

RESOLUTION NO. 22-17

Resolution Of The City Council Of The City Of Emeryville Authorizing The City Manager To Execute The Second Amendment To The Agreement Between The City Of Emeryville And The Alameda County Fire Department Regarding Fire And Emergency Services For The Term July 1, 2022 Through June 30, 2024

WHEREAS, the City of Emeryville and the Alameda County Fire Department (ACFD) (the Parties) previously entered into an agreement for fire and emergency response services in June 2012, which was extended through June 2018; and

WHEREAS, a new agreement between the City of Emeryville and ACFD for the period July 1, 2018 through June 30, 2020 was approved by the City Council on June 19, 2018 ("Agreement") and said Agreement allows the parties to extend for two, two year periods upon mutual agreement; and

WHEREAS, on April 21, 2020, the City Council approved the first amendment to the Agreement to extend the term to cover the period July 1, 2020, to June 30, 2022; and

WHEREAS, the ACFD Fire Chief is authorized to administratively execute a second amendment to the Agreement with the City of Emeryville to extend the term for another two years to June 30, 2024 and the Parties desire to do so;

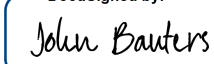
WHEREAS, the Parties acknowledge and accept the validity of the extension pursuant to section 9(a) of the Agreement, which allows the Parties to mutually agree to execute an amendment extending the term within nine months of the end of the previous term; now, therefore, be it

RESOLVED, that the City Council of the City of Emeryville authorizes the City Manager to execute the second amendment to the agreement with the Alameda County Fire Department, in substantially the form attached hereto, for the provision of fire and emergency services for the term of July 1, 2022, to June 30, 2024.

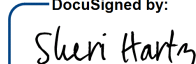
Resolution No. 22-17
Fire Services Agreement; Second Amendment
City Council Meeting | February 1, 2022
Page 2 of 2

ADOPTED, by the City Council of the City of Emeryville at a regular meeting held Tuesday, February 1, 2022, by the following vote:

AYES:	<u>5</u>	Mayor Bauters, Vice Mayor Medina and Council Members Donahue, Martinez and Welch
NOES:	<u>0</u>	
ABSTAIN:	<u>0</u>	
ABSENT:	<u>0</u>	

DocuSigned by:

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MAYOR

ATTEST:

DocuSigned by:

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CITY CLERK

APPROVED AS TO FORM:

DocuSigned by:

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INTERIM CITY ATTORNEY

ATTACHMENTS

- Exhibit A – Second Amendment to Fire Contract

**SECOND AMENDMENT TO THE AGREEMENT BETWEEN THE CITY OF EMERYVILLE AND THE ALAMEDA
COUNTY FIRE DEPARTMENT REGARDING FIRE AND EMERGENCY SERVICES**

This is the Second Amendment to that certain agreement effective June 30, 2018 between the ALAMEDA COUNTY FIRE DEPARTMENT, a dependent fire district formed under the Fire Protection District Law of 1987 (Health and Safety Code Sections 13800 et. seq.) and governed by the Board of Supervisors of the County of Alameda as its Board of Directors (ACFD) and the CITY OF EMERYVILLE (City), a municipal corporation (the Parties).

RECITALS

WHEREAS ACFD and the City previously entered into a contract for fire and emergency response services on or about July 1, 2012 and extended that contract through June 30, 2018; and

WHEREAS on or about June 30, 2018 ACFD and the City entered into a new two-year contract for fire and emergency response services (the 2018 Agreement); and

WHEREAS Section 9(a) of the 2018 Agreement provides that it may be extended for up to two successive two-year terms by mutual written agreement of the parties, provided the extension is executed at least nine months before the then-effective expiration date unless the parties agree otherwise; and

WHEREAS on or about May 6, 2020, the parties executed First Amendment to the 2018 Agreement to extend the contract for two years, through June 30, 2022, on the same terms and conditions as set forth therein; and

WHEREAS ACFD and the City both wish to extend the 2018 Agreement for another two-year term through June 30, 2024 on the same terms and conditions as set forth therein; and

WHEREAS the parties acknowledge and accept the validity of the extension, despite the execution of the amendment occurring after the nine-month period otherwise required by that section.

AMENDMENTS TO 2018 AGREEMENT

In consideration of the mutual promises contained in the 2018 Agreement, as amended, and herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

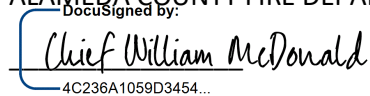
1. Section 9 (a) Term, is hereby amended to read, in its entirety, as follows:

This agreement is for a term of six (6) years, from 12:00a.m. on July 1, 2018 until 11:59p.m. on June 30, 2024.

2. Exhibit 5, Five Year Cost Projection Provided by ACFD is deleted and replaced with the version of Exhibit 5, amended as attached to this Amendment.
3. Exhibit 6, GASB 45 Actuarial Valuation is deleted and replaced with the version of Exhibit 6, amended as attached to this Amendment.

In witness hereof, the City by Resolution duly adopted by its City Council has approved the execution of this Second Amendment and the Board of Directors of the Alameda County Fire District delegated authority to the Fire Chief to execute this Second Amendment as of this day of this ___ day of January 2022.

ALAMEDA COUNTY FIRE DEPARTMENT, a dependent fire protection district

DocuSigned by:

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By: William McDonald

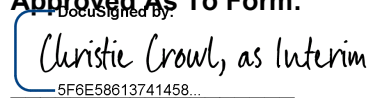
Fire Chief

CITY OF EMERYVILLE

By: _____

City Manager

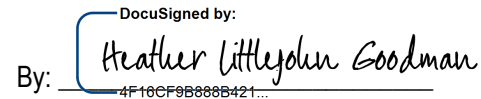
Approved As To Form:

DocuSigned by:

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City Attorney

Approved as to Form:

Donna R. Ziegler, County Counsel

DocuSigned by:

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Heather Littlejohn Goodman

Deputy County Counsel

ALAMEDA COUNTY FIRE DEPARTMENT
CITY OF EMERYVILLE FIRE SERVICE CONTRACR PROPOSED BUDGET FOR FY 2021-22 AND PROJECTIONS

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
	ADOPTED BUDGET	PROPOSED BUDGET	PROJECTION	PROJECTION	PROJECTION	PROJECTION
Allocated %	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%
PROGRAM SERVICES & SUPPLIES	\$536,569	\$532,691	\$545,920	\$559,667	\$573,967	\$588,860
APPARATUS & EQUIPMENT	\$80,526	\$80,526	\$82,137	\$83,780	\$85,456	\$87,165
BUILDINGS & GROUNDS	\$1,626	\$1,626	\$1,659	\$1,692	\$1,726	\$1,761
PPE & UNIFORMS	\$33,621	\$30,587	\$31,199	\$31,823	\$32,459	\$33,108
BLDG RENTS & LEASES	\$31,081	\$31,418	\$34,560	\$38,016	\$41,818	\$46,000
EQUIP RENTS & LEASES	\$1,975	\$1,975	\$2,074	\$2,178	\$2,287	\$2,401
RADIOS	\$14,311	\$14,458	\$14,747	\$15,042	\$15,343	\$15,650
INFORMATION TECHNOLOGY	\$101,049	\$103,223	\$105,287	\$107,393	\$109,541	\$111,732
PROFESSIONAL SEVICES	\$14,697	\$14,697	\$14,991	\$15,291	\$15,597	\$15,909
DISPATCH CONTRACT	\$111,289	\$108,122	\$110,284	\$112,490	\$114,740	\$117,035
DISASTER PREPAREDNESS	\$443	\$955	\$974	\$993	\$1,013	\$1,033
EMS	\$33,577	\$30,765	\$31,380	\$32,008	\$32,648	\$33,301
FIRE PREVENTION	\$4,923	\$4,780	\$4,876	\$4,974	\$5,073	\$5,174
FUEL/TRANSP	\$23,428	\$24,980	\$25,480	\$25,990	\$26,510	\$27,040
HAZARDOUS MATERIALS	\$7,502	\$6,779	\$6,915	\$7,053	\$7,194	\$7,338
HOUSEHOLD SUPPLIES	\$9,579	\$9,579	\$9,771	\$9,966	\$10,165	\$10,368
OPERATIONS	\$895	\$895	\$913	\$931	\$950	\$969
LAUNDRY	\$6,609	\$6,609	\$6,741	\$6,876	\$7,014	\$7,154
MAPPING	\$1,265	\$1,399	\$1,427	\$1,456	\$1,485	\$1,515
ADMINISTRATION	\$3,425	\$3,002	\$3,062	\$3,123	\$3,185	\$3,249
PUB ED & COMM RELATIONS	\$3,829	\$4,974	\$5,073	\$5,174	\$5,277	\$5,383
SCBA	\$6,131	\$6,131	\$6,254	\$6,379	\$6,507	\$6,637
STAFF VEHICLES	\$17,064	\$19,366	\$19,753	\$20,148	\$20,551	\$20,962
TRG & STAFF DEV.	\$18,026	\$15,773	\$16,088	\$16,410	\$16,738	\$17,073
RESCUE	\$3,536	\$3,475	\$3,545	\$3,616	\$3,688	\$3,762
WILDLAND	\$462	\$625	\$638	\$651	\$664	\$677
HUMAN RESOURCES	\$4,780	\$4,780	\$4,876	\$4,974	\$5,073	\$5,174
RESERVE	\$920	\$1,192	\$1,216	\$1,240	\$1,265	\$1,290

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
	ADOPTED BUDGET	PROPOSED BUDGET	PROJECTION	PROJECTION	PROJECTION	PROJECTION
Allocated %	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%
COUNTY OVERHEAD	\$163,245	\$128,087	\$155,513	\$163,289	\$171,452	\$180,025
COUNTY HUMAN RESOURCE SERVICES	\$12,405	\$13,081	\$13,735	\$14,422	\$15,143	\$15,900
COUNTY AUDITOR SERVICES	\$2,205	\$2,321	\$2,437	\$2,559	\$2,687	\$2,821
COUNTY LEGAL SERVICES	\$21,798	\$18,607	\$19,537	\$20,514	\$21,540	\$22,617
GSA COMMUNICATIONS	\$1,528	\$1,527	\$1,603	\$1,683	\$1,767	\$1,855
GSA ELECT EQUIP MAINTENANCE	\$13,902	\$13,954	\$14,652	\$15,385	\$16,154	\$16,962
GSA TRANSPORTATION	\$3,199	\$3,528	\$3,704	\$3,889	\$4,083	\$4,287
COUNTY INFORMATION TECHNOLOGY	\$17,702	\$16,389	\$17,208	\$18,068	\$18,971	\$19,920
RISK MGT PROFESSIONAL LIABILITY	\$37,250	\$45,469	\$47,742	\$50,129	\$52,635	\$55,267
COUNTY INDIRECTS	\$53,256	\$13,211	\$34,895	\$36,640	\$38,472	\$40,396
FIXED ASSETS	\$20,731	\$24,600	\$25,092	\$25,594	\$26,106	\$26,628
ALL PROGRAMS AND OVERHEAD TOTAL	\$720,545	\$685,378	\$726,525	\$748,550	\$771,525	\$795,513
SALARIES AND EMPLOYEE BENEFITS	\$6,748,356	\$6,983,826	\$7,260,237	\$7,499,423	\$7,748,643	\$7,988,225
BASE SALARY	\$3,517,576	\$3,595,192	\$3,702,468	\$3,812,689	\$3,926,228	\$4,043,280
OVERTIME	\$777,669	\$787,219	\$810,835	\$835,160	\$860,215	\$886,022
HOLIDAY PAY	\$162,921	\$167,676	\$172,700	\$177,889	\$183,223	\$188,719
PERS RETIREMENT	\$1,232,154	\$1,329,859	\$1,412,928	\$1,462,935	\$1,514,680	\$1,548,477
EMPLOYEE CONTRIBUTION TO EMPLOYER RETIREMENT COSTS	(\$69,716)	(\$86,599)	(\$89,180)	(\$91,935)	(\$94,677)	(\$97,392)
PAYROLL TAXES	\$65,168	\$66,523	\$69,656	\$71,702	\$73,811	\$75,981
HEALTH INSURANCE - ACTIVE	\$521,942	\$549,053	\$573,770	\$599,583	\$626,560	\$654,758
HEALTH INSURANCE - RETIREE	\$263,818	\$285,674	\$308,756	\$323,194	\$340,016	\$358,938
EMPLOYEE CONTRIBUTION TO HEALTH INSURANCE	(\$52,900)	(\$56,207)	(\$59,308)	(\$61,983)	(\$64,765)	(\$67,682)
DENTAL	\$35,144	\$34,926	\$34,926	\$34,926	\$34,926	\$34,926
401A CONTRIBUTION	\$51,265	\$52,531	\$54,069	\$55,659	\$57,298	\$58,986
OTHER BENEFITS	\$50,153	\$50,067	\$50,311	\$50,382	\$50,444	\$50,494
WORKERS COMP	\$193,162	\$207,912	\$218,306	\$229,222	\$240,684	\$252,718

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
	ADOPTED BUDGET	PROPOSED BUDGET	PROJECTION	PROJECTION	PROJECTION	PROJECTION
Allocated %	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%
CONTRACT WITH OAKLAND FIRE DEPARTMENT FOR ADDITIONAL COVERAGE	\$210,685	\$221,219	\$232,280	\$243,894	\$256,089	\$268,893
OPERATING BUDGET TOTAL	\$7,679,586	\$7,890,423	\$8,219,042	\$8,491,867	\$8,776,257	\$9,052,631
\$ Increase		\$210,837	\$328,619	\$272,825	\$284,390	\$276,374
% Increase		2.75%	4.16%	3.32%	3.35%	3.15%
GRANT & CAPITAL IMPROVEMENT PROJECTS	\$116,312	\$9,620	\$0	\$0	\$0	\$0
EQUIPMENT REPLACEMENT	\$116,312	\$9,620				
PROPOSED CONTRACT TOTAL	\$7,795,898	\$7,900,043	\$8,219,042	\$8,491,867	\$8,776,257	\$9,052,631
UNFUNDED ADC FOR OPEB	\$52,883	\$0	\$0	\$0	\$0	\$0
NORMAL COST	\$267,580	\$265,353	\$273,977	\$282,881	\$292,075	\$301,567
UAAL AMORT	\$212,145	\$181,720	\$187,626	\$193,724	\$200,020	\$206,521
PAY-GO	(\$263,818)	(\$285,674)	(\$308,756)	(\$323,194)	(\$340,016)	(\$358,938)
EMPLOYEE CONTRIBUTION TO CERBT	(\$163,024)	(\$166,867)	(\$171,886)	(\$177,033)	(\$182,345)	(\$187,815)
RECOMMENDED CONTRACT TOTAL WITH FULL ADC	\$7,848,781	\$7,900,043	\$8,219,042	\$8,491,867	\$8,776,257	\$9,052,631

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
	ADOPTED BUDGET	PROPOSED BUDGET	PROJECTION	PROJECTION	PROJECTION	PROJECTION
Allocated %	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%

ASSUMPTIONS:

COLA - IAFF Local 55	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
COLA - Unrepresented Non-Management	3.00%	3.25%	3.25%	3.00%	3.00%	3.00%
COLA - Unrepresented Management	3.25%	3.25%	3.00%	3.00%	3.00%	3.00%
Health Premium Cost Increase	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Dental Premium	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PERS Rate - Safety Plan	36.293%	38.000%	39.200%	39.400%	39.600%	39.300%
PERS Rate - Classic Misc. Plan	15.655%	16.780%	17.470%	17.760%	18.070%	18.100%
Workers Comp		5.00%	5.00%	5.00%	5.00%	5.00%
Program Services & Supplies			2.00%	2.00%	2.00%	2.00%
County Overhead Allocation			5.00%	5.00%	5.00%	5.00%
EE Contribution to ER PERS - Classic Safety	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
EE Contribution to ER PERS - PEPRA Safety	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%



ALAMEDA COUNTY FIRE DEPARTMENT RETIREE HEALTHCARE PLAN

June 30, 2019 Actuarial Valuation

Bartel Associates, LLC

Doug Pryor, Vice President

Catherine Wandro, Assistant Vice President & Actuary

Daniel Park, Actuarial Analyst

Katherine Moore, Associate Actuary

May 25, 2020

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BENEFIT SUMMARY

■ Eligibility	■ Service or disability retirement under CalPERS										
■ Medical Benefit	■ Full monthly premium up to cap ¹ :										
	<table><tr><th>Hire Date</th><th>Cap</th><th>Vesting Schedule</th></tr><tr><td>< 4/1/09</td><td rowspan="2">100% of Kaiser Bay Area Premium – Single, 2-Party, or Family</td><td>No</td></tr><tr><td>4/1/09-1/31/15</td><td rowspan="2">Yes</td></tr><tr><td>≥ 2/1/15²</td><td>90% of Kaiser Bay Area Premium – Single or 2-Party</td></tr></table>	Hire Date	Cap	Vesting Schedule	< 4/1/09	100% of Kaiser Bay Area Premium – Single, 2-Party, or Family	No	4/1/09-1/31/15	Yes	≥ 2/1/15 ²	90% of Kaiser Bay Area Premium – Single or 2-Party
	Hire Date	Cap	Vesting Schedule								
	< 4/1/09	100% of Kaiser Bay Area Premium – Single, 2-Party, or Family	No								
	4/1/09-1/31/15		Yes								
	≥ 2/1/15 ²	90% of Kaiser Bay Area Premium – Single or 2-Party									
■ Kaiser premium cap varies by:											
● Medical coverage											
● Medicare eligibility											

¹ For special Safety group of retirees cap is \$164.94/mo. single or \$250.85/mo. 2-Party.

² MOUs indicate 1/1/15, but date adopted by CalPERS was 2/1/15.



BENEFIT SUMMARY

■ Vesting Schedule	■ Vesting % based on CalPERS service, minimum 5 years ACFD service:			
	CalPERS Service	Vesting Percent	CalPERS Service	Vesting Percent
	<10	PEMHCA Min	15	75%
	10	50%	16	80%
	11	55%	17	85%
	12	60%	18	90%
	13	65%	19	95%
	14	70%	20+	100%
	■ 100% vesting with disability retirement.			
■ Surviving Spouse	■ 100% of retiree benefit continues to surviving spouse if retiree elects survivor annuity under CalPERS retirement plan			
■ Other Benefits	■ No dental, vision, life, or Medicare Part B reimbursements.			



BENEFIT SUMMARY

■ Employee Contrib.	■ Per current MOUs: Effective 1/1/14 (7/1/14 to unrepresented) employees are required to contribute a percent of pay to the OPEB Plan:			
	<u>Year</u>	<u>Fire</u>	<u>Misc</u>	
	2019	4.468151%	5.233606%	
	2020	5.251237%	5.923652%	
■ Pay-As-You-Go Costs	<u>Fiscal Year</u>	<u>Cash PayGo</u>	<u>Implied Subsidy</u>	<u>Total</u>
	■ 2018/19	\$4,115,286	\$817,000	\$4,932,286
	■ 2017/18	\$3,867,448	\$759,000	\$4,626,448
	■ 2016/17	\$3,545,260	\$685,000	\$4,230,260
	■ 2015/16	\$3,171,111	n/a	\$3,171,111
	■ 2014/15	\$2,807,121	n/a	\$2,807,121
	■ 2013/14	\$2,452,762	n/a	\$2,452,762
■ Contract Agencies	■ Costs allocated to contract agencies based on agencies’ cost allocation percentage with ACFD			



BENEFIT SUMMARY

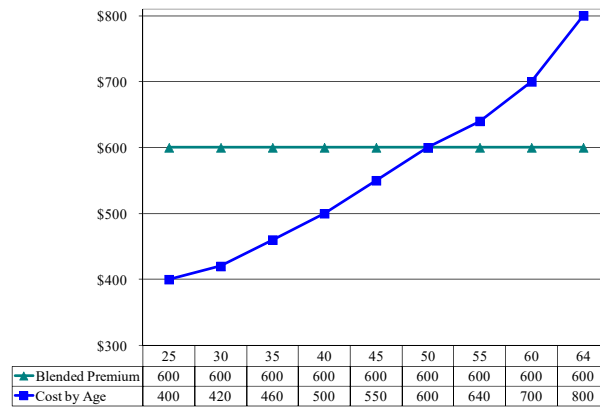
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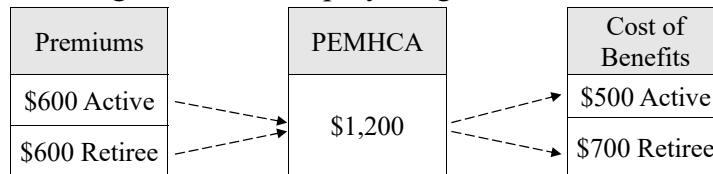
IMPLIED SUBSIDY

- For PEMHCA, employer cost for allowing retirees to participate at active rates.

- General trend:



- Sample assuming one active employee age 40 and one retiree age 60:



IMPLIED SUBSIDY

- GASB defers to actuarial standards of practice.
- Prior Actuarial Standards of Practice No. 6³ (ASOP 6) allowed community rated plans to value liability using premiums, resulting in no implied subsidy.
- In May 2014, Actuarial Standards Board released revised ASOP 6:
 - Requires implied subsidy valued for community rated plans such as PEMHCA.
 - Timing: effective with all valuations on or after March 31, 2015 with earlier implementation encouraged
- June 30, 2015 and later valuations include the PEMHCA implied subsidy.

³ Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Plan Costs or Contributions.



DATA SUMMARY

Historical Participant Statistics

	6/30/11	6/30/13	6/30/15	6/30/17	6/30/19
■ Actives:					
• Count	410	417	421	419	426
• Average Age	42.0	43.5	42.6	41.7	41.7
• Average Service					
➢ ACFD	7.7	8.6	8.3	8.6	9.3
➢ CalPERS	12.3	13.6	13.0	12.1	12.3
• Average Salary	\$118,000	\$111,700	\$115,500	\$120,600	\$130,300
• Total Salary (000s)	48,377	46,590	48,607	50,541	55,516
■ Retirees:					
• Count	191	208	246	292	308
• Average Age	63.6	64.0	64.1	63.9	64.1
• Average Retirement Age					
➢ Service Retirement	54.4	54.3	54.4	54.6	54.6
➢ Disability Retirement	52.2	52.2	52.5	53.1	53.3



DATA SUMMARY

Participant Reconciliation

	Actives	Retirees	Disabled	Surviving Spouses	Total
■ June 30, 2017 Valuation	419	181	87	24	711
• New Hires	49	-	-	-	49
• Terminations	(15)	-	-	-	(15)
• New Service Retirements	(19)	19	-	-	-
• New Disability Retirements	(11)	-	11	-	-
• Death with Survivor	-	(2)	-	2	-
• Death w/o Survivor or Cancelled	-	(5)	(7)	(2)	(14)
• Data Adjustments	<u>3</u>	<u>(1)</u>	<u>1</u>	<u>-</u>	<u>3</u>
■ June 30, 2019 Valuation	426	192	92	24	734



ACTUARIAL ASSUMPTIONS HIGHLIGHTS

Discount Rate

■ CERBT Investment Options

	Strategy 1	Strategy 2	Strategy 3
Global Equity	59%	40%	22%
Fixed Income	25%	43%	49%
TIPS	5%	5%	16%
Commodities	3%	4%	5%
REITs	<u>8%</u>	<u>8%</u>	<u>8%</u>
Total	100%	100%	100%

- ACFD currently in Strategy 1.
- Separate sub-accounts for each contracting agency.



ACTUARIAL ASSUMPTIONS HIGHLIGHTS

Discount Rate

■ Future expected returns

- Stochastic simulations of geometric average returns over 20 years
- 5,000 trials
- 2.75% inflation assumption
- Projections based on 5 independent Investment Advisors 2017 10-year Capital Market Assumptions and where available, investment advisors anticipated long-term trends:
- Confidence levels:

	Strategy 1	Strategy 2	Strategy 3
50% Confidence Level	6.75%	6.25%	5.50%
55% Confidence Level	6.50%	6.00%	5.25%
60% Confidence Level	6.00%	5.75%	5.25%



ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	June 30, 2017 Valuation	June 30, 2019 Valuation
■ Valuation Date	<ul style="list-style-type: none"> ■ June 30, 2017 ■ 2018/19 and 2019/20 ADC 	<ul style="list-style-type: none"> ■ June 30, 2019 ■ 2020/21 and 2021/22 ADC
■ General Inflation	<ul style="list-style-type: none"> ■ 2.75% ■ Used for economic assumptions 	<ul style="list-style-type: none"> ■ Same
■ Payroll Increases	<ul style="list-style-type: none"> ■ Aggregate Increases – 3.00% ■ Merit Increases – CalPERS 1997-2015 Experience Study 	<ul style="list-style-type: none"> ■ Same
■ Mortality, Termination, Disability, Retirement	<ul style="list-style-type: none"> ■ CalPERS 1997-2015 Experience Study ■ Pre-retirement mortality projected with 15-year 90% Scale MP-2016 ■ Post-retirement mortality projected with Scale MP-2017 	<ul style="list-style-type: none"> ■ CalPERS 1997-2015 Experience Study ■ Mortality projected with Scale MP-2019



ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	June 30, 2017 Valuation	June 30, 2019 Valuation
■ Discount Rate	<ul style="list-style-type: none"> ■ 4.84% - approx. blended rate determined by allocating liabilities to agencies based on estimated pre-funding policies: <ul style="list-style-type: none"> ● 6.75% - full pre-funding rate used for Dispatch and City of Dublin ● 5.00% - partial pre-funding rate (35% of ADC less paygo) used for ALCO, City of Newark, and Union City ● 4.00% - employee contributions only for remaining agencies ■ 6.75% - side fund calculations, CERBT Strategy #1 	<ul style="list-style-type: none"> ■ 4.90% - approx. blended rate determined by allocating liabilities to agencies based on estimated pre-funding policies: <ul style="list-style-type: none"> ● 6.75% - full pre-funding rate used for Dispatch and City of Dublin ● 5.00% - partial pre-funding rate (35% to 50% of ADC less paygo) used for ALCO, City of Newark, City of Emeryville, Union City, and LBNL ● 4.00% - employee contributions only for remaining agencies ■ 6.75% - side fund calculations, CERBT Strategy #1



ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	June 30, 2017 Valuation			June 30, 2019 Valuation		
■ Medical Trend	Year	Increase from Prior Year		Year	Increase from Prior Year	
		Non-Medicare	Medicare		Non-Medicare	Medicare
	2017	Actual 2017 Premiums		2017	n/a	
	2018	Actual 2018 Premiums		2018	n/a	
	2019	7.50%	6.50%	2019	Actual 2019 Premiums	
	2020	7.50%	6.50%	2020	Actual 2020 Premiums	
	2021	7.25%	6.30%	2021	7.25%	6.30%
	2022	7.00%	6.10%	2022	7.00%	6.10%
	2023	6.75%	5.90%	2023	6.75%	5.90%
	2024	6.50%	5.70%	2024	6.50%	5.70%
	2025	6.25%	5.50%	2025	6.25%	5.50%
	2026	6.00%	5.30%	2026	6.00%	5.30%
	2027	5.80%	5.15%	2027	5.80%	5.15%
	2028	5.60%	5.00%	2028	5.60%	5.00%
	2029	5.40%	4.85%	2029	5.40%	4.85%
	2030	5.20%	4.70%	2030	5.20%	4.70%
	2031-35	5.05%	4.60%	2031-35	5.05%	4.60%
	2036-45	4.90%	4.50%	2036-45	4.90%	4.50%
	2046-55	4.75%	4.45%	2046-55	4.75%	4.45%
	2056-65	4.60%	4.40%	2056-65	4.60%	4.40%
	2066-75	4.30%	4.20%	2066-75	4.30%	4.20%
	2076+	4.00%	4.00%	2076+	4.00%	4.00%



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ACTUARIAL ASSUMPTIONS HIGHLIGHTS

	June 30, 2017 Valuation		June 30, 2019 Valuation	
■ Dependents at Retirement	■ % electing family coverage at retirement <ul style="list-style-type: none"> • Misc: 10% • Safety: 20% ■ No family coverage \geq 65		■ % electing family coverage at retirement <ul style="list-style-type: none"> • Misc: 10% • Safety: 30% ■ No family coverage \geq 65	
■ Waived Retirees	■ Pre 65: 40% re-elect at age 65 ■ Post 65: 0% re-elect		■ Pre 65: 10% re-elect at age 65 ■ Post 65: 0% re-elect	
■ Affordable Care Act (ACA) Excise Tax	■ 2.0% liability load on cash subsidy to estimate impact		■ Not Valued	
■ Administrative Expenses	■ 0.33% of retiree PEMHCA premiums ■ Added to Normal Cost		■ 0.27% of retiree PEMHCA premiums ■ 0.05% of CERBT Assets ■ Added to Normal Cost	



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ACTUARIAL METHODS

	June 30, 2017 Valuation	June 30, 2019 Valuation
■ Cost Method	<ul style="list-style-type: none"> • Entry Age Normal • Normal Cost is a level percent of payroll 	<ul style="list-style-type: none"> • Same
■ Funding Policy	<ul style="list-style-type: none"> • Partial pre-funding, varies by agency 	<ul style="list-style-type: none"> • Same
■ Amortization Method	<ul style="list-style-type: none"> • Level percent of payroll 	<ul style="list-style-type: none"> • Same
■ Amortization Periods	<ul style="list-style-type: none"> • 15-year, 20-year, and 30-year UAAL amortization shown for unfunded side fund liabilities 	<ul style="list-style-type: none"> • Same



ACTUARIAL METHODS

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ASSETS

Market Value of Plan Assets (MVA)

(Amounts in \$000's)

	2017/18	2018/19	Projected 2019/20 ⁴
■ MVA (Beginning of Year)	\$ 17,420	\$ 22,505	\$ 28,042
● Contributions – Employer	2,041	1,997	1,443
● Contributions – Employee	1,631	2,030	2,018
● Disbursements	-	-	-
● Investment Return	1,429	1,530	-
● Administrative Expenses	(10)	(12)	(15)
● Investment Expense	<u>(7)</u>	<u>(8)</u>	<u>(11)</u>
■ MVA (End of Year)	22,505	28,042	31,478
■ Approximate Annual Return	7.3%	6.2%	0.0%

⁴ Assets projected from 6/30/19 to 6/30/20 using actual contributions through 12/31/19 from the CERBT statements, expected contributions from 1/1/20 through 6/30/20 provided by ACFD, and an estimated 0% investment return for 2019/20.



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ASSETS

Actuarial Value of Plan Assets (AVA)

(Amounts in \$000's)

	2017/18	2018/19	Projected 2019/20
■ AVA (Beginning of Year)	\$ 17,434	\$ 22,426	\$ 28,091
● Employer Contribution	3,672	4,027	3,462
● Benefit Payment/Disbursements	-	-	-
● Expected Investment Return	1,301	1,650	2,013
■ Expected AVA (End of Year)	22,407	28,103	33,566
■ MVA (End of Year)	22,505	28,042	31,478
■ 1/5 of (MVA - Expected AVA)	19	(12)	(418)
■ Preliminary AVA	22,426	28,091	33,148
● Minimum AVA (80% of MVA)	18,004	22,434	25,182
● Maximum AVA (120% of MVA)	27,006	33,650	37,774
■ AVA (End of Year)	22,426	28,091	33,148
■ Approximate AVA return	6.9%	6.7%	5.3%



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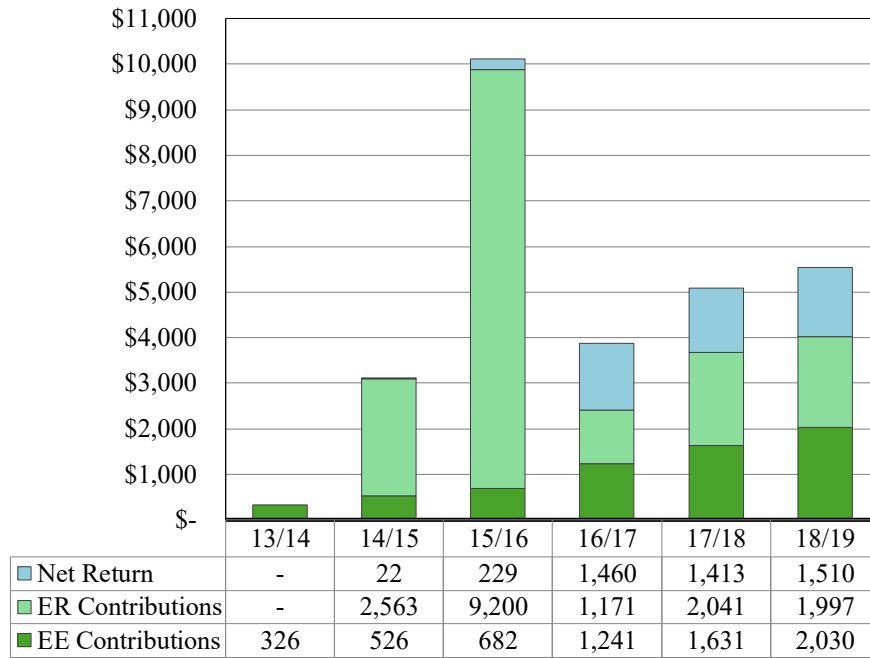
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ASSETS

Historical Asset Changes

(Amounts in \$000's)

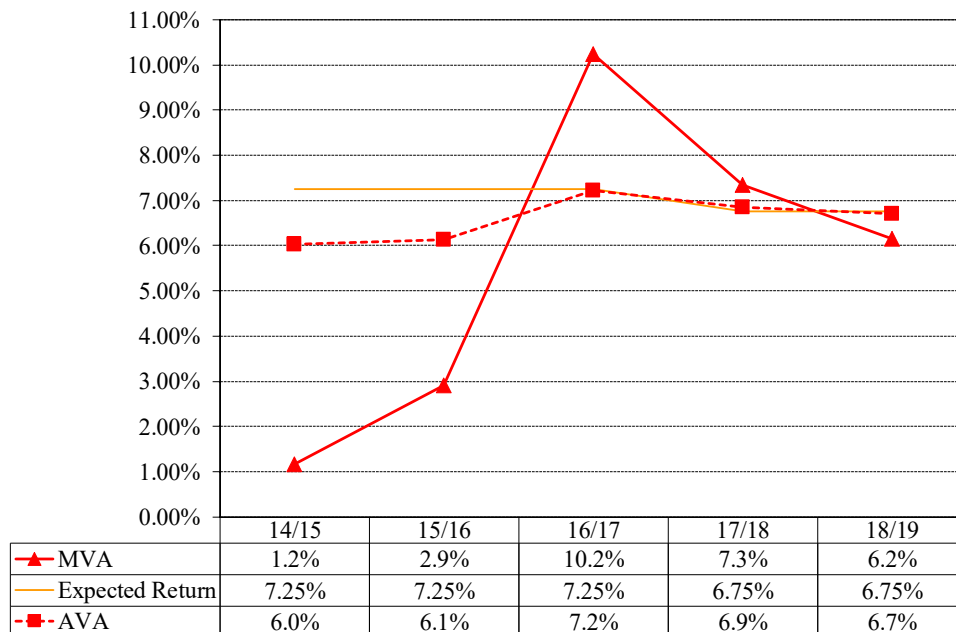


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ASSETS

Annualized Asset Returns

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RESULTS

Actuarial Obligations

(Amounts in \$000's)

	6/30/17 Valuation	6/30/19 Valuation
■ Present Value of Benefits		
•Actives	\$144,444	\$140,736
•Retirees	<u>71,857</u>	<u>79,795</u>
•Total	216,301	220,531
■ Actuarial Accrued Liability		
•Actives	65,381	65,358
•Retirees	<u>71,857</u>	<u>79,795</u>
•Total	137,238	145,153
■ Actuarial Value of Assets	<u>(17,434)</u>	<u>(28,091)</u>
■ Unfunded AAL	119,804	117,062
■ Funded Ratio	12.7%	19.4%
■ Pay-As-You-Go	4,268	5,200



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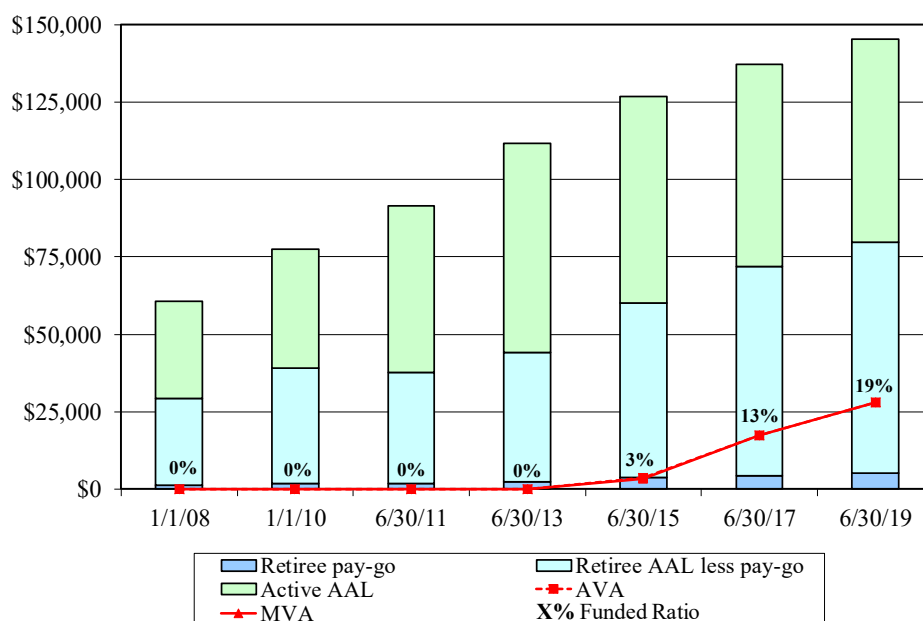
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RESULTS

Historical Actuarial Accrued Liability

(Amounts in \$000's)



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RESULTS

Actuarial Gains & Losses

(Amounts in \$000's)

	AAL
■ 6/30/17 Actual	\$137,238
■ 6/30/19 Expected	154,987
■ Experience (Gains)/Losses:	
• Premiums/Claims less than Expected	(11,924)
• Demographic & Other	6,136
■ Assumption Changes:	
• Mortality Improvement	(992)
• Remove ACA Excise Tax	(2,420)
• Waived Retiree Re-Election	(148)
• Family Coverage at Retirement	626
• Discount Rate	<u>(1,112)</u>
■ Total Changes	(9,834)
■ 6/30/19 Actual	145,153



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RESULTS

Actuarial Obligations by Pre/Post Medicare

(Amounts in \$000's)

	6/30/19 Valuation		
	Pre Medicare Results	Post Medicare Results	Total
■ Present Value of Benefits			
• Actives	\$ 83,406	\$ 57,330	\$140,736
• Retirees	<u>34,467</u>	<u>45,328</u>	<u>79,795</u>
• Total	117,873	102,658	220,531
■ Actuarial Accrued Liability			
• Actives	37,776	27,582	65,358
• Retirees	<u>34,467</u>	<u>45,328</u>	<u>79,795</u>
• Total	72,243	72,910	145,153
■ Actuarial Value of Assets⁵	<u>(13,981)</u>	<u>(14,110)</u>	<u>(28,091)</u>
■ Unfunded AAL	58,262	58,800	117,062
■ Funded Ratio	19.4%	19.4%	19.4%

⁵ Assets allocated to Pre/Post Medicare based on AAL.



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RESULTS

Schedule of Funding Progress

(Amounts in \$000's)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Payroll (c)	UAAL as Percentage of Payroll ((b-a)/c)
1/1/08	\$ 0	\$ 60,663	\$ 60,663	0.0%	\$ 46,446	130.6%
1/1/10	0	77,388	77,388	0.0%	46,942	164.9%
6/30/11	0	91,574	91,574	0.0%	48,377	189.3%
6/30/13	0	111,712	111,712	0.0%	50,708	220.3%
6/30/15	3,528	126,879	123,351	2.8%	50,186	245.8%
6/30/17	17,434	137,238	119,804	12.7%	52,057	230.1%
6/30/19	28,091	145,153	117,062	19.4%	55,516	210.9%



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RESULTS

Actuarial Obligations by Agency

(Amounts in \$000's)

	Dis-patch	ALCO	San Leandro	Dublin	LBNL	LLNL	Newark	Union City	Emery-ville	Total
■ Discount Rate	6.75%	5.00%	4.00%	6.75%	5.00%	4.00%	5.00%	5.00%	5.00%	Blended
■ PVB 6/30/19										
•Actives	\$3,340	\$58,035	\$43,551	\$10,180	\$2,474	\$3,203	\$7,137	\$8,592	\$4,224	\$140,736
•Retirees	505	34,339	22,572	7,449	1,464	1,660	4,223	5,084	2,499	79,795
•Total	3,845	92,374	66,123	17,629	3,938	4,863	11,360	13,676	6,723	220,531
■ AAL 6/30/19										
•Actives	1,331	27,531	18,960	5,501	1,174	1,395	3,386	4,076	2,004	65,358
•Retirees	505	34,339	22,572	7,449	1,464	1,660	4,223	5,084	2,499	79,795
•Total	1,836	61,870	41,532	12,950	2,638	3,055	7,609	9,160	4,503	145,153
■ AVA 6/30/19	(2,001)	(7,971)	(1,382)	(11,744)	(263)	(658)	(2,310)	(1,283)	(479)	(28,091)
■ UAAL 6/30/19	(165)	53,899	40,150	1,206	2,375	2,397	5,299	7,877	4,024	117,062
■ Funded Ratio	109.0%	12.9%	3.3%	90.7%	10.0%	21.5%	30.4%	14.0%	10.6%	19.4%



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RESULTS

Benefit Payment Projection by Cash/Implied Subsidy

(Amounts in \$000's)

Fiscal Year	Cash Subsidy	Implied Subsidy	Total
2020/21	\$ 4,422	\$ 1,225	\$ 5,647
2021/22	4,785	1,329	6,114
2022/23	5,156	1,452	6,608
2023/24	5,453	1,464	6,917
2024/25	5,762	1,515	7,277
2025/26	6,103	1,579	7,682
2026/27	6,526	1,731	8,257
2027/28	6,827	1,725	8,552
2028/29	7,216	1,799	9,015
2029/30	7,603	1,839	9,442



RESULTS

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SIDE FUND CALCULATIONS

Side Funds – Purpose

- Allow each agency in ACFD the choice of pre-funding their OPEB benefit independent of the pre-funding choice of other agencies in ACFD
- Side Funds are established for each agency within ACFD based on the full pre-funding discount rate
- They represent the amount of unfunded liability for each agency due to past service, based on ACFD retiree medical benefit
- Each agency decides how much, if any, of its own side fund to pre-fund
- If paid off would fully pre-fund past-service liability for agency



SIDE FUND CALCULATIONS

Side Funds – Methodology

- Initial side fund determined as of 6/30/08, or when joining ACFD if later, for each agency in ACFD.
- Yearly side fund calculation:
 - Allocate year's full pre-funding Normal Cost to each participating agency based on FTE, remaining is allocated based on allocation % of shared positions.
 - Each agency side fund will change:
 - (Beginning of year side fund with interest to end of year)
 - + (Allocated portion of full pre-funding NC)
 - (Allocated benefit payments with interest to end of year)
- Difference between total side fund amount and full pre-funding AAL is allocated to each agency based on FTE, remaining based on allocation % of shared positions.
- Each agency determines whether to make a pre-funding contribution to their CERBT sub-account or not, agency side fund is adjusted by any assets in sub-account:
 - (End of year side fund)
 - (End of year assets in CERBT sub-account)



SIDE FUND CALCULATIONS

Actuarial Obligations for Side Fund Calculations**Full Funding Discount Rate**

(Amounts in \$000's)

	6/30/17 Valuation		6/30/19 Valuation	
	Projected		Projected	
	6/30/17	6/30/18	6/30/19	6/30/20
Full Funding Discount Rate	6.75%		6.75%	
■ Present Value of Benefits	\$150,345		\$156,145	
■ Actuarial Accrued Liability				
• Safety	101,410	\$107,792	108,432	114,338
• Misc Non Dispatch	3,091	3,539	3,442	3,889
• Misc Dispatch	<u>1,852</u>	<u>2,124</u>	<u>1,836</u>	<u>2,066</u>
• Total	106,353	113,455	113,710	120,293
■ Actuarial Value of Assets	<u>(17,434)</u>	<u>(21,438)</u>	<u>(28,091)</u>	<u>(33,148)</u>
■ Unfunded AAL	88,919	92,017	85,619	87,145
■ Normal Cost	n/a	4,463	n/a	4,438
■ Pay-As-You-Go	4,268	4,792	5,200	5,647



SIDE FUND CALCULATIONS

Actuarially Determined Contribution (ADC) for Side Fund Calculations

	6/30/17 Valuation		6/30/19 Valuation	
	2018/19	2019/20	2020/21	2021/22
Full Funding Discount Rate	6.75%		6.75%	
■ ADC - \$				
• Normal Cost	\$4,463	\$4,597	\$4,438	\$4,572
• UAAL Amortization ⁶	<u>7,611</u>	<u>7,840</u>	<u>6,396</u>	<u>6,588</u>
• Total ADC	12,074	12,437	10,834	11,160
• Employee Contributions ⁷	<u>(2,054)</u>	<u>(2,115)</u>	<u>(2,564)</u>	<u>(3,036)</u>
• Total	10,021	10,322	8,270	8,124
■ Projected Payroll	53,619	55,228	58,897	60,664
■ ADC - % Pay				
• Normal Cost	8.3%	8.3%	7.5%	7.5%
• UAAL Amortization	<u>14.2%</u>	<u>14.2%</u>	<u>10.9%</u>	<u>10.9%</u>
• Total ADC	22.5%	22.5%	18.4%	18.4%
• Employee Contributions	<u>(3.8%)</u>	<u>(3.8%)</u>	<u>(4.4%)</u>	<u>(5.0%)</u>
• Total	18.7%	18.7%	14.0%	13.4%

⁶ Based on valuation amortization periods.⁷ Estimated employee contributions based on employee contribution rates and projected payroll.

SIDE FUND CALCULATIONS

CERBT Sub-Accounts and AVA Calculation**Fiscal Year 2017/18****(Amounts in \$000's)**

	Dis- patch	ALCO	San Leandro	Dublin	LBNL	LLNL	Newark	Union City	Emery- ville	Total
■ MVA 6/30/17	\$1,540	\$3,764	\$569	\$9,581	\$108	\$271	\$921	\$503	\$163	\$17,420
• Contributions	97	1,448	304	174	58	145	1,010	316	121	3,672
• Disbursements	-	-	-	-	-	-	-	-	-	-
• Inv. Earnings	125	312	50	769	10	24	82	44	14	1,429
• Admin. Exp.	(1)	(2)	-	(5)	-	-	(1)	-	-	(10)
• Invest. Exp.	(1)	(2)	-	(4)	-	-	-	-	-	(7)
■ MVA 6/30/18	1,760	5,521	922	10,515	176	439	2,011	863	298	22,505
• AVA Ratio ⁸	← 99.65% →									
■ AVA 6/30/18	1,754	5,501	919	10,478	175	438	2,004	860	297	22,426

⁸ Ratio of valuation 6/30/18 Actuarial Value of Assets (\$22,426) to Market Value of Assets (\$22,505) = 99.65%.



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SIDE FUND CALCULATIONS

CERBT Sub-Accounts and AVA Calculation**Fiscal Year 2018/19****(Amounts in \$000's)**

	Dis- patch	ALCO	San Leandro	Dublin	LBNL	LLNL	Newark	Union City	Emery- ville	Total
■ MVA 6/30/18	\$1,760	\$5,521	\$922	\$10,515	\$176	\$439	\$2,011	\$863	\$298	\$22,505
• Contributions	123	2,063	381	537	73	182	163	351	154	4,027
• Disbursements	-	-	-	-	-	-	-	-	-	-
• Inv. Earnings	116	379	77	681	15	36	133	67	26	1,530
• Admin. Exp.	(1)	(3)	(1)	(5)	-	-	(1)	-	-	(12)
• Invest. Exp.	(1)	(2)	-	(4)	-	-	(1)	-	-	(8)
■ MVA 6/30/19	1,997	7,958	1,380	11,723	263	657	2,306	1,281	478	28,042
• AVA Ratio ⁹	← 100.17% →									
■ AVA 6/30/19	2,001	7,971	1,382	11,744	263	658	2,310	1,283	479	28,091

⁹ Ratio of valuation 6/30/19 Actuarial Value of Assets (\$28,091) to Market Value of Assets (\$28,042) = 100.17%.



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SIDE FUND CALCULATIONS

Side Fund Calculations
2017/18 Fiscal Year – 6.75% Discount Rate
(Amounts in \$000's)

	Dis- patch	ALCO	San Leandro	Dublin	LBNL	LLNL	Newark	Union City	Emery- ville	Total
■ Allocation %	0.00%	29.53%	20.00%	11.43%	3.81%	9.52%	8.57%	11.43%	5.71%	100.00%
■ Side Fund BOY	\$1,852	\$45,013	\$26,357	\$12,093	\$2,093	\$2,471	\$5,853	\$7,125	\$3,496	\$106,353
• Pool NC ¹⁰	191	1,170	750	436	139	349	331	436	227	4,029
• BP	(50)	(1,346)	(917)	(524)	(174)	(436)	(393)	(524)	(262)	(4,626)
• Interest	<u>123</u>	<u>2,994</u>	<u>1,749</u>	<u>799</u>	<u>135</u>	<u>152</u>	<u>382</u>	<u>464</u>	<u>227</u>	<u>7,025</u>
■ Side Fund EOY	2,116	47,831	27,939	12,804	2,193	2,536	6,173	7,501	3,688	112,781
■ Balance EOY ¹⁰	<u>8</u>	<u>198</u>	<u>132</u>	<u>76</u>	<u>25</u>	<u>62</u>	<u>58</u>	<u>76</u>	<u>39</u>	<u>674</u>
■ AAL EOY	2,124	48,029	28,071	12,880	2,218	2,598	6,231	7,577	3,727	113,455
■ AVA EOY	<u>(1,754)</u>	<u>(5,501)</u>	<u>(919)</u>	<u>(10,478)</u>	<u>(175)</u>	<u>(438)</u>	<u>(2,004)</u>	<u>(860)</u>	<u>(297)</u>	<u>(22,426)</u>
■ UAAL EOY	370	42,528	27,152	2,402	2,043	2,160	4,227	6,717	3,430	91,029

¹⁰ Allocated based on FTE first, and then allocation % of shared positions, except for Dispatch which is based on actual Dispatch valuation results.



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SIDE FUND CALCULATIONS

Side Fund Calculations
2018/19 Fiscal Year – 6.75% Discount Rate
(Amounts in \$000's)

	Dis- patch	ALCO	San Leandro	Dublin	LBNL	LLNL	Newark	Union City	Emery- ville	Total
■ Allocation %	0.00%	29.53%	20.00%	11.43%	3.81%	9.52%	8.57%	11.43%	5.71%	100.00%
■ Side Fund BOY	\$2,124	\$48,029	\$28,071	\$12,880	\$2,218	\$2,598	\$6,231	\$7,577	\$3,727	\$113,455
• Pool NC ¹¹	208	1,308	827	482	154	384	367	482	251	4,463
• BP	(49)	(1,447)	(972)	(556)	(185)	(463)	(417)	(556)	(277)	(4,922)
• Interest	<u>142</u>	<u>3,194</u>	<u>1,863</u>	<u>851</u>	<u>143</u>	<u>160</u>	<u>407</u>	<u>493</u>	<u>242</u>	<u>7,495</u>
■ Side Fund EOY	2,425	51,084	29,789	13,657	2,330	2,679	6,588	7,996	3,943	120,491
■ Balance EOY	<u>(588)</u>	<u>(1,851)</u>	<u>(1,226)</u>	<u>(707)</u>	<u>(231)</u>	<u>(578)</u>	<u>(533)</u>	<u>(707)</u>	<u>(360)</u>	<u>(6,781)</u>
■ AAL EOY ¹¹	1,836	49,234	28,563	12,950	2,099	2,101	6,055	7,289	3,583	113,710
■ AVA EOY	<u>(2,001)</u>	<u>(7,971)</u>	<u>(1,382)</u>	<u>(11,744)</u>	<u>(263)</u>	<u>(658)</u>	<u>(2,310)</u>	<u>(1,283)</u>	<u>(479)</u>	<u>(28,091)</u>
■ UAAL EOY	(165)	41,263	27,181	1,206	1,836	1,443	3,745	6,006	3,104	85,619

¹¹ Allocated based on FTE first, and then allocation % of shared positions, except for Dispatch which is based on actual Dispatch valuation results.



May 25, 2020

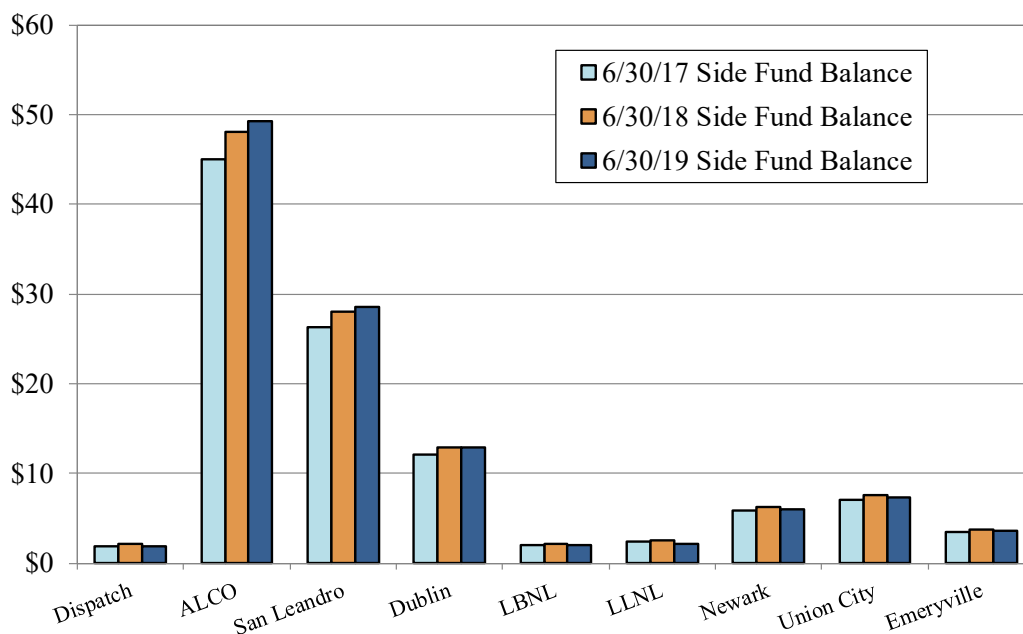
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SIDE FUND CALCULATIONS

Side Fund Balances (AAL)

(Amounts in millions)



May 25, 2020

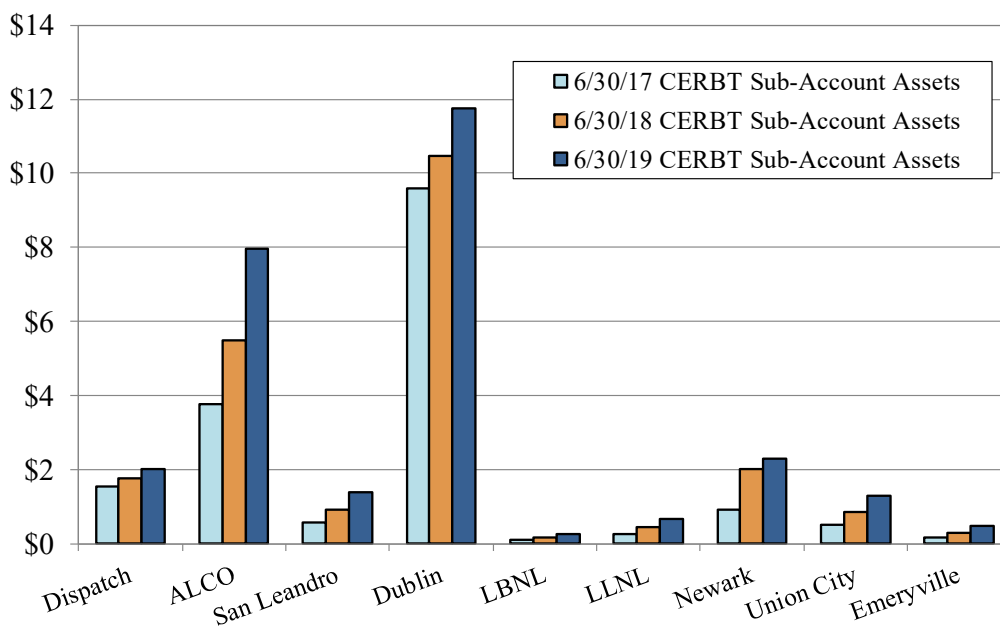
37



SIDE FUND CALCULATIONS

CERBT Sub-Account Assets (AVA)

(Amounts in millions)



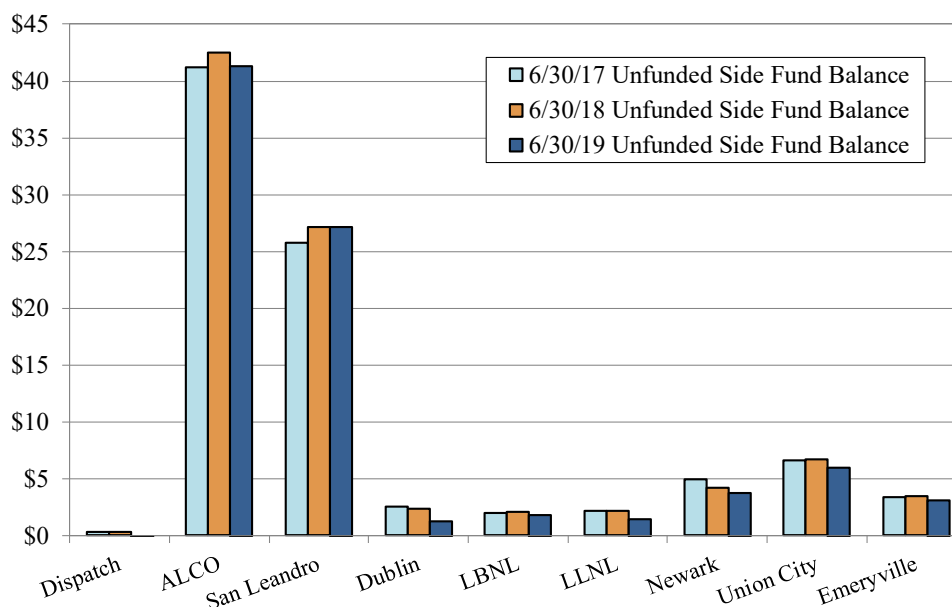
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SIDE FUND CALCULATIONS

Unfunded Side Fund Balances (UAAL)
Side Fund Balance less CERBT Sub-Account Assets
 (Amounts in millions)



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SIDE FUND CALCULATIONS

Sample 2020/21 ADCs at Varying UAAL Amortization Periods¹²

6.75% Discount Rate
 (Amounts in \$000's)

	Dis- patch	ALCO	San Leandro	Dublin	LBNL	LLNL	Newark	Union City	Emery- ville	Total
15-Year UAAL Amortization										
■ 2020/21 ADC										
• Normal Cost	\$175	\$1,350	\$852	\$495	\$159	\$397	\$376	\$377	\$257	\$4,438
• UAAL Amort	<u>(16)</u>	<u>3,816</u>	<u>2,563</u>	<u>101</u>	<u>142</u>	<u>111</u>	<u>340</u>	<u>537</u>	<u>278</u>	<u>7,872</u>
• Total	159	5,166	3,415	596	301	508	716	914	535	12,310
20-Year UAAL Amortization										
■ 2020/21 ADC										
• Normal Cost	\$175	\$1,350	\$852	\$495	\$159	\$397	\$376	\$377	\$257	\$4,438
• UAAL Amort	<u>(13)</u>	<u>3,101</u>	<u>2,083</u>	<u>82</u>	<u>115</u>	<u>90</u>	<u>276</u>	<u>436</u>	<u>226</u>	<u>6,396</u>
• Total	162	4,451	2,935	577	274	487	652	813	483	10,834
30-Year UAAL Amortization										
■ 2020/21 ADC										
• Normal Cost	\$175	\$1,350	\$852	\$495	\$159	\$397	\$376	\$377	\$257	\$4,438
• UAAL Amort	<u>(10)</u>	<u>2,408</u>	<u>1,617</u>	<u>63</u>	<u>90</u>	<u>70</u>	<u>214</u>	<u>339</u>	<u>176</u>	<u>4,967</u>
• Total	165	3,758	2,469	558	249	467	590	716	433	9,405

¹² 2020/21 Normal Costs reflect the new allocation %'s effective 7/1/20.



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ACTUARIAL CERTIFICATION

This report presents the Alameda County Fire Department Retiree Healthcare Plan ("Plan") June 30, 2019 actuarial valuation. The purpose of this valuation is to:

- Determine the June 30, 2019 Benefit Obligations,
- Determine the Plan's June 30, 2019 Funded Status, and
- Calculate the 2020/21 and 2021/22 Actuarially Determined Contributions.

Information provided in this report may be useful to the Department for the Plan's financial management. Future valuations may differ significantly if the Plan's experience differs from our assumptions or if there are changes in Plan design, actuarial methods or actuarial assumptions. The project scope did not include an analysis of this potential variation.

The valuation is based on Plan provisions, participant data, and asset information provided by the Department as summarized in this report, which we relied on and did not audit. We reviewed the participant data for reasonableness.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,



Doug Pryor, ASA, EA, MAAA
Vice President
Bartel Associates, LLC
May 25, 2020



Catherine A. Wandro, ASA, MAAA, FCA
Assistant Vice President
Bartel Associates, LLC
May 25, 2020



May 25, 2020

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**ACTUARIAL CERTIFICATION**

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EXHIBITS - PREMIUMS

2019 PEMHCA Monthly Premiums**Bay Area**

Plan	Non-Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem Select	\$ 831.44	\$ 1,662.88	\$ 2,161.74	n/a	n/a	n/a
Anthem Traditional	1,111.13	2,222.26	2,888.94	\$ 357.44	\$ 714.88	\$ 1,072.32
Blue Shield Access+	970.90	1,941.80	2,524.34	n/a	n/a	n/a
Health Net SmartCare	901.55	1,803.10	2,344.03	n/a	n/a	n/a
Kaiser	768.25	1,536.50	1,997.45	323.74	647.48	971.22
UnitedHealthcare	n/a	n/a	n/a	299.37	598.74	898.11
Western Health Advantage	767.01	1,534.02	1,994.23	n/a	n/a	n/a
PERS Choice	866.27	1,732.54	2,252.30	360.41	720.82	1,081.23
PERS Select	543.19	1,086.38	1,412.29	360.41	720.82	1,081.23
PERSCare	1,131.68	2,263.36	2,942.37	394.83	789.66	1,184.49
PORAC	774.00	1,623.00	2,076.00	513.00	1,022.00	1,635.00



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EXHIBITS - PREMIUMS

2020 PEMHCA Monthly Premiums**Region 1**

Medical Plan	Non-Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Anthem Select	\$ 868.98	\$ 1,737.96	\$ 2,259.35	\$ 388.15	\$ 776.30	\$1,164.45
Anthem Traditional	1,184.84	2,369.68	3,080.58	388.15	776.30	1,164.45
Blue Shield Access+	1,127.77	2,255.54	2,932.20	n/a	n/a	n/a
Blue Shield Trio	833.00	1,666.00	2,165.80	n/a	n/a	n/a
Health Net SmartCare	1,000.52	2,001.04	2,601.35	n/a	n/a	n/a
Kaiser	768.49	1,536.98	1,998.07	339.43	678.86	1,018.29
UnitedHealthcare	899.94	1,799.88	2,339.84	327.03	654.06	981.09
Western Health Advantage	731.96	1,463.92	1,903.10	n/a	n/a	n/a
PERS Choice	861.18	1,722.36	2,239.07	351.39	702.78	1,054.17
PERS Select	520.29	1,040.58	1,352.75	351.39	702.78	1,054.17
PERSCare	1,133.14	2,266.28	2,946.16	384.78	769.56	1,154.34
PORAC	774.00	1,699.00	2,199.00	513.00	1,022.00	1,635.00



E-2



EXHIBITS – PARTICIPANT STATISTICS

Participant Statistics**June 30, 2019**

	Safety	Miscellaneous		Total
		Non-Dispatch	Dispatch	
■ Actives:				
• Count	350	45	31	426
• Average Age	41.5	46.1	37.6	41.7
• Average Service				
➢ ACFD	9.8	7.0	6.0	9.3
➢ CalPERS	13.2	8.7	7.6	12.3
• Average 18/19 Salary	\$139,000	\$89,700	\$91,300	\$130,300
• Total 18/19 Salary (000s)	48,652	4,035	2,829	55,516
■ Retirees:				
• Count	293	9	6	308 ¹³
• Average Age	64.1	65.9	63.6	64.1
• Average Retirement Age				
➢ Service Retirement	54.1	60.6	59.2	54.6
➢ Disability Retirement	53.3	54.2	n/a	53.3

¹³ Includes 18 retirees who waive medical coverage.

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EXHIBITS – PARTICIPANT STATISTICS

Participant Statistics**June 30, 2017**

	Safety	Miscellaneous		Total
		Non-Dispatch	Dispatch	
■ Actives:				
• Count	346	41	32	419
• Average Age	41.6	45.5	37.6	41.7
• Average Service				
➢ ACFD	9.2	6.2	5.1	8.6
➢ CalPERS	13.0	8.8	7.3	12.1
• Average 16/17 Salary	\$127,300	\$91,600	\$85,500	\$120,600
• Total 16/17 Salary (000s)	44,047	3,757	2,737	50,541
■ Retirees:				
• Count	278	8	6	292 ¹⁴
• Average Age	64.0	64.9	61.6	63.9
• Average Retirement Age				
➢ Service Retirement	54.2	61.0	59.2	54.6
➢ Disability Retirement	53.1	54.2	n/a	53.1

¹⁴ Includes 16 retirees who waive medical coverage.

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EXHIBITS – PARTICIPANT STATISTICS

Medical Plan Participation

Medical Plan	Actives	Retirees		
		Pre-65	Post-65	Total
Anthem Select	1%	3%	0%	2%
Anthem Traditional	2%	2%	3%	2%
Blue Shield Access+	3%	5%	0%	3%
Health Net SmartCare	2%	5%	0%	3%
Kaiser	63%	36%	51%	43%
UnitedHealthcare	1%	1%	8%	4%
PERS Choice	2%	5%	19%	11%
PERSCare	1%	4%	7%	5%
PERS Select	1%	0%	0%	0%
PORAC	24%	39%	12%	27%
Total	100%	100%	100%	100%



EXHIBITS – PARTICIPANT STATISTICS

Current Active Medical Plan Coverage

Medical Plan	Single	2-Party	Family	Waived	Total
Anthem Select	3	-	3	-	6
Anthem Traditional	2	-	6	-	8
Blue Shield Access+	1	3	7	-	11
Health Net SmartCare	-	1	6	-	7
Kaiser	76	32	150	-	258
UnitedHealthcare	-	-	2	-	2
PERS Choice	4	2	3	-	9
PERSCare	1	1	1	-	3
PERS Select	1	-	1	-	2
PORAC	12	19	67	-	98
Waived	-	-	-	22	22
Total	100	58	246	22	426



EXHIBITS – PARTICIPANT STATISTICS

Retiree Medical Plan Coverage - Pre 65

Medical Plan	Single	2-Party	Family	Waived	Total
Anthem Select	-	2	3	-	5
Anthem Traditional	1	2	-	-	3
Blue ShieldAccess+	2	3	3	-	8
Health Net SmartCare	3	1	4	-	8
Kaiser	11	22	28	-	61
UnitedHealthcare	1	-	-	-	1
PERS Choice	4	-	4	-	8
PERSCare	1	6	-	-	7
PERS Select	-	-	-	-	-
PORAC	8	31	27	-	66
Waived	-	-	-	9	9
Total	31	67	69	9	176



EXHIBITS – PARTICIPANT STATISTICS

Retiree Medical Plan Coverage - Post 65

Medical Plan	Single	2-Party	Family	Waived	Total
Anthem Select	-	-	-	-	-
Anthem Traditional	-	2	2	-	4
Kaiser	24	36	3	-	63
UnitedHealthcare	5	5	-	-	10
PERS Choice	6	16	1	-	23
PERSCare	5	4	-	-	9
PERS Select	-	-	-	-	-
PORAC	1	11	2	-	14
Waived	-	-	-	9	9
Total	41	74	8	9	132



EXHIBITS – PARTICIPANT STATISTICS

Retirees Medical Plan Coverage by Age

Age	Medical Coverage				
	Single	2-Party	Family	Waived	Total
Under 50	-	2	3	3	8
50-54	-	7	20	-	27
55-59	7	23	31	5	66
60-64	24	35	15	1	75
65-69	16	31	6	5	58
70-74	11	34	1	2	48
75-79	6	7	1	1	15
80-84	2	2	-	-	4
85 & Over	6	-	-	1	7
Total	72	141	77	18	308
Average Age	68.5	65.4	58.1	63.2	64.1



EXHIBITS – PARTICIPANT STATISTICS

Actives by Age and Service – Safety

Age	ACFD Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25	2	2	-	-	-	-	-	4
25-29	11	20	3	-	-	-	-	34
30-34	5	33	20	2	-	-	-	60
35-39	3	15	16	26	11	-	-	71
40-44	-	5	14	20	19	-	-	58
45-49	-	3	23	10	15	2	-	53
50-54	-	1	14	5	6	7	1	34
55-59	-	1	11	5	1	13	-	31
60-64	-	-	1	1	-	1	1	4
≥ 65	-	-	-	1	-	-	-	1
Total	21	80	102	70	52	23	2	350



EXHIBITS – PARTICIPANT STATISTICS

Actives by Age and Service – Miscellaneous (Non-Dispatch)

Age	ACFD Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25	-	-	-	-	-	-	-	-
25-29	-	3	-	-	-	-	-	3
30-34	-	2	-	-	-	-	-	2
35-39	1	6	1	-	-	-	-	8
40-44	-	5	2	1	1	-	-	9
45-49	-	6	1	2	-	-	-	9
50-54	-	2	-	1	-	1	-	4
55-59	-	-	3	2	1	1	-	7
60-64	-	-	1	-	1	-	-	2
≥ 65	-	-	-	-	-	1	-	1
Total	1	24	8	6	3	3	-	45



EXHIBITS – PARTICIPANT STATISTICS

Actives by Age and Service – Miscellaneous (Dispatch)

Age	ACFD Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25	1	1	-	-	-	-	-	2
25-29	-	3	-	-	-	-	-	3
30-34	-	2	3	-	-	-	-	5
35-39	-	4	8	2	-	-	-	14
40-44	-	-	-	1	-	-	-	1
45-49	-	-	1	2	-	-	-	3
50-54	-	1	-	2	-	-	-	3
55-59	-	-	-	-	-	-	-	-
60-64	-	-	-	-	-	-	-	-
≥ 65	-	-	-	-	-	-	-	-
Total	1	11	12	7	-	-	-	31



EXHIBITS – PARTICIPANT STATISTICS

Actives by Age and Service – Total

Age	ACFD Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25	3	3	-	-	-	-	-	6
25-29	11	26	3	-	-	-	-	40
30-34	5	37	23	2	-	-	-	67
35-39	4	25	25	28	11	-	-	93
40-44	-	10	16	22	20	-	-	68
45-49	-	9	25	14	15	2	-	65
50-54	-	4	14	8	6	8	1	41
55-59	-	1	14	7	2	14	-	38
60-64	-	-	2	1	1	1	1	6
≥ 65	-	-	-	1	-	1	-	2
Total	23	115	122	83	55	26	2	426



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation	June 30, 2019 Valuation
■ Valuation Date	■ June 30, 2017 ■ 2018/19 and 2019/20 ADC	■ June 30, 2019 ■ 2020/21 and 2021/22 ADC
■ General Inflation	■ 2.75% ■ Used for economic assumptions	■ Same



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation	June 30, 2019 Valuation
■ Discount Rate	<p>■ 4.84% - approx. blended rate determined by allocating liabilities to agencies based on estimated pre-funding policies:</p> <ul style="list-style-type: none"> ● 6.75% - full pre-funding rate used for Dispatch and City of Newark ● 5.00% - partial pre-funding rate (30% of ACC less paygo) used for ALCO ● 4.00% - employee contributions only for remaining agencies <p>■ 6.75% - side fund calculations, CERBT Strategy #1</p>	<p>■ 4.90% - approx. blended rate determined by allocating liabilities to agencies based on estimated pre-funding policies:</p> <ul style="list-style-type: none"> ● 6.75% - full pre-funding rate used for Dispatch and City of Dublin ● 5.00% - partial pre-funding rate (35% to 50% of ADC less paygo) used for ALCO, City of Newark, City of Emeryville, Union City, and LBNL ● 4.00% - employee contributions only for remaining agencies <p>■ 6.75% - side fund calculations, CERBT Strategy #1</p>



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation	June 30, 2019 Valuation																
■ Payroll Increases	■ Aggregate Increases – 3.00% ■ Merit Increases – CalPERS 1997-2015 Experience Study	■ Same																
■ Affordable Care Act (ACA) Excise Tax	■ 2.0% liability load on cash subsidy to estimate impact	■ Not Valued																
■ Admin. Expenses	■ 0.33% of retiree PEMHCA premiums ■ Added to Normal Cost	■ 0.27% of retiree PEMHCA premiums ■ 0.05% of CERBT Assets ■ Added to Normal Cost																
■ PEMHCA Minimum Increases	<table><tr><td><u>Year</u></td><td><u>PEMHCA Min</u></td></tr><tr><td>2017</td><td>\$128.00</td></tr><tr><td>2018</td><td>\$133.00</td></tr><tr><td>2019+</td><td>4.25%/yr. increase</td></tr></table>	<u>Year</u>	<u>PEMHCA Min</u>	2017	\$128.00	2018	\$133.00	2019+	4.25%/yr. increase	<table><tr><td><u>Year</u></td><td><u>PEMHCA Min</u></td></tr><tr><td>2019</td><td>\$136.00</td></tr><tr><td>2020</td><td>\$139.00</td></tr><tr><td>2021+</td><td>4.25%/yr. increase</td></tr></table>	<u>Year</u>	<u>PEMHCA Min</u>	2019	\$136.00	2020	\$139.00	2021+	4.25%/yr. increase
<u>Year</u>	<u>PEMHCA Min</u>																	
2017	\$128.00																	
2018	\$133.00																	
2019+	4.25%/yr. increase																	
<u>Year</u>	<u>PEMHCA Min</u>																	
2019	\$136.00																	
2020	\$139.00																	
2021+	4.25%/yr. increase																	



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation			June 30, 2019 Valuation		
■ Medical Trend	Year	Increase from Prior Year		Year	Increase from Prior Year	
		Non-Medicare	Medicare		Non-Medicare	Medicare
	2017	Actual 2017 Premiums		2017	n/a	
	2018	Actual 2018 Premiums		2018	n/a	
	2019	7.50%	6.50%	2019	Actual 2019 Premiums	
	2020	7.50%	6.50%	2020	Actual 2020 Premiums	
	2021	7.25%	6.30%	2021	7.25%	6.30%
	2022	7.00%	6.10%	2022	7.00%	6.10%
	2023	6.75%	5.90%	2023	6.75%	5.90%
	2024	6.50%	5.70%	2024	6.50%	5.70%
	2025	6.25%	5.50%	2025	6.25%	5.50%
	2026	6.00%	5.30%	2026	6.00%	5.30%
	2027	5.80%	5.15%	2027	5.80%	5.15%
	2028	5.60%	5.00%	2028	5.60%	5.00%
	2029	5.40%	4.85%	2029	5.40%	4.85%
	2030	5.20%	4.70%	2030	5.20%	4.70%
	2031-35	5.05%	4.60%	2031-35	5.05%	4.60%
	2036-45	4.90%	4.50%	2036-45	4.90%	4.50%
	2046-55	4.75%	4.45%	2046-55	4.75%	4.45%
	2056-65	4.60%	4.40%	2056-65	4.60%	4.40%
	2066-75	4.30%	4.20%	2066-75	4.30%	4.20%
	2076+	4.00%	4.00%	2076+	4.00%	4.00%



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation		June 30, 2019 Valuation	
■ Unit 002 Cap Incr.	■ 0%		■ Same	
■ Mortality, Termination, Disability, Retirement	■ CalPERS 1997-2015 Experience Study ■ Pre-retirement mortality projected with 15-year 90% Scale MP-2016 (CalPERS assumption) ■ Post-retirement mortality projected with Scale MP-2017		■ CalPERS 1997-2015 Experience Study ■ Mortality projected with Scale MP-2019	
■ Waived Retirees	■ Pre 65: 40% re-elect at age 65 ■ Post 65: 0% re-elect		■ Pre 65: 10% re-elect at age 65 ■ Post 65: 0% re-elect	
■ Medical Plan at Retirement	■ Currently covered: same as current medical plan ■ Currently waived: Kaiser Bay Area		■ Same	



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation	June 30, 2019 Valuation										
■ Participation at Retirement	<div>■ Hired before 4/1/09:<ul style="list-style-type: none">● Currently covered - 100%● Currently waived - 90%</div> <div>■ Hired on or after 4/1/09:<table><tr><td><u>Service</u></td><td><u>Participation</u></td></tr><tr><td>< 10</td><td>60%</td></tr><tr><td>10-14</td><td>90%</td></tr><tr><td>15-19</td><td>95%</td></tr><tr><td>≥ 20</td><td>100%</td></tr></table></div>	<u>Service</u>	<u>Participation</u>	< 10	60%	10-14	90%	15-19	95%	≥ 20	100%	■ Same
<u>Service</u>	<u>Participation</u>											
< 10	60%											
10-14	90%											
15-19	95%											
≥ 20	100%											
■ Medicare Eligibility	<div>■ Actives and pre-65 retirees: 100%</div> <div>■ Post-65 retirees: Current Medicare status</div> <div>■ Everyone eligible for Medicare will elect Part B coverage</div>	■ Same										



EXHIBITS - ACTUARIAL ASSUMPTIONS

	June 30, 2017 Valuation	June 30, 2019 Valuation
■ Marital Status at Retirement	■ Actives: <ul style="list-style-type: none"> • Currently covered - current marital status • Currently waived - 80% married ■ Retirees - current marital status	■ Same
■ Spouse Age	■ Actives: Males 3 years older than females ■ Retirees: Males 3 years older than females if spouse birth date not available	■ Same
■ Dependents at Retirement	■ % electing family coverage at retirement <ul style="list-style-type: none"> • Misc: 10% • Safety: 20% ■ No family coverage ≥ 65	■ % electing family coverage at retirement <ul style="list-style-type: none"> • Misc: 10% • Safety: 30% ■ No family coverage ≥ 65



EXHIBITS - ACTUARIAL ASSUMPTIONS

June 30, 2019 Valuation											
■ HMO Medical Claims Cost 2020	■ Sample estimated monthly claims costs:										
	<u>Bay Area Region - Medicare Eligible</u>										
	Anthem		Anthem		Blue Shield		Kaiser		United		
	<u>Select</u>		<u>Traditional</u>		<u>Access+</u>				<u>Healthcare</u>		
	<u>Age</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>
	25	\$322	\$564	\$429	\$751	\$375	\$657	\$281	\$492	\$337	\$591
	35	410	696	547	928	479	812	358	607	430	730
	45	586	854	781	1,139	684	997	512	745	614	896
	55	973	1,132	1,296	1,511	1,135	1,322	849	988	1,020	1,188
	60	1,227	1,287	1,635	1,716	1,431	1,502	1,071	1,122	1,286	1,350
	64	1,367	1,374	1,822	1,832	1,595	1,604	1,194	1,198	1,433	1,441
	65	351	349	351	349	n/a	n/a	308	309	303	300
	70	374	369	374	369	n/a	n/a	328	327	322	318
	75	393	388	393	388	n/a	n/a	345	344	339	334
	80	413	408	413	408	n/a	n/a	362	361	356	351
	85	452	446	452	446	n/a	n/a	396	395	389	384



EXHIBITS - ACTUARIAL ASSUMPTIONS

June 30, 2019 Valuation									
■ PPO Medical Claims Cost 2020	■ Sample estimated monthly claims costs:								
	<u>Bay Area Region - Medicare Eligible</u>								
	<u>PERS Choice</u>		<u>PERS Select</u>		<u>PERSCare</u>		<u>PORAC</u>		
	<u>Age</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>
	25	\$252	\$471	\$175	\$341	\$326	\$596	\$308	\$557
	35	332	592	235	432	425	746	399	694
	45	495	738	359	545	625	925	582	860
	55	861	1,001	642	747	1,072	1,245	987	1,154
	60	1,105	1,149	831	862	1,369	1,424	1,256	1,317
	64	1,241	1,234	937	929	1,533	1,526	1,405	1,410
	65	282	344	282	344	293	358	404	489
	70	307	376	307	376	319	391	439	533
	75	322	394	322	394	334	410	461	560
	80	337	413	337	413	351	430	483	588
	85	368	451	368	451	382	469	527	642



EXHIBITS - ACTUARIAL ASSUMPTIONS

June 30, 2019 Valuation	
<ul style="list-style-type: none"> ■ Basis for Assumptions 	<ul style="list-style-type: none"> ■ CalPERS January 2017 experience study based on 1997 to 2015 demographic experience ■ Mortality improvement based on most recent Society of Actuaries table ■ Inflation based on our estimate for the Plan's very long time horizon ■ Discount rate based on 2017 Bartel Associates stochastic analysis, taking into account capital market assumptions of investment advisory firms ■ Age-based claims were developed by Axene Health Partners based on demographic data for the CalPERS health plans provided by CalPERS and Axene's proprietary AHP cost model. ■ Participation and coverage assumptions based in part on Plan experience ■ Medical Trend: <ul style="list-style-type: none"> ● Short-term trend was developed in consultation with Axene Health Partners' healthcare actuaries ● Long-term trend was developed using Society of Actuaries' Getzen Model of Long-Run Medical Cost Trends

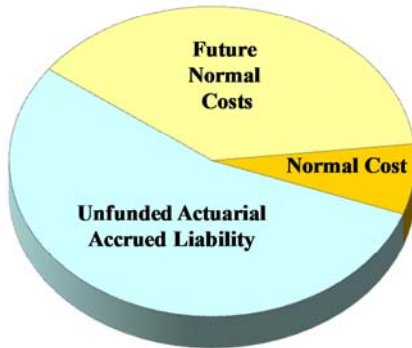
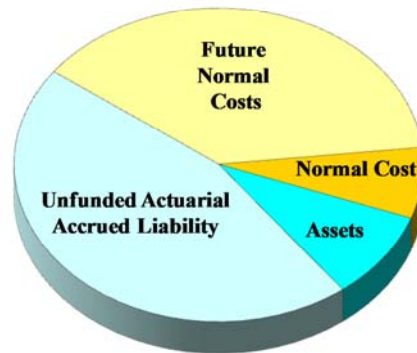


EXHIBITS - DEFINITIONS

<ul style="list-style-type: none"> ■ OPEB Actuarial Valuation 	<ul style="list-style-type: none"> ■ Project future employer-provided benefit cash flows for current active employees and current retirees ■ Discount projected cash flow to valuation date using discount rate (assumed return on assets used to pay benefits) and other actuarial assumptions to determine present value of projected future benefits (PVB) ■ Allocate PVB to past, current, and future periods using the actuarial cost method ■ Actuarial cost method used for this valuation is the Entry Age Normal Cost method which determines Normal Cost as a level percentage of payroll (same method used by CalPERS) ■ Normal Cost is amount allocated to current fiscal year ■ Actuarial Accrued Liability (AAL) is amount allocated to prior service with employer ■ Unfunded AAL (UAAL) is AAL less plan assets pre-funded in a segregated and restricted trust
<ul style="list-style-type: none"> ■ PayGo Cost 	<ul style="list-style-type: none"> ■ Cash subsidy is the pay-as-you-go employer benefit payments for retirees ■ Implied subsidy is the difference between the actual cost of retiree benefits and retiree premiums subsidized by active employee premiums



EXHIBITS - DEFINITIONS

Present Value of Benefits**Present Value of Benefits
(Without Plan Assets)****Present Value of Benefits
(With Plan Assets)**

EXHIBITS - DEFINITIONS

**Acronyms
Used in
Report**

- AAL - Actuarial Accrued Liability
- ADC - Actuarially Determined Contribution
- AVA - Actuarial Value of Assets
- EAN - Entry Age Normal Cost Method
- GASBS 75 - Governmental Accounting Standards Board Statement No. 75
- NC - Normal cost
- OPEB - Other (than pensions) Post Employment Benefits
- PVB - Present Value of Projected Benefits
- UAAL - Unfunded Actuarial Accrued Liability

