



Moraga-Orinda Fire District

Board of Directors

CALL AND NOTICE OF A SPECIAL MEETING

March 15, 2018

5:00 P.M.

PUBLIC WORKSHOP

PLEASE NOTE NEW MEETING ADDRESS:

Sarge Littlehale Community Room
22 Orinda Way
Orinda, CA 94563

1. OPENING CEREMONIES

- 1.1. Call the Meeting to Order
- 1.2. Roll Call
- 1.3. Pledge of Allegiance

2. PUBLIC COMMENT

The public is invited to speak on any matter not appearing on the agenda and within the subject matter jurisdiction of the District. Comments should be limited to three minutes. Please state your name and address for the record.

3. REGULAR CALENDAR

3.1. Public Workshop

The Moraga-Orinda Fire District Board is in the process of preparing the Long Range Financial Plan and seeks the public's advice and input.

Staff Recommendation: 1) Discuss; 2) Deliberate; 3) Provide Direction to Staff on Assumptions

4. ADJOURNMENT

The Moraga-Orinda Fire Protection District ("District"), in complying with the Americans with Disabilities Act ("ADA"), requests individuals who require special accommodations to access, attend and/or participate in District Board meetings due to a disability, to please contact the District Chief's office, (925) 258-4599, at least one business day prior to the scheduled District Board meeting to ensure that we may assist you.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the Moraga-Orinda Fire District to a majority of members of the Board of Directors less than 72 hours prior to that meeting are available for public inspections at 1280 Moraga Way during normal business hours.

I hereby certify that this agenda in its entirety was posted on March 9, 2018, at the Moraga and Orinda Fire Administration offices, Stations 41, 42, 43, 44, and 45. Agenda faxed to the Moraga Town Office (Hacienda), Orinda City Hall and Orinda and Moraga libraries.

Grace Santos
Secretary to the Board



Moraga-Orinda Fire District

TO: Board of Directors

FROM: Dave Winnacker, Fire Chief
Gloriann Sasser, Administrative Services Director

DATE: March 15, 2018

SUBJECT: Item 3.1 – Long Range Financial Plan Public Financial Workshop

Background

The District maintains a Long Range Financial Plan (Plan.) The Plan projects District revenue and expenditures over a forward-looking 15-year period. The Ad Hoc Labor Negotiations Committee requested a public financial workshop to discuss the Long Range Financial Plan.

Two versions of the Plan have been prepared. Version A (Attachment A) uses similar methodologies used in the past. Version B (Attachment A) uses more conservative methodologies. This report explains the assumption methodologies for the significant items in the Plan. After board discussion and receiving public input, staff requests the board provide direction on the following:

- a. Property tax revenue at HdL projections or 3%
- b. OPEB contributions per actuarial calculations or \$500K
- c. Pension rate stabilization trust contributions at actuarial calculations or \$500K
- d. General fund reserve requirements – 17% or 50%
- e. Capital expenditures – Issue debt or pay cash for construction of Station 41, 45 and Administration.

General Fund Revenues

Property tax - The District obtains five year projections for property tax revenues from HdL, the District's property tax revenue consultants (Attachment B.) The five year projections are as follows:

2019/20 4.51%
2020/21 4.44%
2021/22 4.39%
2022/23 4.35%
2023/24 onward 4%

Data of property tax revenue for the last ten years is provided in Attachment C. Version A of the Plan uses the HdL projections. Version B of the Plan uses 3%.

Ambulance fees – Projected to increase 1.5% throughout both versions of the Plan. Ambulance fee revenue is increased annually based on the San Francisco-Oakland-San Jose areas consumer price index for all urban consumers (CPI.) District ambulance revenue is also affected by Medicare and other insurances payment limits, resident write offs and number of transports. Data related to ambulance fee revenue is provided in Attachment D.

Other revenue (Federal grants) – Projected in both Plans based on the SAFER grant accepted by the Board on September 27, 2017.

General Fund Expenditures

Regular salaries – Per the MOUs, employees will receive a 1% salary increase on June 1, 2018. Salaries are projected to increase 2.5% throughout both Plans based on direction from the Finance Committee on February 7, 2017.

Overtime – Projected to remain at current level of approximately \$2M per fiscal year, then projected to have a cost increase of 2.5% throughout both Plans (same as salaries cost increase.)

Overtime strike team – District strike team activity reached its highest amount in FY2018/19. This was due to increased fire activity in California. Strike team overtime is projected to decrease to previous amounts of \$450K, then projected to have a cost increase of 2.5% in both Plans, the same as the salaries cost increase.

Worker's compensation – Projected to increase 1% throughout both Plans

Medical, dental and vision – Per the MOU, the District's contribution for medical and dental contributions is capped for both active employees and retirees. Exposure to future rate increases applies to vision insurance and additional retirees only. The expenditures are projected to increase 1% throughout both Plans.

Operating expenses – Projected to increase 3% throughout both Plans based on CPI. See Attachment E for 10-year history of CPI.

CCCERA employer payment – Five year projections in both Plans provided by Segal, CCCERA's actuary, as follows (Attachment F):

2018/19 Actual rates set by the CCCERA board of directors on August 9, 2017

2019/20 -1.86%

2020/21 -1.59%

2021/22 -0.56%

2022/23 -1.59%

2023/24 -2.10%

2024/25 forward – No projections are provided by CCCERA. The remaining years in both Plans project +1.0%.

OPEB funding – Per Board direction on October 18, 2017, Version A of the Plan includes OPEB contributions based on actuarial calculations using a discount rate of 6.25% and 20-year amortization. Version B of the Plan increases the OPEB contribution to \$500K in FY2018/19 and a 3% increase in future years.

Pension rate stabilization – On January 17, 2018, the Board discussed using the same philosophy and the same targets for rates of return for pension obligations as it does for the OPEB obligation. CCCERA assumed rate of investment return is 7.0%. Based on board discussion to use actual investment return of 6.25%, additional amortization payments calculated using GovInvest software are included in Attachment G. The Plan includes pension rate stabilization trust contributions at the same amount as the OPEB funding contribution in both versions.

Capital Projects Fund

The Long Range Financial Plan - Capital Expenditures (Attachment A, Page 2), has been updated. The costs to complete Station 43 have been updated and are projected to be \$4.7M and are included in the Plan (Attachment H.) The Capital Plan also includes:

- \$8M debt issuance in FY2019/20 to fund the rebuild of Station 41 and Administration (3% interest over 15 years.)
- \$5M debt issuance in FY 2022/23 to fund the rebuild of Station 45 (3% interest over 15 years.)

In addition, in June 2017 the District's draft Long-Range Facilities Plan was presented to the Board. The Long-Range Facilities Plan has been reviewed and projected costs are included in the updated Plan. Staff requests the board discuss issuing debt or paying cash to pay for the construction of Station 41, Administration and Station 45 and provide direction to staff. Both versions of the plan include issuing debt in order to spread the cost of the station construction across the long-term.

Fund Balance Policy

In June 2017 the Board adopted Resolution 17-12 adopting a revised fund balance policy. The revised fund balance policy increased the minimum unrestricted fund balance in the General Fund from 10% to 17% of budgeted General Fund revenue. The fund balance policy is reviewed on an annual basis and is scheduled for review in June 2018.

Fund balance data from other agencies has been compiled and included (Attachment I.) Staff requests the Board provide direction regarding increasing minimum fund balance reserve levels from 17% to 50%.

Recommended Action

1) Discuss 2) Deliberate 3) Provide direction to staff on assumptions used for:

- Property tax revenue at HdL projections or 3%
- OPEB contributions per actuarial calculations or \$500K
- Pension rate stabilization trust contributions at actuarial calculations or \$500K
- General fund reserve requirements – 17% or 50%
- Capital expenditures – Issue debt or pay cash for construction of Station 41, 45 and Administration.

Attachments

- 1) Attachment A – Long Range Financial Plan Version A and Version B
- 2) Attachment B – HdL 5-year property tax revenue projections
- 3) Attachment C – Property Tax Revenue Last Ten Years
- 4) Attachment D – Ambulance fee revenue last five years
- 5) Attachment E – Consumer Price Index last 10 years
- 6) Attachment F - CCCERA Five-Year Projection of Employer Contribution Rate Changes
- 7) Attachment G – Additional pension contributions
- 8) Attachment H - Station 43 Project Projected Remaining Costs

Attachment A

Moraga-Orinda Fire Protection District
 Long Range Financial Plan
 Draft Update
 March 2018 Version A

	PROJ 17/18	PROJ 18/19	PROJ 19/20	PROJ 20/21	PROJ 21/22	PROJ 22/23	PROJ 23/24	PROJ 24/25	PROJ 25/26	PROJ 26/27	PROJ 27/28	PROJ 28/29	PROJ 29/30	PROJ 30/31	PROJ 31/32	ASSM	ASSM	ASSM	ASSM	ASSM	ASSM	
1	GENERAL FUND BALANCE UNASSIGNED, BEGINNING																18/19	19/20	20/21	21/22	22/23	24+
2	CAPITAL FUND BALANCE, BEGINNING OF YEAR																18/19	19/20	20/21	21/22	22/23	24+
2a	DEBT SERVICE FUND BALANCE, BEGINNING																					
3	COMBINED UNRESTRICTED FUND BALANCE, BEGINNING																NA	NA	NA	NA	NA	NA
3a	PERCENT OF GENERAL FUND REVENUE																NA	NA	NA	NA	NA	NA
4	ANNUAL GENERAL FUND SURPLUS																NA	NA	NA	NA	NA	NA
4a	ANNUAL CAPITAL PROJECTS FUND SURPLUS (DEFICIT)																NA	NA	NA	NA	NA	NA
5	GENERAL FUND REVENUES																					
5a	PROPERTY TAX																HdL	4.5%	4.4%	4.4%	4.4%	4.0%
5b	USE OF MONEY & PROPERTY																Budget	0.0%	0.0%	0.0%	0.0%	0.0%
5c	INTERGOVERNMENTAL REVENUE																Budget	1.0%	1.0%	1.0%	1.0%	1.0%
5d	CHARGES FOR SERVICES/OTHER																Budget	1.0%	1.0%	1.0%	1.0%	1.0%
5e	AMBULANCE FEES																Budget	1.5%	1.5%	1.5%	1.5%	1.5%
5f	OTHER REVENUE (FEDERAL GRANTS)																NA	NA	NA	NA	NA	NA
5g	FIRE FLOW TAX																NA	NA	NA	NA	NA	NA
6	TOTAL GENERAL FUND REVENUES																NA	NA	NA	NA	NA	NA
7	CAPITAL FUND REVENUES																0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
7a	DEBT SERVICE FUND REVENUES																NA	NA	NA	NA	NA	NA
8	TOTAL REVENUES																NA	NA	NA	NA	NA	NA
9	GENERAL FUND EXPENDITURES																					
9a	REGULAR SALARIES																2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
9b	TEMPORARY SALARIES																0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9c	OVERTIME																2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
9c1	OVERTIME STRIKE TEAM																Budget	1.5%	2.5%	2.5%	2.5%	2.5%
9d	OTHER BENEFITS																0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9f	WORKERS COMPENSATION																1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
9g	MEDICAL, DENTAL & VISION																1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
9h	OPERATING EXPENSES																3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
9j	CCCPERA EMPLOYER PAYMENT - NORMAL COST																1.0%	-1.9%	-1.6%	-0.6%	-1.6%	-2.1%
9j1	CCCPERA EMPLOYER PAYMENT - UAAL PAYMENT																1.0%	-1.9%	-1.6%	-0.6%	-1.6%	-2.1%
9k	SINGLE ROLE PARAMEDIC IMPLEMENTATION																					
9m	OPEB FUNDING (INTO TRUST)																3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
9n	PENSION RATE STABILIZATION (INTO TRUST)																3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
10	TOTAL GENERAL FUND EXPENDITURES																NA	NA	NA	NA	NA	NA
11	CAPITAL EXPENDITURES																NA	NA	NA	NA	NA	NA
11a	DEBT SERVICE FUND EXPENDITURES																					
12	TOTAL EXPENDITURES																NA	NA	NA	NA	NA	NA
13	TRANSFERS OUT GENERAL FUND																					
13A	TRANSFER IN CAPITAL PROJECTS FUND																					
13B	TRANSFERS OUT CAPITAL PROJECTS FUND																					
14	TRANSFER IN DEBT SERVICE FUND																					
18	GENERAL FUND BALANCE UNASSIGNED, END																NA	NA	NA	NA	NA	NA
19	CAPITAL FUND BALANCE, END OF YEAR																NA	NA	NA	NA	NA	NA
19A	DEBT SERVICE FUND BALANCE, END OF YEAR																NA	NA	NA	NA	NA	NA
20	COMBINED UNRESTRICTED FUND BALANCE, END OF YEAR																NA	NA	NA	NA	NA	NA
21	OPEB TRUST PROJECTED BALANCE																6.3%	6.3%	6.3%	6.3%	6.3%	6.3%
22	PENSION RATE STABILIZATION TRUST PROJECTED																6.3%	6.3%	6.3%	6.3%	6.3%	6.3%

Attachment A

Moraga-Orinda Fire Protection District
 Long Range Financial Plan - Capital Expenditures
 Draft Update
 March 2018

	DESCRIPTION	AGE	REPLACEMENT DATE	BOOK VALUE	2018 REPLACEMENT COST	PROJ 18/19	PROJ 19/20	PROJ 20/21	PROJ 21/22	PROJ 22/23	PROJ 23/24	PROJ 24/25	PROJ 25/26	PROJ 26/27	PROJ 27/28	PROJ 28/29	PROJ 29/30	PROJ 30/31	PROJ 31/32
	BUILDINGS & GROUNDS																		
	STATION-41/TRAINING	61	2019	579,367	7,000,000		585,000	585,000	585,000	585,000	585,000	585,000	585,000	585,000	585,000	585,000	585,000	585,000	585,000
	ADMINISTRATION	49	2019	340,435	1,000,000		85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000
	STATION-42	16	2041	1,992,000	2,721,437														
	STATION-43	0	2058		4,093,000	3,659,115													
	STATION-44	11	2046	2,648,802	2,478,819														
	STATION-45	47	2022	475,488	5,000,000					420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000
	CAPITAL IMPROVEMENTS - OTHER					206,000	212,180	218,545	225,102	231,855	238,810	245,975	253,354	260,955	268,783	276,847	285,152	293,707	302,518
	TOTAL FACILITIES EXPENDITURES					3,865,115	882,180	888,545	895,102	1,321,855	1,328,810	1,335,975	1,343,354	1,350,955	1,358,783	1,366,847	1,375,152	1,383,707	1,392,518
	TOTAL APPARATUS EXPENDITURES/VEHICLE					0	0	0	0	769,776	0	0	0	0	0	2,742,596	0	0	0
	FIREFIGHTING CAPITAL EQUIPMENT					39,393	40,575	41,792	43,046	444,337	45,668	47,038	1,148,449	49,902	51,399	51,399	51,399	51,399	51,399
	IT CAPITAL (FIXED ASSETS) EXPENDITURES					17,597	18,124	18,668	19,228	19,805	20,399	21,011	21,642	22,291	22,960	22,960	22,960	22,960	22,960
	OTHER CAPITAL EXPENDITURES					12,191	12,313	12,436	12,561	12,686	12,813	12,941	13,071	13,201	13,333	13,467	13,601	13,737	13,875
	TOTAL CAPITAL					\$ 3,934,296	\$ 953,192	\$ 961,442	\$ 969,936	\$ 2,568,459	\$ 1,407,691	\$ 1,416,965	\$ 2,526,516	\$ 1,436,349	\$ 1,446,476	\$ 4,197,268	\$1,463,113	\$1,471,803	\$ 1,480,752

Attachment A

MORAGA-ORINDA FIRE DISTRICT
 APPARATUS & VEHICLE REPLACEMENT PLAN: 2018 - 2031

DRAFT: MARCH 2018

DESCRIPTION	AGE	REPLACE DATE	2017 COST	PROJ 17/18	PROJ 18/19	PROJ 19/20	PROJ 20/21	PROJ 21/22	PROJ 22/23	PROJ 23/24	PROJ 24/25	PROJ 25/26	PROJ 26/27	PROJ 27/28	PROJ 28/29	PROJ 29/30	PROJ 30/31	PROJ 31/32	
ENGINES - STRUCTURE PROTECTION																			
1996	ENGINE TYPE 1 SPARTAN 3D (REPLACE W/TRUCK)	21	2017	585,163															
1998	ENGINE TYPE 1 SPARTAN, HI TEC (REPLACE W/ 2017 PIERCE)	19	2017	585,163															
1998	ENGINE TYPE 1 SPARTAN, HI-TEC (REPLACE W/ 2017 PIERCE)	19	2017	585,163															
2008	ENGINE TYPE 1 PIERCE	9	2028	585,163											727,577				
2012	ENGINE TYPE 1 PIERCE	5	2032	585,163															
2017	ENGINE TYPE 1	0	2037	602,834															
2017	ENGINE TYPE 1	0	2037	602,834															
ENGINES - WILDLAND																			
2002	ENGINE TYPE 3 WESTATES	15	2022	386,428					426,648										
2002	ENGINE TYPE 3 WESTATES	15	2022	386,428					426,648										
2008	ENGINE TYPE 3 PIERCE	9	2028	386,428											480,475				
2010	ENGINE TYPE 3 PIERCE	7	2028	386,428											480,475				
ENGINES -																			
2018	ENGINE TYPE 6	0	2018			100,000													
2018	ENGINE TYPE 6	0	2018			100,000													
AERIAL LADDER TRUCKS																			
1989	TRAINING TILLER TRUCK - SEAGRAVE 100'	28	TBD	30,000															
2001	AERIAL LADDER SPARTAN/LTI-93	16	N/A	1,110,000															
2017	TILLER TRUCK - 100'	0	2033	1,286,924															
SPECIALIZED APPARATUS																			
1999	TECHNICAL RESCUE UNIT	18	TBD	300,000															
2009	WATER TENDERPIERCE-KENWORTH	8	2034	300,000															
2011	RESCUE BOAT	6	2030	30,000														39,584	
2011	TRAILER RESCUE - ALL RISK	6	2030	16,561														21,852	
AMBULANCES																			
2015	AMBULANCE NAVISTAR TERRASTAR LEADER	1	2028	212,277											263,940				
2015	AMBULANCE NAVISTAR TERRASTAR LEADER	1	2028	212,277											263,940				
2017	AMBULANCE	0	2028	180,645											209,882				
2017	AMBULANCE	0	2028	180,645											209,882				
COMMAND VEHICLES																			
2007	COMMAND FORD EXPEDITION	10	2016	60,000															
2008	COMMAND CHEVY SUBURBAN	9	2020	60,000					66,245										
2008	COMMAND CHEVY SUBURBAN	9	2020	60,000					66,245										
2008	COMMAND-CHEVY SUBURBAN	9	2020	60,000					66,245										
2017	COMMAND CHEVY TAHOE	0	2028	52,048											64,715				
SUPPORT VEHICLES																			
1994	SUPPORT - INT'L/ROAD RESCUE	23	TBD	200,000															
2011	CHEVY TAHOE (REPLACE W/ EXPLORER)	6	2022	34,700					38,312										
2012	FORD EXPLORER	5	2022	34,700					38,312										
2017	FORD EXPLORER	0	2028	33,546											41,710				
UTILITY VEHICLES																			
2000	UTILITY FORD F250	17	2020	60,000					66,245										
2005	FORD RANGER	12	2020	18,769					19,918										
2005	FORD RANGER	12	2020	18,769					19,918										
TOTAL APPARATUS EXPENDITURES/VEHICLE					0	0	0	0	769,776	0	0	0	0	0	2,742,596	0	0	0	
CAPITAL FUND BALANCE (PROJ), END OF YEAR WITH PURCHASES					8,275,205	4,875,692	4,035,114	3,278,465	2,517,411	1,782,313	1,751,333	1,715,556	1,773,846	1,826,063	1,771,064	1,769,322	1,704,949	1,636,249	1,562,310

FIREFIGHTING/RESCUE APPARATUS
 AMBULANCES
 COMMAND/SUPPORT/STAFF VEHICLES



MORAGA ORINDA FIRE Attachment B
GENERAL FUND REVENUE ESTIMATE

2018-19 Revenue Estimate based on 2017-18 Values and Estimated Changes

District Revenue	2018-19	2019-20	2020-21	2021-22	2022-23
Non RDA and BY Values	\$10,701,070,113	\$11,319,217,137	\$11,829,593,926	\$12,354,859,472	\$12,897,207,649
Real Property Value (Incl. Prop 8 parcels)	\$10,669,236,716	\$11,287,383,740	\$11,797,760,529	\$12,323,026,075	\$12,865,374,252
CPI of Non Prop 8 Parcels (Max 2.0%)	\$193,713,004	\$208,314,050	\$220,712,453	\$232,696,757	\$244,533,014
Transfer of Ownership Assessed Value Change	\$358,208,848	\$268,163,462	\$279,706,498	\$291,725,076	\$304,224,889
Est. SFR Prop 8 Adj Based on Recent SFR Price	\$66,225,172	\$33,899,277	\$24,846,595	\$17,926,343	\$12,184,553
Estimated Real Property Value	\$11,287,383,740	\$11,797,760,529	\$12,323,026,075	\$12,865,374,252	\$13,426,316,708
Base Year Values	\$0	\$0	\$0	\$0	\$0
Secured Personal Property Value (0.0% growth)	\$11,174,950	\$11,174,950	\$11,174,950	\$11,174,950	\$11,174,950
Unsecured Personal Property Value (0.0% growth)	\$20,658,447	\$20,658,447	\$20,658,447	\$20,658,447	\$20,658,447
Nonunitary Utility Value (0.0% growth)	\$0	\$0	\$0	\$0	\$0
Enter Completed New Construction					
Estimated Net Taxable Value	\$11,319,217,137	\$11,829,593,926	\$12,354,859,472	\$12,897,207,649	\$13,458,150,105
Estimated Total Percent Change	5.78%	4.51%	4.44%	4.39%	4.35%
Taxed @ 1%	\$113,192,171	\$118,295,939	\$123,548,595	\$128,972,076	\$134,581,501
Aircraft Value	\$0	\$0	\$0	\$0	\$0
Average District Share 0.2120735665	\$24,005,067	\$25,087,442	\$26,201,391	\$27,351,568	\$28,541,179
Aircraft Rate (.01 * 0.0)	\$0	\$0	\$0	\$0	\$0
Enter Unitary Taxes Budgeted Flat					
Net District Estimate	\$24,005,067	\$25,087,442	\$26,201,391	\$27,351,568	\$28,541,179
Enter Suppl. Apportionment - Average 3 Yrs.	400,000	400,000	400,000	400,000	400,000
Enter Delinquent Apportionment - Average 3 Yrs.					

Attachment B

Dist Wide Value Change	2018-19	2019-20	2020-21	2021-22	2022-23
District Net Taxable Value	\$10,701,070,113	\$11,319,217,137	\$11,829,593,926	\$12,354,859,472	\$12,897,207,649
Real Property Value (Incl. Prop 8 parcels)	\$10,669,236,716	\$11,287,383,740	\$11,797,760,529	\$12,323,026,075	\$12,865,374,252
CPI of Non Prop 8 Parcels (Max 2.0%)	\$193,713,004	\$208,314,050	\$220,712,453	\$232,696,757	\$244,533,014
Transfer of Ownership Assessed Value Change	\$358,208,848	\$268,163,462	\$279,706,498	\$291,725,076	\$304,224,889
Est. SFR Prop 8 Adj Based on Recent SFR Price	\$66,225,172	\$33,899,277	\$24,846,595	\$17,926,343	\$12,184,553
Estimated Real Property Value	\$11,287,383,740	\$11,797,760,529	\$12,323,026,075	\$12,865,374,252	\$13,426,316,708
Secured Personal Property Value (0.0% growth)	\$11,174,950	\$11,174,950	\$11,174,950	\$11,174,950	\$11,174,950
Unsecured Personal Property Value (0.0% growth)	\$20,658,447	\$20,658,447	\$20,658,447	\$20,658,447	\$20,658,447
Nonunitary Utility Value	\$0	\$0	\$0	\$0	\$0
Enter Completed New Construction					
Estimated Net Taxable Value	\$11,319,217,137	\$11,829,593,926	\$12,354,859,472	\$12,897,207,649	\$13,458,150,105
Estimated Total Percent Change	5.78%	4.51%	4.44%	4.39%	4.35%

NOTES:

- Transfer of Ownership Assessed Value Change: For years 2019-20 and later a growth rate is applied that is representative of the historical average rate of real property growth due to properties that have transferred ownership. The percentage used in Contra Costa County of 2.36% is applied to real property value.
- Estimated Assessor Prop 8 Adjustments: Prop 8 reductions in value are TEMPORARY reductions applied by the assessor that recognize the fact that the current market value of a property has fallen below its trended (Prop 13) assessed value. For 2018-19 and later, properties with prior Prop 8 reductions are not included in the CPI increase, they are projected flat until either the Assessor begins to recapture value as the economy improves and median sale prices begin to increase, they are further reduced, or they sell and are reset per Prop 13.
- Where they exist, prop 8 restoration adjustments are based on projected median SFR home price growth. For this projection the following median year to year percentage changes are used for Moraga Orinda Fire: 2019-20 @ 4.2%; 2020-21 @ 3.5%; 2021-22 @ 2.7%; 2022-23 @ 2.0%;
- Base Year Values Entry: With the dissolution of redevelopment, base year values are unlikely to change and are budgeted flat.
- Secured personal property and unsecured values are projected at 100% of 2017-18 levels. Unsecured escaped assessments may be included in the unsecured value. The value of escaped assessments is generally inconsistent and varies from year to year.
- Completed new construction entry: This data entry point allows for the inclusion of new construction projects completed annually. Due to processing delays we suggest that a time frame of November - October be selected. (i.e. Nov. 2016 - Oct. 2017 for the 2019-20 FY). If completed new construction has resulted in a sale of the property it is likely that the new value will appear in the value increase due to transfers of ownership entry and therefore should not be also included in the completed new construction value.
- Pooled Revenue Sources include supplemental allocations, redemptions for delinquent payments in Non-Teeter cities, tax payer refunds due to successful appeals, roll corrections and other adjustments applied after the release of the roll. The forecasting of these revenues should be developed based on historical averages over a minimum of 3 years.
- General Fund Revenue Estimate does not include any ad valorem voter approved debt service revenue.
- The revenue projection assumes 100% payment of taxes. Delinquency is not considered in the projection; however, rates of between 1% and 2.5% are typical.
- Pass through and residual revenues from former redevelopment agencies are not included in this estimate.

Prepared on 2/2/18 Using Sales Through 12/31/17

This report is not to be used in support of debt issuance or continuing disclosure statements without the written consent of HdL Coren & Cone



2018-19 GENERAL FUND REVENUE SPREADSHEET INSTRUCTIONS

If you take nothing else from this memo, please be aware of the following:

- The “Net GF Estimate” line on the supplied revenue estimate represents 2018/19 current year revenue in secured, unsecured and homeowner’s (HOX, HOPT) revenue only. It does not include revenue from secured unitary, prior year, supplemental, or redemption revenue. Instructions are provided below to budget some of those revenue streams.
- If you budget secured and unsecured revenues separately, you should budget unsecured flat and subtract that amount from the “Net GF Estimate” to obtain your secured amount to budget.
- “Net GF Estimate” assumes 0% delinquency. The actual delinquency rate is between 1% and 2%.
- New construction is not represented in this estimate unless the property sold in 2017. You may enter new construction according to the guidelines below or leave it blank for a more conservative estimate.
- **THIS REPORT IS ONLY A GUIDE.** The most accurate estimate of future revenues would include factoring of some of the elements in this spreadsheet report against the actual secured, unsecured, and HOX revenues received for the current year. Current year revenues plus trending information specifically related to property transfers and new development in the general fund taxing district are all critical to the development of estimated general fund revenues.
- You know your community. If the estimate or its assumptions don’t seem to fit your community, please contact us to discuss your specific situation.

To discuss your spreadsheet with HdLCC staff, please call 909.861.4335 or email us at:

Paula Cone - pcone@hdlccpropertytax.com

Nichole Cone- ncone@hdlccpropertytax.com

Dave Schey - dschey@hdlccpropertytax.com

INFORMATION AND ASSUMPTIONS

This year the Assessor’s applied CPI factor is 2.0%. It is important to remember that all properties that have been granted Prop 8 reductions between 2008 and 2012 are required to be reviewed each year outside of the CCPI adjustment and any positive adjustment to those properties will likely exceed this 2.0% if granted value restorations.

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We are providing you with our assumptions in developing the General Fund spreadsheet model for 2017-18. This will allow you to make educated changes based on local information and override our assumptions in the Excel version of this report if you feel we are not taking specific changes into consideration.

1. **CCPI** All real property not reduced per Proposition 8 by the county assessors will receive the 2.0% CPI adjustment. In reviewing the trending of Prop 8 reductions, many of our clients still have between 10%-15% of the single family residential properties in the Prop 8 review pool. Those properties will not receive the CCPI adjustment. Our model has calculated the CCPI to be applied to the real property values of non-Prop 8 reduced properties.
2. **TRANSFERS OF OWNERSHIP** For those properties that have sold between January and December 2017 we have calculated the difference between the value on the roll released for 2017-18 and the price paid for the property in the sale transaction and have provided that "market value" as an increase due to these sales.
3. **PROPOSITION 8 RECAPTURES – SINGLE FAMILY RESIDENTIAL** We have reviewed all single family residential properties that have sold during the full 2017 calendar year and have compared that sale price against 2016 transfers to ascertain the median price change between tax years. The median price change as a percentage is applied to each parcel in the pool that was previously reduced per Prop 8. The amount that can be restored for a single parcel is never more than a parcel's potential recapture amount with the next year's assessor's CPI included. While our data is good data, the assessors may be applying more subjective means for recapturing than the empirical data may suggest. All neighborhoods are not the same and some will see larger bumps than others. Our modeling applies this median increase percentage change across the board and not on a neighborhood basis. As the pool of Prop 8 parcels dwindles, we have included a new check that looks at the pre-recession peak median plus all intervening years of inflation. If the annual current median is more than 10% above the inflated pre-recession peak, no increase in value for Proposition 8 restorations will be calculated.
4. **PROPOSITION 8 RECAPTURES – NON-SINGLE FAMILY PARCELS** Gauging increases on non-single family parcels (commercial, industrial, multifamily residential and vacant) is more difficult. Due to the uniqueness of these properties, comparable sales and adjustments to Prop 8 reduced values are too difficult to forecast. For this reason, these positive adjustments are not a part of our estimate.
5. **BASE YEAR VALUES** In cities with former redevelopment agencies, base year values tend to remain constant and we don't anticipate any changes to base year values.
6. **PERSONAL PROPERTY VALUES** The personal property on the secured tax rolls and the unsecured property values are being budgeted flat at 2017-18 levels. This value is not a one size fits all, so any community with new development which supports tenants may see an increase in this value type. Conversely, moving or downsizing among existing tenants could result in a decline in this value type. Due to the large number of escaped assessments in Orange County, we have included a 10-year trimmed mean value for escapes in 2018/19 to prevent large fluctuations in the estimate based on these one-time corrections. Amounts are noted in the footnote.
7. **COMPLETED NEW CONSTRUCTION IN GENERAL FUND** Building permit or project completion information will be available from your city's building official. It is suggested that

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you use November 2016 through October 2017 for the 2018-19 fiscal year. If newly constructed of residential units were sold during the 2017 calendar year, those sales transactions are included in the box identified as "Transfer of Ownership Assessed Value Change", and should not be counted as new construction also. Properties built and granted certificates of occupancy and not sold before the end of 2017 can be included in the Completed New Construction box.

8. **RESIDUAL REVENUE** Our modeling does not provide an estimate for residual revenue the city/district may receive from the former RDA. We have a separate spreadsheet available that assists in the development of residual revenue projections for Successor Agencies. As an alternative you can budget the allocation received in 2017-18 flat.
9. **APPEALS** Appeal reductions are no longer included in our estimates. Determining the impact of appeals reductions for prior years on future year's values has become unreliable in the current climate. If you are aware of specific appeals that have been approved in the past year that will impact revenues going forward, please call us to discuss and we will revise the estimate.
10. **OIL AND GAS VALUES** In cities with refineries and oil reserves we have seen a decline in the valuation of the oil and gas storage and underground reserves due to falling oil prices in recent years. Revenue from these assets is being projected flat in our model. Please call us to discuss your estimate so that we can talk about what to expect in 2018/19.
11. **ANNEXATIONS** The model assumes that there are no new annexations. If there are annexations that are set to take effect with the 2018-19 roll year, the expected value added from the new territory should be added to the new construction line or call us to discuss.

Once you have developed an assessed value number for 2018-19, this value is multiplied by 1% and then that product is multiplied by the "City/District Share of 1% Tax Revenue" noted in the middle of the report in calculating your estimated general fund tax revenue. This is a weighted 1% share agency wide.

For NON-TEETER cities we have not factored for delinquent taxes. The delinquency rate is between 1% and 2% depending on the county surveyed. This is lower than the delinquency rates seen during the recession. No offset has been made for administrative fees charged by the county per SB 2557.

GENERAL PROPERTY TAX DISCUSSION

2017, the year that will be influencing the 2018-19 property values, was a year where we saw increases in median sale prices continue to inch upward, but in many counties at a slower pace than we have seen in the past couple of years. Potential increases in value due to the restoration of previously reviewed and reduced values per Proposition 8 will result in a more measured and limited impact to the forecasted budgeted growth. These Proposition 8 value reviews have always been a major challenge as we forecast property tax revenues because most of the county Assessors do not provide information to assist in this forecasting relative to their workload and potential restoration increases. In the 44 counties where we purchase and have analyzed the Proposition 8 recovery, the

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average restoration statewide is at 75%. Only a handful of counties have seen less than 50% of those previously reduced values recaptured. Transfers of ownership in 2017, while not as strong as what was seen in 2016 in both number of sales and the year over year sale price increase, have still continued to move up slightly or flatten in some areas. The unavailability of inventory is driving some of the numbers. The continued growth of median sale prices may translate in some additional limited Proposition 8 recapturing.

HdL Coren & Cone has prepared our annual General Fund budget worksheet to assist you in estimating property tax and VLF (in-lieu) revenues for next fiscal year. Each year our revenue projection model is re-evaluated to account for changes in the real estate landscape that will impact the revenue stream in the coming year. The previous Proposition 8 administrative reductions performed by assessors will be addressed differently by appraisal staff in each county. In almost every county the current median sales prices have exceeded peak prices in the run-up before the recession and would support some limited restoration of previously reduced values. Our analysis of data has allowed us to identify single family residential properties that were reduced between 2008 and 2012. Some properties have subsequently sold from within those identified as having received reductions and because of the sale have now had their base value reset per Proposition 13 and have been removed from our analysis. Those homes remaining are likely to receive an upward adjustment for 2018-19 given current real estate market trends. The real question in each county is just how much of the current median sale price increase will be applied to properties as they are reviewed and start to reflect current market values. We encourage you to contact us, to ask questions, or to discuss our reasoning in this model. If you have a relationship with your county assessor, a simple question as to whether he/she will be implementing a similar, greater or lesser number or amount of reinstatements may give you much needed information. As city/district staff you may also have information that we have not received and that information, once applied to the revenue model, may change the outcome.

Pooled revenue sources such as supplemental payments, redemption payments in non-Teeter cities, tax payer refunds due to successful appeals, and one-time adjustments made by the assessor and reflected by auditor-controller apportionments are not included in this property tax revenue projection. These forecasted amounts tend to be less consistent and should be based on the allocations or reductions the city/district has seen on remittance advices over a multi-year period including your knowledge of events in the city or county that may impact your positive cash flow. Supplemental apportionments have been stabilizing with the flattening of sale prices and lower numbers of sales transactions. Redemption (delinquent) payments in non-teeter cities have remained somewhat constant over the past several years. These pooled revenue sources are difficult to quantify accurately.

The VLF in-lieu estimate is based on the change in Gross Taxable Value in the entire city which may be a different set of values for cities with redevelopment project areas. This revenue source is now tied to the property value change between tax years



FIVE YEAR GENERAL FUND BUDGET PROJECTION – INSTRUCTIONS AND ASSUMPTIONS

Our 5-Year General Fund Revenue forecasting tool has many moving parts that need to be included and built upon in a multi-year forecast. Some parts of this equation are easier to forecast because we have solid resources to help with those factors including the CCPI adjustment per Prop 13, transfers of ownership between tax years and new construction projects completed between reporting years. Some of the elements are guesstimates based on trends and other information that may or may not be borne out in the data when it is released by the counties such as Prop 8 value restorations, supplemental apportionments, redemption apportionments (delinquent or prior year payments), unitary revenue and adjustments applied after the close of the tax roll.

With an eye on prior year trends relative to sales activity and Prop 8 values restored, and some historical factors for ownership changes over the past 13-25 years (depending on the county), we have developed a spreadsheet that, like our general fund single year tool, allows for some tweaking by city staff.

We are providing you with the assumptions considered in the development of the 5-Year General Fund Revenue Projection spreadsheet model to give you, the user, the detail behind the numbers. This knowledge allows you to make educated modifications based on more regional or local information that you may be aware of to over-ride our assumptions in the Excel version of this report. We recognize that with any tool that attempts to project property tax revenues out beyond one or two years, cities will be revising their projections annually as more current data becomes available. In the development of this product we have made the following assumptions:

1. **CONSUMER PRICE INDEX ANNUAL ADJUSTMENT** The California Consumer Price Index (the “CCPI”) for 2018-19 that has been approved by the State is 2.00%. In years 2-5 of the model, the CCPI has been forecast at the maximum allowable – 2%. Properties that have been reduced by the assessor per Prop 8 are not included in this increase because they are tracked separately and reviewed annually with a potential increase different than the granted CCPI depending on the economic recovery.
2. **TRANSFERS OF OWNERSHIP** For the 2018-19 fiscal year, the actual value increase due to the transfers of ownership is included. For fiscal year 2019-20 and later, a growth rate is applied that is representative of the historical percentage of the value growth countywide that is a result of properties that have transferred ownership averaged over the past 13-25 years. That percentage is unique to the county where your City is located and is identified in the footnotes. This growth rate ranges from 1.06% to 3.00%, depending on the county.
3. **PROPOSITION 8 VALUE RESTORATION – SINGLE FAMILY RESIDENTIAL** Proposition 8 reductions in value are TEMPORARY and are applied by the assessor to recognize the fact that the current market value of a property has fallen below its trended Proposition 13 assessed value. For 2018-19 and later, properties with prior Prop 8 reductions are not included in the CCPI increase. They are projected flat until either the Assessor begins to restore value as the economy improves and median sale prices begin to increase or they are further reduced, or they sell and are reset per Prop 13.

Proposition 8 adjustments in the 5-year model are based on the projected growth in the median sale price of SFR homes. The report includes the estimated adjustment value of the remaining Prop 8 reduced properties that are likely to be restored in each of the next 5 years. The amount for 2018-19 is based on the data we have included in our single year forecast.

For the subsequent 4 years, the projection uses a progression of the projected median price change percentage as estimated by Zillow for calendar year 2018 and that percentage is scaled to a cautious estimate of 2% in

Attachment B

2022-23 to gauge the potential value restoration annually. Since this is one of the most difficult numbers to forecast given the lack of information from most Assessors' Offices, it will be one element that will be adjusted as the forecast is prepared and released in future tax years.

We have identified SFR properties that were previously reduced per Prop 8 and have subsequently sold from within this pool of properties and have been reset per Prop 13. Those sales have been reviewed over the past 8 years and have been factored into the equation used to reduce the overall pool of properties to be restored going forward.

Conversely, if the annual current median is more than 10% above the inflated pre-recession peak, no increase in value for Proposition 8 restorations will be calculated and any year shown.

4. **BASE YEAR VALUES** With the dissolution of redevelopment, base year values are unlikely to change and are budgeted flat. No growth factors have been applied and should not be considered as these values do not change during the life of the project unless granted a Malaki Adjustment.
5. **PERSONAL PROPERTY VALUES** Secured personal property and unsecured values are projected at 100% of the values reported in 2017-18. Unsecured escaped values may be included in the unsecured value. These assets are generally inconsistent and vary from year to year. Due to the large number of escaped assessments in Orange County, for this county only, we have included a 10 year trimmed mean for escapes in future years to prevent large fluctuations in the estimate based on these one-time corrections.
6. **COMPLETED NEW CONSTRUCTION** This data entry point allows for the inclusion of new construction projects completed annually. Due to processing delays we suggest that a time frame of November - October be selected. (i.e. November 2017 – October 2018 for the 2018-19 FY).
7. **POOLED REVENUE SOURCES** There are several revenues that are pooled and apportioned county-wide. These include supplemental allocations, redemptions for delinquent payments in Non-Teeter cities, tax payer refunds due to successful appeals, roll corrections and other adjustments applied after the release of the roll. The forecasting of these revenues should be developed based on historical averages.
8. **APPEALS** Appeal reductions are no longer included in our estimates. Determining the impact of appeals reductions for prior years on future year's values has become unreliable in the current climate. If you are aware of specific appeals that have been approved in the past year that will impact revenues going forward, please call us to discuss and we will revise the estimate.
9. **OIL AND GAS VALUES** In cities with refineries and oil reserves we have seen a decline in the valuation of the oil and gas storage and underground reserves due to falling oil prices in recent years. Revenue from these assets is being projected flat in our model. Please call us to discuss your estimate so that we can talk about what to expect in 2018/19 and future years.
10. **ANNEXATIONS** The model assumes that there are no new annexations. If there are annexations that are set to take effect with the 2018-19 roll year, the expected value added from the new territory should be added to the new construction line or call HdL Coren & Cone to discuss
11. **WHAT IS NOT INCLUDED?**
 - The revenue model does not include any ad valorem voter approved debt service revenue.
 - The revenue forecast assumes 100% payment of taxes. Delinquency factors for non-Teeter cities have not been included. Depending on the county, delinquencies range between 1% and 2 ½%
 - The annual fee charged by the County (SB 2557) to administer property tax revenues is not included.

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- Pass through payments and Residual Revenue allocations from the RPTTF derived from former redevelopment project areas are not included.

To discuss your spreadsheet with HdLCC staff, please call 909.861.4335 or email us at:

Paula Cone - pcone@hdlccpropertytax.com

Nichole Cone- ncone@hdlccpropertytax.com

Dave Schey - dschey@hdlccpropertytax.com

Attachment C

Property Tax Revenue Last Ten Years

<u>Fiscal Year</u>	<u>Amount</u>	<u>Increase (Decrease)</u>	<u>Percentage Increase (Decrease)</u>
2007/08	\$15,805,123		
2008/09	16,407,887	\$602,764	3.81%
2009/10	16,827,597	419,710	2.56%
2010/11	16,882,276	54,679	0.32%
2011/12	16,524,808	(357,468)	-2.12%
2012/13	16,471,345	(53,463)	-0.32%
2013/14	17,670,263	1,198,918	7.28%
2014/15	19,235,847	1,565,584	8.86%
2015/16	20,693,314	1,457,467	7.58%
2016/17	22,121,300	1,427,986	6.90%
2017/18 Projected	23,050,127	928,827	4.20%
Average last 10 years			3.91%
Average last 5 years			6.96%
Average last 3 years			6.23%

Source: Comprehensive Annual Financial Report

Attachment D

Ambulance Fee Revenue Last Five Years

<u>Fiscal Year</u>	<u>Amount</u>	<u>Increase (Decrease)</u>	<u>Percentage Increase (Decrease)</u>
2013/14	\$810,990		
2014/15	907,730	96,740	11.93%
2015/16	997,388	89,658	9.88%
2016/17	1,116,153	118,765	11.91%
2017/18 Projected	1,043,570	(72,583)	-6.50%
Average last 4 years			6.80%
Average last 3 years			5.09%

Source: Comprehensive Annual Financial Report

Attachment E

Consumer Price Index Last Ten Years

7/1/2008	4.20%
2009	0.20%
2010	1.10%
2011	2.40%
2012	2.60%
2013	2.60%
7/1/2014	3.00%
7/1/2015	2.30%
12/1/2015	2.30%
7/1/2016	2.70%
7/1/2017	3.50%

Average last 10 years	2.46%
Average last 3 years	2.83%
Average last 2 years	3.10%

CPI is San Francisco-Oakland-San Jose



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March 8, 2018

Ms. Gail Strohl
Chief Executive Officer
Contra Costa County Employees' Retirement Association
1355 Willow Way, Suite 221
Concord, CA 94520

**Re: Contra Costa County Employees' Retirement Association
Five-Year Projection of Employer Contribution Rate Changes
Based on Estimated 13.9% Net Market Value Investment Return for 2017**

Dear Gail:

As requested, we have updated our five-year projection of estimated employer contribution rate changes for CCCERA. This projection is derived from the December 31, 2016 actuarial valuation results and incorporates an estimated net market value investment return of 13.9% for the 2017 calendar year. Key assumptions and methods are detailed below. **It is important to understand that these results are entirely dependent on those assumptions. Actual results as determined in future actuarial valuations will differ from these results. In particular, actual investment returns and actual salary levels different than assumed can have a significant impact on future contribution rates.**

Results

The estimated contribution rate changes shown on the next page apply to the recommended average employer contribution rate. For purposes of this projection, the rate changes that are included reflect the asset gains and losses that are funded as a level percentage of the Association's total active payroll base.

The changes in contribution rate are due to: (1) deferred gains and losses from the actuarial asset smoothing methodology; (2) losses due to investment income not earned on the excess of the Actuarial Value of Assets (AVA) over the Market Value of Assets (MVA) (and gains when the opposite occurs); and (3) contribution gains and losses which occur from delaying the implementation of new rates until 18 months after the actuarial valuation date.

This update also reflects an estimated net market value investment return of 13.9% in 2017 (i.e., more than the 7.00% assumed return) as provided by CCCERA.

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The following table provides the year-to-year rate changes from each of the above components and the cumulative rate change over the five-year projection period. To obtain the estimated average employer contribution rate at each successive valuation date, these cumulative rate changes should be added to the rates developed from the December 31, 2016 valuation. These rate changes become effective 18 months following the actuarial valuation date shown in the table.

2018-19

The rate changes shown below represent the average rate for the aggregate plan.

Rate Change Component	Valuation Date (12/31)				
	2017	2018	2019	2020	2021
(1) Deferred (Gains)/Losses	-0.84%	-0.45%	-0.04%	-0.55%	-0.81%
(2) (Gain)/Loss of Investment Income on Difference Between MVA and AVA	0.12%	-0.15%	-0.12%	-0.11%	-0.07%
(3) 18-Month Rate Delay	-0.11%	-0.11%	-0.09%	-0.05%	-0.06%
Incremental Rate Change	-0.83%	-0.71%	-0.25%	-0.71%	-0.94%
Cumulative Rate Change	-0.83%	-1.54%	-1.79%	-2.50%	-3.44%

The difference between these cumulative rate changes and those shown in our August 18, 2017 letter (i.e., the previous five-year projection) are as follows:

	Valuation Date (12/31)				
	2017	2018	2019	2020	2021
Cumulative Rate Change From August 18, 2017 Letter	-0.10%	0.47%	1.47%	1.93%	2.04%
Reflecting Estimated Investment Return through 12/31/2017	-0.83%	-1.54%	-1.79%	-2.50%	-3.44%
Difference	-0.73%	-2.01%	-3.26%	-4.43%	-5.48%

The average employer contribution rate as of the December 31, 2016 Actuarial Valuation is 38.08%, and based on the cumulative rate changes above is projected to progress as shown below.

	Valuation Date (12/31)				
	2017	2018	2019	2020	2021
Average Employer Contribution Rate	37.25%	36.54%	36.29%	35.58%	34.64%

Attachment F

Ms. Gail Strohl
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Page 3

The rate change for an individual cost group or employer will vary depending primarily on the size of that group's assets and liabilities relative to its payroll. The ratio of the group's assets to payroll is sometimes referred to as the asset volatility index (AVI). A higher AVI results in more volatile contributions and can result from the following factors:

- More generous benefits
- More retirees
- Older workforce
- Shorter careers
- Issuance of Pension Obligation Bonds (POBs)

The attached exhibit shows the AVI for CCCERA's cost groups along with the "relative AVI" which is the AVI for that specific cost group divided by the average AVI for the aggregate plan. Using these ratios we have estimated the rate change due to these generally investment related net losses for each individual cost group by multiplying the rate changes shown above for the aggregate plan by the relative AVI for each cost group. These estimated rate changes for each cost group are shown in the attached exhibit.

Note that because we have estimated the allocation of the rate changes across the cost groups, the actual rate changes by group may differ from those shown in the exhibit, even if the plan-wide average rate changes are close to those shown above.

Key Assumptions and Methods

The projection is based upon the following assumptions and methods:

- December 31, 2016 non-economic assumptions remain unchanged.
- December 31, 2016 retirement benefit formulas remain unchanged.
- December 31, 2016 1937 Act statutes remain unchanged.
- UAAL amortization method remains unchanged.
- December 31, 2016 economic assumptions remain unchanged, including the 7.00% investment earnings assumption.
- The net market value investment return of 13.9% was earned during 2017.
- We have assumed that returns of 7.00% are actually earned on a market value basis for years after 2017.
- Active payroll grows at 3.25% per annum.
- Deferred investment gains and losses are recognized per the asset smoothing schedule prepared by the Association as of December 31, 2016. They are funded as a level percentage of the Association's total active payroll base.

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- Deferred investment gains are all applied directly to reduce the UAAL. Note that this assumption may not be entirely consistent with the details of the Board's Interest Crediting and Excess Earnings Policy.
- The AVI used for these projections is based on the December 31, 2016 Actuarial Valuation and is assumed to stay constant during the projection period.
- All other actuarial assumptions used in the December 31, 2016 actuarial valuation are realized.
- No changes are made to actuarial methodologies, such as adjusting for the contribution rate delay in advance.
- The projections do not reflect any changes in the employer contribution rates that could result due to future changes in the demographics of CCCERA's active members or decreases in the employer contribution rates that might result from new hires going into the PEPRA tiers.

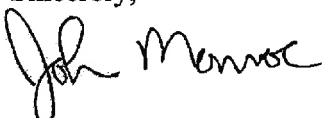
Finally, we emphasize that projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

Unless otherwise noted, all of the above calculations are based on the December 31, 2016 actuarial valuation results including the participant data and actuarial assumptions on which that valuation was based. That valuation and these projections were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary.

The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Please let us know if you have any questions.

Sincerely,



John Monroe

EK/bbf
Enclosure

Exhibit
Contra Costa County Employees' Retirement Association
Estimated Employer Rate Change by Cost Group (CG) Based on December 31, 2016 Valuation with Estimated 13.9% Net Market Value Return for 2017

	CG#1 & CG#2 Combined Enhanced General	CG#3 Enhanced CCC Sanitary District	CG#4 Enhanced Housing Authority	CG#5 Enhanced CCCFPD	CG#6 Non-Enhanced District
Market Value of Assets (MVA)*	\$4,151,205,760	\$284,476,829	\$48,588,674	\$44,845,241	\$6,163,499
Projected Payroll for 2017	\$591,044,696	\$32,605,517	\$5,539,229	\$4,254,051	\$803,241
Asset Volatility Index (AVI) = MVA/Payroll	7.02	8.72	8.77	10.54	7.67
Relative Volatility Index (AVI) = CG AVI / Total Plan AVI	0.75	0.93	0.93	1.12	0.82
Estimated Incremental Rate Change as of 12/31/2017	-0.62%	-0.77%	-0.78%	-0.93%	-0.68%
Estimated Incremental Rate Change as of 12/31/2018	-0.53%	-0.66%	-0.66%	-0.80%	-0.58%
Estimated Incremental Rate Change as of 12/31/2019	-0.19%	-0.23%	-0.23%	-0.28%	-0.20%
Estimated Incremental Rate Change as of 12/31/2020	-0.53%	-0.66%	-0.66%	-0.80%	-0.58%
Estimated Incremental Rate Change as of 12/31/2021	-0.70%	-0.87%	-0.88%	-1.05%	-0.77%
Cumulative Rate Change as of 12/31/2017	-0.62%	-0.77%	-0.78%	-0.93%	-0.68%
Cumulative Rate Change as of 12/31/2018	-1.15%	-1.43%	-1.44%	-1.73%	-1.26%
Cumulative Rate Change as of 12/31/2019	-1.34%	-1.66%	-1.67%	-2.01%	-1.46%
Cumulative Rate Change as of 12/31/2020	-1.87%	-2.32%	-2.33%	-2.81%	-2.04%
Cumulative Rate Change as of 12/31/2021	-2.57%	-3.19%	-3.21%	-3.86%	-2.81%

	CG#7 & CG#9 Combined Enhanced County	CG#8 Enhanced CCCFPD/East CCCFPD	CG#10 Enhanced Moraga-Orinda FD	CG#11 Enhanced San Ramon Valley FD	CG#12 Non-Enhanced Rodeo-Hercules FPD
Market Value of Assets (MVA)*	\$1,517,507,945	\$815,630,343	\$147,971,814	\$322,683,735	\$28,718,083
Projected Payroll for 2017	\$87,087,359	\$34,772,352	\$7,041,521	\$19,187,758	\$2,076,536
Asset Volatility Index (AVI) = MVA/Payroll	17.43	23.46	21.01	16.82	13.83
Relative Volatility Index (AVI) = CG AVI / Total Plan AVI	1.86	2.50	2.24	1.79	1.47
Estimated Incremental Rate Change as of 12/31/2017	-1.54%	-2.07%	10-20 10-21 -1.86%	-1.49%	-1.22%
Estimated Incremental Rate Change as of 12/31/2018	-1.32%	-1.77%	-1.59%	-1.27%	-1.05%
Estimated Incremental Rate Change as of 12/31/2019	-0.46%	-0.62%	-0.56%	-0.45%	-0.37%
Estimated Incremental Rate Change as of 12/31/2020	-1.32%	-1.77%	-1.59%	-1.27%	-1.05%
Estimated Incremental Rate Change as of 12/31/2021	-1.74%	-2.35%	-2.10%	-1.68%	-1.38%
Cumulative Rate Change as of 12/31/2017	-1.54%	-2.07%	-1.86%	-1.49%	-1.22%
Cumulative Rate Change as of 12/31/2018	-2.86%	-3.84%	-3.45%	-2.76%	-2.27%
Cumulative Rate Change as of 12/31/2019	-3.32%	-4.46%	-4.01%	-3.21%	-2.64%
Cumulative Rate Change as of 12/31/2020	-4.64%	-6.23%	-5.60%	-4.48%	-3.69%
Cumulative Rate Change as of 12/31/2021	-6.38%	-8.58%	-7.70%	-6.16%	-5.07%

Total Plan
\$7,367,791,922
\$784,412,260
9.39
1.00
-0.83%
-0.71%
-0.25%
-0.71%
-0.94%
-0.83%
-1.54%
-1.79%
-2.50%
-3.44%

* Excludes Post Retirement Death Benefit reserve and terminated employers' assets from bookkeeping accounts.

These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

Attachment G

Fiscal Year Ending	CCCERA		
	7% Investment Return	6.25% Investment Return	Additional
June 30	Annual Amortization Payment	Annual Amortization Payment	Contribution
2018	\$3,058,617	\$3,072,544	\$13,927
2019	3,126,734	3,178,796	52,062
2020	3,335,499	3,452,484	116,985
2021	3,599,729	3,808,469	208,739
2022	3,755,799	4,082,400	326,601
2023	3,865,334	4,327,411	462,077
2024	4,374,370	4,983,548	609,178
2025	4,517,438	5,283,598	766,160
2026	4,651,891	5,586,211	934,320
2027	4,777,148	5,892,311	1,115,164
2028	4,590,403	5,896,592	1,306,189
2029	2,929,961	4,445,515	1,515,554
2030	1,784,602	3,595,334	1,810,732

Source: GovInvest Software

Attachment H

Station 43 Project July 1 - February 28, 2018

	<u>Current Budget</u>	<u>Actuals</u>	<u>Remaining</u>	<u>Projected Remaining Costs</u>
Temporary station costs @ \$6,000/month for 14 months	\$75,000	\$40,445	\$34,555	\$84,000
Temporary engine enclosure - move	6,000		6,000	6,000
Temporary station demobilization - sell trailer	0		0	0
Church parking lot repave	39,975	12,000	27,975	39,975
Permits - grading	2,500		2,500	2,500
Permits - building	8,046	8,046	0	0
Biologist	4,000		4,000	4,000
Construction manager - Consolidated CM, Inc.	229,638	37,229	192,409	192,409
Construction manager - Stewart Enterprises	13,412	9,436	3,976	0
Constructability review - Consolidated CM, Inc.		2,638		6,363
Preconstruction/Bidding - Consolidated CM, Inc.				53,700
Winterize Construction Site				2,329
Legal costs	45,000	48,641	(3,641)	10,000
PMC claim	110,768	71,895	38,873	38,873
PMC pay to District	(53,925)	(53,925)	0	0
Architect			0	99,000
Architect - invoices received not paid		36,487	(36,487)	0
Surveyor - certify grade	10,000	1,635	8,366	8,366
Special inspections and testing	28,000		28,000	28,000
Construction inspections	6,000		6,000	6,000
Furniture, fixtures & equipment	75,000		75,000	75,000
Disapators & pumps		25,036		0
Site maintenance		2,500		0
PG&E Refund		(2,133)		0
FSG contract	3,341,000		3,341,000	0
Sausal contract				3,812,000
Contingency - 5%			0	190,600
Total	<u>\$3,940,414</u>	<u>\$239,930</u>	<u>\$3,728,525</u>	<u>\$4,659,115</u>
Cash available from debt issuance beginning of period		2,875,323		
Interest		4,219		
Cash available from debt issuance end of period		<u>\$2,639,613</u>		

Assumptions:

Construction complete April 2019

Temporary station 43 demobilized by April 2019