

Miller & Miller Executive Summary

Historical Financial Results

Miller and Miller found that the financial information reported by the E911 Program Office for the period from 2005 to 2014 closely matches the information reported in King County's Comprehensive Annual Financial Report (CAFR), which is audited by the Washington State Auditor's Office.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning Fund Balance	\$ 9,941,647	\$ 12,776,003	\$ 14,650,615	\$ 16,673,202	\$ 18,653,051	\$ 18,178,206	\$ 16,353,040	\$ 15,189,400	\$ 20,055,001	\$ 24,333,733
Revenues										
E911 Switched Access Lines	6,873,434	6,781,758	6,251,586	5,612,605	4,973,377	4,402,344	5,482,150	5,184,655	4,824,410	4,241,264
E911 Wireless Access Lines	7,741,820	8,654,330	9,251,750	10,035,322	10,171,815	10,273,340	14,779,362	15,249,172	15,515,864	17,161,106
E911 VoIP Access Lines				467,362	1,384,782	1,492,723	2,570,996	2,882,050	3,174,284	2,744,937
Investment Interest	306,602	575,599	837,589	371,718	379,318	160,121	101,829	77,830	89,116	112,549
State E911 support	280,428		65,000			6,705	43,556	29,434	39,220	79,831
Miscellaneous	13,515	840	1,567,719		2,390					
Total Revenues	15,215,799	16,012,527	17,973,644	16,487,007	16,911,682	16,335,232	22,977,893	23,423,141	23,642,894	24,339,687
Expenditures										
Wages, Benefits & Retirement	(475,397)	(531,690)	(578,861)	(678,252)	(709,689)	(746,387)	(739,504)	(800,089)	(897,529)	(1,033,846)
Supplies	(10,248)	(11,689)	(14,334)	(26,515)	(31,763)	(129,954)	(38,849)	(61,715)	(88,507)	(373,033)
Direct Services	(335,192)	(248,069)	(392,449)	(306,315)	(302,359)	(346,326)	(410,071)	(317,193)	(267,304)	(263,615)
911 System costs	(6,319,615)	(7,084,950)	(3,070,064)	(4,689,396)	(3,968,538)	(3,438,153)	(4,481,666)	(3,497,840)	(4,347,126)	(4,967,650)
PSAP Support	(2,899,527)	(4,285,210)	(7,249,271)	(6,642,440)	(8,042,165)	(9,623,555)	(15,074,366)	(10,836,146)	(10,885,168)	(11,584,125)
911 System Maintenance	(859,490)	(876,082)	(1,084,193)	(1,293,793)	(1,681,735)	(1,820,702)	(2,236,212)	(1,402,495)	(1,738,913)	(1,875,545)
Intergovernmental Services	(576,556)	(605,637)	(669,562)	(700,930)	(809,564)	(715,772)	(701,768)	(570,020)	(608,322)	(618,828)
Capital										
Comm Equip Replacement	(905,418)	(494,588)	(2,892,323)	(30,134)	(1,905,922)	(1,382,407)	(488,192)	(1,202,236)	(604,837)	(911,235)
Total Expenditures	(12,381,443)	(14,137,915)	(15,951,057)	(14,367,775)	(17,451,735)	(18,203,256)	(24,170,628)	(18,687,734)	(19,437,706)	(21,627,877)
Excess (Deficiency) of Revenues over Expenditures	2,834,356	1,874,612	2,022,587	2,119,232	(540,053)	(1,868,024)	(1,192,735)	4,735,407	4,205,188	2,711,810
Other Fund Transactions	-	-	-	(139,383)	65,208	42,858	29,095	130,194	79,001	3,240
Ending Fund Balance	\$ 12,776,003	\$ 14,650,615	\$ 16,673,202	\$ 18,653,051	\$ 18,178,206	\$ 16,353,040	\$ 15,189,400	\$ 20,055,001	\$ 24,339,190	\$ 27,048,783

Revenues and Expenditures Are Increasing

As shown in the table above, total revenues have consistently increased since 2011, when the Washington State Legislature increased the excise taxes on switched access lines (land lines), wireless access lines (cell phones), and Voice over Internet Protocol (VoIP). The share of revenue from each of these sources has changed over time, as usage of land lines has declined while cell phone usage has increased. While revenues have increased, expenditures have also increased, but at a lower rate, causing the program's fund balance to grow over this period, from almost \$13 million on 2005 to more than \$27 million in 2014.

King County's Enhanced 911 Emergency Telephone System (E911) Program Financial Information

The King County Enhanced 911 Emergency Telephone System (E911) has reported historical financial information to the Public Safety Answering Point organizations (PSAPs). A summary of the reported historical financial information for the ten-years ending December 31, 2014 is presented in the following chart:

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning Fund Balance	\$ 9,941,647	\$ 12,776,003	\$ 14,650,615	\$ 16,673,202	\$ 18,653,051	\$ 18,178,206	\$ 16,353,040	\$ 15,189,400	\$ 20,055,001	\$ 24,333,733
Revenues										
E911 Switched Access Lines	6,873,434	6,781,758	6,251,586	5,612,605	4,973,377	4,402,344	5,482,150	5,184,655	4,824,410	4,241,264
E911 Wireless Access Lines	7,741,820	8,654,330	9,251,750	10,035,322	10,171,815	10,273,340	14,779,362	15,249,172	15,515,864	17,161,106
E911 VoIP Access Lines				467,362	1,384,782	1,492,723	2,570,996	2,882,050	3,174,284	2,744,937
Investment Interest	306,602	575,599	837,589	371,718	379,318	160,121	101,829	77,830	89,116	112,549
State E911 support	280,428		65,000			6,705	43,556	29,434	39,220	79,831
Other Interfund-Emergency Comm Sys-OEM										
Miscellaneous	13,515	840	1,567,719		2,390					
Total Revenues	15,215,799	16,012,527	17,973,644	16,487,007	16,911,682	16,335,232	22,977,893	23,423,141	23,642,894	24,339,687
Expenditures										
Wages, Benefits & Retirement	(475,397)	(531,690)	(578,861)	(678,252)	(709,689)	(746,387)	(739,504)	(800,089)	(897,529)	(1,033,846)
Supplies	(10,248)	(11,689)	(14,334)	(26,515)	(31,763)	(129,954)	(38,849)	(61,715)	(88,507)	(373,033)
Direct Services	(335,192)	(248,069)	(392,449)	(306,315)	(302,359)	(346,326)	(410,071)	(317,193)	(267,304)	(263,615)
911 System costs	(6,319,615)	(7,084,950)	(3,070,064)	(4,689,396)	(3,968,538)	(3,438,153)	(4,481,666)	(3,497,840)	(4,347,126)	(4,967,650)
PSAP Support	(2,899,527)	(4,285,210)	(7,249,271)	(6,642,440)	(8,042,165)	(9,623,555)	(15,074,366)	(10,836,146)	(10,885,168)	(11,584,125)
911 System Maintenance	(859,490)	(876,082)	(1,084,193)	(1,293,793)	(1,681,735)	(1,820,702)	(2,236,212)	(1,402,495)	(1,738,913)	(1,875,545)
Intergovernmental Services	(576,556)	(605,637)	(669,562)	(700,930)	(809,564)	(715,772)	(701,768)	(570,020)	(608,322)	(618,828)
Capital										
Comm Equip Replacement	(905,418)	(494,588)	(2,892,323)	(30,134)	(1,905,922)	(1,382,407)	(488,192)	(1,202,236)	(604,837)	(911,235)
Total Expenditures	(12,381,443)	(14,137,915)	(15,951,057)	(14,367,775)	(17,451,735)	(18,203,256)	(24,170,628)	(18,687,734)	(19,437,706)	(21,627,877)
Excess (Deficiency) of Revenues over Expenditures	2,834,356	1,874,612	2,022,587	2,119,232	(540,053)	(1,868,024)	(1,192,735)	4,735,407	4,205,188	2,711,810
Other Fund Transactions	-	-	-	(139,383)	65,208	42,858	29,095	130,194	79,001	3,240
Ending Fund Balance	\$ 12,776,003	\$ 14,650,615	\$ 16,673,202	\$ 18,653,051	\$ 18,178,206	\$ 16,353,040	\$ 15,189,400	\$ 20,055,001	\$ 24,339,190	\$ 27,048,783

King County E911 Final Summary Working Paper

In order to determine the reliability of reported financial information, we compared this information to information contained in the King County Comprehensive Annual Financial Report (CAFR), which is audited by the State Auditor’s Office (SAO). We found that the 2005-2014 financial information reported by the E911 Program Office closely matched the figures published in the King County CAFRs and are reasonably reported.

The E911 Fund is considered as a non-major revenue fund of King County (KC). As such, there is no separate reporting of a statement of net position and statement of revenues, expenditures and changes in net position in KC’s CAFR. However, it is a separately budgeted fund and as such, reports a Budgetary Comparison Schedule (Budgetary Basis) for each of the ten years in the E911 fund reporting. The E911 Fund was composed of two separate “Low Organizations” in the KC financial systems through 2009, and a third “low-org” was added in 2010. One “low-org” is for the Office of Emergency Management Administrative section (supports both the Emergency Management and E911 sections of the Office) and the other “low-org” is for the conduct of the E911 program. The third “low-org” that was added in 2010 was to separate out the costs of the E911 IT FTEs. E911 program management reports only the “low-orgs” related to the conduct of the E911 program and not the OEM Administrative function. Because E911 management only reports the E911 program financial results to stakeholders and the KC CAFR reports all “low-orgs”, reconciliations are necessary to show that reported historical financial results are included in the KC CAFR. Also important in the reconciliations is that KC E911 reports historical information on a basis similar to a cash basis, while the actual amounts reported in the KC CAFR’s Budgetary Comparison Schedule (Budgetary Basis) includes encumbrances as costs. As such, the reconciliation of reported historical financial results to the KC CAFR needs to account for both the non-inclusion of the OEM portion of the fund but also the differences in accounting for encumbrances.

Comparing audited CAFR amounts to reported historical financial information for revenue produced the following results:

Year	Total Revenues per CAFR (1)	Interfund Charges for Services (1)	Difference	Historical Financial Information (2)
2005	15,669,000	(453,000)	(201)	15,215,799
2006	16,541,000	(528,000)	(473)	16,012,527
2007	18,469,000	(528,000)	32,644	17,973,644
2008	17,015,465	(528,458)	-	16,487,007
2009	17,440,140	(528,458)	-	16,911,682
2010	16,887,483	(528,458)	(23,793)	16,335,232
2011	23,573,516	(556,779)	(38,844)	22,977,893
2012*	24,249,388	(689,554)	(136,693)	23,423,141
2013*	24,362,348	(725,374)	5,920	23,642,894
2014*	25,135,565	(756,368)	(39,510)	24,339,687
(1)	Information obtained from published CAFR except for * items.			
(2)	Information obtained from E911 Program Management.			
*	Information provided by King County, through E911 Program.			

King County E911 Final Summary Working Paper

The 2005-2013 CAFRs have been audited by the Washington State Auditor. As noted in the asterisk (*) for 2012 to 2014 in the chart above, KC is no longer separately reporting non-major special revenue funds in its CAFR. As such, this information was derived from the King County Finance & Business Operations Division financial systems supporting the CAFRs. Beginning in 2014, there was a change in how excise taxes were collected on prepaid phone cards. Prior to 2014, the phone carriers reported excise taxes upon usage of the prepaid minutes. In 2014 the retailers began collecting excise taxes upon sale of the prepaid phone cards. The effect of this change in practice is to accelerate taxes collected in 2014 (approximately \$1.7 million). Considering this change in how taxes are collected, the reported revenues for 2014 appear to be consistent with the recent trend of annual increases from year to year. The differences noted are mostly related to year-end GAAP adjustments, such as changes in the market value of investments reported in the CAFR but not reported in this historical information and they are not significant in relation to the overall program revenues.

Comparing audited CAFR amounts to reported historical financial information for expenditures produced the following results:

Year	Total Expenditures per CAFR (1)	Less EM Office (2)	Net E911	Encumbrance Carryover to the next year (1)	Difference	Historical Financial Information (2)
2005	14,285,335	436,278	13,849,057	(1,467,615)	-	12,381,442
2006	16,415,319	471,229	15,944,090	(1,807,176)	1,001	14,137,915
2007	17,490,198	403,655	17,086,543	(1,133,487)	(1,999)	15,951,057
2008	15,938,545	454,450	15,484,095	(1,116,319)	(1)	14,367,775
2009	19,726,668	518,653	19,208,015	(1,756,270)	(10)	17,451,735
2010	19,831,409	558,999	19,272,410	(1,069,155)	1	18,203,256
2011	26,089,771	491,973	25,597,798	(1,426,840)	(330)	24,170,628
2012*	19,348,464	660,730	18,687,734	-	-	18,687,734
2013*	20,131,984	694,278	19,437,706	-	-	19,437,706
2014*	22,319,391	691,515	21,627,876	-	1	21,627,877
(1)	Information obtained from published CAFR except for * items.					
(2)	Information obtained from E911 Program Management from King County Financial System.					
*	Information provided by King County, through E911 Program.					

The 2014 CAFR is not audited. However, the reported expenditures for 2014 appear to be consistent with the recent trend of annual increases from year to year. The differences noted are not significant in relation to the overall program revenues.

Analysis of Historical Financial Results:

From 2005 to 2010 the main funding source, the excise taxes on switched access lines, continued a relatively consistent trend. E911 Switched Access Lines (landlines) taxes continued to decline while wireless access lines taxes continued to increase. Taxes on Voice over Internet Protocol (VoIP) access lines taxes began in 2008. Effective in 2011 the E911 excise taxes were increased by the Washington

King County E911 Final Summary Working Paper

State Legislature. As a result, there was a significant increase in excise taxes collected for all categories in 2011. After 2011 the prior trends continued except for VoIP, which shows a decline from 2013 to 2014. The reasons for the decrease in VoIP are unknown but E911 program management believes the change may be due to the bundling pricing by the state's largest internet carrier, wherein VoIP is included in the bundle but then dropped by customers as they realize they are continuing to use wireless for their voice communications.

Program expenditures follow the policies, goals, and objectives outlined in the Office of Emergency Management business plans associated with each budget. This business plan becomes part of the Department of Executive Services business plan, and is aligned with the County's Strategic Plan. Budget requests have been related to upgrades to move towards NG911, E911 policies, and countywide policies. As such, consistent trends, similar to the revenue trends discussed above are not so readily identifiable. For example, the expenditures for Capital Communications Equipment Replacement vary significantly from year-to-year depending on when PSAPs are scheduled for hardware replacement. From 2005 to 2008 the fund balance increased because expenditures were less than the tax collections by approximately \$2 million per year. In 2009 the fund balance decreased due to an increase in expenditures for PSAP support according to E911 funding policies, 911 System Maintenance and Capital Communications Equipment Replacement. In 2011, there was a change in the procedures for distributing support funds to the PSAPs which makes it appear that PSAP support significantly increased in this year. There was an issue with delays in PSAP requests for the expenditure of their allotted funds that resulted in the E911 Program Office needing to request the carryover of funds to the next budget year. In order to resolve this issue, the Program Office began to deposit the allotted funds into the PSAP E911 Escrow accounts rather than leaving them in the E911 Program expenditure accounts. When this procedure was initiated in 2011, the PSAP support appears higher because funds carried over from previous years that had accumulated in the E911 expenditure accounts were transferred into the PSAP E911 Escrow funds.

Fund Balance:

King County and E911 Program financial policies impose internal restrictions on the use of fund balance. These restrictions take many different forms. Encumbrance is a term to reflect that the E911 Program has entered into commitments for future expenditures. Such commitments are not reflected in expenditures until the good and services are provided. So while not reflected as expenditures, they are not available for future spending because they are already committed to a specified use. The E911 program may also "designate" fund balance for a variety of reasons. One significant designation is to account for the "Escrow Accounts" established under the King County Enhanced 911 Participation Agreement with the PSAPs. This agreement establishes rules for the excise tax revenue sharing. Under this agreement excise tax revenues are shared with PSAPs, but the use of the funds must be approved by E911 Program management following a standard set of approval guidelines. As of December 31, 2014, the E911 Program office reports that \$15,058,687 is held in these PSAP "Escrow Accounts".

The historical financial information provided to PSAPs includes detail on the encumbrance carryover and other designations of fund balance. The summary of historical financial information presented above

King County E911 Final Summary Working Paper

excludes this level of detail as prior years' encumbrances and designations are not relevant to the current year financial position. However, to explain how these encumbrances and designation affect the availability of fund balance for use in future periods, the following comparison of 2012 to 2014 reported amounts is provided below:

Fund Balance Components Reported to PSAPs				
		2012	2013	2014
Encumbrance/Reappropriation Carryover				
Wages, Benefits & Retirement		\$ -	\$ 38,121	\$ -
Supplies		-	72,311	-
Direct Services		(47,012)	(204,944)	(388,873)
911 System costs		(1,496,446)	(10,892,948)	(10,277,957)
PSAP Support		(2,625,865)	(2,632,403)	-
911 System Maint			(172,865)	-
Intergovernmental Services			(161,869)	(95,452)
Communication Equipment Replacement		(2,686,724)	(897,863)	(1,139,659)
Total Encumbrance/Reappropriation Carryover		(6,856,047)	(14,852,460)	(11,901,941)
Designated Reserve Account Balances				
Wireline Equipment Replacement		(1,000,000)	(1,000,000)	(1,000,000)
Wireless 911		(2,521,742)	(2,521,742)	(2,521,742)
Rainy Day Reserve @ 35 days of expenditures		(1,803,548)	(1,607,125)	(1,993,191)
Total Reserves		(5,325,290)	(5,128,867)	(5,514,933)
Total Encumbrances and Designated Reserves		(12,181,337)	(19,981,327)	(17,416,874)
Total Ending Fund Balance		20,055,001	24,339,190	27,048,783
Total Ending Undesignated Fund Balance		\$ 7,873,664	\$ 4,357,863	\$ 9,631,909

While the Encumbrance/Re-appropriation Carryover reduces ending Undesignated Fund Balance, the balance is available for spending in the ensuing year. The E-911 PSAP Escrow Accounts are not within the E-911 fund, they are separate funds. There is no encumbrance or carryover process with the Escrow accounts. The funds remain in the account until a PSAP requests expenditure from their account. These amounts increase the "rainy day reserve" for 2014.

Fund balances are not the same as available cash balances. The cash balance as of December 31, 2014 is \$23,945,519. Current liabilities such as accounts payable and wages and benefits payable are \$115,866. As such, available cash to fund encumbrances and reserves is \$23,829,653, which is significantly more than the reserves and encumbrances. However, the available cash is not sufficient to fund the PSAP escrow accounts in addition to the reserves and encumbrances. Including receivables of approximately \$3.8 million as of December 31, 2014, which should be collected soon after year end, then the current assets (available cash plus receivables) are approximately \$3.7 million less than total reserves, encumbrances and escrow accounts of approximately \$31.3 million.

King County E911 Final Summary Working Paper

Understanding fund balance and available cash to fund future operations is important in the next section of this report where projections of future operating scenarios are evaluated.

Fund Balance Policies:

We believe having a “Rainy Day Reserve” is a sound financial policy. However, the purposes for such a reserve should be considered and further refined. It is common for governments to adopt a policy to provide working capital reserves in fund balance, matched by an equal amount of segregated cash. Working capital is the amount by which current assets exceeds current liabilities. A reserve of 30-60 days of average expected expenditures is typical to provide such a working capital reserve. This purpose should be separated from a “contingency” type of fund, wherein unforeseen adverse developments can be managed with available cash resources. Both a working capital reserve and a contingency reserve warrant further consideration.

Replacement reserves are reported to be approximately \$3.5 million, but this reporting may understate the actual amount as there may be “equipment reserves” included within the PSAP “Escrow Accounts”. There are several ways to plan for and finance replacement projects. The main two options are to accumulate sufficient resources from operations to fund the replacement and use debt financing to fund the replacement project, when it occurs. The first option reduces amounts available for operations until the replacement occurs and the second option reduces amounts available for operations after the replacement occurs (debt service costs). Of course, there are many different scenarios that could use a combination of both options and variations on each. Regardless of how a replacement project is financed the necessary replacement costs should be well understood.

Financial Projections 2015-2022:

Background¹: The King County E-911 Program initiated an operating and financial sustainability review process in 2011 once it foresaw that it faced a potential financial shortfall a few years in the future if it continued on its current path. In light of the changing ways that the public connects to 911 services, as well as next generation system-wide upgrades that are already taking place, the E-911 Program determined that this was the appropriate time to take a comprehensive look at its operations, programs, finances, and overall organization to better position itself with a sustainable and reliable program in the future. To address the E-911 Program’s short and long-term financial issues, a Recommendation Committee (RC) of policy makers, representing the jurisdictions of each PSAP in the County, was convened to make financial and policy recommendations to King County regarding future options for the E-911 Program. The RC identified 28 scenarios that would impact future financial sustainability.

¹ This information is substantially obtained from the King County E-911 & PSAP Planning Interim Recommendations Report Draft – v 10/7/14

Assessment of Financial Projections:

E911 Program management provided a baseline financial projection (Current Path) that was updated as of January 3, 2015 for our assessment. A baseline financial projection is the appropriate first start to analyzing other scenarios based on program modifications. In order to test the baseline projections, we used the Excel Forecast function on the historical financial results previously presented. The baseline projections provided are from the years 2015 to 2022. For expenditures, we used the entire 10-year period of historical financial results with one exception to remove an unusual charge from the 2014 historical financial information. Since the excise tax revenue stream changed significantly in 2011 (due to the excise tax rate increase adopted by the Washington State Legislature), we used the Forecast function for the historical tax revenue reported from 2011 to 2014. As previously discussed, there was a one-time acceleration of excise taxes in 2014 related to a change in collecting excise taxes on prepaid phone cards. This change was eliminated in our independent projections as the FORECAST function cannot use only one year to establish a trend.

EXCEL's FORECAST function calculates, or predicts, a future value by using existing values. The predicted value is a y-value for a given x-value. The known values are existing x-values and y-values, and the new value is predicted by using linear regression. This function may be used to predict future revenues, expenditures or consumer trends. The Syntax is FORECAST (x,known_y's,known_x's). **X** is the data point for which you want to predict a value. In this case **X** is the various revenue and expenditure categories from 2015 to 2012. **Known_y's** is the dependent array or range of data. In this case the known y's are the years from 2005 to 2014 for expenditures and 2011 to 2014 to excise tax revenues. **Known_x's** is the independent array or range of data. In this case the known x's are the various revenue (2011-2014) and expenditure data (2005-2014). The equation for FORECAST is $a+bx$, where:

$$a = \bar{y} - b\bar{x}$$

and:

$$b = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sum(x-\bar{x})^2}$$

and where x and y are the sample means AVERAGE(known_x's) and AVERAGE(known y's).

EXCEL's FORECAST function is limited to using only past historical performance and does not allow for judgment regarding anticipated future changes. However, it provides a sound mathematical model to use as a comparison for the baseline projection. The analysis of the comparison between the results of the FORECAST function and the baseline projection is presented in the following chart. Both the FORECAST and the baseline projection show the ending fund balance going negative during the projected time period (2015-2022). However, the baseline projection shows a projected fund balance deficit occurring in 2018 while the FORECAST projection shows projected fund balance deficit occurring

King County E911 Final Summary Working Paper

in 2022. Inherent in both projections is a fallacy that KCE911 program would be allowed to continue to spend in excess of its revenues and available fund balance. The FORECAST function also does not account for any acceleration in spending related to NG911. However, for the purpose of analyzing what program changes could be made to eliminate the deficit spending, these projections are useful.

	FORECAST for Eight Years	Difference	E911 Program Projections	NOTES	Historical % Change	FORECAST % Change	Baseline % Change
Beginning Fund Balance	\$ 26,867,327	\$ (2,035)	\$ 26,869,362				
Major Revenues							
E911 Switched Access Lines	19,820,021	(1,107,736)	20,927,758	(A)	-4%	-9%	-8%
E911 Wireless Access Lines	134,184,018	823,575	133,360,442	(B)	10%	14%	0.5%
E911 VoIP Access Lines	26,648,564	(9,895,135)	36,543,699	(C)	14%	15%	9%
Total Revenue	180,652,602	(10,179,296)	190,831,899		5%	12%	0.3%
Expenditures							
Wages, Benefits & Retirement	(9,523,318)	4,950,214	(14,473,532)	(D)	11%	17%	6%
Supplies	(904,845)	139,897	(1,044,741)	(E)	35%	20%	2%
Direct Services	(2,319,583)	4,265,734	(6,585,317)	(F)	-2%	12%	-1%
911 System costs	(24,858,074)	63,177,195	(88,035,269)	(F)	-2%	9%	-6%
PSAP Support	(143,524,967)	(35,786,406)	(107,738,561)	(F)	30%	19%	4%
911 System Maint	(20,508,252)	(1,036,613)	(19,471,639)	(F)	12%	17%	2%
Intergovernmental Services	(5,176,098)	625,109	(5,801,207)	(G)	1%	12%	-2%
Capital							
Comm Equip Replacement	(5,697,173)	11,700,385	(17,397,558)	(F)	0%	8%	-3%
Total Expenditures	(212,512,310)	48,035,514	(260,547,824)		7%	16%	-2%
Net Change (without reserves)	\$ (31,859,708)	\$ 37,856,217	\$ (69,715,926)				

NOTES:

Revenues:

- (A) The historical change includes the significant excise tax rate increase in 2011, so overall the decrease is less than both projections. Both projections show an expected decrease in landline excise taxes with the forecast showing a slightly greater rate of decline than the baseline.
- (B) The mathematical forecast assumes that the rate of change will continue the trend affected by recent changes in wireless behavior, even though it is above the historical change over the 10-year period. The baseline projection assumes that wireless devices have reached a near saturation point as of December 31, 2014.
- (C) Both the historical change and the forecast change factor in the decrease in VoIP from 2013 to 2014, while the baseline starts at a level higher than the 2014 balances. This difference accounts for substantially all of the total revenue differences between the forecast and the baseline. Until the decrease in the VoIP revenue from 2013 to 2014 is understood, we believe that there is risk that the baseline projections may overstate projected revenues.

King County E911 Final Summary Working Paper

Expenditures: Comparing historical trends in expenditures against the baseline projections is more problematic than the revenue comparisons because the baseline assumes the same program changes that were previously discussed under the Historical Financial Results discussed above while the forecast does not take management plans into account.

- (D) The baseline is based on the adopted budgets for 2015 and 2016, which show a large planned increase in staffing costs from 2014 that is not factored into either the historical changes or the forecast. So while the historical changes reflect an average of 11% increase in staffing costs from 2005 to 2014 and the forecast projects a 17% increase based on trends from 2005 to 2014 the baseline uses a beginning budget amount that is significantly in excess of the forecast. This explains why the baseline increases average 9% per year while the forecast averages 17%. The baseline projection shows that the E911 program intends to spend approximately \$5 million more on staffing costs than what would be spent using a continuation of historical trends. In the projection, FTEs are assumed to increase from 7 to 11 in 2015 and it also assumes adding 1 FTE in 2018, 2020, and 2022.
- (E) Due to very low supplies expenditures in 2005 the percentages are not useful. However, in terms of total amount expected to be spent on supplies the baseline and the forecast projections are close.
- (F) The baseline projection is based on 2015 adopted budget, which shows an increase in total expenditures of approximately \$7 million from 2014. As such, future changes are significantly less than historical averages or historical trends reflected in the forecast projection. The annual expenditures from 2005 to 2014 vary widely for 911 system costs, PSAP support, 911 System maintenance and communication equipment replacement. The baseline projection for direct services shows that the planned expenditures are significantly more than historical averages. Once again, the direct service budget for 2015 is approximately \$909,000 versus actual 2014 expenditures of \$263,000 or over a threefold increase. Likewise the planned equipment replacement projected for the next eight years is twice that of historical averages. Overall these line items show that the baseline projection of future costs is approximately \$42.3 million (net of a \$35.8 million decrease in PSAP support) more than the amount using historical expenditure patterns.
- (G) Intergovernmental services costs differences are not considered significant.

Alternatives Analysis:

As previously noted, the use of the 2015 adopted budget skews future projections for the baseline and other scenarios because it assumes that substantially all of the re-appropriation carryover will be spent in 2015, when this has not historically occurred. In order to isolate the impact of individual scenarios we developed a more “normalized” baseline solely for the purpose of analyzing individual scenario impacts. This “normalized” projection is not designed to replace the E911 baseline or current path reported to stakeholders. It is merely a tool to use in assessing the impacts of certain scenarios presented by the RC. The normalized projection reduces 2015 projected expenditures for 911 System Costs, Intergovernmental Services and Communication Equipment Replacement to the average of 2014 actual and 2016 projected balances. This reduced expenditures by \$14.8 million, which approximates the

King County E911 Final Summary Working Paper

\$14.9 million re-appropriation carryover reported in 2014. However, to recognize that these expenditures will not be completely eliminated, we reduced the available fund balance by \$11.9 million to reflect the 2015 re-appropriation carryover. A comparison of the normalized baseline to the previously displayed Forecast and E911 program current path is reflected in the following chart.

	FORECAST for Eight Years	"Normalized" Current Path	E911 Current Path
Beginning Fund Balance	\$ 26,867,327	\$ 26,869,362	\$ 26,869,362
Major Revenues			
E911 Switched Access Lines	19,820,021	20,927,758	20,927,758
E911 Wireless Access Lines	134,184,018	133,360,442	133,360,442
E911 VoIP Access Lines	26,648,564	36,543,699	36,543,699
Total Revenue	180,652,602	190,831,899	190,831,899
Expenditures			
Wages, Benefits & Retirement	(9,523,318)	(14,473,532)	(14,473,532)
Supplies	(904,845)	(1,044,741)	(1,044,741)
Direct Services	(2,319,583)	(6,585,317)	(6,585,317)
911 System costs	(24,858,074)	(75,131,026)	(88,035,269)
PSAP Support	(143,524,967)	(107,738,561)	(107,738,561)
911 System Maint	(20,508,252)	(19,471,639)	(19,471,639)
Intergovernmental Services	(5,176,098)	(5,510,652)	(5,801,207)
Capital			
Comm Equip Replacement	(5,697,173)	(15,818,475)	(17,397,558)
Total Expenditures	(212,512,310)	(245,773,943)	(260,547,824)
Net Change (without reserves)	\$ (31,859,708)	\$(54,942,045)	\$ (69,715,926)
Ending 2022 Total Fund Deficit	\$ (4,992,381)	\$(35,493,661)	\$ (42,846,563)

Current Path, Including the 2015/2016 Adopted Budget: The RC provided 28 different alternative scenarios for consideration. Alternative #3 is the current path that incorporates the adopted 2015 and 2016 budgets, the results from which are displayed above. However, the RC presented that the ending fund balance in 2022 under alternative #3 would be a deficit \$26.5 million as opposed to the deficit of \$45.8 million reported in the revised alternative #3 provided to us. The RC analysis was dated 8/21/14 while the current path we used was as of 1/3/2015. The adopted budgets for 2015 and 2016 changed significantly from August 2014 to January 2015 with a slight decrease in projected revenues and approximately \$14 million increase in 2015 expenditures and \$1.5 million increase in 2016. Regardless of the reasons, the ending fund deficit under alternative #3 is \$19.3 million less than the revised current path reflected above and \$9 million less than the normalized projection (both the current path and the normalized current path show a deficit more than reported in the RC draft report).

Scenarios #8, 9, 10 and 11: These four alternatives address reducing the PSAP Revenue Sharing to 75%, 50%, 25% and 0%. The alternatives assume that revenue sharing is \$5.2 million at the baseline. The historical average reported for PSAP support from 2005 to 2014 is \$8.7 million, while the current path average from 2015-2022 is \$13.5 million. As such, revenue sharing appears to be only a portion of PSAP

King County E911 Final Summary Working Paper

support. The reductions of costs under alternatives #12 Eliminate Funding of Technical FTE's at PSAPS and alternative #13 Eliminate PSAP Equipment Funding are likely included in the PSAP support costs. Since all of these alternatives consider reducing funding to PSAPs, we analyzed the necessary overall reduction necessary to keep the program from going into a fund deficit in 2022. Based on the normalized current path, which reduces 2015 costs, but anticipates reductions in available fund balance (as previously discussed), keeps projected revenues and expenditures from 2016 to 2022 and keeps the projected designations of fund balance (reserves) intact as of 2022, the PSAP funding will need to be reduced by approximately \$40.6 million or a reduction to approximately 62% of baseline PSAP support over the seven year period from 2016 to 2022 (we assume that it is too late to change the 2015 budget). If such a reduction was implemented then ending fund balance would be approximately \$5.1 million composed entirely of reserves (\$2 million for NG911 reserves and \$3.1 million of "rainy day reserves"). The reduction to 62% of baseline could come from revenue sharing, reduction of supported FTEs or equipment funding. More likely it would be a combination of all program changes.

In preparing the impact of alternatives for the RC report, the E911 program might be using dynamic scoring. If static scoring were used, then the impact on the fund balance (deficit) as of 2022 would be significantly different. Using alternative #1 (not used elsewhere in this report) the impact of alternatives # 8 through #11 would be as follows.

	Alternative	Calculation	Fund Balance (Deficit)	Difference	Reported
1	Current Path		(24,134,449)		
8	Reduce PSAP Revenue Distribution to 75% (\$5.2 million to \$3.9 million)	10,400,000	(13,734,449)	(2,768,625)	(10,965,824)
9	Reduce PSAP Revenue Distribution to 50% (\$5.2 million to \$2.6 million)	20,800,000	(3,334,449)	(5,433,995)	2,099,546
10	Reduce PSAP Revenue Distribution to 25% (\$5.2 million to \$1.3 million)	31,200,000	7,065,551	(8,099,364)	15,164,915
11	Reduce PSAP Revenue Distribution to 0% (\$5.2 million to \$0 million)	41,600,000	17,465,551	(10,764,734)	28,230,285

The reported impact on 2022 fund balance in the RC Draft Report appears to significantly overstate the actual impact as compared to using calculated amounts. However, directionally the RC alternatives are consistent with the independent analysis based on the normalized current path in that projected 2022 fund balance remains negative with revenue sharing at 75% but turns positive with revenue sharing around 50%. The independent analysis estimates that a 62% level of total PSAP support is needed to eliminate the 2022 fund deficit.

Scenarios #12 and 13: As mentioned above these costs are included in the PSAP support costs. Once again, we were not provided the details on how the budget savings were calculated. Therefore, we analyzed the impact using analytical review techniques as presented in the following chart.

King County E911 Final Summary Working Paper

	Alternative	Reported 2022 fund Balance	Savings	Reported Reductions	Calculated Per Annual per FTE/Costs
1	Current Path	(24,134,449)			
12	Eliminate Funding of Technical FTEs at PSAPs	3,417,440	27,551,889	24 FTEs per year	\$ 143,499
13	Eliminate PSAP Equipment Funding	3,044,413	27,178,862	not stated	\$ 3,397,358

If the calculation of technical FTEs assumes a fully loaded rate that includes not only salary and benefits but also support costs, such as training, workspace costs and an assignment of general overhead, then the \$143,500, per full time equivalent (FTE), per year, appears reasonable. However, if the FTE cost assumption includes only salary and benefits, then the savings may be overstated.

As previously discussed, the current path projection (Alternative #3 including the adopted 2015-2016 budgets) is to spend \$13.5 million annually, on average, for PSAP support. If revenue sharing is \$5.2 million annually, then the remainder of \$8.3 million can be attributed to funding technical FTEs and PSAP equipment funding. As such, the current path projection (alternative #1) would suggest that the fund balance deficit could be eliminated by either alternative # 12 or alternative #13. However, the normalized current path projection (alternative #3 adjusted) would suggest that the projected ending fund deficit in 2022 would be \$35.5 million, so neither one of these alternatives would solve the fund deficit problem on its own but would require additional savings from the other alternatives or a combination of alternatives #8-#11, #12 and #13.

Scenario #21: The RC Draft report provided no quantification of the impact of modifications of reserve account policies because there were no specific reserve account policies identified for change. As discussed under the fund balance policies above, the E911 program should plan for the next generation E911 (NG) equipment, software and implementation costs, either by reserving funds from each years' operating results or by planning a debt issuance to fund the NG implementation costs to be paid in years after 2022, if feasible. The projection of 2015-2022 financial results includes approximately \$13.6 million of estimated NG costs. Since the projected reserved fund balance as of the end of 2022 is only \$5.2 million, even completely eliminating any fund balance reserve requirement (which we do not recommend), would only change the operating funding by very little for each year. As such, this alternative provides little relief from the projected funding shortfall. Building reserves for NG that are not considered in the future spending projections, however, would take away from annual spending by the E911 program.

Additional Scenario: The RC report did not consider a scenario that assumed that the excise tax could be indexed to inflation. This would require a change in the related laws adopted by the Washington State Legislature. Using the King County Office of Economic Analysis projections of the national consumer price index from 2016 to 2022 and applying those index assumptions to the excise tax rate-based projected revenues produces an average increase in excise tax revenues of approximately \$2.4 million per year ranging from approximately \$550,000 in 2016 to \$4.2 million in 2022. Assuming an

King County E911 Final Summary Working Paper

approximate 2.5% increase every year yields a 17.6 % increase from 2016 to 2022. Over the seven-year period from 2016 to 2022 this scenario produces approximately \$16.8 million in additional revenues, which reduces the normalized projected fund deficit of \$35.5 million to \$18.7 million.

Summary of Results:

The E911 program is reporting its historical financial information in a reasonable manner. Financial information reported by the E911 program is comparable to the information reported in the King County annual audited financial reports (CAFRs). Minor differences are not significant in relation to the overall program finances.

Projections of future results are changed frequently as a result of new information or changed assumptions and changed policies. This practice may lead to stakeholders confusion or concerns about the reliability of projections of the E911 funds future financial performance. To the extent that E911 program management can establish an agreed-upon baseline projection with stakeholders the future changes should be infrequent with detailed explanations as to how the baseline has changed.