CHEIRON Classic Values, Innovative Advice

City and County of San Francisco Postretirement Health Plan

Actuarial Valuation Report as of July 1, 2014

Produced by Cheiron

October 2017

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October 4, 2017

Mr. Ben Rosenfield
Controller
City and County of San Francisco
City Hall Room 316
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Dear Mr. Rosenfield:

The purpose of this report is to present the July 1, 2014 actuarial valuation of the City and County of San Francisco Postretirement Health Plan (Plan). This report is for the use of the City and County of San Francisco and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

This report contains our findings and information for disclosures required by the Governmental Accounting Standards Board Statements No. 43 and 45 (GASB 43 and 45) for the fiscal year ending (FYE) June 30, 2016 and for disclosures required by GASB 45 for the fiscal year ending June 30, 2017. Note, however, that recently adopted GASB Statements No. 74 and 75 for OPEB plans will significantly change the financial reporting from that which is provided in this report. GASB statement No. 74 is effective for the fiscal year ending June 30, 2017 for the Retiree Health Care Trust Fund and GASB 75 is effective for fiscal year ending June 30, 2018 for the City. The next actuarial valuation, which will be as of June 30, 2016, will contain information pertaining to the new GASB 74 and 75 standards.

The appendices to this report describe the participant data, assumptions, methods, and substantive Plan provisions used in calculating the figures throughout the report. In preparing our report, we relied on information (some oral and some written) supplied by the City and County of San Francisco. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and, changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements.

Actuarial computations are calculated based on our understanding of GASB 43 and 45 and are for purposes of fulfilling plan and employer financial accounting requirements. Determinations for purposes other than meeting plan and employer financial accounting requirements may be significantly different from the results in this report.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for the City and County of San Francisco for the purpose described herein and for use by the Plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

This report does not reflect future changes in benefits, penalties, taxes, or administrative costs that may be required as a result of the Patient Protection and Affordable Care Act of 2010, related legislation, or regulations with the exception of additional medical trend loads of 2.5% for FYE 2021 and 0.5% for FYE 2022 to account for the expected impact of the excise tax on high-cost coverage.

Sincerely,
Cheiron

William R. Hallmark

William R. Hallmark, ASA, EA, FCA, MAAA
Consulting Actuary

James A. Summers

James A. Summers, FSA, MAAA
Consulting Actuary

cc: Mike Schionning, FSA, MAAA, Cheiron
Alison Chafin, ASA, EA, MAAA, Cheiron

SECTION I – EXECUTIVE SUMMARY

The City and County of San Francisco engaged Cheiron to provide a valuation of its Postretirement Health Plan's liability as of July 1, 2014. The primary purposes of performing this actuarial valuation are to:

- Determine the Annual Required Contribution (ARC), Annual OPEB Cost (AOC), and the Net Other Postemployment Benefit (OPEB) Obligation (NOO) of the Postretirement Health Plan under GASB 43 and 45 for the fiscal year ending June 30, 2016 and under GASB 45 for the fiscal year ending June 30, 2017;
- Provide information for financial statement disclosures under GASB 43 and 45; and,
- Show the sensitivity of the valuation results to changes in health trend assumptions.

Summary of Key Valuation Results

As of July 1, 2014, the Plan's actuarial liability was approximately $4,260.3 million. Since the valuation as of July 1, 2012, there were changes in Plan benefits and assumptions as well as demographic experience, which had a combined effect of reducing the expected July 1, 2014 actuarial liability by approximately $171.3 million.

In 2009, the City began to pre-fund its obligations and subsequently the Plan created an irrevocable trust, the Retiree Health Care Trust Fund (RHCTF). As of July 1, 2014, the market value of assets was $49.0 million. The Annual Required Contribution (ARC) for the 12 months ending June 30, 2016 is $354.5 million, compared to $350.4 million for the previous year.

The table below presents the key results of the July 1, 2014 actuarial valuation compared to the results of the prior actuarial valuation as of July 1, 2012. The July 1, 2014 actuarial valuation results determine the ARC for FYE 2016 and 2017, whereas the July 1, 2012 actuarial valuation is the basis for the FYE 2014 and 2015 ARC.

Table I-1
Summary of Key Valuation Results

Valuation Date	July 1, 2012	July 1, 2014
Discount Rate	*4.45%*	*4.50%*
Actuarial Liability	$ 3,997,762	$ 4,260,256
Assets	(17,852)	(48,988)
Unfunded Actuarial Liability (UAL)	$ 3,979,910	$ 4,211,268
Funded Ratio	0.4%	1.1%
	FYE 2014	**FYE 2016**
Annual Required Contribution (ARC)	$ 341,377	$ 354,540
Net OPEB Obligation (NOO), end of year	$ 1,793,753	$ 2,190,263

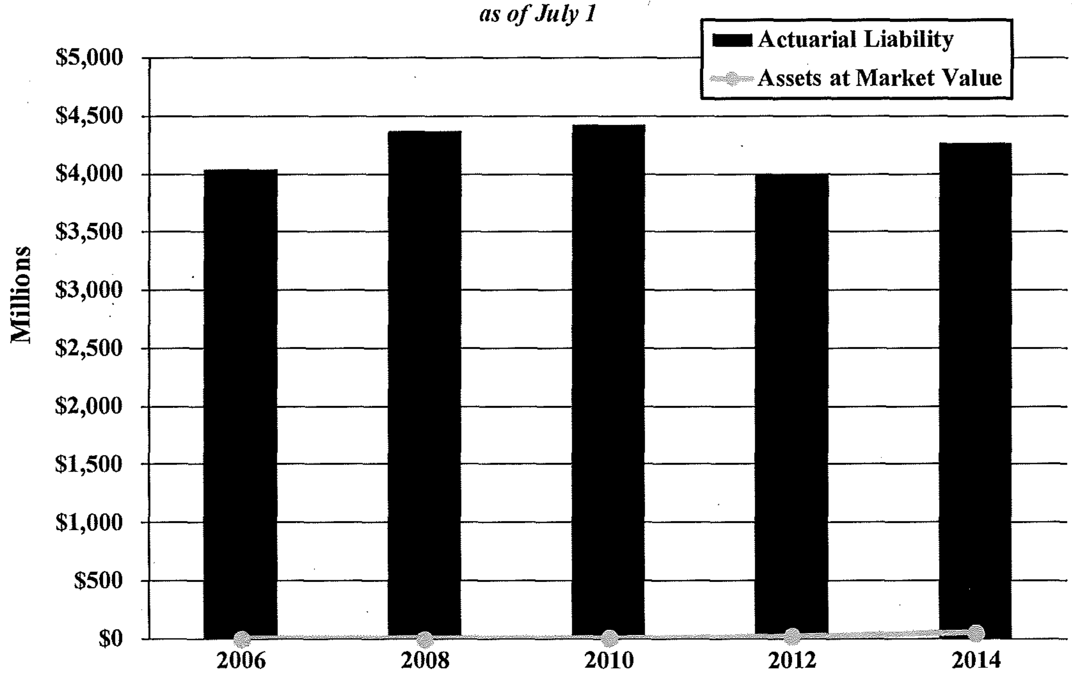
Dollar Amounts in Thousands

SECTION I – EXECUTIVE SUMMARY

Historical Trends

The chart below shows the historical trend of assets and liabilities on a GASB 45 basis for the City and County of San Francisco Postretirement Health Benefit Plan. The first valuation complying with GASB 45 was performed as of July 1, 2006. The City established the San Francisco Retiree Health Care Trust Fund (RHCTF) in December 2010 to fund its OPEB liabilities.

GASB 45 Assets and Liabilities
as of July 1



Funded Ratio	0.0%	0.0%	0.1%	0.4%	1.1%
UAL/(Surplus) *(in millions)*	$4,036.3	$4,364.3	$4,417.0	$3,979.9	$4,211.3
Discount Rate	4.50%	4.25%	4.25%	4.45%	4.50%

* *2006 was the first GASB 45 valuation.*

*** As of July 1, 2010, there were approximately $3.2 million in assets set aside for the Postretirement Health Plan, but the RHCTF was not established until December 2010.*

SECTION II – ASSETS

Market Value of Assets

The San Francisco Retiree Health Care Trust Fund (RHCTF) was established in December 2010 as an irrevocable trust. Table II-1, below, shows the change in the value of assets through the fiscal year ending 2016. The actual asset values are used to project the UAL for the calculation of the Annual Required Contribution for fiscal years ending 2016 and 2017.

Table II-1
Market Value of Assets in Retiree Health Care Trust Fund (RHCTF)

	FYE 2013	FYE 2014	FYE 2015	FYE 2016
Market value of assets, beginning of year	$ 17,852	$ 31,205	$ 48,988	$ 72,980
Contributions				
Employee	$ 8,823	$ 11,791	$ 15,897	$ 20,910
Employer	4,411	5,895	7,947	10,454
Total	$ 13,234	$ 17,686	$ 23,844	$ 31,364
Investment earnings	$ 194	$ 258	$ 389	$ 261
Benefit payments *	$ 0	$ 0	$ 0	$ 0
Administrative expenses	(75)	(161)	(241)	(268)
Market value of assets, end of year	$ 31,205	$ 48,988	$ 72,980	$ 104,337

* Benefits are not paid from the RHCTF at this time

Dollar Amounts in Thousands

For valuation purposes, the actuarial value of assets is equal to the market value of assets.

At its June 18, 2014 meeting, the RHCTF Board adopted an asset allocation of 37 percent domestic equity, 37 percent international developed equity, and 26 percent investment grade bonds. It is assumed assets will earn an average of 7.50% each year.

SECTION III – DEVELOPMENT OF BLENDED DISCOUNT RATE

The discount rate used for GASB 43 and 45 disclosures is a weighted average of the expected return on Plan assets (7.50%) and the expected return on City assets (3.25%). If contributions to the Plan were equal to the Annual Required Contribution (ARC), the discount rate would be 7.50%. If contributions to the Plan were just equal to the benefit payments for the next year, the discount rate would be 3.25%. Since contributions are between these two amounts, the discount rate is a weighted average of these two discount rates where the weights reflect how close contributions are expected to be to the ARC as opposed to the benefit payments.

Projected Contribution Rates

Currently, the City pays retiree benefits from general assets and both the City and employees make contributions to the Retiree Health Care Trust Fund (RHCTF). For the fiscal years ending June 30, 2016 and June 30, 2017, employees hired on or after January 10, 2009 (Prop B Employees) contribute 2.0% of pay to the RHCTF and the City contributes 1.0% of Prop B Employee pay. No contributions were made by or on behalf of Pre-Prop B employees during the fiscal year ending June 30, 2016. For the fiscal year ending June 30, 2017, employees hired before January 10, 2009 contribute 0.25% of pay to the RHCTF and the City contributes a matching amount. Table III-1 below develops the projected contribution rates as a percentage of total payroll for FYE 2016 and 2017.

Table III-1
Projected City and Member Contribution Rates to RHCTF

	FYE 2016	FYE 2017
Projected Payroll		
Pre-Prop B employees	$ 1,761,921	$ 1,719,291
Prop B employees	954,696	1,099,199
Total	$ 2,716,617	$ 2,818,490
Projected Contribution Amounts *		
Employees	$ 20,910	$ 26,282
Employer	10,454	15,290
Total	$ 31,364	$ 41,572
Projected Contribution Rates as a % of Payroll		
Employees	0.77%	0.93%
Employer	0.38%	0.54%
Total	1.15%	1.47%

* Actual amounts shown in FYE 2016

Dollar Amounts in Thousands

Development of the Annual Required Contribution at Expected Return on Plan Assets

Table III-2 below shows the measures of actuarial liability and normal cost as of the valuation date based on a discount rate equal to the expected return on assets, or 7.50%. These measures are the basis for the projection of the ARC for FYE 2016 and 2017.

Table III-2
Liability Measures at Expected Return on Plan Assets
as of July 1, 2014

	Pre-Prop B	Prop B	Total
Actuarial Liability			
Actives	$ 1,096,426	$ 94,934	$ 1,191,360
Terminated Vested Members	344,461	0	344,461
Retirees	1,449,541	0	1,449,541
Total Actuarial Liability	$ 2,890,428	$ 94,934	$ 2,985,362
Normal Cost	$ 84,379	$ 19,583	$ 103,962
Valuation Payroll	$ 1,922,064	$ 603,370	$ 2,525,434
Normal Cost Rate	4.39%	3.25%	4.12%

Dollar Amounts in Thousands

The valuation payroll shown above represents the present value on July 1, 2014 of the salaries expected to be paid during FYE 2015 to employees who were active employees on the valuation date considering the probability of their terminating employment during the year due to retirement, disability, termination, or death. It does not represent the total amount of payroll expected during the fiscal year.

SECTION III – DEVELOPMENT OF BLENDED DISCOUNT RATE

Table III-3 below projects the total normal cost rate for FYE 2016 and 2017 by applying the Pre-Prop B and Prop B normal cost rates from the valuation to the projected payroll for Pre-Prop B and Prop B employees for FYE 2016 and 2017. Since the lower Prop B normal cost rate applies to all new employees, the aggregate normal cost rate is projected to decrease gradually as new employees replace current Pre-Prop B employees. The normal cost rate is a component of the ARC.

Table III-3
Projected Normal Cost Rates at Expected Return on Assets

	FYE 2016	FYE 2017
Pre-Prop B employees		
Normal Cost Rate	4.39%	4.39%
Payroll	$ 1,973,854	$ 1,936,700
Normal Cost	$ 86,651	$ 85,021
Prop B employees		
Normal Cost Rate	3.25%	3.25%
Payroll	$ 742,763	$ 881,790
Normal Cost	$ 24,108	$ 28,620
Total		
Normal Cost	$ 110,759	$ 113,641
Payroll	$ 2,716,617	$ 2,818,490
Normal Cost Rate	4.08%	4.03%

Dollar Amounts in Thousands

The payroll shown in the table above represents the expected salaries paid during the specified fiscal years including salaries of new hires since the valuation date. Additionally, Pre-Prop B and Prop B employees are shown based on their vesting provisions, rather than their contribution requirements as shown in Table III-1.

SECTION III – DEVELOPMENT OF BLENDED DISCOUNT RATE

Table III-4 below projects the Unfunded Actuarial Liability (UAL) to July 1, 2015 and July 1, 2016. The amortization factor is based on a rolling 30-year amortization period. The amortization payment applicable to FYE 2016 and 2017 is calculated as a rate of projected payroll (UAL Rate shown below). The ARC is the normal cost rate, as shown on the prior page of this report, plus the UAL rate.

Table III-4
Projected UAL Amortization Rates at Expected Return on Assets

	FYE 2015	FYE 2016
Actuarial Liability, beginning of year	$ 2,985,362	$ 3,151,396
Normal Cost	103,962	106,826
Projected Benefit Payments	(163,602)	(164,729)
Interest	225,674	238,301
Actuarial Liability, end of year	$ 3,151,396	$ 3,331,794
Market Value of Assets, beginning of year *	$ 48,988	$ 72,980
Contributions	23,844	31,364
Net Investment Earnings	148	(7)
Market Value of Assets, end of year	$ 72,980	$ 104,337
Projected Unfunded Actuarial Liability (UAL)	$ 3,078,416	$ 3,227,457
Amortization Factor	18.1193	18.1193
For the following fiscal year:		
Projected Amortization Payment	$ 169,897	$ 178,123
Payroll	$ 2,716,617	$ 2,818,490
UAL Rate	6.25%	6.32%

* Actual market value of assets used through FYE 2016

Dollar Amounts in Thousands

SECTION III – DEVELOPMENT OF BLENDED DISCOUNT RATE

Blended Discount Rate Calculation

Table III-5 below combines the information developed in the tables earlier in this section to calculate the blended discount rate. The weight given to the expected return on plan assets in the weighted average calculation is equal to the contributions to the RHCTF divided by the amount that would be contributed to the RHCTF if the full ARC had been contributed. Since this valuation is used for two fiscal years, the blended discount rate used in the valuation is the average of the blended discount rates calculated for each fiscal year.

Table III-5
Calculation of Blended Discount Rate

	FYE 2016	FYE 2017
1. Contribution Rates to RHCTF		
Employee	0.77%	0.93%
Employer	0.38%	0.54%
Total	1.15%	1.47%
Normal Cost Rate *	4.08%	4.03%
UAL Rate *	6.25%	6.32%
Total ARC Rate *	10.33%	10.35%
less Pay-As-You-Go Rate	-6.06%	-6.05%
2. Total ARC in Excess of Pay-As-You-Go	4.27%	4.30%
3. Weight to Expected Return on Plan Assets (1. / 2.)	27.05%	34.27%
4. Expected Return on Plan Assets	7.50%	7.50%
5. Expected Return on City Assets	3.25%	3.25%
6. Discount Rate [3. x 4. + (1 - 3.) x 5.]	4.40%	4.71%
Discount Rate for Valuation (average of 6.**)	4.50%	

* Calculated at the expected return on assets

** Rounded to the nearest 25 basis points

SECTION IV – GASB VALUATION RESULTS

This section of the report provides the July 1, 2014 actuarial valuation results on a GASB basis, develops the Annual Required Contribution (ARC) under GASB 43 and 45 for the fiscal year ending June 30, 2016, develops the Annual Required Contribution (ARC) under GASB 45 for the fiscal year ending June 30, 2017, and reconciles the current valuation with the prior July 1, 2012 valuation.

Table IV-1 below compares the actuarial liability, plan assets, and unfunded actuarial liability as of July 1, 2014 to the prior valuation as of July 1, 2012.

Table IV-1
Actuarial Liability

Valuation Date	July 1, 2012	July 1, 2014
Discount Rate	*4.45%*	*4.50%*
Actives	$ 1,665,912	$ 1,730,819
Terminated Vested Members	445,251	602,775
Retirees	1,886,599	1,926,662
Total Actuarial Liability	$ 3,997,762	$ 4,260,256
Assets	(17,852)	(48,988)
Unfunded Actuarial Liability	$ 3,979,910	$ 4,211,268
Funded Ratio	0.4%	1.1%

Dollar Amounts in Thousands

The *actuarial liability* represents the portion of the value of projected benefits that is allocated to service earned prior to the valuation date. The *unfunded actuarial liability* (UAL) represents the excess of the actuarial liability over plan assets.

SECTION IV – GASB VALUATION RESULTS

The valuation is performed as of July 1, 2014 and those results are then projected forward to the first day of the fiscal year for which the Annual Required Contribution (ARC) is determined. In Table IV-2 below, the projection of the actuarial liability from the valuation date to the beginning of each of the next two fiscal years is shown.

Table IV-2
Projected Actuarial Liability
(4.50% discount rate)

		FYE 2015		FYE 2016
Actuarial Liability, beginning of year	$	4,260,256	$	4,492,286
Normal Cost		198,623		204,066
Projected Benefit Payments		(163,602)		(164,729)
Interest		197,009		207,671
Actuarial Liability, end of year	$	4,492,286	$	4,739,294
Assets *		(72,980)		(104,337)
Projected Unfunded Actuarial Liability (UAL)	$	4,419,306	$	4,634,957
Amortization Factor		26.4879		26.4879
For the following fiscal year:				
UAL Payment	$	166,842	$	174,984

* Actual market value of assets used through FYE 2016 — *Dollar Amounts in Thousands*

The ARC consists of two parts: (1) the *employer normal cost*, which represents the annual cost attributable to service earned in a given year less employee contributions, and (2) amortization of the UAL, which is based on a rolling 30-year amortization period. Table IV-3 below shows development of the ARC for fiscal years ending June 30, 2016 and June 30, 2017.

Table IV-3
Annual Required Contribution
(4.50% discount rate)

		FYE 2016		FYE 2017
Total Normal Cost	$	208,608	$	213,998
Less Expected Employee Contributions *		(20,910)		(26,282)
Employer Normal Cost	$	187,698	$	187,716
Unfunded Actuarial Liability Amortization		166,842		174,984
Annual Required Contribution	$	354,540	$	362,700

* Actual amounts shown in FYE 2016 — *Dollar Amounts in Thousands*

SECTION IV – GASB VALUATION RESULTS

Table IV-4 shows the expected benefit payments, or "pay-as-you-go" costs, net of retiree contributions, for the 15 fiscal years following the valuation date. In calculating the liability of the plan, expected benefit payments are projected for the life of each existing participant.

Table IV-4
Expected Net Benefit Payments

FYE June 30,	Expected Net Benefit Payments	FYE June 30,	Expected Net Benefit Payments	FYE June 30,	Expected Net Benefit Payments
2015	$ 163,602	2020	$ 210,067	2025	$ 296,912
2016	164,729	2021	227,329	2026	314,540
2017	170,443	2022	243,743	2027	331,728
2018	179,704	2023	259,818	2028	349,219
2019	194,383	2024	278,110	2029	364,838

Dollar Amounts in Thousands

SECTION IV – GASB VALUATION RESULTS

Reconciliation with Prior Results

Table IV-5 estimates the impact of the major factors contributing to the change in liability since the last actuarial valuation (July 1, 2012). Note that the expected values as of July 1, 2014 are based on assumptions and methods from the prior valuation.

Table IV-5
Reconciliation with Prior Results

	Actuarial Liability July 1, 2014	% of Liability	Total Normal Cost as of July 1, 2014	% of Total Normal Cost
Expected July 1, 2014 valuation results *	$ 4,431,594		$ 197,841	
(Gain)/Loss due to:				
Demographic Changes	$ 228,707	5%	$ 21,521	11%
Health Claims Cost Changes	(499,839)	-11%	(24,464)	-12%
Discount Rate Change from 4.45% to 4.50%	(27,890)	-1%	(2,264)	-1%
Updated Heath Care Trend Rates	117,718	3%	6,911	3%
Other Assumption Changes	9,966	0%	(922)	0%
Total (Gain)/Loss	$ (171,338)	-4%	$ 782	0%
July 1, 2014 valuation results	$ 4,260,256		$ 198,623	

Dollar Amounts in Thousands

* Actuarial Liability as of July 1, 2012 is projected to July 1, 2014 with expected benefits earned and interest reduced by expected benefits paid. The Total Normal Cost as of July 1, 2012 is projected to July 1, 2014 with anticipated salary increases and population changes.

Below is a brief description of each of the changes shown in Table IV-5:

- *Expected Values* refer to the change that would have occurred had experience matched all the assumptions between July 1, 2012 and July 1, 2014.
- *Demographic Changes* refer to population changes between July 1, 2012 and July 1, 2014.
- *Health Claims Cost Changes* refer to the impact of the difference between actual health care claims, expense costs, and premium compared to the projected costs using the assumptions from the July 1, 2012 valuation. The claim curves were updated to reflect actual changes in utilization.
- *Discount Rate Change* refers to the change in discount rate from 4.45% as of July 1, 2012 to 4.50% as of July 1, 2014.
- *Health Care Trend Rates* shows the impact of updating this assumption to reflect changed expectations in the marketplace.
- *Other Assumption Changes* refers to all other assumption changes including changes to wage inflation.

SECTION V – SENSITIVITY TO HEALTH CARE TREND RATES

The actuarial liability, the ARC, and benefit payments produced in this report are sensitive to the assumptions used. The tables below show the impact of a 1% increase or decrease in the health care trend rates on the actuarial liability, the ARC, and the net expected benefit payments, to provide some measure of sensitivity. Since actual premiums are known through 2017, the 1% increase or decrease to the health care trend commences after December 31, 2017.

Table V-1
Actuarial Liability as of July 1, 2014
(4.50% discount rate)

Health Care Trend Rate	**-1%**	**Base**	**1%**
Actuarial Liability			
Actives	$ 1,460,529	$ 1,730,819	$ 2,072,968
Terminated Vested Members	507,383	602,775	724,484
Retirees	1,784,219	1,926,662	2,092,775
Total Actuarial Liability	$ 3,752,131	$ 4,260,256	$ 4,890,227
Assets	(48,988)	(48,988)	(48,988)
Unfunded Actuarial Liability	$ 3,703,143	$ 4,211,268	$ 4,841,239

Dollar Amounts in Thousands

Table V-2
GASB ARC – FYE 2016
(4.50% discount rate)

Health Care Trend Rate	**-1%**	**Base**	**1%**
Total Normal Cost	$ 174,622	$ 208,608	$ 252,747
Less Employee Contribution	(20,910)	(20,910)	(20,910)
Employer Normal Cost	$ 153,712	$ 187,698	$ 231,837
UAL Amortization	145,537	166,842	193,326
Total ARC	$ 299,249	$ 354,540	$ 425,163

Dollar Amounts in Thousands

SECTION V – SENSITIVITY TO HEALTH CARE TREND RATES

Table V-3
Expected Net Benefit Payments

Fiscal Year Ending June 30,	Health Care Trend Rate -1%	Base	1%
2015	$ 163,602	$ 163,602	$ 163,602
2016	164,729	164,729	164,729
2017	170,443	170,443	170,443
2018	178,837	179,704	180,571
2019	191,638	194,383	197,146
2020	205,160	210,067	215,049
2021	219,936	227,329	234,904
2022	233,600	243,743	254,232
2023	246,660	259,818	273,551
2024	261,535	278,110	295,572
2025	276,578	296,912	318,537
2026	290,224	314,540	340,644
2027	303,180	331,728	362,666
2028	316,134	349,219	385,416
2029	327,129	364,838	406,486

Dollar Amounts in Thousands

Note: There is no variation in the first three years because actual premiums are used.

SECTION VI – ACCOUNTING DISCLOSURES

GASB Statements No. 43 and 45 establish standards for disclosure of OPEB information by governmental plans and employers in their financial statements. In accordance with those statements, we have prepared the following disclosures.

Schedule of Funding Progress

The schedule of funding progress, Table VI-1, compares the assets used for funding purposes to the actuarial liability to determine how well the Plan is funded and how this status has changed over the past several years. The unfunded actuarial liability is compared to the covered payroll as a measure of the potential future burden on the employer.

Table VI-1
Schedule of Funding Progress

Actuarial Valuation Date	Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
7/1/2006*	$ 0	$ 4,036,324	$ 4,036,324	0.0%	$ 2,066,866	195.3%
7/1/2008*	0	4,364,273	4,364,273	0.0%	2,296,336	190.1%
7/1/2010**	0	4,420,146	4,420,146	0.0%	2,393,930	184.6%
7/1/2012	17,852	3,997,762	3,979,910	0.4%	2,457,633	161.9%
7/1/2014	48,988	4,260,256	4,211,268	1.1%	2,618,426	160.8%

Dollar Amounts in Thousands

* Figures prior to July 1, 2010 valuation calculated by the prior actuary.

** As of July 1, 2010, the City set aside approximately $3.2 million in assets for the OPEB plan. However, the Retiree Health Care Trust Fund was not established until December 2010.

SECTION VI – ACCOUNTING DISCLOSURES

Schedule of Employer Contributions

The schedule of employer contributions, Table VI-2, is a required disclosure under GASB 45. It compares the actual employer contributions to the Annual OPEB Cost and shows the historical trend of the Net OPEB Obligation. For this purpose, employer contributions include both the pay-as-you-go cost and contributions to the RHCTF.

Table VI-2
GASB 45 Schedule of Employer Contributions

Fiscal Year Ended	Annual OPEB (AOC) Cost	Amount Contributed	Percentage of AOC Contributed	Net OPEB Obligation
6/30/2010*	$ 374,214	$ 126,859	33.9%	$ 852,782
6/30/2011*	392,151	145,880	37.2%	1,099,177
6/30/2012	405,850	156,252	38.5%	1,348,883
6/30/2013	418,539	160,300	38.3%	1,607,130
6/30/2014	353,251	166,628	47.2%	1,793,753
6/30/2015	363,643	167,241	46.0%	1,990,155
6/30/2016	368,963	168,855	45.8%	2,190,263

Dollar Amounts in Thousands

* Figures prior to FYE June 30, 2012 calculated by the prior actuary.

Under GASB 43, there is a separate Schedule of Employer Contributions, Table VI-3, for the Retiree Health Care Trust Fund that compares the actual contributions to the Annual Required Contribution.

SECTION VI – ACCOUNTING DISCLOSURES

Table VI-3
GASB 43 Schedule of Employer Contributions

Fiscal Year Ended	Annual Required Contribution (ARC)	Amount Contributed	Percentage of ARC Contributed
6/30/2010*	$ 368,665	$ 126,859	34.4%
6/30/2011*	384,334	145,880	38.0%
6/30/2012	397,862	156,252	39.3%
6/30/2013	408,735	160,300	39.2%
6/30/2014	341,377	166,628	48.8%
6/30/2015	350,389	167,241	47.7%
6/30/2016	354,540	168,855	47.6%

Dollar Amounts in Thousands

* Figures prior to FYE June 30, 2012 calculated by the prior actuary.

SECTION VI – ACCOUNTING DISCLOSURES

Table VI-4 below shows the development of the Net OPEB Obligation (NOO) for the fiscal year ending (FYE) June 30, 2016 and for the FYE June 30, 2017. Actual employer contributions have been used to develop the end of year Net OPEB Obligation for both years shown in this table.

Table VI-4
Development of Net OPEB Obligation (NOO)

	FYE 2016	FYE 2017
1. Net OPEB Obligation/(Asset), beginning of year	$ 1,990,155	$ 2,190,263
2. Annual Required Contribution for FYE	$ 354,540	$ 362,700
3. Interest on Net OPEB Obligation/(Asset)	89,557	98,562
4. Adjustment to Annual Required Contribution	75,134	82,689
5. Annual OPEB Cost *(2.) + (3.) - (4.)*	$ 368,963	$ 378,573
6. Employer Contributions		
a. Contributions to RHTF	$ 10,454	$ 18,428
b. Benefit Payments	158,401	165,470
c. Total	$ 168,855	$ 183,898
7. Net OPEB Obligation/(Asset), end of year *(1.) + (5.) - (6c.)*	$ 2,190,263	$ 2,384,938

Dollar Amounts in Thousands

SECTION VI – ACCOUNTING DISCLOSURES

The *Note to Required Supplementary Information* shown in Table VI-5 provides additional disclosure information for the financial statements.

Table VI-5
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation Date	July 1, 2014
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay
Amortization Period	Rolling 30 years
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Discount Rate	4.50%
Total Payroll Growth	3.75%
Ultimate Rate of Medical Inflation	4.50%
Years to Ultimate Rate	18

APPENDIX A – PARTICIPANT DATA

The following table compares key statistics from the current to the previous valuation.

Schedule of Valuation Data			
Valuation Date	**July 1, 2012**	**July 1, 2014**	**% Change**
Active Employees			
Count	27,764	29,001	4%
Average Age	47.5	47.4	0%
Average Service	11.9	12.1	2%
Total Payroll	$ 2,457,633,410	$ 2,618,425,870	7%
In-Pay Participants with Coverage *			
Count	24,515	25,919	6%
Average Age	69.5	69.8	1%
Vested, Terminated Members			
Count	2,134	2,843	33%
Average Age	48.7	47.5	-2%

* Includes spouses and domestic partners

The following table provides a summary of Active employees by age and service as of the current valuation date.

Active Employees by Age and Service
As of July 1, 2014

Age Group	Years of Service < 5	5-9	10-14	15-19	20-24	25-29	30+	Total
Under 25	258	2	0	0	0	0	0	260
25 to 29	1,322	221	5	0	0	0	0	1,548
30 to 34	1,666	1,007	112	7	0	0	0	2,792
35 to 39	1,252	1,118	568	165	5	0	0	3,108
40 to 44	996	1,097	1,020	744	132	7	0	3,996
45 to 49	837	858	1,050	1,028	599	149	8	4,529
50 to 54	717	771	904	986	805	494	281	4,958
55 to 59	492	557	780	727	653	578	604	4,391
60 to 64	241	328	467	443	332	316	355	2,482
Over 65	86	158	180	176	116	80	141	937
Total	7,867	6,117	5,086	4,276	2,642	1,624	1,389	29,001

APPENDIX A – PARTICIPANT DATA

Key statistics for active participants by employee group are provided as of the valuation date in the following table.

Active Employees by Employee Group As of July 1, 2014						
	Police	**Fire**	**Muni**	**Craft**	**Misc.**	**Total**
Pre-Prop B (for vesting schedule)						
Count	1,710	1,203	1,521	2,629	14,753	21,816
Average age	44.0	46.9	51.7	52.9	50.3	50.0
Average service	15.9	16.7	14.7	16.4	15.1	15.4
Total Payroll ($000's)	$218,370	$149,134	$94,813	$221,731	$1,360,893	$2,044,941
Post-Prop B (for vesting schedule)						
Count	386	207	639	680	5,273	7,185
Average age	31.1	35.1	41.9	43.4	39.2	39.3
Average service	1.8	2.1	2.6	1.9	2.3	2.2
Total Payroll ($000's)	$36,892	$18,509	$38,152	$53,189	$426,743	$573,485
Total Actives						
Count	2,096	1,410	2,160	3,309	20,026	29,001
Average age	41.7	45.2	48.8	51.0	47.4	47.4
Average service	13.3	14.6	11.1	13.4	11.7	12.1
Total Payroll ($000's)	$255,263	$167,643	$132,965	$274,920	$1,787,636	$2,618,426

APPENDIX A – PARTICIPANT DATA

A schedule of inactive participants by status and age group is shown below.

Inactive Participants by Status and Age Group
As of July 1, 2014

Age Group	Disabled Retiree	Retiree	Survivor	Term Vested	Total
Under 40	6	0	4	506	516
40 to 44	26	0	12	616	654
45 to 49	48	0	26	801	875
50 to 54	248	304	40	409	1,001
55 to 59	358	1,239	92	283	1,972
60 to 64	576	2,861	179	157	3,773
65 to 69	417	3,686	256	45	4,404
70 to 74	138	2,907	306	12	3,363
75 to 79	90	1,982	313	7	2,392
80 to 84	45	1,251	402	4	1,702
85 to 90	28	824	413	2	1,267
Over 90	4	484	321	1	810
Total	1,984	15,538	2,364	2,843	22,729

Shown below is the distribution of medical plan elections for participants currently receiving a benefit from the Plan.

Medical Plan Elections for In-Pay Participants *
As of July 1, 2014

	Pre-Medicare			Medicare Eligible		
Medical Plan	Retirees & Surviving Spouses	Spouses & Domestic Partners	Total	Retirees & Surviving Spouses	Spouses & Domestic Partners	Total
Blue Shield	2,678	1,250	3,928	3,610	899	4,509
City Health Plan	650	266	916	3,974	907	4,881
Kaiser	2,691	1,155	3,846	6,283	1,556	7,839
Total	6,019	2,671	8,690	13,867	3,362	17,229

* Assumes Medicare eligibility at age 65. Does not include waived and exempt retired participants.

APPENDIX B – ASSUMPTIONS AND METHODS

Economic Assumptions

The wage inflation and price inflation assumptions align with those adopted by the Retirement Board at the January 14, 2015 Board meeting and are used by the City and County of San Francisco Employees' Retirement System in their July 1, 2014 actuarial valuation.

1. **Expected Return on Plan Assets:** 7.50% per year, net of expenses
   The expected return on plan assets is based on the asset allocation adopted by the RHCTF Board on June 18, 2014 and the capital market assumptions over a 20-year time horizon for that allocation of the Board's investment consultant.

2. **Expected Return on City Assets:** 3.25% per year, net of expenses
   The long-term expected return on city assets was set equal to the long-term inflation assumption.

3. **Blended Discount Rate for Valuation Purposes:** 4.50% per year

4. **Consumer Price Inflation:** 3.25% per year

5. **Per Person Cost Trends:**

Annual Increases				
To Year Beginning January 1	10-County Trend	Medical & Rx Pre-Medicare	Medical & Rx Medicare Eligible	Vision / Expense
2015		*Actual Premiums Used*		
2016		*Actual Premiums Used*		
2017		*Actual Premiums Used*		
2018	6.00%	8.00%	6.50%	3.50%
2019	5.89	7.75	6.36	3.50
2020	5.79	7.50	6.21	3.50
2021	5.68	7.25	6.07	3.50
2022	5.57	7.00	5.93	3.50
2023	5.46	6.75	5.79	3.50
2024	5.36	6.50	5.64	3.50
2025	5.25	6.25	5.50	3.50
2026	5.14	6.00	5.36	3.50
2027	5.04	5.75	5.21	3.50
2028	4.93	5.50	5.07	3.50
2029	4.82	5.25	4.93	3.50
2030	4.71	5.00	4.79	3.50
2031	4.61	4.75	4.64	3.50
2032+	4.50	4.50	4.50	3.50

- Deductibles, Co-payments, Out-of-Pocket Maximums, and Annual Maximum are assumed to increase at the above trend rates.
- A load of 2.5% in FYE 2021 and 0.5% in FYE 2022 was added to the Pre-Medicare medical trend to account for Healthcare Reform.

APPENDIX B – ASSUMPTIONS AND METHODS

Demographic Assumptions

Demographic assumptions pertaining to rates of retirement, termination, member refunds mortality, disability, and salary increases align with those adopted by the Retirement Board at the January 14, 2015 Board meeting and are used by the City and County of San Francisco Employees' Retirement System in their July 1, 2014 actuarial valuation. The other demographic assumptions are based on recent Plan experience.

1. **Retirement Rates:**

   Rates of retirement are based on age and service according to the following tables.

   Eligible deferred vested members are assumed to retire at age 55, or current age if older. Any deferred vested member hired on or after January 10, 2009 is assumed to retire outside of the 180-day retirement window set in place by Proposition B (passed 6/3/2008).

Rates of Retirement by Age and Service
29 Years of Service or less (24 or less for Safety)

Age	Police	Fire	Muni Drivers	Craft	Misc. Females	Misc. Males
50	0.0150	0.0200	0.0700	0.0300	0.0300	0.0300
51	0.0150	0.0100	0.0250	0.0250	0.0250	0.0250
52	0.0150	0.0100	0.0250	0.0250	0.0250	0.0250
53	0.0300	0.0100	0.0500	0.0400	0.0400	0.0400
54	0.0300	0.0100	0.0500	0.0400	0.0400	0.0400
55	0.1000	0.0300	0.0600	0.0500	0.0400	0.0400
56	0.1000	0.0300	0.0600	0.0500	0.0450	0.0450
57	0.1000	0.0300	0.1000	0.0500	0.0500	0.0500
58	0.1000	0.0500	0.1000	0.0500	0.0600	0.0600
59	0.1000	0.1000	0.1000	0.0750	0.0750	0.0750
60	0.1000	0.2500	0.1000	0.1000	0.1100	0.1100
61	0.1000	0.2500	0.1250	0.1300	0.1400	0.1400
62	0.3000	0.2500	0.2500	0.2250	0.2250	0.2250
63	0.1000	0.2500	0.2000	0.1750	0.1750	0.1750
64	0.1000	0.2500	0.2000	0.1750	0.1750	0.1750
65	1.0000	1.0000	0.2500	0.2750	0.2250	0.2250
66	1.0000	1.0000	0.2500	0.2750	0.2250	0.2250
67	1.0000	1.0000	0.2500	0.1750	0.2000	0.2000
68	1.0000	1.0000	0.2500	0.1750	0.2000	0.2000
69	1.0000	1.0000	0.2500	0.1750	0.2000	0.2000
70 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

APPENDIX B – ASSUMPTIONS AND METHODS

Rates of Retirement by Age and Service
30 Years of Service or more (25 or more for Safety)

Age	Police	Fire	Muni Drivers	Craft	Misc. Females	Misc. Males
50	0.0300	0.0200	0.0300	0.0300	0.0300	0.0300
51	0.0300	0.0200	0.0300	0.0300	0.0300	0.0300
52	0.0400	0.0200	0.0300	0.0300	0.0300	0.0300
53	0.0700	0.1000	0.0300	0.0300	0.0300	0.0300
54	0.1000	0.2000	0.0300	0.0300	0.0750	0.0300
55	0.1200	0.2250	0.3000	0.0750	0.0750	0.0750
56	0.1400	0.2250	0.3000	0.0750	0.0750	0.0750
57	0.1600	0.2250	0.3000	0.0750	0.0750	0.0750
58	0.1800	0.2500	0.3000	0.1500	0.1250	0.1200
59	0.2000	0.3000	0.3000	0.3000	0.1750	0.1500
60	0.2200	0.3500	0.3000	0.3000	0.2500	0.3000
61	0.2500	0.4000	0.3000	0.3000	0.2500	0.3000
62	0.2500	0.4000	0.3500	0.3500	0.3750	0.3500
63	0.2500	0.3000	0.3000	0.3000	0.2500	0.2500
64	0.2500	0.3000	0.3000	0.3000	0.2500	0.2500
65	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
66	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
67	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
68	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
69	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
70 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

APPENDIX B – ASSUMPTIONS AND METHODS

2. Termination Rates:

Sample rates of termination of employment for all employee groups (excluding Miscellaneous members) are shown in the following table.

Rates of Termination Non-Miscellaneous Members				
Service	Police	Fire	Muni Drivers	Craft
0	10.00%	4.00%	12.00%	8.00%
1	4.00	1.50	6.00	7.00
2	2.00	1.50	5.00	6.00
3	2.00	1.50	4.00	5.00
4	2.00	1.50	3.50	4.00
5	1.00	1.50	3.25	3.25
6	1.00	1.00	3.00	2.75
7	1.00	1.00	3.00	2.50
8	1.00	1.00	3.00	2.25
9	1.00	1.00	3.00	2.00
10	1.00	1.00	3.00	1.75
11	1.00	0.50	3.00	1.75
12	1.00	0.50	3.00	1.75
13	1.00	0.50	3.00	1.75
14	1.00	0.50	3.00	1.75
15	1.00	0.50	3.00	1.75
16	0.50	0.50	3.00	1.75
17	0.50	0.50	3.00	1.75
18	0.50	0.20	3.00	1.75
19	0.50	0.10	3.00	1.75
20	0.50	0.05	3.00	1.75
21	0.00	0.00	3.00	1.75
22	0.00	0.00	0.00	1.75
23	0.00	0.00	0.00	0.00

APPENDIX B – ASSUMPTIONS AND METHODS

Sample rates of termination by age and service for Miscellaneous members are shown in the following table.

Rates of Termination Miscellaneous Members			
	Years of Service		
Age	0	3	5+
20	37.50%	12.00%	6.50%
25	27.50	9.00	6.50
30	24.00	9.00	5.50
35	20.00	7.00	4.25
40	17.50	6.00	3.00
45	15.00	4.50	2.50
50	15.00	4.50	2.60
55	15.00	4.50	3.15
60	15.00	4.50	4.00
65	15.00	4.50	4.00

Termination rates do not apply once a member is eligible for retirement.

3. **Member Refunds:**

The rates of refund of contributions for terminated vested members are presented in the table below.

Vested Terminated Rates of Refund		
Age	Police / Fire	Miscellaneous
Under 25	100%	70%
25	75	55
30	50	40
35	30	35
40	20	30
45	10	20
50 & over	0	0

APPENDIX B – ASSUMPTIONS AND METHODS

4. Mortality Rates:

Healthy Lives:

Mortality rates for actives, retirees, beneficiaries, and terminated vested participants are based on the sex distinct RP-2000 Mortality Tables. To reflect mortality improvements since the date of the table, for active and terminated vested females, the Employee table is projected to 2030 and for active and terminated vested males to 2005, both using Scale AA. For female and male annuitants, the Annuitant table is projected to 2020 using Scale AA.

Rates of Mortality for Actives and Annuitants
Healthy Lives at Selected Ages

	Actives			Annuitants	
Age	**Male**	**Female**	**Age**	**Male**	**Female**
25	0.036%	0.014%	50	0.372%	0.166%
30	0.043	0.020	55	0.402	0.301
35	0.075	0.034	60	0.594	0.561
40	0.104	0.045	65	1.012	0.938
45	0.141	0.069	70	1.641	1.515
50	0.195	0.100	75	2.854	2.394
55	0.275	0.199	80	5.265	3.987
60	0.450	0.338	85	9.624	6.866
65	0.706	0.501	90	16.928	12.400
70	0.920	0.655	95	25.699	18.688
			100	33.773	23.276

For active members, 25% of Safety deaths and 0% of Miscellaneous deaths are assumed to be duty-related.

APPENDIX B – ASSUMPTIONS AND METHODS

Disabled Lives:

The following provides a sample of the mortality rates for members with disability retirement.

Rates of Mortality for Disabled Lives at Selected Ages					
	Police and Fire			All Miscellaneous	
Age	Male	Female	Age	Male	Female
50	0.40%	0.33%	50	1.63%	1.11%
55	0.53	0.50	55	1.94	1.56
60	0.74	0.74	60	2.29	1.61
65	1.26	1.09	65	3.17	1.80
70	2.04	1.59	70	3.87	2.84
75	3.18	2.47	75	6.00	3.65
80	6.09	4.08	80	8.39	5.23
85	10.80	7.16	85	14.04	8.42
90	15.09	12.35	90	21.55	14.14
95	23.77	21.24	95	31.03	20.92
100	37.44	32.55	100	45.91	34.18

For Safety members, all disabilities are assumed to be duty-related. Therefore, all deaths of disabled Safety members are assumed to generate duty death benefits.

5. **Disability Rates:**

Sample disability rates of active participants are provided in the following table. All Safety and no Miscellaneous disabilities are assumed to be duty-related.

Rates of Disability at Selected Ages						
Age	Police	Fire	Muni Drivers	Craft	Misc. Females	Misc. Males
30	0.05%	0.06%	0.01%	0.01%	0.01%	0.01%
35	0.09	0.15	0.06	0.06	0.05	0.04
40	0.16	0.38	0.11	0.12	0.10	0.08
45	0.37	0.60	0.17	0.24	0.28	0.11
50	0.79	1.20	0.75	0.44	0.55	0.30
55	3.00	5.00	1.20	0.64	0.60	0.42
60	6.10	12.75	0.00	0.00	0.00	0.00
65	7.50	15.00	0.00	0.00	0.00	0.00

APPENDIX B – ASSUMPTIONS AND METHODS

6. Salary Increase Rate:

Wage Inflation Component: 3.75%

Additional Merit Component:

Salary Merit Increases					
Service	**Police**	**Fire**	**Muni Drivers**	**Craft**	**Misc.**
1	11.00%	15.00%	15.00%	4.50%	7.00%
2	8.50	8.00	10.00	3.25	5.25
3	6.50	6.00	2.00	2.50	4.00
4	4.50	4.25	1.00	2.00	3.00
5	3.25	3.00	0.00	1.50	2.50
6	2.30	2.30	0.00	1.25	2.00
7	1.95	1.95	0.00	1.00	1.75
8	1.70	1.70	0.00	0.90	1.65
9	1.50	1.50	0.00	0.85	1.45
10	1.50	1.50	0.00	0.85	1.30
11	1.50	1.50	0.00	0.85	1.20
12	1.50	1.50	0.00	0.85	1.15
13	1.50	1.50	0.00	0.85	1.10
14	1.50	1.50	0.00	0.85	1.05
15 & over	1.50	1.50	0.00	0.85	1.00

APPENDIX B – ASSUMPTIONS AND METHODS

7. Percent of Retirees Electing Coverage:

Future eligible retirees are assumed to elect coverage at retirement at the following rates, which vary by vesting level and Medicare eligibility.

Percent of Retirees Electing Coverage				
	Vesting Level			
	0%	50%	75%	100%
Pre-Medicare	15%	75%	85%	94%
Medicare Eligible	15%	50%	80%	94%

Participants currently receiving benefits are assumed to keep their current coverage.

8. Medical Plan Election:

Future retirees' plan elections are assumed to mirror current retiree plan elections. The following rates are used to determine blended claims and contributions for future retirees.

Assumed Plan Elections for Future Retirees		
Medical Plan	Pre-Medicare	Medicare Eligible
Blue Shield	45%	45%*
City Health Plan	5%	5%
Kaiser	50%	50%

* The Blue Shield plan for Medicare eligible retirees is being replaced in 2017, by the New City Plan, and we assume Blue Shield membership will completely transfer to that plan.

Participants currently receiving benefits are assumed to continue participation in their current medical plan.

9. Medicare Participation:

All in-pay participants, both current and future, are assumed to be eligible for and elect into Medicare at age 65. All participants under age 65 and currently on Medicare are assumed not to be on Medicare until age 65.

10. Future Service Accruals:

Actives are assumed to accrue a full year of credited service each year. Members currently terminated and under a reciprocity arrangement are assumed to meet the City's eligibility requirements for retiree healthcare through earned reciprocity service.

APPENDIX B – ASSUMPTIONS AND METHODS

11. Portion of New Entrant Payroll Eligible for Pre-Prop B Benefits:

In order to project payroll for employees eligible for the pre-Proposition B vesting schedule, we assumed the following portion of newly hired employees were originally hired on or before January 9, 2009 and returned to work: 26% in FYE 2015, 18% in FYE 2016, and 13% in FYE 2017.

12. Coverage Elections for Spouses and Domestic Partners:

The percentage of future non-disabled retirees who elect to cover a spouse or domestic partner is shown in the following table.

Spousal Coverage Elections Non-Disabled Participants	Vesting Level			
	0%	50%	75%	100%
Pre-Medicare	75%	40%	35%	35%
Medicare Eligible	35%	35%	35%	35%

The percentage of future disabled retirees who elect to cover a spouse or domestic partner is shown in the following table.

Spousal Coverage Elections Disabled Participants	Election
Before Age 65	25%
After Age 65	35%

Actual spouse/domestic partner coverage data is used for participants currently receiving a benefit.

The cost for children is fully paid for by the member. No additional load was added for children.

13. Dependent Age:

For participants currently receiving a benefit, actual spouse date of birth is used if available. Otherwise, spouses and domestic partners of male members are assumed to be three years younger than the member and spouses and domestic partners of female members are assumed to be three years older than the member.

14. Surviving Spouse Participation:

100% of surviving spouses continue coverage.

APPENDIX B – ASSUMPTIONS AND METHODS

Claim and Expense Assumptions

1. **Average Annual Claims Assumptions:** The following claim assumptions are applicable to the 12-month plan year beginning July 1, 2014 and are based on the premiums in effect on the valuation date. Subsequent years' costs are based on actual premiums when available, then adjusted with trends previously listed.

Annual Claims and Expenses
For the Period July 1, 2014 to June 30, 2015

	Blue Shield		City Plan			Kaiser		
Age	Medical	Admin	Medical	Rx	Admin	Medical & Rx	Admin	Vision
40	$ 5,596	$ 25	$ 5,748	$ 1,355	$ 597	$ 4,825	$ 25	$ 48
45	6,315	25	6,250	1,726	597	5,444	25	48
50	7,839	25	7,544	2,323	597	6,758	25	48
55	9,751	25	9,205	3,039	597	8,406	25	48
60	12,106	25	11,398	3,798	597	10,436	25	48
64	14,355	25	13,805	4,262	597	12,375	25	48
65	4,112	25	1,321	1,462	379	3,471	25	48
70	4,587	25	1,566	1,620	379	3,872	25	48
75	4,894	25	1,816	1,711	379	4,131	25	48
80	5,013	25	1,979	1,739	379	4,232	25	48
85	4,948	25	2,033	1,707	379	4,177	25	48

2. **Dental, Vision, and Expense:** These benefits are assumed to have no implicit subsidy cost.

3. **Medicare Part D Subsidy:** Per GASB guidance, the Part D Subsidy has not been reflected in this valuation.

4. **Annual Limits:** Assumed to increase at the same rate as trend.

5. **Lifetime Maximums:** Unlimited.

6. **Geography:** Implicitly assumed to remain the same as current retirees.

APPENDIX B – ASSUMPTIONS AND METHODS

Methodology

The Entry Age Actuarial Cost Method was used to measure the Plan's actuarial liability and normal cost. Under this method, the normal cost rate is the percentage of pay contribution that is expected to be sufficient to fund the Plan benefits if it were paid from each member's hire date at the City until termination or retirement.

A normal cost rate is determined for each individual by taking the value, as of age at entry into the Plan, of the member's projected future benefits and dividing it by the value, also as of the member's entry age, of the member's expected future salary.

The actuarial liability is that portion of the present value of projected benefits that is not expected to be paid by future normal costs. The difference between the actuarial liability and the market value of assets accumulated as of the same date is the unfunded actuarial liability. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability. The unfunded actuarial liability is amortized over a rolling 30-year period as a level percent of pay.

The discount rate used for valuation purposes is a weighted average of the expected return on Plan assets and the expected return on City assets. In order to calculate the weighted average, the total Annual Required Contribution (ARC), including employee contributions, is determined using the expected return on Plan assets as the discount rate. The weight assigned to the expected return on Plan assets is equal to (1) the estimated employee and City contributions in excess of expected benefit payments divided by (2) the ARC on this basis in excess of expected benefit payments for the fiscal year. Since this valuation is used for two fiscal years, the valuation discount rate is an average of the weighted average discount rates calculated for the two fiscal years.

The medical claims costs were developed based on actual premiums for the six months ending December 31, 2014 and calendar year 2015 for the HMO plans and actual rates for the six months ending December 31, 2014 and calendar year 2015 for the City Plan. For Non-Medicare adults, the premiums (or rates, as applicable) for active employee only, first dependent of active employee, Non-Medicare retiree, and first dependent of Non-Medicare retirees were blended based upon enrollment data for the period July 1, 2013 to June 30, 2014. The same process was used for Medicare adults, except only Medicare retirees and first dependents of Medicare retirees were included. The resulting per person per month (PPPM) cost was then adjusted using age curves. Expenses and vision costs were based directly on the rates in effect for 2014-2015.

APPENDIX B – ASSUMPTIONS AND METHODS

Changes Since Last Valuation

The expected return on City assets was reduced from 3.75% to 3.25%.

Based on the methodology used to determine the blended discount rate, the reduction in expected return on City assets, and the increase in contributions, the discount rate was determined to increase from 4.45% to 4.50%.

The wage inflation and the consumer price inflation assumptions were reduced from 3.83% and 3.33% to 3.75% and 3.25%, respectively to align with the City and County of San Francisco Employees' Retirement System assumptions.

Per person healthcare cost trends were updated to reflect known premium increases through calendar year 2017, higher trends starting for calendar year 2016, and grading down to an ultimate trend rate beginning in 2032 of 4.50%.

Average annual claims assumptions by age were updated to reflect recent experience.

An assumption was added to recognize that certain participants returning to work would remain under the pre-Proposition B vesting provisions, but make contributions under the Proposition B schedule. In order to project payroll for employees eligible for the pre-Proposition B vesting schedule, we assumed the following portion of newly hired employees were originally hired on or before January 9, 2009 and returned to work: 26% for FYE 2015, 18% for FYE 2016, and 13% for FYE 2017.

APPENDIX C – SUBSTANTIVE PLAN PROVISIONS

Eligibility:

Permanent full-time and elected employees are eligible to retire and receive postretirement health insurance benefits when they are eligible for retirement benefits from the City and County of San Francisco's Retirement System. Certain members of the California Public Employees' Retirement System and certain Court employees are also eligible for benefits from the City. Employees of the San Francisco Unified School District and the San Francisco Community College District are not included in the retiree medical plan. The eligibility requirements are as follows:

City and County of San Francisco's Retirement System (SFERS)

Normal Retirement	Miscellaneous	Age 50 with 20 years of credited service[1]
		Age 60 with 10 years of credited service
	Safety	Age 50 with 5 years of credited service
Disabled Retirement[2]	Any age with 10 years of credited service	
Terminated Vested[3]	Age 50 with 5 years of credited service at separation	
Active Death[2]	Any age with 10 years of credited service	

California Public Employees' Retirement System (CalPERS)

A small group of currently active employees, previously considered a State Agency, have been shifted to the City's responsibility. This group is subject to CalPERS retirement criteria (age 50 and 5 years of credited service).

Courts

Members separated as of January 1, 2001 are the responsibility of the City and County of San Francisco. These participants are subject to the eligibility requirements of SFERS.

Benefits for Retirees:

Medical: PPO – City Health Plan (self-insured)
HMO – Kaiser (fully-insured) and Blue Shield (flex-funded)

Dental: Delta Dental & DeltaCare USA

Vision: Vision benefits are provided under the medical insurance plans and are administered by Vision Service Plan.

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1 Age 53 with 20 years of credited service, age 60 with 10 years of credited service, or age 65 for Miscellaneous members hired on or after January 7, 2012.

2 No service requirement for Safety members retiring under the industrial disability benefit or for surviving spouses / domestic partners of those killed in the line of duty.

3 Effective with Proposition B, passed 6/3/2008, participants hired on or after January 10, 2009 must retire within 180 days of separation in order to be eligible for retiree healthcare benefits from the City.

APPENDIX C – SUBSTANTIVE PLAN PROVISIONS

Premiums: Monthly premiums for July 1, 2014 through December 31, 2017 are as follows.

Participants in the California Superior Courts, the San Francisco Unified School District, and the San Francisco Community College District are allowed to participate in these plans as active employees.

Medical Premiums / Premium Equivalents *				
	Pre-Medicare		Medicare Eligible	
	Single	Dual	Single	Dual
January 1, 2014 – December 31, 2014				
Active				
Blue Shield	$ 647.37	$ 1,292.73	N/A	N/A
City Plan	1,227.55	2,412.45	N/A	N/A
Kaiser	565.11	1,128.19	N/A	N/A
Retiree				
Blue Shield	$ 1,436.19	$ 2,081.56	$ 384.60	$ 767.17
City Plan	1,428.97	2,815.25	364.18	694.66
Kaiser	1,134.67	1,697.75	352.49	702.95
January 1, 2015 – December 31, 2015				
Active				
Blue Shield **	$ 673.02	$ 1,344.04	N/A	N/A
City Plan	1,012.41	1,987.35	N/A	N/A
Kaiser	553.98	1,105.93	N/A	N/A
Retiree				
Blue Shield	$ 1,493.40	$ 2,164.42	$ 384.60	$ 767.17
City Plan	1,185.63	2,333.77	271.86	519.47
Kaiser	1,112.15	1,664.10	314.23	626.43
January 1, 2016 – December 31, 2016				
Active				
Blue Shield	$ 721.53	$ 1,441.07	N/A	N/A
City Plan	756.67	1,484.92	N/A	N/A
Kaiser	554.02	1,106.01	N/A	N/A
Retiree				
Blue Shield	$ 1,664.39	$ 2,412.11	$ 374.50	$ 746.97
City Plan	934.45	1,838.78	280.66	534.74
Kaiser	1,112.19	1,664.18	320.99	639.95
January 1, 2017 – December 31, 2017				
Active				
Blue Shield	$ 752.25	$ 1,500.09	N/A	N/A
City Plan	802.40	1,561.09	N/A	N/A
Kaiser	582.54	1,160.70	N/A	N/A
Retiree				
Blue Shield ***	$ 1,733.42	$ 2,511.01	N/A	N/A
City Plan	1,142.48	2,241.22	329.18	653.98
Kaiser	1,167.51	1,745.67	349.11	693.84

* Includes Rx, vision, and expense.

** Active 2015 Blue Shield premiums shown exclude negative claims stabilization amounts while Active 2016 and 2017 Blue Shield premiums include positive claims stabilization amounts.

*** Blue Shield plan for Medicare eligible retirees is no longer available after 2016.

APPENDIX C – SUBSTANTIVE PLAN PROVISIONS

Health Plan Last Modified Plan:	1/1/2014 Blue Shield Access+ (HMO)	1/1/2014 Blue Shield 65 Plus (HMO)	1/1/2014 City Health Plan (PPO)	1/1/2014 Kaiser (HMO)
In-Network (INN) Benefits				
Deductible (Individual / Family)	None	None	$250 / $750	None
Coinsurance	N/A	N/A	15%	N/A
Out-of-Pocket Max (Individual / Family)	$2,000 / $4,000	$6,700 (Part A&B services)	$3,750 per person	$1,500 / $3,000
Copays				
Preventive Care	Fully Covered	Fully Covered	Fully Covered	Fully Covered
Office Visit (OV) - Primary Care (PCP)	$25 per visit	$25 per visit	DC[1]	$20 per visit
OV - Specialist Care Provider (SCP)	$30 per visit	$25 per visit	DC[1]	$20 per visit
Hospital Emergency Room (ER)	$100 per visit	$100 per visit	DC[1]	$100 per visit
Outpatient Surgery	$100 per surgery	$100 per surgery	DC[1]	$35 per surgery
Hospital Inpatient	$200 per admission	$200 per admission	DC[1]	$100 per admission
Lifetime Max	Unlimited	Unlimited	Unlimited	Unlimited
Out-of-Network (OON) Benefits	**Not Covered**	**Not Covered**		**Not Covered**
Deductible (Individual / Family)			$250 / $750	
Coinsurance			50%	
Office Visits (PCP) & (SCP)			DC[1]	
Out-of-Pocket Max (Individual / Family)			$7,500 per person	
Lifetime Max			Unlimited	
Prescription Drugs				
Retail (30 Days) - Generic/Formulary/Non-Form.	$10 / $25 / $50	$10 / $25 / $50	$5 / $20 / $45 (OON then 50% coins)	$5 / $15 / $15
Mail Order (90 Days) - Generic/Form./Non-Form.	$20 / $50 / $100	$20 / $50 / $100 (OON $30 / $75 / $150)	$10 / $40 / $90 (OON no coverage)	$10 / $30 / $30
Specialty Pharmacy	20% of script up to $100	20% of script up to $100 (includes injectibles)	Same as Mail/Retail	N/A
Mental Health and Substance Abuse				
Mental Health Inpatient	$200 per admission	$200 per admission	DC[1]	$100 per admission
Mental Health Outpatient	$25 per visit	$25 per visit	DC[1]	$20 per visit
Substance Abuse Inpatient	$200 per admission	$200 per admission	DC[1]	$100 per admission
Substance Abuse Outpatient	$25 per visit	$25 per visit	DC[1]	$20 per visit
Detail Benefits				
Chiropractic Benefit	$15 per visit (30 visit limit)	$20 per visit	Deductible and 50% Coins.	$15 per visit
Rehab (speech, occupational, physical)	$25 per visit	$25 per visit	DC[1]	$20 per visit
Hearing Aids	$2500 for 36 mos.	$2500 for 36 mos.	$2500 for 36 mos.	$2500 for 36 mos.
Durable Medical Equipment	Fully Covered	Fully Covered	DC[1]	Fully Covered
Medical Management	PCP referral required	PCP referral required	Required on Some Services	PCP referral required
Medicare Integration	N/A	Medicare Advantage & Coordination of Benefits		Medicare Advantage & Coordination of Benefits
Vision Care Services	**Not Covered**	**Not Covered**	**Not Covered**	**Not Covered**

[1] DC = Deductible and coinsurance applies

APPENDIX C – SUBSTANTIVE PLAN PROVISIONS

Cost Sharing Provisions:

Medical & Vision: Members are required to pay the difference between the cost of coverage and the City contribution.

Dental Coverage: Retirees pay the full cost of dental coverage offered by the City for themselves and their dependents.

City Contribution: The City pays a portion of the retiree or spouse/domestic partner premium as detailed in the following table with the vesting schedule also applied. The City's contribution is limited by the premium. Medicare Part B premiums are the responsibility of the retiree.

City Contribution*	
Pre-Medicare:	
Retiree/Surviving Spouse	Single Retiree Premium less 50% of the amount the Single Active Premium exceeds the 10-County Amount
Spouse/Domestic Partner	50% of the difference between the Single and Dual Retiree Coverage Premiums
Child	None
Medicare Eligible:	
Retiree/Surviving Spouse	100% of Single Retiree Premium, up to the 10-County Amount
Spouse/Domestic Partner	50% of the difference between the Single and Dual Retiree Coverage Premiums
Child	None

* For participants terminated on or before 6/30/2001 and not yet retired, Proposition C (passed 11/8/2011) removes the additional City Contribution put in place by Proposition E (passed 11/7/2000), which decreased the amount the retiree pays for single or dual coverage by half.

Vesting Schedule (based on years of service)*	
Originally hired on or before January 9, 2009 (with 5 years)	100%
Originally hired on or after January 10, 2009	
Under 10 years	0%
10 to 15 years	50%
15 to 20 years	75%
Over 20 years	100%

* Proposition B, passed 6/3/2008, introduced this vesting schedule to the postretirement health benefit plan. Participants retiring under disability or benefiting under the active death benefit receive 100% of the City Contribution, regardless of hire date and service. The participant's vesting schedule is based on their original hire date.

APPENDIX C – SUBSTANTIVE PLAN PROVISIONS

10-County Amount: The 10-County Amount (historical amounts are listed in the table below) is the average of the monthly employer contribution in the ten most populous counties in California (other than San Francisco).

10-County Amount	
Period Ending	
December 31, 2014	$ 559.65
December 31, 2015	567.80
December 31, 2016	579.24
December 31, 2017	604.84

Retiree Health Care Trust Fund Contributions:

Employees most recently hired before January 10, 2009: Once there is no Unfunded Actuarial Liability, employees contribute the lesser of 50% of the normal cost or 1% of payroll and the employer contributes the remainder of the normal cost. Prior to becoming fully funded, employee and employer contributions are the lesser of 100% of normal cost or as follows:

RHCTF Contribution Schedule Employees Hired Before January 10, 2009		
FYE	**Employee**	**Employer**
2016 and Earlier	0.00%	0.00%
2017	0.25%	0.25%
2018	0.50%	0.50%
2019	0.75%	0.75%
2020 and later	1.00%	1.00%

Employees most recently hired on or after January 10, 2009: Once there is no Unfunded Actuarial Liability, employees contribute the lesser of 50% of the normal cost or 2% of payroll and the employer contributes the remainder of the normal cost. Prior to becoming fully funded, employee contributions are the lesser of 100% of normal cost or 2% of payroll and employer contributions are 1% of payroll.

The participant's contribution is based on their latest date of hire.

Disbursements from Retiree Health Care Trust Fund:

Other than disbursements described below to stabilize City contributions and disbursements for reasonable administrative expenses, no disbursements may be made from the RHCTF unless it is fully funded.

If City retiree health care costs (RHCTF contributions plus benefit payments) are projected to exceed 10% of payroll, with approval of the Mayor and by resolution of the Board of Supervisors, the RHCTF Board may authorize stabilization disbursements up to the extent

APPENDIX C – SUBSTANTIVE PLAN PROVISIONS

necessary to reduce the City's retiree health care costs to 10% of payroll provided that such stabilization disbursement does not exceed 10% of the balance in the RHCTF as of the prior year.

Changes Since Last Valuation:

The Blue Shield Medicare plan is being replaced with a new City Medicare plan beginning January 1, 2017.

APPENDIX D – GLOSSARY OF TERMS

1. **Actuarial Assumptions**
   Assumptions as to the occurrence of future events affecting costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and, other relevant items.

2. **Actuarial Cost Method**
   A procedure for determining the actuarial present value of plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

3. **Actuarial Gain (Loss) (Called Actuarial Experience Gain and Loss)**
   A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. **Actuarial Liability, i.e., Actuarial Accrued Liability**
   That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of projected benefits which will not be paid by future Normal Costs.

5. **Actuarial Present Value (Present Value)**
   The value as of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

   a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.),
   b. multiplied by the probability of the occurrence of the event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
   c. discounted according to an assumed rate (or rates) or return to reflect the time value of money.

   As a simple example: assume you owe $100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you won't be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

Amount		Probability of Payment	$\frac{1}{(1+\text{Discount Rate})}$		
$100	x	(1 - .01)	1/(1+.1)	=	$90

APPENDIX D – GLOSSARY OF TERMS

6. **Actuarial Valuation**
   The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for the Plan.

7. **Actuarial Value of Assets**
   The value of cash, investments and other property belonging to a Plan, as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an actuarial value of assets is to smooth out fluctuations in market values. This way, long-term costs are not distorted by short-term fluctuations in the market.

8. **Amortization**
   The portion of the Plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

9. **Discount Rate**
   The estimated long-term interest yield on the investments that are expected to be used to finance the payment of benefits, with consideration given to the nature and mix of current and expected investments and the basis used to determine the Actuarial Value of Assets.

10. **Entry Age Normal Actuarial Cost Method**
    A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. **Funded Ratio**
    The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

12. **Normal Cost**
    That portion of the Actuarial Present Value of the Plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

13. **Unfunded Actuarial Liability**
    The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

14. **Per Person Cost Trend, i.e., Healthcare Cost Trend Rate**
    The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

APPENDIX E – ABBREVIATION LIST

Actuarial Accrued Liability (AAL)
Actuarial Valuation Report (AVR)
Annual Required Contribution (ARC)
Coordination of Benefits (COB)
Deductible and Coinsurance (DC)
Durable Medical Equipment (DME)
Employee Assistance Program (EAP)
Employee Benefits Division (EBD)
Fiscal Year Ending (FYE)
Governmental Accounting Standards Board (GASB)
Hospital Emergency Room (ER)
In-Network (INN)
Inpatient (IP)
Medicare Eligible (ME)
Net Other Postemployment Benefit (NOO)
Non-Medicare Eligible (NME)
Not Applicable (NA)
Office Visit (OV)
Other Postemployment Benefit (OPEB)
Out-of-Network (OON)
Out-of-Pocket (OOP)
Outpatient (OP)
Pay-as-you-go (PAYGo)
Per Person Per Month (PPPM)
Pharmacy (Rx)
Preferred Provider Organization (PPO)
Primary Care Physician (PCP)
Specialist Care Provider (SCP)
Summary Plan Description (SPD)
Unfunded Actuarial Accrued Liability (UAAL)
Unfunded Actuarial Liability (UAL)
Urgent Care (UC)

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