few years, fire academy classes have run from January – March, meaning there are often long gaps between retirements and hiring. For example, if someone retires in February a replacement will not be hired until the following January and will not exit the academy until the end of March, with the intervening months covered by overtime. Unlike other types of leave, vacancies are at least partially offset by salary savings, although this doesn't always show in the fire overtime budget.

There have also been temporary vacancies since 2013. In 2015, during the transitional period between Fire Chiefs, there were consecutive three month periods during which a Battalion Chief from Operations was temporarily assigned as Deputy Chief of Administration, requiring backfill of those shifts on the line. In addition, as part of the Eastside Metro Training Group, Kirkland has provided an instructor to the academy for the three months between January and March. Some of these instructors have been taken from line positions, which also impacted the overtime buffer.

As the average amount of overtime-causing leave, shown in the chart above, is already almost always above two, vacancies in effect add a further burden on overtime. The chart below shows the number of vacancies by month between 2013 and 2015. The table below includes retirements and the temporary assignments mentioned above.



As there are three shifts, one vacancy means that two shifts still have the full complement of staffing, and as there is no guarantee that retirements happen evenly across the three shifts there can be multiple retirements from the same shift, leaving imbalanced shifts for long periods. The impact of vacancies and temporary assignments can be seen clearly in the amount of overtime spent during the first quarter of 2013, 2014, and 2015. The numbers are again adjusted to 2014 rates with one time expenditures removed.

First Quarter Overtime 2013-2015

	2013	2014	2015
January	39,700	73,400	141,100
February	34,700	45,000	57,500
March	16,400	58,300	66,000
Total	90,800	176,700	264,600

The pattern in the table is clear; as vacancies have increased, so has overtime. As the first quarter is generally a period in which planned leave is lowest, the majority of the additional overtime in these months is attributable to vacancies. This would mean that \$173,800 of overtime in the first quarter of 2015 was due to vacancies the department was experiencing. Although those were the highest number of vacancies the department has had, an estimated \$300,000 of overtime in both 2014 and 2015 can be attributed to vacancies.

Unlike other absences, vacancies create salary savings, which help offset overtime costs. However, it is not necessarily a 100% offset. The table below shows the monthly difference between paying the regular salary and benefits of a firefighter with maximum longevity, and covering all of those shifts at the mean overtime rate for a firefighter in 2015.

	Salary	Benefits	Total
Firefighter V max. Longevity	8,142	3,302	11,445
100% Overtime Coverage*	11,102	1,546	12,648

*Average overtime rate

As mentioned above, each additional vacancy likely requires a greater percentage of shifts to be covered by overtime, as it reduces the overtime buffer. This is important as one option for overtime management is to recognize that there are times when overtime is less expensive than hiring a new staff member. Based on a model that calculates average overtime cost, and the ongoing salary and benefit cost of a firefighter, it is cheaper for the City of Kirkland to staff with overtime if fewer than 89% of shifts require overtime.

The implication of this is that the City could choose not to hire to full staffing levels, and instead carry vacancies with the explicit recognition that salary savings would cover the increased overtime. Only after a certain number of vacancies are opened up would the new hires be added. This would be a significant departure from current policy, and would require further study, as well as negotiated and bargained with the IAFF.

As an interim policy solution, given the long lead times between retirements and the next year's academy, a service package was brought forward in the 2017-18 budget process to authorize unfunded over-hire positions. These positions will allow the department to act on upcoming retirements, and hire replacements to prevent long periods of understaffing. This would particularly help by training replacement firefighters prior to the summer immediately following a retirement, when overtime tends to be highest.

One way of measuring the impact of vacancies on overtime, is to assume that most overtime caused by vacancies is offset by savings in regular salaries. Although the relationship isn't completely one for one, vacancies do create salary savings, and as the table above shows, they are of a similar magnitude to additional overtime. The table below shows how far under budget regular salaries have been from 2013 to 2015.

Regular Salaries to Budget 2013-2015

	Budget	Actuals	Difference
2013	8,801,901	8,813,250	11,349
2014	8,744,423	8,424,057	(320,366)
2015	8,681,315	8,499,244	(182,071)

Impact of all leaves on Increased Overtime

The table below combines the estimated impact of the factors described above to show the growth in fire overtime in recent years. Each year starts with the 2012 overtime amount, which is considered the base. The impact of the additional vacation is then added into each year. For 2014 and 2015 the offsetting salary savings amount is used as an estimate of how much overtime was caused by vacancies. Finally, for 2013 and 2015 the increase in 'overtime-causing' leaves is estimated by assuming that the increase between 2012 and 2013 was proportionately the same between 2012 and 2015.

	2013	2014	2015
Base 2012 Overtime	604,600	604,600	604,600
Estimated Impact of Additional Vacation	55,000	85,000	85,000
Estimated Impact of Vacancies	-	320,366	182,071
Estimated Impact of Increased overtime buffer leaves	128,200	-	169,265
Expected Overtime	787,800	1,009,966	1,040,936
Adjusted Overtime	787,800	966,300	1,089,400
Difference	-	43,666	(48,464)

Combining these three factors gives an expected overtime amount, which in each case is relatively close to the actual adjusted overtime amount. Differences between the expected and actual overtime amount are unexplained. This means that in 2015 there was approximately \$50,000 in fire suppression overtime which does not appear to be explained by the factors described above.

Next Steps

There are two actions that can be taken now which will help to manage overtime in the next biennium. In addition, the future opening of the new Fire Station 24 will provide the opportunity to take a closer look at the fire department shift structure and overtime costs.

1. Recognize Salary Savings Created By Vacancies

While it is currently recognized that vacancies create salary savings, this recognition is not always formalized in the budget adjustment process. In future, staff could develop an estimate of the increased overtime costs that a vacancy will cause, meaning an adjustment could be made to the overtime line item. This would help clarify how much of the increase in overtime costs was the result of vacancies, and would improve the clarity of dashboards, and other tools that seek to assess fire overtime actuals against budget. More refined estimates such as these would help with long term planning.

2. Continue to Authorize over hire positions

Currently, the Fire Department budgets supplies and academy costs under the assumption that there will be three retirements per year. Actual retirements have been higher than this; for example, in 2014 there were five retirements. This creates vacancies that are filled with overtime, with each additional vacancy needing a higher percentage of time covered by overtime.

A significant challenge in replacing retired staff is the long lead time between retirements and getting a replacement trained and into a line position. This is in part because of the three month fire academy program, but is mostly because there is often only one academy per year, running from January – March. This means if there is a retirement in February, it can be over a year until a new firefighter is trained to take that place.

In 2015, with the knowledge that there would be a number of retirements between December 2015 and March 2016, the Department requested the onetime authority to hire two positions above the 97 IAFF positions so that there would be trained recruits ready to fill positions by April 2016. Although overtime costs have remained high in 2016, this has been for other reasons, and the approval of over hire positions has kept vacancies at one through the summer of 2016, compared to two in 2015 and four in 2014.

The positions would be unfunded, meaning the department would need to request one-time funding to hire the positions.

Summary and Next Steps

Overtime in the fire department is a product of the requirement for minimum staffing, and will always occur at some level. However, a rise in the number of vacancies, coupled with an increase in the amount of sick, and other, leaves, has increased fire overtime costs since 2012. While there are some near term actions that can help reduce this increase, further analysis is also needed on longer term strategies to address overtime. The upcoming construction of Fire Station 24 provides the ideal time to look into these longer term strategies.