AGENDA

RETIREMENT BOARD MEETING

REGULAR MEETING	Board Conference Room
August 9, 2023	1200 Concord Avenue, Suite 350
9:00 a.m.	Concord, California

THE RETIREMENT BOARD MAY DISCUSS AND TAKE ACTION ON THE FOLLOWING:

1. Pledge of Allegiance.

2. Public Comment (3 minutes/speaker).

3. Recognition of Karen Levy for 15 years of service.

CONSENT ITEMS

4.A All Consent Items are to be approved by one action unless a Board Member requests separate action on a specific item. (Action Item)

I. Approve minutes from the July 12, 2023 meeting.

II. Approve the following routine items:
   a. Certifications of membership.
   b. Service and disability allowances.
   c. Death benefits.
   d. Investment liquidity report.

III. Accept the following routine items:
   a. Disability applications and authorize subpoenas as required.
   b. Travel report.
   c. Investment asset allocation report.

4.B Consider and take possible action on Consent Items previously removed, if any. (Action Item)

The Retirement Board will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Retirement Office at least 24 hours before a meeting.

5. Consider and take possible action to appoint an Acting Chief Executive Officer pursuant to Govt. Code Section 31522.9. (Action Item)

6. Appointment of ad hoc advisory committee to manage the search and recruitment of the next Chief Executive Officer.

7. Consider and take possible action to adopt the December 31, 2022 Valuation Report and contribution rates for the period July 1, 2024—June 30, 2025. (Action item)

8. Pension administration system project update: (Presentation Item)
    a. Update from staff
    b. Presentation from Segal
    c. Presentation from Sagitec

9. Consider and take possible action to amend the Internal Revenue Code Compliance Policy and the Policy on Internal Revenue Code Section 415 Compliance. (Action Item)

10. Consider and take possible action to issue a request for proposals for fiduciary counsel services. (Action Item)

11. Consider authorizing the attendance of Board: (Action Item)
    a. EQT Investment Due Diligence Meeting, September 15, 2023, New York, New York.
    b. 2023 Invesco Real Estate Global Client Conference, November 14-16, 2023, San Diego, California.

12. Miscellaneous
    a. Staff Report
    b. Outside Professionals' Report
    c. Trustees' comments

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Contra Costa County Employees' Retirement Association

RETIREMENT BOARD MEETING MINUTES

REGULAR MEETING	Board Conference Room
July 12, 2023	1200 Concord Avenue, Suite 350
9:00 a.m.	Concord, California

Present: Candace Andersen, Dennis Chebotarev, Donald Finley, Scott Gordon, Jerry Holcombe, Louie Kroll, Jay Kwon, David MacDonald, John Phillips, Mike Sloan, Russell Watts, and Samson Wong

Absent: None

Staff: Christina Dunn, Deputy Chief Executive Officer; Timothy Price, Chief Investment Officer; Karen Levy, General Counsel; Cherry Chang, Internal Auditor; Wrally Dutkiewicz, Compliance Officer; Henry Gudino, Accounting Manager; Erica Grant, Human Resources Manager; Erika McIntosh, Administrative Services Manager; and Jasmine Lee, Member Services Manager

Outside Professional Support:	Representing:
Jesse Rivera	Segal Company
Srinivas Kolluru	Sagitec

1. **Pledge of Allegiance**

   The Board, staff and audience joined in the *Pledge of Allegiance.*

2. **Board Reorganization:**

   It was **M/S/C** to nominate Scott Gordon as Chairperson, David MacDonald as Vice-Chairperson and Jerry Holcombe as Secretary. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Watts).

Wong was present for subsequent discussion and voting.

3. **Accept comments from the public**

   No member of the public offered comment.

4. **Recognition of Mayra Boyle and Jaime Hernandez for 5 years of service and Chih-Chi Chu and Brianne Wilkins for 15 years of service**

   Gordon recognized and congratulated Mayra Boyle and Jaime Hernandez for 5 years of service and Chih-Chi Chu and Brianne Wilkins for 15 years of service.

5. **<u>Approval of minutes</u>**

   It was **M/S/C** to approve the minutes of the June 14, 2023 meeting. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts, and Wong).

6. **<u>Approval of Routine Items</u>**

   It was **M/S/C** to approve the routine items of the July 12, 2023 meeting. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts, and Wong).

7. **<u>Acceptance of Routine Items</u>**

   It was **M/S/C** to accept the routine items of the July 12, 2023 meeting. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts, and Wong).

CLOSED SESSION

The Board moved into Closed Session pursuant to Govt. Code Section 54957.6.

The Board moved into open session.

8. There was no reportable action related to Govt. Code Section 54957.6.

9. **<u>Pension administration system project update</u>**

   a. Update from Staff - Dunn gave an update on the pension administration system project.
   b. Presentation from Segal – Rivera gave an update on the project.
   c. Presentation from Sagitec – Mucha gave an update on the project.

10. **<u>Retirement application processing update</u>**

    Dunn and Brianne Wilkins presented the Retirement application process improvement project report. Robert Campbell, Contra Costa County Auditor-Controller, commented on the process Contra Costa County completes in order to submit the retirement contribution reports to CCCERA.

11. **<u>Legislative update</u>**

    Levy provided a Legislative update.

12. **<u>Consider and take possible action to adopt Board of Retirement Resolution No. 2023-3, Investment Asset Allocation Targets and Ranges</u>**

    It was **M/S/C** to adopt Board of Retirement Resolution No. 2023-3, Investment Asset Allocation Targets and Ranges. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts, and Wong).

13. **<u>Presentation of 2022 CCCERA budget vs. actual expenses report</u>**

    Gudino presented the 2022 CCCERA budget vs. actual expenses report.

14. <u>Presentation of the Contra Costa County Conservation & Development Department employer audit report</u>

Dutkiewicz presented the Contra Costa County Conservation & Development Department Employer audit report.

15. <u>Consider authorizing the attendance of Board:</u>

a. There was no action taken on this item. The NASRA Annual Conference, August 5-9, 2023, Broomfield, CO.

b. It was **M/S/C** to authorize the attendance of 1 Board member at the CRCEA Annual Fall Conference, October 1-4, 2023, Stockton, CA. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts and Wong).

c. There was no action taken on this item. The NCPERS Accredited Fiduciary (NAF) Program, October 21-22 2023, Las Vegas, NV.

d. It was **M/S/C** to authorize the attendance of 1 Board member at the NCPERS FALL (Financial, Actuarial, Legislative and Legal Conference), October 22-25 2023, Las Vegas, NV. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts and Wong).

e. It was **M/S/C** to authorize the attendance of 6 Board members at the CALAPRS Trustees Roundtable, October 27, 2023, Virtual. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts and Wong).

16. <u>Miscellaneous</u>

a. Staff Report – Dunn reported an all staff training was held on July 12, 2023.

b. Outside Professionals' Report – None

c. Trustees' Comments – None

It was **M/S/C** to adjourn the meeting. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts, and Wong)

Scott W. Gordon, Chairman

Jerry R. Holcombe, Secretary

Meeting Date
08/09/2023
Agenda Item
#4.A-IIa.

CERTIFICATION OF MEMBERSHIPS

Name	Employee Number	Tier	Membership Date	Employer
Acosta, Rafael	90517	P5.2	06/01/23	Contra Costa County
Afolabi, Moyoade	93343	P5.2	06/01/23	Contra Costa County
Aiken, Allison	93393	P5.2	06/01/23	Contra Costa County
Alessio, Christopher	93470	P5.2	06/01/23	Contra Costa County
Anglin, Tina	51994	P5.2	06/01/23	Contra Costa County
Araysa, Janet	93555	P5.2	06/01/23	Contra Costa County
Atencion, Jena Erika	93486	P5.2	06/01/23	Contra Costa County
Austin, Brittany	93579	P5.2	06/01/23	Contra Costa County
Bailey, Caryn	93544	P5.2	06/01/23	Contra Costa County
Barton, Leticia	93552	P5.2	06/01/23	Contra Costa County
Bonbright Schultz, Angelica	93502	P5.2	06/01/23	Contra Costa County
Bonte, Roger	93526	P5.2	06/01/23	Contra Costa County
Brumfield, Laquisha	93472	P5.2	06/01/23	Contra Costa County
Cabrera, Katherine	D4980	P4.3	06/01/23	Contra Costa County Employees' Retirement Association
Cajoto-Gamez, Estrella	D9500	P5.3	06/01/23	Contra Costa County Superior Courts
Campbell, Schuyler	D4980	P4.3	06/01/23	Contra Costa County Employees' Retirement Association
Candido Pineda, Valeria	93499	P5.2	06/01/23	Contra Costa County
Chang, Andrew	93490	P5.2	06/01/23	Contra Costa County
Charles, Annette	93363	P5.2	06/01/23	Contra Costa County
Chesser, Patrick	93487	P5.2	06/01/23	Contra Costa County
Clay, Bonnie	93550	P5.2	06/01/23	Contra Costa County
Connor, Bianca	93566	P5.2	06/01/23	Contra Costa County
Contreras, Alma	93587	P5.2	06/01/23	Contra Costa County
Cordova, Sheli	93522	P5.2	06/01/23	Contra Costa County
Corpus, Jesse	93452	P5.2	06/01/23	Contra Costa County
Culbertson, Taylor	93455	P5.2	06/01/23	Contra Costa County
Cullup, Jeffrey	93573	P5.2	06/01/23	Contra Costa County
Dandridge, Tiffany	93498	P5.2	06/01/23	Contra Costa County
Darby, Arielle	93547	P5.2	06/01/23	Contra Costa County
Dargan, Deiziana	92303	S/E	06/01/23	Contra Costa County
Datta, Shruti	93496	P5.2	06/01/23	Contra Costa County
Davis, Jahnita	93570	P5.2	06/01/23	Contra Costa County
Davis, Jillana	93553	P5.2	06/01/23	Contra Costa County
De Peralta, Michael Eugene	92246	P5.2	06/01/23	Contra Costa County

Key:

I = Tier I	P4.2 = PEPRA Tier 4 (2% COLA)	S/A = Safety Tier A
II = Tier II	P4.3 = PEPRA Tier 4 (3% COLA)	S/C = Safety Tier C
III = Tier III	P5.2 = PEPRA Tier 5 (2% COLA)	S/D = Safety Tier D
	P5.3 = PEPRA Tier 5 (3% COLA)	S/E = Safety Tier E

CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Dela Vega, Joseph	93359	P5.2	06/01/23	Contra Costa County
Deleon Guerrero, Marissa	93571	P5.2	06/01/23	Contra Costa County
Diaz, Maciel	93546	P5.2	06/01/23	Contra Costa County
Dolan, Whitney	93420	P5.2	06/01/23	Contra Costa County
Dolmus Lindo, Heysell	93301	P5.2	06/01/23	Contra Costa County
Dominguez, Teresa	93495	P5.2	06/01/23	Contra Costa County
Dovichi, Nicholas	93408	P5.2	06/01/23	Contra Costa County
Dwiggins, Kathryn	93549	P5.2	06/01/23	Contra Costa County
Esposito, Annie	93436	P5.2	06/01/23	Contra Costa County
Fallon, Jacob	93481	P5.2	06/01/23	Contra Costa County
Faulk, Archie	93457	P5.2	06/01/23	Contra Costa County
Figueroa, Eller	93409	P5.2	06/01/23	Contra Costa County
Flores, Axel	93163	P5.2	06/01/23	Contra Costa County
Galeas Calderon, Giovanni	93407	P5.2	06/01/23	Contra Costa County
Gardner, Glenda	93402	III	06/01/23	Contra Costa County
Garner, Stephanie	62101	III	06/01/23	Contra Costa County
Geiger, Jeffrey	93474	P5.2	06/01/23	Contra Costa County
Georgandas, Gregory	93501	P5.2	06/01/23	Contra Costa County
Gibbs, James	93433	P5.2	06/01/23	Contra Costa County
Gilbert, Joanne	93430	P5.2	06/01/23	Contra Costa County
Gomez, Emmanuel	93458	P5.2	06/01/23	Contra Costa County
Gonzalez, Karla	93531	P5.2	06/01/23	Contra Costa County
Gonzalez, Sandra	93366	P5.2	06/01/23	Contra Costa County
Goodson, Toccara	93541	P5.2	06/01/23	Contra Costa County
Groce, Jason	64211	III	06/01/23	Contra Costa County
Guerrero, Jeri	93272	P5.2	06/01/23	Contra Costa County
Guzman, Jennifer	93364	P5.2	06/01/23	Contra Costa County
Guzman, Kathy	D9990	I	06/01/23	Contra Costa County Housing Authority
Havas, Laurie	93551	P5.2	06/01/23	Contra Costa County
Hawkins, Dianne	93394	P5.2	06/01/23	Contra Costa County
Hernandez, Daniel	93630	P5.2	06/01/23	Contra Costa County
Hernandez, Gilberto	93387	P5.2	06/01/23	Contra Costa County
Holtan, Dawn	93578	P5.2	06/01/23	Contra Costa County
Hudson, Jennifer	89378	P5.2	06/01/23	Contra Costa County

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III = Tier III	**P5.2 = PEPRA Tier 5 (2% COLA)**	**S/D = Safety Tier D**
	P5.3 = PEPRA Tier 5 (3% COLA)	**S/E = Safety Tier E**

CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Huneycutt, Michael	D3406	P4.3	06/01/23	Central Contra Costa Sanitary District
Jackson, Allen	91190	P5.2	06/01/23	Contra Costa County
Jayee, Martharline	93367	P5.2	06/01/23	Contra Costa County
Jefferson, Aryanna	91480	P5.2	06/01/23	Contra Costa County
Jenkins, Jeremie	93536	P5.2	06/01/23	Contra Costa County
Jiles, Johntrell	93411	P5.2	06/01/23	Contra Costa County
Jimenez, Ursula	93497	P5.2	06/01/23	Contra Costa County
Jones, Darnell	91949	P5.2	06/01/23	Contra Costa County
Karimi-Tabriz, Mitra	93437	P5.2	06/01/23	Contra Costa County
Keileh, Jad	93400	P5.2	06/01/23	Contra Costa County
Kongsinporn, Atiwat	93369	P5.2	06/01/23	Contra Costa County
Kordylewski, Waldemar	93438	P5.2	06/01/23	Contra Costa County
Linden, Justin	D7274	P4.3	03/01/23	Moraga-Orinda Fire District
Llosa-Morris, Jessie	75962	P5.2	06/01/23	Contra Costa County
Lo, Karen	93401	P5.2	06/01/23	Contra Costa County
Lopez, Margarita	93453	P5.2	06/01/23	Contra Costa County
Lucas, Sheilamar	92797	P5.2	06/01/23	Contra Costa County
Macha, Tatiana	93419	P5.2	06/01/23	Contra Costa County
MacMillan, Natalie	D7274	P4.3	03/01/23	Moraga-Orinda Fire District
Magallon, Frank	D7274	P4.3	06/01/23	Moraga-Orinda Fire District
Magallon, Olivia	93415	P5.2	06/01/23	Contra Costa County
Martinez Vega, Araceli	93431	P5.2	06/01/23	Contra Costa County
McGee, Veltha	93494	P5.2	06/01/23	Contra Costa County
Mehmood, Zain	93503	P5.2	06/01/23	Contra Costa County
Millan, Leonor	93539	P5.2	06/01/23	Contra Costa County
Miranda, Ana	93065	P5.2	06/01/23	Contra Costa County
Molina, Nestor	D9500	P5.3	06/01/23	Contra Costa County Superior Courts
Molina, Tanya	90293	P5.2	06/01/23	Contra Costa County
Moore, Mira	93434	P5.2	06/01/23	Contra Costa County
Moradi, Zahra	88572	P5.2	06/01/23	Contra Costa County
Moreno, Ivan	93107	P5.2	06/01/23	Contra Costa County
Mulvaney, Heather	93542	P5.2	06/01/23	Contra Costa County
Norby, Gregory	D3406	P4.3	06/01/23	Central Contra Costa Sanitary District
Ojoi, Marylin	92550	P5.2	06/01/23	Contra Costa County

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III = Tier III	**P5.2 = PEPRA Tier 5 (2% COLA)**	**S/D = Safety Tier D**
	P5.3 = PEPRA Tier 5 (3% COLA)	**S/E = Safety Tier E**

CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Opaon-Ali, Maria Teresa	93532	P5.2	06/01/23	Contra Costa County
Owen, Kristin	93584	P5.2	06/01/23	Contra Costa County
Pacha, Jon	90259	P5.2	06/01/23	Contra Costa County
Parada Hernandez, Jorge	D9500	P5.3	06/01/23	Contra Costa County Superior Courts
Pena, Lourdes	93479	P5.2	06/01/23	Contra Costa County
Pena, Miranda	93558	P5.2	06/01/23	Contra Costa County
Perkins, Qunitious	93417	P5.2	06/01/23	Contra Costa County
Peters, Nicole	64211	III	06/01/23	Contra Costa County
Phillips, Porshia	93540	P5.2	06/01/23	Contra Costa County
Phoummathep, Lena	93559	P5.2	06/01/23	Contra Costa County
Pinnock, Allwell	77692	P5.2	06/01/23	Contra Costa County
Pinson, Trinette	93328	P5.2	06/01/23	Contra Costa County
Porter, Kristen	88889	P5.2	06/01/23	Contra Costa County
Raj, Sandeep	91473	P5.2	06/01/23	Contra Costa County
Ramirez, Rebecca	93545	S/D	06/01/23	Rodeo-Hercules Fire Protection District
Resendez, Jessica	93462	P5.2	06/01/23	Contra Costa County
Rezeik, Eslam	93421	P5.2	06/01/23	Contra Costa County
Rojas, Ysabelle	93572	P5.2	06/01/23	Contra Costa County
Ruffinelli, Maria	93562	P5.2	06/01/23	Contra Costa County
Ryugo, Thomas	93439	P5.2	06/01/23	Contra Costa County
Saint-Saens, Melody	93426	P5.2	06/01/23	Contra Costa County
Salter, Kameelah	93563	P5.2	06/01/23	Contra Costa County
Sanchez, Mierl	93543	P5.2	06/01/23	Contra Costa County
Santiago, Diana	93554	P5.2	06/01/23	Contra Costa County
Singh, Satnam	93580	P5.2	06/01/23	Contra Costa County
Sorge, Jessica	D4980	P4.3	06/01/23	Contra Costa County Employees' Retirement Association
Sorto Umana, Flor	93513	P5.2	06/01/23	Contra Costa County
Stevens, Brittnay	93398	P5.2	06/01/23	Contra Costa County
Stubbs, Connor	D9500	P5.3	06/01/23	Contra Costa County Superior Courts
Swift, Kenna	93365	P5.2	06/01/23	Contra Costa County
Sylvain, Jada	90258	P5.2	06/01/23	Contra Costa County
Tolentino, Tristan	93413	P5.2	06/01/23	Contra Costa County
Torres, Nancy	93525	P5.2	06/01/23	Contra Costa County
Tsang, Norman	93355	P5.2	06/01/23	Contra Costa County
Valentine, La Niya	93519	P5.2	06/01/23	Contra Costa County
Velasco, Mariza	93215	P5.2	06/01/23	Contra Costa County
Verriere, Andrew	D9500	P5.3	06/01/23	Contra Costa County Superior Courts

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CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Vinson, Janiya	D4980	P4.3	06/01/23	Contra Costa County Employees' Retirement Association
Von Der Lieth, Stephanie	67723	P5.2	06/01/23	Contra Costa County
von Halle, Angelique	93471	P5.2	06/01/23	Contra Costa County
Williams, Claunesha	90121	P5.2	06/01/23	Contra Costa County
Woodman, Aldine	62937	P5.2	06/01/23	Contra Costa County

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	P5.3 = PEPRA Tier 5 (3% COLA)	**S/E = Safety Tier E**

TIER CHANGES

Name	*Employee Number*	*Old Tier*	*New Tier*	*Effective Date*	*Employer*	*Reason for Change*
Clark, Kyle	93182	S/E	S/A	04/01/23	Contra Costa Fire Protection District	Reciprocity Established
Daniel, Victor	92876	P4.2	S/E	06/01/23	Contra Costa Fire Protection District	Promotion

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III = Tier III	**P5.2 = PEPRA Tier 5 (2% COLA)**	**S/D = Safety Tier D**
	P5.3 = PEPRA Tier 5 (3% COLA)	**S/E = Safety Tier E**

Meeting Date
08/09/2023
Agenda Item
#4.A-IIb.

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

Service and Disability Retirement Allowances:

Name	Number	Effective Date	Option Type	Tier	Selected
Corson, Kevin	81423	05/13/23	SR	PEPRA 5.2	Unmodified
Custer-Ortega, Julie	52785	06/01/23	SR	II and III	Unmodified
Gorospe, Scott	D9500	05/13/23	SR	II and III	Unmodified
Ingersoll, Kelli	D4980	06/01/23	SR	I and II	Unmodified
Karp, Susan	77795	01/01/23	SR	III	Unmodified
Moreno, Nestor	61512	12/30/22	SR	Safety A	Unmodified
Reiterman, Laurel	39998	03/15/23	SR	II	Unmodified
Sillers, Christopher	D7274	03/31/23	SR	Safety D	Unmodified
Simon-Goodner, Cynthia	64257	03/20/20	SR	II and III	Unmodified
Smith, Renee	D9500	06/01/23	SR	III	Unmodified
Surio, Blesilda	70597	06/01/23	SR	III	Unmodified
Thoma, Matthew	56338	05/14/23	SR	Safety A	Unmodified
Young, Laura	55296	05/03/23	SR	III	Unmodified

Option Type

NSP = Non-Specified
SCD = Service Connected Disability
SR = Service Retirement
NSCD = Non-Service Connected Disability
* = County Advance Selected w/option

Tier

I = Tier I
II = Tier II
III = Tier III
S/A = Safety Tier A
S/C = safety Tier C

Pepra 4.2 = Pepra Tier 4 (2% COLA)
Pepra 4.3 = Pepra Tier 4 (3% COLA)
Pepra 5.2 = Pepra Tier 5 (2% COLA)
Pepra 5.3 = Pepra Tier 5 (3% COLA)
S/D = Pepra Safety Tier D
S/E = Pepra Safety Tier E

Meeting Date
08/09/2023
Agenda Item
#4.A-IIc.

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

Deaths:

Name	Date of Death	Employer as of Date of Death
Briggs, Thomas	07/05/23	Delta Diablo Sanitation District
Cash, Carolyn	11/13/22	Contra Costa County
Corser, Nancy	07/05/23	Contra Costa County
Cotton, Anita	06/28/23	Contra Costa County
Dexter, Stephen	06/21/23	Contra Costa County
Dooley, Richard	07/06/23	Contra Costa Fire Protection
Harris, Eddie	07/03/23	Contra Costa County
Jett, David	07/02/23	Contra Costa County
Newton, Michael	06/16/23	Contra Costa County
Pies, Cheri	07/04/23	Contra Costa County
Schnieber, Judith	06/14/23	Contra Costa County
Tinnirello, Alicia	07/12/23	Contra Costa County
Young, Darrell	06/26/23	City of Pittsburg

Meeting Date
08/09/2023
Agenda Item
#4.A-IId.

Contra Costa County Employees' Retirement Association

Contra Costa County Employees' Retirement Association
Liquidity Report – June 2023

June 2023 Performance

	Cash Flow	Coverage Ratio
Benefit Cash Flow Projected by Model	$49,500,000	
Liquidity Sub-Portfolio Cash Flow	$49,500,000	100%
Actual Benefits Paid	$51,365,226	96.4%
Next Month's Projected Benefit Payment	*$49,750,000*	

Monthly Manager Positioning – June 2023

	Beginning Market Value	Liquidity Program Cash Flow	Market Value Change/Other Activity	Ending Market Value
DFA	$295,908,992	($10,750,000)	$520,423	$285,679,415
Insight	$477,086,304	($18,500,000)	$872,642	$459,458,946
Sit	$533,524,784	($20,250,000)	($2,450,387)	$510,824,397
Liquidity	**$1,306,520,080**	**($49,500,000)**	**($1,057,321)**	**$1,255,962,758**
Cash	$101,703,956	($1,865,226)	$47,765,600	$147,604,330
Liquidity + Cash	**$1,408,224,036**	**($51,365,226)**	**$46,708,279**	**$1,403,567,089**

Functional Roles

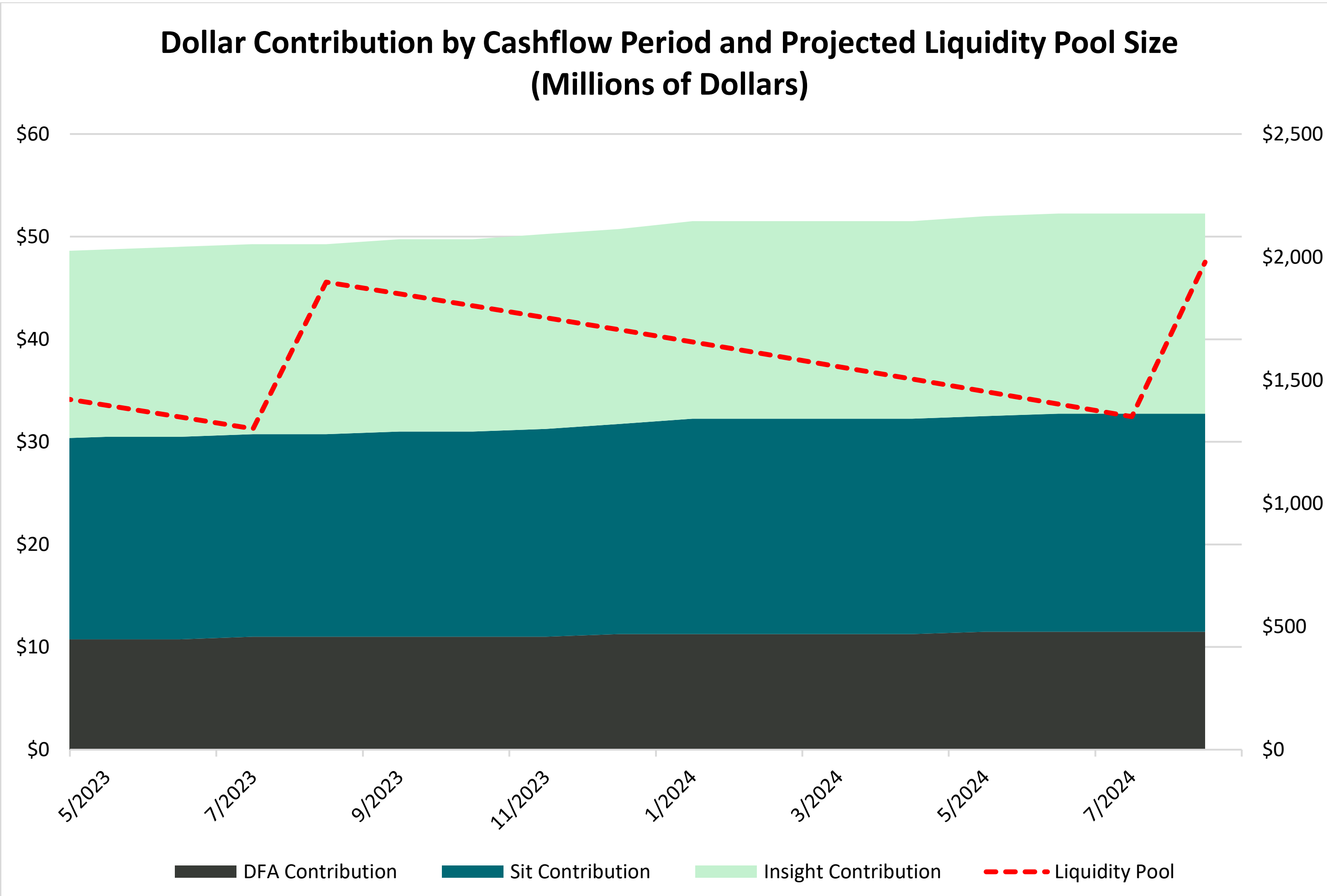
Manager	Portfolio Characteristics	Liquidity Contribution
Sit	High quality portfolio of small balance, government guaranteed mortgages with higher yields.	Pays out net income on monthly basis.
DFA	High quality, short duration portfolio of liquid, low volatility characteristics.	Pays out a pre-determined monthly amount. DFA sources liquidity from across their portfolio.
Insight	Buy and maintain (limited trading) portfolio of high quality, short duration, primarily corporates.	Completion portfolio makes a payment through net income and bond maturities that bridges the gap between other managers and projected payment.
Cash	STIF account at custodial bank.	Buffer in the event of any Liquidity shortfall/excess.

Notes

The sixth cash flow for 2023 from the liquidity program was completed on June 23rd. The actuarial model cash flow was lower than actual experience, producing $1.9 million less than the actual benefits paid.

Cash Flow Structure

The chart below shows the sources of cash flow for the next three years of CCCERA's projected benefit payments. This table will change slightly as the model is tweaked and as the portfolios receive new rounds of funding each July as part of the Annual Funding Plan.



Meeting Date
08/09/2023
Agenda Item
#4.A-IIIa.

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

Disability Retirement Applications: *The Board's Hearing Officer is hereby authorized to issue subpoenas in the following cases involving disability applications:*

Name	Number	Filed	Type
None			

Option Type	Tier	
NSP = Non-Specified	I = Tier I	Pepra 4.2 = Pepra Tier 4 (2% COLA)
SCD = Service Connected Disability	II = Tier II	Pepra 4.3 = Pepra Tier 4 (3% COLA)
SR = Service Retirement	III = Tier III	Pepra 5.2 = Pepra Tier 5 (2% COLA)
NSCD = Non-Service Connected Disability	S/A = Safety Tier A	Pepra 5.3 = Pepra Tier 5 (3% COLA)
* = County Advance Selected w/option	S/C = safety Tier C	S/D = Pepra Safety Tier D
		S/E = Pepra Safety Tier E

Meeting Date
08/09/2023
Agenda Item
#4.A-IIIb.

CCCERA Board of Trustees
Training & Educational Conference Expenses Paid During
Quarter 2 - 2023 (April to June)

Trustee:	Conference Name/Purpose:	Location:	Dates:	Total
Candace Andersen	NONE			
Dennis Chebotarev	NONE			
Donald Finley	SACRS/UC Berkeley Program-PREPAID	Berkeley, CA	July 16-19, 2023	$ 3,915.24
Scott Gordon	NONE			
Jerry Holcombe	NONE			
Louie Kroll	SACRS Spring Conference	San Diego, CA	May 9-12, 2023	1,397.87
Jay Kwon	CALAPRS General Assembly	Monterey, CA	Mar 4-7, 2023	142.79
	SACRS Spring Conference	San Diego, CA	May 9-12, 2023	1,056.22
Obdulia Lopez (for Russell Watts)	SACRS Spring Conference	San Diego, CA	May 9-12, 2023	120.00
	SACRS/UC Berkeley Program-PREPAID	Berkeley, CA	July 16-19, 2023	2,500.00
David J. MacDonald	SACRS Spring Conference	San Diego, CA	May 9-12, 2023	1,271.17
	SACRS/UC Berkeley Program-PREPAID	Berkeley, CA	July 16-19, 2023	2,500.00
John Phillips	SACRS/UC Berkeley Program-PREPAID	Berkeley, CA	July 16-19, 2023	3,896.38
Mike Sloan	CRCEA Spring Conference	Ontario, CA	April 23-26, 2023	1,090.85
Russell V. Watts	SACRS Spring Conference	San Diego, CA	May 9-12, 2023	1,164.72
Samson Wong	SACRS Spring Conference	San Diego, CA	May 9-12, 2023	1,432.87
	IFEBP Advanced Trustees Institute	San Diego, CA	June 19-21, 2023	3,333.69

Meeting Date
08/09/2023
Agenda Item
#4.A-IIIc.

Contra Costa County Employees' Retirement Association
Asset Allocation as of June 30, 2023

Liquidity	Market Value	Percentage of Total Fund	Current Target* Percentage	Current Target Over/(Under)	Long Term Target	Long Term Over/(Under)
Dimensional Fund Advisors	285,679,415	2.7%	4.0%	-1.3%		
Insight	459,458,946	4.4%	6.5%	-2.1%		
Sit	510,824,397	4.9%	6.5%	-1.6%		
Total Liquidity	**1,255,962,758**	**12.0%**	**17.0%**	**-5.0%**	**17.0%**	**-5.0%**
		Range 11-22%				
Growth						
Domestic Equity						
Boston Partners	416,630,766	4.0%	4.0%	-0.0%		
BlackRock Index Fund	1,016,442,904	9.7%	9.0%	0.7%		
Emerald Advisers	221,725,345	2.1%	1.5%	0.6%		
Ceredex	205,504,972	2.0%	1.5%	0.5%		
Total Domestic Equity	1,860,303,986	17.7%	16.0%	1.7%	13.0%	4.7%
Global & International Equity						
Pyrford (Columbia)	480,757,874	4.6%	4.0%	0.6%		
William Blair	454,581,649	4.3%	4.0%	0.3%		
First Eagle	539,500,613	5.1%	4.5%	0.6%		
Artisan Global Opportunities	536,371,052	5.1%	4.5%	0.6%		
PIMCO/RAE Emerging Markets	385,958,815	3.7%	3.5%	0.2%		
TT Emerging Markets	329,574,778	3.1%	3.5%	-0.4%		
Total Global & International Equity	2,726,744,781	26.0%	24.0%	2.0%	19.0%	7.0%
Private Equity**	1,318,746,333	12.6%	13.0%	-0.4%	18.0%	-5.4%
Private Credit	1,032,915,493	9.8%	8.0%	1.8%	13.0%	-3.2%
Real Estate - Value Add	246,319,772	2.3%	4.0%	-1.7%	5.0%	-2.7%
Real Estate - Opportunistic & Distressed	334,819,493	3.2%	4.0%	-0.8%	5.0%	-1.8%
Real Estate - REIT			2.0%	-0.1%	0.0%	1.9%
Adelante	90,003,387	0.9%				
Invesco	108,541,907	1.0%				
High Yield	147,379,539	1.4%	1.5%	-0.1%	0.0%	1.4%
Risk Parity			3.0%	0.2%	3.0%	0.2%
AQR GRP EL	170,170,821	1.6%				
PanAgora	162,473,698	1.5%				
Total Other Growth Assets	3,611,370,444	34.4%	35.5%	-1.1%	44.0%	-9.6%
Total Growth Assets	**8,198,419,210**	**78.1%**	**75.5%**	**2.6%**	**76.0%**	**2.1%**
		Range 65-85%				
Risk Diversifying						
AFL-CIO	221,026,841	2.1%	2.5%	-0.4%	2.5%	-0.4%
Acadian MAARS	248,722,208	2.4%	2.5%	-0.1%	2.5%	-0.1%
Sit LLCAR	305,359,768	2.9%	2.5%	0.4%	2.0%	0.9%
Total Risk Diversifying	**775,108,817**	**7.4%**	**7.5%**	-0.1%	**7.0%**	**0.4%**
		Range 0% - 10%				
Cash and Overlay						
Overlay (Parametric)	115,249,510	1.1%		1.1%		
Cash	147,604,330	1.4%		1.4%		
Total Cash and Overlay	**262,853,841**	**2.5%**	**0.0%**	2.5%	**0.0%**	**2.5%**
Total Fund	**10,492,344,626**	**100%**	**100%**		**100%**	

*Current targets and ranges reflect asset allocation targets accepted by the Board on July 27, 2022 (BOR Resolution 2022-2).
**Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).

Private Market Investments
As of June 30, 2023

REAL ESTATE - Value Add	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Blackstone Strategic Partners Real Estate VIII	11/18/22	11/18/32				80,000,000	0	0.00%	80,000,000
Invesco IREF IV	12/01/14	12/01/21				35,000,000	661,977	0.01%	4,453,599
Invesco IREF V	09/11/18	09/11/25				75,000,000	76,882,418	0.73%	10,824,790
Invesco IREF VI	09/21/22	09/22/29				100,000,000	43,038,149	0.41%	54,368,747
Long Wharf FREG IV	08/14/13	09/30/21				25,000,000	1,116,898	0.01%	
Long Wharf FREG V	10/31/16	09/30/24				50,000,000	29,833,861	0.28%	
Long Wharf LREP VI	02/05/20	02/05/28				50,000,000	34,372,830	0.33%	718,341
Long Wharf LREP VII	05/15/23	03/31/32				50,000,000	4,107,316	0.04%	45,130,002
LaSalle Income & Growth Fund VI	01/31/12	01/31/19				75,000,000	13,870,420	0.13%	3,946,000
LaSalle Income & Growth Fund VII	10/31/16	09/30/24				75,000,000	42,435,903	0.40%	87,245
						860,000,000	**246,319,772**	**2.35%**	**199,528,723**
	Outstanding Commitments						**199,528,723**		
	Total						**445,848,495**		

REAL ESTATE -Opportunistic & Distressed	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Blackstone BREP X	06/30/22	06/30/32				100,000,000	3,370,164	0.03%	96,642,602
Cross Lake Real Estate Fund IV	04/11/23	04/11/33				60,000,000	0	0.00%	60,000,000
DLJ Real Estate Capital Partners, L.P. III	06/30/05	06/30/14	in full liq.			75,000,000	12,537,898	0.12%	4,031,338
DLJ Real Estate Capital Partners, L.P. IV	12/31/07	09/30/18				100,000,000	43,742,174	0.42%	1,876,084
DLJ Real Estate Capital Partners, L.P. V	07/31/13	12/31/22				75,000,000	29,822,329	0.28%	3,203,035
DLJ Real Estate Capital Partners, L.P. VI	02/28/19	01/31/29				50,000,000	27,859,722	0.27%	15,687,733
Oaktree Real Estate Opportunities Fund V	02/01/11	02/01/21				50,000,000	353,783	0.00%	25,750,000
Oaktree Real Estate Opportunities Fund VI	09/30/13	09/30/20				80,000,000	19,728,654	0.19%	18,400,000
Oaktree Real Estate Opportunities Fund VII	02/28/15	02/28/23				65,000,000	45,001,418	0.43%	16,120,000
PCCP Equity IX	04/11/22	04/01/30				75,000,000	51,422,731	0.49%	26,781,770
Siguler Guff Distressed Real Estate Opp. Fund	07/30/11	07/30/22				75,000,000	13,343,865	0.13%	5,625,000
Siguler Guff Distressed Real Estate Opp. Fund II	08/31/13	08/31/25				70,000,000	27,551,156	0.26%	8,015,000
Siguler Guff Distressed Real Estate Opp. II Co-Inv	01/31/16	10/31/25				25,000,000	12,579,377	0.12%	4,084,638
Paulson Real Estate Fund II	11/10/13	11/10/20				20,000,000	12,732,755	0.12%	654,377
Angelo Gordon Realty Fund VIII	12/31/11	12/31/18				80,000,000	11,663,899	0.11%	12,334,302
Angelo Gordon Realty Fund IX	10/10/14	10/10/22				65,000,000	23,109,568	0.22%	7,572,500
						1,065,000,000	**334,819,493**	**3.16%**	**306,778,379**
	Outstanding Commitments						**306,778,379**		
	Total						**641,597,872**		

PRIVATE CREDIT	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Torchlight Debt Opportunity Fund IV	08/01/12	08/30/20				60,000,000	5,654,635	0.05%	0
Torchlight Debt Opportunity Fund V	12/31/14	09/17/22				75,000,000	7,179,601	0.07%	15,000,000
Angelo Gordon Energy Credit Opportunities	09/10/15	09/10/20				16,500,000	1,926,290	0.02%	2,319,783
CCCERA StepStone	12/01/17	11/30/27				1,170,000,000	1,018,154,967	9.70%	301,692,803
						1,524,500,000	**1,032,915,493**	**9.84%**	**319,012,586**
	Outstanding Commitments						**319,012,586**		
	Total						**1,351,928,079**		

Private Market Investments
As of June 30, 2023

PRIVATE EQUITY	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Adams Street Partners	12/22/95	12/22/25				269,565,614	124,675,992	1.19%	17,282,948
Adams Street Secondary II	12/31/08	12/31/20				30,000,000	3,567,745	0.03%	1,635,000
Adams Street Secondary V	10/31/12	10/31/22				40,000,000	10,842,424	0.10%	9,154,125
Adams Street Venture Innovation Fund	03/09/16	03/09/28				75,000,000	170,773,547	1.63%	7,503,262
AE Industrial Partners Fund II	05/18/18	05/18/28				35,000,000	39,275,612	0.37%	9,752,530
Bay Area Equity Fund	06/14/04	12/31/14	2nd 2 YR	LP	12/31/2017	10,000,000	0	0.00%	0
Bay Area Equity Fund II	2/29/09	12/31/19				10,000,000	19,810,993	0.19%	0
Carpenter Community BancFund	10/31/09	10/31/19				30,000,000	0	0.00%	0
EIF USPF II	06/15/05	06/15/15	3rd 1 YR	LP	06/15/18	50,000,000	58,920	0.00%	0
EIF USPF III	02/28/07	02/28/17	1st 1 YR	LP	02/28/18	65,000,000	2,004,391	0.02%	0
EIF USPF IV	06/28/10	06/28/20				50,000,000	18,496,965	0.18%	4
Ares EIF V	09/09/15	11/19/25				50,000,000	26,737,625	0.25%	6,194,129
EQT X	11/17/22	11/17/32				100,000,000	0	0.00%	99,568,560
Genstar Capital Partners IX	02/18/19	02/18/29				50,000,000	65,779,809	0.63%	7,714,575
Genstar Capital Partners X	04/01/21	04/01/31				42,500,000	28,386,521	0.27%	15,493,423
Genstar Capital Partners XI	04/26/23	04/26/33				75,000,000	0	0.00%	75,000,000
GTCR VIII	10/27/20	12/31/36				50,000,000	24,254,624	0.23%	24,427,247
Hellman & Friedman Capital Partners X	05/10/21	05/10/31				75,000,000	55,050,745	0.52%	21,027,776
Hellman & Friedman Capital Partners XI	12/16/22	12/16/32				100,000,000	0	0.00%	100,000,000
Leonard Green - Green Equity Investors IX	03/01/22	02/28/32				60,000,000	0	0.00%	60,000,000
Leonard Green - Jade Equity Investors II	03/01/22	02/28/32				15,000,000	0	0.00%	15,000,000
Oaktree Private Investment Fund 2009	02/28/10	12/15/19				40,000,000	360,651	0.00%	6,308,961
Ocean Avenue Fund II	05/07/14	05/07/24				30,000,000	26,288,371	0.25%	3,000,000
Ocean Avenue Fund III	12/09/15	12/09/25				50,000,000	51,500,814	0.49%	3,500,000
Paladin III	08/15/08	08/15/18				25,000,000	9,618,297	0.09%	387,482
Pathway	11/09/98	05/31/21				125,000,000	2,484,159	0.02%	10,492,756
Pathway 2008	12/26/08	12/26/23				30,000,000	12,013,422	0.11%	2,669,167
Pathway 6	05/24/11	05/24/26				40,000,000	28,934,390	0.28%	3,647,595
Pathway 7	02/07/13	02/07/23				70,000,000	64,049,180	0.61%	5,202,742
Pathway 8	11/23/15	11/23/25				50,000,000	68,372,705	0.65%	3,997,989
Siguler Guff CCCERA Opportunities	06/03/14	05/31/25				200,000,000	131,647,871	1.25%	28,597,500
Siguler Guff Secondary Opportunities	12/31/16	12/31/26				50,000,000	0	0.00%	0
Siris Partners IV	05/18/18	05/18/28				35,000,000	40,772,516	0.39%	7,949,620
Symphony Technology Group VII	12/21/22	12/21/32				50,000,000	0	0.00%	50,000,000
TA XIV	05/27/21	05/27/31				50,000,000	30,450,959	0.29%	17,000,000
TA XV	03/30/23	03/31/33				90,000,000	0	0.00%	90,000,000
TPG Healthcare Partners, L.P.	06/27/19	06/27/29				24,000,000	22,913,619	0.22%	4,328,185
TPG Healthcare Partners II	06/30/22	06/30/32				65,000,000	0	0.00%	65,000,000
TPG Partners IX	06/30/22	06/30/32				50,000,000	15,191,723	0.14%	33,685,397
Trident VIII, L.P.	05/24/19	05/24/29				40,000,000	45,657,728	0.44%	4,777,416
Trident IX, L.P.	09/17/21	09/17/31				50,000,000	15,191,723	0.14%	33,685,397
Real Assets									
Aether III & III Surplus	11/30/13	11/30/20				75,000,000	60,071,157	0.57%	2,150,961
Aether IV	01/01/16	01/01/28				50,000,000	58,179,233	0.55%	4,152,278
Commonfund Capital Natural Resources IX	06/30/13	06/30/20				50,000,000	36,800,282	0.35%	2,350,007
Wastewater Opportunity Fund	12/31/15	11/30/22				25,000,000	8,531,620	0.08%	521,541
						2,641,065,614	**1,318,746,333**	**13.76%**	**853,158,573**
	Outstanding Commitments						**853,158,573**		
	Total						**2,171,904,906**		

Market value equals the most recent reported net asset value, plus capital calls after net asset value date, less distributions after net asset value date.
The Target Termination column is the beginning of liquidation of the fund, however, some funds may be extended for an additional two or three years.

Meeting Date
08/09/2023
Agenda Item
#5

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 9, 2023

To: CCCERA Board of Retirement

From: Erica Grant, Human Resources Manager

Subject: Consider and take possible action to appoint an acting Chief Executive Officer pursuant to Govt. Code Section 31522.9

Background

On July 5, 2023 the CCCERA Chief Executive Officer resigned her position. In order to ensure continued leadership and support it is recommended to appoint an acting Chief Executive Officer until a permanent replacement is hired.

Recommendation

Consider and take possible action to appoint an acting Chief Executive Officer pursuant to Govt. Code Section 31522.9 at the compensation as outlined in Attachment A of the CCCERA Resolution for Salary and Benefits for Unrepresented Employees 2023-1.

Resolution of the Board of Retirement
Contra Costa County Employees' Retirement Association

CCCERA Resolution for Salary and Benefits for Unrepresented Employees
(BOR Reso. No. 2023-1)

Attachment A

Effective February 1, 2023

Revision Dates: 2/1/23, 1/1/23, 7/27/2022, 7/13/2022, 4/1/2022, 1/1/2022, 4/1/2021, 4/1/2020, 1/1/2020, 7/1/19, 4/1/19, 7/1/18, 7/1/17, 7/1/16, 2/1/16, 7/1/15, 1/1/15

						Eligible for Differential*				
						10 year Longevity	15 year Longevity	20 year Longevity	CPA, CGFM, CIA, CMA	ASA
	Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**2.50%**	**2.50%**	**2.00%**	**5%**	**5%**
Hourly (Non-Exempt)										
Executive Assistant	$41.12	$43.18	$45.34	$47.60	$49.98	Yes	Yes	No	No	Yes
Information Technology Coordinator	$43.18	$45.34	$47.60	$49.98	$52.48	Yes	Yes	No	No	Yes
Member Services Supervisor	$49.98	$52.48	$55.11	$57.86	$60.76	Yes	Yes	No	No	Yes
Retirement Services Supervisor	$49.98	$52.48	$55.11	$57.86	$60.76	Yes	Yes	No	No	Yes
Monthly (Exempt)										
Accountant	$6,788	$7,128	$7,484	$7,858	$8,251	Yes	Yes	No	Yes	Yes
Accounting Manager	$11,611	$12,191	$12,801	$13,441	$14,113	Yes	Yes	No	Yes	Yes
Accounting Supervisor	$8,664	$9,097	$9,552	$10,030	$10,531	Yes	Yes	No	Yes	Yes
Administrative Services Manager	$11,334	$11,901	$12,496	$13,121	$13,777	Yes	Yes	No	No	Yes
Human Resources Manager	$11,334	$11,901	$12,496	$13,121	$13,777	Yes	Yes	No	No	Yes
Human Resources Coordinator	$8,664	$9,097	$9,552	$10,030	$10,531	Yes	Yes	No	No	Yes
Communications Coordinator	$8,055	$8,458	$8,881	$9,325	$9,791	Yes	Yes	No	No	Yes
Compliance Business Analyst	$8,881	$9,325	$9,791	$10,280	$10,794	Yes	Yes	No	No	Yes
Deputy General Counsel	$16,337	$17,154	$18,012	$18,912	$19,858	Yes	Yes	No	No	Yes
Information System Programmer/Analyst	$8,251	$8,664	$9,097	$9,552	$10,030	Yes	Yes	No	No	Yes
Network Security Engineer	$9,552	$10,030	$10,531	$11,058	$11,611	Yes	Yes	No	No	Yes
Information Technology Manager	$13,777	$14,465	$15,189	$15,948	$16,746	Yes	Yes	No	No	Yes
Investment Analyst	$11,901	$12,496	$13,121	$13,777	$14,465	Yes	Yes	No	No	Yes
Investment Officer	$16,746	$17,583	$18,462	$19,385	$20,354	Yes	Yes	No	No	Yes
Member Services Manager	$11,334	$11,901	$12,496	$13,121	$13,777	Yes	Yes	No	No	Yes
Retirement Services Manager	$11,334	$11,901	$12,496	$13,121	$13,777	Yes	Yes	No	No	Yes
Senior Investment Analyst	$13,121	$13,777	$14,465	$15,189	$15,948	Yes	Yes	No	No	Yes
Senior Investment Officer	$18,462	$19,385	$20,354	$21,372	$22,441	Yes	Yes	No	No	Yes

	Monthly Salary Range (Exempt)					
Chief Executive Officer	$24,823.37	Yes	Yes	No	No	Yes
Chief Investment Officer	$22,359 - $29,067	Yes	Yes	No	No	Yes
Compliance Officer	$11,557 - $15,023	Yes	Yes	No	No	Yes
Deputy Chief Executive Officer	$17,927 - $23,303	Yes	Yes	No	No	Yes
General Counsel	$19,763 - $25,691	Yes	Yes	Yes	No	Yes
Internal Auditor	$11,557 - $15,023	Yes	Yes	No	Yes	Yes

*NOTE: Certificate Differentials cannot be combined with other certificate differentials

Meeting Date
08/09/2023
Agenda Item
#7

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 9, 2023

To: CCCERA Board of Retirement

From: Christina Dunn, Deputy Chief Executive Officer

Subject: Consider and take possible action to adopt the December 31, 2022 Valuation Report and Contribution Rates for the period July 1, 2024—June 30, 2025.

Background
Segal Consulting has prepared the December 31, 2022 valuation report. The employer and member contribution rates shown in this report are effective July 1, 2024 to June 30, 2025.

Recommendation
Consider and take possible action to adopt the December 31, 2022 Valuation Report and Contribution Rates for the period July 1, 2024—June 30, 2025.

Meeting Date
08/09/2023
Agenda Item
#7

Contra Costa County Employees' Retirement Association

Actuarial Valuation and Review

As of December 31, 2022

Segal

180 Howard Street
Suite 1100
San Francisco, CA 94105-6147
segalco.com
T 415.263.8200

July 27, 2023

Board of Retirement
Contra Costa County Employees' Retirement Association
1200 Concord Avenue, Suite 300
Concord, CA 94520

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2022. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year 2024-2025.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement Association. The census information and financial information on which our calculations were based was prepared by the staff of the Association. That assistance is gratefully acknowledged.

The actuarial calculations were directed under the supervision of Andy Yeung, ASA, MAAA, FCA and Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Association.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal

Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

Andy Yeung, ASA, MAAA, FCA, EA
Vice President and Actuary

AW/jl

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Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal to present a valuation of the Contra Costa County Employees' Retirement Association ("CCCERA" or "the Plan") as of December 31, 2022. The valuation was performed to determine whether the assets and contribution rates are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of current Plan assets to cover the estimated cost of settling the Plan's accrued benefit obligations.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Plan, as administered by the Board of Retirement;
- The characteristics of covered active members[1], inactive vested members, and retired members and beneficiaries as of December 31, 2022, provided by the Retirement Association;
- The assets of the Plan as of December 31, 2022, provided by CCCERA;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the December 31, 2022 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Board for the December 31, 2022 valuation and
- The funding policy adopted by the Board of Retirement.

[1] Similar to the disclosure we provided in our December 31, 2021 valuation report, the annual information for active members and, in particular, the service credit provided for active members was reported through November 30, 2022 instead of December 31, 2022. Based on prior discussions with CCCERA we understand that the Association is going to change its pension administration system so as to report service through December 31. This change will first be reflected in the valuation following the change in the pension administration system, and Segal will reflect the liability for that additional month of service at the same time.

Section 1: Actuarial Valuation Summary

One of the general goals of an actuarial valuation is to establish contributions which fully fund the Association's liabilities, and which, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both Normal Cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the funding policy adopted by the Board on February 26, 2014, and most recently amended on October 14, 2020. Details of the funding policy are provided in *Section 4, Exhibit 1* starting on page 110.

A schedule of current amortization balances and payments may be found in *Section 3, Exhibit I* starting on page 89. A graphical projection of the Unfunded Actuarial Accrued Liability (UAAL) amortization balances and payments has been included in *Section 3, Exhibit J* starting on page 104.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2024 through June 30, 2025.

Valuation Highlights

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1. As we pointed out in our December 31, 2021 valuation report, the UAAL amortization layers established December 31, 2007 related to the restart of amortization, as well as the Pension Obligation Bonds (POBs) issued by certain employers, have been fully amortized as of December 31, 2022. As information items, we have continued to show those layers in *Section 3, Exhibit I*, but with zero "Outstanding Balance" and "Years Remaining."

   As a result of the full amortization of these layers, there is a decrease in the UAAL contribution rate of about 7.4% of payroll for the plan in total in this December 31, 2022 valuation. However, it is important to note that this impact varies by Cost Group in this valuation. For example, those Cost Groups which had a credit at the restart of amortization, or those which issued POBs larger than their restart amortization experience an <u>increase</u> in their contribution rate as a result of the full amortization of those layers in this valuation.

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2. The ratio of the Valuation Value of Assets to the Actuarial Accrued Liability decreased from 92.4% to 91.2%. This ratio is one measure of funding status, and its history is a measure of funding progress. The funded ratio measured on a market value basis decreased from 101.3% to 84.3%. These measurements are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for, or the amount of, future contributions.

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3. The Association's UAAL (which is based on the Valuation Value of Assets) increased from $855 million as of December 31, 2021 to $1,050 million as of December 31, 2022. The increase in UAAL is primarily due to an investment return on valuation value (i.e., after asset smoothing) less than the 6.75% assumed rate used in the December 31, 2021 valuation, individual salary increases greater than expected, and COLA increases greater than expected. A reconciliation of the Association's UAAL is provided in *Section 2, Exhibit E*. A schedule of the current UAAL amortization amounts is provided in *Section 3, Exhibit I*. A graphical projection of the UAAL amortization bases and payments is provided in *Section 3, Exhibit J*.

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4. The net actuarial loss from investment and contribution experience is $166.7 million, or 1.4% of actuarial accrued liability. The net experience loss from sources other than investment and contribution experience was $183.3 million, or 1.5% of the actuarial accrued liability. This loss was primarily due to individual salary increases greater than expected and COLA increases greater than expected.

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5. The average employer rate calculated in this valuation (excluding any employer subvention of member rates or member subvention of employer rates) has decreased from 35.55% of payroll to 30.01% of payroll. This decrease is primarily due to the net effect of the full amortization of the 2007 restart of amortization and the POBs issued by certain employers. That decrease was offset to some degree by an investment return on valuation value (i.e., after asset smoothing) less than the 6.75% assumed rate used in the December 31, 2021 valuation, individual salary increases greater than expected, and COLA increases greater than expected. A complete reconciliation of the Association's aggregate employer rate is provided in *Section 2, Subsection F*.

Separate employer contribution rates are shown for members with membership dates before January 1, 2013 (non-PEPRA or "legacy" members) and on or after January 1, 2013 (PEPRA members). However, the average employer contribution rates shown in *Section 1* are based on all members regardless of their membership date. A detailed schedule of the employer contribution rates is provided in *Section 2, Subsection F*.

Pg. 169 A schedule with the recommended employer contribution rates that will be used in preparing the contribution rate packet is provided in *Section 4, Exhibit 7*.

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6. The average member rate calculated in this valuation has increased from 12.17% of payroll to 12.18% of payroll due to changes in active member demographics. A complete reconciliation of the Association's aggregate member rate is provided in *Section 2, Subsection F*.

   The detailed member rates are provided in *Section 4, Exhibit 3* of this report. They are shown by cost group.

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7. The rate of return on the Market Value of Assets was -11.25% for the 2022 plan year. The return on the Valuation Value of Assets was 5.25% for the same period after considering the recognition of prior years' investment gains and losses, as well as the markedly different returns during the first-half of 2022 (a market loss of -10.81%) and the second-half of 2022 (a market loss of -0.46%). This resulted in an actuarial loss when measured against the assumed rate of return of 6.75% used in the December 31, 2021 valuation. This investment loss after asset smoothing increased the average employer contribution rate by 1.11% of pay.

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8. Starting with the December 31, 2022 valuation, the Valuation Value of Assets for each Cost Group has now been rolled forward based on contributions, benefit payments and returns for each of the two six-month periods from December 31, 2021 to December 31, 2022. This is consistent with how CCCERA calculates interest crediting for the reserves every six months. When compared to the old method (which rolled forward the above amounts for the entire twelve-month period), the biggest difference for any Cost Group when expressed as a percentage of assets is less than 0.05%.

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9. The total unrecognized net investment loss as of December 31, 2022 is about \$825 million as compared to an unrecognized net investment gain of \$1,003 million in the previous valuation. This deferred net investment loss of \$825 million will be recognized in the determination of the Actuarial Value of Assets for funding purposes in the next few years as shown in *Section 2, Subsection B*.

   The net deferred losses of \$825 million represent about 8.2% of the Market Value of Assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$825 million net market losses is expected to have an impact on the Association's future funded ratio and contribution rate requirements. This potential impact may be illustrated as follows:

   a. If the net deferred losses were recognized immediately in the valuation value of assets, the funded percentage would decrease from 91.2% to 84.3%.

      For comparison purposes, if all the deferred gains in the December 31, 2021 valuation had been recognized immediately in the December 31, 2021 valuation, the funded percentage would have increased from 92.4% to 101.3%.

b. If the net deferred losses were recognized immediately in the valuation value of assets, the average employer contribution rate would increase from 30.01% to about 35.87% of payroll.

   For comparison purposes, if all the deferred gains in the December 31, 2021 valuation had been recognized immediately in the December 31, 2021 valuation, the average employer contribution rate would have decreased from 35.55% to 27.98% of payroll.

10. The actuarial valuation report as of December 31, 2022 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

11. The assets provided for this valuation reflects additional UAAL contributions of $3,344,437 made by East Contra Costa Fire Protection District (East Fire) as part of the East Fire's annexation into Contra Costa Fire Protection District (Con Fire) on June 30, 2022. As part of the December 31, 2021 valuation, this prepayment has been used to reduce Con Fire's UAAL contribution rates effective July 1, 2022 for Cost Groups #5 and #8. This valuation also reflects the $279,000 additional contributions made by San Ramon Valley Fire Department towards its UAAL. This amount has been amortized as a level percent of pay (credit) over a period of eighteen years beginning with the December 31, 2022 valuation to reduce the employer UAAL contributions.

12. On July 30, 2020, the California Supreme Court issued a decision in the case of Alameda County Deputy Sheriffs' Association et al. v. Alameda County Employees' Retirement Association (ACERA) and Board of Retirement of ACERA. That decision has important implications for CCCERA and its members, in particular, the decision requires pension systems like CCCERA to exclude certain pay items from a legacy member's compensation earnable. It is our understanding that the CCCERA Board of Retirement has taken action to return member contributions that were previously made on certain terminal pay and on-call pay items impacting approximately 6,400 members, as well as to reduce the benefit of 7 retirees that had estoppel included in their retirement calculation (we note that the reduced benefits for the 7 retirees were reported starting with the December 31, 2021 valuation). We further understand that the assets as of December 31, 2022 now reflects the return of those member contributions.

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13. The Actuarial Standards Board approved Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment, which was first effective with CCCERA's December 31, 2018 actuarial valuation. ASOP 51 requires actuaries to identify risks that "may reasonably be anticipated to significantly affect the plan's future financial condition". Investment risk, asset/liability mismatch risk, interest rate risk, longevity and other demographic risks and contribution risk are also cited as examples in ASOP 51. The standard does not require the actuary to evaluate the likelihood of contributing entities to make contributions when due, nor does it require the actuary to assess the likelihood or consequences of future changes in applicable law.

    The actuary's assessment can be qualitative or quantitative (e.g., based on numerical demonstrations). The actuary may use non-numerical methods for assessing risks that might take the form of commentary about potential adverse experience and the likely effect on future results. While the standard does not require that every valuation include a quantitative risk assessment, the actuary may recommend that a more detailed risk assessment be performed. When making that decision, the actuary will take into account such factors as the Plan's design, maturity, size, funded status, asset allocation, cash flow, possible insolvency and current market conditions.

Because the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Association's future financial condition, but have included a brief discussion of key risks that may affect the Association in *Section 2, Subsection J*. A more detailed assessment of the risks tailored to specific interests or concerns of the Board would provide the Board with a better understanding of the inherent risks and is recommended. This assessment would further discuss and highlight information and risks particular to CCCERA such as detailed historical experience and key events, growing plan maturity, heightened contribution sensitivity to asset and liability changes, and projected sensitivity to potential future investment returns through selected scenario or stress test projections.

14. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the UAAL and the principal balance. The funding policy adopted by the Board meets this standard.
15. This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and Pension Expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the plan and employer's financial statements as of December 31, 2022, will be provided separately. The accounting disclosures will utilize different methodologies from those employed in the funding valuation, as required by the GASB. However, the actuarially determined contribution in this valuation is expected to be used as the actuarially determined contribution (ADC) for GASB financial reporting.
16. It is important to note that this actuarial valuation is based on plan assets as of December 31, 2022. The plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after December 31, 2022 due to COVID-19. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.

Summary of Key Valuation Results

		December 31, 2022		December 31, 2021	
		Total Rate	Estimated Annual Dollar Amount[1] ($ in '000s)	Total Rate	Estimated Annual Dollar Amount[1] ($ in '000s)
Average Employer Contribution Rates:[3]	**General**				
	• Cost Group #1 – County and Small Districts (Tiers 1 and 4)[2]	24.96%	$5,878	33.98%	$8,213
	• Cost Group #2 – County and Small Districts (Tiers 3 and 5)	22.35%	174,790	26.90%	198,951
	• Cost Group #3 – Central Contra Costa Sanitary District	16.56%	6,713	15.82%	6,179
	• Cost Group #4 – Contra Costa Housing Authority	28.28%	1,938	42.67%	2,817
	• Cost Group #5 – Contra Costa County Fire Protection District[2]	38.80%	3,080	36.18%	2,715
	• Cost Group #6 – Small Districts (Non-Enhanced Tiers 1 and 4)	15.78%	175	16.11%	165
	Safety				
	• Cost Group #7 – County (Tiers A and D)	63.54%	$31,326	75.47%	$38,320
	• Cost Group #8 – Contra Costa Fire Protection District[2]	66.96%	40,575	68.30%	35,149
	• Cost Group #9 – County (Tiers C and E)	53.35%	34,822	65.29%	39,307
	• Cost Group #10 – Moraga-Orinda Fire District	88.64%	7,982	78.11%	6,831
	• Cost Group #11 – San Ramon Valley Fire District	50.96%	12,851	82.92%	19,893
	• Cost Group #12 – Rodeo-Hercules Fire Protection District	89.35%	2,096	95.72%	2,561
	All Categories Combined	**30.01%**	**$322,227**	**35.55%**	**$361,100**

Note: Pages 161 and 162 contain a summary that shows which employers are in each cost group.

[1] Based on projected compensation for each valuation date shown.
[2] The rates as of December 31, 2021 reflect the annexation of East Contra Costa County Fire Protection District into Contra Costa County Fire Protection District as well as the prepayment of $3,344,437 towards their UAAL on June 30, 2022. This prepayment has been used to reduce the District's UAAL contribution rate effective July 1, 2022.
[3] These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

Summary of Key Valuation Results (continued)

		December 31, 2022		December 31, 2021	
		Total Rate	Estimated Annual Dollar Amount[1] ($ in '000s)	Total Rate	Estimated Annual Dollar Amount[1] ($ in '000s)
Average Member Contribution Rates:[2]	**General**				
	• Cost Group #1 – County and Small Districts (Tiers 1 and 4)	11.44%	$2,695	11.32%	$2,736
	• Cost Group #2 – County and Small Districts (Tiers 3 and 5)	10.76%	84,160	10.79%	79,798
	• Cost Group #3 – Central Contra Costa Sanitary District	11.57%	4,691	11.58%	4,524
	• Cost Group #4 – Contra Costa Housing Authority	11.78%	807	11.82%	780
	• Cost Group #5 – Contra Costa County Fire Protection District	11.91%	946	11.96%	898
	• Cost Group #6 – Small Districts (Non-Enhanced Tiers 1 and 4)	13.75%	153	14.06%	144
	Safety				
	• Cost Group #7 – County (Tiers A and D)	18.83%	$9,283	18.86%	$9,576
	• Cost Group #8 – Contra Costa Fire Protection District	17.58%	10,652	17.59%	9,052
	• Cost Group #9 – County (Tiers C and E)	17.03%	11,116	16.91%	10,180
	• Cost Group #10 – Moraga-Orinda Fire District	18.41%	1,658	18.25%	1,596
	• Cost Group #11 – San Ramon Valley Fire District	16.88%	4,257	16.57%	3,975
	• Cost Group #12 – Rodeo-Hercules Fire Protection District	14.83%	348	12.54%	335
	All Categories Combined	**12.18%**	**$130,764**	**12.17%**	**$123,593**

Note: Pages 161 and 162 contain a summary that shows which employers are in each cost group.

[1] Based on projected compensation for each valuation date shown.
[2] These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

Summary of Key Valuation Results (continued)

		December 31, 2022	December 31, 2021
Actuarial Accrued Liability as of December 31:	• Retired members and beneficiaries	$7,745,002,318	$7,301,323,228
	• Inactive vested members[1]	360,870,317	333,053,458
	• Active members	3,806,356,245	3,654,596,801
	• Total Actuarial Accrued Liability	$11,912,228,880	$11,288,973,487
	• Normal Cost for plan year beginning December 31[2]	$296,628,244	$282,575,725
Assets as of December 31:	• Market Value of Assets (MVA)	$10,053,668,812	$11,453,765,753
	• Actuarial Value of Assets (AVA)	10,878,817,667	10,451,125,236
	• Actuarial Value of Assets as a percentage of MVA	108.2%	91.2%
	• Valuation Value of Assets (VVA)	$10,861,822,062	$10,434,412,288
Funded Status as of December 31:	• Unfunded Actuarial Accrued Liability on MVA basis[3]	$1,875,555,673	$(148,079,318)
	• Funded percentage on MVA basis[9]	84.3%	101.3%
	• Unfunded Actuarial Accrued Liability on VVA basis	$1,050,406,818	$854,561,199
	• Funded percentage on VVA basis	91.2%	92.4%
Key Assumptions:	• Net investment return	6.75%	6.75%
	• Price inflation	2.50%	2.50%
	• Payroll growth increase	3.00%	3.00%
	• Cost of living adjustments		
	– Tiers with 3%/4% COLA	2.75%	2.75%
	– Tiers with 2% COLA	2.00%	2.00%

[1] Includes inactive members with member contributions on deposit.
[2] Includes administrative expenses.
[3] Both the UAAL and the funded percentage on MVA basis have been calculated by using the MVA reduced by non-valuation reserves in the amount of $16,995,605 as of December 31, 2022 and $16,712,948 as of December 31, 2021.

Summary of Key Valuation Results (continued)

		December 31, 2022	December 31, 2021	Change From Prior Year
Demographic Data as of December 31:	**Active Members:**			
	• Number of members	10,082	10,005	0.8%
	• Average age	46.1	46.3	-0.2
	• Average service	10.1	10.2	-0.1
	• Total projected compensation	$1,073,886,785	$1,015,755,387	5.7%
	• Average projected compensation	$106,515	$101,525	4.9%
	Retired Members and Beneficiaries:			
	• Number of members:			
	– Service retired	8,197	7,908	3.7%
	– Disability retired	874	885	-1.2%
	– Beneficiaries	1,490	1,485	0.3%
	– Total	10,561	10,278	2.8%
	• Average age	71.1	70.9	0.2
	• Average monthly benefit	$4,466	$4,353	2.6%
	Inactive Vested Members:			
	• Number of members[1]	3,974	3,812	4.2%
	• Average Age	46.5	46.6	-0.1
	Total Members:	24,617	24,095	2.2%

[1] Includes 2,183 inactive non-vested members with member contributions on deposit as of December 31, 2022 and 2,147 as of December 31, 2021.

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Plan of Benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant Data	An actuarial valuation for a plan is based on data provided to the actuary by the Association. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the Market Value of Assets as of the valuation date, as provided by the Association. The Association uses a “Valuation Value of Assets” that differs from market value to gradually reflect year-to-year changes in the Market Value of Assets in determining the contribution requirements.
Actuarial Assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments (if any). The forecasted benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the Plan’s assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.
Models	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

The actuarial valuation is prepared at the request of CCCERA. Segal is not responsible for the use or misuse of its report, particularly by any other party.
An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan. Future contribution requirements may differ from those determined in the valuation because of: • Differences between actual experience and anticipated experience; • Changes in actuarial assumptions or methods; • Changes in statutory provisions; and • Differences between the contribution rates determined by the valuation and those adopted by the Board.
Some actuarial results in this report are not rounded, but that does not imply precision.
If CCCERA is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.
While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
Segal's report shall be deemed to be final and accepted by CCCERA upon delivery and review. CCCERA should notify Segal immediately of any questions or concerns about the final content.

As Segal has no discretionary authority with respect to the management or assets of CCCERA, it is not a fiduciary in its capacity as actuaries and consultants with respect to CCCERA.

Section 2: Actuarial Valuation Results

A. Member Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, inactive vested members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in *Section 3, Exhibits A, B,* and *C*.

Member Population: 2013 – 2022

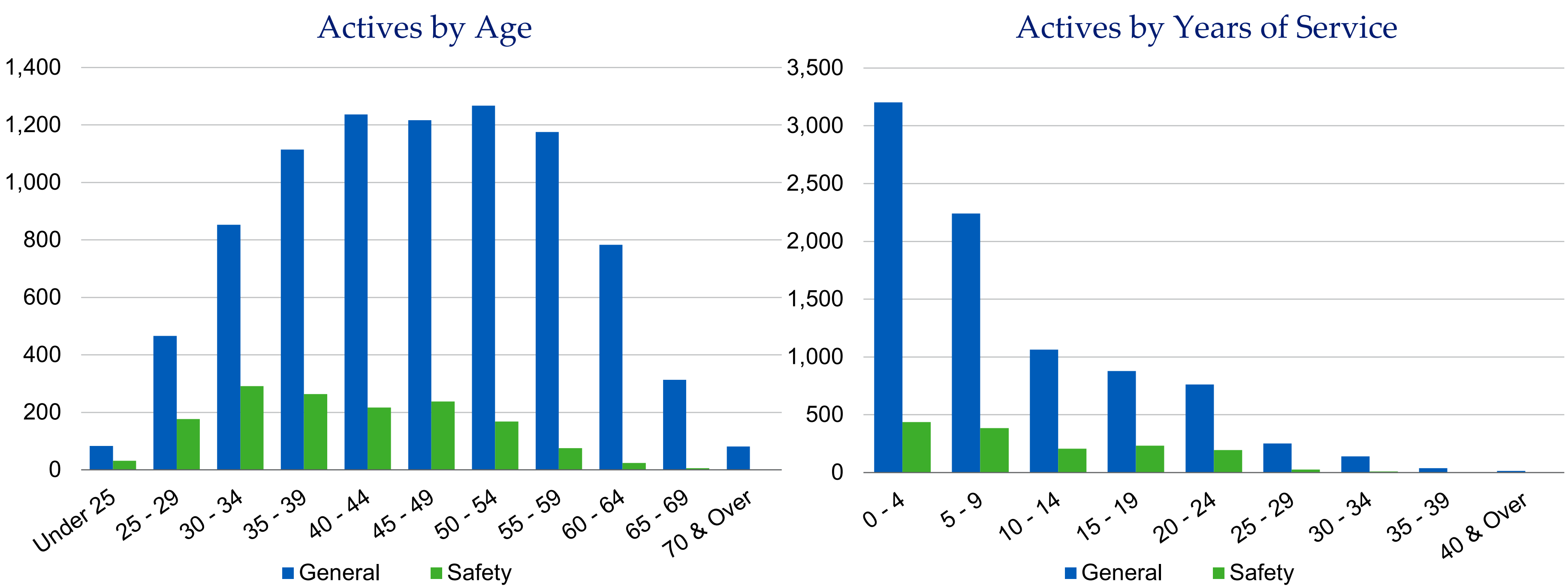
Year Ended December 31	Active Members	Inactive Vested Members[1]	Retired Members and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives	Ratio of Retired Members and Beneficiaries to Actives
2013	9,124	2,345	8,625	10,970	1.20	0.95
2014	9,159	2,647	8,871	11,518	1.26	0.97
2015	9,642	2,790	9,068	11,858	1.23	0.94
2016	9,848	3,089	9,100	12,189	1.24	0.92
2017	10,038	3,327	9,267	12,594	1.25	0.92
2018	10,021	3,477	9,547	13,024	1.30	0.95
2019	10,075	3,638	9,737	13,375	1.33	0.97
2020	10,099	3,591	10,018	13,609	1.35	0.99
2021	10,005	3,812	10,278	14,090	1.41	1.03
2022	10,082	3,974	10,561	14,535	1.44	1.05

[1] Includes inactive members with member contributions on deposit.

Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 10,082 active members with an average age of 46.1, average years of service of 10.1 years and average compensation of $106,515. The 10,005 active members in the prior valuation had an average age of 46.3, average service of 10.2 years and average compensation of $101,525.

Distribution of Active Members as of December 31, 2022



Inactive Members

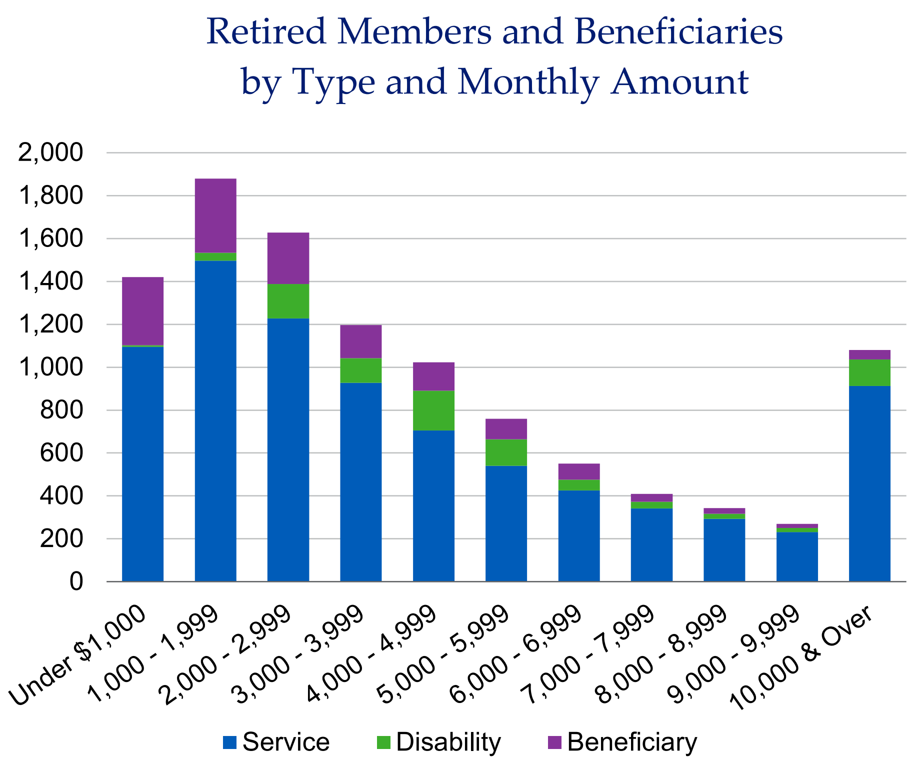
In this year's valuation, there were 3,974 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 3,812 in the prior valuation.

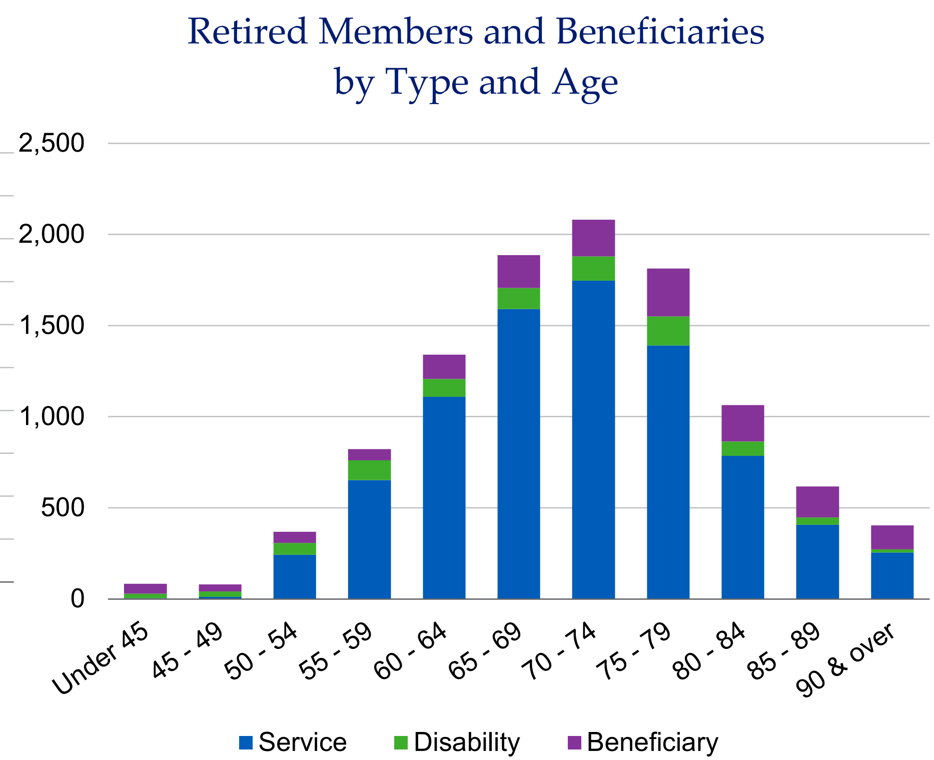
Retired Members and Beneficiaries

As of December 31, 2022, 9,071 retired members and 1,490 beneficiaries were receiving total monthly benefits of $47,165,238. For comparison, in the previous valuation, there were 8,793 retired members and 1,485 beneficiaries receiving monthly benefits of $44,743,043.

As of December 31, 2022, the average monthly benefit for retired members and beneficiaries is $4,466, compared to $4,353 in the previous valuation. The average age for retired members and beneficiaries is 71.1 in the current valuation, compared with 70.9 in the prior valuation.

Distribution of Retired Members and Beneficiaries as of December 31, 2022





Historical Plan Population

The chart below demonstrates the progression of the active population over the last ten years. The chart also shows the growth among the retired population over the same time period.

Member Data Statistics: 2013 – 2022

	Active Members			Retired Members and Beneficiaries		
Year Ended December 31	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount
2013	9,124	45.8	10.1	8,625	69.3	$3,579
2014	9,159	45.8	9.9	8,871	69.4	3,669
2015	9,642	45.9	9.9	9,068	69.9	3,706
2016	9,848	45.9	9.9	9,100	70.0	3,799
2017	10,038	46.0	9.8	9,267	70.3	3,892
2018	10,021	46.2	9.9	9,547	70.4	3,986
2019	10,075	46.3	10.1	9,737	70.6	4,116
2020	10,099	46.3	10.2	10,018	70.8	4,219
2021	10,005	46.3	10.2	10,278	70.9	4,353
2022	10,082	46.1	10.1	10,561	71.1	4,466

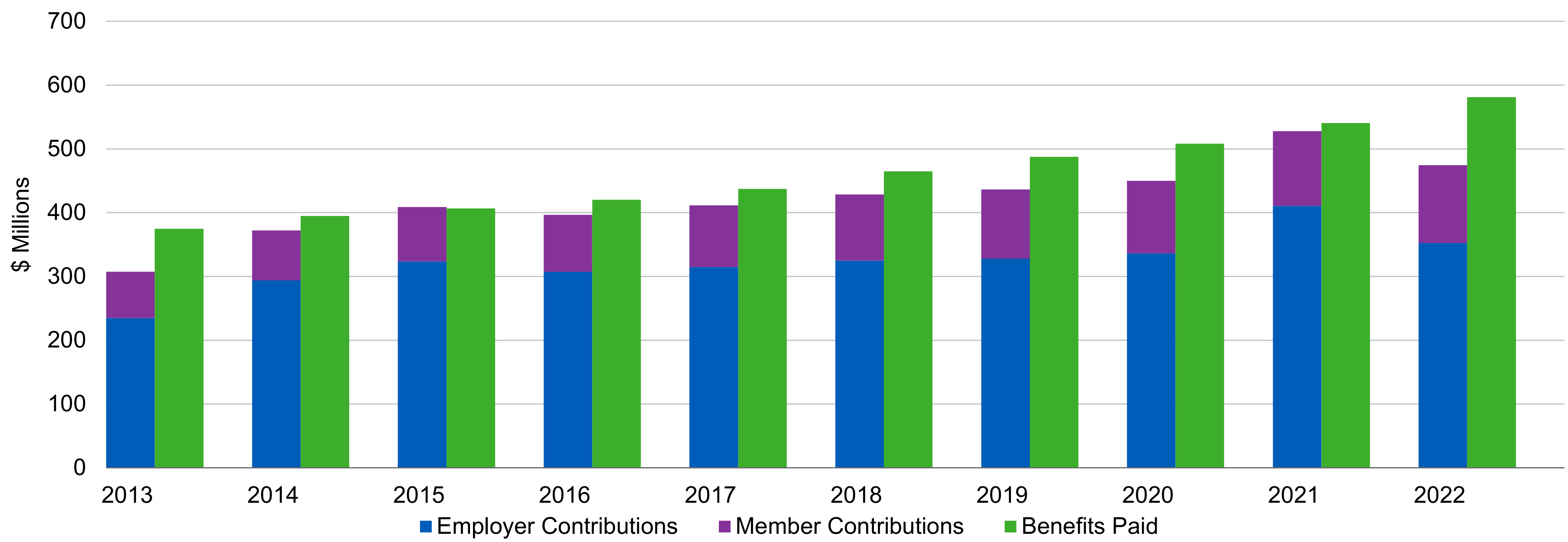
B. Financial Information

Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and investment earnings (less investment fees) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components.

Additional financial information, including a summary of transactions for the valuation year, is presented in *Section 3, Exhibits E, F, G* and *H*.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the valuation asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Comparison of Contributions Made with Benefits for Years Ended December 31, 2013 – 2022



Determination of Actuarial Value of Assets for Year Ended December 31, 2022

		Expected Return	Actual Return[1]	Investment Gain/(Loss)	Percent Deferred	Unrecognized Amount
1	**Market Value of Assets**					**$10,053,668,812**
2	Calculation of unrecognized return					
a)	Period ended December 31, 2017	$271,873,066	$498,651,736	$226,778,670	0%	$0
b)	Period ended June 30, 2018	288,460,475	63,645,390	(224,815,085)	0%	0
c)	Period ended December 31, 2018	289,889,306	(258,676,279)	(548,565,585)	10%	(54,856,558)
d)	Period ended June 30, 2019	280,075,265	820,000,188	539,924,922	20%	107,984,984
e)	Period ended December 31, 2019	307,217,326	348,171,398	40,954,072	30%	12,286,222
f)	Period ended June 30, 2020	318,113,258	(302,015,927)	(620,129,184)	40%	(248,051,674)
g)	Period ended December 31, 2020	306,509,032	1,184,409,986	877,900,954	50%	438,950,477
h)	Period ended June 30, 2021	346,562,358	(254,319,434)	(600,881,792)	60%	(360,529,075)
i)	Period ended December 31, 2021	337,995,697	1,661,663,047	1,323,667,350	70%	926,567,145
j)	Period ended June 30, 2022	393,183,225	(1,235,218,785)	(1,628,402,011)	80%	(1,302,721,608)
k)	Period ended December 31, 2022	336,398,943	(46,688,578)	(383,087,521)	90%	(344,778,768)
l)	Total unrecognized return[1]					$(825,148,855)
3	**Actuarial Value of Assets (1) - (2l)**					**$10,878,817,667**
4	Ratio of Actuarial Value to Market Value					108.2%
5	Non-valuation reserves and designations:					
a)	Post Retirement Death Benefit					$16,995,605
b)	Statutory Contingency					0
c)	Additional One Percent Contingency					0
d)	Unrestricted Designation					0
e)	Total					$16,995,605
6	**Valuation Value of Assets (3) – (5e)**					**$10,861,822,062**

Note: Results may be slightly off due to rounding.

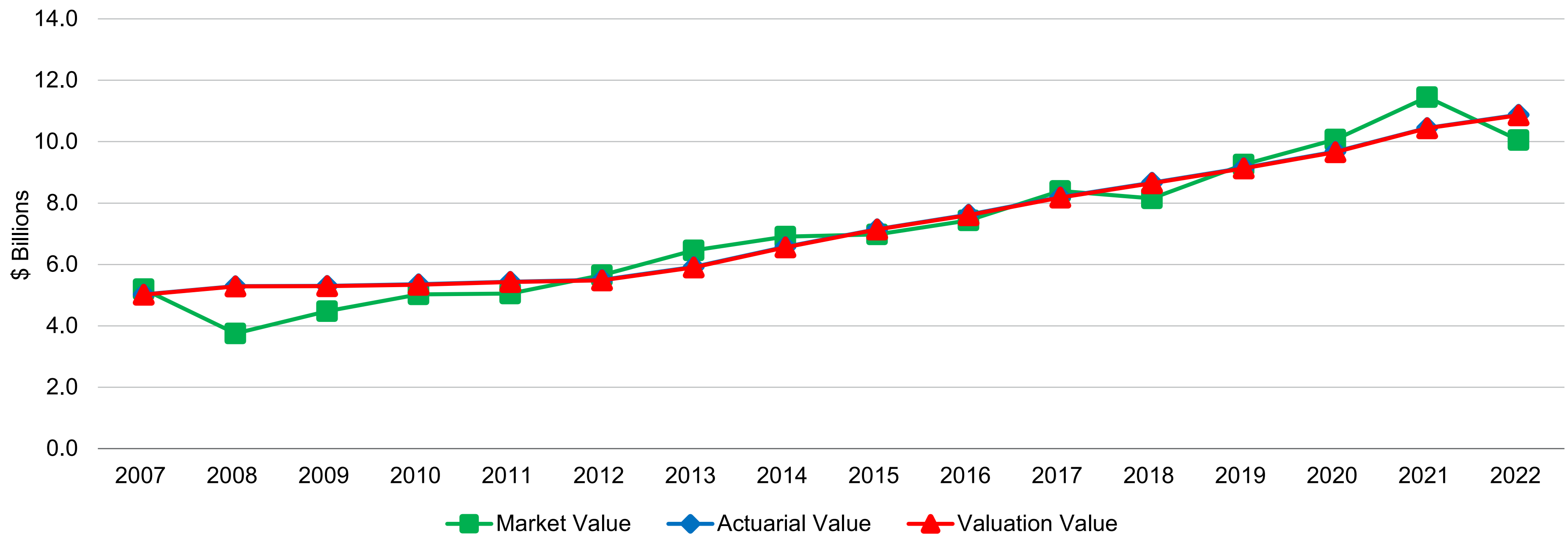
[1] Deferred return as of December 31, 2022 recognized in each of the next five years:

(a)	Amount recognized on December 31, 2023	$(144,867,200)
(b)	Amount recognized on December 31, 2024	(202,091,033)
(c)	Amount recognized on December 31, 2025	(169,950,699)
(d)	Amount recognized on December 31, 2026	(269,931,171)
(e)	Amount recognized on December 31, 2027	(38,308,752)
(f)	Total unrecognized return as of December 31, 2022	$(825,148,855)

Section 2: Actuarial Valuation Results

The Market Value, Actuarial Value and Valuation Value of Assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the Actuarial Value of Assets tracks the Market Value of Assets. The Valuation Value of Assets is generally the actuarial value, excluding any non-valuation reserves. The Valuation Value of Assets is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the Unfunded Actuarial Accrued Liability is an important element in determining the contribution requirement.

Market Value, Actuarial[1] Value, and Valuation[1] Value of Assets as of December 31, 2007 – 2022



[1] The Actuarial Value and the Valuation Value have been substantially the same over the time period shown, differing by no more than $20 million.

C. Actuarial Experience

To calculate any actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the actuarially determined contribution will decrease from the previous year. On the other hand, the actuarially determined contribution will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years. There are no changes in actuarial assumptions reflected in this valuation.

The total loss is $350.0 million, which includes $155.6 million from investment loss, a loss of $11.1 million from contribution experience and $183.3 million in losses from all other sources. The net experience variation from individual sources other than investments and contributions was 1.5% of the Actuarial Accrued Liability. A discussion of the major components of the actuarial experience is on the following pages.

Actuarial Experience for Year Ended December 31, 2022

1	Net loss from investments[1]	$155,589,609
2	Net loss from contribution experience[2]	11,121,129
3	Net loss from other experience[3]	183,265,424
4	**Net experience loss: 1 + 2 + 3**	**$349,976,162**

[1] Details on next page.
[2] See *Section 2, Subsection E* for further details.
[3] See *Section 2, Subsection E* for further details. Does not include the effect of plan, method, or assumption changes, if any.

Investment Experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. The rate of return on the Market Value of Assets was -11.25% for the year ended December 31, 2022.

For valuation purposes, the assumed rate of return on the Valuation Value of Assets is 6.75% based on the December 31, 2021 valuation. The actual rate of return on a valuation basis for the 2022 plan year was 5.25% after considering the recognition of prior years' investment gains and losses and the non-level returns during the first-half of 2022 (a market loss of -10.81%) and the second-half of 2022 (a market loss of -0.46%). Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended December 31, 2022 with regard to its investments.

Investment Experience for Year Ended December 31, 2022

		Market Value	Actuarial Value	Valuation Value
1	Net investment income	$(1,281,907,365)	$545,882,007	$544,768,870
2	Average value of assets	11,394,619,393	10,391,978,876	10,375,681,168
3	Rate of return: 1 ÷ 2	(11.25%)	5.25%	5.25%
4	Assumed rate of return	6.75%	6.75%	6.75%
5	Expected investment income:[1] 2 x 4	769,136,809	701,458,574	700,358,479
6	**Actuarial gain/(loss): 1 - 5**	**$(2,051,044,174)**	**$(155,576,567)**	**$(155,589,609)**

[1] The expected investment returns are based on January 1, 2022 asset values and do not take into account the actual timing of cashflows (i.e., contributions, benefit payment, expenses, etc.) during the year.

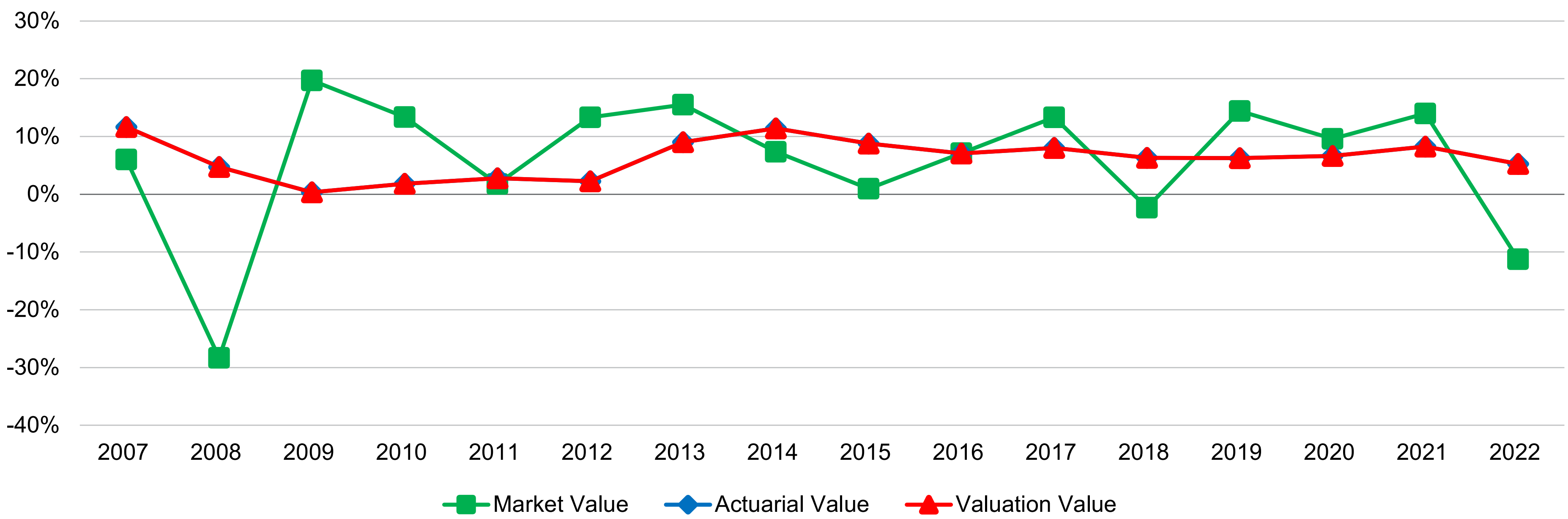
Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial and valuation basis compared to the actual market value investment return for the last ten years, including averages over select time periods.

Investment Return – Market Value, Actuarial Value and Valuation Value: 2013 – 2022

Year Ended December 31	Market Value Investment Return		Actuarial Value Investment Return		Valuation Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent
2013	$870,984,744	15.50%	$492,503,802	9.01%	$491,324,308	9.02%
2014	473,522,261	7.35%	673,040,867	11.39%	671,957,212	11.40%
2015	65,495,657	0.95%	577,199,123	8.78%	576,151,245	8.79%
2016	493,874,242	7.10%	502,352,173	7.04%	501,328,149	7.04%
2017	987,415,981	13.31%	608,519,874	8.00%	607,477,597	8.00%
2018	(195,030,888)	(2.33%)	516,825,883	6.32%	515,766,323	6.32%
2019	1,168,171,586	14.39%	538,946,876	6.24%	537,877,737	6.24%
2020	882,394,061	9.57%	603,096,897	6.62%	602,005,689	6.62%
2021	1,407,343,614	13.99%	796,432,706	8.24%	795,314,105	8.24%
2022	(1,281,907,365)	(11.25%)	545,882,007	5.25%	544,768,870	5.25%
Most recent five-year geometric average return		**4.37%**		**6.53%**		**6.53%**
Most recent ten-year geometric average return		**6.52%**		**7.68%**		**7.68%**

Section 2, Subsection B described the actuarial asset valuation method that gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

Market, Actuarial[1] and Valuation[1] Rates of Return for Years Ended December 31, 2007 – 2022



[1] The Actuarial and Valuation Rates of Return have been substantially the same over the time period shown, differing by no more than 0.02%.

Contributions

Contributions for the year ended December 31, 2022 totaled $474.7 million, compared to the projected amount of $485.5 million. This resulted in a loss of $11.1 million for the year, when adjusted for timing. The $11.1 million in contribution loss is net of additional UAAL Contributions of $3,344,437 made by East Fire and $279,000 made by San Ramon Valley Fire District.

Non-Investment Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected),
- salary increases (greater or smaller than projected),
- cost-of-living adjustments (COLAs) higher or lower than anticipated, and
- administrative expenses different than assumed.

The net loss from this other experience for the year ended December 31, 2022 amounted to $183.3 million, which is 1.5% of the Actuarial Accrued Liability. The loss was primarily due to individual salary increases higher than expected and COLA increases higher than expected. See *Section 2, Subsection E* for a detailed development of the Unfunded Actuarial Accrued Liability.

D. Other Changes in the Actuarial Accrued Liability

The Actuarial Accrued Liability as of December 31, 2022 is $11.9 billion, an increase of $0.6 billion, or 5.5%, from the Actuarial Accrued Liability as of the prior valuation date. The liability is expected to grow each year with Normal Cost and interest, and to decline due to benefit payments made. Additional fluctuations can occur due to actual experience that differs from expected (as discussed in the previous subsection).

Actuarial Assumptions and Methods

The administrative expenses assumption has decreased from 1.15% of payroll in last year's valuation to 1.13% of payroll in this year's valuation based on the actual administrative expenses and actual payroll reported by CCCERA.

Details on actuarial assumptions and methods are in *Section 4, Exhibit 1*.

Plan Provisions

There are no changes in plan provisions reflected in this report.

A summary of plan provisions is in *Section 4, Exhibit 2*.

E. Development of Unfunded Actuarial Accrued Liability

Development for Year Ended December 31, 2022

1	**Unfunded Actuarial Accrued Liability as of December 31, 2021**		**$854,561,199**
2	Normal Cost at middle of year[1]		272,418,167
3	Expected administrative expenses		11,681,194
4	Expected employer and member contributions		(485,450,020)
5	Interest		47,220,116
6	Expected Unfunded Actuarial Accrued Liability as of December 31, 2022		$700,430,656
7	Changes due to:		
	a. Investment return less than expected (after asset smoothing)	$155,589,609	
	b. Actual contributions less than expected in item 4	14,863,444	
	c. Gain from additional UAAL contributions for East Fire[2]	(3,455,468)	
	d. Gain from additional UAAL contributions for San Ramon FD[3]	(286,847)	
	e. Individual salary increases greater than expected	99,918,077	
	f. COLA increases greater than expected in 2023	79,804,487	
	g. Other experience loss[4]	3,542,860	
	Total changes		$349,976,162
8	**Unfunded Actuarial Accrued Liability as of December 31, 2022**		**$1,050,406,818**

Note: The sum of items 7b through 7d equals the "Net loss from contribution experience" shown in *Section 2, Subsection C*.
The sum of items 7e through 7g equals the "Net loss from other experience" shown in *Section 2, Subsection C*.

[1] Excludes administrative expense load.
[2] $3,344,437 additional contributions made by East Fire adjusted with $111,032 in interest to the end of the year.
[3] $279,000 additional contributions made by San Ramon Valley Fire District adjusted with $7,847 in interest to the end of the year.
[4] Other differences in actual versus expected experience including (but not limited to) mortality, retirement, disability, termination and leave cashout experience.

F. Recommended Contribution

The recommended contribution is equal to the employer Normal Cost payment and a payment on the Unfunded Actuarial Accrued Liability. As of December 31, 2022, the average recommended employer contribution is 30.01% of compensation.

The Board sets the funding policy used to calculate the recommended contribution based on layered amortization periods. See *Section 4, Exhibit 1* for further details on the funding policy.

The contribution requirement as of December 31, 2022 is based on the data previously described, the actuarial assumptions and Plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions, if any.

Average Recommended Employer Contribution

		December 31, 2022		December 31, 2021	
	All Tiers Combined	**Amount ($ in '000s)**	**% of Projected Compensation**	**Amount ($ in '000s)**	**% of Projected Compensation**
1	Total Normal Cost	$296,628	27.63%	$282,576	27.82%
2	Expected member contributions	130,764	12.18%	123,593	12.17%
3	Employer Normal Cost: 1 – 2	$165,864	15.45%	$158,983	15.65%
4	Actuarial Accrued Liability	11,912,229		11,288,973	
5	Valuation Value of Assets	10,861,822		10,434,412	
6	Unfunded Actuarial Accrued Liability: 4 – 5	$1,050,407		$854,561	
7	Payment on Unfunded Actuarial Accrued Liability	156,364	14.56%	202,117	19.90%[1]
8	**Total average recommended employer contribution: 3 + 7**	**$322,227**	**30.01%**	**$361,100**	**35.55%**
9	Projected compensation	$1,073,887		$1,015,755	

Note: Contributions are assumed to be paid at the middle of the year.

[1] Reflects UAAL prepayment made by East Fire in the amount of $3,344,437 before annexation into Con Fire on June 30, 2022.

Reconciliation of Average Recommended Employer Contribution Rate

The chart below details the changes in the average recommended employer contribution rate from the prior valuation to the current year's valuation.

Reconciliation from December 31, 2021 to December 31, 2022

		Contribution Rate[1]	Estimated Annual Dollar Amount[2]
Average Recommended Employer Contribution as of December 31, 2021[3]		**35.55%**	**$361,099,855**
1	Effect of investment return less than expected (after asset smoothing)	1.11%	11,920,143
2	Effect of actual contributions less than expected	0.13%	1,396,053
3	Effect of additional UAAL contributions for San Ramon FD[3]	(0.00%)	(21,993)
4	Effect of individual salary increases greater than expected in 2022	0.71%	7,624,596
5	Effect of amortizing prior year's UAAL over a larger than expected projected total payroll	(0.15%)	(1,610,830)
6	Effect of COLA increases greater than expected in 2023	0.57%	6,121,155
7	Effect of the 2007 UAAL restart charge and POB credit amortization layers being fully amortized	(7.44%)	(79,914,066)
8	Effect of changes in active member demographics on Normal Cost[4]	(0.20%)	(2,147,774)
9	Effect of change in administrative expense load[5]	(0.02%)	(214,777)
10	Effect of other gains[6]	(0.21%)	18,404,602
11	Effect of setting contribution rate equal to Normal Cost for certain Cost Groups[7]	(0.04%)	(429,555)
Total change		(5.54%)	$(38,872,446)
Average Recommended Employer Contribution as of December 31, 2022		**30.01%**	**$322,227,409**

1 These rates do not include any employer subvention of member contributions, or member subvention of employer contributions.
2 Based on projected compensation for each valuation date shown.
3 The contribution rate and the annual dollar amount shown as of December 31, 2021 has been calculated to reflect the UAAL prepayment made by East Fire in the amount of $3,344,437 on June 30, 2022. As a result, there is no additional effect due to UAAL prepayment contribution made by East Fire between the two valuations.
4 This is the net impact of: a) reduction in normal cost rate due to the replacement of legacy members by PEPRA members, b) change in entry age and other demographic profiles, and c) the effect of legacy Safety members who for the first time reached 30 years of reported service as of December 31, 2022 and stopped making member basic contributions.
5 The calculation and the allocation of the administrative expense between employer and member can be found on page 110.
6 Other differences in actual versus expected experience including (but not limited to) mortality, retirement, disability, termination and leave cashout experience. Estimated annual dollar cost also reflects changes in payroll from prior valuation.
7 Cost Groups #3 and #6 were overfunded as of December 31, 2021. We have applied some of the overfunded amount to offset the net increase in liability for these two Cost Groups during 2022. In particular, only Cost Group #6 remains overfunded (and not Cost Group #3) as of December 31, 2022.

Reconciliation of Average Recommended Member Contribution Rate

The chart below details the changes in the average recommended member contribution rate from the prior valuation to the current year's valuation.

Reconciliation from December 31, 2021 to December 31, 2022

	Contribution Rate[1]	Estimated Annual Dollar Amount[2]
Average Recommended Member Contribution as of December 31, 2021	**12.17%**	**$123,592,769**
1 Effect of change in administrative expense load[3]	0.00%	$0
2 Effect of changes in active member demographics[4]	0.01%	7,171,612
Total change	0.01%	$7,171,612
Average Recommended Member Contribution as of December 31, 2022	**12.18%**	**$130,764,381**

[1] These rates do not include any employer subvention of member contributions, or member subvention of employer contributions.
[2] Based on projected compensation for each valuation date shown.
[3] The calculation and the allocation of the administrative expense between employer and member can be found on page 110.
[4] This also includes the effect of legacy Safety members who first reached 30 years of reported service as of December 31, 2022 and stopped making member basic contributions. Estimated annual dollar cost also reflects change in payroll from prior valuation.

Recommended Employer Contribution Rate

Cost Group #1[3]	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
County General Tier 1 w/ Courts								
Normal Cost	13.36%	3.71%	17.07%	$1,244,451	13.31%	3.67%	16.98%	$1,416,969
UAAL	9.34%	0.19%	9.53%	694,764	12.02%	1.86%	13.88%	1,158,277
Total Contribution	**22.70%**	**3.90%**	**26.60%**	**$1,939,215**	**25.33%**	**5.53%**	**30.86%**	**$2,575,246**
District General Tier 1 w/o POB								
Normal Cost	13.36%	3.71%	17.07%	$1,039,112	13.31%	3.67%	16.98%	$1,213,743
UAAL	9.34%	0.19%	9.53%	580,125	16.94%	5.81%	22.75%	1,626,186
Total Contribution	**22.70%**	**3.90%**	**26.60%**	**$1,619,237**	**30.25%**	**9.48%**	**39.73%**	**$2,839,929**
District General Tier 1 w/ POB (Moraga)								
Normal Cost	13.36%	3.71%	17.07%	$58,974	13.31%	3.67%	16.98%	$55,895
UAAL	9.34%	0.19%	9.53%	32,925	11.17%	2.45%	13.62%	44,834
Total Contribution	**22.70%**	**3.90%**	**26.60%**	**$91,899**	**24.48%**	**6.12%**	**30.60%**	**$100,729**
District General Tier 1 w/ UAAL Prepayment (First Five)								
Normal Cost	13.36%	3.71%	17.07%	$235,209	13.31%	3.67%	16.98%	$242,366
UAAL	9.34%	0.19%	9.53%	131,315	12.29%	2.30%	14.59%	208,252
Total Contribution	**22.70%**	**3.90%**	**26.60%**	**$366,524**	**25.60%**	**5.97%**	**31.57%**	**$450,618**
District General Tier 1 w/ UAAL Prepayment (LAFCO)								
Normal Cost	13.36%	3.71%	17.07%	$32,863	13.31%	3.67%	16.98%	$32,083
UAAL[4]	3.86%	0.19%	4.05%	7,797	12.95%	4.38%	17.33%	32,745
Total Contribution	**17.22%**	**3.90%**	**21.12%**	**$40,660**	**26.26%**	**8.05%**	**34.31%**	**$64,828**

[1] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
[2] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
[3] Note that in preparing future valuation reports, we will stop distinguishing UAAL contribution rates without POB and with POB.
[4] LAFCO made several UAAL prepayments in the past valuations. Those prepayments have been amortized over 18 years from the date they were made and allocated to provide Basic and COLA rate credits based on the then current Basic and COLA UAAL rates before the prepayments. In this valuation with the restart of UAAL amortization charge layer being fully amortized, we have re-allocated the outstanding balance of those prepayment credits so that the COLA UAAL rate for LAFCO would be the same as the other employers in Cost Group #1.

Recommended Employer Contribution Rate (continued)

Cost Group #1[3]	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
County General Tier 4 (3% COLA) w/ Courts								
Normal Cost	9.36%	3.15%	12.51%	$0	9.34%	3.13%	12.47%	$0
UAAL	9.34%	0.19%	9.53%	0	12.02%	1.86%	13.88%	0
Total Contribution	**18.70%**	**3.34%**	**22.04%**	**$0**	**21.36%**	**4.99%**	**26.35%**	**$0**
District General Tier 4 (3% COLA) w/o POB								
Normal Cost	9.36%	3.15%	12.51%	$744,885	9.34%	3.13%	12.47%	$563,174
UAAL	9.34%	0.19%	9.53%	567,447	16.94%	5.81%	22.75%	1,027,442
Total Contribution	**18.70%**	**3.34%**	**22.04%**	**$1,312,332**	**26.28%**	**8.94%**	**35.22%**	**$1,590,616**
District General Tier 4 (3% COLA) w/ POB (Moraga)								
Normal Cost	9.36%	3.15%	12.51%	$99,378	9.34%	3.13%	12.47%	$98,179
UAAL	9.34%	0.19%	9.53%	75,705	11.17%	2.45%	13.62%	107,233
Total Contribution	**18.70%**	**3.34%**	**22.04%**	**$175,083**	**20.51%**	**5.58%**	**26.09%**	**$205,412**
District General Tier 4 (3% COLA) w/ UAAL Prepayment (First Five)								
Normal Cost	9.36%	3.15%	12.51%	$189,227	9.34%	3.13%	12.47%	$177,859
UAAL	9.34%	0.19%	9.53%	144,152	12.29%	2.30%	14.59%	208,096
Total Contribution	**18.70%**	**3.34%**	**22.04%**	**$333,379**	**21.63%**	**5.43%**	**27.06%**	**$385,955**
District General Tier 4 (3% COLA) w/ UAAL Prepayment (LAFCO)								
Normal Cost	9.36%	3.15%	12.51%	$0	9.34%	3.13%	12.47%	$0
UAAL[4]	3.86%	0.19%	4.05%	0	12.95%	4.38%	17.33%	0
Total Contribution	**13.22%**	**3.34%**	**16.56%**	**$0**	**22.29%**	**7.51%**	**29.80%**	**$0**
County General Tier 4 (2% COLA) w/ Courts								
Normal Cost	9.09%	2.09%	11.18%	$0	9.04%	2.07%	11.11%	$0
UAAL	9.34%	0.19%	9.53%	0	12.02%	1.86%	13.88%	0
Total Contribution	**18.43%**	**2.28%**	**20.71%**	**$0**	**21.06%**	**3.93%**	**24.99%**	**$0**

1 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
2 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
3 Note that in preparing future valuation reports, we will stop distinguishing UAAL contribution rates without POB and with POB.
4 LAFCO made several UAAL prepayments in the past valuations. Those prepayments have been amortized over 18 years from the date they were made and allocated to provide Basic and COLA rate credits based on the then current Basic and COLA UAAL rates before the prepayments. In this valuation with the restart of UAAL amortization charge layer being fully amortized, we have re-allocated the outstanding balance of those prepayment credits so that the COLA UAAL rate for LAFCO would be the same as the other employers in Cost Group #1.

Recommended Employer Contribution Rate (continued)

Cost Group #2[3]	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
County General Tier 3 w/ Courts								
Normal Cost	11.96%	3.40%	15.36%	$56,576,002	11.95%	3.39%	15.34%	$57,719,869
UAAL	9.34%	0.19%	9.53%	35,102,168	12.02%	1.86%	13.88%	52,226,322
Total Contribution	**21.30%**	**3.59%**	**24.89%**	**$91,678,170**	**23.97%**	**5.25%**	**29.22%**	**$109,946,191**
District General Tier 3 w/o POB								
Normal Cost	11.96%	3.40%	15.36%	$383,555	11.95%	3.39%	15.34%	$433,252
UAAL	9.34%	0.19%	9.53%	237,974	16.94%	5.81%	22.75%	642,535
Total Contribution	**21.30%**	**3.59%**	**24.89%**	**$621,529**	**28.89%**	**9.20%**	**38.09%**	**$1,075,787**
County General Tier 5 (3%/4% COLA) w/ Courts								
Normal Cost	8.58%	2.84%	11.42%	$6,763,962	8.57%	2.83%	11.40%	$6,725,605
UAAL	9.34%	0.19%	9.53%	5,644,532	12.02%	1.86%	13.88%	8,188,719
Total Contribution	**17.92%**	**3.03%**	**20.95%**	**$12,408,494**	**20.59%**	**4.69%**	**25.28%**	**$14,914,324**
District General Tier 5 (3%/4% COLA) w/o POB								
Normal Cost	8.58%	2.84%	11.42%	$161,361	8.57%	2.83%	11.40%	$136,832
UAAL	9.34%	0.19%	9.53%	134,656	16.94%	5.81%	22.75%	273,063
Total Contribution	**17.92%**	**3.03%**	**20.95%**	**$296,017**	**25.51%**	**8.64%**	**34.15%**	**$409,895**
County General Tier 5 (2% COLA) w/ Courts								
Normal Cost	8.47%	1.90%	10.37%	$36,320,856	8.40%	1.89%	10.29%	$30,860,000
UAAL	9.34%	0.19%	9.53%	33,378,761	12.02%	1.86%	13.88%	41,626,511
Total Contribution	**17.81%**	**2.09%**	**19.90%**	**$69,699,617**	**20.42%**	**3.75%**	**24.17%**	**$72,486,511**
District General Tier 5 (2% COLA) w/o POB								
Normal Cost	8.47%	1.90%	10.37%	$44,893	8.40%	1.89%	10.29%	$36,686
UAAL	9.34%	0.19%	9.53%	41,257	16.94%	5.81%	22.75%	81,109
Total Contribution	**17.81%**	**2.09%**	**19.90%**	**$86,150**	**25.34%**	**7.70%**	**33.04%**	**$117,795**

[1] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
[2] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
[3] Note that in preparing future valuation reports, we will stop distinguishing UAAL contribution rates without POB and with POB.

Recommended Employer Contribution Rate (continued)

Cost Group #3	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
CCCSD General Tier 1								
Normal Cost	13.57%	3.88%	17.45%	$4,713,467	13.49%	3.87%	17.36%	$4,816,906
UAAL	0.40%	0.66%	1.06%	286,319	0.15%	0.00%	0.15%	41,621
Total Contribution	**13.97%**	**4.54%**	**18.51%**	**$4,999,786**	**13.64%**	**3.87%**	**17.51%**	**$4,858,527**
CCCSD General Tier 4 (3% COLA)								
Normal Cost	8.60%	3.00%	11.60%	$1,569,590	8.55%	2.97%	11.52%	$1,303,604
UAAL	0.40%	0.66%	1.06%	143,428	0.15%	0.00%	0.15%	16,974
Total Contribution	**9.00%**	**3.66%**	**12.66%**	**$1,713,018**	**8.70%**	**2.97%**	**11.67%**	**$1,320,578**

1 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
2 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.

Recommended Employer Contribution Rate (continued)

Cost Group #4	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2,3] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
Contra Costa Housing Authority General Tier 1								
Normal Cost	13.41%	3.80%	17.21%	$626,043	13.47%	3.79%	17.26%	$622,479
UAAL	8.98%	4.41%	13.39%	487,084	16.87%	10.80%	27.67%	997,914
Total Contribution	**22.39%**	**8.21%**	**30.60%**	**$1,113,127**	**30.34%**	**14.59%**	**44.93%**	**$1,620,393**
Contra Costa Housing Authority General Tier 4 (3% COLA)								
Normal Cost	9.17%	3.10%	12.27%	$394,422	9.18%	3.09%	12.27%	$367,561
UAAL	8.98%	4.41%	13.39%	430,425	16.87%	10.80%	27.67%	828,885
Total Contribution	**18.15%**	**7.51%**	**25.66%**	**$824,847**	**26.05%**	**13.89%**	**39.94%**	**$1,196,446**
Cost Group #5								
CCCFPD General Tier 1								
Normal Cost	14.97%	3.98%	18.95%	$738,478	15.04%	3.99%	19.03%	$725,506
UAAL	12.80%	10.30%	23.10%	900,203	10.96%	9.31%	20.27%	772,781
Total Contribution	**27.77%**	**14.28%**	**42.05%**	**$1,638,681**	**26.00%**	**13.30%**	**39.30%**	**$1,498,287**
CCCFPD General Tier 4 (3% COLA)								
Normal Cost	11.28%	3.85%	15.13%	$15,980	10.91%	3.74%	14.65%	$25,042
UAAL	12.80%	10.30%	23.10%	24,398	10.96%	9.31%	20.27%	34,649
Total Contribution	**24.08%**	**14.15%**	**38.23%**	**$40,378**	**21.87%**	**13.05%**	**34.92%**	**$59,691**
CCCFPD General Tier 4 (2% COLA)								
Normal Cost	10.16%	2.33%	12.49%	$491,623	10.25%	2.35%	12.60%	$443,627
UAAL	12.80%	10.30%	23.10%	909,247	10.96%	9.31%	20.27%	713,676
Total Contribution	**22.96%**	**12.63%**	**35.59%**	**$1,400,870**	**21.21%**	**11.66%**	**32.87%**	**$1,157,303**

1 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
2 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
3 The contribution rates and the annual dollar amounts shown for Cost Group #5 as of December 31, 2021 has been calculated to reflect the UAAL prepayment made by East Fire in the amount of $3,344,437 on June 30, 2022 for the General and Safety groups.

Recommended Employer Contribution Rate (continued)

Cost Group #6	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
Non-Enhanced District General Tier 1								
Normal Cost[3]	12.70%	3.80%	16.50%	$97,339	13.21%	4.02%	17.23%	$101,500
UAAL	0.13%	0.00%	0.13%	767	0.15%	0.00%	0.15%	884
Total Contribution	**12.83%**	**3.80%**	**16.63%**	**$98,106**	**13.36%**	**4.02%**	**17.38%**	**$102,384**
Non-Enhanced District General Tier 4 (3% COLA)								
Normal Cost	11.01%	3.68%	14.69%	$76,376	10.66%	3.56%	14.22%	$61,533
UAAL	0.13%	0.00%	0.13%	676	0.15%	0.00%	0.15%	649
Total Contribution	**11.14%**	**3.68%**	**14.82%**	**$77,052**	**10.81%**	**3.56%**	**14.37%**	**$62,182**
Cost Group #7								
County Safety Tier A								
Normal Cost	23.27%	7.55%	30.82%	$14,040,055	23.23%	7.52%	30.75%	$14,464,350
UAAL	13.90%	19.60%	33.50%	15,260,929	21.92%	23.56%	45.48%	21,393,126
Total Contribution	**37.17%**	**27.15%**	**64.32%**	**$29,300,984**	**45.15%**	**31.08%**	**76.23%**	**$35,857,476**
County Safety Tier D								
Normal Cost	14.55%	6.02%	20.57%	$770,517	14.45%	5.98%	20.43%	$763,443
UAAL	13.90%	19.60%	33.50%	1,254,853	21.92%	23.56%	45.48%	1,699,530
Total Contribution	**28.45%**	**25.62%**	**54.07%**	**$2,025,370**	**36.37%**	**29.54%**	**65.91%**	**$2,462,973**

[1] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
[2] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
[3] The decrease in the employer Normal Cost rate from last year to this year is primarily due to the change in the average entry age from 43.8 in last year's valuation to 40.5 in this year's valuation.

Recommended Employer Contribution Rate (continued)

Cost Group #8	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2,3] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
CCCFPD Safety Tier A								
Normal Cost	23.60%	7.78%	31.38%	$11,876,441	23.57%	7.81%	31.38%	$11,321,535
UAAL	12.25%	28.74%	40.99%	15,513,553	11.35%	29.90%	41.25%	14,882,515
Total Contribution	**35.85%**	**36.52%**	**72.37%**	**$27,389,994**	**34.92%**	**37.71%**	**72.63%**	**$26,204,050**
CCCFPD Safety Tier D								
Normal Cost	12.81%	5.39%	18.20%	$416,061	12.62%	5.32%	17.94%	$384,961
UAAL	12.25%	28.74%	40.99%	937,053	11.35%	29.90%	41.25%	885,153
Total Contribution	**25.06%**	**34.13%**	**59.19%**	**$1,353,114**	**23.97%**	**35.22%**	**59.19%**	**$1,270,114**
CCCFPD Safety Tier E								
Normal Cost	13.16%	3.68%	16.84%	$3,445,302	13.10%	3.64%	16.74%	$2,215,419
UAAL	12.25%	28.74%	40.99%	8,386,160	11.35%	29.90%	41.25%	5,459,143
Total Contribution	**25.41%**	**32.42%**	**57.83%**	**$11,831,462**	**24.45%**	**33.54%**	**57.99%**	**$7,674,562**
Cost Group #9								
County Safety Tier C								
Normal Cost	21.91%	4.74%	26.65%	$4,381,568	21.94%	4.74%	26.68%	$4,175,779
UAAL	13.90%	19.60%	33.50%	5,507,787	21.92%	23.56%	45.48%	7,118,232
Total Contribution	**35.81%**	**24.34%**	**60.15%**	**$9,889,355**	**43.86%**	**28.30%**	**72.16%**	**$11,294,011**
County Safety Tier E								
Normal Cost	13.74%	3.82%	17.56%	$8,574,681	13.63%	3.77%	17.40%	$7,751,580
UAAL	13.90%	19.60%	33.50%	16,358,303	21.92%	23.56%	45.48%	20,261,025
Total Contribution	**27.64%**	**23.42%**	**51.06%**	**$24,932,984**	**35.55%**	**27.33%**	**62.88%**	**$28,012,605**

[1] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
[2] The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
[3] The contribution rates and the annual dollar amounts shown for Cost Group #8 as of December 31, 2021 has been calculated to reflect the UAAL prepayment made by East Fire in the amount of $3,344,437 on June 30, 2022 for the General and Safety groups.

Recommended Employer Contribution Rate (continued)

Cost Group #10	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
Moraga-Orinda FD Safety Tier A								
Normal Cost	22.35%	7.36%	29.71%	$1,997,877	22.24%	7.34%	29.58%	$1,945,645
UAAL	19.73%	41.86%	61.59%	4,141,679	13.85%	37.37%	51.22%	3,369,030
Total Contribution	**42.08%**	**49.22%**	**91.30%**	**$6,139,556**	**36.09%**	**44.71%**	**80.80%**	**$5,314,675**
Moraga-Orinda FD Safety Tier D								
Normal Cost	13.52%	5.70%	19.22%	$438,258	13.17%	5.55%	18.72%	$405,748
UAAL	19.73%	41.86%	61.59%	1,404,385	13.85%	37.37%	51.22%	1,110,172
Total Contribution	**33.25%**	**47.56%**	**80.81%**	**$1,842,643**	**27.02%**	**42.92%**	**69.94%**	**$1,515,920**
Cost Group #11								
San Ramon FD Safety Tier A								
Normal Cost	24.79%	8.46%	33.25%	$5,104,772	24.69%	8.47%	33.16%	$5,450,419
UAAL	12.34%	11.81%	24.15%	3,707,677	30.42%	24.56%	54.98%	9,036,913
Total Contribution	**37.13%**	**20.27%**	**57.40%**	**$8,812,449**	**55.11%**	**33.03%**	**88.14%**	**$14,487,332**
San Ramon FD Safety Tier D								
Normal Cost	11.81%	4.98%	16.79%	$1,656,386	11.67%	4.92%	16.59%	$1,253,012
UAAL	12.34%	11.81%	24.15%	2,382,473	30.42%	24.56%	54.98%	4,152,536
Total Contribution	**24.15%**	**16.79%**	**40.94%**	**$4,038,859**	**42.09%**	**29.48%**	**71.57%**	**$5,405,548**

1 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
2 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.

Recommended Employer Contribution Rate (continued)

Cost Group #12	December 31, 2022 Actuarial Valuation[1] Recommended Rates for FY 2024-2025 Basic	COLA	Total	Estimated Annual Dollar Amount	December 31, 2021 Actuarial Valuation[2,3] Recommended Rates for FY 2023-2024 Basic	COLA	Total	Estimated Annual Dollar Amount
Non-Enhanced Rodeo-Hercules FPD Safety Tier A								
Normal Cost	19.33%	6.99%	26.32%	$370,283	20.64%	7.58%	28.22%	$541,887
UAAL	37.21%	28.96%	66.17%	930,914	38.70%	31.95%	70.65%	1,356,638
Total Contribution	**56.54%**	**35.95%**	**92.49%**	**$1,301,197**	**59.34%**	**39.53%**	**98.87%**	**$1,898,525**
Non-Enhanced Rodeo-Hercules FPD Safety Tier D								
Normal Cost[4]	12.99%	5.49%	18.48%	$173,616	12.00%	5.07%	17.07%	$128,908
UAAL[3]	37.21%	28.96%	66.17%	621,655	38.70%	31.95%	70.65%	533,529
Total Contribution	**50.20%**	**34.45%**	**84.65%**	**$795,271**	**50.70%**	**37.02%**	**87.72%**	**$662,437**
Total All Employers Combined (Aggregate)								
Normal Cost	12.05%	3.40%	15.45%	$165,863,863	12.19%	3.46%	15.65%	$158,982,956
UAAL	9.88%	4.68%	14.56%	156,363,546	13.22%	6.68%	19.90%	202,116,899
Total Contribution	**21.93%**	**8.08%**	**30.01%**	**$322,227,409**	**25.41%**	**10.14%**	**35.55%**	**$361,099,855**

1 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.13% of payroll, respectively.
2 The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.50% and 0.15% of payroll, respectively.
3 The contribution rates and the annual dollar amounts shown for All Employers Combined (Aggregate) as of December 31, 2021 has been calculated to reflect the UAAL prepayment made by East Fire in the amount of $3,344,437 on June 30, 2022 for the General and Safety groups.
4 The decrease in the employer Normal Cost rate from last year to this year is primarily due to the change in the average entry age from 25.9 in last year's valuation to 28.4 in this year's valuation.

Recommended Employer Contribution Rate (continued)

The projected compensation for the 2023 calendar year that is used to estimate the annual dollar amount shown on the prior pages as of December 31, 2022 are as follows:

Cost Group #1	Projected Compensation
County General Tier 1 w/ Courts	$7,290,282
District General Tier 1 w/o POB	6,087,356
District General Tier 1 w/ POB (Moraga)	345,485
District General Tier 1 w/ UAAL Prepayment (First Five)	1,377,910
District General Tier 1 w/ UAAL Prepayment (LAFCO)	192,521
County General Tier 4 (3% COLA) w/ Courts	0
District General Tier 4 (3% COLA) w/o POB	5,954,320
District General Tier 4 (3% COLA) w/ POB (Moraga)	794,385
District General Tier 4 (3% COLA) w/ UAAL Prepayment (First Five)	1,512,608
District General Tier 4 (3% COLA) w/ UAAL Prepayment (LAFCO)	0
County General Tier 4 (2% COLA) w/ Courts	0

Cost Group #2	Projected Compensation
County General Tier 3 w/ Courts	$368,333,346
District General Tier 3 w/o POB	2,497,103
County General Tier 5 (3%/4% COLA) w/ Courts	59,229,092
District General Tier 5 (3%/4% COLA) w/o POB	1,412,965
County General Tier 5 (2% COLA) w/ Courts	350,249,333
District General Tier 5 (2% COLA) w/o POB	432,912

Cost Group #3	Projected Compensation
CCCSD General Tier 1	$27,011,270
CCCSD General Tier 4 (3% COLA)	13,530,945

Cost Group #4	Projected Compensation
Contra Costa Housing Authority General Tier 1	$3,637,670
Contra Costa Housing Authority General Tier 4 (3% COLA)	3,214,527

Cost Group #5	Projected Compensation
CCCFPD General Tier 1	$3,896,981
CCCFPD General Tier 4 (3% COLA)	105,619
CCCFPD General Tier 4 (2% COLA)	3,936,135

Cost Group #6	Projected Compensation
Non-Enhanced District General Tier 1	$589,934
Non-Enhanced District General Tier 4 (3% COLA)	519,920

Cost Group #7	Projected Compensation
County Safety Tier A	$45,555,012
County Safety Tier D	3,745,831

Cost Group #8	Projected Compensation
CCCFPD Safety Tier A	$37,847,166
CCCFPD Safety Tier D	2,286,052
CCCFPD Safety Tier E	20,459,039

Cost Group #9	Projected Compensation
County Safety Tier C	$16,441,156
County Safety Tier E	48,830,756

Cost Group #10	Projected Compensation
Moraga-Orinda FD Safety Tier A	$6,724,596
Moraga-Orinda FD Safety Tier D	2,280,216

Cost Group #11	Projected Compensation
San Ramon FD Safety Tier A	$15,352,698
San Ramon FD Safety Tier D	9,865,311

Cost Group #12	Projected Compensation
Non-Enhanced Rodeo-Hercules FPD Safety Tier A	$1,406,852
Non-Enhanced Rodeo-Hercules FPD Safety Tier D	939,481
Total All Employers Combined (Aggregate)	**$1,073,886,785**

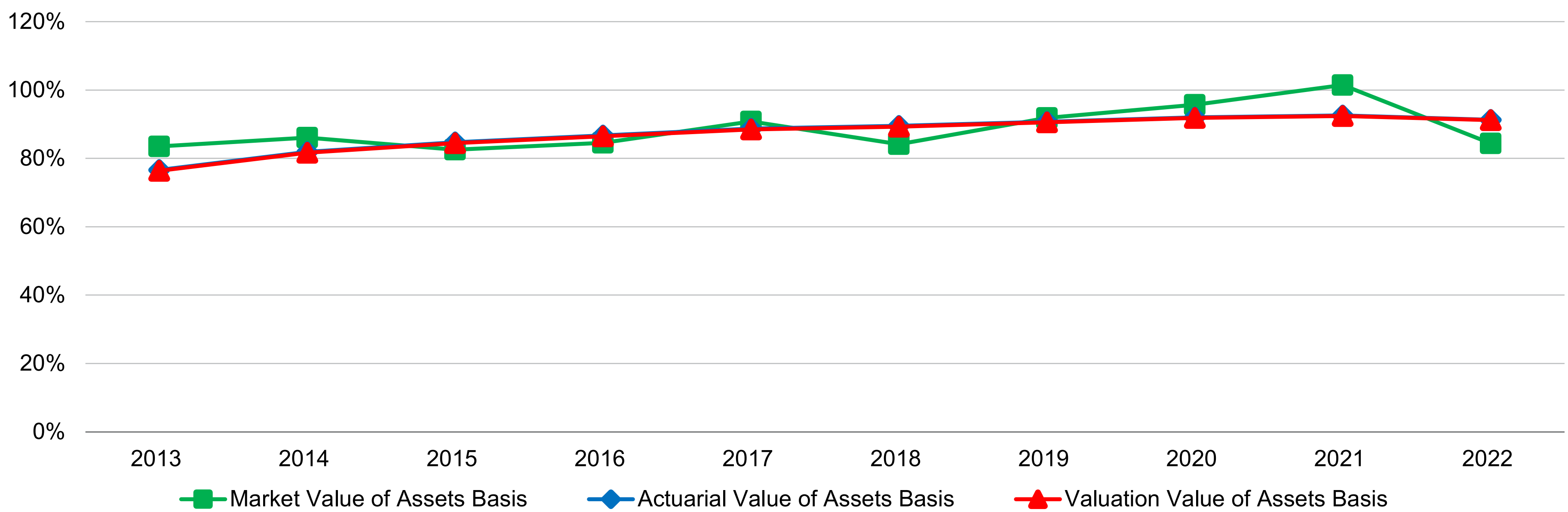
G. Funded Status

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the Market, Actuarial and Valuation Value of Assets to the Actuarial Accrued Liability of the Plan. Higher ratios indicate a relatively well-funded plan while lower ratios may indicate recent changes to actuarial assumptions, funding of the plan below actuarial requirements, poor asset performance, or a variety of other causes.

The chart below depicts a history of the funded ratio for the Plan. The chart on the next page shows the Plan's schedule of funding progress for the last ten years.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the Market, Actuarial, or Valuation Value of Assets is used.

Funded Ratio for Years Ended December 31, 2013 – 2022



Note: The Actuarial Value of Assets and the Valuation Value of Assets have been substantially the same over the time period shown, differing by no more than $20 million.

Schedule of Funding Progress for Years Ended December 31, 2013 – 2022

Actuarial Valuation Date as of December 31	Valuation Value of Assets[1] (a)	Actuarial Accrued Liability (AAL)[2] (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Projected Covered Payroll (c)	UAAL as a Percentage of Projected Covered Payroll (%) [(b) - (a)] / (c)
2013	$5,907,416,432	$7,731,097,407	$1,823,680,975	76.4%	$679,428,911	268.4%
2014	6,557,496,101	8,027,438,213	1,469,942,112	81.7%	697,831,837	210.6%
2015	7,136,801,380	8,448,624,096	1,311,822,716	84.5%	746,352,663	175.8%
2016	7,606,997,530	8,794,434,139	1,187,436,609	86.5%	784,412,260	151.4%
2017	8,179,891,191	9,239,246,920	1,059,355,729	88.5%	860,624,613	123.1%
2018	8,650,178,226	9,682,143,750	1,031,965,524	89.3%	896,390,768	115.1%
2019	9,128,668,718	10,075,722,222	947,053,504	90.6%	937,531,262	101.0%
2020	9,662,282,926	10,521,628,175	859,345,249	91.8%	990,041,699	86.8%
2021	10,434,412,288	11,288,973,487	854,561,199	92.4%	1,015,755,387	84.1%
2022	10,861,822,062	11,912,228,880	1,050,406,818	91.2%	1,073,886,785	97.8%

1 Excludes assets for non-valuation reserves.
2 Excludes liabilities for non-valuation reserves.

H. Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the Plan for current participants is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the actuarial present value of future benefits of the Plan.

Second, this actuarial present value of future benefits is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet for Year Ended December 31, 2022

	Basic	COLA	Total
Actuarial present value of future benefits[1]			
• Present value of benefits for retired members and beneficiaries	$4,243,507,715	$3,501,494,603	$7,745,002,318
• Present value of benefits for inactive vested members[2]	271,326,184	89,544,133	360,870,317
• Present value of benefits for active members	4,402,643,406	1,539,209,053	5,941,852,459
Total actuarial present value of future benefits	**$8,917,477,305**	**$5,130,247,789**	**$14,047,725,094**
Current and future assets[1]			
• Total Valuation Value of Assets	$6,675,802,273	$4,186,019,789	$10,861,822,062
• Present value of future contributions by members	736,872,799	270,635,099	1,007,507,898
• Present value of future employer contributions for:			
– Entry age normal cost	867,824,446	260,163,870	1,127,988,316
– Unfunded actuarial accrued liability	636,977,787	413,429,031	1,050,406,818
Total of current and future assets	**$8,917,477,305**	**$5,130,247,789**	**$14,047,725,094**

[1] Excludes administrative expenses.
[2] Includes inactive members with member contributions on deposit.

I. Volatility Ratios

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the Market Value of Assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measurement since it is based on the current level of assets.

The current AVR is about 9.3. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 9.3% of one-year's payroll. Since actuarial gains and losses are amortized over 18 years, there would be a 0.7% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the actuarial accrued liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities.

The LVR also indicates how volatile contributions will be in response to changes in the actuarial accrued liability due to actual experience or to changes in actuarial assumptions. The current total Plan LVR is about 11.0, but is 8.5 for General compared to 21.5 for Safety. This means, for example, that assumption changes will have a greater impact on employer contribution rates for Safety than for General.

Volatility Ratios for Years Ended December 31, 2013 – 2022

Year Ended December 31	Asset Volatility Ratio			Liability Volatility Ratio		
	General	Safety	Total	General	Safety	Total
2013	7.3	18.2	9.5	8.6	22.3	11.4
2014	7.5	19.7	9.9	8.6	23.5	11.5
2015	7.1	18.7	9.3	8.4	23.3	11.3
2016	7.2	19.0	9.5	8.3	23.1	11.1
2017	7.4	19.6	9.7	8.0	22.2	10.7
2018	6.9	18.0	9.0	8.1	21.8	10.7
2019	7.5	19.4	9.8	8.1	21.5	10.7
2020	7.8	19.9	10.1	8.1	21.1	10.6
2021	8.7	21.6	11.2	8.4	21.9	11.1
2022	7.3	17.7	9.3	8.5	21.5	11.0

J. Risk Assessment

Because the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan.

This report does not contain a detailed analysis of the potential range of future measurements, but does include a concise discussion of some of the primary risks that may affect the Plan's future financial condition. We recommend a more detailed assessment of the risks to provide the Board with a better understanding of the risks inherent in the Plan that can inform both financial preparation and future decision making. This assessment would enable us to work with the Board to highlight and illustrate particular risks or potential future outcomes they may be interested in discussing and could include scenario testing, sensitivity testing, stress testing and stochastic modeling.

This section provides descriptions and basic assessments of the primary risks that are likely to have an ongoing influence on the Plan's financial health, as well as a discussion of historical trends and maturity measures:

Risk Assessments

- Asset/Liability Mismatch Risk (the potential that future plan experience does not affect asset and liability values in the same way, causing them to diverge)

  The most significant asset/liability mismatch risk to the Plan is investment risk, as discussed below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first mismatch is evident in annual valuations: when asset values deviate from assumptions they are typically independent from liability changes. The second mismatch can be caused when systemic asset deviations from assumptions may signal the need for an assumption change, which causes liability values and contribution rates to move in the opposite direction from any change in the expected experience of asset growth rates.

  Asset/liability mismatch can also be caused by demographic assumption risk such as longevity, which affects liabilities but have no impact on asset levels. This risk is also discussed below.

- Investment Risk (the risk that investment returns will be different than expected)

  The investment return assumption is a long-term, static assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. That volatility can cause significant changes in the financial condition of the Plan, affecting both funded status and contribution rates. The inherent year-to-year volatility is reduced by smoothing through the Actuarial Value of Assets, however investment experience can still have a sizable impact. As discussed in *Section 2, Subsection I, Volatility Ratios*, on page 47, a 1% asset gain or loss (relative to the assumed investment return) translates to about 9.3% of one-year's payroll. Since actuarial gains and losses are amortized over 18 years, there would be a 0.7% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The year-by-year market value rate of return over the last 10 years has ranged from a low of -11.25% to a high of 15.50%.

- Longevity Risk (the risk that mortality experience will be different than expected)

  The actuarial valuation includes current life expectancy assumptions and an expectation of future improvement in life expectancy, which are significant assumptions given the relatively long duration of liabilities for pension plans. Emerging plan experience that does not match these expectations will result in increases or decreases in the actuarially determined contribution over time. This risk can be reduced by using tables appropriate for the Plan (public experience tables) that are weighted by benefit levels, and by using generational mortality projections. Effective with the December 31, 2018 valuation, the Board has adopted amount weighted mortality tables with generational mortality projections.

- Other Risks

  In addition to longevity, the valuation includes a variety of other assumptions that are unlikely to match future experience exactly. One example is projected salary scales over time. As salary is central to the determination of benefits paid in retirement, deviations from the projected salary scales could have a material impact on the benefits anticipated for each member. Examples of demographic assumptions include retirement, termination and disability assumptions, and will likely vary in significance for different groups (for example, disability assumptions are typically more significant for Safety groups).

Some plans also carry significant contribution risk, defined as the potential for actual future contributions deviating from expected future contributions. However, the employers have a proven track-record of making the Actuarially Determined Contributions based on the Board's Actuarial Funding Policy, so contribution risk is minimal.

Evaluation of Historical Trends

Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past ten years:

- The funded percentage on the Valuation Value of Assets basis has increased from 76.4% to 91.2%. This is primarily due to contributions made to amortize the UAAL (i.e., amortizing each layer of UAAL over 18 years as a level percentage of pay). For a more detailed history see *Section 2, Subsection G, Funded Status* starting on page 44.
- The average geometric investment return on the Valuation Value of Assets over the last 10 years was 7.68%. This includes a high of 11.40% return and a low of 5.25%. The average over the last 5 years 6.53%. For more details see the Investment Return table in *Section 2, Subsection B* on page 26.

- The primary source of new UAAL was the strengthening of assumptions through multiple assumption changes. For example, the assumption change in 2012 changed the discount rate from 7.75% to 7.25% and updated mortality tables, adding $567 million in unfunded liability. The assumption change in 2015 changed the discount rate from 7.25% to 7.00% and updated mortality tables, adding $114 million in unfunded liability. The assumption change in 2021 changed the discount rate from 7.00% to 6.75% and updated mortality tables, adding $235 million in unfunded liability. For more details on the unfunded liability changes see *Section 3, Exhibit I, Table of Amortization Bases* starting on page 89.
- The plan's funding policy effectively deals with these unfunded liabilities over time. This can be seen most clearly in *Section 3, Exhibit J, Projection of UAAL Balances and Payments* provided on pages 104 and 105.

Maturity Measures

In the last 10 years the ratio of members in pay status to active participants has increased from 0.95 to 1.05. This ratio has fluctuated between 0.92 and 1.05 during the last 10 years. An increased ratio indicates that the plan has grown in maturity over time. This is to be expected, but is also informative for understanding plan sensitivity to particular risks. For more details see *Section 2, Subsection A, Member Data* on page 17.

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities. Over the past year, benefits paid were $107 million more than contributions received. Plans with high levels of negative cash flows may have a need for a larger allocation to income generating assets, which can create a drag on investment return. However, the Plan currently has a low level of negative cash flow and is relatively well funded (at a 91.2% funded ratio). For more details on historical cash flows see the Comparison of Contributions Made with Benefits in *Section 2, Subsection B* on page 21.

A further discussion of plan maturity measures and how they relate to changes in assets and liabilities is included in *Section 2, Subsection I, Volatility Ratios* on page 47.

Section 3: Supplemental Information

Exhibit A: Table of Plan Coverage

Total Plan

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	10,082	10,005	0.8%
• Average age	46.1	46.3	-0.2
• Average years of service	10.1	10.2	-0.1
• Total projected compensation[1]	$1,073,886,785	$1,015,755,387	5.7%
• Average projected compensation	$106,515	$101,525	4.9%
• Account balances	$1,366,675,181	$1,313,264,988	4.1%
• Total active vested members	6,661	6,683	-0.3%
Inactive vested members:[2]			
• Number	3,974	3,812	4.2%
• Average Age	46.5	46.6	-0.1
Retired members:[2]			
• Number in pay status	8,197	7,908	3.7%
• Average age	71.1	71.0	0.1
• Average monthly benefit	$4,584	$4,487	2.2%
Disabled members:[2]			
• Number in pay status[3]	874	885	-1.2%
• Average age	68.0	67.7	0.3
• Average monthly benefit	$5,645	$5,403	4.5%
Beneficiaries:[2]			
• Number in pay status	1,490	1,485	0.3%
• Average age	72.8	72.8	0.0
• Average monthly benefit	$3,124	$3,017	3.5%

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] Includes members from withdrawn employers.
[3] For 2022, includes 735 members receiving a service-connected disability and 139 members receiving a non-service connected disability.

Exhibit A: Table of Plan Coverage (continued)

General Tier 1 (Non-Enhanced and Enhanced)

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	357	397	-10.1%
• Average age	51.8	51.7	0.1
• Average years of service	19.8	19.3	0.5
• Total projected compensation[1]	$50,429,409	$53,193,650	-5.2%
• Average projected compensation	$141,259	$133,989	5.4%
• Account balances	$76,334,921	$78,417,254	-2.7%
• Total active vested members	356	396	-10.1%
Inactive vested members:[2]			
• Number	189	200	-5.5%
• Average Age	53.2	52.9	0.3
Retired members:[2]			
• Number in pay status	2,157	2,189	-1.5%
• Average age	76.1	75.8	0.3
• Average monthly benefit	$4,999	$4,861	2.8%
Disabled members:[2]			
• Number in pay status[3]	217	226	-4.0%
• Average age	75.0	74.4	0.6
• Average monthly benefit	$3,450	$3,333	3.5%
Beneficiaries:[2]			
• Number in pay status	621	644	-3.6%
• Average age	77.9	78.2	-0.3
• Average monthly benefit	$2,931	$2,829	3.6%

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] Includes members from withdrawn employers.
[3] For 2022, includes 162 members receiving a service-connected disability and 55 members receiving a non-service connected disability.

Exhibit A: Table of Plan Coverage (continued)

General Tier 2

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number[1]	0	0	N/A
• Average age	N/A	N/A	N/A
• Average years of service	N/A	N/A	N/A
• Total projected compensation	N/A	N/A	N/A
• Average projected compensation	N/A	N/A	N/A
• Account balances	N/A	N/A	N/A
• Total active vested members	N/A	N/A	N/A
Inactive vested members:[2]			
• Number	130	144	-9.7%
• Average Age	61.0	60.1	0.9
Retired members:[2]			
• Number in pay status	393	403	-2.5%
• Average age	77.0	76.9	0.1
• Average monthly benefit	$949	$931	1.9%
Disabled members:[2]			
• Number in pay status[3]	31	35	-11.4%
• Average age	75.3	74.8	0.5
• Average monthly benefit	$2,489	$2,542	-2.1%
Beneficiaries:[2]			
• Number in pay status	104	105	-1.0%
• Average age	72.4	72.0	0.4
• Average monthly benefit	$1,000	$949	5.4%

[1] As of the December 31, 2005 valuation, there are no longer any Tier 2 active members as they have all transferred to Tier 3.
[2] Includes members from withdrawn employers.
[3] For 2022, includes 18 members receiving a service-connected disability and 13 members receiving a non-service connected disability.

Exhibit A: Table of Plan Coverage (continued)

General Tier 3

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	3,184	3,506	-9.2%
• Average age	52.9	52.6	0.3
• Average years of service	17.7	17.0	0.7
• Total projected compensation[1]	$370,830,449	$379,094,662	-2.2%
• Average projected compensation	$116,467	$108,127	7.7%
• Account balances	$610,553,860	$609,081,412	0.2%
• Total active vested members	3,143	3,463	-9.2%
Inactive vested members:			
• Number	1,547	1,599	-3.3%
• Average Age	50.8	50.5	0.3
Retired members:			
• Number in pay status	4,063	3,816	6.5%
• Average age	69.6	69.3	0.3
• Average monthly benefit	$3,377	$3,237	4.3%
Disabled members:			
• Number in pay status[2]	76	78	-2.6%
• Average age	65.7	65.3	0.4
• Average monthly benefit	$2,822	$2,726	3.5%
Beneficiaries:			
• Number in pay status	295	273	8.1%
• Average age	64.7	63.5	1.2
• Average monthly benefit	$1,852	$1,787	3.6%

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] For 2022, includes 26 members receiving a service-connected disability and 50 members receiving a non-service connected disability.

Exhibit A: Table of Plan Coverage (continued)

General Tier 4 – 2% COLA

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	45	41	9.8%
• Average age	44.7	44.9	-0.2
• Average years of service	3.5	3.1	0.4
• Total projected compensation[1]	$3,936,135	$3,520,850	11.8%
• Average projected compensation	$87,470	$85,874	1.9%
• Account balances	$1,444,229	$1,093,623	32.1%
• Total active vested members	14	9	55.6%
Inactive vested members:			
• Number	14	13	7.7%
• Average Age	44.7	44.2	0.5
Retired members:			
• Number in pay status	1	1	0.0%
• Average age	70.6	69.6	1.0
• Average monthly benefit	$1,384	$1,357	2.0%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.

Exhibit A: Table of Plan Coverage (continued)

General Tier 4 – 3% COLA

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	249	219	13.7%
• Average age	41.8	42.0	-0.2
• Average years of service	4.2	3.9	0.3
• Total projected compensation[1]	$25,632,324	$21,645,116	18.4%
• Average projected compensation	$102,941	$98,836	4.2%
• Account balances	$11,253,610	$8,771,267	28.3%
• Total active vested members	103	85	21.2%
Inactive vested members:			
• Number	65	53	22.6%
• Average Age	40.3	39.1	1.2
Retired members:			
• Number in pay status	4	3	33.3%
• Average age	66.0	63.2	2.8
• Average monthly benefit	$1,388	$1,419	-2.2%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.

Exhibit A: Table of Plan Coverage (continued)

General Tier 5 – 2% COLA

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	4,089	3,683	11.0%
• Average age	42.7	42.3	0.4
• Average years of service	3.6	3.4	0.2
• Total projected compensation[1]	$350,682,245	$300,259,338	16.8%
• Average projected compensation	$85,762	$81,526	5.2%
• Account balances	$126,776,352	$100,488,070	26.2%
• Total active vested members	1,374	1,027	33.8%
Inactive vested members:			
• Number	1,290	1,084	19.0%
• Average Age	40.8	40.5	0.3
Retired members:			
• Number in pay status	63	35	80.0%
• Average age	65.6	65.5	0.1
• Average monthly benefit	$751	$646	16.3%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.

Exhibit A: Table of Plan Coverage (continued)

General Tier 5 – 3% COLA

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	666	690	-3.5%
• Average age	46.4	46.2	0.2
• Average years of service	7.5	7.0	0.5
• Total projected compensation[1]	$60,642,057	$60,196,814	0.7%
• Average projected compensation	$91,054	$87,242	4.4%
• Account balances	$50,911,219	$46,192,040	10.2%
• Total active vested members	559	592	-5.6%
Inactive vested members:			
• Number	337	314	7.3%
• Average Age	44.4	43.9	0.5
Retired members:			
• Number in pay status	53	32	65.6%
• Average age	66.8	67.4	-0.6
• Average monthly benefit	$1,029	$860	19.7%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.

Exhibit A: Table of Plan Coverage (continued)

Safety Tier A (Non-Enhanced and Enhanced)

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	635	691	-8.1%
• Average age	47.3	46.7	0.6
• Average years of service	18.8	18.2	0.6
• Total projected compensation[1]	$106,886,325	$108,051,877	-1.1%
• Average projected compensation	$168,325	$156,370	7.6%
• Account balances	$399,143,984	$394,420,760	1.2%
• Total active vested members	634	690	-8.1%
Inactive vested members:[2]			
• Number	215	234	-8.1%
• Average Age	48.3	47.9	0.4
Retired members:[2]			
• Number in pay status	1,441	1,415	1.8%
• Average age	66.6	66.6	0.0
• Average monthly benefit	$8,705	$8,501	2.4%
Disabled members:[2]			
• Number in pay status[3]	533	532	0.2%
• Average age	65.8	65.3	0.5
• Average monthly benefit	$7,181	$6,910	3.9%
Beneficiaries:[2]			
• Number in pay status	468	461	1.5%
• Average age	71.4	71.0	0.4
• Average monthly benefit	$4,660	$4,487	3.9%

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] Includes members from withdrawn employers.
[3] For 2022, includes 514 members receiving a service-connected disability and 19 members receiving a non-service connected disability.

Exhibit A: Table of Plan Coverage (continued)

Safety Tier C

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	113	116	-2.6%
• Average age	41.7	40.9	0.8
• Average years of service	12.6	11.5	1.1
• Total projected compensation[1]	$16,441,156	$15,651,345	5.0%
• Average projected compensation	$145,497	$134,925	7.8%
• Account balances	$26,308,093	$23,794,663	10.6%
• Total active vested members	113	115	-1.7%
Inactive vested members:			
• Number	71	70	1.4%
• Average Age	39.2	38.0	1.2
Retired members:			
• Number in pay status	9	7	28.6%
• Average age	57.9	55.3	2.6
• Average monthly benefit	$2,497	$2,271	10.0%
Disabled members:			
• Number in pay status[2]	12	12	0.0%
• Average age	45.3	44.3	1.0
• Average monthly benefit	$3,847	$3,772	2.0%
Beneficiaries:			
• Number in pay status	1	1	0.0%
• Average age	52.1	51.1	1.0
• Average monthly benefit	$2,102	$2,061	2.0%

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] For 2022, includes 10 members receiving a service-connected disability and 2 members receiving a non-service connected disability.

Exhibit A: Table of Plan Coverage (continued)

Safety Tier D

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	144	130	10.8%
• Average age	35.9	35.7	0.2
• Average years of service	5.9	5.6	0.3
• Total projected compensation[1]	$19,116,891	$16,358,143	16.9%
• Average projected compensation	$132,756	$125,832	5.5%
• Account balances	$18,249,978	$15,016,650	21.5%
• Total active vested members	93	87	6.9%
Inactive vested members:			
• Number	27	32	-15.6%
• Average Age	37.4	36.0	1.4
Retired members:			
• Number in pay status	2	2	0.0%
• Average age	61.8	60.8	1.0
• Average monthly benefit	$2,290	$2,224	3.0%
Disabled members:			
• Number in pay status[2]	3	2	50.0%
• Average age	52.8	60.7	-7.9
• Average monthly benefit	$3,650	$2,821	29.4%
Beneficiaries:			
• Number in pay status	1	1	0.0%
• Average age	56.5	55.5	1.0
• Average monthly benefit	$733	$712	2.9%

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] For 2022, includes 3 members receiving a service-connected disability.

Exhibit A: Table of Plan Coverage (continued)

Safety Tier E

Category	Year Ended December 31 2022	Year Ended December 31 2021	Change From Prior Year
Active members in valuation:			
• Number	600	532	12.8%
• Average age	34.3	34.0	0.3
• Average years of service	4.6	4.2	0.4
• Total projected compensation[1]	$69,289,794	$57,783,593	19.9%
• Average projected compensation	$115,483	$108,616	6.3%
• Account balances	$45,698,937	$35,989,250	27.0%
• Total active vested members	272	219	24.2%
Inactive vested members:			
• Number	89	69	29.0%
• Average Age	35.6	35.2	0.4
Retired members:			
• Number in pay status	11	5	120.0%
• Average age	60.9	59.6	1.3
• Average monthly benefit	$1,920	$1,602	19.9%
Disabled members:			
• Number in pay status[2]	2	0	N/A
• Average age	35.0	N/A	N/A
• Average monthly benefit	$4,433	N/A	N/A
Beneficiaries:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year salaries by the assumed salary scale.
[2] For 2022, includes 2 members receiving a service-connected disability.

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Benefit Service, and Average Projected Compensation

Total Plan

		Years of Benefit Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	115	115	—	—	—	—	—	—	—	—
	$71,064	$71,064	—	—	—	—	—	—	—	—
25 - 29	643	577	66	—	—	—	—	—	—	—
	$85,840	$84,170	$100,442	—	—	—	—	—	—	—
30 - 34	1,144	719	387	37	1	—	—	—	—	—
	$95,704	$89,237	$104,833	$126,401	$77,296	—	—	—	—	—
35 - 39	1,378	598	527	202	49	2	—	—	—	—
	$105,674	$95,053	$105,692	$131,779	$127,223	$112,071	—	—	—	—
40 - 44	1,454	487	427	251	247	42	—	—	—	—
	$110,909	$92,058	$104,060	$134,803	$133,671	$122,463	—	—	—	—
45 - 49	1,455	359	355	211	258	253	19	—	—	—
	$116,052	$91,831	$103,877	$127,941	$136,008	$136,096	$131,233	—	—	—
50 - 54	1,435	336	309	207	214	263	81	24	1	—
	$115,361	$92,669	$98,362	$124,627	$132,036	$137,773	$133,497	$117,650	$87,932	—
55 - 59	1,251	247	255	171	178	222	99	65	14	—
	$108,055	$88,168	$97,147	$108,552	$114,846	$121,143	$122,060	$139,863	$110,899	—
60 - 64	807	140	189	123	111	118	62	41	16	7
	$103,172	$82,960	$87,590	$110,429	$111,406	$112,499	$134,956	$127,374	$104,213	$87,204
65 - 69	319	48	88	55	39	46	15	16	7	5
	$102,530	$93,447	$83,349	$113,938	$121,985	$102,278	$115,984	$123,023	$127,235	$111,899
70 & over	81	13	22	14	13	10	3	4	1	1
	$106,300	$102,189	$84,859	$133,796	$110,000	$103,752	$81,436	$109,049	$113,304	$280,489
Total	**10,082**	**3,639**	**2,625**	**1,271**	**1,110**	**956**	**279**	**150**	**39**	**13**
	$106,515	**$89,553**	**$101,003**	**$124,477**	**$127,631**	**$127,558**	**$128,107**	**$130,277**	**$110,561**	**$111,570**

Exhibit B: Members in Active Service as of December 31, 2022
by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 1 Non-Enhanced

		Years of Benefit Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
35 - 39	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
40 - 44	1	1	—	—	—	—	—	—	—	—
	$156,525	$156,525	—	—	—	—	—	—	—	—
45 - 49	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
50 - 54	2	—	—	—	2	—	—	—	—	—
	$161,052	—	—	—	$161,052	—	—	—	—	—
55 - 59	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
60 - 64	1	—	—	1	—	—	—	—	—	—
	$111,306	—	—	$111,306	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**4**	**1**	**—**	**1**	**2**	**—**	**—**	**—**	**—**	**—**
	$147,484	**$156,525**	**—**	**$111,306**	**$161,052**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 1 Enhanced

		Years of Benefit Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	5	—	—	5	—	—	—	—	—	—
	$169,650	—	—	$169,650	—	—	—	—	—	—
35 - 39	23	4	5	12	2	—	—	—	—	—
	$135,404	$137,840	$114,176	$149,741	$97,583	—	—	—	—	—
40 - 44	55	6	7	21	16	5	—	—	—	—
	$145,288	$158,225	$146,917	$142,841	$143,370	$143,900	—	—	—	—
45 - 49	66	6	8	14	18	17	3	—	—	—
	$137,547	$116,054	$157,180	$144,706	$132,089	$142,469	$99,616	—	—	—
50 - 54	72	4	7	16	11	24	9	1	—	—
	$143,850	$111,991	$153,552	$153,834	$110,740	$160,273	$122,247	$208,068	—	—
55 - 59	73	1	2	9	24	23	6	7	1	—
	$147,159	$222,559	$282,407	$153,518	$137,349	$148,675	$136,114	$122,791	$181,477	—
60 - 64	36	—	2	8	4	11	5	5	1	—
	$130,333	—	$107,434	$122,419	$126,871	$145,761	$109,802	$139,870	$138,555	—
65 - 69	16	—	2	3	3	4	1	1	—	2
	$120,909	—	$173,443	$130,093	$137,519	$119,600	$80,021	$77,587	—	$74,407
70 & over	7	—	—	1	3	1	—	1	—	1
	$154,521	—	—	$297,048	$111,371	$71,982	—	$98,014	—	$280,489
Total	**353**	**21**	**33**	**89**	**81**	**85**	**24**	**15**	**2**	**3**
	$141,188	**$136,550**	**$153,278**	**$148,094**	**$131,301**	**$147,780**	**$118,533**	**$129,504**	**$160,016**	**$143,101**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 3 Enhanced

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	22	3	2	17	—	—	—	—	—	—
	$97,401	$111,364	$78,219	$97,194	—	—	—	—	—	—
35 - 39	194	17	40	108	27	2	—	—	—	—
	$112,737	$113,799	$121,266	$113,739	$95,471	$112,071	—	—	—	—
40 - 44	415	16	45	171	155	28	—	—	—	—
	$121,841	$116,912	$130,814	$128,290	$117,001	$97,639	—	—	—	—
45 - 49	554	18	49	174	160	142	11	—	—	—
	$120,527	$138,113	$125,498	$122,188	$121,338	$114,970	$103,284	—	—	—
50 - 54	656	24	45	167	161	179	60	19	1	—
	$120,732	$124,918	$120,114	$118,363	$121,860	$123,156	$124,429	$95,392	$87,932	—
55 - 59	670	10	39	149	142	178	87	53	12	—
	$111,529	$152,601	$112,425	$101,090	$107,942	$111,783	$116,104	$136,005	$101,402	—
60 - 64	453	9	27	103	104	97	55	36	15	7
	$112,716	$145,367	$99,241	$109,745	$109,225	$105,857	$135,981	$125,639	$101,924	$87,204
65 - 69	173	2	8	51	34	42	12	14	7	3
	$112,329	$165,967	$93,962	$113,727	$121,510	$100,628	$108,604	$113,351	$127,235	$136,894
70 & over	47	2	6	13	10	9	3	3	1	—
	$107,723	$153,700	$70,380	$121,238	$109,589	$107,282	$81,436	$112,728	$113,304	—
Total	**3,184**	**101**	**261**	**953**	**793**	**677**	**228**	**125**	**36**	**10**
	$116,467	**$129,673**	**$117,572**	**$116,100**	**$115,587**	**$113,273**	**$121,620**	**$123,751**	**$106,599**	**$102,111**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 4 – 2% COLA

		Years of Benefit Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	7	7	—	—	—	—	—	—	—	—
	$73,053	$73,053	—	—	—	—	—	—	—	—
30 - 34	5	5	—	—	—	—	—	—	—	—
	$84,160	$84,160	—	—	—	—	—	—	—	—
35 - 39	5	2	3	—	—	—	—	—	—	—
	$74,693	$54,431	$88,202	—	—	—	—	—	—	—
40 - 44	3	2	1	—	—	—	—	—	—	—
	$86,098	$92,772	$72,750	—	—	—	—	—	—	—
45 - 49	8	7	1	—	—	—	—	—	—	—
	$83,096	$88,003	$48,747	—	—	—	—	—	—	—
50 - 54	8	5	3	—	—	—	—	—	—	—
	$113,194	$125,267	$93,071	—	—	—	—	—	—	—
55 - 59	7	4	3	—	—	—	—	—	—	—
	$89,546	$102,829	$71,836	—	—	—	—	—	—	—
60 - 64	1	1	—	—	—	—	—	—	—	—
	$65,502	$65,502	—	—	—	—	—	—	—	—
65 - 69	1	1	—	—	—	—	—	—	—	—
	$109,562	$109,562	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**45**	**34**	**11**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$87,470	**$89,862**	**$80,075**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 4 – 3% COLA

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	10	10	—	—	—	—	—	—	—	—
	$78,521	$78,521	—	—	—	—	—	—	—	—
25 - 29	23	22	1	—	—	—	—	—	—	—
	$83,884	$82,237	$120,100	—	—	—	—	—	—	—
30 - 34	39	23	16	—	—	—	—	—	—	—
	$97,337	$83,417	$117,346	—	—	—	—	—	—	—
35 - 39	45	31	14	—	—	—	—	—	—	—
	$107,829	$105,708	$112,526	—	—	—	—	—	—	—
40 - 44	40	25	15	—	—	—	—	—	—	—
	$115,526	$107,359	$129,138	—	—	—	—	—	—	—
45 - 49	33	15	18	—	—	—	—	—	—	—
	$106,459	$98,263	$113,288	—	—	—	—	—	—	—
50 - 54	23	13	10	—	—	—	—	—	—	—
	$107,536	$103,792	$112,403	—	—	—	—	—	—	—
55 - 59	24	10	14	—	—	—	—	—	—	—
	$107,720	$103,910	$110,441	—	—	—	—	—	—	—
60 - 64	9	5	4	—	—	—	—	—	—	—
	$81,101	$73,172	$91,012	—	—	—	—	—	—	—
65 - 69	3	2	1	—	—	—	—	—	—	—
	$115,554	$130,701	$85,262	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**249**	**156**	**93**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$102,941	**$95,920**	**$114,718**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 5 – 2% COLA

		Years of Benefit Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	67	67	—	—	—	—	—	—	—	—
	$57,959	$57,959	—	—	—	—	—	—	—	—
25 - 29	420	388	32	—	—	—	—	—	—	—
	$75,462	$75,174	$78,949	—	—	—	—	—	—	—
30 - 34	721	543	178	—	—	—	—	—	—	—
	$85,590	$84,078	$90,203	—	—	—	—	—	—	—
35 - 39	722	459	260	3	—	—	—	—	—	—
	$92,366	$90,587	$95,135	$124,690	—	—	—	—	—	—
40 - 44	595	394	199	2	—	—	—	—	—	—
	$89,048	$88,036	$90,530	$140,845	—	—	—	—	—	—
45 - 49	455	289	166	—	—	—	—	—	—	—
	$88,387	$85,838	$92,826	—	—	—	—	—	—	—
50 - 54	426	259	166	—	1	—	—	—	—	—
	$87,148	$86,181	$88,328	—	$141,723	—	—	—	—	—
55 - 59	346	205	140	1	—	—	—	—	—	—
	$83,375	$79,902	$88,052	$140,778	—	—	—	—	—	—
60 - 64	221	117	101	3	—	—	—	—	—	—
	$80,681	$77,076	$85,644	$54,153	—	—	—	—	—	—
65 - 69	95	42	53	—	—	—	—	—	—	—
	$81,256	$87,326	$76,446	—	—	—	—	—	—	—
70 & over	21	11	10	—	—	—	—	—	—	—
	$94,471	$92,823	$96,283	—	—	—	—	—	—	—
Total	**4,089**	**2,774**	**1,305**	**9**	**1**	**—**	**—**	**—**	**—**	**—**
	$85,762	**$83,700**	**$89,959**	**$106,555**	**$141,723**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 5 – 3% COLA

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	6	6	—	—	—	—	—	—	—	—
	$57,923	$57,923	—	—	—	—	—	—	—	—
25 - 29	16	13	3	—	—	—	—	—	—	—
	$66,813	$64,761	$75,702	—	—	—	—	—	—	—
30 - 34	61	21	39	—	1	—	—	—	—	—
	$80,221	$70,842	$85,347	—	$77,296	—	—	—	—	—
35 - 39	125	19	105	1	—	—	—	—	—	—
	$95,102	$81,310	$97,528	$102,410	—	—	—	—	—	—
40 - 44	128	18	110	—	—	—	—	—	—	—
	$94,427	$77,401	$97,213	—	—	—	—	—	—	—
45 - 49	101	12	89	—	—	—	—	—	—	—
	$97,595	$90,010	$98,617	—	—	—	—	—	—	—
50 - 54	80	13	63	4	—	—	—	—	—	—
	$91,291	$91,001	$90,930	$97,923	—	—	—	—	—	—
55 - 59	56	7	47	2	—	—	—	—	—	—
	$94,574	$107,296	$91,373	$125,271	—	—	—	—	—	—
60 - 64	62	5	53	4	—	—	—	—	—	—
	$84,985	$87,499	$83,081	$107,069	—	—	—	—	—	—
65 - 69	25	1	23	1	—	—	—	—	—	—
	$86,009	$114,880	$85,180	$76,221	—	—	—	—	—	—
70 & over	6	—	6	—	—	—	—	—	—	—
	$80,297	—	$80,297	—	—	—	—	—	—	—
Total	**666**	**115**	**538**	**12**	**1**	**—**	**—**	**—**	**—**	**—**
	$91,054	**$79,842**	**$93,186**	**$104,095**	**$77,296**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

Safety Tier A Non-Enhanced

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
35 - 39	1	—	1	—	—	—	—	—	—	—
	$137,571	—	$137,571	—	—	—	—	—	—	—
40 - 44	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
45 - 49	3	—	—	—	—	3	—	—	—	—
	$172,780	—	—	—	—	$172,780	—	—	—	—
50 - 54	1	—	—	—	—	1	—	—	—	—
	$178,511	—	—	—	—	$178,511	—	—	—	—
55 - 59	3	—	1	—	—	—	—	2	—	—
	$190,810	—	$155,387	—	—	—	—	$208,521	—	—
60 - 64	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**8**	**—**	**2**	**—**	**—**	**4**	**—**	**2**	**—**	**—**
	$175,857	**—**	**$146,479**	**—**	**—**	**$174,213**	**—**	**$208,521**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

Safety Tier A Enhanced

		Years of Benefit Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	10	1	5	4	—	—	—	—	—	—
	$154,264	$133,801	$164,039	$147,162	—	—	—	—	—	—
35 - 39	81	9	14	43	15	—	—	—	—	—
	$166,061	$160,517	$165,251	$162,547	$180,215	—	—	—	—	—
40 - 44	138	6	12	38	73	9	—	—	—	—
	$162,072	$144,786	$150,388	$155,132	$165,856	$187,783	—	—	—	—
45 - 49	193	4	5	14	74	91	5	—	—	—
	$170,473	$215,302	$193,239	$171,880	$168,145	$166,663	$211,692	—	—	—
50 - 54	131	1	3	14	38	59	12	4	—	—
	$175,662	$170,008	$186,364	$161,464	$179,147	$172,275	$187,273	$200,772	—	—
55 - 59	49	—	1	5	12	21	6	3	1	—
	$171,009	—	$160,544	$179,387	$151,542	$170,318	$194,372	$202,074	$154,290	—
60 - 64	20	—	1	4	3	10	2	—	—	—
	$147,684	—	$114,094	$149,396	$166,417	$140,343	$169,665	—	—	—
65 - 69	5	—	—	—	2	—	2	1	—	—
	$174,772	—	—	—	$106,753	—	$178,242	$303,871	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**627**	**21**	**41**	**122**	**217**	**190**	**27**	**8**	**1**	**—**
	$168,229	**$165,637**	**$164,348**	**$160,939**	**$168,628**	**$168,425**	**$191,400**	**$214,147**	**$154,290**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

Safety Tier C

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	13	—	2	11	—	—	—	—	—	—
	$143,685	—	$140,121	$144,333	—	—	—	—	—	—
35 - 39	46	1	5	35	5	—	—	—	—	—
	$144,731	$123,726	$140,679	$144,933	$151,568	—	—	—	—	—
40 - 44	25	2	1	19	3	—	—	—	—	—
	$143,237	$118,647	$141,773	$143,242	$160,086	—	—	—	—	—
45 - 49	15	—	—	9	6	—	—	—	—	—
	$143,895	—	—	$144,747	$142,616	—	—	—	—	—
50 - 54	8	—	1	6	1	—	—	—	—	—
	$150,753	—	$141,638	$152,943	$146,725	—	—	—	—	—
55 - 59	5	—	—	5	—	—	—	—	—	—
	$166,033	—	—	$166,033	—	—	—	—	—	—
60 - 64	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
65 - 69	1	—	1	—	—	—	—	—	—	—
	$140,103	—	$140,103	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**113**	**3**	**10**	**85**	**15**	**—**	**—**	**—**	**—**	**—**
	$145,497	**$120,340**	**$140,715**	**$146,264**	**$149,368**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

Safety Tier D

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	2	2	—	—	—	—	—	—	—	—
	$86,882	$86,882	—	—	—	—	—	—	—	—
25 - 29	27	23	4	—	—	—	—	—	—	—
	$129,729	$129,322	$132,074	—	—	—	—	—	—	—
30 - 34	42	22	20	—	—	—	—	—	—	—
	$135,615	$137,957	$133,039	—	—	—	—	—	—	—
35 - 39	44	8	36	—	—	—	—	—	—	—
	$136,018	$129,468	$137,473	—	—	—	—	—	—	—
40 - 44	14	2	12	—	—	—	—	—	—	—
	$136,260	$115,497	$139,721	—	—	—	—	—	—	—
45 - 49	9	1	8	—	—	—	—	—	—	—
	$119,269	$146,402	$115,878	—	—	—	—	—	—	—
50 - 54	3	—	3	—	—	—	—	—	—	—
	$134,065	—	$134,065	—	—	—	—	—	—	—
55 - 59	3	—	3	—	—	—	—	—	—	—
	$125,522	—	$125,522	—	—	—	—	—	—	—
60 - 64	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**144**	**58**	**86**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$132,756	**$130,972**	**$133,960**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Exhibit B: Members in Active Service as of December 31, 2022 by Age, Years of Service, and Average Projected Compensation (continued)

Safety Tier E

		Years of Benefit Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	30	30	—	—	—	—	—	—	—	—
	$99,419	$99,419	—	—	—	—	—	—	—	—
25 - 29	150	124	26	—	—	—	—	—	—	—
	$109,926	$106,948	$124,128	—	—	—	—	—	—	—
30 - 34	226	101	125	—	—	—	—	—	—	—
	$117,555	$110,662	$123,125	—	—	—	—	—	—	—
35 - 39	92	48	44	—	—	—	—	—	—	—
	$115,225	$109,204	$121,794	—	—	—	—	—	—	—
40 - 44	40	15	25	—	—	—	—	—	—	—
	$118,670	$104,666	$127,072	—	—	—	—	—	—	—
45 - 49	18	7	11	—	—	—	—	—	—	—
	$116,807	$114,317	$118,392	—	—	—	—	—	—	—
50 - 54	25	17	8	—	—	—	—	—	—	—
	$122,320	$120,083	$127,072	—	—	—	—	—	—	—
55 - 59	15	10	5	—	—	—	—	—	—	—
	$146,319	$144,752	$149,454	—	—	—	—	—	—	—
60 - 64	4	3	1	—	—	—	—	—	—	—
	$136,977	$139,778	$128,574	—	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**600**	**355**	**245**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$115,483	**$109,694**	**$123,871**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit

Total Plan

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	17	4	4	5	3	—	1	—	—	—
	$726	$230	$186	$1,079	$1,652	—	$324	—	—	—
30 - 34	9	2	2	3	—	1	1	—	—	—
	$1,717	$4,705	$186	$1,448	—	$817	$504	—	—	—
35 - 39	29	7	9	4	2	4	3	—	—	—
	$2,265	$3,923	$2,361	$1,423	$1,486	$1,599	$639	—	—	—
40 - 44	29	12	5	4	5	—	1	2	—	—
	$3,216	$4,533	$3,131	$3,882	$652	—	$1,584	$1,429	—	—
45 - 49	80	26	17	15	10	1	7	3	1	—
	$3,408	$3,937	$4,111	$3,087	$4,134	$1,585	$879	$1,289	$1,182	—
50 - 54	368	257	47	17	19	14	9	5	—	—
	$4,637	$4,998	$4,846	$3,561	$4,259	$2,540	$1,453	$832	—	—
55 - 59	823	413	293	57	26	18	11	5	—	—
	$4,855	$4,503	$5,172	$7,004	$4,253	$3,768	$2,966	$2,048	—	—
60 - 64	1,340	495	366	371	41	33	18	11	5	—
	$4,519	$4,039	$3,630	$6,231	$3,998	$4,091	$3,474	$3,980	$2,180	—
65 - 69	1,886	521	429	551	254	64	34	18	10	5
	$4,485	$3,637	$3,346	$5,628	$6,136	$3,944	$3,042	$3,618	$3,517	$2,615
70 - 74	2,081	238	390	655	483	204	51	34	17	9
	$4,538	$3,236	$3,027	$5,175	$5,731	$4,772	$3,362	$3,251	$3,583	$2,172
75 - 79	1,814	45	119	439	510	424	156	46	42	33
	$4,679	$2,754	$2,467	$4,308	$5,405	$5,940	$3,001	$3,879	$3,573	$3,253
80 - 84	1,064	9	18	119	260	297	182	108	36	35
	$4,353	$1,588	$1,764	$3,140	$3,810	$5,340	$5,212	$4,032	$3,395	$3,685
85 - 89	617	1	4	16	52	142	151	133	78	40
	$4,043	$7,808	$1,830	$3,001	$2,698	$4,115	$4,616	$4,773	$2,927	$3,662
90 & Over	404	—	—	2	8	19	68	93	105	109
	$3,542	—	—	$986	$2,642	$2,617	$4,195	$4,175	$3,484	$2,923
Total	**10,561**	**2,030**	**1,703**	**2,258**	**1,673**	**1,221**	**693**	**458**	**294**	**231**
	$4,466	**$4,015**	**$3,599**	**$5,161**	**$5,166**	**$5,087**	**$4,030**	**$4,099**	**$3,315**	**$3,178**

Note: Total retired benefit $47,165,238, average age 71.1, and average years of retirement 14.4. Includes members from withdrawn employers.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

General Tier 1 (Non-Enhanced and Enhanced)

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	2	—	—	2	—	—	—	—	—	—
	$135	—	—	$135	—	—	—	—	—	—
30 - 34	2	—	—	1	—	—	1	—	—	—
	$847	—	—	$1,191	—	—	$504	—	—	—
35 - 39	6	1	1	2	—	—	2	—	—	—
	$946	$928	$1,360	$1,191	—	—	$504	—	—	—
40 - 44	2	—	—	1	—	—	1	—	—	—
	$1,823	—	—	$2,062	—	—	$1,584	—	—	—
45 - 49	10	1	1	2	—	—	4	1	1	—
	$1,258	$928	$1,494	$2,062	—	—	$916	$1,185	$1,182	—
50 - 54	23	15	—	1	1	2	3	1	—	—
	$2,262	$2,388	—	$4,472	$2,835	$1,877	$1,320	$1,193	—	—
55 - 59	93	56	23	3	4	3	3	1	—	—
	$3,684	$4,483	$2,295	$4,298	$3,792	$1,225	$1,515	$2,457	—	—
60 - 64	173	65	50	37	8	3	3	3	4	—
	$3,568	$4,546	$3,634	$2,684	$1,846	$2,343	$1,505	$2,828	$1,516	—
65 - 69	382	55	84	154	44	19	10	8	5	3
	$4,349	$4,192	$3,870	$5,617	$2,779	$2,757	$2,902	$2,690	$2,042	$1,696
70 - 74	587	18	53	213	176	78	17	20	5	7
	$4,899	$3,640	$3,283	$6,431	$5,173	$2,935	$2,842	$2,802	$2,391	$1,516
75 - 79	621	3	14	77	218	186	75	20	13	15
	$5,014	$3,210	$2,665	$6,023	$6,329	$4,830	$2,631	$2,660	$3,124	$2,241
80 - 84	442	—	1	12	65	161	103	62	20	18
	$4,687	—	$3,746	$6,466	$6,156	$5,983	$3,623	$2,454	$2,533	$2,820
85 - 89	358	—	1	1	12	69	108	84	59	24
	$4,328	—	$395	$298	$4,833	$6,208	$5,254	$3,447	$2,207	$3,140
90 & Over	294	—	—	—	2	8	36	78	93	77
	$3,553	—	—	—	$6,205	$4,452	$5,650	$4,485	$2,956	$2,188
Total	**2,995**	**214**	**228**	**506**	**530**	**529**	**366**	**278**	**200**	**144**
	$4,458	**$4,159**	**$3,412**	**$5,738**	**$5,501**	**$4,956**	**$3,930**	**$3,366**	**$2,629**	**$2,389**

Note: Total retired benefit $13,352,079, average age 76.4, and average years of retirement 20.4. Includes members from withdrawn employers.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

General Tier 2

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
35 - 39	2	—	—	—	—	2	—	—	—	—
	$968	—	—	—	—	$968	—	—	—	—
40 - 44	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
45 - 49	6	—	—	—	—	1	3	2	—	—
	$1,126	—	—	—	—	$1,585	$830	$1,340	—	—
50 - 54	12	1	—	—	—	1	6	4	—	—
	$1,028	$25	—	—	—	$228	$1,520	$742	—	—
55 - 59	14	6	4	—	1	—	2	1	—	—
	$672	$438	$185	—	$753	—	$1,481	$2,324	—	—
60 - 64	42	13	14	9	—	1	5	—	—	—
	$555	$502	$391	$343	—	$890	$1,464	—	—	—
65 - 69	65	11	13	8	15	7	10	1	—	—
	$981	$1,001	$513	$589	$802	$1,767	$1,362	$3,340	—	—
70 - 74	69	3	8	12	21	18	4	3	—	—
	$997	$353	$992	$808	$883	$1,005	$1,759	$2,151	—	—
75 - 79	119	1	3	13	23	37	35	5	2	—
	$1,068	$224	$1,083	$983	$727	$1,097	$1,180	$1,799	$1,608	—
80 - 84	74	—	1	2	14	28	23	6	—	—
	$1,000	—	$31	$302	$915	$1,198	$960	$824	—	—
85 - 89	79	—	—	2	2	36	28	10	1	—
	$1,306	—	—	$692	$1,926	$1,437	$1,096	$1,457	$940	—
90 & Over	46	—	—	—	—	11	23	10	1	1
	$1,377	—	—	—	—	$1,283	$1,490	$1,383	$671	$474
Total	**528**	**35**	**43**	**46**	**76**	**142**	**139**	**42**	**4**	**1**
	$1,049	**$614**	**$560**	**$701**	**$852**	**$1,233**	**$1,230**	**$1,431**	**$1,207**	**$474**

Note: Total retired benefit $553,949, average age 76.0, and average years of retirement 20.0. Includes members from withdrawn employers.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

General Tier 3

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	11	4	4	3	—	—	—	—	—	—
	$617	$230	$186	$1,709	—	—	—	—	—	—
30 - 34	5	—	2	2	—	1	—	—	—	—
	$869	—	$186	$1,577	—	$817	—	—	—	—
35 - 39	11	1	4	2	1	2	1	—	—	—
	$1,233	$125	$705	$1,655	$1,938	$2,230	$909	—	—	—
40 - 44	6	—	1	—	5	—	—	—	—	—
	$639	—	$578	—	$652	—	—	—	—	—
45 - 49	16	3	5	5	3	—	—	—	—	—
	$1,814	$891	$2,569	$1,916	$1,310	—	—	—	—	—
50 - 54	92	72	9	3	4	4	—	—	—	—
	$1,888	$1,938	$2,198	$2,038	$887	$1,182	—	—	—	—
55 - 59	339	229	93	7	7	3	—	—	—	—
	$2,963	$3,385	$2,030	$2,834	$2,224	$1,647	—	—	—	—
60 - 64	702	345	241	109	4	3	—	—	—	—
	$3,282	$4,014	$2,859	$1,985	$3,069	$485	—	—	—	—
65 - 69	1,024	377	311	263	64	9	—	—	—	—
	$3,555	$3,901	$3,219	$3,787	$2,250	$3,145	—	—	—	—
70 - 74	1,073	192	316	380	155	30	—	—	—	—
	$3,415	$3,390	$2,961	$4,111	$3,040	$1,490	—	—	—	—
75 - 79	715	38	97	330	200	49	1	—	—	—
	$3,460	$2,918	$2,526	$3,882	$3,646	$2,148	$2,478	—	—	—
80 - 84	346	6	15	101	168	55	—	1	—	—
	$2,743	$2,088	$1,759	$2,764	$3,094	$1,992	—	$1,761	—	—
85 - 89	86	1	3	11	38	33	—	—	—	—
	$2,352	$7,808	$2,309	$3,331	$2,065	$2,195	—	—	—	—
90 & Over	8	—	—	2	6	—	—	—	—	—
	$1,338	—	—	$986	$1,455	—	—	—	—	—
Total	**4,434**	**1,268**	**1,101**	**1,218**	**655**	**189**	**2**	**1**	**—**	**—**
	$3,266	**$3,593**	**$2,843**	**$3,629**	**$3,041**	**$1,993**	**$1,694**	**$1,761**	**—**	**—**

Note: Total retired benefit $14,480,744, average age 69.2, and average years of retirement 9.0.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

General Tier 4

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
35 - 39	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
40 - 44	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
45 - 49	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
50 - 54	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
55 - 59	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
60 - 64	1	1	—	—	—	—	—	—	—	—
	$1,331	$1,331	—	—	—	—	—	—	—	—
65 - 69	2	2	—	—	—	—	—	—	—	—
	$1,527	$1,527	—	—	—	—	—	—	—	—
70 - 74	2	2	—	—	—	—	—	—	—	—
	$1,275	$1,275	—	—	—	—	—	—	—	—
75 - 79	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
80 - 84	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
85 - 89	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
90 & Over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**5**	**5**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$1,387	**$1,387**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Note: Total retired benefit $6,934, average age 66.9, and average years of retirement 1.2.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

General Tier 5

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
35 - 39	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
40 - 44	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
45 - 49	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
50 - 54	1	1	—	—	—	—	—	—	—	—
	$579	$579	—	—	—	—	—	—	—	—
55 - 59	15	14	1	—	—	—	—	—	—	—
	$564	$566	$529	—	—	—	—	—	—	—
60 - 64	25	24	1	—	—	—	—	—	—	—
	$850	$876	$234	—	—	—	—	—	—	—
65 - 69	49	49	—	—	—	—	—	—	—	—
	$931	$931	—	—	—	—	—	—	—	—
70 - 74	18	17	1	—	—	—	—	—	—	—
	$1,126	$1,163	$496	—	—	—	—	—	—	—
75 - 79	5	3	2	—	—	—	—	—	—	—
	$787	$1,068	$365	—	—	—	—	—	—	—
80 - 84	3	3	—	—	—	—	—	—	—	—
	$588	$588	—	—	—	—	—	—	—	—
85 - 89	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
90 & Over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**116**	**111**	**5**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$878	**$900**	**$398**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Note: Total retired benefit $101,850, average age 66.2, and average years of retirement 1.7.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

Safety Tier A (Non-Enhanced and Enhanced) and Tier C

		Years of Retirement								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	4	—	—	—	3	—	1	—	—	—
	$1,320	—	—	—	$1,652	—	$324	—	—	—
30 - 34	1	1	—	—	—	—	—	—	—	—
	$4,765	$4,765	—	—	—	—	—	—	—	—
35 - 39	8	3	4	—	1	—	—	—	—	—
	$4,393	$5,683	$4,266	—	$1,033	—	—	—	—	—
40 - 44	21	12	4	3	—	—	—	2	—	—
	$4,085	$4,533	$3,769	$4,488	—	—	—	$1,429	—	—
45 - 49	48	22	11	8	7	—	—	—	—	—
	$4,673	$4,489	$5,050	$4,075	$5,344	—	—	—	—	—
50 - 54	240	168	38	13	14	7	—	—	—	—
	$6,116	$6,598	$5,474	$3,843	$5,324	$3,836	—	—	—	—
55 - 59	356	102	172	47	14	12	6	3	—	—
	$7,366	$7,984	$7,399	$7,798	$5,650	$4,934	$4,186	$1,819	—	—
60 - 64	388	39	59	216	29	26	10	8	1	—
	$7,908	$6,980	$7,624	$9,226	$4,720	$4,832	$5,070	$4,412	$4,837	—
65 - 69	363	26	21	126	131	29	14	9	5	2
	$8,380	$5,034	$4,883	$9,802	$9,773	$5,495	$4,342	$4,473	$4,992	$3,993
70 - 74	332	6	12	50	131	78	30	11	12	2
	$8,471	$5,086	$5,177	$8,957	$10,444	$8,739	$3,871	$4,366	$4,080	$4,469
75 - 79	354	—	3	19	69	152	45	21	27	18
	$7,822	—	$2,407	$7,025	$9,139	$9,700	$5,045	$5,534	$3,934	$4,095
80 - 84	199	—	1	4	13	53	56	39	16	17
	$7,712	—	$1,595	$4,057	$4,445	$9,048	$9,879	$7,092	$4,471	$4,601
85 - 89	94	—	—	2	—	4	15	39	18	16
	$6,803	—	—	$4,843	—	$7,948	$6,597	$8,481	$5,396	$4,445
90 & Over	56	—	—	—	—	—	9	5	11	31
	$5,574	—	—	—	—	—	$5,288	$4,922	$8,208	$4,827
Total	**2,464**	**379**	**325**	**488**	**412**	**361**	**186**	**137**	**90**	**86**
	$7,558	**$6,679**	**$6,743**	**$8,807**	**$8,909**	**$8,417**	**$6,344**	**$6,424**	**$4,932**	**$4,530**

Note: Total retired benefit $18,623,433, average age 67.2, and average years of retirement 16.2. Includes members from withdrawn employers.

Exhibit C: Retired Members and Beneficiaries as of December 31, 2022 by Age, Years of Retirement, and Average Monthly Benefit (continued)

Safety Tier D and Tier E

		Years of Retirement								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 30	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30 - 34	1	1	—	—	—	—	—	—	—	—
	$4,645	$4,645	—	—	—	—	—	—	—	—
35 - 39	2	2	—	—	—	—	—	—	—	—
	$4,681	$4,681	—	—	—	—	—	—	—	—
40 - 44	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
45 - 49	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
50 - 54	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
55 - 59	6	6	—	—	—	—	—	—	—	—
	$1,449	$1,449	—	—	—	—	—	—	—	—
60 - 64	9	8	1	—	—	—	—	—	—	—
	$2,255	$2,233	$2,431	—	—	—	—	—	—	—
65 - 69	1	1	—	—	—	—	—	—	—	—
	$3,254	$3,254	—	—	—	—	—	—	—	—
70 - 74	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
75 - 79	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
80 - 84	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
85 - 89	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
90 & Over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**19**	**18**	**1**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$2,434	**$2,434**	**$2,431**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Note: Total retired benefit $46,249, average age 56.7, and average years of retirement 1.6.

Exhibit D: Reconciliation of Member Data

	Active Members	Inactive Vested Members[1]	Retired Members	Disabled Members	Beneficiaries	Total
Number as of December 31, 2021	**10,005**	**3,812**	**7,908**	**885**	**1,485**	**24,095**
• New members	1,059	124	0	0	69	1,252
• Terminations – with vested rights	(442)	442	0	0	0	0
• Contribution refunds	(160)	(245)	0	0	0	(405)
• Retirements	(396)	(93)	489	0	0	0
• New disabilities	(15)	0	(1)	16	0	0
• Return to work	49	(46)	(3)	0	0	0
• Died with or without beneficiary	(18)	(11)	(196)	(27)	(71)	(323)
• Data adjustments	0	(9)	0	0	7	(2)
Number as of December 31, 2022	**10,082**	**3,974**	**8,197**	**874**	**1,490**	**24,617**

[1] Includes inactive members with member contributions on deposit.

Exhibit E: Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended December 31, 2022		Year Ended December 31, 2021	
Net assets at market value at the beginning of the year		**$11,453,765,753**		**$10,070,237,862**
Contribution income:				
• Employer contributions	$352,383,785		$410,759,608	
• Member contributions	122,303,823		117,016,915	
• Less administrative expenses	(11,537,709)		(11,237,383)	
Net contribution income		*$463,149,898*		*$516,539,140*
Investment income:				
• Interest, dividends and other income	$172,575,489		$154,751,676	
• Asset appreciation	(1,407,318,252)		1,301,941,286	
• Less investment and administrative fees	(47,164,600)		(49,349,348)	
Net investment income		*$(1,281,907,363)*		*$1,407,343,614*
Total income available for benefits		**$(818,757,464)**		**$1,923,882,754**
Less benefit payments:				
• Benefits paid	$(562,830,131)		$(532,116,595)[1]	
• Refunds of contributions	(13,738,069)		(5,883,885)[1]	
• Adjustments, transfers or other expenses	(4,771,275)		(2,354,383)	
Net benefit payments		*$(581,339,475)*		*$(540,354,863)*
Change in net assets at market value		**$(1,400,096,939)**		**$1,383,527,891**
Net assets at market value at the end of the year		**$10,053,668,812**		**$11,453,765,753**

Note: Results may be slightly off due to rounding.

[1] We have reallocated the benefit payments with regards to the refund for active member death to match CCCERA's financial statements.

Exhibit F: Summary Statement of Plan Assets

	December 31, 2022		December 31, 2021	
Cash equivalents		*$735,959,243*		*$1,237,796,371*
Accounts receivable:				
• Investment trades	$13,095,410		$14,987,409	
• Investment income	20,647,573		17,821,719	
• Employer and member contributions	11,459,157		10,773,593	
• Additional contributions	3,927,768		6,245,892	
Total accounts receivable		*$49,129,908*		*$49,828,613*
Investments:				
• Stocks	$4,805,529,144		$5,648,984,567	
• Bonds	1,994,157,311		2,219,364,324	
• Real estate	565,387,390		601,655,645	
• Alternative investments and real assets	2,409,662,472		2,338,181,666	
Total investments at market value		*$9,774,736,317*		*$10,808,186,202*
Other assets		*4,727,818*		*3,359,519*
Total assets		**$10,564,553,286**		**$12,099,170,705**
Accounts payable:				
• Investment trades	$(16,827,616)		$(31,033,062)	
• Security lending	(269,029,887)		(409,048,701)	
• Employer contributions unearned	(167,823,612)		(151,108,057)	
• Other	(56,113,360)		(53,217,133)	
Total accounts payable		**$(509,794,475)**		**$(644,406,953)**
Deferred inflows of resources		**(1,090,000)**		**(998,000)**
Net assets at market value		**$10,053,668,812**		**$11,453,765,753**
Net assets at actuarial value		**$10,878,817,667**		**$10,451,125,236**
Net assets at valuation value		**$10,861,822,062**		**$10,434,412,288**

Note: Results may be slightly off due to rounding.

Exhibit G: Summary of Total Allocated Reserves

	December 31, 2022	December 31, 2021
• Member Deposits[1]	$1,077,187,687	$1,029,847,720
• Member Cost of Living[1]	537,732,911	522,964,111
• Employer Advance[1, 2]	2,957,523,538	3,139,040,709
• Employer Cost of Living[1, 2]	705,910,721	2,190,242,717
• Retired Members[1, 2]	4,396,244,276	3,797,564,502
• Retired Cost of Living[1, 2]	3,939,921,046	2,179,759,742
• Dollar Power Cost of Living Supplement Pre-Funding[1]	(1,796,005)	(820,020)
• Post Retirement Death Benefit[3]	16,995,605	16,712,948
• Statutory Contingency (one percent)[3]	0	0
• Additional One Percent Contingency Designation[3]	0	0
• Contra Tracking Account[1]	(2,750,902,112)	(2,424,187,193)
Total Allocated Reserves	**$10,878,817,667**	**$10,451,125,236**
Total Deferred Return	(825,148,855)	1,002,640,517
Net Market Value	**$10,053,668,812**	**$11,453,765,753**

Note: Results may be slightly off due to rounding.

[1] Included in valuation value of assets.
[2] Both December 31, 2022 and December 31, 2021 information reflect a “true-up” of retired reserves as of January 1, 2022 and January 1, 2021, respectively.
[3] Not included in valuation value of assets. See reference made on page 133 with respect to the payment of benefits out of the Post Retirement Death Benefit Reserve.

Exhibit H: Development of the Fund Through December 31, 2022

Year Ended December 31	Employer Contributions[1]	Member Contributions[1]	Administrative Expenses[2]	Net Investment Return[3]	Benefit Payments	Market Value of Assets at Year-End	Valuation Value of Assets at Year-End	Valuation Value as a Percent of Market Value
2013	$235,017,452	$72,373,254	N/A	$870,984,744	$374,638,978	$6,458,317,596	$5,907,416,432	91.5%
2014	293,760,413	78,257,665	N/A	473,522,261	394,947,705	6,908,910,230	6,557,496,101	94.9%
2015	323,720,270	85,360,637	N/A	65,495,657	406,904,366	6,976,582,428	7,136,801,380	102.3%
2016	307,457,143	89,240,172	$8,486,463	493,874,242	420,148,018	7,438,519,504	7,606,997,530	102.3%
2017	314,836,561	96,466,906	9,146,115	987,415,981	437,511,788	8,390,581,049	8,179,891,191	97.5%
2018	325,117,103	103,541,529	9,337,053	(195,030,888)	464,885,947	8,149,985,793	8,650,178,226	106.1%
2019	327,982,796	108,487,711	10,200,473	1,168,171,586	487,414,734	9,257,012,679	9,128,668,718	98.6%
2020	336,356,723	113,494,191	10,749,625	882,394,059	508,270,165	10,070,237,862	9,662,282,926	95.9%
2021	410,759,608	117,016,915	11,237,383	1,407,343,614	540,354,863	11,453,765,753	10,434,412,288	91.1%
2022	352,383,785	122,303,823	11,537,709	(1,281,907,363)	581,339,475	10,053,668,812	10,861,822,062	108.0%

Note: Results may be slightly off due to rounding.

[1] Prior to 2017, employer contributions include “employer subvention of member contributions” and exclude “member subvention of employer contributions”.
[2] Prior to 2016, administrative expenses were shown as an offset to the net investment return.
[3] On a market basis, net of investment fees beginning with the year ended December 31, 2016. Prior to 2016, shown net of investment fees and administrative expenses.

Exhibit I: Table of Amortization Bases

Cost Groups #1 and #2 – General County and Small Districts

Type	Date Established	Initial Amount[1]	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[2]
Restart of Amortization	December 31, 2007	$784,550,613	15	$0	0	$0
Actuarial Loss	December 31, 2008	79,980,337	18	36,829,627	4	10,056,092
Actuarial Loss	December 31, 2009	164,932,313	18	89,587,739	5	19,912,584
Assumption Change	December 31, 2009	39,537,694	18	21,476,038	5	4,773,459
Depooling Implementation	December 31, 2009	(74,652,572)	18	(40,549,696)	5	(9,012,943)
Actuarial Loss	December 31, 2010	152,969,439	18	94,117,059	6	17,736,874
Actuarial Loss	December 31, 2011	94,687,495	18	64,162,626	7	10,544,084
Actuarial Loss	December 31, 2012	116,951,818	18	85,508,028	8	12,507,206
Assumption Change	December 31, 2012	288,612,127	18	211,015,566	8	30,865,114
Actuarial Gain	December 31, 2013	(134,721,070)	18	(104,974,103)	9	(13,882,113)
Assumption Change[3]	December 31, 2013	(107,482,250)	18	(83,749,727)	9	(11,075,333)
Actuarial Gain	December 31, 2014	(171,785,272)	18	(140,902,481)	10	(17,055,366)
Actuarial Gain	December 31, 2015	(104,934,178)	18	(89,702,652)	11	(10,037,730)
Assumption Change	December 31, 2015	39,788,586	18	34,013,148	11	3,806,073
Actuarial Gain	December 31, 2016	(28,560,150)	18	(25,370,467)	12	(2,646,091)
Actuarial Gain	December 31, 2017	(17,925,791)	18	(16,434,070)	13	(1,608,600)
Actuarial Loss	December 31, 2018	75,214,335	18	70,751,303	14	6,537,257
Assumption Change	December 31, 2018	(6,017,706)	18	(5,660,630)	14	(523,029)
Actuarial Loss	December 31, 2019	8,869,944	18	8,518,158	15	746,691
Method Change	December 31, 2019	(9,431,611)	18	(9,057,550)	15	(793,973)
Actuarial Loss	December 31, 2020	34,716,218	18	33,889,035	16	2,830,592
Actuarial Gain	December 31, 2021	(29,835,340)	18	(29,492,071)	17	(2,356,136)
Assumption Change	December 31, 2021	114,962,352	18	113,639,657	17	9,078,729
Actuarial Loss	December 31, 2022	200,508,908	18	200,508,908	18	15,373,256
Subtotal – Cost Groups #1 and #2				**$518,123,446**		**$75,776,697**

Note: Results may be slightly off due to rounding.

[1] Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire. A portion of all amortization bases from Cost Groups #1 & #2 established before December 31, 2021 were allocated to East Fire and moved into Cost Group #5.
[2] As of middle of year.
[3] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #3 – Central Contra Costa Sanitary District

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Actuarial Loss[2]	December 31, 2022	$4,915,384	18	$4,915,384	18	$376,868
Subtotal – Cost Group #3				**$4,915,384**		**$376,868**

[1] As of middle of year.
[2] Cost Group #3 has gone from having a surplus as of December 31, 2021 (about $5.8 million) to a UAAL due to investment return less than expected (about $7.1 million), COLA increase greater than expected (about $2.7 million) and other experience losses.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #4 – Contra Costa Housing Authority

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Restart of Amortization	December 31, 2007	$7,770,000	15	$0	0	$0
Actuarial Loss	December 31, 2008	1,573,513	18	724,577	4	197,841
Actuarial Loss	December 31, 2009	1,277,079	18	693,682	5	154,184
Assumption Change	December 31, 2009	425,000	18	230,851	5	51,311
Depooling Implementation	December 31, 2009	(189,275)	18	(102,810)	5	(22,852)
Actuarial Loss	December 31, 2010	619,697	18	381,279	6	71,854
Assumption Change[2]	December 31, 2010	(920,656)	18	(566,449)	6	(106,750)
Actuarial Loss	December 31, 2011	1,059,328	18	717,828	7	117,963
Actuarial Loss	December 31, 2012	1,912,999	18	1,398,668	8	204,582
Assumption Change	December 31, 2012	3,722,862	18	2,721,929	8	398,135
Actuarial Gain	December 31, 2013	(2,220,704)	18	(1,730,363)	9	(228,829)
Assumption Change[2]	December 31, 2013	(1,077,289)	18	(839,419)	9	(111,007)
Actuarial Gain	December 31, 2014	(1,360,021)	18	(1,115,522)	10	(135,027)
Actuarial Gain	December 31, 2015	(875,294)	18	(748,242)	11	(83,728)
Assumption Change	December 31, 2015	432,801	18	369,979	11	41,401
Actuarial Gain	December 31, 2016	(297,092)	18	(263,912)	12	(27,525)
Actuarial Loss	December 31, 2017	53,895	18	49,410	13	4,836
Actuarial Loss	December 31, 2018	527,741	18	496,426	14	45,869
Assumption Change	December 31, 2018	86,577	18	81,440	14	7,525
Actuarial Loss	December 31, 2019	544,467	18	522,873	15	45,834
Method Change	December 31, 2019	(103,353)	18	(99,254)	15	(8,700)
Actuarial Loss	December 31, 2020	80,685	18	78,763	16	6,579
Actuarial Gain	December 31, 2021	(439,350)	18	(434,296)	17	(34,696)
Assumption Change	December 31, 2021	1,519,858	18	1,502,371	17	120,025
Actuarial Loss	December 31, 2022	2,604,379	18	2,604,379	18	199,681
Subtotal – Cost Group #4				**$6,674,187**		**$908,506**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.
[2] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Cost Groups #5 – Contra Costa County Fire Protection District

Type	Date Established	Initial Amount[1]	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[2]
Restart of Amortization	December 31, 2007	$(492,460)	15	$0	0	$0
Actuarial Loss	December 31, 2008	98,825	18	45,507	4	12,425
Actuarial Loss	December 31, 2009	1,723,190	18	936,000	5	208,044
Assumption Change	December 31, 2009	362,132	18	196,702	5	43,721
Depooling Implementation	December 31, 2009	2,093,197	18	1,136,980	5	252,716
Actuarial Loss	December 31, 2010	2,823,409	18	1,737,151	6	327,376
Actuarial Loss	December 31, 2011	1,413,203	18	957,622	7	157,370
Actuarial Loss	December 31, 2012	1,864,724	18	1,363,372	8	199,420
Assumption Change	December 31, 2012	3,374,927	18	2,467,540	8	360,926
Actuarial Gain	December 31, 2013	(2,589,708)	18	(2,017,889)	9	(266,852)
Assumption Change[3]	December 31, 2013	(1,056,692)	18	(823,370)	9	(108,885)
Actuarial Gain	December 31, 2014	(2,329,297)	18	(1,910,547)	10	(231,260)
Actuarial Gain	December 31, 2015	(825,906)	18	(706,023)	11	(79,004)
Assumption Change	December 31, 2015	382,244	18	326,760	11	36,564
Actuarial Loss	December 31, 2016	1,572,498	18	1,396,877	12	145,692
Actuarial Loss	December 31, 2017	1,464,466	18	1,342,598	13	131,416
Actuarial Loss	December 31, 2018	1,545,142	18	1,453,458	14	134,296
Assumption Change	December 31, 2018	602,943	18	567,166	14	52,405
Actuarial Loss	December 31, 2019	1,838,915	18	1,765,983	15	154,804
Method Change	December 31, 2019	(872,975)	18	(838,352)	15	(73,489)
UAAL Prepayment	December 31, 2020	(181,746)	18	(177,416)	16	(14,819)
Actuarial Loss	December 31, 2020	2,595,831	18	2,533,981	16	211,651
Actuarial Gain	December 31, 2021	(1,811,591)	18	(1,790,748)	17	(143,064)
Assumption Change	December 31, 2021	1,486,425	18	1,469,323	17	117,385
Actuarial Loss	December 31, 2022	2,541,827	18	2,541,827	18	194,885
Subtotal – Cost Group #5				**$13,974,502**		**$1,823,723**

Note: Results may be slightly off due to rounding.

[1] Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire. A portion of all amortization bases from Cost Groups #1 & #2 established before December 31, 2021 were allocated to East Fire and moved into Cost Group #5.
[2] As of middle of year.
[3] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #6 – Small Districts (General Non-Enhanced)

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Actuarial Surplus[2]	December 31, 2022	$(634,577)		$(634,577)	N/A	$0
Subtotal – Cost Group #6				**$(634,577)**		**$0**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.
[2] Consistent with CCCERA's Actuarial Funding Policy, all prior UAAL layers are considered fully amortized due to surplus.

Exhibit I: Table of Amortization Bases (continued)

Cost Groups #7 and #9 – County Safety

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Restart of Amortization	December 31, 2007	$127,662,439	15	$0	0	$0
Actuarial Loss	December 31, 2008	25,619,265	18	11,797,249	4	3,221,163
Actuarial Loss	December 31, 2009	55,134,940	18	29,948,132	5	6,656,543
Assumption Change	December 31, 2009	11,076,665	18	6,016,610	5	1,337,306
Depooling Implementation	December 31, 2009	23,852,078	18	12,955,943	5	2,879,706
Actuarial Loss	December 31, 2010	57,287,975	18	35,247,405	6	6,642,566
Actuarial Loss	December 31, 2011	45,209,350	18	30,634,991	7	5,034,362
Actuarial Loss	December 31, 2012	53,258,503	18	38,939,366	8	5,695,637
Assumption Change	December 31, 2012	138,353,562	18	101,155,677	8	14,795,977
Actuarial Gain	December 31, 2013	(35,024,912)	18	(27,291,268)	9	(3,609,085)
Assumption Change[2]	December 31, 2013	(43,771,706)	18	(34,106,733)	9	(4,510,384)
Actuarial Gain	December 31, 2014	(61,815,393)	18	(50,702,496)	10	(6,137,221)
Assumption Change[3]	December 31, 2014	(51,701)	18	(42,406)	10	(5,133)
Actuarial Gain	December 31, 2015	(58,489,966)	18	(49,999,963)	11	(5,594,998)
Assumption Change	December 31, 2015	39,291,409	18	33,588,137	11	3,758,514
Actuarial Gain	December 31, 2016	(13,557,811)	18	(12,043,634)	12	(1,256,128)
Actuarial Gain	December 31, 2017	(8,178,240)	18	(7,497,677)	13	(733,888)
Actuarial Loss	December 31, 2018	41,037,406	18	38,602,348	14	3,566,768
Assumption Change	December 31, 2018	(47,713,599)	18	(44,882,392)	14	(4,147,029)
Actuarial Loss	December 31, 2019	10,313,187	18	9,904,162	15	868,186
Method Change	December 31, 2019	(1,626,137)	18	(1,561,644)	15	(136,892)
Actuarial Loss	December 31, 2020	5,352,140	18	5,224,614	16	436,387
Actuarial Gain	December 31, 2021	(9,006,255)	18	(8,902,634)	17	(711,236)
Assumption Change	December 31, 2021	58,980,022	18	58,301,430	17	4,657,730
Actuarial Loss	December 31, 2022	72,120,444	18	72,120,444	18	5,529,560
Subtotal – Cost Groups #7 and #9				**$247,405,661**		**$38,238,411**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.
[2] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.
[3] Effective with the December 31, 2014 valuation, leave cashout (terminal pay) assumptions were eliminated for Cost Group #9.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #8 – Contra Costa Fire Protection District

Type	Date Established	Initial Amount[1]	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[2]
Restart of Amortization	December 31, 2007	$124,138,710	15	$0	0	$0
CCCFPD Safety POBs	December 31, 2007	(127,509,711)	15	0	0	0
Actuarial Loss	December 31, 2008	6,780,436	18	3,122,279	4	852,518
Actuarial Loss	December 31, 2009	27,018,706	18	14,675,989	5	3,262,018
Assumption Change	December 31, 2009	4,945,000	18	2,686,019	5	597,019
Depooling Implementation	December 31, 2009	47,818,666	18	25,974,087	5	5,773,236
Actuarial Loss	December 31, 2010	38,165,445	18	23,481,941	6	4,425,300
Assumption Change[3]	December 31, 2010	(1,599,051)	18	(983,843)	6	(185,411)
Actuarial Loss	December 31, 2011	26,533,166	18	17,979,540	7	2,954,645
Actuarial Loss	December 31, 2012	31,501,440	18	23,031,929	8	3,368,866
Assumption Change	December 31, 2012	68,193,356	18	49,858,818	8	7,292,818
Actuarial Gain	December 31, 2013	(22,661,640)	18	(17,657,857)	9	(2,335,132)
Assumption Change[3]	December 31, 2013	(17,910,676)	18	(13,955,925)	9	(1,845,576)
Actuarial Gain	December 31, 2014	(29,217,962)	18	(23,965,287)	10	(2,900,848)
Actuarial Gain	December 31, 2015	(19,005,510)	18	(16,246,800)	11	(1,818,018)
Assumption Change	December 31, 2015	24,296,846	18	20,770,082	11	2,324,173
Actuarial Gain	December 31, 2016	(8,297,685)	18	(7,370,975)	12	(768,778)
Actuarial Gain	December 31, 2017	(10,658,502)	18	(9,771,540)	13	(956,458)
Actuarial Loss	December 31, 2018	19,301,243	18	18,155,955	14	1,677,568
Assumption Change	December 31, 2018	(23,503,820)	18	(22,109,162)	14	(2,042,836)
Actuarial Loss	December 31, 2019	11,258,256	18	10,811,750	15	947,744
Method Change	December 31, 2019	(3,057,179)	18	(2,935,930)	15	(257,360)

[1] Prior to December 31, 2019, Con Fire was pooled with East Fire in Cost Group #8. Effective with the December 31, 2019 valuation, East Fire was depooled into Cost Group #13. All amortization bases established on or before December 31, 2018 were split between the two employers based on the ratios of actuarial accrued liability as of December 31, 2018. Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire, and all amortization bases from Cost Group #13 established before December 31, 2021 were moved into Cost Group #8.

[2] As of middle of year.

[3] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #8 – Contra Costa Fire Protection District (continued)

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Actuarial Gain	December 31, 2020	$(5,495,306)	18	$(5,364,370)	16	$(448,061)
UAAL Prepayment	December 31, 2020	(2,839,926)	18	(2,772,259)	16	(231,554)
Actuarial Loss	December 31, 2021	7,016,144	18	6,935,420	17	554,074
Assumption Change	December 31, 2021	25,946,537	18	25,648,010	17	2,049,032
Actuarial Loss	December 31, 2022	32,208,479	18	32,208,479	18	2,469,462
Subtotal – Cost Group #8				**$152,206,352**		**$24,758,441**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.

Exhibit I: Table of Amortization Bases (continued)

Cost Groups #10 – Moraga-Orinda Fire District

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Restart of Amortization	December 31, 2007	$(2,591,000)	15	$0	0	$0
Actuarial Loss	December 31, 2008	2,002,150	18	921,957	4	251,734
Actuarial Loss	December 31, 2009	5,671,684	18	3,080,739	5	684,753
Assumption Change	December 31, 2009	1,012,000	18	549,697	5	122,181
Depooling Implementation	December 31, 2009	4,873,631	18	2,647,253	5	588,402
Actuarial Loss	December 31, 2010	5,334,964	18	3,282,428	6	618,591
Assumption Change[2]	December 31, 2010	806,018	18	495,916	6	93,458
Actuarial Loss	December 31, 2011	6,791,005	18	4,601,756	7	756,224
Actuarial Loss	December 31, 2012	8,924,598	18	6,525,121	8	954,425
Assumption Change	December 31, 2012	12,149,892	18	8,883,259	8	1,299,349
Actuarial Gain	December 31, 2013	(1,027,440)	18	(800,577)	9	(105,871)
Assumption Change[2]	December 31, 2013	(3,613,981)	18	(2,815,999)	9	(372,397)
Actuarial Gain	December 31, 2014	(4,813,045)	18	(3,947,777)	10	(477,854)
Actuarial Gain	December 31, 2015	(8,490,806)	18	(7,258,339)	11	(812,208)
Assumption Change	December 31, 2015	3,844,347	18	3,286,328	11	367,740
Actuarial Loss	December 31, 2016	1,028,690	18	913,802	12	95,308
Actuarial Gain	December 31, 2017	(422,995)	18	(387,795)	13	(37,958)
Actuarial Loss	December 31, 2018	6,029,055	18	5,671,306	14	524,016
Assumption Change	December 31, 2018	(4,116,542)	18	(3,872,277)	14	(357,789)
Actuarial Loss	December 31, 2019	3,411,399	18	3,276,101	15	287,179
Method Change	December 31, 2019	(471,164)	18	(452,477)	15	(39,664)
Actuarial Gain	December 31, 2020	(864,383)	18	(843,788)	16	(70,478)
Actuarial Loss	December 31, 2021	2,537,586	18	2,508,390	17	200,397
Assumption Change	December 31, 2021	5,301,507	18	5,240,511	17	418,667
Actuarial Loss	December 31, 2022	7,121,589	18	7,121,589	18	546,021
Subtotal – Cost Group #10				**$38,627,125**		**$5,534,226**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.

[2] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #11 – San Ramon Valley Fire District

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Restart of Amortization	December 31, 2007	$58,766,000	15	$0	0	$0
Actuarial Loss	December 31, 2008	10,216,694	18	4,704,619	4	1,284,566
Actuarial Loss	December 31, 2009	9,262,105	18	5,030,979	5	1,118,231
Assumption Change	December 31, 2009	2,453,000	18	1,332,418	5	296,155
Depooling Implementation	December 31, 2009	(20,174,500)	18	(10,958,361)	5	(2,435,705)
Actuarial Loss	December 31, 2010	6,585,812	18	4,052,033	6	763,628
Assumption Change[2]	December 31, 2010	5,093,420	18	3,133,814	6	590,584
Actuarial Loss	December 31, 2011	5,513,071	18	3,735,795	7	613,917
Actuarial Loss	December 31, 2012	14,600,741	18	10,675,171	8	1,561,450
Assumption Change	December 31, 2012	26,672,143	18	19,501,042	8	2,852,405
Actuarial Gain	December 31, 2013	(4,492,900)	18	(3,500,849)	9	(462,964)
Assumption Change[2]	December 31, 2013	(12,984,002)	18	(10,117,081)	9	(1,337,915)
Actuarial Gain	December 31, 2014	(13,850,852)	18	(11,360,808)	10	(1,375,155)
Actuarial Gain	December 31, 2015	(9,008,582)	18	(7,700,958)	11	(861,738)
Assumption Change	December 31, 2015	5,533,144	18	4,729,991	11	529,286
Actuarial Loss	December 31, 2016	2,020,042	18	1,794,438	12	187,156
UAAL Prepayment	December 31, 2017	(303,806)	18	(278,524)	13	(27,263)
Actuarial Gain	December 31, 2017	(1,837,378)	18	(1,684,478)	13	(164,880)
UAAL Prepayment	December 31, 2018	(261,501)	18	(245,984)	14	(22,728)
Actuarial Loss	December 31, 2018	11,681,729	18	10,988,564	14	1,015,318
Assumption Change	December 31, 2018	(9,240,163)	18	(8,691,875)	14	(803,109)
UAAL Prepayment	December 31, 2019	(1,267,559)	18	(1,217,287)	15	(106,706)
Actuarial Loss	December 31, 2019	5,365,395	18	5,152,602	15	451,670
Method Change	December 31, 2019	(1,623,299)	18	(1,558,918)	15	(136,653)

1 As of middle of year.
2 Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #11 – San Ramon Valley Fire District (continued)

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
UAAL Prepayment	December 31, 2020	$(267,529)	18	$(261,155)	16	$(21,813)
Actuarial Gain	December 31, 2020	(60,980)	18	(59,527)	16	(4,972)
UAAL Prepayment	December 31, 2021	(270,666)	18	(267,552)	17	(21,375)
Actuarial Loss	December 31, 2021	2,230,205	18	2,204,545	17	176,122
Assumption Change	December 31, 2021	13,908,945	18	13,748,916	17	1,098,408
UAAL Prepayment	December 31, 2022	(286,847)	18	(286,847)	18	(21,993)
Actuarial Loss	December 31, 2022	17,272,835	18	17,272,835	18	1,324,329
Subtotal – Cost Group #11				**$49,867,559**		**$6,058,256**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.

Exhibit I: Table of Amortization Bases (continued)

Cost Group #12 – Rodeo-Hercules Fire Protection District

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Restart of Amortization	December 31, 2007	$3,960,000	15	$0	0	$0
Actuarial Loss	December 31, 2008	957,150	18	440,752	4	120,344
Actuarial Loss	December 31, 2009	2,872,360	18	1,560,205	5	346,785
Assumption Change	December 31, 2009	1,154,000	18	626,828	5	139,325
Depooling Implementation	December 31, 2009	(1,809,374)	18	(982,814)	5	(218,449)
Actuarial Loss	December 31, 2010	1,502,503	18	924,441	6	174,216
Assumption Change[2]	December 31, 2010	662,085	18	407,359	6	76,769
Actuarial Loss	December 31, 2011	2,067,217	18	1,400,798	7	230,198
Actuarial Loss	December 31, 2012	2,246,131	18	1,642,233	8	240,208
Assumption Change	December 31, 2012	3,018,796	18	2,207,159	8	322,840
Actuarial Loss	December 31, 2013	413,088	18	321,877	9	42,566
Assumption Change[2]	December 31, 2013	(1,169,821)	18	(911,520)	9	(120,542)
Actuarial Loss	December 31, 2014	315,937	18	259,139	10	31,367
Actuarial Gain	December 31, 2015	(990,379)	18	(846,623)	11	(94,737)
Assumption Change	December 31, 2015	775,874	18	663,253	11	74,218
Actuarial Gain	December 31, 2016	(270,731)	18	(240,495)	12	(25,083)
Actuarial Gain	December 31, 2017	(836,969)	18	(767,319)	13	(75,107)
Actuarial Gain	December 31, 2018	(71,915)	18	(67,648)	14	(6,251)
Assumption Change	December 31, 2018	(985,876)	18	(928,273)	14	(85,770)
Actuarial Loss	December 31, 2019	146,468	18	140,659	15	12,330
Method Change	December 31, 2019	(241,485)	18	(231,908)	15	(20,329)
Actuarial Loss	December 31, 2020	179,608	18	175,328	16	14,644
Actuarial Loss	December 31, 2021	744,297	18	735,734	17	58,778
Assumption Change	December 31, 2021	1,416,650	18	1,400,351	17	111,875
Actuarial Loss	December 31, 2022	2,600,757	18	2,600,757	18	199,403
Subtotal – Cost Group #12				**$10,530,275**		**$1,549,598**

Note: Results may be slightly off due to rounding.

[1] As of middle of year.
[2] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Exhibit I: Table of Amortization Bases (continued)

Special Adjustments

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
County General POBs	December 31, 2007	$(453,973,319)	15	$0	0	$0
Moraga General POBs	December 31, 2007	(701,412)	15	0	0	0
First Five UAAL Prepayment	December 31, 2011	(1,794,205)	11	0	0	0
LAFCO UAAL Prepayment	December 31, 2017	(30,817)	18	(28,253)	13	(2,765)
LAFCO UAAL Prepayment	December 31, 2019	(31,680)	18	(30,424)	15	(2,667)
LAFCO UAAL Prepayment	December 31, 2020	(31,963)	18	(31,201)	16	(2,606)
LAFCO UAAL Prepayment	December 31, 2021	(31,804)	18	(31,438)	17	(2,512)
Subtotal – Special Adjustments				**$(121,316)**		**$(10,550)**

Note: Results may be slightly off due to rounding.

[1] As of middle of year. The annual payment amounts shown for the Special Adjustments represent the credit allocated to the employer to reflect the receipt of the proceeds for Pension Obligation Bonds (POBs) or any other special contributions. These adjustments serve to reduce the UAAL contribution rate for these employers. The cost of debt service associated with the POBs is not reflected in this report.

Exhibit I: Table of Amortization Bases (continued)

All Cost Groups Combined

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Restart of Amortization	December 31, 2007	$1,103,764,302	15	$0	0	$0
County General POBs[2]	December 31, 2007	(453,973,319)	15	0	0	0
Moraga General POBs[2]	December 31, 2007	(701,412)	15	0	0	0
CCCFPD Safety POBs[2]	December 31, 2007	(127,509,711)	15	0	0	0
Actuarial Loss	December 31, 2008	127,228,371	18	58,586,568	4	15,996,683
Actuarial Loss	December 31, 2009	267,892,376	18	145,513,465	5	32,343,142
Assumption Change	December 31, 2009	60,965,491	18	33,115,164	5	7,360,477
Depooling Implementation	December 31, 2009	(18,188,149)	18	(9,879,417)	5	(2,195,889)
Actuarial Loss	December 31, 2010	265,289,245	18	163,223,737	6	30,760,405
Assumption Change[3]	December 31, 2010	4,041,816	18	2,486,796	6	468,650
Actuarial Loss	December 31, 2011	183,273,836	18	124,190,957	7	20,408,763
First Five UAAL Prepayment[2]	December 31, 2011	(1,794,205)	11	0	0	0
Actuarial Loss	December 31, 2012	231,260,954	18	169,083,889	8	24,731,794
Assumption Change	December 31, 2012	544,097,665	18	397,810,992	8	58,187,564
Actuarial Gain	December 31, 2013	(202,325,285)	18	(157,651,030)	9	(20,848,280)
Assumption Change[3]	December 31, 2013	(189,066,417)	18	(147,319,774)	9	(19,482,039)
Actuarial Gain	December 31, 2014	(284,855,905)	18	(233,645,779)	10	(28,281,364)
Assumption Change[4]	December 31, 2014	(51,701)	18	(42,406)	10	(5,133)
Actuarial Gain	December 31, 2015	(202,620,622)	18	(173,209,601)	11	(19,382,161)
Assumption Change	December 31, 2015	114,345,251	18	97,747,678	11	10,937,969
Actuarial Gain	December 31, 2016	(46,362,239)	18	(41,184,365)	12	(4,295,449)
San Ramon UAAL Prepayment	December 31, 2017	(303,806)	18	(278,524)	13	(27,263)
LAFCO UAAL Prepayment[5]	December 31, 2017	(30,817)	18	(28,253)	13	(2,765)

1 As of middle of year. The annual payment amounts shown for the Special Adjustments represent the credit allocated to the employer to reflect the receipt of the proceeds for Pension Obligation Bonds (POBs) or any other special contributions. These adjustments serve to reduce the UAAL contribution rate for these employers. The cost of debt service associated with the POBs is not reflected in this report.

2 Includes remaining balance of POBs and any other special contributions made by the County (including Courts), First 5 – Children & Families Commission, Local Agency Formation Commission, or Moraga-Orinda Fire District that have been allocated to the County General cost groups or for Con Fire that have been allocated to their Safety cost group.

3 Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

4 Effective with the December 31, 2014 valuation, leave cashout (terminal pay) assumptions were eliminated for Cost Group #9.

5 Includes remaining balance of POBs and any other special contributions made by the County (including Courts), First 5 – Children & Families Commission, LAFCO, or Moraga-Orinda Fire District that have been allocated to the County General cost groups or for Con Fire that have been allocated to their Safety cost group.

Exhibit I: Table of Amortization Bases (continued)

All Cost Groups Combined (continued)

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Actuarial Gain	December 31, 2017	$(38,341,514)	18	$(35,150,870)	13	$(3,440,639)
San Ramon UAAL Prepayment	December 31, 2018	(261,501)	18	(245,984)	14	(22,728)
Actuarial Loss	December 31, 2018	155,264,736	18	146,051,712	14	13,494,841
Assumption Change	December 31, 2018	(90,889,139)	18	(85,496,003)	14	(7,899,632)
San Ramon UAAL Prepayment	December 31, 2019	(1,267,559)	18	(1,217,287)	15	(106,706)
LAFCO UAAL Prepayment	December 31, 2019	(31,680)	18	(30,424)	15	(2,667)
Actuarial Loss	December 31, 2019	41,748,029	18	40,092,287	15	3,514,438
Method Change	December 31, 2019	(17,427,203)	18	(16,736,034)	15	(1,467,060)
San Ramon UAAL Prepayment	December 31, 2020	(267,529)	18	(261,155)	16	(21,813)
LAFCO UAAL Prepayment	December 31, 2020	(31,963)	18	(31,201)	16	(2,606)
CCCFPD UAAL Prepayment[2]	December 31, 2020	(3,021,672)	18	(2,949,675)	16	(246,373)
Actuarial Loss	December 31, 2020	36,503,813	18	35,634,037	16	2,976,342
San Ramon UAAL Prepayment	December 31, 2021	(270,666)	18	(267,552)	17	(21,375)
LAFCO UAAL Prepayment	December 31, 2021	(31,804)	18	(31,438)	17	(2,512)
Actuarial Gain	December 31, 2021	(28,564,305)	18	(28,235,659)	17	(2,255,761)
Assumption Change	December 31, 2021	223,522,296	18	220,950,569	17	17,651,851
San Ramon UAAL Prepayment	December 31, 2022	(286,847)	18	(286,847)	18	(21,993)
Actuarial Loss[3]	December 31, 2022	341,894,603	18	341,894,603	18	26,213,465
CG#6 - Actuarial Surplus	December 31, 2022	(634,577)	N/A	(634,577)	N/A	0
Subtotal – All Cost Groups				**$1,041,568,598**		**$155,014,176**
Withdrawn Employers[4]				8,838,220		
Total CCCERA				**$1,050,406,818**		

Note: Results may be slightly off due to rounding.

[1] As of middle of year. The annual payment amounts shown for the Special Adjustments represent the credit allocated to the employer to reflect the receipt of the proceeds for Pension Obligation Bonds (POBs) or any other special contributions. These adjustments serve to reduce the UAAL contribution rate for these employers. The cost of debt service associated with the POBs is not reflected in this report.

[2] As part of East Fire's annexation into Con Fire, East Fire made a prepayment of $3,344,437 on June 30, 2022 towards their December 31, 2020 UAAL balance. As requested by East Fire, the prepayment has been used to reduce Con Fire's UAAL contribution rates effective July 1, 2022. The amount shown as the initial amount of $3,021,672 is equal to $3,344,437 discounted with interest from June 30, 2022 to December 31, 2020.

[3] Excludes the actuarial loss for Cost Group #6 and only includes a partial of the actuarial loss for Cost Group #3. Cost Group #6 has surplus in both December 31, 2021 and December 31, 2022 valuations and Cost Group #3 has gone from having a surplus as of December 31, 2021 valuation to a UAAL as of December 31, 2022.

[4] Starting with the December 31, 2016 valuation, the three withdrawn employers (i.e., Diablo Water District, Delta Diablo Sanitation District and City of Pittsburg) have been moved from Cost Groups #1, #2 and #7 to their own Withdrawn Employers Cost Group.

Exhibit J: Projection of UAAL Balances and Payments

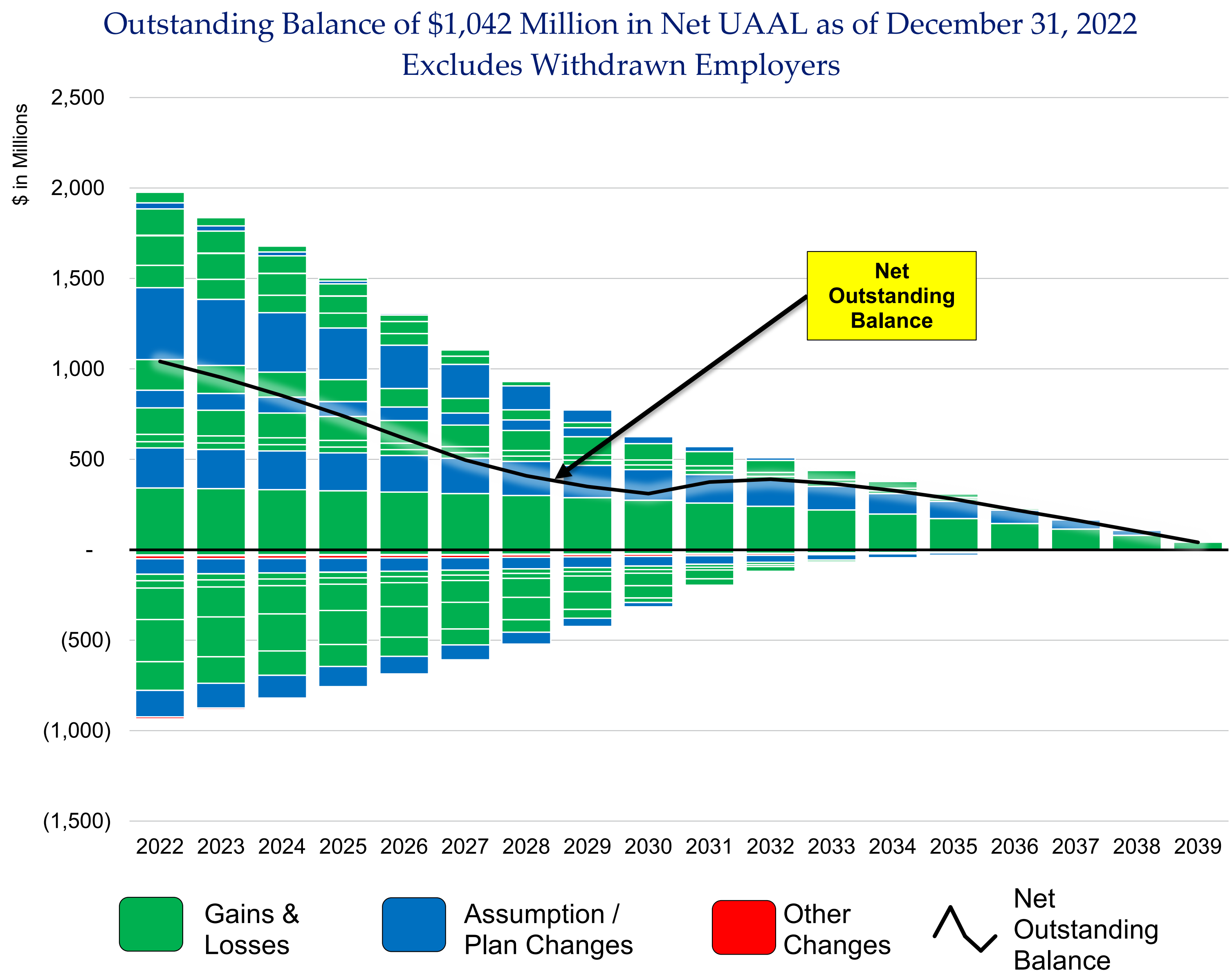
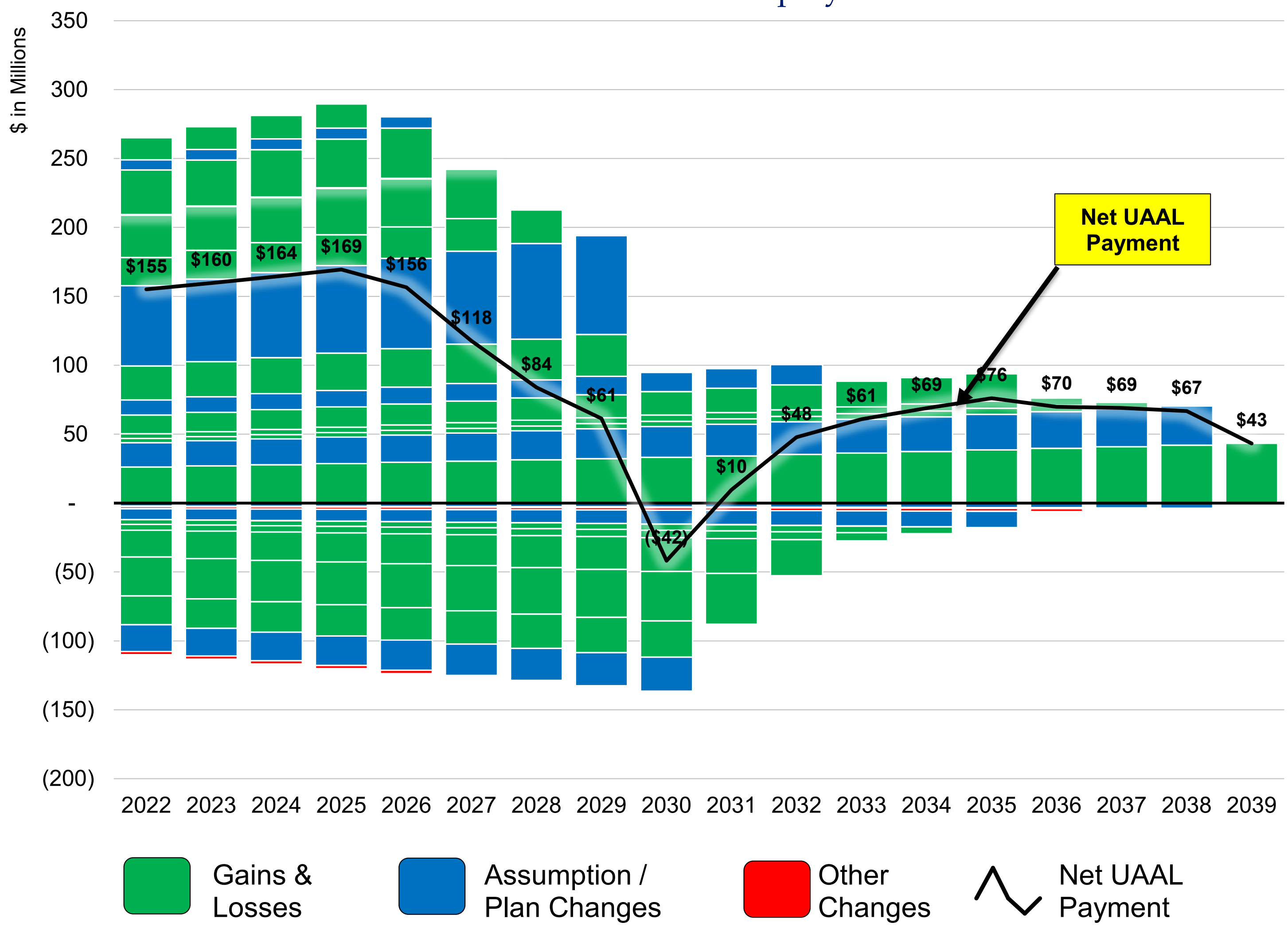


Exhibit J: Projection of UAAL Balances and Payments (continued)

Annual Payments Required to Amortize $1,042 Million in Net UAAL as of December 31, 2022
Excludes Withdrawn Employers



Note: The net UAAL amortization credits shown above for year 2030 and 2031 are before applying any tail volatility management that may be recommended by Segal to the Board in the future.

Exhibit K: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners and Beneficiaries:	The single-sum value of lifetime benefits to existing pensioners and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield in actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
Actuarially Equivalent:	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Actuarially Determined Contribution (ADC) and the Net Pension Liability (NPL).
Actuarial Value of Assets (AVA):	The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Fund is calculated, including: Investment return - the rate of investment yield that the Fund will earn over the long-term future; Mortality rates - the death rates of employees and pensioners; life expectancy is based on these rates; Retirement rates - the rate or probability of retirement at a given age or service; Disability rates – the probability of disability retirement at a given age; Termination rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; Salary increase rates - the rates of salary increase due to inflation and productivity growth.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
Investment Return:	The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

Normal Cost:	That portion of the Actuarial Present Value of pension plan benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated.
Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period with level percentage of payroll is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never decrease, but will become smaller each year, in relation to covered payroll, if the actuarial assumptions are realized.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of non-valuation reserves.

Section 4: Actuarial Valuation Basis

Exhibit 1: Actuarial Assumptions and Methods

Rationale for Assumptions:	The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the January 1, 2018 through December 31, 2020 Actuarial Experience Study report dated April 5, 2022. Unless otherwise noted, all actuarial assumptions and methods shown below apply to all tiers. These assumptions were adopted by the Board.

Economic Assumptions

Net Investment Return:

6.75%; net of investment expenses.

Based on the Actuarial Experience Study referenced above, expected investment expenses represent about 0.60% of the Actuarial Value of Assets.

Administrative Expenses:

1.13% of payroll allocated to both the employer and the member based on normal cost (before expenses) for the employer and member. This assumption changes each year based on the actual administrative expenses as a percent of actual compensation during the calendar year leading up to the valuation date.

For the 2022 calendar year, actual administrative expenses were $11,537,709 and actual payroll was $1,023,662,811. This results in the administrative expense assumption of 1.13% of payroll, allocated between employers and members as shown below:

	Average Normal Cost Rate Before Administrative Expense	Weighting	Total
Employer	14.95%	56.14%	0.63%
Member	11.68%	43.86%	0.50%
Total	**26.63%**	**100.00%**	**1.13%**

The employer Normal Cost rate is then increased by the same percent of payroll as the basic member rate with the remaining employer loading allocated to the employer UAAL rate. This is done to maintain a 50/50 sharing of Normal Cost for those in the PEPRA tiers. The table below shows this allocation.

Allocation of Administrative Expense Load as a % of Payroll

Addition to Employer Basic Normal Cost Rate	0.50%
Addition to Employer Basic UAAL Rate	0.13%
Addition to Member Basic Rate	0.50%
Total Addition to Contribution Rates	**1.13%**

Section 4: Actuarial Valuation Basis

Employee Contribution Crediting Rate:	6.75%, compounded semi-annually.
Inflation Rate:	Increases of 2.50% per year.
Cost of Living Adjustment (COLA):	Increases of 2.75% per year. Benefits for General Tier 1, Tier 3 (non-disability), Tier 4 and Tier 5 (non-disability) and Safety Tier A and Tier D are subject to a 3.00% maximum COLA increase due to CPI per year (valued as a 2.75% increase). Benefits for General Tier 2, Tier 3 (disability) and Tier 5 (disability) are subject to a 4.00% maximum change per year (valued as a 2.75% increase). Benefits for General Tier 4 and Tier 5 members covered under certain memoranda of understanding and Safety Tier C and Tier E are subject to a 2.00% maximum change per year (valued as a 2.00% increase). For members that have COLA banks, they are reflected in projected future COLAs. The actual COLA granted by CCCERA on April 1, 2023 has been reflected for non-active members in the December 31, 2022 valuation.
Payroll Growth:	Inflation of 2.50% per year plus "across-the-board" real salary increases of 0.50% per year, used to amortize the Unfunded Actuarial Accrued Liability as a level percentage of payroll.
Increase in Internal Revenue Code Section 401(a)(17) Compensation Limit:	Increase of 2.50% per year from the valuation date.
Increase in Section 7522.10 Compensation Limit:	Increase of 2.50% per year from the valuation date.

Salary Increases:

The annual rate of compensation increase includes:

- Inflation at 2.50%, plus
- “Across-the-board” real salary increases of 0.50% per year, plus
- The following merit and promotion increases:

	Rate (%)	
Years of Service	**General**	**Safety**
Less than 1	11.00	12.00
1 – 2	6.50	8.50
2 – 3	4.75	5.50
3 – 4	3.50	5.00
4 – 5	2.50	4.00
5 – 6	2.00	3.00
6 – 7	1.75	2.25
7 – 8	1.65	1.75
8 – 9	1.45	1.50
9 – 10	1.35	1.45
10 – 11	1.30	1.40
11 – 12	1.10	1.35
12 – 13	1.00	1.30
13 – 14	0.90	1.25
14 – 15	0.80	1.25
15 – 16	0.75	1.25
16 – 17	0.70	1.25
17 – 18	0.65	1.25
18 – 19	0.60	1.25
19 – 20	0.55	1.25
20 & Over	0.50	1.00

The average total assumed salary increase for active members in the December 31, 2022 actuarial valuation is 4.8%.

Demographic Assumptions

Post-Retirement Mortality Rates:	*Healthy* • **General Members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021. • **Safety Members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) increased by 5% for males and decreased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021. *Disabled* • **General Members:** Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) increased by 5% for males and unadjusted for females, projected generationally with the two-dimensional mortality improvement scale MP-2021. • **Safety Members:** Pub-2010 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) increased by 5% for males and unadjusted for females, projected generationally with the two-dimensional mortality improvement scale MP-2021. *Beneficiary* • **Beneficiaries not currently in Pay Status:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021. • **Beneficiaries in Pay Status:** Pub-2010 Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) increased by 5% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2021. The Pub-2010 mortality tables and adjustments as shown above reasonably reflect the mortality experience as of the measurement date. These mortality tables were adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

Pre-Retirement Mortality Rates:	• **General Members:** Pub-2010 General Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021. • **Safety Members:** Pub-2010 Safety Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.

	Rate (%)			
	General		Safety	
Age	**Male**	**Female**	**Male**	**Female**
20	0.04	0.01	0.04	0.02
25	0.02	0.01	0.03	0.02
30	0.03	0.01	0.04	0.02
35	0.04	0.02	0.04	0.03
40	0.06	0.03	0.05	0.04
45	0.09	0.05	0.07	0.06
50	0.13	0.08	0.10	0.08
55	0.19	0.11	0.15	0.11
60	0.28	0.17	0.23	0.14
65	0.41	0.27	0.35	0.20
70	0.61	0.44	0.66	0.39

Note that generational projections beyond the base year (2010) are not reflected in the above mortality rates.

All pre-retirement deaths are assumed to be non-service connected related.

Mortality Rates for Member Contributions:	• **General Members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected 30 years with the two-dimensional mortality improvement scale MP-2021, weighted 30% male and 70% female. • **Safety Members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) increased by 5% for males and decreased by 5% for females, projected 30 years with the two-dimensional mortality improvement scale MP-2021, weighted 85% male and 15% female.

Disability Incidence:

	Rate (%)		
Age	**General Tier 1 and Tier 4**	**General Tier 3 and Tier 5**	**Safety**
20	0.01	0.01	0.06
25	0.02	0.02	0.16
30	0.04	0.03	0.32
35	0.08	0.05	0.46
40	0.22	0.07	0.56
45	0.36	0.09	0.96
50	0.52	0.12	2.88
55	0.60	0.16	4.00
60	0.60	0.18	4.30
65	0.60	0.18	4.50
70	0.60	0.18	4.50

65% of General Tier 1 and Tier 4 disabilities are assumed to be service connected disabilities. The other 35% are assumed to be non-service connected disabilities.

25% of General Tier 3 and Tier 5 disabilities are assumed to be service connected disabilities. The other 75% are assumed to be non-service connected disabilities.

100% of Safety disabilities are assumed to be service connected disabilities.

Termination:

Years of Service	Rate (%) General	Rate (%) Safety
Less than 1	14.00	11.00
1 – 2	9.50	9.00
2 – 3	9.00	7.00
3 – 4	6.25	5.00
4 – 5	6.25	4.00
5 – 6	5.00	3.50
6 – 7	4.50	3.00
7 – 8	4.00	2.50
8 – 9	3.75	2.50
9 – 10	3.75	2.00
10 – 11	3.50	2.00
11 – 12	3.25	2.00
12 – 13	2.75	2.00
13 – 14	2.50	1.80
14 – 15	2.50	1.60
15 – 16	2.25	1.50
16 – 17	2.25	1.40
17 – 18	2.00	1.30
18 – 19	2.00	1.20
19 – 20	1.50	1.00
20 & Over	1.50	0.50

The member is assumed to receive the greater of the member’s contribution balance or a deferred retirement benefit.

No termination is assumed after a member is first assumed to retire.

Retirement Rates (General):

	Rate (%)					
	Tier 1 Enhanced		Tier 3 Enhanced			
Age	Less than 30 Years of Service	Over 30 Years of Service	Less than 30 Years of Service	Over 30 Years of Service	Tier 1 Non-Enhanced	PEPRA Tier 4 and Tier 5
49	0.00	0.00	0.00	25.00	0.00	0.00
50	4.00	10.00	4.00	10.00	3.00	0.00
51	4.00	10.00	3.00	5.00	3.00	0.00
52	4.00	10.00	3.00	5.00	3.00	2.00
53	4.00	10.00	4.00	5.00	3.00	3.00
54	10.00	16.00	6.00	11.00	3.00	3.00
55	15.00	24.00	8.00	15.00	10.00	4.00
56	15.00	24.00	8.00	10.00	10.00	5.00
57	15.00	24.00	8.00	10.00	10.00	6.00
58	15.00	22.00	9.00	15.00	10.00	6.00
59	18.00	22.00	10.00	15.00	10.00	8.00
60	20.00	20.00	12.00	15.00	25.00	8.00
61	20.00	20.00	16.00	20.00	15.00	12.00
62	25.00	30.00	20.00	25.00	40.00	15.00
63	25.00	30.00	20.00	25.00	35.00	17.00
64	25.00	30.00	25.00	28.00	30.00	20.00
65	35.00	35.00	30.00	32.00	40.00	25.00
66	40.00	40.00	32.00	32.00	35.00	25.00
67	40.00	40.00	30.00	30.00	35.00	25.00
68	40.00	40.00	30.00	30.00	35.00	25.00
69	40.00	40.00	30.00	30.00	35.00	25.00
70	40.00	40.00	35.00	35.00	40.00	35.00
71	35.00	35.00	35.00	35.00	40.00	35.00
72	35.00	35.00	35.00	35.00	40.00	35.00
73	35.00	35.00	35.00	35.00	50.00	35.00
74	35.00	35.00	35.00	35.00	50.00	35.00
75 & Over	100.00	100.00	100.00	100.00	100.00	100.00

Retirement Rates (Safety):

	Rate (%)			
	Tier A Enhanced			
Age	Less than 30 Years of Service	Over 30 Years of Service	Tier C Enhanced	Tier A Non-Enhanced and PEPRA Tier D and Tier E
45	7.00	7.00	2.00	0.00
46	5.00	5.00	1.00	0.00
47	7.00	7.00	4.00	0.00
48	10.00	30.00	4.00	0.00
49	22.00	30.00	12.00	0.00
50	22.00	30.00	20.00	5.00
51	22.00	22.00	18.00	4.00
52	16.00	20.00	15.00	4.00
53	16.00	22.00	15.00	5.00
54	16.00	24.00	18.00	6.00
55	16.00	30.00	18.00	15.00
56	18.00	30.00	15.00	15.00
57	18.00	30.00	15.00	15.00
58	20.00	35.00	25.00	15.00
59	20.00	35.00	25.00	20.00
60	20.00	35.00	25.00	20.00
61	20.00	35.00	25.00	20.00
62	20.00	35.00	25.00	20.00
63	25.00	35.00	30.00	20.00
64	35.00	35.00	35.00	25.00
65 & Over	100.00	100.00	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members:

For current and future deferred vested members, retirement age assumptions are as follows:

General: 60

Safety with Reciprocity: 53

Safety without Reciprocity: 51

40% of future General and 70% of future Safety deferred vested members are assumed to continue to work for a reciprocal employer. For reciprocals, 3.50% and 4.00% compensation increases are assumed per annum for General and Safety, respectively.

Future Benefit Accruals:

1.0 year of service per year for full-time employees. Continuation of current partial service accrual for part-time employees.

Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
Definition of Active Members:	All active members of CCCERA as of the valuation date.
Form of Payment:	All active and inactive members are assumed to elect the unmodified option at retirement. There is no explicit assumption for children's benefits.
Percent Married:	For all active and inactive members, 65% of male members and 50% of female members are assumed to be married at pre-retirement death or retirement.
Age and Gender of Spouse:	For all active and inactive members, male members are assumed to have a female spouse who is 3 years younger than the member and female members are assumed to have a male spouse who is 2 years older than the member.
Offsets by Other Plans of the Employer for Disability Benefits:	The Plan requires members who retire because of disability from General Tier 3 and General PEPRA Tier 5 to offset the Plan's disability benefits with other Plans of the employer. We have not assumed any offsets in this valuation.
Leave Cashout Assumptions:	The following assumptions for leave cashouts as a percentage of final average pay are used: *General Tiers 1, 2 and 3 & Safety Tiers A and C* Cost Group 1 1.00% Cost Group 2 0.50% for Tier 2 0.75% for Tier 3 Cost Group 3 5.25% Cost Group 4 1.00% Cost Group 5 1.00% Cost Group 6 0.00% Cost Group 7 0.50% Cost Group 8 0.25% Cost Group 9 0.00% Cost Group 10 0.25% Cost Group 11 3.00% Cost Group 12 1.75% Withdrawn Employers 0.00% *General PEPRA Tiers 4 and 5 & Safety PEPRA Tiers D and E* None

Service from Accumulated Sick Leave Conversion:	The following assumptions for additional service converted from accumulated sick leave as a percentage of service at retirement are used: *Service Retirements:* General: 1.00% Safety: 1.70% *Disability Retirements:* General: 0.06% Safety: 1.00% Pursuant to Section 31641.01, the cost of this benefit for the non-PEPRA tiers will be charged only to employers and will not affect member contribution rates.

Changed Actuarial Assumptions

The following assumptions have been changed since the prior valuation. Previously these assumptions were as follows:

Administrative Expenses:	1.15% of payroll allocated to both the employer and the member based on normal cost (before expenses) for the employer and member. This assumption changes each year based on the actual administrative expenses as a percent of actual compensation during the calendar year leading up to the valuation date.

Actuarial Funding Policy

Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age on the valuation date minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formula for each individual has always been in effect (i.e., “replacement life within a tier”).
Actuarial Value of Assets:	Market value of assets (MVA) less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized returns are equal to the difference between the actual market return and the expected return on the market value, and are recognized semi-annually over a five-year period.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.
Amortization Policy:	The UAAL as of December 31, 2014 will continue to be amortized over separate amortization layers based on the valuations during which each separate layer was previously established. Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of December 31 will be amortized over a period of 18 years. Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 18 years.

	Unless the Board adopts an alternative amortization period after receiving an actuarial analysis: • With the exception noted below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 10 years; • The entire increase in UAAL resulting from a temporary retirement incentive will be funded in full upon adoption of the incentive. If the increase in UAAL is due to the impact of benefits resulting from additional service permitted in Section 31641.04 of the 1937 CERL (Golden Handshake), the entire increase in UAAL will be funded in full upon adoption of the Golden Handshake. The UAAL will be amortized over "closed" amortization periods so that the amortization period for each layer decreases by one year with each actuarial valuation. The UAAL will be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase (i.e., payroll growth). If an overfunding or "surplus" exists (i.e., the VVA exceeds the AAL, so that the total of all UAAL amortization layers becomes negative), any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods. If the surplus exceeds 20% of the AAL per Section 7522.52 of the Government Code, then the amount of surplus in excess of 20% of the AAL (and any subsequent surpluses in excess of that amount) will be amortized over an "open" amortization period of 30 years, but only if the other conditions of Section 7522.52 have also been met. If those conditions are not met, then the surplus will not be amortized and the full Normal Cost will be contributed. These amortization policy components will generally apply separately to each of CCCERA's UAAL cost groups with the exception that the conditions of Section 7522.52 apply to the total plan.

Other Actuarial Methods

Employer Contributions:	Employer contributions consist of two components: *Normal Cost* The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation. *Contribution to the Unfunded Actuarial Accrued Liability (UAAL)* The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of

	payroll, amortization payments (credits) are scheduled to increase at the annual payroll growth rate of 3.00% (i.e., 2.50% inflation plus 0.50% "across-the-board" salary increase). The amortization policy is described on the previous page. The recommended employer contributions are provided in *Section 2, Subsection F*. *General Tier 4 (2% COLA)* The General Tier 4 (2% COLA) in Cost Group #1 continues to not have any actual members as of December 31, 2022. The contribution rates for this cost group have been developed based on generally the same methodology used to estimate contribution rates for all of the PEPRA tiers in the December 31, 2012 valuation. We have assumed in this valuation that the demographic profiles (e.g., entry age, composition of male versus female, etc.) for this cost group can be approximated by the data profiles of current active members within the PEPRA tiers.
Member Contributions:	*Non-PEPRA Members* Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for non-PEPRA General and Safety members, respectively. The member's basic contribution rate is determined so that, if paid annually from a member's first year of membership through the prescribed retirement age, would accumulate to the amount necessary to fund an annuity that is equal to: • 1/120 of one year Final Average Salary per year of service at age 55 for General Tier 1 and Tier 3 Non-Enhanced members • 1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Non-Enhanced members • 1/120 of one year Final Average Salary per year of service at age 60 for General Tier 1 and Tier 3 Enhanced members • 1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Enhanced members • 1/100 of three year Final Average Salary per year of service at age 50 for Safety Tier C Enhanced members Member contributions are accumulated at an annual interest rate adopted annually by the Board. Note that recently negotiated MOU's for County General members no longer include the 50% employer subvention of the members' basic contributions. Districts pay varying portions of the members' basic contributions on a nonrefundable basis. Members also pay 50% of the cost-of-living benefit. For most Safety Tier A employers, Safety members also subvent a portion of the employer rate, currently up to 9% of compensation (depending on their MOU). Effective with the December 31, 2014 valuation, for determining the cost of the total benefit (i.e., basic and COLA components), the leave cashout assumptions are recognized in the valuation as an employer and member cost. Prior to the December 31, 2014 valuation, for determining the cost of the basic benefit (i.e., non-COLA component), the leave cashout assumptions were recognized in the valuation only as an employer cost and did not affect member contribution rates. In other words, the leave cashout assumptions were only used in establishing COLA member contribution rates.

	As a result of including the leave cashout assumptions in the basic member rates for the members of each specific cost group, the COLA member rates are no longer pooled across all members of the same tier. This results in twelve different sets of member contribution rates for each specific cost group. *PEPRA Members* Pursuant to Section 7522.30(a) of the Government Code, PEPRA members are required to contribute at least 50% of the Normal Cost rate. We have assumed that exactly 50% of the Normal Cost would be paid by PEPRA members. In addition, we have calculated the total Normal Cost rate for the PEPRA tiers to the nearest one fiftieth of one percent (i.e., the nearest even one-hundredth) as that will allow the Normal Cost rate to be shared exactly 50:50 without going beyond two decimal places. The member contribution rates for all members are provided in *Section 4, Exhibit 3*.
Cost Sharing Adjustments:	Starting with the December 31, 2009 Actuarial Valuation, the Board took action to depool CCCERA's assets, liabilities and normal cost by employer when determining employer contribution rates. The Board action included a review of experience back to December 31, 2002. This did not involve recalculation of any employer rates prior to December 31, 2009. However, it did involve reflecting the separate experience of the employers in each individual cost group back from December 31, 2002 through December 31, 2009. The cost groups are detailed in *Section 4, Exhibit 5*. In addition, the Board action called for a discontinuation of certain cost sharing adjustments for both member and employer contribution rates for General Tier 1 and Safety Tier A. Even under the depooling structure, there are a few remaining cost sharing arrangements. Here is a summary of the cost sharing arrangements that were implemented in the December 31, 2009 Actuarial Valuation: • Smaller employers (less than 50 active members as of December 31, 2009) were pooled with the applicable County tier. For the December 31, 2009 through December 31, 2018 valuations, Safety members from the East Contra Costa Fire Protection District were pooled with Safety members of the Contra Costa County Fire Protection District. Starting with the December 31, 2019 valuation the Safety members from the East Contra Costa Fire Protection District were depooled from the Safety members of the Contra Costa Fire Protection District based on AAL. Effective July 1, 2022, East Contra Costa Fire Protection District was annexed into Contra Costa Fire Protection District. Consistent with the annexation, starting with the December 31, 2021 valuation, the prior General and Safety members from the East Contra Costa Fire Protection District have become General and Safety members of Contra Costa Fire Protection District. • Due to a statutory requirement, the Superior Court was pooled with the County regardless of how many members the Court has. • UAAL costs are pooled between Cost Group #1 and Cost Group #2 which represent General County and Small Districts. UAAL costs are also pooled for Cost Groups #7 and #9 which are Safety County tiers.

Additional Contribution Rate Adjustments:	Adjustments are made to some UAAL amounts for the County, the Moraga-Orinda Fire District (Moraga), First 5 – Children & Families Commission (First Five) and Local Agency Formation Commission (LAFCO) to account for Pension Obligation Bonds (POBs) and any other special contributions that they previously made. These adjustments serve to reduce the UAAL contribution rate for these employers. The outstanding balances of these adjustments as of December 31, 2022 are as follows:

	County General	Moraga General	First Five General	LAFCO General[1]
Basic	$0	$0	$0	$121,316
COL	0	0	0	0

Internal Revenue Code Section 415:	Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan. A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets. In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $265,000 for 2023. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions. Non-PEPRA benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m). Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard. Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. However, it is anticipated that PEPRA members will not be limited in the future due to the PEPRA compensation limit applied in the determination of their benefit. Actual limitations will result in actuarial gains as they occur.

Changed Actuarial Methods

There have been no changes in actuarial methods since the prior valuation.

[1] LAFCO made several UAAL prepayments in the past valuations. Those prepayments have been amortized over 18 years from the date they were made and allocated to provide Basic and COLA rate credits based on the then current Basic and COLA UAAL rates before the prepayments. In this valuation with the restart of UAAL amortization charge layer being fully amortized, we have re-allocated the outstanding balance of those prepayment credits so that the COLA UAAL rate for LAFCO would be the same as the other employers in Cost Group #1.

Exhibit 2: Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	January 1 through December 31
Membership Eligibility:	
General Tier 1	General members hired before July 1, 1980 and electing not to transfer to Tier 2 Plan. Certain General members with membership dates before January 1, 2013 hired by specific employers who did not adopt Tier 2 are placed in Tier 1.
General Tier 2	Most General members hired on or after August 1, 1980 and all General members hired before July 1, 1980 electing to transfer to the Tier 2 Plan. Effective October 1, 2002, for the County, Tier 2 was eliminated and all County employees (excluding CNA employees) in Tier 2 were placed in Tier 3. Effective January 1, 2005, all CNA employees in Tier 2 were placed in Tier 3.
General Tier 3	General members with membership dates before January 1, 2013 who are not placed in Tier 1 are placed in Tier 3.
General PEPRA Tier 4	General members with membership dates on or after January 1, 2013 hired by specific employers who did not adopt Tier 2 are placed in Tier 4.
General PEPRA Tier 5	General members with membership dates on or after January 1, 2013 who are not placed in Tier 4 are placed in Tier 5.
Safety Tier A and Tier C	Safety members with membership dates before January 1, 2013. County Sheriff's Department Safety members hired on or after January 1, 2007, but before January 1, 2013 are placed in Safety Tier C Enhanced.
Safety PEPRA Tier D and Tier E	Safety members with membership dates on or after January 1, 2013. Safety members from certain bargaining units are placed in Safety Tier E.

Final Compensation for Benefit Determination:	
General Tier 1 and Tier 3 (non-disability), Safety Tier A	Highest consecutive 12 months of compensation earnable. (§31462.1) (FAS1)
General Tier 2 and Tier 3 (disability), Safety Tier C	Highest consecutive 36 months of compensation earnable. (§31462) (FAS3)
General Tier 4 and Tier 5, Safety Tier D and Tier E	Highest consecutive 36 months of pensionable compensation. (§7522.10(c), §7522.32 and §7522.34) (FAS3)
Compensation Limit:	
General Tier 1, Tier 2 and Tier 3, Safety Tier A and Tier C	For members with membership dates on or after January 1, 1996, Compensation Earnable is limited to Internal Revenue Code Section 401(a)(17). The limit is $330,000 for calendar year 2023. The limit is indexed for inflation on an annual basis.
General Tier 4 and Tier 5, Safety Tier D and Tier E	Pensionable Compensation is limited to $146,042 for 2023 ($175,250, if not enrolled in Social Security). The limit is indexed for inflation on an annual basis.
Social Security Primary Insurance Amount:	
General Tier 2	Estimated Social Security award at age 62 assuming level future earnings. (PIA)
Service:	
All Tiers	Years of service (Yrs) are generally based on a member's employment during a period of time for which deductions are made from their compensation. Includes accumulated sick leave as of the date of retirement. (§31641.01)
General Tier 2	Maximum of 30 years (Yrs30).
Service Retirement Eligibility:	
General Tier 1, Tier 2, and Tier 3	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years of service regardless of age. (§31672)
General Tier 4 and Tier 5	Age 52 with 5 years of service or age 70 regardless of service. (§7522.20(a) and §31672.3)
Safety Tier A and Tier C	Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years of service regardless of age. (§31663.25)
Safety Tier D and Tier E	Age 50 with 5 years of service or age 70 regardless of service. (§7522.25(a)) and §31672.3)

Benefit Formula: The offsets shown in all benefit formulas only apply to members integrated with Social Security.

General Tier 1 and Tier 3 (Non Enhanced) (§31676.11)

Retirement Age	Benefit Formula
50	1.24% x (FAS1 – $1,400) x Yrs
55	1.67% x (FAS1 – $1,400) x Yrs
60	2.18% x (FAS1 – $1,400) x Yrs
62	2.35% x (FAS1 – $1,400) x Yrs
65 & Over	2.61% x (FAS1 – $1,400) x Yrs

General Tier 1 and Tier 3 (Enhanced) (§31676.16)

Retirement Age	Benefit Formula
50	1.43% x (FAS1 – $1,400) x Yrs
55	2.00% x (FAS1 – $1,400) x Yrs
60	2.26% x (FAS1 – $1,400) x Yrs
62	2.37% x (FAS1 – $1,400) x Yrs
65 & Over	2.42% x (FAS1 – $1,400) x Yrs

For members previously covered under the non-enhanced §31676.11 formula, they are entitled to at least the benefits they could have received under §31676.11.

General Tier 2 (§31752)

Retirement Age	Benefit Formula
50	0.83% x FAS3 x Yrs – 0.57% x Yrs30 x PIA
55	1.13% x FAS3 x Yrs – 0.87% x Yrs30 x PIA
60	1.43% x FAS3 x Yrs – 1.37% x Yrs30 x PIA
62	1.55% x FAS3 x Yrs – 1.67% x Yrs30 x PIA
65 & Over	1.73% x FAS3 x Yrs – 1.67% x Yrs30 x PIA

General Tier 4 and Tier 5 (§7522.20(a))

Retirement Age	Benefit Formula
52	1.00% x FAS3 x Yrs
55	1.30% x FAS3 x Yrs
60	1.80% x FAS3 x Yrs
62	2.00% x FAS3 x Yrs
65	2.30% x FAS3 x Yrs
67 & Over	2.50% x FAS3 x Yrs

Benefit Formula (continued):		
Safety Tier A (Non-Enhanced) (§31664)	**Retirement Age**	**Benefit Formula**
	50	2.00% x FAS1 x Yrs
	55 & Over	2.62% x FAS1 x Yrs
Safety Tier A (Enhanced) (§31664.1)	**Retirement Age**	**Benefit Formula**
	50 & Over	3.00% x FAS1 x Yrs
Safety Tier C (Enhanced) (§31664.1)	**Retirement Age**	**Benefit Formula**
	50 & Over	3.00% x FAS3 x Yrs
Safety Tier D and Tier E (§7522.25(d))	**Retirement Age**	**Benefit Formula**
	50	2.00% x FAS3 x Yrs
	55	2.50% x FAS3 x Yrs
	57 & Over	2.70% x FAS3 x Yrs

Maximum Benefit:	
General Tier 1 and Tier 3, Safety Tier 1 and Tier C	100% of Final Compensation. (§31676.11, §31676.16, §31664, §31664.1)
General Tier 2, Tier 4 and Tier 5, Safety Tier D and Tier E	None.

Non-Service Connected Disability:	
General Tier 1 and Tier 4	
Eligibility	Five years of service. (§31720)
Benefit Formula	1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to age 65, but the total projected benefit cannot be more than one-third of Final Compensation. (§31727)
General Tier 2, Tier 3 and Tier 5	
Eligibility	Ten years of service. (§31720.1)
Benefit Formula	40% of Final Compensation plus 10% of Final Compensation used in the benefit determination for each minor child (maximum of three). (§31727.01)
Offset	Disability benefits are offset by other plans of the employer except Workers Compensation and Social Security.
Safety	
Eligibility	Five years of service (§31720).
Benefit Formula	1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to age 55, but the total projected benefit cannot be more than one-third of Final Compensation. (§31727.2)
Service Connected Disability:	
General Tier 1 and Tier 4, Safety	
Eligibility	No age or service requirements. (§31720)
Benefit Formula	50% of the Final Compensation. (§31727.4)
General Tier 2, Tier 3, and Tier 5	
Eligibility	No age or service requirements. (§31720)
Benefit Formula	40% of Final Compensation plus 10% of Final Compensation for each minor child (maximum of three). (§31727.01)
Offset	Disability benefits are offset by other plans of the Employer except Workers Compensation and Social Security.

Pre-Retirement Death:	
General Tier 1, Tier 3, Tier 4, and Tier 5, Safety	
Eligibility – A	None.
Benefit – A	Refund of employee contributions with interest, plus one month's compensation for each year of service, to a maximum of six month's compensation (§31781).
Eligibility – B	Five years of service (Ten years for General Tier 3 and Tier 5).
Benefit – B	Option 2 (100% continuation) of Service Retirement or Non-Service Connected Disability benefit payable to designated beneficiary.
Death in line of duty	50% of Final Compensation payable to spouse. (§31787)
General Tier 2	
Eligibility – A	None.
Benefit – A	Refund of employee contributions with interest, plus $2,000 lump sum benefit offset by any Social Security payment. (§31781.01);
Eligibility – B	Ten years of service.
Benefit – B	Option 2 (100% continuation) of Service Retirement or Non-Service Connected Disability benefit payable to designated beneficiary.
Death in line of duty	60% of Service or Disability Retirement Benefit (minimum benefit is 24% of Final Compensation) plus, for each minor child, 10% of the allowance otherwise paid to the member. Minimum family benefit is 60% of the member's allowance. Maximum family benefit is 100% of member's allowance.

Death After Retirement:	
General Tier 1, Tier 3, Tier 4, and Tier 5, Safety	
Service Retirement or Non Service Connected Disability Retirement	Unless another option was selected at retirement, 60% of member's unmodified allowance continues to eligible spouse. An eligible spouse is a surviving spouse who was married to the member at least one year prior to the member's retirement or at least two years prior to the date of death and has attained age 55 on or prior to the date of death. (§31760.2) An additional lump sum benefit of $5,000 is payable to the member's beneficiary. (§31789.5)
Service Connected Disability	Unless another option was selected at retirement, 100% of member's allowance continued to eligible spouse. (§31786) An additional lump sum benefit of $5,000 is payable to the member's beneficiary. (§31789.5)
General Tier 2	
Service Retirement or Non Service Connected Disability Retirement	Unless another option was selected at retirement, 60% of member's unmodified allowance continues to eligible spouse plus 20% of allowance to each minor child. (§31789.11) Maximum benefit is 100% of allowance. An additional lump sum benefit of $5,000 (§31789.5) plus $2,000 less any Social Security lump sum payment (§31789.01) are payable to the member's beneficiary.
Withdrawal Benefits:	
Less than Five Years of Service	Refund of accumulated employee contributions with interest, or earned benefit at age 70. (§31628)
Five or More Years of Service	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire. (§31700)
Post-Retirement Cost-of-Living Benefits:	
General Tier 1, Tier 3 (non-disability), Tier 4, and Tier 5, Safety Tier A and Tier D	Future changes based on Consumer Price Index to a maximum of 3% per year, excess "banked."
General Tier 2, Tier 3 (disability) and Tier 5 (disability)	Future changes based on Consumer Price Index to a maximum of 4% per year, excess "banked."
General Tier 4 and Tier 5 (under certain MOUs), Safety Tier C and Tier E	Future changes based on Consumer Price Index to a maximum of 2% per year, excess "banked."

Section 4: Actuarial Valuation Basis

Member Contributions:	Please refer to *Section 4, Exhibit 3* for specific rates.
General Tier 1 and Tier 3 (Non Enhanced)	
Basic	Entry-age based rates that provide for one-half of the §31676.11 benefit payable at age 55.
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
General Tier 1 and Tier 3 (Enhanced)	
Basic	Entry-age based rates that provide for an annuity at age 60 equal to 1/120 of FAS1.
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
General Tier 4 and Tier 5	50% of the total Normal Cost rate.
Safety Tier A (Non Enhanced)	
Basic	Entry-age based rates that provide for one-half of the §31664 benefit payable at age 50.
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Safety Tier A (Enhanced)	
Basic	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS1.
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Safety Tier C (Enhanced)	
Basic	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS3.
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Safety Tier D and Tier E	50% of the total Normal Cost rate.
Other Information:	Transfers from Tier 1 to Tier 2 were made on an individual voluntary irrevocable basis. Credit is given under Tier 2 for future service only. The Cost-of-Living maximum is 4% only for the credit under Tier 2. Transferred Tier 2 members keep the five-year requirement for nonservice-connected disability. Those who were members on or before March 7, 1973 and Safety members with membership dates on or before January 1, 2013 will be exempt from paying member contributions after 30 years of service.

Plan Provisions Not Valued:	Additional $5,000 lump sum post-retirement death benefit (except for $2,000 for General Tier 2 members paid out of the Valuation Value of Assets) payable to a member's beneficiary. This benefit is paid from a reserve that is not included in the Valuation Value of Assets and is subject at all times to the availability of funds.

Changed Plan Provisions

There have been no changes in Plan Provisions since the prior valuation.

Note: The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert the actuary so they can both be sure the proper provisions are valued.

Exhibit 3: Member Contribution Rates

General Cost Group #1 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

	Basic		COLA		Total	
Entry Age	**First $350**	**Over $350**	**First $350**	**Over $350**	**First $350**	**Over $350**
15	3.79%	5.43%	1.87%	2.80%	5.66%	8.23%
16	3.85%	5.53%	1.91%	2.86%	5.76%	8.39%
17	3.92%	5.63%	1.94%	2.91%	5.86%	8.54%
18	3.99%	5.73%	1.98%	2.97%	5.97%	8.70%
19	4.05%	5.83%	2.02%	3.03%	6.07%	8.86%
20	4.12%	5.93%	2.05%	3.08%	6.17%	9.01%
21	4.19%	6.04%	2.10%	3.15%	6.29%	9.19%
22	4.27%	6.15%	2.14%	3.21%	6.41%	9.36%
23	4.33%	6.25%	2.18%	3.27%	6.51%	9.52%
24	4.41%	6.37%	2.22%	3.33%	6.63%	9.70%
25	4.49%	6.48%	2.27%	3.40%	6.76%	9.88%
26	4.56%	6.59%	2.31%	3.46%	6.87%	10.05%
27	4.64%	6.71%	2.35%	3.53%	6.99%	10.24%
28	4.72%	6.83%	2.40%	3.60%	7.12%	10.43%
29	4.80%	6.95%	2.44%	3.66%	7.24%	10.61%
30	4.89%	7.08%	2.49%	3.74%	7.38%	10.82%
31	4.97%	7.20%	2.54%	3.81%	7.51%	11.01%
32	5.05%	7.33%	2.59%	3.88%	7.64%	11.21%
33	5.14%	7.46%	2.63%	3.95%	7.77%	11.41%
34	5.23%	7.60%	2.69%	4.03%	7.92%	11.63%
35	5.33%	7.74%	2.74%	4.11%	8.07%	11.85%
36	5.42%	7.88%	2.79%	4.19%	8.21%	12.07%
37	5.51%	8.02%	2.85%	4.27%	8.36%	12.29%
38	5.61%	8.17%	2.91%	4.36%	8.52%	12.53%
39	5.72%	8.33%	2.97%	4.45%	8.69%	12.78%

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #1 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
40	5.82%	8.48%	3.02%	4.53%	8.84%	13.01%
41	5.92%	8.63%	3.08%	4.62%	9.00%	13.25%
42	6.03%	8.79%	3.14%	4.71%	9.17%	13.50%
43	6.13%	8.94%	3.19%	4.79%	9.32%	13.73%
44	6.23%	9.10%	3.25%	4.88%	9.48%	13.98%
45	6.34%	9.26%	3.32%	4.98%	9.66%	14.24%
46	6.45%	9.42%	3.38%	5.07%	9.83%	14.49%
47	6.55%	9.58%	3.44%	5.16%	9.99%	14.74%
48	6.66%	9.74%	3.50%	5.25%	10.16%	14.99%
49	6.75%	9.88%	3.55%	5.33%	10.30%	15.21%
50	6.85%	10.03%	3.61%	5.41%	10.46%	15.44%
51	6.96%	10.19%	3.67%	5.50%	10.63%	15.69%
52	7.07%	10.35%	3.73%	5.59%	10.80%	15.94%
53	7.17%	10.51%	3.79%	5.69%	10.96%	16.20%
54	7.27%	10.65%	3.85%	5.77%	11.12%	16.42%
55	7.36%	10.79%	3.89%	5.84%	11.25%	16.63%
56	7.43%	10.90%	3.94%	5.91%	11.37%	16.81%
57	7.43%	10.89%	3.93%	5.90%	11.36%	16.79%
58	7.39%	10.83%	3.91%	5.87%	11.30%	16.70%
59 & Over	7.23%	10.59%	3.82%	5.73%	11.05%	16.32%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	1.00%
COLA Loading Factor:	56.80%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #2 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
15	3.78%	5.42%	1.62%	2.43%	5.40%	7.85%
16	3.85%	5.52%	1.65%	2.48%	5.50%	8.00%
17	3.91%	5.62%	1.69%	2.53%	5.60%	8.15%
18	3.98%	5.72%	1.72%	2.58%	5.70%	8.30%
19	4.05%	5.82%	1.75%	2.63%	5.80%	8.45%
20	4.11%	5.92%	1.78%	2.67%	5.89%	8.59%
21	4.19%	6.03%	1.82%	2.73%	6.01%	8.76%
22	4.25%	6.13%	1.85%	2.78%	6.10%	8.91%
23	4.33%	6.24%	1.89%	2.83%	6.22%	9.07%
24	4.40%	6.35%	1.93%	2.89%	6.33%	9.24%
25	4.47%	6.46%	1.96%	2.94%	6.43%	9.40%
26	4.55%	6.58%	2.00%	3.00%	6.55%	9.58%
27	4.63%	6.70%	2.04%	3.06%	6.67%	9.76%
28	4.71%	6.82%	2.08%	3.12%	6.79%	9.94%
29	4.79%	6.94%	2.12%	3.18%	6.91%	10.12%
30	4.87%	7.06%	2.16%	3.24%	7.03%	10.30%
31	4.96%	7.19%	2.20%	3.30%	7.16%	10.49%
32	5.05%	7.32%	2.25%	3.37%	7.30%	10.69%
33	5.13%	7.45%	2.29%	3.43%	7.42%	10.88%
34	5.22%	7.58%	2.33%	3.49%	7.55%	11.07%
35	5.31%	7.72%	2.37%	3.56%	7.68%	11.28%
36	5.41%	7.86%	2.42%	3.63%	7.83%	11.49%
37	5.51%	8.01%	2.47%	3.71%	7.98%	11.72%
38	5.60%	8.15%	2.52%	3.78%	8.12%	11.93%
39	5.70%	8.30%	2.57%	3.85%	8.27%	12.15%

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #2 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
40	5.81%	8.46%	2.62%	3.93%	8.43%	12.39%
41	5.91%	8.61%	2.67%	4.00%	8.58%	12.61%
42	6.01%	8.77%	2.72%	4.08%	8.73%	12.85%
43	6.11%	8.92%	2.77%	4.16%	8.88%	13.08%
44	6.22%	9.08%	2.82%	4.23%	9.04%	13.31%
45	6.33%	9.24%	2.87%	4.31%	9.20%	13.55%
46	6.43%	9.40%	2.93%	4.39%	9.36%	13.79%
47	6.54%	9.56%	2.98%	4.47%	9.52%	14.03%
48	6.64%	9.71%	3.03%	4.55%	9.67%	14.26%
49	6.75%	9.87%	3.08%	4.62%	9.83%	14.49%
50	6.84%	10.01%	3.13%	4.69%	9.97%	14.70%
51	6.95%	10.17%	3.18%	4.77%	10.13%	14.94%
52	7.05%	10.33%	3.23%	4.85%	10.28%	15.18%
53	7.15%	10.48%	3.29%	4.93%	10.44%	15.41%
54	7.25%	10.62%	3.33%	4.99%	10.58%	15.61%
55	7.33%	10.75%	3.37%	5.06%	10.70%	15.81%
56	7.39%	10.84%	3.40%	5.10%	10.79%	15.94%
57	7.43%	10.89%	3.42%	5.13%	10.85%	16.02%
58	7.39%	10.84%	3.40%	5.10%	10.79%	15.94%
59 & Over	7.03%	10.30%	3.23%	4.84%	10.26%	15.14%

Interest: 6.75% per annum
Mortality: See *Section 4, Exhibit 1*
Salary Increase: Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense: 0.50% of payroll added to Basic rates
Leave Cashout: 0.75%
COLA Loading Factor: 49.35%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #3 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	5.64%	2.86%	8.50%
16	5.74%	2.92%	8.66%
17	5.84%	2.97%	8.81%
18	5.95%	3.03%	8.98%
19	6.05%	3.09%	9.14%
20	6.16%	3.15%	9.31%
21	6.27%	3.21%	9.48%
22	6.38%	3.27%	9.65%
23	6.49%	3.33%	9.82%
24	6.61%	3.40%	10.01%
25	6.73%	3.47%	10.20%
26	6.85%	3.54%	10.39%
27	6.97%	3.60%	10.57%
28	7.09%	3.67%	10.76%
29	7.22%	3.74%	10.96%
30	7.35%	3.81%	11.16%
31	7.48%	3.89%	11.37%
32	7.61%	3.96%	11.57%
33	7.75%	4.04%	11.79%
34	7.89%	4.11%	12.00%
35	8.03%	4.19%	12.22%
36	8.18%	4.28%	12.46%
37	8.33%	4.36%	12.69%
38	8.48%	4.44%	12.92%
39	8.64%	4.53%	13.17%

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #3 Members' Contribution Rates (as a % of Monthly Payroll) Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	8.80%	4.62%	13.42%
41	8.96%	4.71%	13.67%
42	9.12%	4.80%	13.92%
43	9.28%	4.89%	14.17%
44	9.44%	4.98%	14.42%
45	9.60%	5.07%	14.67%
46	9.77%	5.16%	14.93%
47	9.93%	5.25%	15.18%
48	10.09%	5.34%	15.43%
49	10.24%	5.42%	15.66%
50	10.40%	5.51%	15.91%
51	10.55%	5.59%	16.14%
52	10.69%	5.67%	16.36%
53	10.85%	5.76%	16.61%
54	11.00%	5.85%	16.85%
55	11.16%	5.93%	17.09%
56	11.21%	5.96%	17.17%
57	11.17%	5.94%	17.11%
58	11.03%	5.86%	16.89%
59 & Over	10.48%	5.56%	16.04%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	5.25%
COLA Loading Factor:	55.67%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #4 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
15	3.79%	5.43%	1.83%	2.74%	5.62%	8.17%
16	3.85%	5.53%	1.87%	2.80%	5.72%	8.33%
17	3.92%	5.63%	1.90%	2.85%	5.82%	8.48%
18	3.99%	5.73%	1.94%	2.91%	5.93%	8.64%
19	4.05%	5.83%	1.97%	2.96%	6.02%	8.79%
20	4.12%	5.93%	2.01%	3.02%	6.13%	8.95%
21	4.19%	6.04%	2.05%	3.08%	6.24%	9.12%
22	4.27%	6.15%	2.09%	3.14%	6.36%	9.29%
23	4.33%	6.25%	2.13%	3.20%	6.46%	9.45%
24	4.41%	6.37%	2.17%	3.26%	6.58%	9.63%
25	4.49%	6.48%	2.22%	3.33%	6.71%	9.81%
26	4.56%	6.59%	2.26%	3.39%	6.82%	9.98%
27	4.64%	6.71%	2.30%	3.45%	6.94%	10.16%
28	4.72%	6.83%	2.35%	3.52%	7.07%	10.35%
29	4.80%	6.95%	2.39%	3.59%	7.19%	10.54%
30	4.89%	7.08%	2.44%	3.66%	7.33%	10.74%
31	4.97%	7.20%	2.49%	3.73%	7.46%	10.93%
32	5.05%	7.33%	2.53%	3.80%	7.58%	11.13%
33	5.14%	7.46%	2.58%	3.87%	7.72%	11.33%
34	5.23%	7.60%	2.63%	3.95%	7.86%	11.55%
35	5.33%	7.74%	2.69%	4.03%	8.02%	11.77%
36	5.42%	7.88%	2.73%	4.10%	8.15%	11.98%
37	5.51%	8.02%	2.79%	4.18%	8.30%	12.20%
38	5.61%	8.17%	2.85%	4.27%	8.46%	12.44%
39	5.72%	8.33%	2.91%	4.36%	8.63%	12.69%

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #4 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
40	5.82%	8.48%	2.96%	4.44%	8.78%	12.92%
41	5.92%	8.63%	3.01%	4.52%	8.93%	13.15%
42	6.03%	8.79%	3.07%	4.61%	9.10%	13.40%
43	6.13%	8.94%	3.13%	4.69%	9.26%	13.63%
44	6.23%	9.10%	3.19%	4.78%	9.42%	13.88%
45	6.34%	9.26%	3.25%	4.87%	9.59%	14.13%
46	6.45%	9.42%	3.31%	4.96%	9.76%	14.38%
47	6.55%	9.58%	3.37%	5.05%	9.92%	14.63%
48	6.66%	9.74%	3.43%	5.14%	10.09%	14.88%
49	6.75%	9.88%	3.48%	5.22%	10.23%	15.10%
50	6.85%	10.03%	3.53%	5.30%	10.38%	15.33%
51	6.96%	10.19%	3.59%	5.39%	10.55%	15.58%
52	7.07%	10.35%	3.65%	5.48%	10.72%	15.83%
53	7.17%	10.51%	3.71%	5.57%	10.88%	16.08%
54	7.27%	10.65%	3.77%	5.65%	11.04%	16.30%
55	7.36%	10.79%	3.81%	5.72%	11.17%	16.51%
56	7.43%	10.90%	3.85%	5.78%	11.28%	16.68%
57	7.43%	10.89%	3.85%	5.78%	11.28%	16.67%
58	7.39%	10.83%	3.83%	5.75%	11.22%	16.58%
59 & Over	7.23%	10.59%	3.74%	5.61%	10.97%	16.20%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	1.00%
COLA Loading Factor:	55.62%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #5 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	5.43%	2.93%	8.36%
16	5.53%	2.99%	8.52%
17	5.63%	3.05%	8.68%
18	5.73%	3.11%	8.84%
19	5.83%	3.17%	9.00%
20	5.93%	3.23%	9.16%
21	6.04%	3.29%	9.33%
22	6.15%	3.36%	9.51%
23	6.25%	3.42%	9.67%
24	6.37%	3.49%	9.86%
25	6.48%	3.55%	10.03%
26	6.59%	3.62%	10.21%
27	6.71%	3.69%	10.40%
28	6.83%	3.76%	10.59%
29	6.95%	3.83%	10.78%
30	7.08%	3.91%	10.99%
31	7.20%	3.98%	11.18%
32	7.33%	4.06%	11.39%
33	7.46%	4.14%	11.60%
34	7.60%	4.22%	11.82%
35	7.74%	4.30%	12.04%
36	7.88%	4.39%	12.27%
37	8.02%	4.47%	12.49%
38	8.17%	4.56%	12.73%
39	8.33%	4.65%	12.98%

Exhibit 3: Member Contribution Rates (continued)

General Cost General Cost Group #5 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	8.48%	4.74%	13.22%
41	8.63%	4.83%	13.46%
42	8.79%	4.93%	13.72%
43	8.94%	5.02%	13.96%
44	9.10%	5.11%	14.21%
45	9.26%	5.21%	14.47%
46	9.42%	5.30%	14.72%
47	9.58%	5.40%	14.98%
48	9.74%	5.49%	15.23%
49	9.88%	5.58%	15.46%
50	10.03%	5.66%	15.69%
51	10.19%	5.76%	15.95%
52	10.35%	5.85%	16.20%
53	10.51%	5.95%	16.46%
54	10.65%	6.03%	16.68%
55	10.79%	6.12%	16.91%
56	10.90%	6.18%	17.08%
57	10.89%	6.18%	17.07%
58	10.83%	6.14%	16.97%
59 & Over	10.59%	6.00%	16.59%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	1.00%
COLA Loading Factor:	59.44%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #6 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
15	4.29%	6.18%	1.72%	2.58%	6.01%	8.76%
16	4.36%	6.29%	1.75%	2.63%	6.11%	8.92%
17	4.43%	6.40%	1.79%	2.68%	6.22%	9.08%
18	4.51%	6.52%	1.82%	2.73%	6.33%	9.25%
19	4.59%	6.63%	1.85%	2.78%	6.44%	9.41%
20	4.67%	6.75%	1.89%	2.83%	6.56%	9.58%
21	4.75%	6.87%	1.93%	2.89%	6.68%	9.76%
22	4.83%	6.99%	1.96%	2.94%	6.79%	9.93%
23	4.91%	7.12%	2.00%	3.00%	6.91%	10.12%
24	5.00%	7.25%	2.04%	3.06%	7.04%	10.31%
25	5.09%	7.38%	2.08%	3.12%	7.17%	10.50%
26	5.17%	7.51%	2.12%	3.18%	7.29%	10.69%
27	5.26%	7.64%	2.16%	3.24%	7.42%	10.88%
28	5.35%	7.78%	2.20%	3.30%	7.55%	11.08%
29	5.45%	7.92%	2.24%	3.36%	7.69%	11.28%
30	5.55%	8.07%	2.29%	3.43%	7.84%	11.50%
31	5.65%	8.22%	2.33%	3.50%	7.98%	11.72%
32	5.75%	8.37%	2.38%	3.57%	8.13%	11.94%
33	5.85%	8.52%	2.43%	3.64%	8.28%	12.16%
34	5.95%	8.68%	2.47%	3.71%	8.42%	12.39%
35	6.06%	8.84%	2.52%	3.78%	8.58%	12.62%
36	6.17%	9.01%	2.57%	3.86%	8.74%	12.87%
37	6.27%	9.16%	2.62%	3.93%	8.89%	13.09%
38	6.39%	9.33%	2.67%	4.00%	9.06%	13.33%
39	6.49%	9.49%	2.72%	4.08%	9.21%	13.57%

Exhibit 3: Member Contribution Rates (continued)

General Cost Group #6 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

	Basic		COLA		Total	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350
40	6.61%	9.67%	2.77%	4.16%	9.38%	13.83%
41	6.72%	9.83%	2.82%	4.23%	9.54%	14.06%
42	6.83%	9.99%	2.87%	4.30%	9.70%	14.29%
43	6.95%	10.17%	2.93%	4.39%	9.88%	14.56%
44	7.05%	10.32%	2.97%	4.45%	10.02%	14.77%
45	7.15%	10.48%	3.02%	4.53%	10.17%	15.01%
46	7.25%	10.63%	3.06%	4.59%	10.31%	15.22%
47	7.37%	10.81%	3.12%	4.68%	10.49%	15.49%
48	7.47%	10.96%	3.16%	4.74%	10.63%	15.70%
49	7.58%	11.12%	3.21%	4.82%	10.79%	15.94%
50	7.69%	11.29%	3.26%	4.89%	10.95%	16.18%
51	7.75%	11.37%	3.29%	4.93%	11.04%	16.30%
52	7.77%	11.41%	3.30%	4.95%	11.07%	16.36%
53	7.71%	11.31%	3.27%	4.90%	10.98%	16.21%
54 & Over	7.45%	10.92%	3.15%	4.73%	10.60%	15.65%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	0.00%
COLA Loading Factor:	45.35%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #7 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	9.90%	6.64%	16.54%
16	9.90%	6.64%	16.54%
17	9.90%	6.64%	16.54%
18	9.90%	6.64%	16.54%
19	9.90%	6.64%	16.54%
20	9.90%	6.64%	16.54%
21	9.90%	6.64%	16.54%
22	10.06%	6.75%	16.81%
23	10.21%	6.86%	17.07%
24	10.37%	6.97%	17.34%
25	10.53%	7.09%	17.62%
26	10.70%	7.21%	17.91%
27	10.87%	7.33%	18.20%
28	11.05%	7.45%	18.50%
29	11.23%	7.58%	18.81%
30	11.39%	7.69%	19.08%
31	11.55%	7.81%	19.36%
32	11.71%	7.92%	19.63%
33	11.89%	8.05%	19.94%
34	12.07%	8.17%	20.24%
35	12.25%	8.30%	20.55%
36	12.44%	8.43%	20.87%
37	12.65%	8.58%	21.23%
38	12.85%	8.72%	21.57%
39	13.06%	8.87%	21.93%

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #7 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	13.29%	9.03%	22.32%
41	13.53%	9.20%	22.73%
42	13.78%	9.38%	23.16%
43	14.00%	9.54%	23.54%
44	14.17%	9.66%	23.83%
45	14.24%	9.71%	23.95%
46	14.28%	9.73%	24.01%
47	14.27%	9.73%	24.00%
48	14.09%	9.60%	23.69%
49 & Over	13.63%	9.28%	22.91%

Interest:	6.75 % per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	0.50%
COLA Loading Factor:	70.64%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #8 Members’ Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	9.88%	6.70%	16.58%
16	9.88%	6.70%	16.58%
17	9.88%	6.70%	16.58%
18	9.88%	6.70%	16.58%
19	9.88%	6.70%	16.58%
20	9.88%	6.70%	16.58%
21	9.88%	6.70%	16.58%
22	10.04%	6.81%	16.85%
23	10.19%	6.92%	17.11%
24	10.35%	7.03%	17.38%
25	10.51%	7.15%	17.66%
26	10.68%	7.27%	17.95%
27	10.85%	7.39%	18.24%
28	11.02%	7.51%	18.53%
29	11.20%	7.64%	18.84%
30	11.36%	7.76%	19.12%
31	11.52%	7.87%	19.39%
32	11.69%	7.99%	19.68%
33	11.86%	8.11%	19.97%
34	12.04%	8.24%	20.28%
35	12.23%	8.38%	20.61%
36	12.42%	8.51%	20.93%
37	12.62%	8.66%	21.28%
38	12.83%	8.81%	21.64%
39	13.04%	8.96%	22.00%

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #8 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	13.26%	9.11%	22.37%
41	13.51%	9.29%	22.80%
42	13.74%	9.46%	23.20%
43	13.95%	9.61%	23.56%
44	14.14%	9.74%	23.88%
45	14.20%	9.78%	23.98%
46	14.22%	9.80%	24.02%
47	14.29%	9.85%	24.14%
48	13.95%	9.61%	23.56%
49 & Over	13.66%	9.40%	23.06%

Interest: 6.75% per annum
Mortality: See *Section 4, Exhibit 1*
Salary Increase: Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense: 0.50% of payroll added to Basic rates
Leave Cashout: 0.25%
COLA Loading Factor: 71.42%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #9 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	9.50%	4.19%	13.69%
16	9.50%	4.19%	13.69%
17	9.50%	4.19%	13.69%
18	9.50%	4.19%	13.69%
19	9.50%	4.19%	13.69%
20	9.50%	4.19%	13.69%
21	9.50%	4.19%	13.69%
22	9.65%	4.26%	13.91%
23	9.80%	4.33%	14.13%
24	9.95%	4.40%	14.35%
25	10.11%	4.47%	14.58%
26	10.27%	4.54%	14.81%
27	10.43%	4.62%	15.05%
28	10.59%	4.69%	15.28%
29	10.75%	4.77%	15.52%
30	10.90%	4.84%	15.74%
31	11.05%	4.91%	15.96%
32	11.21%	4.98%	16.19%
33	11.38%	5.06%	16.44%
34	11.55%	5.14%	16.69%
35	11.72%	5.22%	16.94%
36	11.90%	5.30%	17.20%
37	12.09%	5.39%	17.48%
38	12.28%	5.48%	17.76%
39	12.48%	5.57%	18.05%

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #9 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	12.68%	5.66%	18.34%
41	12.88%	5.76%	18.64%
42	13.05%	5.84%	18.89%
43	13.14%	5.88%	19.02%
44	13.21%	5.91%	19.12%
45	13.18%	5.90%	19.08%
46	13.05%	5.84%	18.89%
47	12.78%	5.71%	18.49%
48	13.19%	5.90%	19.09%
49 & Over	13.70%	6.14%	19.84%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	0.00%
COLA Loading Factor:	46.51%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.00% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #10 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	9.88%	6.71%	16.59%
16	9.88%	6.71%	16.59%
17	9.88%	6.71%	16.59%
18	9.88%	6.71%	16.59%
19	9.88%	6.71%	16.59%
20	9.88%	6.71%	16.59%
21	9.88%	6.71%	16.59%
22	10.04%	6.83%	16.87%
23	10.19%	6.94%	17.13%
24	10.35%	7.05%	17.40%
25	10.51%	7.17%	17.68%
26	10.68%	7.29%	17.97%
27	10.85%	7.41%	18.26%
28	11.02%	7.53%	18.55%
29	11.20%	7.66%	18.86%
30	11.36%	7.77%	19.13%
31	11.52%	7.89%	19.41%
32	11.69%	8.01%	19.70%
33	11.86%	8.13%	19.99%
34	12.04%	8.26%	20.30%
35	12.23%	8.40%	20.63%
36	12.42%	8.53%	20.95%
37	12.62%	8.68%	21.30%
38	12.83%	8.83%	21.66%
39	13.04%	8.98%	22.02%

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #10 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	13.26%	9.13%	22.39%
41	13.51%	9.31%	22.82%
42	13.74%	9.48%	23.22%
43	13.95%	9.63%	23.58%
44	14.14%	9.76%	23.90%
45	14.20%	9.81%	24.01%
46	14.22%	9.82%	24.04%
47	14.29%	9.87%	24.16%
48	13.95%	9.63%	23.58%
49 & Over	13.66%	9.42%	23.08%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary Increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense:	0.50% of payroll added to Basic rates
Leave Cashout:	0.25%
COLA Loading Factor:	71.58%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #11 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	10.13%	6.91%	17.04%
16	10.13%	6.91%	17.04%
17	10.13%	6.91%	17.04%
18	10.13%	6.91%	17.04%
19	10.13%	6.91%	17.04%
20	10.13%	6.91%	17.04%
21	10.13%	6.91%	17.04%
22	10.29%	7.02%	17.31%
23	10.45%	7.14%	17.59%
24	10.61%	7.25%	17.86%
25	10.78%	7.37%	18.15%
26	10.95%	7.49%	18.44%
27	11.12%	7.62%	18.74%
28	11.30%	7.74%	19.04%
29	11.48%	7.87%	19.35%
30	11.64%	7.99%	19.63%
31	11.81%	8.11%	19.92%
32	11.98%	8.23%	20.21%
33	12.16%	8.36%	20.52%
34	12.34%	8.49%	20.83%
35	12.52%	8.62%	21.14%
36	12.72%	8.76%	21.48%
37	12.93%	8.91%	21.84%
38	13.13%	9.06%	22.19%
39	13.35%	9.21%	22.56%

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #11 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	13.57%	9.37%	22.94%
41	13.82%	9.55%	23.37%
42	14.06%	9.72%	23.78%
43	14.28%	9.88%	24.16%
44	14.45%	10.00%	24.45%
45	14.51%	10.05%	24.56%
46	14.51%	10.05%	24.56%
47	14.53%	10.06%	24.59%
48	14.23%	9.85%	24.08%
49 & Over	13.65%	9.43%	23.08%

Interest: 6.75% per annum
Mortality: See *Section 4, Exhibit 1*
Salary Increase: Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense: 0.50% of payroll added to Basic rates
Leave Cashout: 3.00%
COLA Loading Factor: 71.71%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #12 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013

Entry Age	Basic	COLA	Total
15	10.02%	5.29%	15.31%
16	10.02%	5.29%	15.31%
17	10.02%	5.29%	15.31%
18	10.02%	5.29%	15.31%
19	10.02%	5.29%	15.31%
20	10.02%	5.29%	15.31%
21	10.02%	5.29%	15.31%
22	10.17%	5.38%	15.55%
23	10.33%	5.47%	15.80%
24	10.49%	5.55%	16.04%
25	10.66%	5.65%	16.31%
26	10.82%	5.74%	16.56%
27	11.00%	5.84%	16.84%
28	11.17%	5.93%	17.10%
29	11.35%	6.03%	17.38%
30	11.52%	6.13%	17.65%
31	11.68%	6.22%	17.90%
32	11.85%	6.31%	18.16%
33	12.03%	6.41%	18.44%
34	12.20%	6.51%	18.71%
35	12.39%	6.61%	19.00%
36	12.59%	6.72%	19.31%
37	12.79%	6.83%	19.62%
38	12.99%	6.94%	19.93%
39	13.21%	7.07%	20.28%

Exhibit 3: Member Contribution Rates (continued)

Safety Cost Group #12 Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates before January 1, 2013 (continued)

Entry Age	Basic	COLA	Total
40	13.43%	7.19%	20.62%
41	13.67%	7.32%	20.99%
42	13.93%	7.47%	21.40%
43	14.13%	7.58%	21.71%
44	14.29%	7.67%	21.96%
45	14.40%	7.73%	22.13%
46	14.36%	7.71%	22.07%
47	14.40%	7.73%	22.13%
48	14.16%	7.59%	21.75%
49 & Over	13.47%	7.21%	20.68%

Interest: 6.75% per annum
Mortality: See *Section 4, Exhibit 1*
Salary Increase: Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative Expense: 0.50% of payroll added to Basic rates
Leave Cashout: 1.75%
COLA Loading Factor: 55.60%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Exhibit 3: Member Contribution Rates (continued)

General Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates On or After January 1, 2013

	Basic	COLA	Total
Cost Group #1 – PEPRA Tier 4 (2% COLA)	9.09%	2.09%	11.18%
Cost Group #1 – PEPRA Tier 4 (3% COLA)	9.36%	3.15%	12.51%
Cost Group #2 - PEPRA Tier 5 (2% COLA)	8.47%	1.90%	10.37%
Cost Group #2 - PEPRA Tier 5 (3%/4% COLA)	8.58%	2.84%	11.42%
Cost Group #3 - PEPRA Tier 4 (3% COLA)	8.60%	3.00%	11.60%
Cost Group #4 - PEPRA Tier 4 (3% COLA)	9.17%	3.10%	12.27%
Cost Group #5 - PEPRA Tier 4 (2% COLA)	10.16%	2.33%	12.49%
Cost Group #5 - PEPRA Tier 4 (3% COLA)	11.28%	3.85%	15.13%
Cost Group #6 - PEPRA Tier 4 (3% COLA)	11.01%	3.68%	14.69%

The PEPRA member contribution rates are 50% of the Normal Cost rate. The Basic rates shown above also include an administrative expense load of 0.50% of payroll.

Note: It is our understanding that in the determination of pension benefits under the PEPRA formulas, the maximum compensation that can be taken into account for 2023 is equal to $146,042; for an employer that is not enrolled in Social Security, the maximum amount is $175,250. (§7522.10) These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2023. (§7522.10(d))

Exhibit 3: Member Contribution Rates (continued)

Safety Members' Contribution Rates (as a % of Monthly Payroll)
Members with Membership Dates On or After January 1, 2013

	Basic	COLA	Total
Cost Group #7 - PEPRA Tier D	14.55%	6.02%	20.57%
Cost Group #8 - PEPRA Tier D	12.81%	5.39%	18.20%
Cost Group #8 - PEPRA Tier E	13.16%	3.68%	16.84%
Cost Group #9 - PEPRA Tier E	13.74%	3.82%	17.56%
Cost Group #10 - PEPRA Tier D	13.52%	5.70%	19.22%
Cost Group #11 - PEPRA Tier D	11.81%	4.98%	16.79%
Cost Group #12 - PEPRA Tier D	12.99%	5.49%	18.48%

The PEPRA member contribution rates are 50% of the Normal Cost rate. The Basic rates shown above also include an administrative expense load of 0.50% of payroll.

Note: It is our understanding that in the determination of pension benefits under the PEPRA formulas, the maximum compensation that can be taken into account for 2023 is equal to $146,042; for an employer that is not enrolled in Social Security, the maximum amount is $175,250. (§7522.10) These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2023. (§7522.10(d))

Exhibit 4: Non-Refundability Factors

		December 31, 2022		December 31, 2021	
		Legacy Tiers	PEPRA Tiers	Legacy Tiers	PEPRA Tiers
General					
Cost Group #1 –	County and Small Districts (Tier 1)	0.9676		0.9668	
	PEPRA Tier 4 (2% COLA)		0.9567		0.9561
	PEPRA Tier 4 (3% COLA)		0.9611		0.9604
Cost Group #2 –	County and Small Districts (Tier 3)	0.9559		0.9552	
	PEPRA Tier 5 (2% COLA)		0.9569		0.9564
	PEPRA Tier 5 (3%/4% COLA)		0.9610		0.9602
Cost Group #3 –	Central Contra Costa Sanitary District	0.9628	0.9685	0.9614	0.9669
Cost Group #4 –	Contra Costa Housing Authority	0.9620	0.9633	0.9601	0.9626
Cost Group #5 –	Contra Costa County Fire Protection District	0.9773		0.9773	
	PEPRA Tier 4 (2% COLA)		0.9588		0.9583
	PEPRA Tier 4 (3% COLA)		0.9621		0.9631
Cost Group #6 –	Small Districts (Non-Enhanced Tier 1 and 4)	0.9625	0.9508	0.9475	0.9484
Safety					
Cost Group #7 –	County (Tier A and D)	0.9710	0.9783	0.9712	0.9782
Cost Group #8 –	Contra Costa Fire Protection District	0.9762		0.9755	
	PEPRA Tier D (3% COLA)		0.9803		0.9800
	PEPRA Tier E (2% COLA)		0.9785		0.9762
Cost Group #9 –	County (Tier C and E)	0.9712	0.9761	0.9697	0.9756
Cost Group #10 –	Moraga-Orinda Fire District	0.9732	0.9781	0.9730	0.9779
Cost Group #11 –	San Ramon Valley Fire District	0.9769	0.9804	0.9770	0.9790
Cost Group #12 –	Rodeo-Hercules Fire Protection District	0.9824	0.9803	0.9865	0.9820

Exhibit 5: Summary of Cost Groups and Employers

General			
Cost Group	Employer Name	Benefit Structure	Special Adjustment
1	County General	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Local Agency Formation Commission	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Contra Costa Mosquito and Vector Control District	Tier 1 Enhanced/PEPRA Tier 4	
	Bethel Island Municipal District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
	First 5-Children & Families Commission	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Contra Costa County Employees' Retirement Association	Tier 1 Enhanced/PEPRA Tier 4	
	Superior Court	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Moraga-Orinda Fire District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Rodeo-Hercules Fire Protection District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
	San Ramon Valley Fire District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
2	County General	Tier 3 Enhanced/PEPRA Tier 5	Yes
	In-Home Supportive Services Authority	Tier 3 Enhanced/PEPRA Tier 5	
	Contra Costa Mosquito and Vector Control District	Tier 3 Enhanced/PEPRA Tier 5	
	Superior Court	Tier 3 Enhanced/PEPRA Tier 5	Yes
3	Central Contra Costa Sanitary District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
4	Contra Costa Housing Authority	Tier 1 Enhanced/PEPRA Tier 4	
5	Contra Costa County Fire Protection District (Non-Integrated)[1]	Tier 1 Enhanced/PEPRA Tier 4	
6	Rodeo Sanitary District	Tier 1 Non-Enhanced/PEPRA Tier 4	
	Byron Brentwood Cemetery	Tier 1 Non-Enhanced/PEPRA Tier 4	

Note: A special adjustment is made for employers that have a remaining balance of a Pension Obligation Bond or any other special contributions as described on page 124.

[1] Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire.

Exhibit 5: Summary of Cost Groups and Employers (continued)

Safety

Cost Group	Employer Name	Benefit Structure	Special Adjustment
7	County Safety	Tier A Enhanced/PEPRA Tier D	
8	Contra Costa County Fire Protection District[1]	Tier A Enhanced/PEPRA Tier D/E	
9	County Safety	Tier C Enhanced/PEPRA Tier E	
		(Members hired on or after January 1, 2007)	
10	Moraga-Orinda Fire District	Tier A Enhanced/PEPRA Tier D	
11	San Ramon Valley Fire District	Tier A Enhanced/PEPRA Tier D	
12	Rodeo-Hercules Fire Protection District	Tier A Non-Enhanced/PEPRA Tier D	

Note: A special adjustment is made for employers that have a remaining balance of a Pension Obligation Bond or any other special contributions as described on page 124.

[1] Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire.

Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2022

	Cashflow for the First Six-Month Period	Cost Groups #1 and #2 General County and Small Districts	Cost Group #3 Central Contra Costa Sanitary District	Cost Group #4 Contra Costa Housing Authority	Cost Group #5 Contra Costa County Fire Protection District	Cost Group #6 Small Districts (General Non-Enhanced)
1	**Allocated Valuation Value of Assets as of Beginning of Year**	**$5,865,218,228**	**$482,428,228**	**$67,820,635**	**$60,366,214**	**$8,535,850**
2	Contributions:[1]					
a.	Total Member Contributions	39,918,828	2,158,156	350,332	388,698	65,630
b.	Employer Contributions - Excludes POB and other Special Contributions	97,688,363	2,924,953	1,344,749	1,126,923	119,205
c.	Employer Contributions - Special (POB, Termination, etc.)	0	0	0	201,159	0
d.	Total Contributions	$137,607,191	$5,083,109	$1,695,081	$1,716,781	$184,835
3	Total Payments Excluding Post-Retirement Death	130,035,255	10,148,785	1,611,724	1,651,268	160,809
4	Administrative Expenses[2]	4,893,183	250,280	42,428	48,079	6,546
5	**Subtotal 1 + 2d – 3 – 4**	**$5,867,896,982**	**$477,112,272**	**$67,861,564**	**$60,383,647**	**$8,553,330**
6	Earnings Allocated in Proportion to **1**	189,894,654	15,619,289	2,195,788	1,954,441	276,360
7	**Allocated Valuation Value of Assets as of Middle of Year 5 + 6**	**$6,057,791,636**	**$492,731,561**	**$70,057,352**	**$62,338,088**	**$8,829,690**

Note: Results may be slightly off due to rounding.

[1] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[2] Allocated based on expected administrative expenses from the prior valuation.

Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2022 (continued)

	Cashflow for the Second Six-Month Period	Cost Groups #1 and #2 General County and Small Districts	Cost Group #3 Central Contra Costa Sanitary District	Cost Group #4 Contra Costa Housing Authority	Cost Group #5 Contra Costa County Fire Protection District	Cost Group #6 Small Districts (General Non-Enhanced)
7	**Allocated Valuation Value of Assets as of Middle of Year**	**$6,057,791,636**	**$492,731,561**	**$70,057,352**	**$62,338,088**	**$8,829,690**
8	Contributions:[1]					
a.	Total Member Contributions	41,167,729	2,384,169	381,182	566,769	69,463
b.	Employer Contributions - Excludes POB and other Special Contributions	101,552,697	3,875,062	1,404,296	1,366,814	81,713
c.	Employer Contributions - Special (POB, Termination, etc.)	0	0	0	0	0
d.	Total Contributions	$142,720,425	$6,259,231	$1,785,477	$1,933,583	$151,177
9	Total Payments Excluding Post-Retirement Death	188,278,191	14,522,955	2,226,036	2,374,108	230,895
10	Administrative Expenses[2]	6,578,561	336,484	57,042	64,640	8,802
11	**Subtotal 7 + 8d – 9 – 10**	**$6,005,655,308**	**$484,131,353**	**$69,559,752**	**$61,832,924**	**$8,741,170**
12	Earnings Allocated in Proportion to 7	116,516,998	9,477,316	1,347,500	1,199,026	169,832
13	**Allocated Valuation Value of Assets as of End of Year 11 + 12**	**$6,122,172,306**	**$493,608,669**	**$70,907,252**	**$63,031,950**	**$8,911,002**

Note: Results may be slightly off due to rounding.

[1] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[2] Allocated based on expected administrative expenses from the prior valuation.

Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2022 (continued)

	Cashflow for the First Six-Month Period	Cost Groups #7 & 9 Safety County	Cost Group #8 Contra Costa Fire Protection District	Cost Group #10 Moraga-Orinda Fire District	Cost Group #11 San Ramon Valley Fire District
1	**Allocated Valuation Value of Assets as of Beginning of Year**	**$2,136,286,241**	**$1,047,652,352**	**$189,300,977**	**$479,058,810**
2	Contributions:[1]				
a.	Total Member Contributions	9,572,692	4,454,360	717,845	1,990,552
b.	Employer Contributions - Excludes POB and other Special Contributions	35,353,275	17,287,731	2,931,634	9,204,209
c.	Employer Contributions - Special (POB, Termination, etc.)	0	3,143,278	0	0
d.	Total Contributions	$44,925,967	$24,885,368	$3,649,479	$11,194,760
3	Total Payments Excluding Post-Retirement Death	46,471,348	27,313,425	6,104,672	9,934,372
4	Administrative Expenses[2]	711,028	329,699	56,030	153,701
5	**Subtotal 1 + 2d – 3 – 4**	**$2,134,029,832**	**$1,044,894,596**	**$186,789,754**	**$480,165,498**
6	Earnings Allocated in Proportion to **1**	69,165,259	33,919,212	6,128,884	15,510,200
7	**Allocated Valuation Value of Assets as of Middle of Year 5 + 6**	**$2,203,195,091**	**$1,078,813,808**	**$192,918,638**	**$495,675,698**

Note: Results may be slightly off due to rounding.

[1] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[2] Allocated based on expected administrative expenses from the prior valuation.

Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2022 (continued)

	Cashflow for the Second Six-Month Period	Cost Groups #7 & 9 Safety County	Cost Group #8 Contra Costa Fire Protection District	Cost Group #10 Moraga-Orinda Fire District	Cost Group #11 San Ramon Valley Fire District
7	**Allocated Valuation Value of Assets as of Middle of Year**	**$2,203,195,091**	**$1,078,813,808**	**$192,918,638**	**$495,675,698**
8	Contributions:[1]				
a.	Total Member Contributions	9,896,669	5,102,137	781,556	2,017,441
b.	Employer Contributions - Excludes POB and other Special Contributions	37,855,075	18,924,455	3,076,640	9,728,881
c.	Employer Contributions - Special (POB, Termination, etc.)	0	0	0	279,000
d.	Total Contributions	$47,751,744	$24,026,592	$3,858,196	$12,025,322
9	Total Payments Excluding Post-Retirement Death	68,203,671	37,984,683	7,044,913	14,480,678
10	Administrative Expenses[2]	955,931	443,259	75,328	206,642
11	**Subtotal 7 + 8d – 9 – 10**	**$2,181,787,233**	**$1,064,412,458**	**$189,656,593**	**$493,013,700**
12	Earnings Allocated in Proportion to **7**	42,376,777	20,750,161	3,710,643	9,533,944
13	**Allocated Valuation Value of Assets as of End of Year 11 + 12**	**$2,224,164,010**	**$1,085,162,619**	**$193,367,236**	**$502,547,644**

Note: Results may be slightly off due to rounding.

[1] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[2] Allocated based on expected administrative expenses from the prior valuation.

Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2022 (continued)

	Cashflow for the First Six-Month Period	Cost Group #12 Rodeo-Hercules Fire Protection District	Withdrawn Employers	Total
1	**Allocated Valuation Value of Assets as of Beginning of Year**	**$43,889,686**	**$53,855,067**	**$10,434,412,288**
2	Contributions:[1]			
a.	Total Member Contributions	157,721	0	59,774,813
b.	Employer Contributions - Excludes POB and other Special Contributions	1,081,378	0	169,062,420
c.	Employer Contributions - Special (POB, Termination, etc.)	0	0	3,344,437
d.	Total Contributions	$1,239,099	$0	$232,181,670
3	Total Payments Excluding Post-Retirement Death	1,063,167	2,230,996	236,725,820
4	Administrative Expenses[2]	17,141	0	6,508,115
5	**Subtotal 1 + 2d – 3 – 4**	**$44,048,477**	**$51,624,071**	**$10,423,360,023**
6	Earnings Allocated in Proportion to **1**	1,420,990	1,743,633	337,828,710
7	**Allocated Valuation Value of Assets as of Middle of Year 5 + 6**	**$45,469,467**	**$53,367,704**	**$10,761,188,733**

Note: Results may be slightly off due to rounding.

[1] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[2] Allocated based on expected administrative expenses from the prior valuation.

Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2022 (continued)

	Cashflow for the Second Six-Month Period	Cost Group #12 Rodeo-Hercules Fire Protection District	Withdrawn Employers	Total
7	**Allocated Valuation Value of Assets as of Middle of Year**	**$45,469,467**	**$53,367,704**	**$10,761,188,733**
8	Contributions:[1]			
a.	Total Member Contributions	161,896	0	62,529,010
b.	Employer Contributions - Excludes POB and other Special Contributions	1,074,899	0	178,940,532
c.	Employer Contributions - Special (POB, Termination, etc.)	0	757,396	1,036,396
d.	Total Contributions	$1,236,795	$757,396	$242,505,938
9	Total Payments Excluding Post-Retirement Death	1,602,347	3,114,559	340,063,036
10	Administrative Expenses[2]	23,045	0	8,749,734
11	**Subtotal 7 + 8d – 9 – 10**	**$45,080,869**	**$51,010,541**	**$10,654,881,901**
12	Earnings Allocated in Proportion to **7**	874,571	983,393	206,940,161
13	**Allocated Valuation Value of Assets as of End of Year 11 + 12**	**$45,955,440**	**$51,993,934**	**$10,861,822,062**

Note: Results may be slightly off due to rounding.

[1] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[2] Allocated based on expected administrative expenses from the prior valuation.

Exhibit 7: Recommended Employer Contribution Rates – For Use in Preparing Contribution Rate Packet

The recommended employer contribution rates found on pages 34 through 42 have been shown on an aggregate basis. Within this Exhibit we have included the recommended legacy tier employer contribution rates as of December 31, 2022 for employers who are in Social Security and for employers who are not in Social Security. For completeness, we have also included the PEPRA tier employer contribution rates.

	Basic			COLA			Total			
Cost Group #1[1]	**First $350 Monthly[2]**	**Excess of $350 Monthly[2]**	**All Eligible Pay[3]**	**First $350 Monthly[2]**	**Excess of $350 Monthly[2]**	**All Eligible Pay[3]**	**First $350 Monthly[2]**	**Excess of $350 Monthly[2]**	**All Eligible Pay[3]**	**All Aggregate Pay**
Tier 1 Non-LAFCO (in Social Security)	15.30%	22.95%	N/A	2.64%	3.95%	N/A	17.94%	26.90%	N/A	26.60%
Tier 1 Non-LAFCO (not in Social Security)	N/A	N/A	22.70%	N/A	N/A	3.90%	N/A	N/A	26.60%	26.60%
Tier 1 LAFCO	11.60%	17.40%	N/A	2.63%	3.94%	N/A	14.23%	21.34%	N/A	21.12%
Tier 4 (3% COLA) Non-LAFCO	N/A	N/A	18.70%	N/A	N/A	3.34%	N/A	N/A	22.04%	22.04%
Tier 4 (3% COLA) LAFCO	N/A	N/A	13.22%	N/A	N/A	3.34%	N/A	N/A	16.56%	16.56%
Tier 4 (2% COLA)	N/A	N/A	18.43%	N/A	N/A	2.28%	N/A	N/A	20.71%	20.71%
Cost Group #2[1]										
Tier 3	14.37%	21.56%	N/A	2.43%	3.64%	N/A	16.80%	25.20%	N/A	24.89%
Tier 5 (3%/4% COLA)	N/A	N/A	17.92%	N/A	N/A	3.03%	N/A	N/A	20.95%	20.95%
Tier 5 (2% COLA)	N/A	N/A	17.81%	N/A	N/A	2.09%	N/A	N/A	19.90%	19.90%

[1] We have simplified the contribution rates for Cost Groups #1 and #2 because the POBs issued by certain employers have been fully amortized as of December 31, 2022.
[2] If employer is in Social Security.
[3] For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

Exhibit 7: Recommended Employer Contribution Rates (continued)

	Basic			COLA			Total			
Cost Group #3	**First $350 Monthly[1]**	**Excess of $350 Monthly[1]**	**All Eligible Pay[2]**	**First $350 Monthly[1]**	**Excess of $350 Monthly[1]**	**All Eligible Pay[2]**	**First $350 Monthly[1]**	**Excess of $350 Monthly[1]**	**All Eligible Pay[2]**	**All Aggregate Pay**
CCCSD Tier 1	N/A	N/A	13.97%	N/A	N/A	4.54%	N/A	N/A	18.51%	18.51%
CCCSD Tier 4 (3% COLA)	N/A	N/A	9.00%	N/A	N/A	3.66%	N/A	N/A	12.66%	12.66%
Cost Group #4										
Contra Costa Housing Authority Tier 1	15.14%	22.72%	N/A	5.57%	8.34%	N/A	20.71%	31.06%	N/A	30.60%
Contra Costa Housing Authority Tier 4 (3% COLA)	N/A	N/A	18.15%	N/A	N/A	7.51%	N/A	N/A	25.66%	25.66%
Cost Group #5										
CCCFPD Tier 1	N/A	N/A	27.77%	N/A	N/A	14.28%	N/A	N/A	42.05%	42.05%
CCCFPD Tier 4 (3% COLA)	N/A	N/A	24.08%	N/A	N/A	14.15%	N/A	N/A	38.23%	38.23%
CCCFPD Tier 4 (2% COLA)	N/A	N/A	22.96%	N/A	N/A	12.63%	N/A	N/A	35.59%	35.59%
Cost Group #6										
Non-Enhanced District Tier 1	8.64%	12.95%	N/A	2.56%	3.84%	N/A	11.20%	16.79%	N/A	16.63%
Non-Enhanced District Tier 4 (3% COLA)	N/A	N/A	11.14%	N/A	N/A	3.68%	N/A	N/A	14.82%	14.82%
Cost Group #7										
County Tier A	N/A	N/A	37.17%	N/A	N/A	27.15%	N/A	N/A	64.32%	64.32%
County Tier D	N/A	N/A	28.45%	N/A	N/A	25.62%	N/A	N/A	54.07%	54.07%
Cost Group #8										
CCCFPD Tier A	N/A	N/A	35.85%	N/A	N/A	36.52%	N/A	N/A	72.37%	72.37%
CCCFPD Tier D	N/A	N/A	25.06%	N/A	N/A	34.13%	N/A	N/A	59.19%	59.19%
CCCFPD Safety Tier E	N/A	N/A	25.41%	N/A	N/A	32.42%	N/A	N/A	57.83%	57.83%

1 If employer is in Social Security.
2 For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

Exhibit 7: Recommended Employer Contribution Rates (continued)

Cost Group #9	Basic: First $350 Monthly[1]	Basic: Excess of $350 Monthly[1]	Basic: All Eligible Pay[2]	COLA: First $350 Monthly[1]	COLA: Excess of $350 Monthly[1]	COLA: All Eligible Pay[2]	Total: First $350 Monthly[1]	Total: Excess of $350 Monthly[1]	Total: All Eligible Pay[2]	All Aggregate Pay
County Tier C	N/A	N/A	35.81%	N/A	N/A	24.34%	N/A	N/A	60.15%	60.15%
County Tier E	N/A	N/A	27.64%	N/A	N/A	23.42%	N/A	N/A	51.06%	51.06%
Cost Group #10										
Moraga-Orinda FD Tier A	N/A	N/A	42.08%	N/A	N/A	49.22%	N/A	N/A	91.30%	91.30%
Moraga-Orinda FD Tier D	N/A	N/A	33.25%	N/A	N/A	47.56%	N/A	N/A	80.81%	80.81%
Cost Group #11										
San Ramon FD Tier A	N/A	N/A	37.13%	N/A	N/A	20.27%	N/A	N/A	57.40%	57.40%
San Ramon FD Tier D	N/A	N/A	24.15%	N/A	N/A	16.79%	N/A	N/A	40.94%	40.94%
Cost Group #12										
Rodeo-Hercules FPD Tier A	N/A	N/A	56.54%	N/A	N/A	35.95%	N/A	N/A	92.49%	92.49%
Rodeo-Hercules FPD Tier D	N/A	N/A	50.20%	N/A	N/A	34.45%	N/A	N/A	84.65%	84.65%

5770632v3/05337.002

1 If employer is in Social Security.
2 For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

Andy Yeung, ASA, MAAA, FCA, EA
Vice President & Actuary
T 415.263.8283
ayeung@segalco.com

180 Howard Street
Suite 1100
San Francisco, CA 94105-6147
segalco.com

July 26, 2023

Ms. Christina Dunn
Acting Chief Executive Officer
Contra Costa County Employees' Retirement Association
1200 Concord Avenue, Suite 300
Concord, CA 94520

**Re: Contra Costa County Employees' Retirement Association (CCCERA)
Contribution Rate Packet for the Period from July 1, 2024 through June 30, 2025**

Dear Christina:

As requested, we have prepared the enclosed contribution rate packet that contains the employer and member contribution rates for the period from July 1, 2024 through June 30, 2025.

The following documents are enclosed:

- Contribution Rate Packet Cover Page
- Contribution Rate Packet Table of Contents
- Contribution Rate Packet Cover Memo
- Board of Supervisors Resolution
- Employer Contribution Rates (Exhibits 1 through 12)
- Member Contribution Rates (Exhibits A through M)
- Examples for Subvention and Employee Cost Sharing
- Prepayment Discount Factor for 2024-2025

The actuarial calculations contained in this letter were performed under my supervision. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Please let us know if you have any questions.

Sincerely,

Andy Yeung

Andy Yeung, ASA, MAAA, FCA, EA
Vice President & Actuary

AW/elf
Enclosures (5774474)

cc: Henry Gudino

CONTRA COSTA COUNTY
EMPLOYEES’ RETIREMENT ASSOCIATION

CONTRIBUTION RATE PACKET FOR
July 1, 2024 through June 30, 2025

1200 Concord Avenue Suite 300 Concord CA 94520 925.521.3960
FAX: 925.521.3969 www.cccera.org

5774474v3/05337.002

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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1200 Concord Avenue Suite 300 Concord CA 94520 925.521.3960
FAX: 925.521.3969 www.cccera.org

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26 General and Safety PEPRA Member Rates (Exhibit M)

27 Examples for Subvention and Employee Cost Sharing

28 Prepayment Discount Factor for 2024-2025

1200 Concord Avenue Suite 300 Concord CA 94520 925.521.3960
FAX: 925.521.3969 www.cccera.org

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 9, 2023

To: Interested Parties and Participating Employers

From: Christina Dunn, Acting Chief Executive Officer

Subject: Contribution Rates Effective July 1, 2024

At its August 9, 2023 meeting, the Retirement Board reviewed the actuary's valuation report for the year ending December 31, 2022 and adopted the recommended employer and employee contribution rates, which will become effective on July 1, 2024. A copy of the December 31, 2022 Actuarial Valuation can be found on CCCERA's website at www.cccera.org under the Actuarial Valuations link.

Enclosed are the employer and employee contribution rates to be used effective July 1, 2024 through June 30, 2025.

Please note the following:

- ✓ **The rates are effective July 1, 2024 through June 30, 2025 and have not yet been adopted by the County Board of Supervisors.**
- ✓ **The rates are BEFORE ANY EMPLOYER SUBVENTION of the employee contribution.** The rates quoted here are the employer required rates without taking into consideration any employer subvention of employee contributions. A convenient methodology for adding subvention is included for your use on page 27. Note that subvention is not always permitted for PEPRA members.
- ✓ **The rates are BEFORE ANY INCREASE IN EMPLOYEE RATE to pay a portion of the employer contribution.**
  If an employee's rate needs to be increased to pay a portion of the employer contribution, both employee and employer rates would need to be adjusted accordingly. A convenient methodology for adding subvention is included for your use on page 27.

THE BOARD OF SUPERVISORS OF CONTRA COSTA COUNTY, CALIFORNIA

Adopted this Order on ____________________________________, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

- -

SUBJECT: Approving Contribution Rates to be charged by the Contra Costa County Employees' Retirement Association. Resolution No.______

Pursuant to Government Code Section 31454 and on recommendation of the Board of the Contra Costa County Employees' Retirement Association, BE IT RESOLVED that the following contribution rates are approved to be effective for the period July 1, 2024 through June 30, 2025.

I. Employer Contribution Rates for Basic and Cost-of-Living Components and Non-refundability Discount Factors

   A. For General Members (Sec. 31676.11, Sec. 31676.16 and Sec. 7522.20(a)) See attached Exhibits 1 through 6

   B. For Safety Members (Sec. 31664, Sec. 31664.1 and Sec. 7522.25(d)) See attached Exhibits 7 through 12

II. Employee Contribution Rates for Basic and Cost-of-Living Components

   See attached Exhibits A through M

As of the December 31, 2022 valuation, the Pension Obligation Bonds (POB) issued by the County, Contra Costa County Fire Protection District and Moraga-Orinda Fire Protection District and the additional UAAL prepayment made by First 5 - Children & Families Commission have been fully amortized.

Central Contra Costa Sanitary District made a UAAL prepayment in 2013, 2014, 2015 and 2021 which affected contribution rates for that employer.

Local Agency Formation Commission made a UAAL prepayment in 2017, 2019, 2020 and 2021 which affected contribution rates for that employer.

San Ramon Valley Fire Protection District made a UAAL prepayment in 2017, 2018, 2019, 2020, 2021 and 2022 which affected contribution rates for the Safety members of that employer.

Effective July 1, 2022, East Contra Costa Fire Protection District was annexed into Contra Costa County Fire Protection District. Consistent with the annexation, starting with the December 31, 2021 valuation, the prior General and Safety members from the East Contra Costa Fire Protection District have become General and Safety members of Contra Costa County Fire Protection District in Cost Group #5 and Cost Group #8, respectively. As part of the annexation, East Contra Costa Fire Protection District made a UAAL prepayment in 2022 which affected contribution rates for the General and Safety members of Contra Costa County Fire Protection District (after annexation) starting July 1, 2022.

Exhibit 1

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #1

Cost Group #1[1]	Basic In Social Security[2]	Basic Not In Social Security[3]	COLA In Social Security[2]	COLA Not In Social Security[3]	Non-Refundability Factor
General Tier 1 Non-LAFCO (in Social Security)	22.95%	N/A	3.95%	N/A	0.9676
General Tier 1 Non-LAFCO (not in Social Security)	N/A	22.70%	N/A	3.90%	0.9676
General Tier 1 LAFCO	17.40%	N/A	3.94%	N/A	0.9676
General Tier 4 (3% COLA) Non-LAFCO	18.70%		3.34%		0.9611
General Tier 4 (3% COLA) LAFCO	13.22%		3.34%		0.9611
General Tier 4 (2% COLA)	18.43%		2.28%		0.9567

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- County General
- LAFCO
- CC Mosquito & Vector Control District
- Bethel Island Municipal Improvement District
- First 5 - Children and Families Commission
- Contra Costa County Employees' Retirement Association
- Superior Court
- Moraga-Orinda Fire Protection District
- Rodeo-Hercules Fire Protection District
- San Ramon Valley Fire Protection District

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] Contribution rates for Cost Group #1 have been simplified because the POBs issued by certain employers have been fully amortized as of December 31, 2022.

[2] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[3] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 2

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #2

Cost Group #2[1]	Basic: In Social Security[2]	Basic: Not In Social Security[3]	COLA: In Social Security[2]	COLA: Not In Social Security[3]	Non-Refundability Factor
General Tier 3	21.56%	N/A	3.64%	N/A	0.9559
General Tier 5 (3%/4% COLA)	17.92%		3.03%		0.9610
General Tier 5 (2% COLA)	17.81%		2.09%		0.9569

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- County General
- In-Home Supportive Services Authority
- CC Mosquito & Vector Control District
- Superior Court

Tiers:

- Tier 3 Enhanced (2% @ 55)
- Tier 5 (2.5% @ 67)

[1] Contribution rates for Cost Group #2 have been simplified because the POBs issued by certain employers have been fully amortized as of December 31, 2022.

[2] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[3] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 3

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #3

Cost Group #3	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
Central Contra Costa Sanitary District General Tier 1	N/A	13.97%	N/A	4.54%	0.9628
Central Contra Costa Sanitary District General Tier 4 (3% COLA)	9.00%		3.66%		0.9685

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Central Contra Costa Sanitary District

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 4

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #4

Cost Group #4	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
Contra Costa Housing Authority General Tier 1	22.72%	N/A	8.34%	N/A	0.9620
Contra Costa Housing Authority General Tier 4 (3% COLA)	18.15%		7.51%		0.9633

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Contra Costa Housing Authority

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 5

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #5

	Basic		COLA		Non-Refundability Factor
Cost Group #5	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
Contra Costa County Fire Protection District General Tier 1	N/A	27.77%	N/A	14.28%	0.9773
Contra Costa County Fire Protection District General Tier 4 (3% COLA)	24.08%		14.15%		0.9621
Contra Costa County Fire Protection District General Tier 4 (2% COLA)	22.96%		12.63%		0.9588

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Contra Costa County Fire Protection District

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 6

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #6

Cost Group #6	Basic: In Social Security[1]	Basic: Not In Social Security[2]	COLA: In Social Security[1]	COLA: Not In Social Security[2]	Non-Refundability Factor
Non-Enhanced District General Tier 1	12.95%	N/A	3.84%	N/A	0.9625
Non-Enhanced District General Tier 4 (3% COLA)	11.14%		3.68%		0.9508

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Rodeo Sanitary District
- Byron Brentwood Cemetery District

Tiers:

- Tier 1 Non-Enhanced (1.67% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 7

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #7

Cost Group #7	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
County Safety Tier A	N/A	37.17%	N/A	27.15%	0.9710
County Safety Tier D	28.45%		25.62%		0.9783

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- County Safety

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 8

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #8

Cost Group #8	Basic: In Social Security[1]	Basic: Not In Social Security[2]	COLA: In Social Security[1]	COLA: Not In Social Security[2]	Non-Refundability Factor
Contra Costa County Fire Protection District Safety Tier A	N/A	35.85%	N/A	36.52%	0.9762
Contra Costa County Fire Protection District Safety Tier D	25.06%		34.13%		0.9803
Contra Costa County Fire Protection District Safety Tier E	25.41%		32.42%		0.9785

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Contra Costa County Fire Protection District

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)
- Tier E (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 9

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #9

Cost Group #9	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
County Safety Tier C	N/A	35.81%	N/A	24.34%	0.9712
County Safety Tier E	27.64%		23.42%		0.9761

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- County Safety (Members hired on or after January 1, 2007)

Tiers:

- Tier C Enhanced (3% @ 50)
- Tier E (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 10

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #10

Cost Group #10	Basic: In Social Security[1]	Basic: Not In Social Security[2]	COLA: In Social Security[1]	COLA: Not In Social Security[2]	Non-Refundability Factor
Moraga-Orinda Fire Protection District Safety Tier A	N/A	42.08%	N/A	49.22%	0.9732
Moraga-Orinda Fire Protection District Safety Tier D	33.25%		47.56%		0.9781

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Moraga-Orinda Fire Protection District

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 11

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #11

Cost Group #11	Basic In Social Security[1]	Basic Not In Social Security[2]	COLA In Social Security[1]	COLA Not In Social Security[2]	Non-Refundability Factor
San Ramon Valley Fire Protection District Safety Tier A	N/A	37.13%	N/A	20.27%	0.9769
San Ramon Valley Fire Protection District Safety Tier D	24.15%		16.79%		0.9804

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- San Ramon Valley Fire Protection District

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 12

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2024 through June 30, 2025 for Cost Group #12

Cost Group #12	Basic In Social Security[1]	Basic Not In Social Security[2]	COLA In Social Security[1]	COLA Not In Social Security[2]	Non-Refundability Factor
Rodeo-Hercules Fire Protection District Safety Tier A	N/A	56.54%	N/A	35.95%	0.9824
Rodeo-Hercules Fire Protection District Safety Tier D	50.20%		34.45%		0.9803

Basic rates shown include an administrative expense load of 0.63% of payroll.

Employers:

- Rodeo-Hercules Fire Protection District

Tiers:

- Tier A Non-Enhanced (2% @ 50)
- Tier D (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit A

General Cost Group #1 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]		COLA	Total	
Entry Age	In Social Security	Not In Social Security		In Social Security	Not In Social Security
15	5.44%	5.43%	2.80%	8.24%	8.23%
16	5.54%	5.53%	2.86%	8.40%	8.39%
17	5.64%	5.63%	2.91%	8.55%	8.54%
18	5.74%	5.73%	2.97%	8.71%	8.70%
19	5.84%	5.83%	3.03%	8.87%	8.86%
20	5.94%	5.93%	3.08%	9.02%	9.01%
21	6.05%	6.04%	3.15%	9.20%	9.19%
22	6.16%	6.15%	3.21%	9.37%	9.36%
23	6.26%	6.25%	3.27%	9.53%	9.52%
24	6.38%	6.37%	3.33%	9.71%	9.70%
25	6.49%	6.48%	3.40%	9.89%	9.88%
26	6.60%	6.59%	3.46%	10.06%	10.05%
27	6.72%	6.71%	3.53%	10.25%	10.24%
28	6.84%	6.83%	3.60%	10.44%	10.43%
29	6.96%	6.95%	3.66%	10.62%	10.61%
30	7.09%	7.08%	3.74%	10.83%	10.82%
31	7.21%	7.20%	3.81%	11.02%	11.01%
32	7.34%	7.33%	3.88%	11.22%	11.21%
33	7.47%	7.46%	3.95%	11.42%	11.41%
34	7.61%	7.60%	4.03%	11.64%	11.63%
35	7.75%	7.74%	4.11%	11.86%	11.85%
36	7.89%	7.88%	4.19%	12.08%	12.07%
37	8.03%	8.02%	4.27%	12.30%	12.29%
38	8.18%	8.17%	4.36%	12.54%	12.53%
39	8.34%	8.33%	4.45%	12.79%	12.78%
40	8.49%	8.48%	4.53%	13.02%	13.01%
41	8.64%	8.63%	4.62%	13.26%	13.25%
42	8.80%	8.79%	4.71%	13.51%	13.50%
43	8.95%	8.94%	4.79%	13.74%	13.73%
44	9.11%	9.10%	4.88%	13.99%	13.98%
45	9.27%	9.26%	4.98%	14.25%	14.24%
46	9.43%	9.42%	5.07%	14.50%	14.49%
47	9.59%	9.58%	5.16%	14.75%	14.74%
48	9.75%	9.74%	5.25%	15.00%	14.99%
49	9.89%	9.88%	5.33%	15.22%	15.21%
50	10.04%	10.03%	5.41%	15.45%	15.44%
51	10.20%	10.19%	5.50%	15.70%	15.69%
52	10.36%	10.35%	5.59%	15.95%	15.94%
53	10.52%	10.51%	5.69%	16.21%	16.20%
54	10.66%	10.65%	5.77%	16.43%	16.42%
55	10.80%	10.79%	5.84%	16.64%	16.63%
56	10.91%	10.90%	5.91%	16.82%	16.81%
57	10.90%	10.89%	5.90%	16.80%	16.79%
58	10.84%	10.83%	5.87%	16.71%	16.70%
59	10.60%	10.59%	5.73%	16.33%	16.32%
60 & Over	10.60%	10.59%	5.73%	16.33%	16.32%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 56.80% applied to Basic Rates prior to adjustment for administrative expenses

[1] For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.50% that is applicable to the first $116.67 of compensation.

Exhibit B

General Cost Group #2 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]			Total	
Entry Age	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.43%	5.42%	2.43%	7.86%	7.85%
16	5.53%	5.52%	2.48%	8.01%	8.00%
17	5.63%	5.62%	2.53%	8.16%	8.15%
18	5.73%	5.72%	2.58%	8.31%	8.30%
19	5.83%	5.82%	2.63%	8.46%	8.45%
20	5.93%	5.92%	2.67%	8.60%	8.59%
21	6.04%	6.03%	2.73%	8.77%	8.76%
22	6.14%	6.13%	2.78%	8.92%	8.91%
23	6.25%	6.24%	2.83%	9.08%	9.07%
24	6.36%	6.35%	2.89%	9.25%	9.24%
25	6.47%	6.46%	2.94%	9.41%	9.40%
26	6.59%	6.58%	3.00%	9.59%	9.58%
27	6.71%	6.70%	3.06%	9.77%	9.76%
28	6.83%	6.82%	3.12%	9.95%	9.94%
29	6.95%	6.94%	3.18%	10.13%	10.12%
30	7.07%	7.06%	3.24%	10.31%	10.30%
31	7.20%	7.19%	3.30%	10.50%	10.49%
32	7.33%	7.32%	3.37%	10.70%	10.69%
33	7.46%	7.45%	3.43%	10.89%	10.88%
34	7.59%	7.58%	3.49%	11.08%	11.07%
35	7.73%	7.72%	3.56%	11.29%	11.28%
36	7.87%	7.86%	3.63%	11.50%	11.49%
37	8.02%	8.01%	3.71%	11.73%	11.72%
38	8.16%	8.15%	3.78%	11.94%	11.93%
39	8.31%	8.30%	3.85%	12.16%	12.15%
40	8.47%	8.46%	3.93%	12.40%	12.39%
41	8.62%	8.61%	4.00%	12.62%	12.61%
42	8.78%	8.77%	4.08%	12.86%	12.85%
43	8.93%	8.92%	4.16%	13.09%	13.08%
44	9.09%	9.08%	4.23%	13.32%	13.31%
45	9.25%	9.24%	4.31%	13.56%	13.55%
46	9.41%	9.40%	4.39%	13.80%	13.79%
47	9.57%	9.56%	4.47%	14.04%	14.03%
48	9.72%	9.71%	4.55%	14.27%	14.26%
49	9.88%	9.87%	4.62%	14.50%	14.49%
50	10.02%	10.01%	4.69%	14.71%	14.70%
51	10.18%	10.17%	4.77%	14.95%	14.94%
52	10.34%	10.33%	4.85%	15.19%	15.18%
53	10.49%	10.48%	4.93%	15.42%	15.41%
54	10.63%	10.62%	4.99%	15.62%	15.61%
55	10.76%	10.75%	5.06%	15.82%	15.81%
56	10.85%	10.84%	5.10%	15.95%	15.94%
57	10.90%	10.89%	5.13%	16.03%	16.02%
58	10.85%	10.84%	5.10%	15.95%	15.94%
59	10.31%	10.30%	4.84%	15.15%	15.14%
60 & Over	10.31%	10.30%	4.84%	15.15%	15.14%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 49.35% applied to Basic Rates prior to adjustment for administrative expenses

[1] For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.50% that is applicable to the first $116.67 of compensation.

Exhibit C

General Cost Group #3 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	5.64%	2.86%	8.50%
16	5.74%	2.92%	8.66%
17	5.84%	2.97%	8.81%
18	5.95%	3.03%	8.98%
19	6.05%	3.09%	9.14%
20	6.16%	3.15%	9.31%
21	6.27%	3.21%	9.48%
22	6.38%	3.27%	9.65%
23	6.49%	3.33%	9.82%
24	6.61%	3.40%	10.01%
25	6.73%	3.47%	10.20%
26	6.85%	3.54%	10.39%
27	6.97%	3.60%	10.57%
28	7.09%	3.67%	10.76%
29	7.22%	3.74%	10.96%
30	7.35%	3.81%	11.16%
31	7.48%	3.89%	11.37%
32	7.61%	3.96%	11.57%
33	7.75%	4.04%	11.79%
34	7.89%	4.11%	12.00%
35	8.03%	4.19%	12.22%
36	8.18%	4.28%	12.46%
37	8.33%	4.36%	12.69%
38	8.48%	4.44%	12.92%
39	8.64%	4.53%	13.17%
40	8.80%	4.62%	13.42%
41	8.96%	4.71%	13.67%
42	9.12%	4.80%	13.92%
43	9.28%	4.89%	14.17%
44	9.44%	4.98%	14.42%
45	9.60%	5.07%	14.67%
46	9.77%	5.16%	14.93%
47	9.93%	5.25%	15.18%
48	10.09%	5.34%	15.43%
49	10.24%	5.42%	15.66%
50	10.40%	5.51%	15.91%
51	10.55%	5.59%	16.14%
52	10.69%	5.67%	16.36%
53	10.85%	5.76%	16.61%
54	11.00%	5.85%	16.85%
55	11.16%	5.93%	17.09%
56	11.21%	5.96%	17.17%
57	11.17%	5.94%	17.11%
58	11.03%	5.86%	16.89%
59	10.48%	5.56%	16.04%
60 & Over	10.48%	5.56%	16.04%

Administrative Expense: 0.50% of payroll added to Basic Rates
COLA Loading: 55.67% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit D

General Cost Group #4 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]			Total	
Entry Age	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.44%	5.43%	2.74%	8.18%	8.17%
16	5.54%	5.53%	2.80%	8.34%	8.33%
17	5.64%	5.63%	2.85%	8.49%	8.48%
18	5.74%	5.73%	2.91%	8.65%	8.64%
19	5.84%	5.83%	2.96%	8.80%	8.79%
20	5.94%	5.93%	3.02%	8.96%	8.95%
21	6.05%	6.04%	3.08%	9.13%	9.12%
22	6.16%	6.15%	3.14%	9.30%	9.29%
23	6.26%	6.25%	3.20%	9.46%	9.45%
24	6.38%	6.37%	3.26%	9.64%	9.63%
25	6.49%	6.48%	3.33%	9.82%	9.81%
26	6.60%	6.59%	3.39%	9.99%	9.98%
27	6.72%	6.71%	3.45%	10.17%	10.16%
28	6.84%	6.83%	3.52%	10.36%	10.35%
29	6.96%	6.95%	3.59%	10.55%	10.54%
30	7.09%	7.08%	3.66%	10.75%	10.74%
31	7.21%	7.20%	3.73%	10.94%	10.93%
32	7.34%	7.33%	3.80%	11.14%	11.13%
33	7.47%	7.46%	3.87%	11.34%	11.33%
34	7.61%	7.60%	3.95%	11.56%	11.55%
35	7.75%	7.74%	4.03%	11.78%	11.77%
36	7.89%	7.88%	4.10%	11.99%	11.98%
37	8.03%	8.02%	4.18%	12.21%	12.20%
38	8.18%	8.17%	4.27%	12.45%	12.44%
39	8.34%	8.33%	4.36%	12.70%	12.69%
40	8.49%	8.48%	4.44%	12.93%	12.92%
41	8.64%	8.63%	4.52%	13.16%	13.15%
42	8.80%	8.79%	4.61%	13.41%	13.40%
43	8.95%	8.94%	4.69%	13.64%	13.63%
44	9.11%	9.10%	4.78%	13.89%	13.88%
45	9.27%	9.26%	4.87%	14.14%	14.13%
46	9.43%	9.42%	4.96%	14.39%	14.38%
47	9.59%	9.58%	5.05%	14.64%	14.63%
48	9.75%	9.74%	5.14%	14.89%	14.88%
49	9.89%	9.88%	5.22%	15.11%	15.10%
50	10.04%	10.03%	5.30%	15.34%	15.33%
51	10.20%	10.19%	5.39%	15.59%	15.58%
52	10.36%	10.35%	5.48%	15.84%	15.83%
53	10.52%	10.51%	5.57%	16.09%	16.08%
54	10.66%	10.65%	5.65%	16.31%	16.30%
55	10.80%	10.79%	5.72%	16.52%	16.51%
56	10.91%	10.90%	5.78%	16.69%	16.68%
57	10.90%	10.89%	5.78%	16.68%	16.67%
58	10.84%	10.83%	5.75%	16.59%	16.58%
59	10.60%	10.59%	5.61%	16.21%	16.20%
60 & Over	10.60%	10.59%	5.61%	16.21%	16.20%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 55.62% applied to Basic Rates prior to adjustment for administrative expenses

1 For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

2 The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.50% that is applicable to the first $116.67 of compensation.

Exhibit E

General Cost Group #5 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	5.43%	2.93%	8.36%
16	5.53%	2.99%	8.52%
17	5.63%	3.05%	8.68%
18	5.73%	3.11%	8.84%
19	5.83%	3.17%	9.00%
20	5.93%	3.23%	9.16%
21	6.04%	3.29%	9.33%
22	6.15%	3.36%	9.51%
23	6.25%	3.42%	9.67%
24	6.37%	3.49%	9.86%
25	6.48%	3.55%	10.03%
26	6.59%	3.62%	10.21%
27	6.71%	3.69%	10.40%
28	6.83%	3.76%	10.59%
29	6.95%	3.83%	10.78%
30	7.08%	3.91%	10.99%
31	7.20%	3.98%	11.18%
32	7.33%	4.06%	11.39%
33	7.46%	4.14%	11.60%
34	7.60%	4.22%	11.82%
35	7.74%	4.30%	12.04%
36	7.88%	4.39%	12.27%
37	8.02%	4.47%	12.49%
38	8.17%	4.56%	12.73%
39	8.33%	4.65%	12.98%
40	8.48%	4.74%	13.22%
41	8.63%	4.83%	13.46%
42	8.79%	4.93%	13.72%
43	8.94%	5.02%	13.96%
44	9.10%	5.11%	14.21%
45	9.26%	5.21%	14.47%
46	9.42%	5.30%	14.72%
47	9.58%	5.40%	14.98%
48	9.74%	5.49%	15.23%
49	9.88%	5.58%	15.46%
50	10.03%	5.66%	15.69%
51	10.19%	5.76%	15.95%
52	10.35%	5.85%	16.20%
53	10.51%	5.95%	16.46%
54	10.65%	6.03%	16.68%
55	10.79%	6.12%	16.91%
56	10.90%	6.18%	17.08%
57	10.89%	6.18%	17.07%
58	10.83%	6.14%	16.97%
59	10.59%	6.00%	16.59%
60 & Over	10.59%	6.00%	16.59%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 59.44% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit F

General Cost Group #6 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]			Total	
Entry Age	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	6.19%	6.18%	2.58%	8.77%	8.76%
16	6.30%	6.29%	2.63%	8.93%	8.92%
17	6.41%	6.40%	2.68%	9.09%	9.08%
18	6.53%	6.52%	2.73%	9.26%	9.25%
19	6.64%	6.63%	2.78%	9.42%	9.41%
20	6.76%	6.75%	2.83%	9.59%	9.58%
21	6.88%	6.87%	2.89%	9.77%	9.76%
22	7.00%	6.99%	2.94%	9.94%	9.93%
23	7.13%	7.12%	3.00%	10.13%	10.12%
24	7.26%	7.25%	3.06%	10.32%	10.31%
25	7.39%	7.38%	3.12%	10.51%	10.50%
26	7.52%	7.51%	3.18%	10.70%	10.69%
27	7.65%	7.64%	3.24%	10.89%	10.88%
28	7.79%	7.78%	3.30%	11.09%	11.08%
29	7.93%	7.92%	3.36%	11.29%	11.28%
30	8.08%	8.07%	3.43%	11.51%	11.50%
31	8.23%	8.22%	3.50%	11.73%	11.72%
32	8.38%	8.37%	3.57%	11.95%	11.94%
33	8.53%	8.52%	3.64%	12.17%	12.16%
34	8.69%	8.68%	3.71%	12.40%	12.39%
35	8.85%	8.84%	3.78%	12.63%	12.62%
36	9.02%	9.01%	3.86%	12.88%	12.87%
37	9.17%	9.16%	3.93%	13.10%	13.09%
38	9.34%	9.33%	4.00%	13.34%	13.33%
39	9.50%	9.49%	4.08%	13.58%	13.57%
40	9.68%	9.67%	4.16%	13.84%	13.83%
41	9.84%	9.83%	4.23%	14.07%	14.06%
42	10.00%	9.99%	4.30%	14.30%	14.29%
43	10.18%	10.17%	4.39%	14.57%	14.56%
44	10.33%	10.32%	4.45%	14.78%	14.77%
45	10.49%	10.48%	4.53%	15.02%	15.01%
46	10.64%	10.63%	4.59%	15.23%	15.22%
47	10.82%	10.81%	4.68%	15.50%	15.49%
48	10.97%	10.96%	4.74%	15.71%	15.70%
49	11.13%	11.12%	4.82%	15.95%	15.94%
50	11.30%	11.29%	4.89%	16.19%	16.18%
51	11.38%	11.37%	4.93%	16.31%	16.30%
52	11.42%	11.41%	4.95%	16.37%	16.36%
53	11.32%	11.31%	4.90%	16.22%	16.21%
54	10.93%	10.92%	4.73%	15.66%	15.65%
55	10.93%	10.92%	4.73%	15.66%	15.65%
56	10.93%	10.92%	4.73%	15.66%	15.65%
57	10.93%	10.92%	4.73%	15.66%	15.65%
58	10.93%	10.92%	4.73%	15.66%	15.65%
59	10.93%	10.92%	4.73%	15.66%	15.65%
60 & Over	10.93%	10.92%	4.73%	15.66%	15.65%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 45.35% applied to Basic Rates prior to adjustment for administrative expenses

[1] For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.50% that is applicable to the first $116.67 of compensation.

Exhibit G

Safety Cost Group #7 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	9.90%	6.64%	16.54%
16	9.90%	6.64%	16.54%
17	9.90%	6.64%	16.54%
18	9.90%	6.64%	16.54%
19	9.90%	6.64%	16.54%
20	9.90%	6.64%	16.54%
21	9.90%	6.64%	16.54%
22	10.06%	6.75%	16.81%
23	10.21%	6.86%	17.07%
24	10.37%	6.97%	17.34%
25	10.53%	7.09%	17.62%
26	10.70%	7.21%	17.91%
27	10.87%	7.33%	18.20%
28	11.05%	7.45%	18.50%
29	11.23%	7.58%	18.81%
30	11.39%	7.69%	19.08%
31	11.55%	7.81%	19.36%
32	11.71%	7.92%	19.63%
33	11.89%	8.05%	19.94%
34	12.07%	8.17%	20.24%
35	12.25%	8.30%	20.55%
36	12.44%	8.43%	20.87%
37	12.65%	8.58%	21.23%
38	12.85%	8.72%	21.57%
39	13.06%	8.87%	21.93%
40	13.29%	9.03%	22.32%
41	13.53%	9.20%	22.73%
42	13.78%	9.38%	23.16%
43	14.00%	9.54%	23.54%
44	14.17%	9.66%	23.83%
45	14.24%	9.71%	23.95%
46	14.28%	9.73%	24.01%
47	14.27%	9.73%	24.00%
48	14.09%	9.60%	23.69%
49 & Over	13.63%	9.28%	22.91%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 70.64% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit H

Safety Cost Group #8 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	9.88%	6.70%	16.58%
16	9.88%	6.70%	16.58%
17	9.88%	6.70%	16.58%
18	9.88%	6.70%	16.58%
19	9.88%	6.70%	16.58%
20	9.88%	6.70%	16.58%
21	9.88%	6.70%	16.58%
22	10.04%	6.81%	16.85%
23	10.19%	6.92%	17.11%
24	10.35%	7.03%	17.38%
25	10.51%	7.15%	17.66%
26	10.68%	7.27%	17.95%
27	10.85%	7.39%	18.24%
28	11.02%	7.51%	18.53%
29	11.20%	7.64%	18.84%
30	11.36%	7.76%	19.12%
31	11.52%	7.87%	19.39%
32	11.69%	7.99%	19.68%
33	11.86%	8.11%	19.97%
34	12.04%	8.24%	20.28%
35	12.23%	8.38%	20.61%
36	12.42%	8.51%	20.93%
37	12.62%	8.66%	21.28%
38	12.83%	8.81%	21.64%
39	13.04%	8.96%	22.00%
40	13.26%	9.11%	22.37%
41	13.51%	9.29%	22.80%
42	13.74%	9.46%	23.20%
43	13.95%	9.61%	23.56%
44	14.14%	9.74%	23.88%
45	14.20%	9.78%	23.98%
46	14.22%	9.80%	24.02%
47	14.29%	9.85%	24.14%
48	13.95%	9.61%	23.56%
49 & Over	13.66%	9.40%	23.06%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 71.42% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit I

Safety Cost Group #9 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	9.50%	4.19%	13.69%
16	9.50%	4.19%	13.69%
17	9.50%	4.19%	13.69%
18	9.50%	4.19%	13.69%
19	9.50%	4.19%	13.69%
20	9.50%	4.19%	13.69%
21	9.50%	4.19%	13.69%
22	9.65%	4.26%	13.91%
23	9.80%	4.33%	14.13%
24	9.95%	4.40%	14.35%
25	10.11%	4.47%	14.58%
26	10.27%	4.54%	14.81%
27	10.43%	4.62%	15.05%
28	10.59%	4.69%	15.28%
29	10.75%	4.77%	15.52%
30	10.90%	4.84%	15.74%
31	11.05%	4.91%	15.96%
32	11.21%	4.98%	16.19%
33	11.38%	5.06%	16.44%
34	11.55%	5.14%	16.69%
35	11.72%	5.22%	16.94%
36	11.90%	5.30%	17.20%
37	12.09%	5.39%	17.48%
38	12.28%	5.48%	17.76%
39	12.48%	5.57%	18.05%
40	12.68%	5.66%	18.34%
41	12.88%	5.76%	18.64%
42	13.05%	5.84%	18.89%
43	13.14%	5.88%	19.02%
44	13.21%	5.91%	19.12%
45	13.18%	5.90%	19.08%
46	13.05%	5.84%	18.89%
47	12.78%	5.71%	18.49%
48	13.19%	5.90%	19.09%
49 & Over	13.70%	6.14%	19.84%

Administrative Expense: 0.50% of payroll added to Basic Rates
COLA Loading: 46.51% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit J

Safety Cost Group #10 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	9.88%	6.71%	16.59%
16	9.88%	6.71%	16.59%
17	9.88%	6.71%	16.59%
18	9.88%	6.71%	16.59%
19	9.88%	6.71%	16.59%
20	9.88%	6.71%	16.59%
21	9.88%	6.71%	16.59%
22	10.04%	6.83%	16.87%
23	10.19%	6.94%	17.13%
24	10.35%	7.05%	17.40%
25	10.51%	7.17%	17.68%
26	10.68%	7.29%	17.97%
27	10.85%	7.41%	18.26%
28	11.02%	7.53%	18.55%
29	11.20%	7.66%	18.86%
30	11.36%	7.77%	19.13%
31	11.52%	7.89%	19.41%
32	11.69%	8.01%	19.70%
33	11.86%	8.13%	19.99%
34	12.04%	8.26%	20.30%
35	12.23%	8.40%	20.63%
36	12.42%	8.53%	20.95%
37	12.62%	8.68%	21.30%
38	12.83%	8.83%	21.66%
39	13.04%	8.98%	22.02%
40	13.26%	9.13%	22.39%
41	13.51%	9.31%	22.82%
42	13.74%	9.48%	23.22%
43	13.95%	9.63%	23.58%
44	14.14%	9.76%	23.90%
45	14.20%	9.81%	24.01%
46	14.22%	9.82%	24.04%
47	14.29%	9.87%	24.16%
48	13.95%	9.63%	23.58%
49 & Over	13.66%	9.42%	23.08%

Administrative Expense:	0.50% of payroll added to Basic Rates
COLA Loading:	71.58% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit K

Safety Cost Group #11 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	10.13%	6.91%	17.04%
16	10.13%	6.91%	17.04%
17	10.13%	6.91%	17.04%
18	10.13%	6.91%	17.04%
19	10.13%	6.91%	17.04%
20	10.13%	6.91%	17.04%
21	10.13%	6.91%	17.04%
22	10.29%	7.02%	17.31%
23	10.45%	7.14%	17.59%
24	10.61%	7.25%	17.86%
25	10.78%	7.37%	18.15%
26	10.95%	7.49%	18.44%
27	11.12%	7.62%	18.74%
28	11.30%	7.74%	19.04%
29	11.48%	7.87%	19.35%
30	11.64%	7.99%	19.63%
31	11.81%	8.11%	19.92%
32	11.98%	8.23%	20.21%
33	12.16%	8.36%	20.52%
34	12.34%	8.49%	20.83%
35	12.52%	8.62%	21.14%
36	12.72%	8.76%	21.48%
37	12.93%	8.91%	21.84%
38	13.13%	9.06%	22.19%
39	13.35%	9.21%	22.56%
40	13.57%	9.37%	22.94%
41	13.82%	9.55%	23.37%
42	14.06%	9.72%	23.78%
43	14.28%	9.88%	24.16%
44	14.45%	10.00%	24.45%
45	14.51%	10.05%	24.56%
46	14.51%	10.05%	24.56%
47	14.53%	10.06%	24.59%
48	14.23%	9.85%	24.08%
49 & Over	13.65%	9.43%	23.08%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 71.71% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit L

Safety Cost Group #12 Non-PEPRA Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	10.02%	5.29%	15.31%
16	10.02%	5.29%	15.31%
17	10.02%	5.29%	15.31%
18	10.02%	5.29%	15.31%
19	10.02%	5.29%	15.31%
20	10.02%	5.29%	15.31%
21	10.02%	5.29%	15.31%
22	10.17%	5.38%	15.55%
23	10.33%	5.47%	15.80%
24	10.49%	5.55%	16.04%
25	10.66%	5.65%	16.31%
26	10.82%	5.74%	16.56%
27	11.00%	5.84%	16.84%
28	11.17%	5.93%	17.10%
29	11.35%	6.03%	17.38%
30	11.52%	6.13%	17.65%
31	11.68%	6.22%	17.90%
32	11.85%	6.31%	18.16%
33	12.03%	6.41%	18.44%
34	12.20%	6.51%	18.71%
35	12.39%	6.61%	19.00%
36	12.59%	6.72%	19.31%
37	12.79%	6.83%	19.62%
38	12.99%	6.94%	19.93%
39	13.21%	7.07%	20.28%
40	13.43%	7.19%	20.62%
41	13.67%	7.32%	20.99%
42	13.93%	7.47%	21.40%
43	14.13%	7.58%	21.71%
44	14.29%	7.67%	21.96%
45	14.40%	7.73%	22.13%
46	14.36%	7.71%	22.07%
47	14.40%	7.73%	22.13%
48	14.16%	7.59%	21.75%
49 & Over	13.47%	7.21%	20.68%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 55.60% applied to Basic Rates prior to adjustment for administrative expenses

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit M

PEPRA Tier Member Contribution Rates

Effective for July 1, 2024 through June 30, 2025

Expressed as a Percentage of Monthly Payroll[1]

General Tiers	Basic	COLA	Total
Cost Group #1 – PEPRA Tier 4 (2% COLA)	9.09%	2.09%	11.18%
Cost Group #1 – PEPRA Tier 4 (3% COLA)	9.36%	3.15%	12.51%
Cost Group #2 – PEPRA Tier 5 (2% COLA)	8.47%	1.90%	10.37%
Cost Group #2 – PEPRA Tier 5 (3%/4% COLA)	8.58%	2.84%	11.42%
Cost Group #3 – PEPRA Tier 4 (3% COLA)	8.60%	3.00%	11.60%
Cost Group #4 – PEPRA Tier 4 (3% COLA)	9.17%	3.10%	12.27%
Cost Group #5 – PEPRA Tier 4 (2% COLA)	10.16%	2.33%	12.49%
Cost Group #5 – PEPRA Tier 4 (3% COLA)	11.28%	3.85%	15.13%
Cost Group #6 – PEPRA Tier 4 (3% COLA)	11.01%	3.68%	14.69%

Safety Tiers	Basic	COLA	Total
Cost Group #7 – PEPRA Tier D	14.55%	6.02%	20.57%
Cost Group #8 – PEPRA Tier D	12.81%	5.39%	18.20%
Cost Group #8 – PEPRA Tier E	13.16%	3.68%	16.84%
Cost Group #9 – PEPRA Tier E	13.74%	3.82%	17.56%
Cost Group #10 – PEPRA Tier D	13.52%	5.70%	19.22%
Cost Group #11 – PEPRA Tier D	11.81%	4.98%	16.79%
Cost Group #12 – PEPRA Tier D	12.99%	5.49%	18.48%

Administrative Expense: 0.50% of payroll added to Basic Rates

[1] All rates should be applied to all compensation (whether or not in Social Security) up to the applicable annual Gov. Code 7522.10(d) compensation limit.

SUBVENTION

All rates are shown as a percent of payroll.

Employee contribution rates vary depending upon their tier and age at entry. To compute the exact subvention percent for each employee, do the following:

Employee rate: Decrease the employee's rate by the subvention percent (i.e. 25%, 50%, etc.).

Employer rate: Increase the employer's rate by a percent of the employee's decrease using the applicable non-refundability factor (found on Exhibits 1 through 12).

EXAMPLE FOR COST GROUP #3 LEGACY MEMBERS:

If the subvention percent is 25%, and the employee's rate is 6.00%,

Employee rates should be decreased by 1.50% (25% × 6.00%)
Employer rate should be increased by 1.44% (1.50% × 0.9628)

Please note that for PEPRA members, subvention is generally not permitted. The standard under Gov. Code §7522.30(a) is that employees pay at least 50 percent of normal costs and that employers not pay any of the required employee contribution, but there are some exceptions. Gov. Code §7522.30(f) allows the terms (regarding the employee's required contribution) of a contract, including a memorandum of understanding, that is in effect on January 1, 2013, to continue through the length of a contract. This means that it is possible that an employer will subvent a portion of a PEPRA member's required contribution until the expiration date of the current contract, so long as it has been determined that the contract has been impaired.

CAUTION – these rates are for employer subvention of up to one-half the member contribution under Gov. Code §31581.1, NOT employer pick-up of employee contribution rates. When an employer subvents, the contribution subvented is not placed in the member's account and is therefore not available to the member as a refund. For this reason, the employer pays the contribution at a discount (i.e. "Non-Refundability Factor").

Employer pick-ups of employee contributions are those made under Gov. Code §31581.2 and Internal Revenue Code §414 (h)(2) for the sole purpose of deferring income tax. These contributions are added to the member's account, are available to the member as a refund and are considered by CCCERA as part of the member's compensation for retirement purposes.

EMPLOYEE PAYMENT OF EMPLOYER COST

There are several reasons why the attached contribution rates may need to be adjusted to increase the employee portion including the following:

Gov. Code §31631 allows for members to pay all or part of the employer contributions.

Gov. Code §31639.95 allows for Safety members to pay a portion of the employer cost for the "3% at 50" enhanced benefit.

Gov. Code §7522.30(c) requires that an employee's contribution rate be at least equal to that of similarly situated employees.

Gov. Code §7522.30(e) allows the employee contributions to be more than one-half of the normal cost rate if the increase has been agreed to through the collective bargaining process.

If you need to increase the employee contribution rate for any reason, you will need to adjust both employee and employer rates as follows:

Employee rate: Increase the employee's rate by the desired percent of payroll.

Employer rate: Decrease the employer's rate by a percent of the cost-sharing percent of payroll using the applicable non-refundability factor.

EXAMPLE FOR COST GROUP #11 LEGACY MEMBERS:

If the required increase in the employee rate is 8.00%,

Employee rates should be increased by 8.00%.
Employer rate should be decreased by 7.82% (8.00% × 0.9769)

PREPAYMENT DISCOUNT FACTOR FOR 2024-2025

Employer Contribution Prepayment Program & Discount Factor for 2024-2025 is **0.9707**

If you are currently participating in the prepayment program and wish to continue, you do not need to do anything other than prepay the July 1, 2024 through June 30, 2025 contributions on or before July 31, 2024. If you wish to start participating, please contact the Accounting Department at CCCERA by March 31, 2024.

The discount factor is calculated assuming the prepayment will be received on July 31 in accordance with Gov. Code §31582(b) in lieu of 12 equal payments due at the end of each month in accordance with Gov. Code §31582(a). The discount factor for the fiscal year July 1, 2024 through June 30, 2025 will be **0.9707** based on the interest assumption of 6.75% per annum. It is calculated by discounting each of the 12 equal payments back to the date that the prepayment is made and is the sum of the discount factors shown in the table below divided by 12. Each of the discount factors below is based on how many months early the payment is made.

Payment Number	Number of Months Payment is Made Early	Discount Factor
1	0	1.0000
2	1	0.9946
3	2	0.9892
4	3	0.9838
5	4	0.9785
6	5	0.9732
7	6	0.9679
8	7	0.9626
9	8	0.9574
10	9	0.9522
11	10	0.9470
12	11	0.9419
Sum of Discount Factors Divided by 12:		**0.9707**

Meeting Date
08/09/2023
Agenda Item
#9

CCCERA
Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 9, 2023

To: CCCERA Board of Retirement

From: Karen Levy, General Counsel

Subject: Consider and take possible action to amend the Internal Revenue Code compliance policies.

Background

The Contra Costa County Employees' Retirement Association is a tax qualified plan. CCCERA received its most recent favorable Letter of Determination from the Internal Revenue Service (IRS) effective December 4, 2014. A Letter of Determination is a favorable ruling that the terms of the retirement plan comply with applicable provisions of the Internal Revenue Code (IRC) and Treasury regulations. It means that the retirement plan is "tax-qualified," and therefore plan participants are not taxed when contributions are made to the plan, but rather upon receipt of benefits at retirement. In 2016, the IRS eliminated the 5-year filing cycle for plans seeking a letter of determination of tax qualified status. Per IRS guidance, the most recent favorable letter received by CCCERA has no expiration date. To maintain its tax qualified status, CCCERA must continue to comply with its plan document as well is the IRC and Treasury regulations.

CCCERA's tax compliance policies have been reviewed and the following edits are recommended:

a. The policy on Internal Revenue Code Section 415 Compliance pertains to limits on annual benefit amount to be paid to members. The suggested changes include updates of references and cross-references and minor clarifications.
b. The policy on Internal Revenue Code Compliance covers a variety of tax items. The suggested changes pertain to changes in federal law pursuant to the federal Setting Every Community Up for Retirement Enhancement Act (SECURE 2.0 Act of 2022) enacted in December 2022. The Act increased the required minimum distribution age to 73 starting January 1, 2023, and to 75 starting January 1, 2033. Additionally, the Act provides that, if the member's designated beneficiary is the surviving spouse, and the spouse so elects, the surviving spouse shall be treated as if they were the employee for the purpose of required minimum distributions.

Enclosed, for the Board's consideration, are the amended tax compliance policies, along with a redline reflecting the suggested changes.

Recommendation
Consider and take possible action to amend the Internal Revenue Code compliance policies.

Policy on Internal Revenue Code Section 415 Compliance

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

POLICY ON INTERNAL REVENUE CODE SECTION 415 COMPLIANCE

1. Purpose of this Policy

A. CCCERA is established as a qualified defined benefit plan under the County Employees Retirement Law of 1937, California Government Code sections 31450, *et seq.*, as amended from time to time ("CERL"), sections 401(a) and 414(d) of the Internal Revenue Code, such other provisions of the Internal Revenue Code as applicable, and applicable Treasury regulations and other guidance.

B. The Retirement Board is authorized to adopt regulations and policies which are appropriate or necessary to maintain the qualified status of the plan.

2. Definitions

A. All references to the Internal Revenue Code or IRC mean the Internal Revenue Code of 1986, as amended.

B. The plan year is the calendar year.

C. For IRC section 415 testing purposes, the limitation year is the calendar year.

3. Limitations on Contributions and Benefits (IRC Section 415; CERL Sections 31538 and 31899 et seq.)

A. As provided in CERL Chapter 3.9, Section 31899 et seq., benefits paid from the plan shall be limited to such extent as may be necessary to conform to the requirements of IRC Section 415 for a qualified pension plan. Notwithstanding any other law, the limitation with respect to a person who first became a member under the plan prior to January 1, 1990 shall not be less than the accrued benefit of the member under the plan (determined without regard to any amendment of this plan adopted after October 14, 1987).

B. *Basic 415(b) Limitation.*

(i) On and after January 1, 1995, a member may not receive an annual benefit that exceeds the dollar amount specified in IRC Section 415(b)(1)(A), subject to the applicable adjustments in IRC Section 415(b) and subject to any additional limits that may be specified in CERL and this Policy, and subject to the grandfather provisions of CERL Section 31899. In no event shall such member's benefit payable under the plan in any limitation year be greater than the limit applicable at the annuity starting date, as increased in subsequent years pursuant to IRC Section 415(d) and the regulations thereunder.

(ii) For purposes of IRC Section 415(b), the "annual benefit" means a benefit payable annually in the form of a straight life annuity (with no ancillary benefits) without regard to the benefit attributable to after-tax employee contributions (except pursuant to IRC Section 415(n)) and to rollover contributions (as defined in IRC Section 415(b)(2)(A)). The "benefit attributable" shall be determined in accordance with Treasury Regulations.

C. *Adjustments to Basic 415(b) Limitation for Form of Benefit*

If the benefit under the plan is other than the form specified in subsection (B)(ii), then the benefit shall be adjusted so that it is the equivalent of the annual benefit, using factors prescribed in Treasury Regulations.

(i) If the form of benefit without regard to the automatic benefit increase feature is not a straight life annuity or a qualified joint and survivor (spousal) annuity[1], then the preceding sentence is applied by either reducing the IRC Section 415(b) limit applicable at the annuity starting date or adjusting the form of benefit to an actuarially equivalent amount [determined using the assumptions specified in Treasury Regulation IRC Section 1.415(b)-1(c)(2)(ii)] that takes into account the additional benefits under the form of benefit as follows:

(ii) For a benefit paid in a form to which IRC Section 417(e)(3) (annuity, not lump sum, benefit) does not apply, the actuarially equivalent straight life annuity benefit that is the <u>greater of</u>:

(a) The annual amount of the straight life annuity (if any) payable to the member under the plan commencing at the same annuity starting date as the form of benefit to the member, or

(b) The annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the form of benefit payable to the member, computed using a 5% interest assumption (or the applicable statutory interest assumption) and, for plan years after December 31, 2008, the applicable mortality tables described in IRC Section 417(e)(3)(B) (Notice 2008-85 or any subsequent Internal Revenue Service ("IRS") guidance implementing IRC Section 417(e)(3)(B)); or

(iii) For a benefit paid in a form to which IRC Section 417(e)(3) (lump sums) applies, the actuarially equivalent straight life annuity benefit that is the greatest of:

(a) The annual amount of the straight life annuity commencing at the annuity starting date that has the same actuarial present value as the particular

[1] A qualified joint and survivor annuity ("QJSA") means a 50% - 100% joint and survivor annuity with a <u>spouse</u> (same sex or opposite sex) as a designated beneficiary. No adjustment is required for the actuarial value of a QJSA that is fully or partially subsidized. See Treas. Reg. Section 1.415(b)-1(c)(4). If the survivor is a <u>non-spouse</u> beneficiary or domestic partner (thus, it is not a QJSA) then the entire benefit must be converted into a single-life annuity and tested under IRC Code Section 415(b).

form of benefit payable, computed using the interest rate and mortality table, or tabular factor, specified in the plan;

(b) The annual amount of the straight life annuity commencing at the annuity starting date that has the same actuarial present value as the particular form of benefit payable, computed using a 5.5 percent interest assumption (or the applicable statutory interest assumption) and, for plan years after December 31, 2008, the applicable mortality tables described in IRC Section 417(e)(3)(B) (Notice 2008-85 or any subsequent IRS guidance implementing IRC Section 417(e)(3)(B)); or

(c) The annual amount of the straight life annuity commencing at the annuity starting date that has the same actuarial present value as the particular form of benefit payable (computed using the applicable interest rate for the distribution under Treasury Regulation IRC Section 1.417(e)-1(d)(3) (using the rate in effect for the month prior to retirement) and, for plan years after December 31, 2008, the applicable mortality tables described in IRC Section 417(e)(3)(B) (Notice 2008-85 or any subsequent IRS guidance implementing IRC Section 417(e)(3)(B)), divided by 1.05.

(iv) In lieu of converting the optional form of benefit into a single-life annuity, the actuary may adjust the 415(b) limit at the annuity starting date in accordance with the above subsections (ii) and (iii).

(v) In the event that a qualified joint and survivor (spousal) annuity includes temporary benefits payable to minor children, no adjustment under 415(b) is required because the benefit remains a qualified joint and survivor annuity.

D. *Benefits Not Taken into Account for 415(b) Limitation*.

For purposes of this section, the following benefits shall not be taken into account in applying these limits:

(i) Any ancillary benefit (usually temporary, not annual or monthly) which is not directly related to retirement income benefits (e.g. burial benefits would be ancillary);

(ii) That portion of any joint and survivor annuity that constitutes a qualified joint and survivor annuity;

(iii) Any other benefit not required under IRC Section 415(b)(2) and Treasury Regulations thereunder to be taken into account for purposes of the limitation of IRC Section 415(b)(1).

E. *Other Adjustments in 415(b) Limitation.*

(i) In the event the member's retirement benefits become payable before age 62, the limit prescribed by this section shall be reduced in accordance with

Treasury Regulations pursuant to the provisions of IRC Section 415(b), so that such limit (as so reduced) equals an annual straight life benefit (when such retirement income benefit begins) which is equivalent to a one hundred sixty thousand dollar ($160,000) (as adjusted) annual benefit beginning at age 62.

The reduction in the limit shall be based on the following set of assumptions, whichever produces the lower limit:

(a) the interest rate and mortality table or tabular factor specified in the plan for commencement prior to the age of 62, or

(b) 5% and for plan years after December 31, 2008, the applicable mortality tables described in IRC section 417(e)(3)(B) (Notice 2008-85 or any subsequent IRS guidance implementing IRC Section 417(e)(3)(B)).

(ii) In the event the member's benefit is based on at least 15 years of service as a full-time employee of any police (sheriff's) or fire department or on 15 years of military service, the adjustments provided for in (i) above shall not apply. There is no age reduction for any employee of a police or fire department, regardless of whether that person otherwise qualifies as a public safety officer, but there is an age reduction for Safety Members who are not employed by a police or fire department. The application of this rule depends on whether the employer is a police department or fire department of the county, rather than on the job classification of the individual member. It is necessary that the employer (or at least the appropriate division of that employer) function as a police or fire department. The requirement of 15 years of service can be satisfied with a combination of police/fire services and military service.

(iii) The reductions provided for in (i) ~~(ii)~~ above shall not be applicable to pre-retirement disability benefits or pre-retirement death benefits.

F. *Less than 10 Years of Participation Adjustment for 415(b) Limitations*.

The maximum retirement benefits payable to any member who has completed less than 10 years of participation shall be the amount determined under subsection (B) multiplied by a fraction, the numerator of which is the number of the member's years of participation and the denominator of which is 10. The service reduction provided by this subsection cannot reduce the maximum benefit below 10 percent. The reduction provided for in this subsection shall not be applicable to pre-retirement disability benefits or pre-retirement death benefits.

G. *Ten Thousand Dollar ($10,000) Limit*.

Notwithstanding the foregoing, the retirement benefit payable with respect to a member shall be deemed not to exceed the 415 limit if the benefits payable, with respect to such member under this plan and under all other qualified defined benefit pension plans to which the member's employer contributes, do not exceed ten thousand dollars ($10,000) for the applicable limitation year and for any prior limitation year and the employer has not any time maintained a qualified defined contribution plan in which the member participated.

H. *Effect of COLA ~~without a~~ and Lump Sum Component on 415(b) Testing*.

Effective on and after January 1, 2009, for purposes of applying the limits under IRC Section 415(b) (the "Limit") to a member with no lump sum benefit, a member’s annual benefit, including any cost of living increases under CERL Article 16.5, shall be tested under the then applicable benefit Limit including any adjustment to the IRC Section 415(b)(1)(A) dollar limit under IRC Section 415(d), and the regulations thereunder.

On and after January 1, 2009, with respect to a member who receives a portion of the member's annual benefit in a lump sum, a member's applicable Limit will be applied taking into consideration cost of living increases as required by IRC Section 415(b) and applicable Treasury Regulations.

I. *IRC Section 415(c) limitations on contributions and other additions*.

415(c) limitations on contributions will only apply to CCCERA if the member has after-tax member contributions or service purchase after-tax amounts ~~(see pg. 8)~~ or other annual additions. All such annual additions, with respect to a member, may not exceed the lesser of $40,000 (as adjusted pursuant to IRC Section 415(d)) or 100% of the member's compensation.

(i) Annual additions are defined to mean the sum (for any year) of employer contributions to a defined contribution plan, member contributions, and forfeitures credited to a member's individual account. Member contributions are determined without regard to rollover contributions and to picked-up employee contributions that are paid to a defined benefit plan.

(ii) For purposes of applying IRC Section 415(c) and for no other purpose, the definition of compensation where applicable will be compensation actually paid or made available during a limitation year, except as noted below and as permitted by Treasury Regulation IRC Section 1.415(c)-2, or successor regulation; provided, however, that member contributions picked up under IRC Section 414(h) shall not be treated as compensation.

(iii) This section applies solely for purposes of IRC Section 415 testing. Compensation will be defined as wages within the meaning of IRC Section 3401(a) and all other payments of compensation to an employee by an employer for which the employer is required to furnish the employee a written statement under IRC Sections 6041(d), 6051(a)(3) and 6052 and will be determined without regard to any rules under IRC Section 3401(a) that limit the remuneration included in wages based on the nature or location of the employment or the services performed (such as the exception for agricultural labor in IRC Section 3401(a)(2)).

(a) However, for limitation years beginning after December 31, 1997, compensation will also include amounts that would otherwise be included in compensation but for an election under IRC Sections 125(a), 402(e)(3), 402(h)(1)(B), 402(k), or 457(b). For limitation years beginning after December 31, 2000, compensation shall also include any elective amounts that are not includible in the gross income of the member by reason of IRC Section 132(f)(4).

(b) For limitation years beginning on and after January 1, 2009, compensation for the limitation year shall also include compensation paid by the later of $2^1/_2$ months after a member's severance from employment or the end of the limitation year that includes the date of the member's severance from employment if:

(I) the payment is regular compensation for services during the member's regular working hours, or compensation for services outside the member's regular working hours (such as overtime or shift differential), commissions, bonuses or other similar payments, and, absent a severance from employment, the payments would have been paid to the member while the member continued in employment with the employer; or

(II) the payment is for unused accrued bona fide sick, vacation or other leave that the member would have been able to use if employment had continued; or

(III) payments pursuant to a nonqualified unfunded deferred compensation plan, but only if the payments would have been paid to the member at the same time if the member had continued employment with the employer and only to the extent that the payment is includible in the member's gross income.

(iv) Any payments not described in paragraph (iii)(b) above are not considered compensation if paid after severance from employment, even if they are paid within $2^1/_2$ months following severance from employment, except for payments to the individual who does not currently perform services for the employer by reason of qualified military service (within the meaning of IRC Section 414(u)(1)) to the extent these payments do not exceed the amounts the individual would have received if the individual had continued to perform services for the employer rather than entering qualified military service.

(v) An employee who is in qualified military service (within the meaning of IRC Section 414(u)(1)) shall be treated as receiving compensation from the employer during such period of qualified military service equal to (i) the compensation the employee would have received during such period if the employee were not in qualified military service, determined based on the rate of pay the employee would have received from the employer but for the absence during the period of qualified military service, or (ii) if the compensation the employee would have received during such period was not reasonably certain, the employee's average compensation from the employer during the twelve month period immediately preceding the qualified military service (or, if shorter, the period of employment immediately preceding the qualified military service).

(vi) Back pay, within the meaning of Treasury Regulation IRC Section 1.415(c)-2(g)(8), shall be treated as compensation for the limitation year to which the back pay relates to the extent the back pay represents wages and compensation that would otherwise be included under this definition.

(vii) For limitation years beginning on or after January 1, 2009, a member's compensation for purposes of this section shall not exceed the annual limit under IRC Section 401(a)(17).

J. *Service Purchases under IRC Section 415(n).*

(i) Effective for permissive service credit contributions made in limitation years beginning after December 31, 1997, if a member makes one or more contributions to purchase permissive service credit under the plan, then the requirements of IRC Section 415(n) will be treated as met only if:

(a) the requirements of IRC Section 415(b) are met (without regard to the age reduction under IRC Section 415(b)(2)(C)), determined by treating the accrued benefit derived from all such contributions as an annual benefit for purposes of IRC Section 415(b), or

(b) the requirements of IRC Section 415(c) are met, (without regard to the pay limit under IRC Section 415(c)(1)(B)) determined by treating all such contributions as annual additions for purposes of IRC Section 415(c).

(ii) For purposes of this subsection the term "permissive service credit" means service credit—

(a) recognized by the plan for purposes of calculating a member's benefit under the plan,

(b) which such member has not received under the plan, and

(c) which such member may receive only by making a voluntary additional contribution, in an amount determined under the plan, which does not exceed the amount necessary to fund the benefit attributable to such service credit.

(iii) The plan does not allow for the purchase of "nonqualified service credit."

(iv) For purposes of subparagraph (iii), effective for permissive service credit contributions made in limitation years beginning after December 31, 1997, the term "nonqualified service credit" means permissive service credit other than that allowed with respect to—

(a) service (including parental, medical, sabbatical, and similar leave) as an employee of the Government of the United States, any State or political subdivision thereof, or any agency or instrumentality of any of the foregoing (other than military service or service for credit which was obtained as a result of a repayment described in IRC Section 415(k)(3)),

(b) service (including parental, medical, sabbatical, and similar leave) as an employee (other than as an employee described in clause (a)) of an education organization described in IRC Section 170(b)(1)(A)(ii) which is a public, private, or sectarian school which provides elementary or secondary education (through grade 12), or a comparable level of education, as determined under the applicable law of the jurisdiction in which the service was performed,

(c) service as an employee of an association of employees who are described in clause (a), or

(d) military service (other than qualified military service under IRC Section 414(u)) recognized by the plan.

In the case of service described in clause (a), (b), or (c), such service will be nonqualified service if recognition of such service would cause a member to receive a retirement benefit for the same service under more than one plan.

(v) In the case of a trustee-to-trustee transfer after December 31, 2001, to which IRC Section 403(b)(13)(A) or 457(e)(17)(A) applies (without regard to whether the transfer is made between plans maintained by the same employer)—

(a) the limitations ~~of subparagraph (iii)~~ on nonqualified service credit under IRC Section 415(n)(3)(B) will not apply in determining whether the transfer is for the purchase of permissive service credit, and

(b) the distribution rules applicable under federal law to the plan will apply to such amounts and any benefits attributable to such amounts.

(vi) For an eligible member, the IRC Section 415(c)(1) limitation shall not be applied to reduce the amount of permissive service credit which may be purchased to an amount less than the amount which was allowed to be purchased under the terms of a Plan as in effect on August 5, 1997. For purposes of this paragraph an eligible member is an individual who first became a member in the plan before January 1, 1998.

(vii) Any repayment of contributions (including interest) shall not be taken into account for IRC Section 415 purposes. So long as the amount repaid does not exceed the amount refunded, plus interest, IRC Section 415(c) will not apply to the repayment. However, the restored benefit is to be treated for testing purposes as the original benefit would have been treated. (See also Section L~~M~~ below).

(viii) In situations involving redeposit by the member of funds assigned to an alternate payee due to a domestic relations order, a member may make payments with post-tax dollars or complete a trustee-to-trustee transfer of 457 plan contributions to accomplish the redeposit. The benefit attributable to such amounts redeposited is not included in the benefit which is tested against the 415(b) limitation (provided that if post-tax dollars are used, the post-tax dollars satisfy the modified 415(c) limit described in paragraph (i)(b) above). The required method for allocating a portion of after-tax employee contributions, for purposes of excluding this amount from the annual benefit to be tested, is established in Reg. Section 1.411(c)-1(c). The method requires calculation of the after-tax employee contributions, plus interest, at rates specified by the regulations.

K. *Modification of Contributions for 415(c) and 415(n) Purposes*.

Notwithstanding any other provision of law to the contrary, CCCERA may modify a request by a member to make a contribution to the plan if the amount of the contribution would exceed the limits provided in IRC Section 415 by using the following methods:

(i) If the law requires a lump sum payment for the purchase of service credit, CCCERA may establish a periodic payment plan for the member to avoid a contribution in excess of the limits under IRC Section 415(c) or 415(n).

(ii) If payment pursuant to subparagraph (i) will not avoid a contribution in excess of the limits imposed by IRC Section 415(c) or 415(n), CCCERA may either reduce the member's contribution to an amount within the limits of those sections or refuse the member's contribution.

L. *Repayments of Cashouts.*

Any repayment of contributions (including interest thereon) to the plan with respect to an amount previously refunded upon a forfeiture of service credit under the plan or another governmental plan maintained by CCCERA shall not be taken into account for purposes of IRC Section 415, in accordance with applicable Treasury Regulations.

For example, if a member takes a refund and later returns to CCCERA membership, the member may redeposit the contributions to re-establish service credit. The member’s service credit is restored and the 415 limit is applied as if the member had never left.

M. *Aggregation of Limits.*

(i) Participation in Other Qualified Plans

(a) The 415(b) limit with respect to any member who at any time has been a member in any other defined benefit plan as defined in IRC Section 414(j) maintained by the member's employer in this plan shall apply as if the total benefits payable under all such defined benefit plans in which the member has been a member were payable from one (1) plan.

(b) The 415(c) limit with respect to any member who at any time has been a member in any other defined contribution plan as defined in IRC Section 414(i) maintained by the member's employer in this plan shall apply as if the total annual additions under all such defined contribution plans in which the member has been a member were payable from one (1) plan.

(c) All defined benefit plans of the same employer must be aggregated for testing purposes and all defined contribution plans of the same employer must be aggregated. However, defined benefit and defined contribution plans are not combined for testing purposes. Thus, for example, if an employee, over the course of his or her career, is employed by Contra Costa County in different positions that are covered under both the CCCERA defined benefit plan and the Contra Costa County Deferred Compensation Plan, the benefit under both plans is not aggregated for purposes of IRC Section 415.

(ii) Alternate Payees/QDROs

(a) Benefits paid to alternate payees of members pursuant to a QDRO must be treated as if the benefit were paid to the participant for purposes of applying the IRC Section 415 limits.

(b) If the alternate payee is a former spouse and if the QDRO provides that the former spouse is to be treated as a spouse, then the value of the alternate payee's spousal benefit can, in effect, be disregarded for purposes of the 415(b) limits, under the normal rule that any portion of a QJSA need not be taken into account for 415(b) testing.

~~(b)~~

N. *Reduction of Benefits Priority*.

Reduction of benefits and/or contributions to all plans, where required, shall be accomplished by first reducing the member's benefit under any defined benefit plans in which the member participated, such reduction to be made first with respect to the plan in which the member most recently accrued benefits and thereafter in such priority as shall be determined by the plan and the plan administrator of such other plans, and next, by reducing or allocating excess forfeitures for defined contribution plans in which the member participated, such reduction to be made first with respect to the plan in which the member most recently accrued benefits and thereafter in such priority as shall be established by the plan and the plan administrator for such other plans provided, however, that necessary reductions may be made in a different manner and priority pursuant to the agreement of the plan and the plan administrator of all other plans covering such member.

4. Review

This policy shall be reviewed by the Board at least every three (3) years and may be amended at any time.

5. History

This policy was adopted on: 12/8/2010

Amended: 1/9/2013, 7/11/2018, 9/8/2021, __/__/2023

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

POLICY ON INTERNAL REVENUE CODE SECTION 415 COMPLIANCE

1. Purpose of this Policy

A. CCCERA is established as a qualified defined benefit plan under the County Employees Retirement Law of 1937, California Government Code sections 31450, *et seq.*, as amended from time to time ("CERL"), sections 401(a) and 414(d) of the Internal Revenue Code, such other provisions of the Internal Revenue Code as applicable, and applicable Treasury regulations and other guidance.

B. The Retirement Board is authorized to adopt regulations and policies which are appropriate or necessary to maintain the qualified status of the plan.

2. Definitions

A. All references to the Internal Revenue Code or IRC mean the Internal Revenue Code of 1986, as amended.

B. The plan year is the calendar year.

C. For IRC section 415 testing purposes, the limitation year is the calendar year.

3. Limitations on Contributions and Benefits (IRC Section 415; CERL Sections 31538 and 31899 et seq.)

A. As provided in CERL Chapter 3.9, Section 31899 et seq., benefits paid from the plan shall be limited to such extent as may be necessary to conform to the requirements of IRC Section 415 for a qualified pension plan. Notwithstanding any other law, the limitation with respect to a person who first became a member under the plan prior to January 1, 1990 shall not be less than the accrued benefit of the member under the plan (determined without regard to any amendment of this plan adopted after October 14, 1987).

B. *Basic 415(b) Limitation.*

(i) On and after January 1, 1995, a member may not receive an annual benefit that exceeds the dollar amount specified in IRC Section 415(b)(1)(A), subject to the applicable adjustments in IRC Section 415(b) and subject to any additional limits that may be specified in CERL and this Policy, and subject to the grandfather provisions of CERL Section 31899. In no event shall such member's benefit payable under the plan in any limitation year be greater than the limit applicable at the annuity starting date, as increased in subsequent years pursuant to IRC Section 415(d) and the regulations thereunder.

(ii) For purposes of IRC Section 415(b), the "annual benefit" means a benefit payable annually in the form of a straight life annuity (with no ancillary benefits) without regard to the benefit attributable to after-tax employee contributions (except pursuant to IRC Section 415(n)) and to rollover contributions (as defined in IRC Section 415(b)(2)(A)). The "benefit attributable" shall be determined in accordance with Treasury Regulations.

C. *Adjustments to Basic 415(b) Limitation for Form of Benefit*

If the benefit under the plan is other than the form specified in subsection (B)(ii), then the benefit shall be adjusted so that it is the equivalent of the annual benefit, using factors prescribed in Treasury Regulations.

(i) If the form of benefit without regard to the automatic benefit increase feature is not a straight life annuity or a qualified joint and survivor (spousal) annuity[1], then the preceding sentence is applied by either reducing the IRC Section 415(b) limit applicable at the annuity starting date or adjusting the form of benefit to an actuarially equivalent amount [determined using the assumptions specified in Treasury Regulation IRC Section 1.415(b)-1(c)(2)(ii)] that takes into account the additional benefits under the form of benefit as follows:

(ii) For a benefit paid in a form to which IRC Section 417(e)(3) (annuity, not lump sum, benefit) does not apply, the actuarially equivalent straight life annuity benefit that is the greater of:

(a) The annual amount of the straight life annuity (if any) payable to the member under the plan commencing at the same annuity starting date as the form of benefit to the member, or

(b) The annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the form of benefit payable to the member, computed using a 5% interest assumption (or the applicable statutory interest assumption) and, for plan years after December 31, 2008, the applicable mortality tables described in IRC Section 417(e)(3)(B) (Notice 2008-85 or any subsequent Internal Revenue Service ("IRS") guidance implementing IRC Section 417(e)(3)(B)); or

(iii) For a benefit paid in a form to which IRC Section 417(e)(3) (lump sums) applies, the actuarially equivalent straight life annuity benefit that is the greatest of:

(a) The annual amount of the straight life annuity commencing at the annuity starting date that has the same actuarial present value as the particular

[1] A qualified joint and survivor annuity ("QJSA") means a 50% - 100% joint and survivor annuity with a spouse (same sex or opposite sex) as a designated beneficiary. No adjustment is required for the actuarial value of a QJSA that is fully or partially subsidized. See Treas. Reg. Section 1.415(b)-1(c)(4). If the survivor is a non-spouse beneficiary or domestic partner (thus, it is not a QJSA) then the entire benefit must be converted into a single-life annuity and tested under IRC Code Section 415(b).

form of benefit payable, computed using the interest rate and mortality table, or tabular factor, specified in the plan;

(b) The annual amount of the straight life annuity commencing at the annuity starting date that has the same actuarial present value as the particular form of benefit payable, computed using a 5.5 percent interest assumption (or the applicable statutory interest assumption) and, for plan years after December 31, 2008, the applicable mortality tables described in IRC Section 417(e)(3)(B) (Notice 2008-85 or any subsequent IRS guidance implementing IRC Section 417(e)(3)(B)); or

(c) The annual amount of the straight life annuity commencing at the annuity starting date that has the same actuarial present value as the particular form of benefit payable (computed using the applicable interest rate for the distribution under Treasury Regulation IRC Section 1.417(e)-1(d)(3) (using the rate in effect for the month prior to retirement) and, for plan years after December 31, 2008, the applicable mortality tables described in IRC Section 417(e)(3)(B) (Notice 2008-85 or any subsequent IRS guidance implementing IRC Section 417(e)(3)(B)), divided by 1.05.

(iv) In lieu of converting the optional form of benefit into a single-life annuity, the actuary may adjust the 415(b) limit at the annuity starting date in accordance with the above subsections (ii) and (iii).

(v) In the event that a qualified joint and survivor (spousal) annuity includes temporary benefits payable to minor children, no adjustment under 415(b) is required because the benefit remains a qualified joint and survivor annuity.

D. *Benefits Not Taken into Account for 415(b) Limitation*.

For purposes of this section, the following benefits shall not be taken into account in applying these limits:

(i) Any ancillary benefit (usually temporary, not annual or monthly) which is not directly related to retirement income benefits (e.g. burial benefits would be ancillary);

(ii) That portion of any joint and survivor annuity that constitutes a qualified joint and survivor annuity;

(iii) Any other benefit not required under IRC Section 415(b)(2) and Treasury Regulations thereunder to be taken into account for purposes of the limitation of IRC Section 415(b)(1).

E. *Other Adjustments in 415(b) Limitation.*

(i) In the event the member's retirement benefits become payable before age 62, the limit prescribed by this section shall be reduced in accordance with

Treasury Regulations pursuant to the provisions of IRC Section 415(b), so that such limit (as so reduced) equals an annual straight life benefit (when such retirement income benefit begins) which is equivalent to a one hundred sixty thousand dollar ($160,000) (as adjusted) annual benefit beginning at age 62.

<u>The reduction in the limit shall be based on the following set of assumptions, whichever produces the lower limit:</u>

(a) the interest rate and mortality table or tabular factor specified in the plan for commencement prior to the age of 62, or

(b) 5% and for plan years after December 31, 2008, the applicable mortality tables described in IRC section 417(e)(3)(B) (Notice 2008-85 or any subsequent IRS guidance implementing IRC Section 417(e)(3)(B)).

(ii) In the event the member's benefit is based on at least 15 years of service as a full-time employee of any police (sheriff's) or fire department or on 15 years of military service, the adjustments provided for in (i) above shall not apply. There is no age reduction for any employee of a police or fire department, regardless of whether that person otherwise qualifies as a public safety officer, but there is an age reduction for Safety Members who are not employed by a police or fire department. The application of this rule depends on whether the <u>employer</u> is a police department or fire department of the county, rather than on the job classification of the individual member. It is necessary that the employer (or at least the appropriate division of that employer) function as a police or fire department. The requirement of 15 years of service can be satisfied with a combination of police/fire services and military service.

(iii) The reductions provided for in (i) above shall not be applicable to pre-retirement disability benefits or pre-retirement death benefits.

F. *Less than 10 Years of Participation Adjustment for 415(b) Limitations*.

The maximum retirement benefits payable to any member who has completed less than 10 years of participation shall be the amount determined under subsection (B) multiplied by a fraction, the numerator of which is the number of the member's years of participation and the denominator of which is 10. The service reduction provided by this subsection cannot reduce the maximum benefit below 10 percent. The reduction provided for in this subsection shall not be applicable to pre-retirement disability benefits or pre-retirement death benefits.

G. *Ten Thousand Dollar ($10,000) Limit*.

Notwithstanding the foregoing, the retirement benefit payable with respect to a member shall be deemed not to exceed the 415 limit if the benefits payable, with respect to such member under this plan and under all other qualified defined benefit pension plans to which the member's employer contributes, do not exceed ten thousand dollars ($10,000) for the applicable limitation year and for any prior limitation year and the employer has not any time maintained a qualified defined contribution plan in which the member participated.

H. *Effect of COLA and Lump Sum Component on 415(b) Testing*.

Effective on and after January 1, 2009, for purposes of applying the limits under IRC Section 415(b) (the "Limit") to a member with no lump sum benefit, a member's annual benefit, including any cost of living increases under CERL Article 16.5, shall be tested under the then applicable benefit Limit including any adjustment to the IRC Section 415(b)(1)(A) dollar limit under IRC Section 415(d), and the regulations thereunder.

On and after January 1, 2009, with respect to a member who receives a portion of the member's annual benefit in a lump sum, a member's applicable Limit will be applied taking into consideration cost of living increases as required by IRC Section 415(b) and applicable Treasury Regulations.

I. *IRC Section 415(c) limitations on contributions and other additions*.

415(c) limitations on contributions will only apply to CCCERA if the member has after-tax member contributions or service purchase after-tax amounts or other annual additions. All such annual additions, with respect to a member, may not exceed the lesser of $40,000 (as adjusted pursuant to IRC Section 415(d)) or 100% of the member's compensation.

(i) Annual additions are defined to mean the sum (for any year) of employer contributions to a defined contribution plan, member contributions, and forfeitures credited to a member's individual account. Member contributions are determined without regard to rollover contributions and to picked-up employee contributions that are paid to a defined benefit plan.

(ii) For purposes of applying IRC Section 415(c) and for no other purpose, the definition of compensation where applicable will be compensation actually paid or made available during a limitation year, except as noted below and as permitted by Treasury Regulation IRC Section 1.415(c)-2, or successor regulation; provided, however, that member contributions picked up under IRC Section 414(h) shall not be treated as compensation.

(iii) This section applies solely for purposes of IRC Section 415 testing. Compensation will be defined as wages within the meaning of IRC Section 3401(a) and all other payments of compensation to an employee by an employer for which the employer is required to furnish the employee a written statement under IRC Sections 6041(d), 6051(a)(3) and 6052 and will be determined without regard to any rules under IRC Section 3401(a) that limit the remuneration included in wages based on the nature or location of the employment or the services performed (such as the exception for agricultural labor in IRC Section 3401(a)(2)).

(a) However, for limitation years beginning after December 31, 1997, compensation will also include amounts that would otherwise be included in compensation but for an election under IRC Sections 125(a), 402(e)(3), 402(h)(1)(B), 402(k), or 457(b). For limitation years beginning after December 31, 2000, compensation shall also include any elective amounts that are not includible in the gross income of the member by reason of IRC Section 132(f)(4).

(b) For limitation years beginning on and after January 1, 2009, compensation for the limitation year shall also include compensation paid by the later of $2^1/_2$ months after a member's severance from employment or the end of the limitation year that includes the date of the member's severance from employment if:

(I) the payment is regular compensation for services during the member's regular working hours, or compensation for services outside the member's regular working hours (such as overtime or shift differential), commissions, bonuses or other similar payments, and, absent a severance from employment, the payments would have been paid to the member while the member continued in employment with the employer; or

(II) the payment is for unused accrued bona fide sick, vacation or other leave that the member would have been able to use if employment had continued; or

(III) payments pursuant to a nonqualified unfunded deferred compensation plan, but only if the payments would have been paid to the member at the same time if the member had continued employment with the employer and only to the extent that the payment is includible in the member's gross income.

(iv) Any payments not described in paragraph (iii)(b) above are not considered compensation if paid after severance from employment, even if they are paid within $2^1/_2$ months following severance from employment, except for payments to the individual who does not currently perform services for the employer by reason of qualified military service (within the meaning of IRC Section 414(u)(1)) to the extent these payments do not exceed the amounts the individual would have received if the individual had continued to perform services for the employer rather than entering qualified military service.

(v) An employee who is in qualified military service (within the meaning of IRC Section 414(u)(1)) shall be treated as receiving compensation from the employer during such period of qualified military service equal to (i) the compensation the employee would have received during such period if the employee were not in qualified military service, determined based on the rate of pay the employee would have received from the employer but for the absence during the period of qualified military service, or (ii) if the compensation the employee would have received during such period was not reasonably certain, the employee's average compensation from the employer during the twelve month period immediately preceding the qualified military service (or, if shorter, the period of employment immediately preceding the qualified military service).

(vi) Back pay, within the meaning of Treasury Regulation IRC Section 1.415(c)-2(g)(8), shall be treated as compensation for the limitation year to which the back pay relates to the extent the back pay represents wages and compensation that would otherwise be included under this definition.

(vii) For limitation years beginning on or after January 1, 2009, a member's compensation for purposes of this section shall not exceed the annual limit under IRC Section 401(a)(17).

J. *Service Purchases under IRC Section 415(n).*

(i) Effective for permissive service credit contributions made in limitation years beginning after December 31, 1997, if a member makes one or more contributions to purchase permissive service credit under the plan, then the requirements of IRC Section 415(n) will be treated as met only if:

(a) the requirements of IRC Section 415(b) are met (without regard to the age reduction under IRC Section 415(b)(2)(C)), determined by treating the accrued benefit derived from all such contributions as an annual benefit for purposes of IRC Section 415(b), or

(b) the requirements of IRC Section 415(c) are met, (without regard to the pay limit under IRC Section 415(c)(1)(B)) determined by treating all such contributions as annual additions for purposes of IRC Section 415(c).

(ii) For purposes of this subsection the term "permissive service credit" means service credit—

(a) recognized by the plan for purposes of calculating a member's benefit under the plan,

(b) which such member has not received under the plan, and

(c) which such member may receive only by making a voluntary additional contribution, in an amount determined under the plan, which does not exceed the amount necessary to fund the benefit attributable to such service credit.

(iii) The plan does not allow for the purchase of "nonqualified service credit."

(iv) For purposes of subparagraph (iii), effective for permissive service credit contributions made in limitation years beginning after December 31, 1997, the term "nonqualified service credit" means permissive service credit other than that allowed with respect to—

(a) service (including parental, medical, sabbatical, and similar leave) as an employee of the Government of the United States, any State or political subdivision thereof, or any agency or instrumentality of any of the foregoing (other than military service or service for credit which was obtained as a result of a repayment described in IRC Section 415(k)(3)),

(b) service (including parental, medical, sabbatical, and similar leave) as an employee (other than as an employee described in clause (a)) of an education organization described in IRC Section 170(b)(1)(A)(ii) which is a public, private, or sectarian school which provides elementary or secondary education (through grade 12), or a comparable level of education, as determined under the applicable law of the jurisdiction in which the service was performed,

(c) service as an employee of an association of employees who are described in clause (a), or

(d) military service (other than qualified military service under IRC Section 414(u)) recognized by the plan.

In the case of service described in clause (a), (b), or (c), such service will be nonqualified service if recognition of such service would cause a member to receive a retirement benefit for the same service under more than one plan.

(v) In the case of a trustee-to-trustee transfer after December 31, 2001, to which IRC Section 403(b)(13)(A) or 457(e)(17)(A) applies (without regard to whether the transfer is made between plans maintained by the same employer)—

(a) the limitations on nonqualified service credit under IRC Section 415(n)(3)(B) will not apply in determining whether the transfer is for the purchase of permissive service credit, and

(b) the distribution rules applicable under federal law to the plan will apply to such amounts and any benefits attributable to such amounts.

(vi) For an eligible member, the IRC Section 415(c)(1) limitation shall not be applied to reduce the amount of permissive service credit which may be purchased to an amount less than the amount which was allowed to be purchased under the terms of a Plan as in effect on August 5, 1997. For purposes of this paragraph an eligible member is an individual who first became a member in the plan before January 1, 1998.

(vii) Any repayment of contributions (including interest) shall not be taken into account for IRC Section 415 purposes. So long as the amount repaid does not exceed the amount refunded, plus interest, IRC Section 415(c) will not apply to the repayment. However, the restored benefit is to be treated for testing purposes as the original benefit would have been treated. (See also Section L below).

(viii) In situations involving redeposit by the member of funds assigned to an alternate payee due to a domestic relations order, a member may make payments with post-tax dollars <u>or</u> complete a trustee-to-trustee transfer of 457 plan contributions to accomplish the redeposit. The benefit attributable to such amounts redeposited is not included in the benefit which is tested against the 415(b) limitation (provided that if post-tax dollars are used, the post-tax dollars satisfy the modified 415(c) limit described in paragraph (i)(b) above). The required method for allocating a portion of after-tax employee contributions, for purposes of excluding this amount from the annual benefit to be tested, is established in Reg. Section 1.411(c)-1(c). The method requires calculation of the after-tax employee contributions, plus interest, at rates specified by the regulations.

K. *Modification of Contributions for 415(c) and 415(n) Purposes*.

Notwithstanding any other provision of law to the contrary, CCCERA may modify a request by a member to make a contribution to the plan if the amount of the contribution would exceed the limits provided in IRC Section 415 by using the following methods:

(i) If the law requires a lump sum payment for the purchase of service credit, CCCERA may establish a periodic payment plan for the member to avoid a contribution in excess of the limits under IRC Section 415(c) or 415(n).

(ii) If payment pursuant to subparagraph (i) will not avoid a contribution in excess of the limits imposed by IRC Section 415(c) or 415(n), CCCERA may either reduce the member's contribution to an amount within the limits of those sections or refuse the member's contribution.

L. *Repayments of Cashouts.*

Any repayment of contributions (including interest thereon) to the plan with respect to an amount previously refunded upon a forfeiture of service credit under the plan or another governmental plan maintained by CCCERA shall not be taken into account for purposes of IRC Section 415, in accordance with applicable Treasury Regulations.

For example, if a member takes a refund and later returns to CCCERA membership, the member may redeposit the contributions to re-establish service credit. The member's service credit is restored and the 415 limit is applied as if the member had never left.

M. *Aggregation of Limits.*

(i) Participation in Other Qualified Plans

(a) The 415(b) limit with respect to any member who at any time has been a member in any other defined benefit plan as defined in IRC Section 414(j) maintained by the member's employer in this plan shall apply as if the total benefits payable under all such defined benefit plans in which the member has been a member were payable from one (1) plan.

(b) The 415(c) limit with respect to any member who at any time has been a member in any other defined contribution plan as defined in IRC Section 414(i) maintained by the member's employer in this plan shall apply as if the total annual additions under all such defined contribution plans in which the member has been a member were payable from one (1) plan.

(c) All defined benefit plans of the same employer must be aggregated for testing purposes and all defined contribution plans of the same employer must be aggregated. However, defined benefit and defined contribution plans are not combined for testing purposes. Thus, for example, if an employee, over the course of his or her career, is employed by Contra Costa County in different positions that are covered under both the CCCERA defined benefit plan and the Contra Costa County Deferred Compensation Plan, the benefit under both plans is not aggregated for purposes of IRC Section 415.

(ii) Alternate Payees/QDROs

(a) Benefits paid to alternate payees of members pursuant to a QDRO must be treated as if the benefit were paid to the participant for purposes of applying the IRC Section 415 limits.

(b) If the alternate payee is a former spouse and if the QDRO provides that the former spouse is to be treated as a spouse, then the value of the alternate payee's spousal benefit can, in effect, be disregarded for purposes of the 415(b) limits, under the normal rule that any portion of a QJSA need not be taken into account for 415(b) testing.

N. *Reduction of Benefits Priority*.

Reduction of benefits and/or contributions to all plans, where required, shall be accomplished by first reducing the member's benefit under any defined benefit plans in which the member participated, such reduction to be made first with respect to the plan in which the member most recently accrued benefits and thereafter in such priority as shall be determined by the plan and the plan administrator of such other plans, and next, by reducing or allocating excess forfeitures for defined contribution plans in which the member participated, such reduction to be made first with respect to the plan in which the member most recently accrued benefits and thereafter in such priority as shall be established by the plan and the plan administrator for such other plans provided, however, that necessary reductions may be made in a different manner and priority pursuant to the agreement of the plan and the plan administrator of all other plans covering such member.

4. Review

This policy shall be reviewed by the Board at least every three (3) years and may be amended at any time.

5. History

This policy was adopted on: 12/8/2010

Amended: 1/9/2013, 7/11/2018, 9/8/2021, __/__/2023

Policy on Internal Revenue Code Compliance

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

POLICY ON INTERNAL REVENUE CODE COMPLIANCE

1. Purpose of this Policy

A. CCCERA is established as a qualified defined benefit plan under the County Employees Retirement Law of 1937, California Government Code sections 31450, *et seq.*, as amended from time to time ("CERL"), sections 401(a) and 414(d) of the Internal Revenue Code, such other provisions of the Internal Revenue Code as applicable, and applicable Treasury regulations and other guidance.

B. The Retirement Board is authorized by law to adopt regulations and policies which are appropriate or necessary to maintain the qualified status of the plan.

2. Definitions

A. All references to the Internal Revenue Code or IRC mean the Internal Revenue Code of 1986, as amended.

B. The plan year is the calendar year.

3. Reversions of Employer Contributions (California Constitution, Article 16, Section 17(a); CERL Sections 31588.2 and 31595; IRC Section 401(a)(2))

The trust fund must not revert, and no contributions shall be permitted to be returned, to the employers prior to the satisfaction of all liabilities with respect to their employees and their beneficiaries under the trust.

4. Vesting (IRC Sections 401(a)(7); California Constitution, Article 16, Section 17(a); CERL Sections 31451, 31485.19, and 31485.22)

A. A member shall be 100% vested in his or her service retirement benefit upon attaining eligibility for a service retirement benefit.

B. A plan member shall be 100% vested in his or her accumulated contributions at all times.

C. In the event of a full or partial termination of, or a complete discontinuance of employer contributions to, the Plan, the accrued benefits of the affected members under the Plan shall be 100% vested and nonforfeitable to the extent funded and to the extent required by federal law.

5. Required Minimum Distributions (IRC Section 401(a)(9); CERL Sections 31485.14 and 31706)

CCCERA will pay all benefits in accordance with a good faith interpretation of the requirements of IRC Section 401(a)(9)~~ and the regulations in effect under that section~~, as applicable to a governmental plan within the meaning of IRC Section 414(d). CCCERA is subject to the following provisions:

A. ~~For members attaining age 70 ½ on or after January 1, 2020, d~~Distribution of a member's benefit must begin by the required beginning date, which is the later of the April 1 following the calendar year in which the member attains ~~age 72~~the applicable age or April 1 of the year following the calendar year in which the member terminates. ~~(Setting Every Community Up for Retirement Enhancement Act (SECURE Act), Section 114.).~~ For members attaining ~~the~~ age 70 ½ on or prior to December 31, 2019, the applicable age is 70 ½. For members attaining age 72 before January 1, 2023, the applicable age is 72. ~~distribution of a member's benefit must begin by the required beginning date, which is the later of the April 1 following the calendar year in which the member attains age 70½ or April 1 of the year following the calendar year in which the member terminates.~~ For members attaining age 72 after December 31, 2022, the applicable age is as defined in Code Section 401(a)(9)(C)(v).

B. The member's entire interest must be distributed over the member's life or the lives of the member and a designated beneficiary, or over a period not extending beyond the life expectancy of the member or of the member and a designated beneficiary.

C. If a member dies after the required distribution of benefits has begun, the remaining portion of the member's interest must be distributed at least as rapidly as under the method of distribution before the member's death. That is, a permissible joint and survivor annuity (one that satisfies E below) may be paid over the life or life expectancy of the beneficiary.

D. If a member dies before required distribution of the member's benefits has begun:~~,~~

(i) the member's entire interest must be either:

(a) distributed (in accordance with federal regulations) over the life or life expectancy of the designated beneficiary, with the distributions beginning no later than December 31 of the calendar year following the calendar year of the member's death, or

(b) distributed by December 31 of the calendar year containing the fifth anniversary of the participant's death.

(ii) Effective January 1, 2024, if the member's designated beneficiary is the surviving spouse, and the spouse elects the treatment in this paragraph, then:

(a) The Treasury Regulations with respect to Code Section 401(a)(9)(B)(iii)(II) (regarding the life and life expectancy of a beneficiary) shall treat the surviving spouse as if the surviving spouse were the employee;

(b) The date on which distributions are required to begin to the surviving spouse under Code Section 401(a)(9)(B)(iii)(III) shall not be earlier than the date on which the employee would have attained age 72 or the otherwise applicable age; and

(c) If the surviving spouse dies before the distributions to such spouse begin, this subparagraph (D)(ii) shall be applied as if the surviving spouse were the employee.

~~D.~~E. The amount of an annuity paid to a member's beneficiary may not exceed the maximum determined under the incidental death benefit requirement of IRC Section 401(a)(9)(G), and the minimum distribution incidental benefit rule under Treasury Regulation Section 1.401(a)(9)-6, Q&A-2.

~~E.~~F. The death and disability benefits provided by CCCERA are limited by the incidental benefit rule set forth in IRC Section 401(a)(9)(G) and Treasury Regulation Section 1.401-1(b)(1)(i) or any successor regulation thereto. As a result, the total death or disability benefits payable may not exceed 25% of the cost for all of the members' benefits received from the retirement system.

~~F.~~G. Notwithstanding the other provisions of this Policy or the provisions of the Treasury Regulations, benefit options in place in 2002 may continue so long as the option satisfies IRC Section 401(a)(9) based on a reasonable and good faith interpretation of that section.

6. Limitation on Compensation (IRC Section 401(a)(17); CERL Section 31671;BOR Regulations VI)

A. Effective with respect to plan years beginning on and after July 1, 2002, the annual compensation of a plan member shall not exceed the applicable limit established by IRC Section 401(a)(17) as of the first day of the limitation year, as adjusted for cost of living increases in accordance with IRC Section 401(a)(17)(B)). Annual compensation means compensation during the plan year or such other consecutive 12-month period over which compensation is otherwise determined under the plan (the determination period). If the determination period consists of fewer than 12 months, the annual compensation limit is an amount equal to the otherwise applicable annual compensation limit multiplied by a fraction, the numerator of which is the number of months in the short determination period, and the denominator of which is 12. If the compensation for any prior determination period is taken into account in determining a plan member's contributions or benefits for the current plan year, the compensation for such prior determination period is subject to the applicable annual compensation limit in effect for that prior period.

B. "Grandfather" Clause. As used in this section, the term "eligible member" means a person who first became a member of CCCERA prior to the plan year beginning after December 31, 1995 (January 1, 1996). Pursuant to section 13212(d)(3)(A) of OBRA '93, and the regulations issued under that section, "eligible members" are not subject to the limits of IRC Section 401(a)(17). The limits referenced in subsection (A) above applies only to years beginning after December 31, 1995, and only to individuals who first become plan members in plan years beginning on and after January 1, 1996.

7. Eligible Rollover Distributions (IRC Section 401(a)(31); CERL Sections 31485.15 and 31564)

For purposes of compliance with IRC Section 401(a)(31), this section applies notwithstanding any contrary provision or retirement law that would otherwise limit a distributee's election to make a rollover. A distributee may elect, at the time and in the manner prescribed by the Board, to have any portion of an eligible rollover distribution paid directly to an eligible retirement plan specified by the distributee in a direct rollover.

A. "Eligible rollover distribution" means any distribution of all or any portion of the balance to the credit of the distributee, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or the life expectancy) of the distributee or the joint lives (or joint life expectancies) of the distributee and the distributee's designated beneficiary, or for a specified period of ten years or more; any distribution to the extent such distribution is required under IRC Section 401(a)(9); and the portion of any distribution that is not includible in gross income. Effective January 1, 2002, a portion of a distribution will not fail to be an eligible rollover distribution merely because the portion consists of after-tax employee contributions that are not includible in gross income. However, such portion may be transferred only (i) to an individual retirement account or annuity described in IRC Section 408(a) or (b) or to a qualified defined contribution plan described in IRC Section 401(a), that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible; (ii) on or after January 1, 2007, to a qualified defined benefit plan described in IRC Section 401(a) or to an annuity contract described in IRC Section 403(b), that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible; or (iii) on or after January 1, 2008, to a Roth IRA described in IRC Section 408A. Effective January 1, 2002, the definition of eligible rollover distribution also includes a distribution to a surviving spouse, or to a spouse or former spouse who is an alternate payee under a qualified domestic relations order, as defined in IRC Section 414(p).

B. "Eligible retirement plan" means any of the following that accepts the distributee's eligible rollover distribution:

(i) an individual retirement account ("IRA") described in IRC Section 408(a),

(ii) an individual retirement annuity ("IRA") described in IRC Section 408(b),

(iii) an annuity plan ("annuity contract") described in IRC Section 403(a),

(iv) a qualified trust (such as CCCERA) described in IRC Section 401(a),

(v) effective January 1, 2002, an annuity contract ("403(b) plan") described in IRC Section 403(b),

(vi) effective January 1, 2002, a plan eligible under IRC Section 457(b) that is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or a political subdivision of a state that agrees to separately account for amounts transferred into that plan from CCCERA, or

(vii) effective January 1, 2008, a Roth IRA described in IRC Section 408A.

(viii) effective December 19, 2015, a SIMPLE IRA that meets the 2-year requirements in IRC Section 408(p)

C. "Distributee" means an active member or former active member. It also includes the member's or former member's surviving spouse and the member's or former member's spouse or former spouse who is the alternate payee under a qualified domestic relations order, as defined in IRC Section 414(p). Effective January 1, 2007, a distributee further includes a nonspouse beneficiary who is a designated beneficiary as defined by IRC Section 401(a)(9)(E). However, a nonspouse beneficiary may rollover the distribution only to an individual retirement account or individual retirement annuity established for the purpose of receiving the distribution, and the account or annuity will be treated as an "inherited" individual retirement account or annuity.

D. "Direct rollover" means a payment by the plan to the eligible retirement plan specified by the distributee.

8. <u>HEART Act (IRC Section 401(a)(37); CERL Section 31485.17)</u>

A. Effective with respect to deaths occurring on or after January 1, 2007, while a member is performing qualified military service (as defined in chapter 43 of title 38, United States Code), to the extent required by IRC Section 401(a)(37), survivors of a member in a State or local retirement or pension system, are entitled to any additional benefits that the system would provide if the member had resumed employment and then died, such as accelerated vesting or survivor benefits that are contingent on the member's death while employed. In any event, a deceased member's period of qualified military service must be counted for vesting purposes.

B. Effective with respect to deaths or disabilities [or both] occurring on or after January 1, 2007, while a member is performing qualified military service (as defined in chapter 43 of title 38, United States Code), to the extent permitted by IRC Section 414(u)(8), for benefit accrual purposes, and in the case of death, for vesting purposes, the member will be treated as having returned to employment on the day before the death or disability and then terminated on the date of death or disability. This provision shall be applied to all similarly situated individuals in a reasonably equivalent manner.

C. Beginning January 1, 2009, to the extent required by IRC Sections 3401(h) and 414(u)(2), an individual receiving differential wage payments (while the individual is performing qualified military service, as defined in chapter 43 of title 38, United States Code) from an employer shall be treated as employed by that employer and the differential wage payment shall be treated as compensation for purposes of applying the limits on annual additions under IRC Section 415(c). This provision shall be applied to all similarly situated individuals in a reasonably equivalent manner.

9. <u>Reemployed Veteran (IRC Section 414(u); CERL Sections 31649, 31649.1 and 31649.5)</u>

Effective December 12, 1994, notwithstanding any other provision of CERL, the Board Regulations or this Policy, contributions, benefits and service credit with respect to qualified military service are governed by IRC Section 414(u) and the Uniformed Services Employment and Reemployment Rights Act of 1994, including requiring the employer to make, on behalf of returning service members, any plan contributions that the employer would have made if the service member had not been absent as a result of military service, the reemployed service member shall also be entitled to accrued benefits that are contingent on the making of, or derived from, employee contributions or elective deferrals that were missed during the qualified employee's military service if such missed contributions are paid to the fund, and the reemployed service member's period of qualified military service shall be included for purposes of vesting.

10. <u>Qualified Domestic Relations Orders (IRC Section 414(p); CERL Article 8.4)</u>

If benefits are payable under CERL Article 8.4 pursuant to a qualified domestic relations order that meets the requirements of a domestic relations order as defined in IRC Section 414(p), then the applicable federal income tax provisions of IRC Section 414(p) will apply.

11. <u>Adjustment of Employer Contributions for Replacement Benefit Program (IRC Section 415(m); CERL Sections 31899.4 and 31899.5)</u>

The adjustment in employer contributions required by CERL Section 31899.4 to the extent the employer pays benefits through the replacement benefit program shall be accomplished in the following manner:

A. For an employer contributing on a monthly basis, the contribution amount the employer is required to pay to CCCERA in any month shall be reduced by the amount the employer pays from the replacement benefit program in that month; and

B. For an employer contributing on an annual basis, any make-up payment due from the employer at the end of the year or, if insufficient, the amount of contributions due from the employer for the next year, shall be reduced by the amount the employer paid from the replacement benefit program during that year.

Under no circumstances shall any amounts be transferred from CCCERA to the replacement benefit program.

12. <u>Prohibited Transactions (IRC Section 503(b))</u>

Effective as of July 1, 1989, the Board may not engage in a transaction prohibited by IRC Section 503(b). For example, prohibited transactions include the following transactions with certain related parties such as a plan sponsor: a loan without adequate interest or security, the payment of excessive compensation, the purchase of securities or property for more than adequate consideration, or the sale of securities or property for less than adequate consideration.

13. <u>Distribution General Requirements (IRC 401(a)(36); CERL Section 31485.20; IRC Section 402(d)(4)(A)(iii); CERL Section 31485.21)</u>

Effective January 1, 2015, members may only receive distributions from the plan in compliance with permitted distributions (*e.g.*, the earlier of death, disability, separation from service, attainment of normal retirement age) rules under (IRC Section 401(a) and Treasury Regulation Section 1.401(b)(1)(i)).

14. <u>Review</u>

This policy shall be reviewed by the Board at least every three (3) years and may be amended at any time.

15. <u>History</u>

This policy was adopted on: December 8, 2010

Amended: July 11, 2018, February 12, 2020, ________, 2023

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

POLICY ON INTERNAL REVENUE CODE COMPLIANCE

1. Purpose of this Policy

A. CCCERA is established as a qualified defined benefit plan under the County Employees Retirement Law of 1937, California Government Code sections 31450, *et seq.*, as amended from time to time ("CERL"), sections 401(a) and 414(d) of the Internal Revenue Code, such other provisions of the Internal Revenue Code as applicable, and applicable Treasury regulations and other guidance.

B. The Retirement Board is authorized by law to adopt regulations and policies which are appropriate or necessary to maintain the qualified status of the plan.

2. Definitions

A. All references to the Internal Revenue Code or IRC mean the Internal Revenue Code of 1986, as amended.

B. The plan year is the calendar year.

3. Reversions of Employer Contributions (California Constitution, Article 16, Section 17(a); CERL Sections 31588.2 and 31595; IRC Section 401(a)(2))

The trust fund must not revert, and no contributions shall be permitted to be returned, to the employers prior to the satisfaction of all liabilities with respect to their employees and their beneficiaries under the trust.

4. Vesting (IRC Sections 401(a)(7); California Constitution, Article 16, Section 17(a); CERL Sections 31451, 31485.19, and 31485.22)

A. A member shall be 100% vested in his or her service retirement benefit upon attaining eligibility for a service retirement benefit.

B. A plan member shall be 100% vested in his or her accumulated contributions at all times.

C. In the event of a full or partial termination of, or a complete discontinuance of employer contributions to, the Plan, the accrued benefits of the affected members under the Plan shall be 100% vested and nonforfeitable to the extent funded and to the extent required by federal law.

5. Required Minimum Distributions (IRC Section 401(a)(9); CERL Sections 31485.14 and 31706)

CCCERA will pay all benefits in accordance with a good faith interpretation of the requirements of IRC Section 401(a)(9), as applicable to a governmental plan within the meaning of IRC Section 414(d). CCCERA is subject to the following provisions:

A. Distribution of a member's benefit must begin by the required beginning date, which is the later of the April 1 following the calendar year in which the member attains the applicable age or April 1 of the year following the calendar year in which the member terminates. For members attaining age 70 ½ on or prior to December 31, 2019, the applicable age is 70 ½. For members attaining age 72 before January 1, 2023, the applicable age is 72. For members attaining age 72 after December 31, 2022, the applicable age is as defined in Code Section 401(a)(9)(C)(v).

B. The member's entire interest must be distributed over the member's life or the lives of the member and a designated beneficiary, or over a period not extending beyond the life expectancy of the member or of the member and a designated beneficiary.

C. If a member dies after the required distribution of benefits has begun, the remaining portion of the member's interest must be distributed at least as rapidly as under the method of distribution before the member's death. That is, a permissible joint and survivor annuity (one that satisfies E below) may be paid over the life or life expectancy of the beneficiary.

D. If a member dies before required distribution of the member's benefits has begun:

(i) the member's entire interest must be either:

(a) distributed (in accordance with federal regulations) over the life or life expectancy of the designated beneficiary, with the distributions beginning no later than December 31 of the calendar year following the calendar year of the member's death, or

(b) distributed by December 31 of the calendar year containing the fifth anniversary of the participant's death.

(ii) Effective January 1, 2024, if the member's designated beneficiary is the surviving spouse, and the spouse elects the treatment in this paragraph, then:

(a) The Treasury Regulations with respect to Code Section 401(a)(9)(B)(iii)(II) (regarding the life and life expectancy of a beneficiary) shall treat the surviving spouse as if the surviving spouse were the employee;

(b) The date on which distributions are required to begin to the surviving spouse under Code Section 401(a)(9)(B)(iii)(III) shall not be earlier than the date on which the employee would have attained age 72 or the otherwise applicable age; and

(c) If the surviving spouse dies before the distributions to such spouse begin, this subparagraph (D)(ii) shall be applied as if the surviving spouse were the employee.

E. The amount of an annuity paid to a member's beneficiary may not exceed the maximum determined under the incidental death benefit requirement of IRC Section 401(a)(9)(G), and the minimum distribution incidental benefit rule under Treasury Regulation Section 1.401(a)(9)-6, Q&A-2.

F. The death and disability benefits provided by CCCERA are limited by the incidental benefit rule set forth in IRC Section 401(a)(9)(G) and Treasury Regulation Section 1.401-1(b)(1)(i) or any successor regulation thereto. As a result, the total death or disability benefits payable may not exceed 25% of the cost for all of the members' benefits received from the retirement system.

G. Notwithstanding the other provisions of this Policy or the provisions of the Treasury Regulations, benefit options in place in 2002 may continue so long as the option satisfies IRC Section 401(a)(9) based on a reasonable and good faith interpretation of that section.

6. <u>Limitation on Compensation (IRC Section 401(a)(17); CERL Section 31671;BOR Regulations VI)</u>

A. Effective with respect to plan years beginning on and after July 1, 2002, the annual compensation of a plan member shall not exceed the applicable limit established by IRC Section 401(a)(17) as of the first day of the limitation year, as adjusted for cost of living increases in accordance with IRC Section 401(a)(17)(B)). Annual compensation means compensation during the plan year or such other consecutive 12-month period over which compensation is otherwise determined under the plan (the determination period). If the determination period consists of fewer than 12 months, the annual compensation limit is an amount equal to the otherwise applicable annual compensation limit multiplied by a fraction, the numerator of which is the number of months in the short determination period, and the denominator of which is 12. If the compensation for any prior determination period is taken into account in determining a plan member's contributions or benefits for the current plan year, the compensation for such prior determination period is subject to the applicable annual compensation limit in effect for that prior period.

B. "Grandfather" Clause. As used in this section, the term "eligible member" means a person who first became a member of CCCERA prior to the plan year beginning after December 31, 1995 (January 1, 1996). Pursuant to section 13212(d)(3)(A) of OBRA ‘93, and the regulations issued under that section, "eligible members" are not subject to the limits of IRC Section 401(a)(17). The limits referenced in subsection (A) above applies only to years beginning after December 31, 1995, and only to individuals who first become plan members in plan years beginning on and after January 1, 1996.

7. Eligible Rollover Distributions (IRC Section 401(a)(31); CERL Sections 31485.15 and 31564)

For purposes of compliance with IRC Section 401(a)(31), this section applies notwithstanding any contrary provision or retirement law that would otherwise limit a distributee's election to make a rollover. A distributee may elect, at the time and in the manner prescribed by the Board, to have any portion of an eligible rollover distribution paid directly to an eligible retirement plan specified by the distributee in a direct rollover.

A. "Eligible rollover distribution" means any distribution of all or any portion of the balance to the credit of the distributee, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or the life expectancy) of the distributee or the joint lives (or joint life expectancies) of the distributee and the distributee's designated beneficiary, or for a specified period of ten years or more; any distribution to the extent such distribution is required under IRC Section 401(a)(9); and the portion of any distribution that is not includible in gross income. Effective January 1, 2002, a portion of a distribution will not fail to be an eligible rollover distribution merely because the portion consists of after-tax employee contributions that are not includible in gross income. However, such portion may be transferred only (i) to an individual retirement account or annuity described in IRC Section 408(a) or (b) or to a qualified defined contribution plan described in IRC Section 401(a), that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible; (ii) on or after January 1, 2007, to a qualified defined benefit plan described in IRC Section 401(a) or to an annuity contract described in IRC Section 403(b), that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible; or (iii) on or after January 1, 2008, to a Roth IRA described in IRC Section 408A. Effective January 1, 2002, the definition of eligible rollover distribution also includes a distribution to a surviving spouse, or to a spouse or former spouse who is an alternate payee under a qualified domestic relations order, as defined in IRC Section 414(p).

B. "Eligible retirement plan" means any of the following that accepts the distributee's eligible rollover distribution:

(i) an individual retirement account ("IRA") described in IRC Section 408(a),

(ii) an individual retirement annuity ("IRA") described in IRC Section 408(b),

(iii) an annuity plan ("annuity contract") described in IRC Section 403(a),

(iv) a qualified trust (such as CCCERA) described in IRC Section 401(a),

(v) effective January 1, 2002, an annuity contract ("403(b) plan") described in IRC Section 403(b),

(vi) effective January 1, 2002, a plan eligible under IRC Section 457(b) that is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or a political subdivision of a state that agrees to separately account for amounts transferred into that plan from CCCERA, or

(vii) effective January 1, 2008, a Roth IRA described in IRC Section 408A.

(viii) effective December 19, 2015, a SIMPLE IRA that meets the 2-year requirements in IRC Section 408(p)

C. "Distributee" means an active member or former active member. It also includes the member's or former member's surviving spouse and the member's or former member's spouse or former spouse who is the alternate payee under a qualified domestic relations order, as defined in IRC Section 414(p). Effective January 1, 2007, a distributee further includes a nonspouse beneficiary who is a designated beneficiary as defined by IRC Section 401(a)(9)(E). However, a nonspouse beneficiary may rollover the distribution only to an individual retirement account or individual retirement annuity established for the purpose of receiving the distribution, and the account or annuity will be treated as an "inherited" individual retirement account or annuity.

D. "Direct rollover" means a payment by the plan to the eligible retirement plan specified by the distributee.

8. <u>HEART Act (IRC Section 401(a)(37); CERL Section 31485.17)</u>

A. Effective with respect to deaths occurring on or after January 1, 2007, while a member is performing qualified military service (as defined in chapter 43 of title 38, United States Code), to the extent required by IRC Section 401(a)(37), survivors of a member in a State or local retirement or pension system, are entitled to any additional benefits that the system would provide if the member had resumed employment and then died, such as accelerated vesting or survivor benefits that are contingent on the member's death while employed. In any event, a deceased member's period of qualified military service must be counted for vesting purposes.

B. Effective with respect to deaths or disabilities [or both] occurring on or after January 1, 2007, while a member is performing qualified military service (as defined in chapter 43 of title 38, United States Code), to the extent permitted by IRC Section 414(u)(8), for benefit accrual purposes, and in the case of death, for vesting purposes, the member will be treated as having returned to employment on the day before the death or disability and then terminated on the date of death or disability. This provision shall be applied to all similarly situated individuals in a reasonably equivalent manner.

C. Beginning January 1, 2009, to the extent required by IRC Sections 3401(h) and 414(u)(2), an individual receiving differential wage payments (while the individual is performing qualified military service, as defined in chapter 43 of title 38, United States Code) from an employer shall be treated as employed by that employer and the differential wage payment shall be treated as compensation for purposes of applying the limits on annual additions under IRC Section 415(c). This provision shall be applied to all similarly situated individuals in a reasonably equivalent manner.

9. <u>Reemployed Veteran (IRC Section 414(u); CERL Sections 31649, 31649.1 and 31649.5)</u>

Effective December 12, 1994, notwithstanding any other provision of CERL, the Board Regulations or this Policy, contributions, benefits and service credit with respect to qualified military service are governed by IRC Section 414(u) and the Uniformed Services Employment and Reemployment Rights Act of 1994, including requiring the employer to make, on behalf of returning service members, any plan contributions that the employer would have made if the service member had not been absent as a result of military service, the reemployed service member shall also be entitled to accrued benefits that are contingent on the making of, or derived from, employee contributions or elective deferrals that were missed during the qualified employee's military service if such missed contributions are paid to the fund, and the reemployed service member's period of qualified military service shall be included for purposes of vesting.

10. <u>Qualified Domestic Relations Orders (IRC Section 414(p); CERL Article 8.4)</u>

If benefits are payable under CERL Article 8.4 pursuant to a qualified domestic relations order that meets the requirements of a domestic relations order as defined in IRC Section 414(p), then the applicable federal income tax provisions of IRC Section 414(p) will apply.

11. <u>Adjustment of Employer Contributions for Replacement Benefit Program (IRC Section 415(m); CERL Sections 31899.4 and 31899.5)</u>

The adjustment in employer contributions required by CERL Section 31899.4 to the extent the employer pays benefits through the replacement benefit program shall be accomplished in the following manner:

A. For an employer contributing on a monthly basis, the contribution amount the employer is required to pay to CCCERA in any month shall be reduced by the amount the employer pays from the replacement benefit program in that month; and

B. For an employer contributing on an annual basis, any make-up payment due from the employer at the end of the year or, if insufficient, the amount of contributions due from the employer for the next year, shall be reduced by the amount the employer paid from the replacement benefit program during that year.

Under no circumstances shall any amounts be transferred from CCCERA to the replacement benefit program.

12. <u>Prohibited Transactions (IRC Section 503(b))</u>

Effective as of July 1, 1989, the Board may not engage in a transaction prohibited by IRC Section 503(b). For example, prohibited transactions include the following transactions with certain related parties such as a plan sponsor: a loan without adequate interest or security, the payment of excessive compensation, the purchase of securities or property for more than adequate consideration, or the sale of securities or property for less than adequate consideration.

13. <u>Distribution General Requirements (IRC 401(a)(36); CERL Section 31485.20; IRC Section 402(d)(4)(A)(iii); CERL Section 31485.21)</u>

Effective January 1, 2015, members may only receive distributions from the plan in compliance with permitted distributions (*e.g.*, the earlier of death, disability, separation from service, attainment of normal retirement age) rules under (IRC Section 401(a) and Treasury Regulation Section 1.401(b)(1)(i)).

14. <u>Review</u>

This policy shall be reviewed by the Board at least every three (3) years and may be amended at any time.

15. <u>History</u>

This policy was adopted on: December 8, 2010

Amended: July 11, 2018, February 12, 2020, _______, 2023

Meeting Date
08/09/2023
Agenda Item
#10

MEMORANDUM

Date: August 9, 2023

To: CCCERA Board of Retirement

From: Karen Levy, General Counsel

Subject: Consider and take possible action to issue a request for proposals for fiduciary counsel services.

Background
Fiduciary counsel provides legal advice and representation related to a defined benefit public employee retirement plan. With the expected retirement of fiduciary counsel at the end of this year, it is prudent that CCCERA and its Board of Retirement explore service providers in this area in order to ensure a smooth and successful transition.

Recommendation
Consider and take possible action to issue a request for proposals for fiduciary counsel services.

Meeting Date
08/09/2023
Agenda Item
#11b.

Invesco

Save the Date!

Please join us at the **2023 Invesco Real Estate Global Client Conference**.

Location:
The Lodge at Torrey Pines
San Diego, California

Date:
Begins Tuesday, November 14*
Dinner 6 p.m.

Ends Thursday, November 16
Dinner 6 p.m.

*Fund meetings for Existing Fund Investors and Advisory Board Members will take place on Tuesday afternoon and Thursday morning.