



## **AGENDA**

### **RETIREMENT BOARD MEETING**

#### REGULAR MEETING

August 10, 2022, 9:00 a.m.

The Board of Retirement will hold its meeting via teleconferencing as permitted by Government Code Section 54953(e). The meeting is accessible telephonically at 669-900-6833, Webinar ID: 889 5238 7657, Passcode: 793600, or via the web at:

<https://us06web.zoom.us/j/88952387657?pwd=VUpybDRuV1pYWWE1tTRER90NjFNQT09>

Passcode: 793600

Persons who wish to address the Board of Retirement during public comment may call in during the meeting by dialing the phone number and passcode above. Access via Zoom is also available at the weblink above. To indicate you wish to speak during public comment, please select \*9 on your phone or “raise your hand” in the Zoom app.

Public comments are limited to any item that is within the subject matter jurisdiction of the Board of Retirement. Comments will be received in real time via telephone or Zoom, subject to a three-minute time limit per speaker.

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

1. Pledge of Allegiance.
2. Roll Call.
3. Accept comments from the public.
4. Approve minutes from the July 13, 2022 meeting.
5. Approve the following routine items:
  - a. Certifications of membership.
  - b. Service and disability allowances.
  - c. Death benefits.
  - d. Investment liquidity report.

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.

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

**CLOSED SESSION**

7. The Board will go into closed session pursuant to Govt. Code Section 54957 to consider recommendations from the medical advisor and/or staff regarding the following disability retirement applications:

<u>Member</u>	<u>Type Sought</u>	<u>Recommendation</u>
a. Zara Cushman	Service Connected	Service Connected
b. John Viera	Service Connected	Service Connected

8. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(1) to confer with legal counsel regarding pending litigation:
  - a. *Nowicki v. CCCERA, et al.*, Contra Costa County Superior Court, Case No. C17-01266
9. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(4) to confer with legal counsel regarding initiation of litigation (one potential case).
10. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(2) to confer with legal counsel regarding potential litigation (one case).

**OPEN SESSION**

11. Consider and take possible action to adopt the December 31, 2021 Valuation Report and contribution rates for the period July 1, 2023—June 30, 2024.
12. Consider and take possible action to approve pay code lists.
13. Consider and take possible action to authorize the Board to conduct teleconference meetings under Government Code section 54953 (e) and to make related findings.
14. Consider authorizing the attendance of Board:
  - a. 2022 Public Safety Conference, NCPERS, October 23-26, 2022, Nashville, TN.  
(Note: Conflict with meeting)
15. Miscellaneous
  - a. Staff Report
  - b. Outside Professionals' Report
  - c. Trustees' comments

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.



**RETIREMENT BOARD MEETING MINUTES**

REGULAR MEETING

July 13, 2022

9:00 a.m.

The Board of Retirement meeting was accessible telephonically at (669) 900-6833, Webinar ID 817 3480 6212 Passcode 574719, as permitted by Government Code Section 54953(e).

**1. Pledge of Allegiance**

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

**2. Roll Call**

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

Absent: None

Staff: Gail Strohl, Chief Executive Officer; Christina Dunn, Deputy Chief Executive Officer; Karen Levy, General Counsel; Timothy Price, Chief Investment Officer and Tim Hoppe, Retirement Services Manager.

Outside Professional Support:

Joe Wiley  
Marc Weinberg  
Caitlin Moyna

Representing:

Aleshire & Wynder, LLP  
Grant & Eisenhofer P.A.  
Grant & Eisenhofer P.A.

**3. 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 Zhu).

**4. Accept comments from the public**

Glen A. Stewart disagrees with his retirement calculation and is requesting the Board review his retirement calculation.

Pete Nowicki spoke about his experience in 2015 with CCCERA noting he has additional information that he will provide each Board meeting.

Adolfo Garcia spoke about the concern he has over the length of time it is taking for him to receive his first retirement check.

**5. Approve of Minutes**

It was **M/S/C** to approve the minutes from the June 8, 2022 meeting with changes to item #13a. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips and Zhu).

**6. Approval of Routine Items**

It was **M/S/C** to approve the routine items of the July 13, 2022 Board meeting. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips and Zhu).

**7. Acceptance of Routine Items**

It was **M/S/C** to accept the routine items of the July 13, 2022 Board meeting. (Yes: Andersen, Chebotarev, Finley, Gordon, Kroll, Holcombe, MacDonald, Phillips and Zhu).

**CLOSED SESSION**

The Board moved into Closed Session pursuant to Govt. Code Section 54957, 54956.9(d)(1), 54956.9(d)(2) and 54957.6.

The Board moved into open session.

**8. It was **M/S/C** to accept the Medical Advisor's recommendation and grant the following disability benefits:**

- a. Herman Barnes – Service Connected (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Zhu and Wong)
- b. Isaac Cortes – Service Connected, not granted for lack of information. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong and Zhu)
- c. William Fiore – Service Connected (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips and Zhu)
- d. Leah Marchese – Service Connected (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips and Zhu)

9. The Board continued in closed session pursuant to Govt. Code Section 54956.9(d)(1) to confer with legal counsel regarding pending litigation:
- a. Nowicki v. CCCERA et al., Contra Costa County Superior Court, Case o. C17-01266  
No reportable action.
  - b. Wilmot v. CCCERA, et al., Contra Costa County Superior Court, Case No. N22-0302  
No reportable action.
  - c. CCCERA, et al. v. Valeant Pharms. Int'l, Inc., et al., United States District Court, New Jersey (3:17-cv-12088)  
No reportable action.

**10. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(2) to confer with legal counsel regarding potential litigation (one case).**

No reportable action.

**11. Conference with Labor Negotiator (Government Code Section 54957.6)**

No reportable action.

Andersen, Chebotarev, Kroll and Sloan were no longer present for subsequent discussion and voting.

**12. Consider and take possible action to adopt the contribution rates for the period July 1, 2022 – June 30, 2023 for the Contra Costa County Fire Protection District.**

It was **M/S/C** to adopt the contribution rates for the period July 1, 2022 – June 20, 2023 for the Contra Costa County Fire Protection District. (Yes: Finley, Gordon, Holcombe, Kwon, MacDonald, Phillips, Wong and Zhu).

**13. Consider and take possible action to add CCCERA staffing:**

- a. Cancel the Administrative/Human Resources manager classification (currently vacant), establish classifications for Human Resources Manager and Administrative Services Manager; change the Administrative/Human Resources Supervisor classification to Human Resources Coordinator; and
- b. Amend Attachment A of Resolution 2022-1 with the updated position information.

It was **M/S/C** to make staffing changes and Amend Attachment A of Resolution 2022-1 with the updated position information. (Yes: Finley, Gordon, Holcombe, Kwon, MacDonald, Phillips, Wong and Zhu).

**14. Consider and take possible action to authorize the Board to conduct teleconference meetings under Government Code Section 54953 (e) and to make related findings**

Levy presented information related to the open meetings law regarding holding teleconference board meetings during a state-proclaimed state of emergency.

It was **M/S/C** to authorize the Board and its committee(s) to continue to conduct teleconference meetings for the next 30 days under Government Code Section 54953 (e) and make the following findings:

1. The Board has reconsidered the circumstance of the statewide state of emergency proclaimed by the Governor on March 4, 2020 and the countywide local emergency proclaimed by the Governor on March 10, 2020
2. The following circumstances currently exist:
  - a. The statewide state of emergency and the countywide local emergency continue to directly impact the ability of the Board and its committee(s) to meet safely in person at meeting that are open to the general public because of the COVID-19 pandemic.
  - b. The County Health Officer's recommendations for safely holding public meetings, which recommend virtual meeting and other measures to promote social distancing, are still in effect.(Yes: Finley, Gordon, Holcombe, Kwon, MacDonald, Phillips, Wong and Zhu).

**15. Consider authorizing the attendance of Board:**

- a. It was **M/S/C** to authorize the attendance of 1 Board member at the IFEBP Trustees Master's Program, October 22-23, 2022, Las Vegas, NV. (Yes: Finley, Gordon, Holcombe, Kwon, MacDonald, Phillips, Wong and Zhu).
- b. It was **M/S/C** to authorize the attendance of 3 Board members at the IFEBP 68<sup>th</sup> Annual Employee Benefits Conference, October 23-26, 2022, Las Vegas, NV. (Yes: Finley, Gordon, Holcombe, Kwon, MacDonald, Phillips, Wong and Zhu).

**16. Miscellaneous**

- a. Staff Report- Strohl reported CCCERA is anticipating mailing the Annual Benefit Statements to members in a few weeks and the Actuarial Valuation Report as of December 31, 2021 will be presented at a board meeting in August.
- b. Outside Professionals –  
  
None
- c. Trustee comments – Gordon welcomed Samson Wong as our Safety Alternate Trustee.

It was **M/S/C** to adjourn the meeting in memory of Karen Wright. (Yes: Finley, Gordon, Holcombe, Kwon, MacDonald, Phillips, Wong and Zhu)

---

Scott Gordon, Chairman

---

Jerry R. Holcombe, Secretary

**CERTIFICATION OF MEMBERSHIPS**

<b>Name</b>	<b>Employee Number</b>	<b>Tier</b>	<b>Membership Date</b>	<b>Employer</b>
Abiakam, Camelia	90094	P5.2	05/01/22	Contra Costa County
Acharya, Laxmi	91943	P5.2	06/01/22	Contra Costa County
Allen, DeAndre	91958	P5.2	06/01/22	Contra Costa County
Alomar, Denise	78041	P5.2	06/01/22	Contra Costa County
Anderson, Matthew	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Baer, Gregory	91925	III	06/01/22	Contra Costa County
Barrientos, Maria Cecilia	89625	P5.2	06/01/22	Contra Costa County
Becton, Jonah	79889	S/D	04/01/22	Rodeo-Hercules Fire Protection District
Beveridge, Michael	90646	P5.2	06/01/22	Contra Costa County
Black, Isaac	89579	P5.2	06/01/22	Contra Costa County
Budgin, Bryan	91988	P5.2	06/01/22	Contra Costa County
Carroll, Talicia	91991	P5.2	06/01/22	Contra Costa County
Cecchi Borgeson, Carolyn	91996	P5.2	06/01/22	Contra Costa County
Cenizal, Nico	91909	P5.2	06/01/22	Contra Costa County
Combs, Maghan	91972	P5.2	06/01/22	Contra Costa County
Crenshaw, Jeffrey	91862	P5.2	06/01/22	Contra Costa County
Cruz, Barnaby	92031	P5.2	06/01/22	Contra Costa County
Diaz, Tina	90367	P5.2	06/01/22	Contra Costa County
Doan, Gina	91861	P5.2	06/01/22	Contra Costa County
Epstein, Patriz	88060	P5.2	06/01/22	Contra Costa County
Evans, Cari	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Ferguson, Shelby	91978	P5.2	06/01/22	Contra Costa County
Figueroa-Quintero, Joel	91999	P5.2	06/01/22	Contra Costa County
Florida, Joshua	84462	P5.2	06/01/22	Contra Costa County
Floyd, Charon	79927	P5.2	06/01/22	Contra Costa County
Galdon Ramos, Katiana	91727	P5.2	04/01/22	Contra Costa County
Garcia, Mark	92003	P5.2	06/01/22	Contra Costa County
Garcia, Rosa	91937	P5.2	06/01/22	Contra Costa County
Gois, Joey	D3406	P4.3	06/01/22	Central Contra Costa Sanitary District
Gonzalez Mendoza, Amy	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Gregorio, Maria Kristina Bosuego	91561	P5.2	06/01/22	Contra Costa County
Gutierrez, Monica	92055	P5.2	06/01/22	Contra Costa County
Guzman, Anthony	89413	S/D	04/01/22	Rodeo-Hercules Fire Protection District
Henry, Krystel	D9990	P4.3	06/01/22	Contra Costa County Housing Authority
Hodge, Rosa	88068	P5.2	06/01/22	Contra Costa County
Huang, Zhihong	91927	P5.2	06/01/22	Contra Costa County
Hunt, Paola	90327	P5.2	06/01/22	Contra Costa County
Huynh, Hong	92014	P5.2	06/01/22	Contra Costa County
Ingram, Deja	91292	P5.2	06/01/22	Contra Costa County
Jackson, Joseph	D3406	P4.3	06/01/22	Central Contra Costa Sanitary District

**Key:**

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

**CERTIFICATION OF MEMBERSHIPS**

<i>Name</i>	<i>Employee Number</i>	<i>Tier</i>	<i>Membership Date</i>	<i>Employer</i>
Jaime, Eliaquin	92047	P5.2	06/01/22	Contra Costa County
Jauregui, Maira	92015	P5.2	06/01/22	Contra Costa County
Jensen, Joshua	91107	S/D	06/01/22	Rodeo-Hercules Fire Protection District
Jiles, LaLoni	91969	P5.2	06/01/22	Contra Costa County
Jones, Lakyssha	84335	P5.2	06/01/22	Contra Costa County
Jones, Marcia	91986	P5.2	06/01/22	Contra Costa County
Jones, Ronald	92018	P5.2	06/01/22	Contra Costa County
Jones, Thomas	D9990	P4.3	06/01/22	Contra Costa County Housing Authority
Loughran-Smith, Lindsey	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Mariveles, Jillian Marie	D9990	P4.3	06/01/22	Contra Costa County Housing Authority
Marquez, Monica	92013	P5.2	06/01/22	Contra Costa County
Martindale, Kylee	91438	S/E	06/01/22	Contra Costa County
Matous, Brittany	89275	P5.2	06/01/22	Contra Costa County
McCallister-Vila, Nina	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Medina, Brenda	91997	P5.2	06/01/22	Contra Costa County
Molina, Virginia	91921	P5.2	06/01/22	Contra Costa County
Monterrosa, Maritza	92012	P5.2	06/01/22	Contra Costa County
Neumann, Ashley	88237	P5.2	06/01/22	Contra Costa County
Nguyen, Khoi	92008	P5.2	06/01/22	Contra Costa County
Ordonez, Heidi	91993	III	06/01/22	Contra Costa County
Ozuzu, Adanna	83884	P5.2	06/01/22	Contra Costa County
Paa, Lemwel	91931	P5.2	06/01/22	Contra Costa County
Pennell, Justin	D9990	P4.3	06/01/22	Contra Costa County Housing Authority
Phillips, Brando	92032	P5.2	06/01/22	Contra Costa County
Pina, Nicco	92034	P5.2	06/01/22	Contra Costa County
Pinson, Lisa	91633	P5.2	06/01/22	Contra Costa County
Preciado, Jaqueline	91940	P5.2	06/01/22	Contra Costa County
Reyes, Arnold	89627	P5.2	06/01/22	Contra Costa County
Rijal, Rajendra	91990	P5.2	06/01/22	Contra Costa County
Rodriguez, Mason	91984	P5.2	06/01/22	Contra Costa County
Rosales, Dyann	89377	P5.2	06/01/22	Contra Costa County
Rosales, Edgar	92044	P5.2	06/01/22	Contra Costa County
Rosas, Gabriella	91985	P5.2	06/01/22	Contra Costa County
Rozal, Michelle	91973	P5.2	06/01/22	Contra Costa County
Russell-Carter, Charles	92000	P5.2	06/01/22	Contra Costa County
Sanchez, Darlene	92005	P4.2	06/01/22	Contra Costa County Fire Protection District
Sanchez, Mark	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Savone, Jessica	92045	P5.2	06/01/22	Contra Costa County
Saylor, Megan	88478	P5.2	06/01/22	Contra Costa County
Schumann, James	39526	S/E	06/01/22	Contra Costa County

**Key:**

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

**CERTIFICATION OF MEMBERSHIPS**

<i>Name</i>	<i>Employee Number</i>	<i>Tier</i>	<i>Membership Date</i>	<i>Employer</i>
Seymour, Isabella	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Sheppard, Simone	91987	P5.2	06/01/22	Contra Costa County
Taylor, John	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Taylor, Olivia	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Terry, Daija	D9990	P4.3	06/01/22	Contra Costa County Housing Authority
Torres, Denise	D9500	P5.3	06/01/22	Contra Costa County Superior Courts
Vargas, Ruth	89548	P5.2	06/01/22	Contra Costa County
Velasco Arciniega, Alondra	90939	S/E	06/01/22	Contra Costa County
Victoria-Pelley, Stephanie	91994	P5.2	06/01/22	Contra Costa County
Walker-Griffin, Avis	89896	P5.2	06/01/22	Contra Costa County
Weir, Sarah	91626	P5.2	06/01/22	Contra Costa County
Wellington, Kyle	86310	S/D	06/01/22	Rodeo-Hercules Fire Protection District
Wesnidge, Dawn	91718	P5.2	06/01/22	Contra Costa County
Wilborn, Amasia	91439	S/E	06/01/22	Contra Costa County
Worji, Marion	91025	P5.2	06/01/22	Contra Costa County
Yin, Alan	91964	P5.2	06/01/22	Contra Costa County

**Key:**

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

**TIER CHANGES**

<i>Name</i>	<i>Employee Number</i>	<i>Old Tier</i>	<i>New Tier</i>	<i>Effective Date</i>	<i>Employer</i>	<i>Reason for Change</i>
Kaufmann, Matthew	73164	S/A	III	06/01/22	Contra Costa County	Position Change
Lakes, Pilar	72800	III	S/C	06/01/22	Contra Costa County	Promotion to Deputy Sheriff
Robery, Spencer	90911	S/E	P5.2	06/01/22	Contra Costa County	Voluntary Demotion
Ruiz, Giovanni	91786	P5.2	S/E	06/01/22	Contra Costa County	Promotion to Deputy Sheriff

**Key:**

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

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

Meeting Date  
**08/10/2022**  
Agenda Item  
**#5b.**

***Service and Disability Retirement Allowances:***

<u>Name</u>	<u>Number</u>	<u>Effective Date</u>	<u>Option Type</u>	<u>Tier</u>	<u>Selected</u>
Anicete, Adelma	42708	03/31/22	SR	II and III	Unmodified
Argyropoulos, Mary	D9500	03/31/22	SR	II and III	Unmodified
Barnes, Herman	65454	03/30/22	SCD	Safety A	Unmodified
Barrientos, Roque	61025	03/28/22	SR	Safety A	Unmodified
Beard, Julie	52011 A/P	03/08/22	SR	Safety A	Unmodified
Bernardi, Leslie	77072	03/31/22	SR	III	Unmodified
Borbely, Stephen	52011	03/20/22	SR	Safety A	Unmodified
Braunesreither, Lori	51497	02/01/22	SR	I and II	Unmodified
Brown, Sandra	70954	03/23/22	SR	III	Unmodified
Brunson, Shirley	36725	03/31/22	SR	II and III	Unmodified
Callahan, Steven	51709	03/03/22	SR	II,III and Safety A	Unmodified
Carr-Trotter, Vicki	47237	03/30/22	SR	II and III	Unmodified
Celis, Victor	51363	03/31/22	SR	II and III	Unmodified
Chapman, Jonathan	62253	03/26/22	SR	II and III	Unmodified
Cherayil, Annie	56173	03/31/22	SR	II and III	Unmodified
Clark, Debra	63535	03/01/22	SR	II and III	Unmodified
Cotherman, Robin	63217	03/15/22	SR	III	Unmodified
Driscoll, Lisa	40206	03/31/22	SR	III	Unmodified
Ebrahimi, John	56447	03/30/22	SR	Safety A	Unmodified
Farnitano, Christopher	48789	03/01/22	SR	III	Unmodified
Ferris, Ruth	31822	02/10/22	SR	I	Unmodified
Gallagher, Kathy	78239	03/07/22	SR	III	Unmodified
Garcia, Adolfo	61863	03/29/22	SR	III	Unmodified
Grant, Brenda	66678	03/15/22	SR	III	Unmodified
Hagler, Pamela	60423	02/18/22	SR	I	Unmodified
Harrington, Charles	67677	03/31/22	SR	III	Unmodified
Harrison, Jami	56426	03/15/22	SR	II and III	Unmodified
Hughes, Glynis	71086	02/04/22	SR	III	Unmodified
Huie, John	D3406	03/31/22	SR	I	Option 2
Ireton, Sherriann	68612	02/11/22	SR	III	Unmodified
Jones, Carmel	60744	03/01/22	SR	Safety A	Unmodified
Kallerman, Judith	50775	03/31/22	SR	III	Unmodified
Kanzaria, Ramesh	62647	03/31/22	SR	I	Unmodified
Kim, Kook	65947	02/22/22	SR	Safety A	Unmodified
Kramer, Nancy	75250	02/15/22	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

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

**Tier**

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

# CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## BOARD OF RETIREMENT

Landers, Patsy	56496	01/21/22	SR	II and III	Unmodified
Janine Langford	66461	03/01/22	SR	Safety A	Unmodified
Maldonado, Vickie	46604	03/31/22	SR	II and III	Unmodified
Manoukian, Molly	51538	02/02/22	SR	II and III	Unmodified
Maran, Maya	63551	03/30/22	SR	II and III	Unmodified
Miller DewBerry, Linda	D9500	03/15/22	SR	II and III	Unmodified
Moore-McDowell, Jennifer	54760	03/01/22	SR	II and III	Unmodified
Mora, Alice	48054	03/31/22	SR	II and III	Unmodified
Moreira, Telma	61651	03/16/22	SR	III	Unmodified
Nestore, Toni	51296	03/01/22	SR	III	Unmodified
Ordonez, Phillip	61598	03/31/22	SR	Safety A	Unmodified
Pearson, Jacqueline	50528	03/02/22	SR	III	Option 1
Phillips, Sheena	32232	03/11/22	SR	II and III	Unmodified
Pierson-Brown, Leigh	38457	03/31/22	SR	II and III	Unmodified
Prince, Valerie	D9500	03/01/22	SR	II and III	Unmodified
Quezada, Laura	60344	03/25/22	SR	II and III	Option 2
Ramos, Araceli	61642	03/31/22	SR	II and III	Unmodified
Richards, Vincent	69564	03/01/22	SCD	Safety A	Unmodified
Rie, Teri	47356	03/16/22	SR	II and III	Unmodified
Riggins, Kristine	75051	10/22/20	SR	III	Unmodified
Robbins, Margaret	46581	03/31/22	SR	II and III	Unmodified
Robles, Renee	54848	02/01/22	SR	I	Unmodified
Rodriguez, Nora	53342	03/31/22	SR	III	Unmodified
Rosett, Debra	79062	03/31/22	SR	PEPRA 5.3	Unmodified
Roxas, Felipe	71280	03/31/22	SR	III	Unmodified
Runckel, Jason	55221	02/04/22	SR	II and III	Unmodified
Salangsang, Lucy	74810	03/01/22	SR	III	Unmodified
Schamach, Barry	47391	03/29/22	SR	III	Unmodified
Shimano, Richard	71923	01/03/22	SR	III	Unmodified
Simpson, Cynthia	D9990	03/31/22	SR	I	Unmodified
Sison, Marita	57089	03/30/22	SR	II and III	Unmodified
Spaulding, Mark	61600	03/31/22	SR	Safety A	Unmodified
Stoddard, Cynthia	76912	03/31/22	SR	PEPRA 5.2	Unmodified
Sueoka, Thomas	53668	03/31/22	SR	III	Unmodified
Taggart, Janelle	53397	03/31/22	SR	III	Unmodified
Teply, Zdena	63444	03/22/22	SR	III	Unmodified
Tyler, Deborah	66970	03/14/22	SR	III	Unmodified
Vienna, Theresa	78140	03/31/22	SR	PEPRA 5.3	Unmodified
Villatoro, Pedro	D7160	03/31/22	SR	Safety A	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

# CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## BOARD OF RETIREMENT

Voss, Michael	54504	03/10/22	SR	II and III	Unmodified
Warriner, Maria	72636	12/08/21	SR	III	Unmodified
Wendling, Christie	60404	03/31/22	SR	II and III	Unmodified
Williams, D. Michelle	46631	03/01/22	SR	II and III	Unmodified
Wilson, Terrance	53429	03/30/22	SR	Safety A	Unmodified
Wolfe, Douglas	64030	03/30/22	SR	Safety A	Unmodified
Wright, Linda	68660	03/01/22	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

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

Meeting Date  
**08/10/2022**  
Agenda Item  
**#5c.**

***Deaths:***

<u>Name</u>	<u>Date of Death</u>	<u>Employer as of Date of Death</u>
Boney, Teresa	06/14/22	Contra Costa County
Burghardt, Sharon	06/23/22	Contra Costa County
Carpenter, Nancy	07/21/22	Superior Courts
Cevello, Mary	06/28/22	Contra Costa County
Chavarria-Fryar, Elaine	07/05/22	Contra Costa County
Davis, Barbara	06/15/22	Contra Costa County
Gibson, Edward	03/08/22	Contra Costa County
Lew, Charlotte	06/25/22	Contra Costa County
Maas, Maxine	06/08/22	Contra Costa County
Morgan, Douglas	11/19/21	Superior Courts
Sheppard, Jack	07/06/22	San Ramon Valley Fire Protection District



Meeting Date  
**08/10/2022**  
Agenda Item  
**#5d.**

**Contra Costa County Employees' Retirement Association  
Liquidity Report – June 2022**

**June 2022 Performance**

	<b>Cash Flow</b>	<b>Coverage Ratio</b>
Benefit Cash Flow Projected by Model	\$48,250,000	
Liquidity Sub-Portfolio Cash Flow	\$48,250,000	<b>100%</b>
Actual Benefits Paid	\$49,647,564	<b>97.2%</b>
<i>Next Month's Projected Benefit Payment</i>	<i>\$48,500,000</i>	

**Monthly Manager Positioning – June 2022**

	<b>Beginning Market Value</b>	<b>Liquidity Program Cash Flow</b>	<b>Market Value Change/Other Activity</b>	<b>Ending Market Value</b>
DFA	\$270,795,241	(\$34,750,000)	\$26,963,027	\$263,008,267
Insight	\$510,618,815	(\$8,750,000)	(\$28,122,272)	\$473,746,543
Sit	\$501,981,503	(\$4,750,000)	(\$5,602,918)	\$491,628,584
<b>Liquidity</b>	<b>\$1,283,395,558</b>	<b>(\$43,500,000)</b>	<b>(\$1,159,246)</b>	<b>\$1,228,383,394</b>
Cash	\$447,907,852	(\$6,147,564)	\$1,992,364	\$443,752,652
<b>Liquidity + Cash</b>	<b>\$1,731,303,410</b>	<b>(\$49,647,564)</b>	<b>(\$9,519,800)</b>	<b>\$1,672,136,046</b>

**Functional Roles**

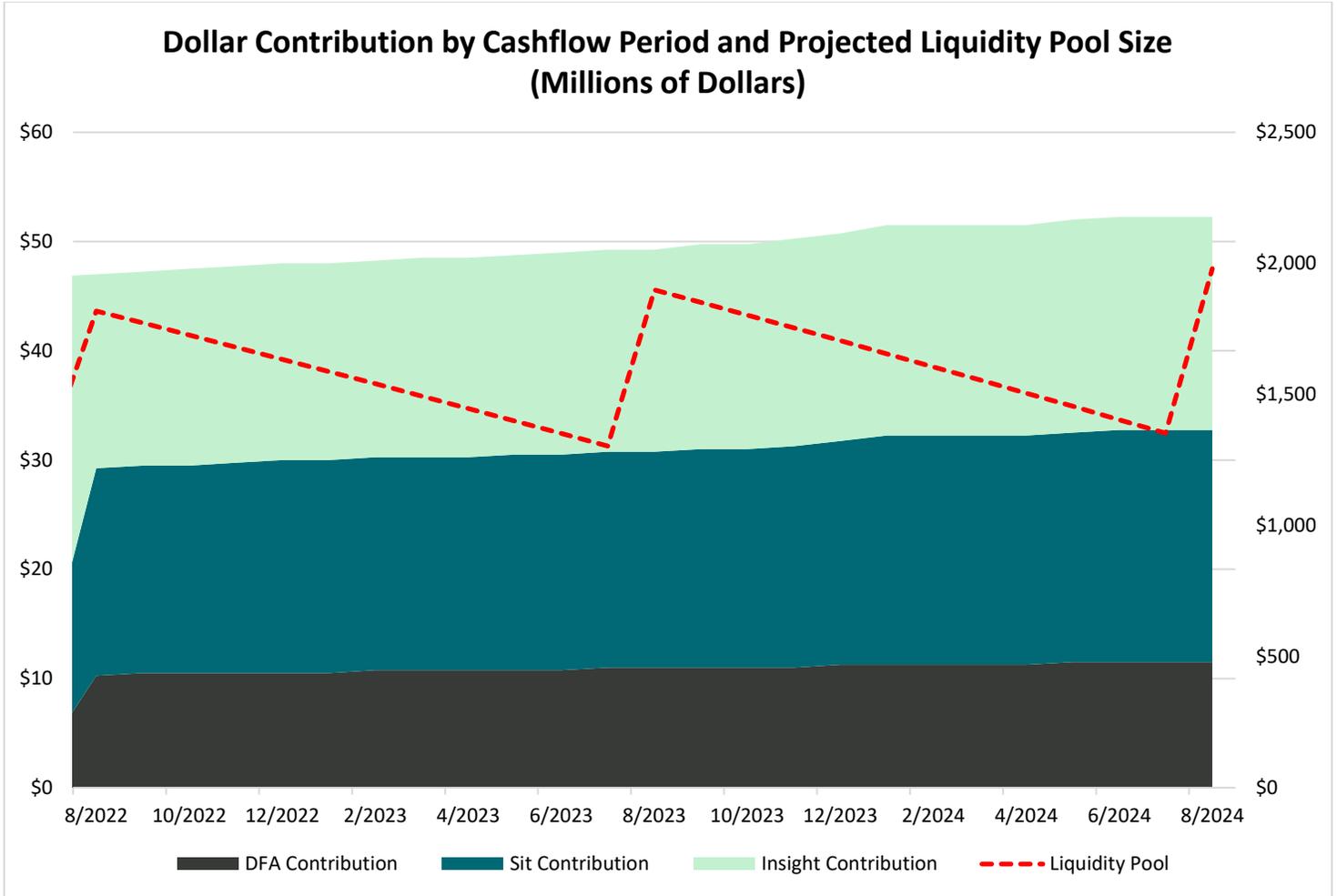
<b>Manager</b>	<b>Portfolio Characteristics</b>	<b>Liquidity Contribution</b>
Sit	High quality portfolio of small balance, government guaranteed mortgages with higher yields.	Pays out net income on monthly basis.
DFA	High quality, short duration portfolio of liquid, low volatility characteristics.	Pays 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 2022 from the liquidity program was completed on June 23<sup>rd</sup>. The actuarial model cash flow was lower than actual experience, producing \$1.4 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.



CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

Meeting Date  
**08/10/2022**  
Agenda Item  
**#6a.**

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

<u>Name</u>	<u>Number</u>	<u>Filed</u>	<u>Type</u>
Havea, Amy	70553	05/02/22	SCD

**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  
**08/10/2022**  
Agenda Item  
**#6b.**

**CCCERA Board of Trustees  
Training & Educational Conference Expenses Paid During  
Quarter 2 - 2022 (April to June)**

Trustee:	Conference Name/Purpose:	Location:	Event Dates:	Total
Candace Andersen	NONE			
Dennis Chebotarev	NONE			
Donald Finley	NONE			
Scott Gordon	NONE			
Jerry Holcombe	NONE			
Louie Kroll	SACRS UC Berkeley Program-PREPAID REGISTRATION	Berkeley, CA	July 17-20, 2022	\$2,500.00
Jay Kwon	CALAPRS General Assembly	San Diego, CA	Mar 3 - 8, 2022	113.00
	CALAPRS Trustees' Roundtable	Virtual	April 29, 2022	50.00
	SACRS Spring Conference	Rancho Mirage, CA	May 8 - 13, 2022	784.23
David J. MacDonald	CALAPRS General Assembly	San Diego, CA	Mar 3 - 8, 2022	280.16
	NASP Day of Education in Private Equity	Los Angeles, CA	Mar 23-24, 2022	679.60
	SACRS UC Berkeley Program-PREPAID REGISTRATION	Berkeley, CA	July 17-20, 2022	2,500.00
John Phillips	SACRS Spring Conference	Rancho Mirage, CA	May 8 - 13, 2022	1,629.13
Reggie Powell	NONE			
Mike Sloan	CALAPRS Advanced Principles	Los Angeles, CA	Mar 30 - Apr 1, 2022	543.00
	SACRS Spring Conference	Rancho Mirage, CA	May 8 - 13, 2022	2,007.75
	SACRS UC Berkeley Program-PREPAID REGISTRATION	Berkeley, CA	July 17-20, 2022	2,500.00
Russell V. Watts	NONE			

**Contra Costa County Employees' Retirement Association  
Asset Allocation as of June 30, 2022**

**Meeting Date  
08/10/2022  
Agenda Item  
#6c.**

	Market Value	Percentage of Total Fund	Current Target* Percentage	Current Target Over/(Under)	Long Term Target	Long Term Over/(Under)
<b>Liquidity</b>						
Dimensional Fund Advisors	263,008,267	2.6%	4.0%	-1.4%		
Insight	473,746,543	4.7%	7.0%	-2.3%		
Sit	491,628,584	4.9%	7.0%	-2.1%		
<b>Total Liquidity</b>	<b>1,228,383,394</b>	<b>4.9%</b>	<b>7.0%</b>	<b>-2.1%</b>	<b>17.0%</b>	<b>-12.1%</b>
		<b>Range 11-22%</b>				
<b>Growth</b>						
<b>Domestic Equity</b>						
Boston Partners	372,114,916	3.7%	4.0%	-0.3%		
Jackson Square	125,323	0.0%	4.0%	-4.0%		
BlackRock Index Fund	735,558,302	7.3%	5.0%	2.3%		
Emerald Advisers	183,413,674	1.8%	1.5%	0.3%		
Ceredex	173,993,462	1.7%	1.5%	0.2%		
<b>Total Domestic Equity</b>	<b>1,465,205,678</b>	<b>14.5%</b>	<b>16.0%</b>	<b>-1.5%</b>	<b>13.0%</b>	<b>1.5%</b>
<b>Global &amp; International Equity</b>						
Pyrford (Columbia)	447,803,732	4.4%	4.0%	0.4%		
William Blair	391,648,898	3.9%	4.0%	-0.1%		
First Eagle	471,188,220	4.7%	4.5%	0.2%		
Artisan Global Opportunities	434,618,620	4.3%	4.5%	-0.2%		
PIMCO/RAE Emerging Markets	324,030,742	3.2%	4.0%	-0.8%		
TT Emerging Markets	334,738,918	3.3%	4.0%	-0.7%		
<b>Total Global &amp; International Equity</b>	<b>2,404,029,130</b>	<b>23.8%</b>	<b>25.0%</b>	<b>-1.2%</b>	<b>19.0%</b>	<b>4.8%</b>
<b>Private Equity**</b>						
<b>Private Credit</b>	1,435,406,433	14.2%	11.0%	3.2%	18.0%	-3.8%
<b>Real Estate - Value Add</b>	892,590,325	8.8%	8.0%	0.8%	13.0%	-4.2%
<b>Real Estate - Opportunistic &amp; Distressed</b>	223,152,921	2.2%	4.0%	-1.8%	5.0%	-2.8%
<b>Real Estate - REIT</b>	358,397,295	3.6%	4.0%	-0.4%	5.0%	-1.4%
			2.0%	0.0%	0.0%	2.0%
Adelante	89,840,083	0.9%				
Invesco	114,127,181	1.1%				
<b>High Yield (Allianz)</b>	158,440,530	1.6%	2.0%	-0.4%	0.0%	1.6%
<b>Risk Parity</b>			3.0%	1.1%	3.0%	1.1%
AQR GRP EL	196,593,496	1.9%				
PanAgora	218,706,568	2.2%				
<b>Total Other Growth Assets</b>	<b>3,687,254,832</b>	<b>36.6%</b>	<b>34.0%</b>	<b>2.6%</b>	<b>44.0%</b>	<b>-7.4%</b>
<b>Total Growth Assets</b>	<b>7,556,489,640</b>	<b>74.9%</b>	<b>75.0%</b>	<b>-0.1%</b>	<b>76.0%</b>	<b>-1.1%</b>
		<b>Range 65-85%</b>				
<b>Risk Diversifying</b>						
AFL-CIO	232,861,395	2.3%	2.5%	-0.2%	2.5%	-0.2%
Acadian MAARS	255,461,747	2.5%	1.5%	1.0%	1.5%	1.0%
Sit LLCAR	277,032,339	2.7%	1.5%		1.5%	
Wellington Real Total Return	114,127	0.0%	0.0%			
<b>Total Risk Diversifying</b>	<b>765,469,607</b>	<b>7.6%</b>	<b>7.0%</b>	<b>0.6%</b>	<b>7.0%</b>	<b>0.6%</b>
		<b>Range 0% - 10%</b>				
<b>Cash and Overlay</b>						
Overlay (Parametric)	93,694,209	0.9%		0.9%		
Cash	443,752,652	4.4%		4.4%		
<b>Total Cash and Overlay</b>	<b>537,446,861</b>	<b>5.3%</b>	<b>0.0%</b>	<b>5.3%</b>	<b>0.0%</b>	<b>5.3%</b>
<b>Total Fund</b>	<b>10,087,789,502</b>	<b>93%</b>	<b>89%</b>		<b>100%</b>	

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 28, 2021 (BOR Resolution 2021-4).

\*\*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, 2022**

**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
Invesco IREF III	08/01/13	08/01/20				35,000,000	0	0.00%	
Invesco IREF IV	12/01/14	12/01/21				35,000,000	2,964,661	0.03%	4,453,599
Invesco IREF V	09/11/18	09/11/25				75,000,000	77,068,008	0.76%	19,389,232
Long Wharf FREG IV	08/14/13	09/30/21				25,000,000	1,441,579	0.01%	
Long Wharf FREG V	10/31/16	09/30/24				50,000,000	30,716,863	0.30%	
Long Wharf LREP VI	02/05/20	02/05/28				50,000,000	29,841,111	0.30%	17,177,938
LaSalle Income & Growth Fund VI	01/31/12	01/31/19				75,000,000	20,208,434	0.20%	3,946,000
LaSalle Income & Growth Fund VII	10/31/16	09/30/24				75,000,000	60,912,265	0.60%	5,859,352
						<b>630,000,000</b>	<b>223,152,921</b>	<b>2.21%</b>	<b>50,826,121</b>
<b>Outstanding Commitments</b>							<b>50,826,121</b>		
<b>Total</b>							<b>273,979,042</b>		

**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
DLJ Real Estate Capital Partners, L.P. III	06/30/05	06/30/14	in full liq.			75,000,000	15,666,054	0.16%	4,031,338
DLJ Real Estate Capital Partners, L.P. IV	12/31/07	09/30/18				100,000,000	51,726,883	0.51%	1,876,084
DLJ Real Estate Capital Partners, L.P. V	07/31/13	12/31/22				75,000,000	30,558,376	0.30%	5,046,583
DLJ Real Estate Capital Partners, L.P. VI	02/28/19	01/31/29				50,000,000	22,014,741	0.22%	21,346,526
Oaktree Real Estate Opportunities Fund V	02/01/11	02/01/21				50,000,000	1,213,282	0.01%	25,750,000
Oaktree Real Estate Opportunities Fund VI	09/30/13	09/30/20				80,000,000	25,861,783	0.26%	18,400,000
Oaktree Real Estate Opportunities Fund VII	02/28/15	02/28/23				65,000,000	49,913,265	0.49%	16,120,000
PCCP Equity IX	04/11/22	04/01/30				75,000,000	23,801,564	0.24%	43,698,436
Siguler Guff Distressed Real Estate Opp. Fund	07/30/11	07/30/22				75,000,000	21,670,223	0.21%	5,625,000
Siguler Guff Distressed Real Estate Opp. Fund II	08/31/13	08/31/25				70,000,000	37,614,184	0.37%	8,015,000
Siguler Guff Distressed Real Estate Opp. II Co-Inv	01/31/16	10/31/25				25,000,000	12,695,131	0.13%	4,462,138
Paulson Real Estate Fund II	11/10/13	11/10/20				20,000,000	15,253,477	0.15%	654,377
Angelo Gordon Realty Fund VIII	12/31/11	12/31/18				80,000,000	15,333,535	0.15%	12,334,302
Angelo Gordon Realty Fund IX	10/10/14	10/10/22				65,000,000	35,074,797	0.35%	7,572,500
						<b>905,000,000</b>	<b>358,397,295</b>	<b>3.55%</b>	<b>174,932,284</b>
<b>Outstanding Commitments</b>							<b>174,932,284</b>		
<b>Total</b>							<b>533,329,579</b>		

**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 III	09/30/08	06/30/16	2nd 1 YR	LP	06/30/18	75,000,000	0	0.00%	0
Torchlight Debt Opportunity Fund IV	08/01/12	08/30/20				60,000,000	9,122,501	0.09%	0
Torchlight Debt Opportunity Fund V	12/31/14	09/17/22				75,000,000	8,396,667	0.08%	15,000,000
Angelo Gordon Energy Credit Opportunities	09/10/15	09/10/20				16,500,000	3,887,741	0.04%	2,319,783
CCCERA StepStone	12/01/17	11/30/27				1,170,000,000	871,183,416	8.64%	449,125,011
						<b>1,524,500,000</b>	<b>892,590,325</b>	<b>8.85%</b>	<b>466,444,794</b>
<b>Outstanding Commitments</b>							<b>466,444,794</b>		
<b>Total</b>							<b>1,359,035,119</b>		

**Private Market Investments**  
As of June 30, 2022

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	164,349,025	1.63%	18,002,941
Adams Street Secondary II	12/31/08	12/31/20				30,000,000	4,070,660	0.04%	1,635,000
Adams Street Secondary V	10/31/12	10/31/22				40,000,000	13,393,276	0.13%	9,154,125
Adams Street Venture Innovation Fund	03/09/16	03/09/28				75,000,000	211,850,261	2.10%	8,962,500
AE Industrial Partners Fund II	05/18/18	05/18/28				35,000,000	51,091,101	0.51%	9,719,513
Bay Area Equity Fund	06/14/04	12/31/14	2nd 2 YR	LP	12/31/2017	10,000,000	1,237,972	0.01%	0
Bay Area Equity Fund II	2/29/09	12/31/19				10,000,000	18,634,998	0.18%	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	0	0.00%	0
EIF USPF III	02/28/07	02/28/17	1st 1 YR	LP	02/28/18	65,000,000	1,671,760	0.02%	0
EIF USPF IV	06/28/10	06/28/20				50,000,000	25,598,803	0.25%	4
Ares EIF V	09/09/15	11/19/25				50,000,000	32,433,844	0.32%	6,194,129
Genstar Capital Partners IX	02/18/19	02/18/29				50,000,000	65,695,903	0.65%	6,482,943
Genstar Capital Partners X	04/01/21	04/01/31				42,500,000	9,269,834	0.09%	33,776,690
GTCR VIII	10/27/20	12/31/36				50,000,000	15,488,684	0.15%	37,570,000
Hellman & Friedman Capital Partners	05/10/21	05/10/31				75,000,000	41,768,289	0.41%	34,117,819
Leonard Green - Green Equity Investors IX	03/01/22	02/28/32				60,000,000	0	0.00%	0
Leonard Green - Jade Equity Investors II	03/01/22	02/28/32				15,000,000	0	0.00%	0
Oaktree Private Investment Fund 2009	02/28/10	12/15/19				40,000,000	464,381	0.00%	6,308,961
Ocean Avenue Fund II	05/07/14	05/07/24				30,000,000	27,841,681	0.28%	3,000,000
Ocean Avenue Fund III	12/09/15	12/09/25				50,000,000	54,261,818	0.54%	4,000,000
Paladin III	08/15/08	08/15/18				25,000,000	12,693,920	0.13%	387,482
Pathway	11/09/98	05/31/21				125,000,000	4,423,238	0.04%	10,614,246
Pathway 2008	12/26/08	12/26/23				30,000,000	20,055,628	0.20%	2,778,718
Pathway 6	05/24/11	05/24/26				40,000,000	43,781,725	0.43%	3,690,212
Pathway 7	02/07/13	02/07/23				70,000,000	87,246,125	0.86%	5,362,302
Pathway 8	11/23/15	11/23/25				50,000,000	81,713,727	0.81%	4,410,352
Siguler Guff CCCERA Opportunities	06/03/14	05/31/25				200,000,000	155,017,000	1.54%	29,597,500
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	37,957,011	0.38%	8,845,760
TA XIV	05/27/21	05/27/31				50,000,000	12,918,141	0.13%	36,500,000
TPG Healthcare Partners, L.P.	06/27/19	06/27/29				24,000,000	13,874,874	0.14%	13,110,866
Trident VIII, L.P.	05/24/19	05/24/29				40,000,000	47,008,047	0.47%	5,426,540
Trident IX, L.P.	09/17/21	09/17/31				50,000,000	3,411,831	0.03%	45,319,130
<b>Real Assets</b>									
Aether III & III Surplus	11/30/13	11/30/20				75,000,000	62,835,207	0.62%	2,995,390
Aether IV	01/01/16	01/01/28				50,000,000	58,926,264	0.58%	4,103,494
Commonfund Capital Natural Resources IX	06/30/13	06/30/20				50,000,000	37,518,990	0.37%	2,725,007
Wastewater Opportunity Fund	12/31/15	11/30/22				25,000,000	20,314,246	0.20%	1,204,775
						<b>2,111,065,614</b>	<b>1,435,406,433</b>	<b>15.89%</b>	<b>310,677,268</b>
<b>Outstanding Commitments</b>							<b>310,677,268</b>		
<b>Total</b>							<b>1,746,083,701</b>		

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  
**08/10/2022**  
Agenda Item  
**#11**

## MEMORANDUM

Date: August 10, 2022  
To: CCCERA Board of Retirement  
From: Gail Strohl, Chief Executive Officer  
Subject: Consider and take possible action to adopt the December 31, 2021 Valuation Report and Contribution Rates for the period July 1, 2023—June 30, 2024.

---

### Background

Segal Consulting has prepared the December 31, 2021 valuation report. The employer and member contribution rates shown in this report are effective July 1, 2023 to June 30, 2024.

### Recommendation

Consider and take possible action to adopt the December 31, 2021 Valuation Report and Contribution Rates for the period July 1, 2023—June 30, 2024.

Meeting Date  
**08/10/2022**  
Agenda Item  
**#11**

# Contra Costa County Employees' Retirement Association

## **Actuarial Valuation and Review**

As of December 31, 2021



This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.

© 2022 by The Segal Group, Inc. All rights reserved.

**Segal**



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

July 22, 2022

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, 2021. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year 2023-2024.

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

A handwritten signature in black ink, appearing to read "Paul Angelo", written over a horizontal line.

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

A handwritten signature in black ink, appearing to read "Andy Yeung", written over a horizontal line.

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

EK/jl

# Table of Contents

Section 1: Actuarial Valuation Summary.....	5
Purpose and Basis .....	5
Valuation Highlights.....	7
Summary of Key Valuation Results .....	12
Important Information About Actuarial Valuations .....	16
Section 2: Actuarial Valuation Results .....	18
A. Member Data .....	18
B. Financial Information.....	22
C. Actuarial Experience .....	25
D. Other Changes in the Actuarial Accrued Liability.....	30
E. Development of Unfunded Actuarial Accrued Liability .....	31
F. Recommended Contribution.....	32
G. Funded Status .....	45
H. Actuarial Balance Sheet .....	47
I. Volatility Ratios .....	48
J. Risk Assessment .....	49
Section 3: Supplemental Information .....	52
Exhibit A: Table of Plan Coverage.....	52
Exhibit B: Members in Active Service as of December 31, 2021 .....	64
Exhibit C: Retired Members and Beneficiaries as of December 31, 2021.....	77
Exhibit D: Reconciliation of Member Data .....	85
Exhibit E: Summary Statement of Income and Expenses on a Market Value Basis .....	86
Exhibit F: Summary Statement of Plan Assets.....	87
Exhibit G: Summary of Total Allocated Reserves.....	88
Exhibit H: Development of the Fund Through December 31, 2021.....	89

# Table of Contents

Exhibit I: Table of Amortization Bases.....	90
Exhibit J: Projection of UAAL Balances and Payments.....	105
Exhibit K: Definition of Pension Terms .....	107
Section 4: Actuarial Valuation Basis .....	111
Exhibit 1: Actuarial Assumptions and Methods .....	111
Exhibit 2: Summary of Plan Provisions.....	135
Exhibit 3: Member Contribution Rates.....	144
Exhibit 4: Non-Refundability Factors .....	170
Exhibit 5: Summary of Cost Groups and Employers .....	171
Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2021 .....	173
Exhibit 7: Recommended Employer Contribution Rates – For Use in Preparing Contribution Rate Packet .....	176

# 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, 2021. 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<sup>1</sup>, inactive vested members, and retired members and beneficiaries as of December 31, 2021, provided by the Retirement Association;
- The assets of the Plan as of December 31, 2021, provided by CCCERA;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the December 31, 2021 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Board for the December 31, 2021 valuation and
- The funding policy adopted by the Board of Retirement.

<sup>1</sup> Similar to the disclosure we provided in our December 31, 2020 valuation report, the annual information for active members and, in particular, the service credit provided for active members was reported through November 30, 2021 instead of December 31, 2021. 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 111.

A schedule of current amortization balances and payments may be found in *Section 3, Exhibit I* starting on page 90. 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 105.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2023 through June 30, 2024.

## Section 1: Actuarial Valuation Summary

### Valuation Highlights

- Pg. 111 1. The economic and non-economic assumptions used in this valuation are based on those approved by the Board and as recommended by Segal in our triennial Experience Study Report dated April 15, 2022. Those assumptions can be found in *Section 4, Exhibit 1*.

The new assumptions resulted in an increase in the average employer and member contribution rates of 2.13% and 0.33% of payroll, respectively (the contribution rate impacts are higher for the Safety cost groups compared to the General cost groups). The assumption changes also increased the UAAL by \$234.9 million.

2. On March 9, 2022, Local Agency Formation Commissions (LAFCO) approved the annexation of East Contra Costa Fire Protection District (East Fire) into Contra Costa Fire Protection District (Con Fire) effective July 1, 2022. Prior to the annexation, Con Fire's and East Fire's Safety members were in Cost Group #8 and Cost Group #13, respectively and they were the sole employer in each of those two cost groups. Con Fire was the sole employer of the General members in Cost Group #5 while East Fire's General members were a part of Cost Group #1, pooled with members from other employers in that Cost Group. After the annexation, East Fire's Safety members became part of Cost Group #8 and East Fire's General members became part of Cost Group #5.

The transfers of assets and liabilities associated with these Cost Group reassignments for East Fire and Con Fire members have been reflected in this valuation. Because East Fire was the sole employer in Cost Group #13, the assets in Cost Group #13 have been allocated to Cost Group #8. Because East Fire's General members were part of Cost Group #1 and the UAAL contribution rate was pooled with other employers in Cost Group #1 and Cost Group #2, for their General members we have allocated to East Fire a proportionate share of the UAAL based on their projected payroll to the total payroll for all employers in the two Cost Groups. These allocations were determined as of December 31, 2020 and the details of the allocations can be found in our May 10, 2022 letter.

- Pg. 143 For the December 31, 2021 valuation, CCCERA has provided us with a list of East Fire members who would be enrolled in a different tier of benefit effective July 1, 2022 after the annexation.

As part of the annexation, East Fire made a prepayment of \$3,344,437 on June 30, 2022 towards their December 31, 2020 UAAL. As requested by East Fire, this prepayment has been used to reduce Con Fire's UAAL contribution rates effective July 1, 2022. The first actuarial valuation to reflect the prepayment in the Table of Amortization Bases for Con Fire (Cost Groups #5 and #8) will be as of December 31, 2022, as that will be the first valuation in which the prepayment will be reflected in the assets provided for the valuation. However, in this report we have shown Con Fire's contribution rates in Cost Group #5 and #8 after reflecting this prepayment.

- Pg. 45 3. The ratio of the Valuation Value of Assets to the Actuarial Accrued Liability increased from 91.8% to 92.4%. 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 increased from 95.6% to 101.3%. 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.

## Section 1: Actuarial Valuation Summary

- Pg. 31  
Pgs. 90-104
4. The Association's UAAL (which is based on the Valuation Value of Assets) decreased from \$859 million as of December 31, 2020 to \$855 million as of December 31, 2021. The decrease in UAAL is primarily due to an investment return on actuarial value (i.e. after asset smoothing) more than the 7.00% assumed rate used in the December 31, 2020 valuation and contributions paying down a portion of the UAAL, offset to some degree by the change in assumptions, 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*.
- Pg. 25
5. The net actuarial gain from investment and contribution experience is \$182.0 million, or 1.6% of actuarial accrued liability. The net experience loss from sources other than investment and contribution experience was \$83.8 million, or 0.7% of the actuarial accrued liability. This loss was primarily due to individual salary increases greater than expected and COLA increases greater than expected.
- Pg. 33
6. The average employer rate calculated in this valuation (excluding any employer subvention of member rates or member subvention of employer rates) has increased from 33.87% of payroll to 35.55% of payroll. This increase is primarily due to the effect of change in assumptions, individual salary increases greater than expected, and COLA increases greater than expected, offset to some degree by an investment return on actuarial value (i.e. after asset smoothing) greater than the 7.00% assumed rate used in the December 31, 2020 valuation, and the effect of changes in member demographics on Normal Cost. 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. 176
- 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*.
- Pg. 34
7. The average member rate calculated in this valuation has increased from 11.85% of payroll to 12.17% of payroll. 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.
8. As mentioned in our letter providing five years of projected employer contribution rates, the UAAL layers related to the restart of amortization, as well as the Pension Obligation Bonds (POBs) issued by certain employers, will become fully amortized during the 2022 Calendar Year. The net impact will be a reduction in the UAAL contribution rate calculated in the December 31, 2022 valuation of about 7% of payroll for the plan in total. However, it is important to note that this impact will vary by Cost Group. For example, those Cost Groups which had a credit at the restart of amortization, or those which issued POBs larger than their restart amortization will see an increase in their contribution rate as a result of the full amortization.

## Section 1: Actuarial Valuation Summary

Pg. 26 9. The rate of return on the Market Value of Assets was 13.99% for the 2021 plan year. The return on the Valuation Value of Assets was 8.24% 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 2021 (a market loss at -2.52%) and the second-half of 2021 (a market gain of 16.92%). This resulted in an actuarial gain when measured against the assumed rate of return of 7.00% used in the December 31, 2020 valuation. This actuarial investment gain decreased the average employer contribution rate by 0.90% of pay.

Pg. 23 10. The total unrecognized net investment gain as of December 31, 2021 is about \$1,003 million as compared to an unrecognized net investment gain of \$392 million in the previous valuation. This deferred net investment gain of \$1,003 million (i.e., about \$1.0 billion) 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 gains of \$1.0 billion represent about 8.8% of the Market Value of Assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$1.0 billion net market gains 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 gains were recognized immediately in the valuation value of assets, the funded percentage would increase from 92.4% to 101.3%.

For comparison purposes, if all the deferred gains in the December 31, 2020 valuation had been recognized immediately in the December 31, 2020 valuation, the funded percentage would have increased from 91.8% to 95.6%.

b. If the net deferred gains were recognized immediately in the valuation value of assets, the average employer contribution rate would decrease from 35.55% to about 27.98% of payroll.

For comparison purposes, if all the deferred gains in the December 31, 2020 valuation had been recognized immediately in the December 31, 2020 valuation, the average employer contribution rate would have decreased from 35.26% to 32.22% of payroll.

11. The actuarial valuation report as of December 31, 2021 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.

12. The assets provided for this valuation reflects the \$70,763,669 prepayment made by Central Contra Costa Sanitary District (Central San) on June 25, 2021. As requested by Central San, this prepayment has been used to reduce Central San's UAAL contribution rate effective July 1, 2021. As a result of this prepayment, the UAAL contributions made during the first six months of 2021, and other actuarial experience during 2021, Central San is now fully funded. This valuation also reflects the \$263,000 additional contributions made by San Ramon Valley Fire Department and the \$30,000 additional contributions made by LAFCO towards their respective UAALs. Each of these two amounts have been amortized as a level percent of pay (credit) over a period of eighteen years beginning with the December 31, 2021 valuation to reduce the employer UAAL contributions.

## Section 1: Actuarial Valuation Summary

13. 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 understand 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 further understand that the December 31, 2021 participant data as well as the assets as of that date, do not reflect the return of member contributions that totaled approximately \$4 million, however the participant data does reflect the reduction of benefit for the 7 members.

Pg. 49 14. 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.

15. Segal strongly recommends an actuarial funding policy 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 unfunded actuarial accrued liability and the principal balance. The funding policy adopted by the Board meets this standard.

## Section 1: Actuarial Valuation Summary

16. 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, 2021, 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.
17. It is important to note that this actuarial valuation is based on plan assets as of December 31, 2021. Due to the COVID-19 pandemic, market conditions have changed significantly since the onset of the Public Health Emergency. 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, 2021. While it is impossible to determine how the pandemic will affect market conditions and other demographic experience of the plan in future valuations, Segal is available to prepare projections of potential outcomes upon request.

## Section 1: Actuarial Valuation Summary

### Summary of Key Valuation Results

		December 31, 2021		December 31, 2020	
		Total Rate	Estimated Annual Dollar Amount <sup>1</sup> (\$ in '000s)	Total Rate	Estimated Annual Dollar Amount <sup>1</sup> (\$ in '000s)
<b>Average Employer Contribution Rates:<sup>3</sup></b>	<b>General</b>				
	• Cost Group #1 – County and Small Districts (Tiers 1 and 4) <sup>2</sup>	33.98%	\$8,213	32.60%	\$8,165
	• Cost Group #2 – County and Small Districts (Tiers 3 and 5)	26.90%	198,951	25.99%	187,609
	• Cost Group #3 – Central Contra Costa Sanitary District <sup>4</sup>	15.82%	6,179	15.63%	5,863
	• Cost Group #4 – Contra Costa Housing Authority	42.67%	2,817	41.51%	2,645
	• Cost Group #5 – Contra Costa County Fire Protection District <sup>2</sup>	36.18%	2,715	35.63%	2,690
	• Cost Group #6 – Small Districts (Non-Enhanced Tiers 1 and 4)	16.11%	165	15.33%	158
	<b>Safety</b>				
	• Cost Group #7 – County (Tiers A and D)	75.47%	\$38,320	70.95%	\$38,766
	• Cost Group #8 – Contra Costa Fire Protection District <sup>2</sup>	68.30%	35,149	63.35%	30,838
	• Cost Group #9 – County (Tiers C and E)	65.29%	39,307	61.32%	32,350
	• Cost Group #10 – Moraga-Orinda Fire District	78.11%	6,831	67.47%	6,006
	• Cost Group #11 – San Ramon Valley Fire District	82.92%	19,893	77.24%	18,017
	• Cost Group #12 – Rodeo-Hercules Fire Protection District	95.72%	2,561	90.21%	2,287
<b>All Categories Combined</b>		<b>35.55%</b>	<b>\$361,100</b>	<b>33.87%</b>	<b>\$335,394</b>

**Note:** Pages 171 and 172 contain a summary that shows which employers are in each cost group.

<sup>1</sup> Based on projected compensation for each valuation date shown.

<sup>2</sup> The rates as of December 31, 2020 and 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.

<sup>3</sup> These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

<sup>4</sup> The rate as of December 31, 2020 is after reflecting the prepayment of \$70,763,669 towards the District's UAAL on June 25, 2021. This prepayment has been used to reduce the District's UAAL contribution rate effective July 1, 2021.

## Section 1: Actuarial Valuation Summary

### Summary of Key Valuation Results (continued)

		December 31, 2021		December 31, 2020	
		Total Rate	Estimated Annual Dollar Amount <sup>1</sup> (\$ in '000s)	Total Rate	Estimated Annual Dollar Amount <sup>1</sup> (\$ in '000s)
<b>Average Member Contribution Rates:<sup>2</sup></b>	<b>General</b>				
	• Cost Group #1 – County and Small Districts (Tiers 1 and 4)	11.32%	\$2,736	11.07%	\$2,828
	• Cost Group #2 – County and Small Districts (Tiers 3 and 5)	10.79%	79,798	10.61%	76,571
	• Cost Group #3 – Central Contra Costa Sanitary District	11.58%	4,524	11.35%	4,258
	• Cost Group #4 – Contra Costa Housing Authority	11.82%	780	11.44%	729
	• Cost Group #5 – Contra Costa County Fire Protection District	11.96%	898	11.78%	831
	• Cost Group #6 – Small Districts (Non-Enhanced Tiers 1 and 4)	14.06%	144	13.43%	138
	<b>Safety</b>				
	• Cost Group #7 – County (Tiers A and D)	18.86%	\$9,576	17.97%	\$9,819
	• Cost Group #8 – Contra Costa Fire Protection District <sup>3</sup>	17.59%	9,052	16.62%	8,090
	• Cost Group #9 – County (Tiers C and E)	16.91%	10,180	16.23%	8,563
	• Cost Group #10 – Moraga-Orinda Fire District	18.25%	1,596	17.25%	1,536
	• Cost Group #11 – San Ramon Valley Fire District	16.57%	3,975	15.88%	3,704
	• Cost Group #12 – Rodeo-Hercules Fire Protection District	12.54%	335	11.13%	282
<b>All Categories Combined</b>		<b>12.17%</b>	<b>\$123,593</b>	<b>11.85%</b>	<b>\$117,349</b>

**Note:** Pages 171 and 172 contain a summary that shows which employers are in each cost group.

<sup>1</sup> Based on projected compensation for each valuation date shown.

<sup>2</sup> These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

<sup>3</sup> The rates as of December 31, 2020 reflect the annexation of East Contra Costa County Fire Protection District into Contra Costa County Fire Protection District.

## Section 1: Actuarial Valuation Summary

### Summary of Key Valuation Results (continued)

		December 31, 2021	December 31, 2020
<b>Actuarial Accrued Liability as of December 31:</b>	<ul style="list-style-type: none"> <li>Retired members and beneficiaries</li> </ul>	\$7,301,323,228	\$6,719,970,806
	<ul style="list-style-type: none"> <li>Inactive vested members<sup>1</sup></li> </ul>	333,053,458	308,470,870
	<ul style="list-style-type: none"> <li>Active members</li> </ul>	<u>3,654,596,801</u>	<u>3,493,186,499</u>
	<ul style="list-style-type: none"> <li>Total Actuarial Accrued Liability</li> </ul>	\$11,288,973,487	\$10,521,628,175
	<ul style="list-style-type: none"> <li>Normal Cost for plan year beginning December 31<sup>2</sup></li> </ul>	\$282,575,725	\$271,126,476
<b>Assets as of December 31:</b>	<ul style="list-style-type: none"> <li>Market Value of Assets (MVA)</li> </ul>	\$11,453,765,753	\$10,070,237,862
	<ul style="list-style-type: none"> <li>Actuarial Value of Assets (AVA)</li> </ul>	10,451,125,236	9,678,508,253
	<ul style="list-style-type: none"> <li>Actuarial Value of Assets as a percentage of MVA</li> </ul>	91.2%	96.1%
	<ul style="list-style-type: none"> <li>Valuation Value of Assets (VVA)</li> </ul>	\$10,434,412,288	\$9,662,282,926
<b>Funded Status as of December 31:</b>	<ul style="list-style-type: none"> <li>Unfunded Actuarial Accrued Liability on MVA basis<sup>3</sup></li> </ul>	\$(148,079,318)	\$467,615,640
	<ul style="list-style-type: none"> <li>Funded percentage on MVA basis<sup>11</sup></li> </ul>	101.3%	95.6%
	<ul style="list-style-type: none"> <li>Unfunded Actuarial Accrued Liability on VVA basis</li> </ul>	\$854,561,199	\$859,345,249
	<ul style="list-style-type: none"> <li>Funded percentage on VVA basis</li> </ul>	92.4%	91.8%
<b>Key Assumptions:</b>	<ul style="list-style-type: none"> <li>Net investment return</li> </ul>	6.75%	7.00%
	<ul style="list-style-type: none"> <li>Price inflation</li> </ul>	2.50%	2.75%
	<ul style="list-style-type: none"> <li>Payroll growth increase</li> </ul>	3.00%	3.25%
	<ul style="list-style-type: none"> <li>Cost of living adjustments                             <ul style="list-style-type: none"> <li>Tiers with 3%/4% COLA</li> </ul> </li> </ul>	2.75%	2.75%
	<ul style="list-style-type: none"> <li>Tiers with 2% COLA</li> </ul>	2.00%	2.00%

<sup>1</sup> Includes inactive members with member contributions on deposit.

<sup>2</sup> Includes administrative expenses.

<sup>3</sup> 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 \$16,712,948 as of December 31, 2021 and \$16,225,327 as of December 31, 2020.

## Section 1: Actuarial Valuation Summary

### Summary of Key Valuation Results (continued)

		December 31, 2021	December 31, 2020	Change From Prior Year
<b>Demographic Data as of December 31:</b>	<b>Active Members:</b>			
	• Number of members	10,005	10,099	-0.9%
	• Average age	46.3	46.3	0.0
	• Average service	10.2	10.2	0.0
	• Total projected compensation	\$1,015,755,387	\$990,041,699	2.6%
	• Average projected compensation	\$101,525	\$98,034	3.6%
	<b>Retired Members and Beneficiaries:</b>			
	• Number of members:			
	– Service retired	7,908	7,655	3.3%
	– Disability retired	885	896	-1.2%
	– Beneficiaries	<u>1,485</u>	<u>1,467</u>	1.2%
	– Total	10,278	10,018	2.6%
	• Average age	70.9	70.8	0.1
	• Average monthly benefit	\$4,353	\$4,219	3.2%
	<b>Inactive Vested Members:</b>			
	• Number of members <sup>1</sup>	3,812	3,591	6.2%
	• Average Age	46.6	46.7	-0.1
	<b>Total Members:</b>	24,095	23,708	1.6%

<sup>1</sup> Includes 2,147 inactive non-vested members with member contributions on deposit as of December 31, 2021 and 2,039 as of December 31, 2020.

## Section 1: Actuarial Valuation Summary

### 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:

<b>Plan of Benefits</b>	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.
<b>Participant Data</b>	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.
<b>Assets</b>	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.
<b>Actuarial Assumptions</b>	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. The projected 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.
<b>Models</b>	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 the Association. 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 the Association 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 Association should look to their other advisors for expertise in these areas.

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

# 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: 2012 – 2021

Year Ended December 31	Active Members	Inactive Vested Members <sup>1</sup>	Retired Members and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives	Ratio of Retired Members and Beneficiaries to Actives
2012	8,640	2,288	8,517	10,805	1.25	0.99
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

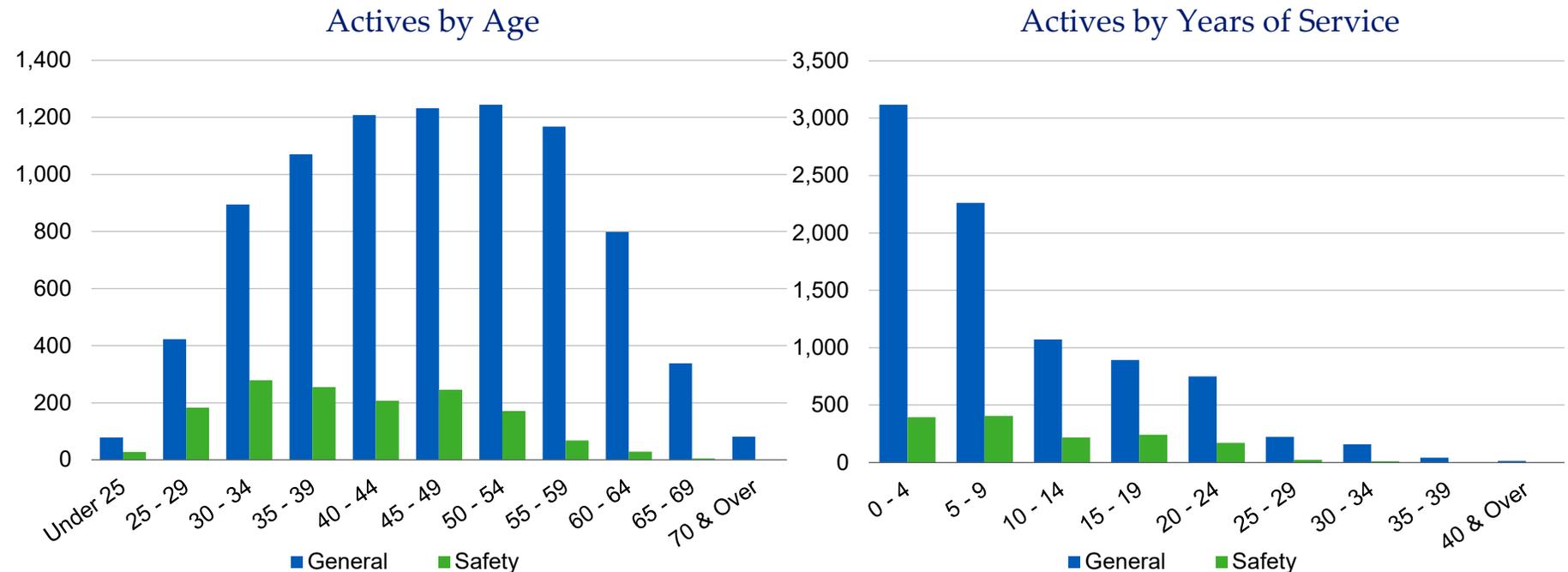
<sup>1</sup> Includes inactive members with member contributions on deposit.

## Section 2: Actuarial Valuation Results

### Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 10,005 active members with an average age of 46.3, average years of service of 10.2 years and average compensation of \$101,525. The 10,099 active members in the prior valuation had an average age of 46.3, average service of 10.2 years and average compensation of \$98,034.

Distribution of Active Members as of December 31, 2021



### Inactive Members

In this year's valuation, there were 3,812 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 3,591 in the prior valuation.

## Section 2: Actuarial Valuation Results

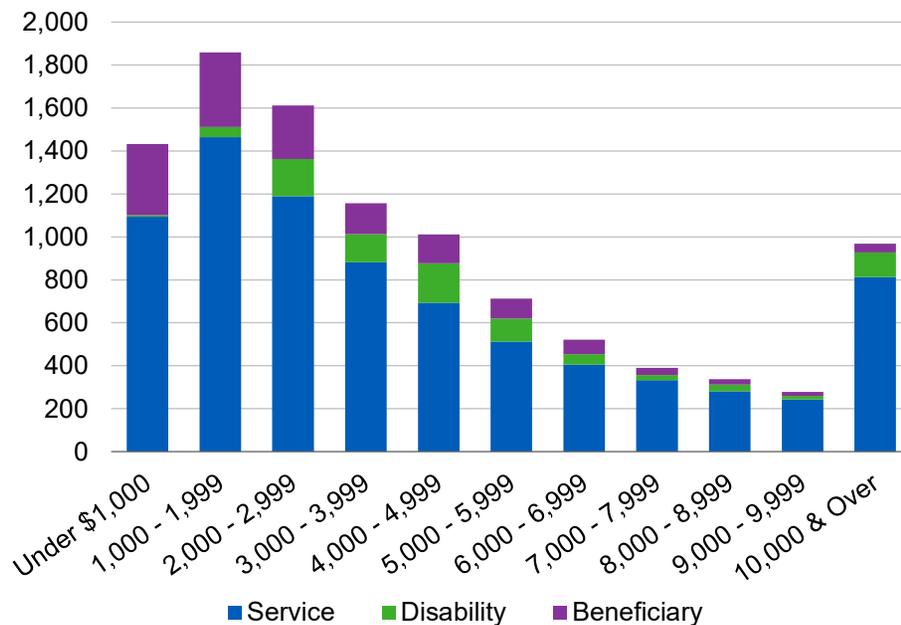
### Retired Members and Beneficiaries

As of December 31, 2021, 8,793 retired members and 1,485 beneficiaries were receiving total monthly benefits of \$44,743,043. For comparison, in the previous valuation, there were 8,551 retired members and 1,467 beneficiaries receiving monthly benefits of \$42,267,178.

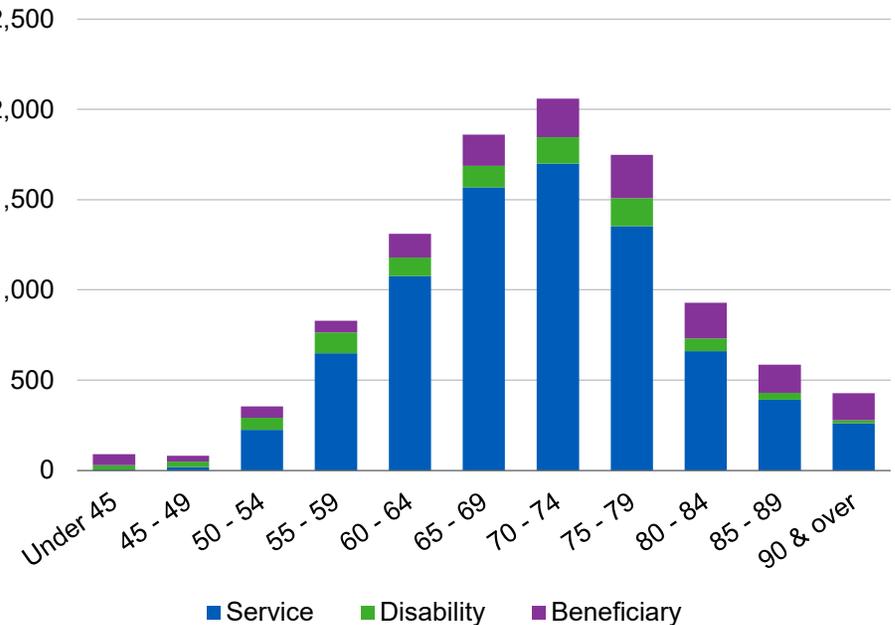
As of December 31, 2021, the average monthly benefit for retired members and beneficiaries is \$4,353, compared to \$4,219 in the previous valuation. The average age for retired members and beneficiaries is 70.9 in the current valuation, compared with 70.8 in the prior valuation.

#### Distribution of Retired Members and Beneficiaries as of December 31, 2021

Retired Members and Beneficiaries  
by Type and Monthly Amount



Retired Members and Beneficiaries  
by Type and Age



## Section 2: Actuarial Valuation Results

### 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: 2012 – 2021

Year Ended December 31	Active Members			Retired Members and Beneficiaries		
	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount
2012	8,640	45.9	10.2	8,517	69.0	\$3,518
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

## Section 2: Actuarial Valuation Results

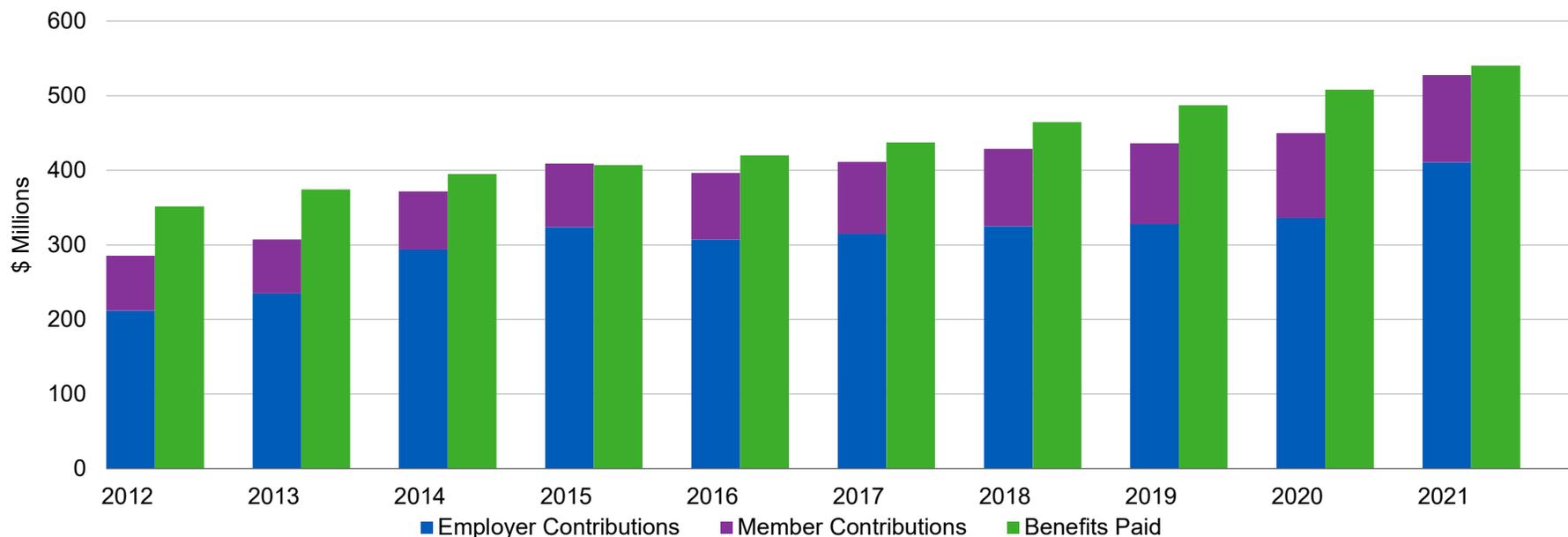
### B. Financial Information

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, 2012 – 2021



## Section 2: Actuarial Valuation Results

### Determination of Actuarial Value of Assets for Year Ended December 31, 2021

<b>1 Market Value of Assets</b>						<b>\$11,453,765,753</b>
<b>2</b>		<b>Expected Return</b>	<b>Actual Return<sup>1</sup></b>	<b>Investment Gain/(Loss)</b>	<b>Percent Deferred</b>	<b>Unrecognized Amount</b>
a)	Period ended December 31, 2016	\$249,584,567	\$196,258,919	\$(53,325,648)	0%	\$0
b)	Period ended June 30, 2017	255,728,819	488,764,245	233,035,426	0%	0
c)	Period ended December 31, 2017	271,873,066	498,651,736	226,778,670	10%	22,677,867
d)	Period ended June 30, 2018	288,460,475	63,645,390	(224,815,085)	20%	(44,963,017)
e)	Period ended December 31, 2018	289,889,306	(258,676,279)	(548,565,585)	30%	(164,569,675)
f)	Period ended June 30, 2019	280,075,265	820,000,188	539,924,922	40%	215,969,969
g)	Period ended December 31, 2019	307,217,326	348,171,398	40,954,072	50%	20,477,036
h)	Period ended June 30, 2020	318,113,258	(302,015,927)	(620,129,184)	60%	(372,077,511)
i)	Period ended December 31, 2020	306,509,032	1,184,409,986	877,900,954	70%	614,530,667
j)	Period ended June 30, 2021	346,562,358	(254,319,434)	(600,881,792)	80%	(480,705,434)
k)	Period ended December 31, 2021	337,995,697	1,661,663,047	1,323,667,350	90%	1,191,300,615
l)	Total unrecognized return <sup>1</sup>					\$1,002,640,517
<b>3</b>	<b>Actuarial Value of Assets (1) - (2l)</b>					<b>\$10,451,125,236</b>
<b>4</b>	Ratio of Actuarial Value to Market Value					91.2%
<b>5</b>	Non-valuation reserves and designations:					
a)	Post Retirement Death Benefit					\$16,712,948
b)	Statutory Contingency					0
c)	Additional One Percent Contingency					0
d)	Unrestricted Designation					0
e)	Total					\$16,712,948
<b>6</b>	<b>Valuation Value of Assets (3) - (5e)</b>					<b>\$10,434,412,288</b>

**Note:** Results may be slightly off due to rounding.

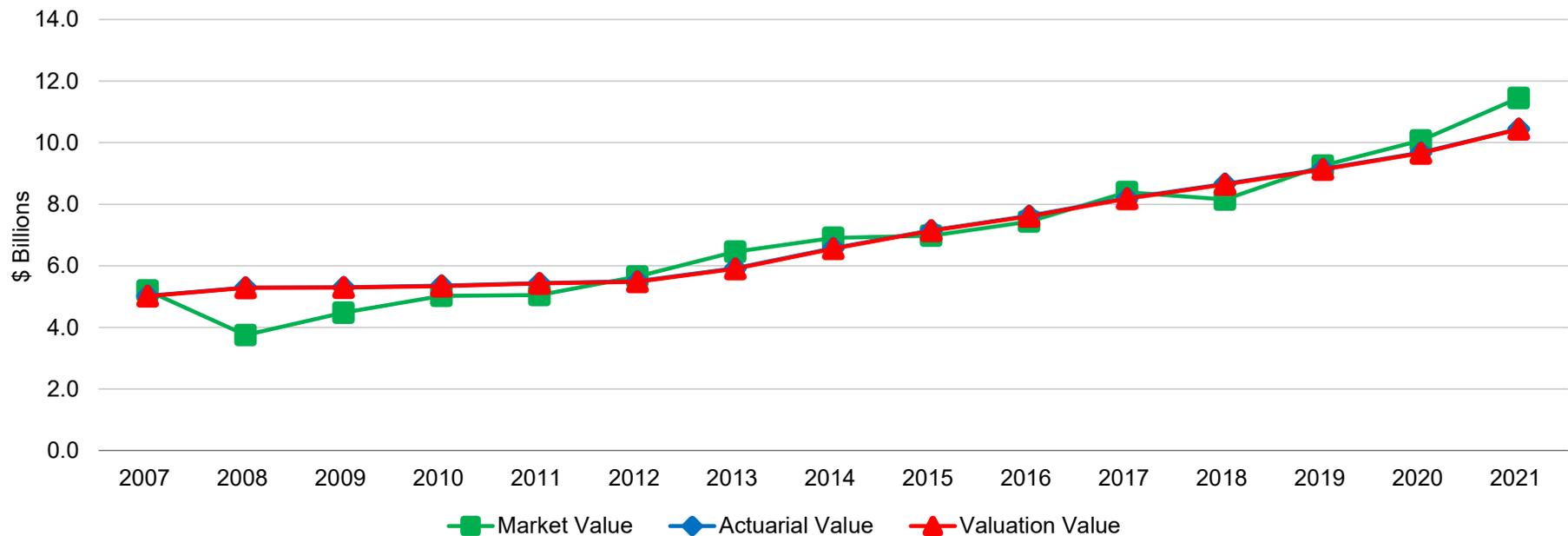
<sup>1</sup> Deferred return as of December 31, 2021 recognized in each of the next five years:

(a)	Amount recognized on December 31, 2022	\$180,288,996
(b)	Amount recognized on December 31, 2023	257,430,706
(c)	Amount recognized on December 31, 2024	200,206,873
(d)	Amount recognized on December 31, 2025	232,347,207
(e)	Amount recognized on December 31, 2026	132,366,735
(f)	Total unrecognized return as of December 31, 2021	\$1,002,640,517

## 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<sup>1</sup> Value, and Valuation<sup>1</sup> Value of Assets as of December 31, 2007 – 2021



<sup>1</sup> The Actuarial Value and the Valuation Value have been substantially the same over the time period shown, differing by no more than \$20 million.

## Section 2: Actuarial Valuation Results

### 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 changes in actuarial assumptions reflected in this valuation.

The total gain is \$98.1 million, which includes \$119.7 million from investment gains, a gain of \$62.3 million from contribution experience and \$83.8 million in losses from all other sources. The net experience variation from individual sources other than investments and contributions was 0.7% 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, 2021

<b>1</b>	Net gain from investments <sup>1</sup>	\$(119,691,541)
<b>2</b>	Net gain from contribution experience <sup>2</sup>	(62,285,414)
<b>3</b>	Net loss from other experience <sup>3</sup>	83,827,871
<b>4</b>	<b>Net experience gain: 1 + 2 + 3</b>	<b>\$(98,149,084)</b>

<sup>1</sup> Details on next page.

<sup>2</sup> See *Section 2, Subsection E* for further details.

<sup>3</sup> See *Section 2, Subsection E* for further details. Does not include the effect of plan, method, or assumption changes, if any.

## Section 2: Actuarial Valuation Results

### 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 13.99% for the year ended December 31, 2021.

For valuation purposes, the assumed rate of return on the Valuation Value of Assets is 7.00% based on the December 31, 2020 valuation. The actual rate of return on a valuation basis for the 2021 plan year was 8.24% after considering the recognition of prior years' investment gains and losses and the non-level returns during the first-half of 2021 (a market loss at -2.52%) and the second-half of 2021 (a market gain of 16.92%). Since the actual return for the year was more than the assumed return, the Plan experienced an actuarial gain during the year ended December 31, 2021 with regard to its investments.

#### Investment Experience for Year Ended December 31, 2021

	Market Value	Actuarial Value	Valuation Value
<b>1</b> Net investment income	\$1,407,343,614	\$796,432,706	\$795,314,105
<b>2</b> Average value of assets	10,059,390,360	9,667,660,751	9,651,750,914
<b>3</b> Rate of return: <b>1 ÷ 2</b>	13.99%	8.24%	8.24%
<b>4</b> Assumed rate of return	7.00%	7.00%	7.00%
<b>5</b> Expected investment income: <b>2 x 4</b>	704,157,325	676,736,253	675,622,564
<b>6</b> Actuarial gain/(loss): <b>1 - 5</b>	<b>\$703,186,289</b>	<b>\$119,696,453</b>	<b>\$119,691,541</b>

## Section 2: Actuarial Valuation Results

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: 2012 – 2021

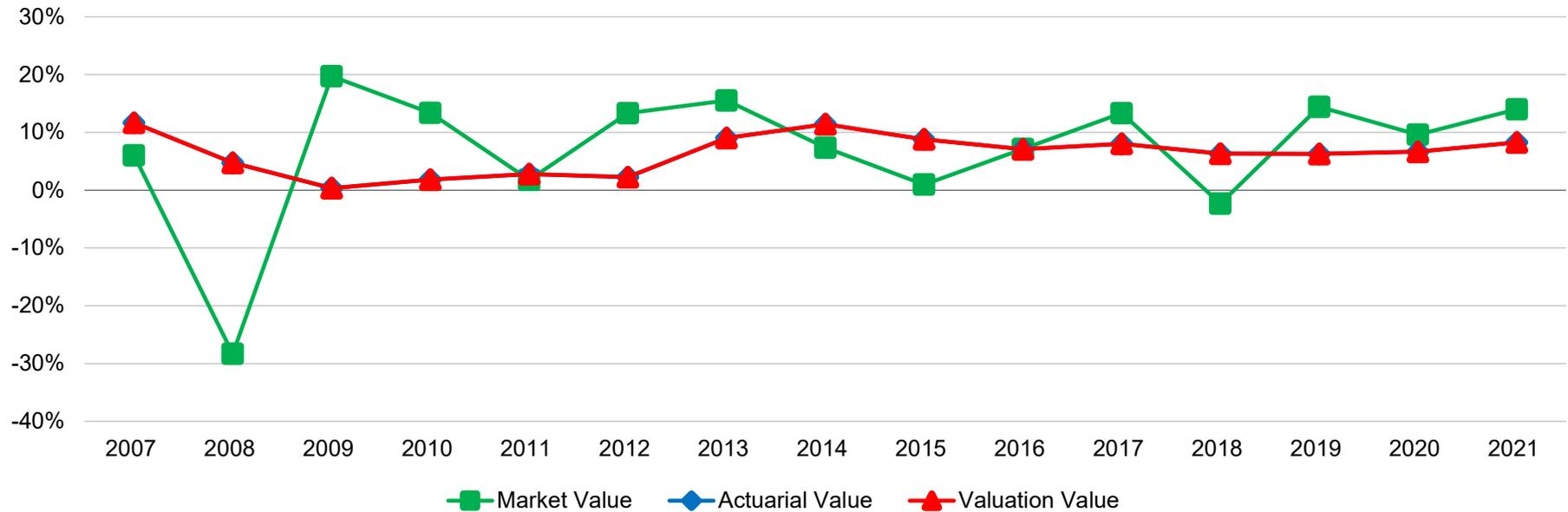
Year Ended December 31	Market Value Investment Return		Actuarial Value Investment Return <sup>1</sup>		Valuation Value Investment Return <sup>1</sup>	
	Amount	Percent	Amount	Percent	Amount	Percent
2012	\$668,138,997	13.31%	\$121,921,302	2.25%	\$120,826,177	2.24%
2013	870,984,744	15.50%	492,503,802	9.01%	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%
<b>Most recent five-year geometric average return</b>		<b>9.60%</b>	<b>7.08%</b>		<b>7.08%</b>	
<b>Most recent ten-year geometric average return</b>		<b>9.16%</b>	<b>7.36%</b>		<b>7.37%</b>	

**Note:** Each year's yield is weighted by the average asset value in that year.

## Section 2: Actuarial Valuation Results

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<sup>1</sup> and Valuation<sup>1</sup> Rates of Return for Years Ended December 31, 2007 – 2021



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

## Section 2: Actuarial Valuation Results

### Contributions

Contributions for the year ended December 31, 2021 totaled \$527.8 million, compared to the projected amount of \$467.6 million. This resulted in a gain of \$62.3 million for the year, when adjusted for timing. The \$62.3 million in contribution gain included additional UAAL Contributions of \$70,763,669 made by Central Contra Costa Sanitary District, \$263,000 made by San Ramon Valley Fire District, and \$30,000 made by LAFCO.

### 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, 2021 amounted to \$83.8 million, which is 0.7% of the Actuarial Accrued Liability. The loss was primarily due to COLA increases higher than expected and individual salary increases higher than expected. See *Section 2, Subsection E* for a detailed development of the Unfunded Actuarial Accrued Liability.

## Section 2: Actuarial Valuation Results

### D. Other Changes in the Actuarial Accrued Liability

#### Actuarial Assumptions

The assumption changes reflected in this report were based on the January 1, 2018 through December 31, 2020 Actuarial Experience Study report dated April 5, 2022.

- These changes increased the Actuarial Accrued Liability by about \$234.9 million (or a 2.1% increase) and increased the total Normal Cost by 0.68% of payroll (an increase of about 2.44%). The average employer contribution rate increase as a result of the assumption changes was 2.13% of payroll. The average employee contribution rate increase as a result of the assumption changes was 0.33% of payroll.

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

#### Plan Provisions

- As part of the annexation of East Contra Costa Fire Protection District (East Fire) into Contra Costa Fire Protection District (Con Fire), there were certain members who have been enrolled in a different tier of benefit effective July 1, 2022. CCCERA provided us with a list of those impacted members and we have reflected those new tiers in this valuation. In particular, there were 5 East Fire General members who moved from Tier 4 with a 3% COLA, to Tier 4 with a 2% COLA, as well as 7 East Fire Safety members who moved from Tier D (with a 3% COLA) to Tier E (with a 2% COLA).

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

## Section 2: Actuarial Valuation Results

### E. Development of Unfunded Actuarial Accrued Liability

Development for Year Ended December 31, 2021

<b>1</b>	<b>Unfunded Actuarial Accrued Liability as of December 31, 2020</b>	<b>\$859,345,249</b>
<b>2</b>	Normal Cost at middle of year <sup>1</sup>	261,423,624
<b>3</b>	Expected administrative expenses	11,271,338
<b>4</b>	Expected employer and member contributions	(467,562,349)
<b>5</b>	Interest	<u>53,374,020</u>
<b>6</b>	Expected Unfunded Actuarial Accrued Liability as of December 31, 2021	\$717,851,882
<b>7</b>	Changes due to:	
	a) Investment return greater than expected (after asset smoothing)	\$(119,691,541)
	b) Actual contributions lower than expected in item 4 <sup>2</sup>	11,215,564
	c) Gain from additional UAAL contributions <sup>3</sup>	(73,500,978)
	d) Individual salary increases higher than expected	25,656,978
	e) COLA increases greater than expected in 2022	64,903,384
	f) Other experience gain <sup>4</sup>	(6,732,491)
	g) Assumption changes	<u>234,858,401</u>
	Total changes	<u>\$136,709,317</u>
<b>8</b>	<b>Unfunded Actuarial Accrued Liability as of December 31, 2021</b>	<b>\$854,561,199</b>

**Note:** The sum of items 7b and 7c equals the “Net gain from contribution experience” shown in *Section 2, Subsection C*.  
The sum of items 7d through 7f equals the “Net loss from other experience” shown in *Section 2, Subsection C*.

<sup>1</sup> Excludes administrative expense load.

<sup>2</sup> Primarily due to smaller than projected total payroll for calendar year 2021.

<sup>3</sup> \$71,056,669 in total additional contributions (\$70,763,699 made by Central Contra Costa Sanitary District, \$263,000 made by San Ramon Valley Fire Department and \$30,000 made by LAFCO) adjusted with \$2,444,309 in interest to the end of the year.

<sup>4</sup> Other differences in actual versus expected experience including (but not limited to) mortality, retirement, disability, termination and leave cashout experience.

## Section 2: Actuarial Valuation Results

### 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, 2021, the average recommended employer contribution is 35.55% 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, 2021 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.

#### Average Recommended Employer Contribution

All Tiers Combined	December 31, 2021		December 31, 2020	
	Amount (\$ in '000s)	% of Projected Compensation	Amount (\$ in '000s)	% of Projected Compensation
<b>1</b> Total Normal Cost	\$282,576	27.82%	\$271,127	27.38%
<b>2</b> Expected member contributions	<u>123,593</u>	<u>12.17%</u>	<u>117,349</u>	<u>11.85%</u>
<b>3</b> Employer Normal Cost: <b>1 – 2</b>	\$158,983	15.65%	\$153,778	15.53%
<b>4</b> Actuarial Accrued Liability	11,288,973		10,521,628	
<b>5</b> Valuation Value of Assets	<u>10,434,412</u>		<u>9,662,283</u>	
<b>6</b> Unfunded Actuarial Accrued Liability: <b>4 – 5</b>	\$854,561		\$859,345	
<b>7</b> Payment on Unfunded Actuarial Accrued Liability	202,117	19.90% <sup>1</sup>	181,616	18.34% <sup>1,2</sup>
<b>8 Total average recommended employer contribution: 3 + 7</b>	<b>\$361,100</b>	<b>35.55%</b>	<b>\$335,394</b>	<b>33.87%</b>
<b>9</b> Projected compensation	\$1,015,755		\$990,042	

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

<sup>1</sup> Reflects UAAL prepayment made by East Fire in the amount of \$3,344,437 on June 30, 2022.

<sup>2</sup> Reflects UAAL prepayment made by Central Contra Costa Sanitary District on June 25, 2021 as well as the annexation of East Fire into Con Fire that was effective July 1, 2022.

## Section 2: Actuarial Valuation Results

### 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, 2020 to December 31, 2021

	Contribution Rate <sup>1</sup>	Estimated Annual Dollar Amount <sup>2</sup>
<b>Average Recommended Employer Contribution as of December 31, 2020 After Rate Credits<sup>3</sup></b>	<b>33.87%</b>	<b>\$335,393,777</b>
1 Effect of investment return greater than expected (after asset smoothing)	(0.90%)	(9,141,798)
2 Effect of actual contributions less than expected <sup>4</sup>	0.08%	812,604
3 Effect of additional UAAL contributions for LAFCO and San Ramon FD	(0.00%)	(23,205)
4 Effect of individual salary increases higher than expected in 2021	0.19%	1,929,935
5 Effect of amortizing prior year's UAAL over a smaller than expected projected total payroll	0.08%	6,296,913
6 Effect of COLA increases greater than expected in 2022	0.49%	4,977,201
7 Effect of changes in active member demographics on Normal Cost <sup>5</sup>	(0.24%)	(2,437,813)
8 Effect of other gains <sup>6</sup>	(0.06%)	2,570,831
9 Effect of change in assumptions	2.13%	21,635,590
10 Effect of setting Cost Group #3 contribution rate equal to Normal Cost <sup>7</sup>	<u>(0.09%)</u>	<u>(914,180)</u>
Total change	1.68%	25,706,078
<b>Average Recommended Employer Contribution as of December 31, 2021 After Rate Credits<sup>8</sup></b>	<b>35.55%</b>	<b>\$361,099,855</b>

<sup>1</sup> These rates do not include any employer subvention of member contributions, or member subvention of employer contributions.

<sup>2</sup> Based on projected compensation for each valuation date shown.

<sup>3</sup> The contribution rate and annual dollar amount shown as of December 31, 2020 has been recalculated since the prior valuation to reflect the UAAL prepayment made by Central Contra Costa Sanitary District on June 25, 2021 as well as the UAAL prepayment made by East Fire in the amount of \$3,344,437 on June 30, 2022.

<sup>4</sup> Primarily due smaller than projected total payroll for calendar year 2021.

<sup>5</sup> 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, 2021 and stopped making member basic contributions.

<sup>6</sup> 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.

<sup>7</sup> Cost Group #3 was overfunded as of December 31, 2020 after considering the prepayment received on June 25, 2021. We have applied some of the overfunded amount to offset the net increase in Cost Group #3's liability during 2021.

<sup>8</sup> The contribution rate and 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.

## Section 2: Actuarial Valuation Results

### 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, 2020 to December 31, 2021

	Contribution Rate <sup>1</sup>	Estimated Annual Dollar Amount <sup>2</sup>
<b>Average Recommended Member Contribution as of December 31, 2020</b>	<b>11.85%</b>	<b>\$117,348,647</b>
<b>1</b> Effect of change in administrative expense load <sup>3</sup>	0.01%	\$101,576
<b>2</b> Effect of changes in active member demographics <sup>4</sup>	(0.02%)	2,790,553
<b>3</b> Effect of change in actuarial assumptions	<u>0.33%</u>	<u>3,351,993</u>
Total change	0.32%	\$6,244,122
<b>Average Recommended Member Contribution as of December 31, 2021</b>	<b>12.17%</b>	<b>\$123,592,769</b>

<sup>1</sup> These rates do not include any employer subvention of member contributions, or member subvention of employer contributions.

<sup>2</sup> Based on projected compensation for each valuation date shown.

<sup>3</sup> The administrative expense load is calculated by taking the total administrative expense load and allocating it to both the employer and the member based on normal cost (before expenses). This year, the total administrative expense load increased from 1.14% to 1.15%, and the proportion of the member normal cost rate to the total normal cost rate increased slightly. These two changes resulted in an increase in the administrative expense load of 0.01% allocated to the member.

<sup>4</sup> This also includes the effect of legacy Safety members who first reached 30 years of reported service as of December 31, 2021 and stopped making member basic contributions. Estimated annual dollar cost also reflects change in payroll from prior valuation.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate

Cost Group #1	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount <sup>3</sup>
<b>County General Tier 1 w/ Courts</b>								
Normal Cost	13.31%	3.67%	16.98%	\$1,416,969	13.23%	3.64%	16.87%	\$1,658,412
UAAL	<u>12.02%</u>	<u>1.86%</u>	<u>13.88%</u>	<u>1,158,277</u>	<u>11.42%</u>	<u>1.51%</u>	<u>12.93%</u>	<u>1,271,089</u>
<b>Total Contribution</b>	<b>25.33%</b>	<b>5.53%</b>	<b>30.86%</b>	<b>\$2,575,246</b>	<b>24.65%</b>	<b>5.15%</b>	<b>29.80%</b>	<b>\$2,929,501</b>
<b>District General Tier 1 w/o POB</b>								
Normal Cost	13.31%	3.67%	16.98%	\$1,213,743	13.23%	3.64%	16.87%	\$1,166,697
UAAL	<u>16.94%</u>	<u>5.81%</u>	<u>22.75%</u>	<u>1,626,186</u>	<u>16.30%</u>	<u>5.43%</u>	<u>21.73%</u>	<u>1,502,805</u>
<b>Total Contribution</b>	<b>30.25%</b>	<b>9.48%</b>	<b>39.73%</b>	<b>\$2,839,929</b>	<b>29.53%</b>	<b>9.07%</b>	<b>38.60%</b>	<b>\$2,669,502</b>
<b>District General Tier 1 w/ POB (Moraga)</b>								
Normal Cost	13.31%	3.67%	16.98%	\$55,895	13.23%	3.64%	16.87%	\$54,726
UAAL	<u>11.17%</u>	<u>2.45%</u>	<u>13.62%</u>	<u>44,834</u>	<u>10.42%</u>	<u>2.01%</u>	<u>12.43%</u>	<u>40,323</u>
<b>Total Contribution</b>	<b>24.48%</b>	<b>6.12%</b>	<b>30.60%</b>	<b>\$100,729</b>	<b>23.65%</b>	<b>5.65%</b>	<b>29.30%</b>	<b>\$95,049</b>
<b>District General Tier 1 w/ UAAL Prepayment (First Five)</b>								
Normal Cost	13.31%	3.67%	16.98%	\$242,366	13.23%	3.64%	16.87%	\$253,684
UAAL	<u>12.29%</u>	<u>2.30%</u>	<u>14.59%</u>	<u>208,252</u>	<u>11.55%</u>	<u>1.83%</u>	<u>13.38%</u>	<u>201,203</u>
<b>Total Contribution</b>	<b>25.60%</b>	<b>5.97%</b>	<b>31.57%</b>	<b>\$450,618</b>	<b>24.78%</b>	<b>5.47%</b>	<b>30.25%</b>	<b>\$454,887</b>
<b>District General Tier 1 w/ UAAL Prepayment (LAFCO)</b>								
Normal Cost	13.31%	3.67%	16.98%	\$32,083	13.23%	3.64%	16.87%	\$31,243
UAAL	<u>12.95%</u>	<u>4.38%</u>	<u>17.33%</u>	<u>32,745</u>	<u>13.32%</u>	<u>4.33%</u>	<u>17.65%</u>	<u>32,687</u>
<b>Total Contribution</b>	<b>26.26%</b>	<b>8.05%</b>	<b>34.31%</b>	<b>\$64,828</b>	<b>26.55%</b>	<b>7.97%</b>	<b>34.52%</b>	<b>\$63,930</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

<sup>3</sup> The annual dollar contribution amount shown for "District General Tier 1 w/o POB" has been revised since the prior valuation to reflect the reduction in payroll due to the annexation of East Fire into Con Fire that was effective July 1, 2022.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #1	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount <sup>3</sup>
<b>County General Tier 4 (3% COLA) w/ Courts</b>								
Normal Cost	9.34%	3.13%	12.47%	\$0	9.07%	3.04%	12.11%	\$0
UAAL	<u>12.02%</u>	<u>1.86%</u>	<u>13.88%</u>	<u>0</u>	<u>11.42%</u>	<u>1.51%</u>	<u>12.93%</u>	<u>0</u>
<b>Total Contribution</b>	<b>21.36%</b>	<b>4.99%</b>	<b>26.35%</b>	<b>\$0</b>	<b>20.49%</b>	<b>4.55%</b>	<b>25.04%</b>	<b>\$0</b>
<b>District General Tier 4 (3% COLA) w/o POB</b>								
Normal Cost	9.34%	3.13%	12.47%	\$563,174	9.07%	3.04%	12.11%	\$516,139
UAAL	<u>16.94%</u>	<u>5.81%</u>	<u>22.75%</u>	<u>1,027,442</u>	<u>16.30%</u>	<u>5.43%</u>	<u>21.73%</u>	<u>926,152</u>
<b>Total Contribution</b>	<b>26.28%</b>	<b>8.94%</b>	<b>35.22%</b>	<b>\$1,590,616</b>	<b>25.37%</b>	<b>8.47%</b>	<b>33.84%</b>	<b>\$1,442,291</b>
<b>District General Tier 4 (3% COLA) w/ POB (Moraga)</b>								
Normal Cost	9.34%	3.13%	12.47%	\$98,179	9.07%	3.04%	12.11%	\$89,389
UAAL	<u>11.17%</u>	<u>2.45%</u>	<u>13.62%</u>	<u>107,233</u>	<u>10.42%</u>	<u>2.01%</u>	<u>12.43%</u>	<u>91,751</u>
<b>Total Contribution</b>	<b>20.51%</b>	<b>5.58%</b>	<b>26.09%</b>	<b>\$205,412</b>	<b>19.49%</b>	<b>5.05%</b>	<b>24.54%</b>	<b>\$181,140</b>
<b>District General Tier 4 (3% COLA) w/ UAAL Prepayment (First Five)</b>								
Normal Cost	9.34%	3.13%	12.47%	\$177,859	9.07%	3.04%	12.11%	\$156,059
UAAL	<u>12.29%</u>	<u>2.30%</u>	<u>14.59%</u>	<u>208,096</u>	<u>11.55%</u>	<u>1.83%</u>	<u>13.38%</u>	<u>172,425</u>
<b>Total Contribution</b>	<b>21.63%</b>	<b>5.43%</b>	<b>27.06%</b>	<b>\$385,955</b>	<b>20.62%</b>	<b>4.87%</b>	<b>25.49%</b>	<b>\$328,484</b>
<b>District General Tier 4 (3% COLA) w/ UAAL Prepayment (LAFCO)</b>								
Normal Cost	9.34%	3.13%	12.47%	\$0	9.07%	3.04%	12.11%	\$0
UAAL	<u>12.95%</u>	<u>4.38%</u>	<u>17.33%</u>	<u>0</u>	<u>13.32%</u>	<u>4.33%</u>	<u>17.65%</u>	<u>0</u>
<b>Total Contribution</b>	<b>22.29%</b>	<b>7.51%</b>	<b>29.80%</b>	<b>\$0</b>	<b>22.39%</b>	<b>7.37%</b>	<b>29.76%</b>	<b>\$0</b>
<b>County General Tier 4 (2% COLA) w/ Courts</b>								
Normal Cost	9.04%	2.07%	11.11%	\$0	8.81%	2.01%	10.82%	\$0
UAAL	<u>12.02%</u>	<u>1.86%</u>	<u>13.88%</u>	<u>0</u>	<u>11.42%</u>	<u>1.51%</u>	<u>12.93%</u>	<u>0</u>
<b>Total Contribution</b>	<b>21.06%</b>	<b>3.93%</b>	<b>24.99%</b>	<b>\$0</b>	<b>20.23%</b>	<b>3.52%</b>	<b>23.75%</b>	<b>\$0</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

<sup>3</sup> The annual dollar contribution amount shown for "District General Tier 4 (3% COLA) w/o POB" has been revised since the prior valuation to reflect the reduction in payroll due to the annexation of East Fire into Con Fire that was effective July 1, 2022.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

December 31, 2021 Actuarial Valuation<sup>1</sup>  
Recommended Rates for FY 2023-2024

December 31, 2020 Actuarial Valuation<sup>2</sup>  
Recommended Rates for FY 2022-2023

Cost Group #2	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>County General Tier 3 w/ Courts</b>								
Normal Cost	11.95%	3.39%	15.34%	\$57,719,869	11.89%	3.35%	15.24%	\$60,298,169
UAAL	<u>12.02%</u>	<u>1.86%</u>	<u>13.88%</u>	<u>52,226,322</u>	<u>11.42%</u>	<u>1.51%</u>	<u>12.93%</u>	<u>51,158,486</u>
<b>Total Contribution</b>	<b>23.97%</b>	<b>5.25%</b>	<b>29.22%</b>	<b>\$109,946,191</b>	<b>23.31%</b>	<b>4.86%</b>	<b>28.17%</b>	<b>\$111,456,655</b>
<b>District General Tier 3 w/o POB</b>								
Normal Cost	11.95%	3.39%	15.34%	\$433,252	11.89%	3.35%	15.24%	\$457,689
UAAL	<u>16.94%</u>	<u>5.81%</u>	<u>22.75%</u>	<u>642,535</u>	<u>16.30%</u>	<u>5.43%</u>	<u>21.73%</u>	<u>652,597</u>
<b>Total Contribution</b>	<b>28.89%</b>	<b>9.20%</b>	<b>38.09%</b>	<b>\$1,075,787</b>	<b>28.19%</b>	<b>8.78%</b>	<b>36.97%</b>	<b>\$1,110,286</b>
<b>County General Tier 5 (3%/4% COLA) w/ Courts</b>								
Normal Cost	8.57%	2.83%	11.40%	\$6,725,605	8.38%	2.77%	11.15%	\$6,571,396
UAAL	<u>12.02%</u>	<u>1.86%</u>	<u>13.88%</u>	<u>8,188,719</u>	<u>11.42%</u>	<u>1.51%</u>	<u>12.93%</u>	<u>7,620,462</u>
<b>Total Contribution</b>	<b>20.59%</b>	<b>4.69%</b>	<b>25.28%</b>	<b>\$14,914,324</b>	<b>19.80%</b>	<b>4.28%</b>	<b>24.08%</b>	<b>\$14,191,858</b>
<b>District General Tier 5 (3%/4% COLA) w/o POB</b>								
Normal Cost	8.57%	2.83%	11.40%	\$136,832	8.38%	2.77%	11.15%	\$117,377
UAAL	<u>16.94%</u>	<u>5.81%</u>	<u>22.75%</u>	<u>273,063</u>	<u>16.30%</u>	<u>5.43%</u>	<u>21.73%</u>	<u>228,753</u>
<b>Total Contribution</b>	<b>25.51%</b>	<b>8.64%</b>	<b>34.15%</b>	<b>\$409,895</b>	<b>24.68%</b>	<b>8.20%</b>	<b>32.88%</b>	<b>\$346,130</b>
<b>County General Tier 5 (2% COLA) w/ Courts</b>								
Normal Cost	8.40%	1.89%	10.29%	\$30,860,000	8.21%	1.85%	10.06%	\$26,426,429
UAAL	<u>12.02%</u>	<u>1.86%</u>	<u>13.88%</u>	<u>41,626,511</u>	<u>11.42%</u>	<u>1.51%</u>	<u>12.93%</u>	<u>33,965,579</u>
<b>Total Contribution</b>	<b>20.42%</b>	<b>3.75%</b>	<b>24.17%</b>	<b>\$72,486,511</b>	<b>19.63%</b>	<b>3.36%</b>	<b>22.99%</b>	<b>\$60,392,008</b>
<b>District General Tier 5 (2% COLA) w/o POB</b>								
Normal Cost	8.40%	1.89%	10.29%	\$36,686	8.21%	1.85%	10.06%	\$35,562
UAAL	<u>16.94%</u>	<u>5.81%</u>	<u>22.75%</u>	<u>81,109</u>	<u>16.30%</u>	<u>5.43%</u>	<u>21.73%</u>	<u>76,814</u>
<b>Total Contribution</b>	<b>25.34%</b>	<b>7.70%</b>	<b>33.04%</b>	<b>\$117,795</b>	<b>24.51%</b>	<b>7.28%</b>	<b>31.79%</b>	<b>\$112,376</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #3	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2,3</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>CCCSD General Tier 1</b>								
Normal Cost	13.49%	3.87%	17.36%	\$4,816,906	13.11%	3.77%	16.88%	\$4,729,762
UAAL	<u>0.15%</u>	<u>0.00%</u>	<u>0.15%</u>	<u>41,621</u>	<u>0.16%</u>	<u>0.00%</u>	<u>0.16%</u>	<u>44,832</u>
<b>Total Contribution</b>	<b>13.64%</b>	<b>3.87%</b>	<b>17.51%</b>	<b>\$4,858,527</b>	<b>13.27%</b>	<b>3.77%</b>	<b>17.04%</b>	<b>\$4,774,594</b>
<b>CCCSD General Tier 4 (3% COLA)</b>								
Normal Cost	8.55%	2.97%	11.52%	\$1,303,604	8.41%	2.89%	11.30%	\$1,073,037
UAAL	<u>0.15%</u>	<u>0.00%</u>	<u>0.15%</u>	<u>16,974</u>	<u>0.16%</u>	<u>0.00%</u>	<u>0.16%</u>	<u>15,193</u>
<b>Total Contribution</b>	<b>8.70%</b>	<b>2.97%</b>	<b>11.67%</b>	<b>\$1,320,578</b>	<b>8.57%</b>	<b>2.89%</b>	<b>11.46%</b>	<b>\$1,088,230</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

<sup>3</sup> The contribution rates shown are after reflecting the District's prepayment amount of \$70,763,669 made on June 25, 2021.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #4	December 31, 2021 Actuarial Valuation <sup>1,3</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2,3</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>Contra Costa Housing Authority General Tier 1</b>								
Normal Cost	13.47%	3.79%	17.26%	\$622,479	13.32%	3.71%	17.03%	\$650,252
UAAL	<u>16.87%</u>	<u>10.80%</u>	<u>27.67%</u>	<u>997,914</u>	<u>16.49%</u>	<u>10.07%</u>	<u>26.56%</u>	<u>1,014,133</u>
<b>Total Contribution</b>	<b>30.34%</b>	<b>14.59%</b>	<b>44.93%</b>	<b>\$1,620,393</b>	<b>29.81%</b>	<b>13.78%</b>	<b>43.59%</b>	<b>\$1,664,385</b>
<b>Contra Costa Housing Authority General Tier 4 (3% COLA)</b>								
Normal Cost	9.18%	3.09%	12.27%	\$367,561	8.86%	2.99%	11.85%	\$302,384
UAAL	<u>16.87%</u>	<u>10.80%</u>	<u>27.67%</u>	<u>828,885</u>	<u>16.49%</u>	<u>10.07%</u>	<u>26.56%</u>	<u>677,749</u>
<b>Total Contribution</b>	<b>26.05%</b>	<b>13.89%</b>	<b>39.94%</b>	<b>\$1,196,446</b>	<b>25.35%</b>	<b>13.06%</b>	<b>38.41%</b>	<b>\$980,133</b>
<b>Cost Group #5</b>								
<b>CCCFPD General Tier 1</b>								
Normal Cost	15.04%	3.99%	19.03%	\$725,506	14.61%	3.90%	18.51%	\$740,647
UAAL	<u>10.96%</u>	<u>9.31%</u>	<u>20.27%</u>	<u>772,781</u>	<u>11.41%</u>	<u>8.46%</u>	<u>19.87%</u>	<u>795,062</u>
<b>Total Contribution</b>	<b>26.00%</b>	<b>13.30%</b>	<b>39.30%</b>	<b>\$1,498,287</b>	<b>26.02%</b>	<b>12.36%</b>	<b>38.38%</b>	<b>\$1,535,709</b>
<b>CCCFPD General Tier 4 (3% COLA)</b>								
Normal Cost	10.91%	3.74%	14.65%	\$25,042	9.85%	3.30%	13.15%	\$90,523
UAAL	<u>10.96%</u>	<u>9.31%</u>	<u>20.27%</u>	<u>34,649</u>	<u>11.41%</u>	<u>8.46%</u>	<u>19.87%</u>	<u>136,766</u>
<b>Total Contribution</b>	<b>21.87%</b>	<b>13.05%</b>	<b>34.92%</b>	<b>\$59,691</b>	<b>21.26%</b>	<b>11.76%</b>	<b>33.02%</b>	<b>\$227,289</b>
<b>CCCFPD General Tier 4 (2% COLA)</b>								
Normal Cost	10.25%	2.35%	12.60%	\$443,627	10.25%	2.29%	12.54%	\$358,791
UAAL	<u>10.96%</u>	<u>9.31%</u>	<u>20.27%</u>	<u>713,676</u>	<u>11.41%</u>	<u>8.46%</u>	<u>19.87%</u>	<u>568,515</u>
<b>Total Contribution</b>	<b>21.21%</b>	<b>11.66%</b>	<b>32.87%</b>	<b>\$1,157,303</b>	<b>21.66%</b>	<b>10.75%</b>	<b>32.41%</b>	<b>\$927,306</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

<sup>3</sup> The contribution rates and the annual dollar contribution amounts shown for Cost Group #5 are after reflecting the annexation of East Fire into Con Fire that was effective July 1, 2022. We have also reflected the \$3,344,437 prepayment made by East Fire on June 30, 2021 for the General and Safety groups.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #6	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>Non-Enhanced District General Tier 1</b>								
Normal Cost	13.21%	4.02%	17.23%	\$101,500	12.82%	3.89%	16.71%	\$96,847
UAAL	<u>0.15%</u>	<u>0.00%</u>	<u>0.15%</u>	<u>884</u>	<u>0.16%</u>	<u>0.00%</u>	<u>0.16%</u>	<u>927</u>
<b>Total Contribution</b>	<b>13.36%</b>	<b>4.02%</b>	<b>17.38%</b>	<b>\$102,384</b>	<b>12.98%</b>	<b>3.89%</b>	<b>16.87%</b>	<b>\$97,774</b>
<b>Non-Enhanced District General Tier 4 (3% COLA)</b>								
Normal Cost	10.66%	3.56%	14.22%	\$61,533	9.87%	3.32%	13.19%	\$59,144
UAAL	<u>0.15%</u>	<u>0.00%</u>	<u>0.15%</u>	<u>649</u>	<u>0.16%</u>	<u>0.00%</u>	<u>0.16%</u>	<u>717</u>
<b>Total Contribution</b>	<b>10.81%</b>	<b>3.56%</b>	<b>14.37%</b>	<b>\$62,182</b>	<b>10.03%</b>	<b>3.32%</b>	<b>13.35%</b>	<b>\$59,861</b>
<b>Cost Group #7</b>								
<b>County Safety Tier A</b>								
Normal Cost	23.23%	7.52%	30.75%	\$14,464,350	22.41%	7.09%	29.50%	\$15,004,551
UAAL	<u>21.92%</u>	<u>23.56%</u>	<u>45.48%</u>	<u>21,393,126</u>	<u>21.59%</u>	<u>20.53%</u>	<u>42.12%</u>	<u>21,423,447</u>
<b>Total Contribution</b>	<b>45.15%</b>	<b>31.08%</b>	<b>76.23%</b>	<b>\$35,857,476</b>	<b>44.00%</b>	<b>27.62%</b>	<b>71.62%</b>	<b>\$36,427,998</b>
<b>County Safety Tier D</b>								
Normal Cost	14.45%	5.98%	20.43%	\$763,443	14.12%	5.67%	19.79%	\$747,327
UAAL	<u>21.92%</u>	<u>23.56%</u>	<u>45.48%</u>	<u>1,699,530</u>	<u>21.59%</u>	<u>20.53%</u>	<u>42.12%</u>	<u>1,590,573</u>
<b>Total Contribution</b>	<b>36.37%</b>	<b>29.54%</b>	<b>65.91%</b>	<b>\$2,462,973</b>	<b>35.71%</b>	<b>26.20%</b>	<b>61.91%</b>	<b>\$2,337,900</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #8	December 31, 2021 Actuarial Valuation <sup>1,3</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2,3</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>CCCFPD Safety Tier A</b>								
Normal Cost	23.57%	7.81%	31.38%	\$11,321,535	22.86%	7.37%	30.23%	\$10,526,052
UAAL	<u>11.35%</u>	<u>29.90%</u>	<u>41.25%</u>	<u>14,882,515</u>	<u>10.90%</u>	<u>26.36%</u>	<u>37.26%</u>	<u>12,973,142</u>
<b>Total Contribution</b>	<b>34.92%</b>	<b>37.71%</b>	<b>72.63%</b>	<b>\$26,204,050</b>	<b>33.76%</b>	<b>33.73%</b>	<b>67.49%</b>	<b>\$23,499,194</b>
<b>CCCFPD Safety Tier D</b>								
Normal Cost	12.62%	5.32%	17.94%	\$384,961	12.28%	5.06%	17.34%	\$458,151
UAAL	<u>11.35%</u>	<u>29.90%</u>	<u>41.25%</u>	<u>885,153</u>	<u>10.90%</u>	<u>26.36%</u>	<u>37.26%</u>	<u>984,842</u>
<b>Total Contribution</b>	<b>23.97%</b>	<b>35.22%</b>	<b>59.19%</b>	<b>\$1,270,114</b>	<b>23.18%</b>	<b>31.42%</b>	<b>54.60%</b>	<b>\$1,442,993</b>
<b>CCCFPD Safety Tier E</b>								
Normal Cost	13.10%	3.64%	16.74%	\$2,215,419	12.01%	3.30%	15.31%	\$1,716,983
UAAL	<u>11.35%</u>	<u>29.90%</u>	<u>41.25%</u>	<u>5,459,143</u>	<u>10.90%</u>	<u>26.36%</u>	<u>37.26%</u>	<u>4,178,627</u>
<b>Total Contribution</b>	<b>24.45%</b>	<b>33.54%</b>	<b>57.99%</b>	<b>\$7,674,562</b>	<b>22.91%</b>	<b>29.66%</b>	<b>52.57%</b>	<b>\$5,895,610</b>
<b>Cost Group #9</b>								
<b>County Safety Tier C</b>								
Normal Cost	21.94%	4.74%	26.68%	\$4,175,779	20.71%	4.39%	25.10%	\$3,779,883
UAAL	<u>21.92%</u>	<u>23.56%</u>	<u>45.48%</u>	<u>7,118,232</u>	<u>21.59%</u>	<u>20.53%</u>	<u>42.12%</u>	<u>6,342,975</u>
<b>Total Contribution</b>	<b>43.86%</b>	<b>28.30%</b>	<b>72.16%</b>	<b>\$11,294,011</b>	<b>42.30%</b>	<b>24.92%</b>	<b>67.22%</b>	<b>\$10,122,858</b>
<b>County Safety Tier E</b>								
Normal Cost	13.63%	3.77%	17.40%	\$7,751,580	13.26%	3.58%	16.84%	\$6,348,469
UAAL	<u>21.92%</u>	<u>23.56%</u>	<u>45.48%</u>	<u>20,261,025</u>	<u>21.59%</u>	<u>20.53%</u>	<u>42.12%</u>	<u>15,878,711</u>
<b>Total Contribution</b>	<b>35.55%</b>	<b>27.33%</b>	<b>62.88%</b>	<b>\$28,012,605</b>	<b>34.85%</b>	<b>24.11%</b>	<b>58.96%</b>	<b>\$22,227,180</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

<sup>3</sup> The contribution rates and the annual dollar contribution amount shown for Cost Group #8 are after reflecting the annexation of East Fire into Con Fire that was effective July 1, 2022. We have also reflected the \$3,344,437 prepayment made by East Fire on June 30, 2021 for the General and Safety groups.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #10	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>Moraga-Orinda FD Safety Tier A</b>								
Normal Cost	22.24%	7.34%	29.58%	\$1,945,645	21.21%	6.88%	28.09%	\$1,829,506
UAAL	<u>13.85%</u>	<u>37.37%</u>	<u>51.22%</u>	<u>3,369,030</u>	<u>11.77%</u>	<u>30.49%</u>	<u>42.26%</u>	<u>2,752,401</u>
<b>Total Contribution</b>	<b>36.09%</b>	<b>44.71%</b>	<b>80.80%</b>	<b>\$5,314,675</b>	<b>32.98%</b>	<b>37.37%</b>	<b>70.35%</b>	<b>\$4,581,907</b>
<b>Moraga-Orinda FD Safety Tier D</b>								
Normal Cost	13.17%	5.55%	18.72%	\$405,748	12.29%	5.08%	17.37%	\$414,920
UAAL	<u>13.85%</u>	<u>37.37%</u>	<u>51.22%</u>	<u>1,110,172</u>	<u>11.77%</u>	<u>30.49%</u>	<u>42.26%</u>	<u>1,009,472</u>
<b>Total Contribution</b>	<b>27.02%</b>	<b>42.92%</b>	<b>69.94%</b>	<b>\$1,515,920</b>	<b>24.06%</b>	<b>35.57%</b>	<b>59.63%</b>	<b>\$1,424,392</b>
<b>Cost Group #11</b>								
<b>San Ramon FD Safety Tier A</b>								
Normal Cost	24.69%	8.47%	33.16%	\$5,450,419	23.77%	7.80%	31.57%	\$5,425,536
UAAL	<u>30.42%</u>	<u>24.56%</u>	<u>54.98%</u>	<u>9,036,913</u>	<u>28.79%</u>	<u>21.00%</u>	<u>49.79%</u>	<u>8,556,777</u>
<b>Total Contribution</b>	<b>55.11%</b>	<b>33.03%</b>	<b>88.14%</b>	<b>\$14,487,332</b>	<b>52.56%</b>	<b>28.80%</b>	<b>81.36%</b>	<b>\$13,982,313</b>
<b>San Ramon FD Safety Tier D</b>								
Normal Cost	11.67%	4.92%	16.59%	\$1,253,012	11.27%	4.64%	15.91%	\$977,050
UAAL	<u>30.42%</u>	<u>24.56%</u>	<u>54.98%</u>	<u>4,152,536</u>	<u>28.79%</u>	<u>21.00%</u>	<u>49.79%</u>	<u>3,057,658</u>
<b>Total Contribution</b>	<b>42.09%</b>	<b>29.48%</b>	<b>71.57%</b>	<b>\$5,405,548</b>	<b>40.06%</b>	<b>25.64%</b>	<b>65.70%</b>	<b>\$4,034,708</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

Cost Group #12	December 31, 2021 Actuarial Valuation <sup>1</sup> Recommended Rates for FY 2023-2024				December 31, 2020 Actuarial Valuation <sup>2,3</sup> Recommended Rates for FY 2022-2023			
	Basic	COLA	Total	Estimated Annual Dollar Amount	Basic	COLA	Total	Estimated Annual Dollar Amount
<b>Non-Enhanced Rodeo-Hercules FPD Safety Tier A</b>								
Normal Cost	20.64%	7.58%	28.22%	\$541,887	19.87%	7.24%	27.11%	\$503,859
UAAL	<u>38.70%</u>	<u>31.95%</u>	<u>70.65%</u>	<u>1,356,638</u>	<u>37.13%</u>	<u>28.82%</u>	<u>65.95%</u>	<u>1,225,730</u>
<b>Total Contribution</b>	<b>59.34%</b>	<b>39.53%</b>	<b>98.87%</b>	<b>\$1,898,525</b>	<b>57.00%</b>	<b>36.06%</b>	<b>93.06%</b>	<b>\$1,729,589</b>
<b>Non-Enhanced Rodeo-Hercules FPD Safety Tier D</b>								
Normal Cost	12.00%	5.07%	17.07%	\$128,908	11.62%	4.80%	16.42%	\$111,186
UAAL <sup>3</sup>	<u>38.70%</u>	<u>31.95%</u>	<u>70.65%</u>	<u>533,529</u>	<u>37.13%</u>	<u>28.82%</u>	<u>65.95%</u>	<u>446,571</u>
<b>Total Contribution</b>	<b>50.70%</b>	<b>37.02%</b>	<b>87.72%</b>	<b>\$662,437</b>	<b>48.75%</b>	<b>33.62%</b>	<b>82.37%</b>	<b>\$557,757</b>
<b>Total All Employers Combined (Aggregate)</b>								
Normal Cost	12.19%	3.46%	15.65%	\$158,982,956	12.11%	3.42%	15.53%	\$153,777,831
UAAL	<u>13.22%</u>	<u>6.68%</u>	<u>19.90%</u>	<u>202,116,899</u>	<u>12.65%</u>	<u>5.69%</u>	<u>18.34%</u>	<u>181,615,946</u>
<b>Total Contribution</b>	<b>25.41%</b>	<b>10.14%</b>	<b>35.55%</b>	<b>\$361,099,855</b>	<b>24.76%</b>	<b>9.11%</b>	<b>33.87%</b>	<b>\$335,393,777</b>

<sup>1</sup> 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.

<sup>2</sup> The Basic Normal Cost and UAAL rates shown for each cost group include an explicit administrative expense load of 0.49% and 0.16% of payroll, respectively.

<sup>3</sup> The contribution rates and the annual dollar contribution amount shown for All Employers Combined (Aggregate) are after reflecting the UAAL Prepayment made by Central Contra Costa Sanitary District on June 25, 2021 as well as the annexation of East Fire into Con Fire that was effective July 1, 2022. We have also reflected the \$3,344,437 prepayment made by East Fire on June 30, 2021 for the General and Safety groups.

## Section 2: Actuarial Valuation Results

### Recommended Employer Contribution Rate (continued)

The projected compensation for the 2022 calendar year that is used to estimate the annual dollar amount shown on the prior pages as of December 31, 2021 are as follows:

Cost Group #1	Projected Compensation	Cost Group #6	Projected Compensation
County General Tier 1 w/ Courts	\$8,344,932	Non-Enhanced District General Tier 1	\$589,088
District General Tier 1 w/o POB	7,148,072	Non-Enhanced District General Tier 4 (3% COLA)	432,720
District General Tier 1 w/ POB (Moraga)	329,179		
District General Tier 1 w/ UAAL Prepayment (First Five)	1,427,361		
District General Tier 1 w/ UAAL Prepayment (LAFCO)	188,947		
County General Tier 4 (3% COLA) w/ Courts	0		
District General Tier 4 (3% COLA) w/o POB	4,516,229		
District General Tier 4 (3% COLA) w/ POB (Moraga)	787,320		
District General Tier 4 (3% COLA) w/ UAAL Prepayment (First Five)	1,426,294		
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	Cost Group #7	Projected Compensation
County General Tier 3 w/ Courts	\$376,270,333	County Safety Tier A	\$47,038,535
District General Tier 3 w/o POB	2,824,329	County Safety Tier D	3,736,874
County General Tier 5 (3%/4% COLA) w/ Courts	58,996,537		
District General Tier 5 (3%/4% COLA) w/o POB	1,200,277		
County General Tier 5 (2% COLA) w/ Courts	299,902,814		
District General Tier 5 (2% COLA) w/o POB	356,524		
Cost Group #3	Projected Compensation	Cost Group #8	Projected Compensation
CCCSA General Tier 1	\$27,747,152	CCCFFPD Safety Tier A	\$36,078,824
CCCSA General Tier 4 (3% COLA)	11,316,007	CCCFFPD Safety Tier D	2,145,826
		CCCFFPD Safety Tier E	13,234,285
Cost Group #4	Projected Compensation	Cost Group #9	Projected Compensation
Contra Costa Housing Authority General Tier 1	\$3,606,483	County Safety Tier C	\$15,651,345
Contra Costa Housing Authority General Tier 4 (3% COLA)	2,995,610	County Safety Tier E	44,549,308
Cost Group #5	Projected Compensation	Cost Group #10	Projected Compensation
CCCFFPD General Tier 1	\$3,812,435	Moraga-Orinda FD Safety Tier A	\$6,577,568
CCCFFPD General Tier 4 (3% COLA)	170,936	Moraga-Orinda FD Safety Tier D	2,167,459
CCCFFPD General Tier 4 (2% COLA)	3,520,850		
		Cost Group #11	Projected Compensation
		San Ramon FD Safety Tier A	\$16,436,727
		San Ramon FD Safety Tier D	7,552,812
		Cost Group #12	Projected Compensation
		Non-Enhanced Rodeo-Hercules FPD Safety Tier A	\$1,920,223
		Non-Enhanced Rodeo-Hercules FPD Safety Tier D	755,172
		<b>Total All Employers Combined (Aggregate)</b>	<b>\$1,015,755,387</b>

## Section 2: Actuarial Valuation Results

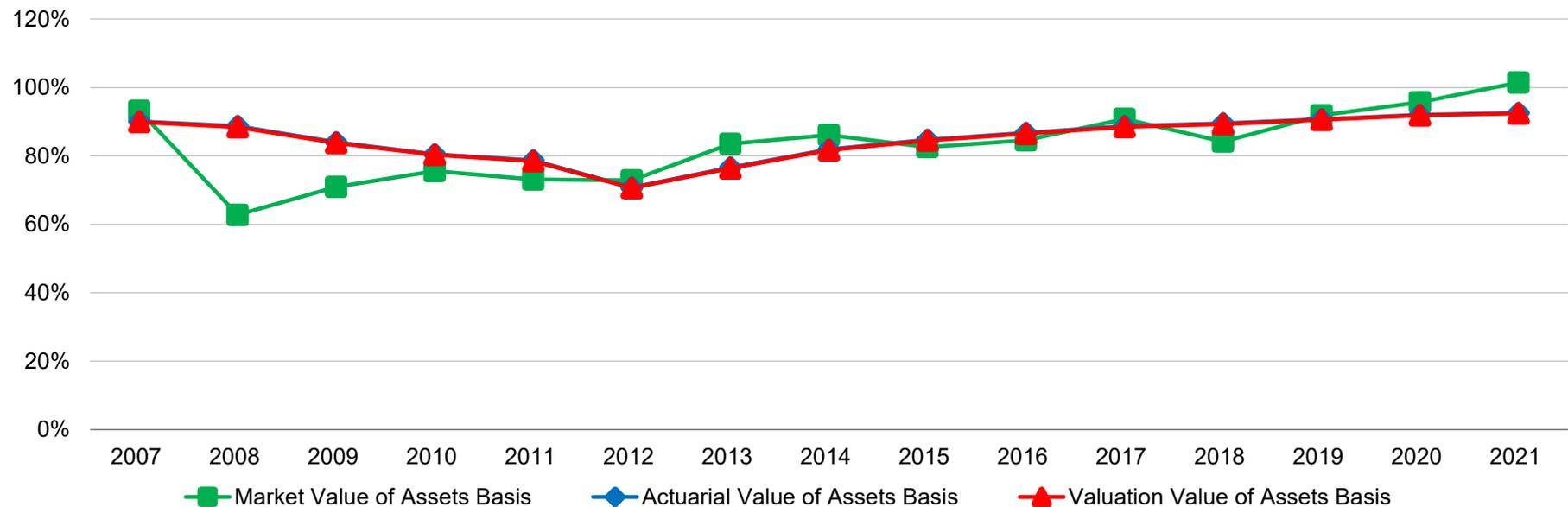
### G. Funded Status

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, 2007 – 2021



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.

## Section 2: Actuarial Valuation Results

### Schedule of Funding Progress for Years Ended December 31, 2012 – 2021

Actuarial Valuation Date as of December 31	Valuation Value of Assets <sup>1</sup> (a)	Actuarial Accrued Liability (AAL) <sup>2</sup> (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)
2012	\$5,482,257,062	\$7,761,315,535	\$2,279,058,473	70.6%	\$652,312,180	349.4%
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%

<sup>1</sup> Excludes assets for non-valuation reserves.

<sup>2</sup> Excludes liabilities for non-valuation reserves.

## Section 2: Actuarial Valuation Results

### 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, 2021

	Basic	COLA	Total
Actuarial present value of future benefits <sup>1</sup>			
• Present value of benefits for retired members and beneficiaries	\$4,056,157,004	\$3,245,166,224	\$7,301,323,228
• Present value of benefits for inactive vested members <sup>2</sup>	250,173,778	82,879,680	333,053,458
• Present value of benefits for active members	<u>4,190,410,274</u>	<u>1,479,676,095</u>	<u>5,670,086,369</u>
<b>Total actuarial present value of future benefits</b>	<b>\$8,496,741,056</b>	<b>\$4,807,721,999</b>	<b>\$13,304,463,055</b>
Current and future assets <sup>1</sup>			
• Total Valuation Value of Assets	\$6,418,125,878	\$4,016,286,410	\$10,434,412,288
• Present value of future contributions by members	681,158,283	258,275,265	939,433,548
• Present value of future employer contributions for:			
– Entry age normal cost	827,259,537	248,796,483	1,076,056,020
– Unfunded actuarial accrued liability	<u>570,197,358</u>	<u>284,363,841</u>	<u>854,561,199</u>
<b>Total of current and future assets</b>	<b>\$8,496,741,056</b>	<b>\$4,807,721,999</b>	<b>\$13,304,463,055</b>

<sup>1</sup> Excludes administrative expenses.

<sup>2</sup> Includes inactive members with member contributions on deposit.

## Section 2: Actuarial Valuation Results

### 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 11.2. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 11.2% of one-year's payroll. Since actuarial gains and losses are amortized over 18 years, there would be a 0.9% 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 11.1, but is 8.4 for General compared to 21.9 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, 2012 – 2021

Year Ended December 31	Asset Volatility Ratio			Liability Volatility Ratio		
	General	Safety	Total	General	Safety	Total
2012	6.7	16.2	8.7	9.0	22.5	11.9
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

## Section 2: Actuarial Valuation Results

### J. Risk Assessment

Since 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 1, Volatility Ratios*, on page 48, a 1% asset gain or loss (relative to the assumed investment return) translates to about 11.2% of one-year's payroll. Since actuarial gains

## Section 2: Actuarial Valuation Results

and losses are amortized over 18 years, there would be a 0.9% 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 (2.33%) 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 70.6% to 92.4%. 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 45.
- The average geometric investment return on the Valuation Value of Assets over the last 10 years was 7.37%. This includes a high of 11.40% return and a low of 2.24%. The average over the last 5 years 7.08%. For more details see the Investment Return table in *Section 2, Subsection B* on page 27.

## Section 2: Actuarial Valuation Results

- 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 90.
- 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 105 and 106.

### Maturity Measures

In the last 10 years the ratio of members in pay status to active participants has increased from 0.99 to 1.03. This ratio has fluctuated between 0.92 and 1.03 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 18.

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 \$13 million<sup>1</sup> 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 relatively low level of negative cash flow and is relatively well funded (at a 92.4% funded ratio). For more details on historical cash flows see the Comparison of Contributions Made with Benefits in *Section 2, Subsection B* on page 22.

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 48.

<sup>1</sup> This includes the prepayment of \$71 million made by Central Contra Costa Sanitary District. Benefits paid were \$83 million more than contributions received if the prepayment amount is excluded.

# Section 3: Supplemental Information

## Exhibit A: Table of Plan Coverage

### Total Plan

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	10,005	10,099	-0.9%
• Average age	46.3	46.3	0.0
• Average years of service	10.2	10.2	0.0
• Total projected compensation <sup>1</sup>	\$1,015,755,387	\$990,041,699	2.6%
• Average projected compensation	\$101,525	\$98,034	3.6%
• Account balances	\$1,313,264,988	\$1,257,434,515	4.4%
• Total active vested members	6,683	6,563	1.8%
<b>Inactive vested members:<sup>2</sup></b>			
• Number	3,812	3,591	6.2%
• Average Age	46.6	46.7	-0.1
<b>Retired members:<sup>2</sup></b>			
• Number in pay status	7,908	7,655	3.3%
• Average age	71.0	70.8	0.2
• Average monthly benefit	\$4,487	\$4,361	2.9%
<b>Disabled members:<sup>2</sup></b>			
• Number in pay status <sup>3</sup>	885	896	-1.2%
• Average age	67.7	67.4	0.3
• Average monthly benefit	\$5,403	\$5,194	4.0%
<b>Beneficiaries:<sup>2</sup></b>			
• Number in pay status	1,485	1,467	1.2%
• Average age	72.8	72.8	0.0
• Average monthly benefit	\$3,017	\$2,882	4.7%

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>2</sup> Includes members from withdrawn employers.

<sup>3</sup> For 2021, includes 739 members receiving a service-connected disability and 146 members receiving a non-service connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 1

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	397	431	-7.9%
• Average age	51.7	51.3	0.4
• Average years of service	19.3	18.7	0.6
• Total projected compensation <sup>1</sup>	\$53,193,650	\$55,178,789	-3.6%
• Average projected compensation	\$133,989	\$128,025	4.7%
• Account balances	\$78,417,254	\$76,464,864	2.6%
• Total active vested members	396	430	-7.9%
<b>Inactive vested members:<sup>2</sup></b>			
• Number	200	204	-2.0%
• Average Age	52.9	52.6	0.3
<b>Retired members:<sup>2</sup></b>			
• Number in pay status	2,189	2,257	-3.0%
• Average age	75.8	75.7	0.1
• Average monthly benefit	\$4,861	\$4,689	3.7%
<b>Disabled members:<sup>2</sup></b>			
• Number in pay status <sup>3</sup>	226	234	-3.4%
• Average age	74.4	73.8	0.6
• Average monthly benefit	\$3,333	\$3,215	3.7%
<b>Beneficiaries:<sup>2</sup></b>			
• Number in pay status	644	664	-3.0%
• Average age	78.2	78.4	-0.2
• Average monthly benefit	\$2,829	\$2,643	7.0%

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>2</sup> Includes members from withdrawn employers.

<sup>3</sup> For 2021, includes 169 members receiving a service-connected disability and 57 members receiving a non-service connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 2

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number <sup>1</sup>	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
<b>Inactive vested members:<sup>2</sup></b>			
• Number	144	157	-8.3%
• Average Age	60.1	59.3	0.8
<b>Retired members:<sup>2</sup></b>			
• Number in pay status	403	410	-1.7%
• Average age	76.9	76.2	0.7
• Average monthly benefit	\$931	\$916	1.6%
<b>Disabled members:<sup>2</sup></b>			
• Number in pay status <sup>3</sup>	35	36	-2.8%
• Average age	74.8	74.0	0.8
• Average monthly benefit	\$2,542	\$2,478	2.6%
<b>Beneficiaries:<sup>2</sup></b>			
• Number in pay status	105	98	7.1%
• Average age	72.0	70.3	1.7
• Average monthly benefit	\$949	\$962	-1.4%

<sup>1</sup> As of the December 31, 2005 valuation, there are no longer any Tier 2 active members as they have all transferred to Tier 3.

<sup>2</sup> Includes members from withdrawn employers.

<sup>3</sup> For 2021, includes 20 members receiving a service-connected disability and 15 members receiving a non-service connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 3

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	3,506	3,841	-8.7%
• Average age	52.6	52.2	0.4
• Average years of service	17.0	16.3	0.7
• Total projected compensation <sup>1</sup>	\$379,094,662	\$398,660,483	-4.9%
• Average projected compensation	\$108,127	\$103,791	4.2%
• Account balances	\$609,081,412	\$605,469,128	0.6%
• Total active vested members	3,463	3787	-8.6%
<b>Inactive vested members:</b>			
• Number	1,599	1,652	-3.2%
• Average Age	50.5	49.9	0.6
<b>Retired members:</b>			
• Number in pay status	3,816	3,568	7.0%
• Average age	69.3	69.0	0.3
• Average monthly benefit	\$3,237	\$3,087	4.9%
<b>Disabled members:</b>			
• Number in pay status <sup>2</sup>	78	82	-4.9%
• Average age	65.3	64.4	0.9
• Average monthly benefit	\$2,726	\$2,671	2.1%
<b>Beneficiaries:</b>			
• Number in pay status	273	250	9.2%
• Average age	63.5	63.0	0.5
• Average monthly benefit	\$1,787	\$1,776	0.6%

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>2</sup> For 2021, includes 27 members receiving a service-connected disability and 51 members receiving a non-service connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 4 – 2% COLA

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	41	34	20.6%
• Average age	44.9	46.2	-1.3
• Average years of service	3.1	2.6	0.5
• Total projected compensation <sup>1</sup>	\$3,520,850	\$2,861,175	23.1%
• Average projected compensation	\$85,874	\$84,152	2.0%
• Account balances	\$1,093,623	\$767,409	42.5%
• Total active vested members	9	4	125.0%
<b>Inactive vested members:</b>			
• Number	13	12	8.3%
• Average Age	44.2	44.7	-0.5
<b>Retired members:</b>			
• Number in pay status	1	0	N/A
• Average age	69.6	N/A	N/A
• Average monthly benefit	\$1,357	N/A	N/A
<b>Disabled members:</b>			
• 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
<b>Beneficiaries:</b>			
• 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

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 4 – 3% COLA

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	219	206	6.3%
• Average age	42.0	42.2	-0.2
• Average years of service	3.9	3.5	0.4
• Total projected compensation <sup>1</sup>	\$21,645,116	\$19,473,284	11.2%
• Average projected compensation	\$98,836	\$94,531	4.6%
• Account balances	\$8,771,267	\$6,954,336	26.1%
• Total active vested members	85	65	30.8%
<b>Inactive vested members:</b>			
• Number	53	32	65.6%
• Average Age	39.1	39.9	-0.8
<b>Retired members:</b>			
• Number in pay status	3	0	N/A
• Average age	63.2	N/A	N/A
• Average monthly benefit	\$1,419	N/A	N/A
<b>Disabled members:</b>			
• 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
<b>Beneficiaries:</b>			
• 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

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 5 – 2% COLA

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	3,683	3,386	8.8%
• Average age	42.3	41.8	0.5
• Average years of service	3.4	3.0	0.4
• Total projected compensation <sup>1</sup>	\$300,259,338	\$263,041,653	14.1%
• Average projected compensation	\$81,526	\$77,685	4.9%
• Account balances	\$100,488,070	\$76,841,128	30.8%
• Total active vested members	1,027	635	61.7%
<b>Inactive vested members:</b>			
• Number	1,084	820	32.2%
• Average Age	40.5	40.1	0.4
<b>Retired members:</b>			
• Number in pay status	35	16	118.8%
• Average age	65.5	65.8	-0.3
• Average monthly benefit	\$646	\$621	4.0%
<b>Disabled members:</b>			
• 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
<b>Beneficiaries:</b>			
• 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

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### General Tier 5 – 3% COLA

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	690	714	-3.4%
• Average age	46.2	45.5	0.7
• Average years of service	7.0	6.2	0.8
• Total projected compensation <sup>1</sup>	\$60,196,814	\$59,988,995	0.3%
• Average projected compensation	\$87,242	\$84,018	3.8%
• Account balances	\$46,192,040	\$39,181,133	17.9%
• Total active vested members	592	568	4.2%
<b>Inactive vested members:</b>			
• Number	314	299	5.0%
• Average Age	43.9	43.4	0.5
<b>Retired members:</b>			
• Number in pay status	32	23	39.1%
• Average age	67.4	66.5	0.9
• Average monthly benefit	\$860	\$788	9.1%
<b>Disabled members:</b>			
• 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
<b>Beneficiaries:</b>			
• 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

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### Safety Tier A

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	691	753	-8.2%
• Average age	46.7	46.3	0.4
• Average years of service	18.2	17.6	0.6
• Total projected compensation <sup>1</sup>	\$108,051,877	\$111,238,091	-2.9%
• Average projected compensation	\$156,370	\$147,727	5.9%
• Account balances	\$394,420,760	\$392,256,798	0.6%
• Total active vested members	690	751	-8.1%
<b>Inactive vested members:<sup>2</sup></b>			
• Number	234	255	-8.2%
• Average Age	47.9	47.1	0.8
<b>Retired members:<sup>2</sup></b>			
• Number in pay status	1,415	1,373	3.1%
• Average age	66.6	66.4	0.2
• Average monthly benefit	\$8,501	\$8,279	2.7%
<b>Disabled members:<sup>2</sup></b>			
• Number in pay status <sup>3</sup>	532	532	0.0%
• Average age	65.3	65.1	0.2
• Average monthly benefit	\$6,910	\$6,677	3.5%
<b>Beneficiaries:<sup>2</sup></b>			
• Number in pay status	461	454	1.5%
• Average age	71.0	70.7	0.3
• Average monthly benefit	\$4,487	\$4,258	5.4%

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>2</sup> Includes members from withdrawn employers.

<sup>3</sup> For 2021, includes 511 members receiving a service-connected disability and 21 members receiving a non-service connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### Safety Tier C

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	116	117	-0.9%
• Average age	40.9	40.0	0.9
• Average years of service	11.5	10.6	0.9
• Total projected compensation <sup>1</sup>	\$15,651,345	\$15,059,295	3.9%
• Average projected compensation	\$134,925	\$128,712	4.8%
• Account balances	\$23,794,663	\$20,467,651	16.3%
• Total active vested members	115	116	-0.9%
<b>Inactive vested members:</b>			
• Number	70	73	-4.1%
• Average Age	38.0	36.9	1.1
<b>Retired members:</b>			
• Number in pay status	7	6	16.7%
• Average age	55.3	56.6	-1.3
• Average monthly benefit	\$2,271	\$2,543	-10.7%
<b>Disabled members:</b>			
• Number in pay status <sup>2</sup>	12	10	20.0%
• Average age	44.3	43.1	1.2
• Average monthly benefit	\$3,772	\$3,576	5.5%
<b>Beneficiaries:</b>			
• Number in pay status	1	1	0.0%
• Average age	51.1	50.1	1.0
• Average monthly benefit	\$2,061	\$2,021	2.0%

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>2</sup> For 2021, includes 10 members receiving a service-connected disability and 2 members receiving a non-service connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### Safety Tier D

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	130	137	-5.1%
• Average age	35.7	34.9	0.8
• Average years of service	5.6	4.8	0.8
• Total projected compensation <sup>1</sup>	\$16,358,143	\$15,626,411	4.7%
• Average projected compensation	\$125,832	\$114,061	10.3%
• Account balances	\$15,016,650	\$12,283,460	22.3%
• Total active vested members	87	76	14.5%
<b>Inactive vested members:</b>			
• Number	32	30	6.7%
• Average Age	36.0	35.2	0.8
<b>Retired members:</b>			
• Number in pay status	2	1	100.0%
• Average age	60.8	57.3	3.5
• Average monthly benefit	\$2,224	\$1,829	21.6%
<b>Disabled members:</b>			
• Number in pay status <sup>2</sup>	2	2	0.0%
• Average age	60.7	59.7	1.0
• Average monthly benefit	\$2,821	\$2,754	2.4%
<b>Beneficiaries:</b>			
• Number in pay status	1	0	N/A
• Average age	55.5	N/A	N/A
• Average monthly benefit	\$712	N/A	N/A

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>2</sup> For 2021, includes 2 member receiving a service-connected disability.

## Section 3: Supplemental Information

### Exhibit A: Table of Plan Coverage (continued)

#### Safety Tier E

Category	Year Ended December 31		Change From Prior Year
	2021	2020	
<b>Active members in valuation:</b>			
• Number	532	480	10.8%
• Average age	34.0	33.6	0.4
• Average years of service	4.2	3.6	0.6
• Total projected compensation <sup>1</sup>	\$57,783,593	\$48,913,524	18.1%
• Average projected compensation	\$108,616	\$101,903	6.6%
• Account balances	\$35,989,250	\$26,748,608	34.5%
• Total active vested members	219	131	67.2%
<b>Inactive vested members:</b>			
• Number	69	57	21.1%
• Average Age	35.2	33.9	1.3
<b>Retired members:</b>			
• Number in pay status	5	1	400.0%
• Average age	59.6	62.2	-2.6
• Average monthly benefit	\$1,602	\$1,058	51.4%
<b>Disabled members:</b>			
• 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
<b>Beneficiaries:</b>			
• 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

<sup>1</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation

#### Total Plan

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	106	106	—	—	—	—	—	—	—	—
	\$70,665	\$70,665	—	—	—	—	—	—	—	—
25 - 29	605	531	74	—	—	—	—	—	—	—
	\$83,748	\$82,230	\$94,640	—	—	—	—	—	—	—
30 - 34	1,174	728	421	25	—	—	—	—	—	—
	\$90,588	\$83,999	\$100,114	\$122,039	—	—	—	—	—	—
35 - 39	1,326	554	522	202	48	—	—	—	—	—
	\$100,389	\$89,260	\$103,019	\$120,434	\$115,870	—	—	—	—	—
40 - 44	1,415	460	413	276	225	41	—	—	—	—
	\$106,372	\$87,832	\$102,290	\$126,714	\$126,419	\$108,538	—	—	—	—
45 - 49	1,477	373	356	232	282	222	12	—	—	—
	\$110,434	\$89,347	\$100,112	\$115,898	\$130,102	\$130,752	\$128,338	—	—	—
50 - 54	1,415	300	307	206	223	273	68	37	1	—
	\$108,809	\$89,259	\$96,132	\$112,585	\$125,360	\$126,659	\$113,398	\$109,831	\$173,747	—
55 - 59	1,236	241	246	163	189	214	89	72	20	2
	\$103,476	\$84,683	\$92,909	\$106,303	\$103,765	\$114,136	\$122,646	\$138,414	\$111,373	\$79,680
60 - 64	827	158	212	115	114	104	58	42	16	8
	\$97,922	\$79,003	\$90,653	\$100,940	\$106,999	\$107,720	\$118,180	\$125,180	\$89,653	\$90,645
65 - 69	343	46	102	55	39	60	14	18	5	4
	\$98,670	\$81,665	\$88,307	\$109,658	\$109,589	\$105,065	\$103,926	\$118,353	\$101,931	\$93,978
70 & over	81	15	17	17	14	7	5	3	2	1
	\$96,546	\$92,982	\$83,302	\$106,106	\$96,904	\$87,545	\$107,151	\$68,639	\$110,974	\$272,462
<b>Total</b>	<b>10,005</b>	<b>3,512</b>	<b>2,670</b>	<b>1,291</b>	<b>1,134</b>	<b>921</b>	<b>246</b>	<b>172</b>	<b>44</b>	<b>15</b>
	<b>\$101,525</b>	<b>\$85,508</b>	<b>\$98,435</b>	<b>\$115,571</b>	<b>\$120,009</b>	<b>\$120,086</b>	<b>\$117,934</b>	<b>\$125,717</b>	<b>\$103,801</b>	<b>\$102,193</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### General Tier 1 Non-Enhanced

Age	Years of Benefit Service									
	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	—	—	—	—	—	—	—	—	—	—
45 - 49	—	—	—	—	—	—	—	—	—	—
50 - 54	2	—	—	—	2	—	—	—	—	—
	\$155,448	—	—	—	\$155,448	—	—	—	—	—
55 - 59	1	—	—	1	—	—	—	—	—	—
	\$63,445	—	—	\$63,445	—	—	—	—	—	—
60 - 64	2	—	1	1	—	—	—	—	—	—
	\$107,374	—	\$107,125	\$107,622	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>5</b>	<b>—</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	<b>\$117,818</b>	<b>—</b>	<b>\$107,125</b>	<b>\$85,533</b>	<b>\$155,448</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### General Tier 1 Enhanced

Age	Years of Benefit Service									
	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	9	1	7	1	—	—	—	—	—	—
	\$150,153	\$78,705	\$157,133	\$172,738	—	—	—	—	—	—
35 - 39	30	5	10	14	1	—	—	—	—	—
	\$134,035	\$148,654	\$122,578	\$136,872	\$135,803	—	—	—	—	—
40 - 44	61	9	17	12	20	3	—	—	—	—
	\$142,111	\$133,857	\$150,181	\$136,346	\$146,614	\$114,171	—	—	—	—
45 - 49	69	7	10	12	19	20	1	—	—	—
	\$134,846	\$110,845	\$135,624	\$143,978	\$127,541	\$143,546	\$150,292	—	—	—
50 - 54	76	5	7	16	14	25	5	3	1	—
	\$132,168	\$122,681	\$143,813	\$132,589	\$118,715	\$139,684	\$98,433	\$161,085	\$173,747	—
55 - 59	79	—	4	14	20	21	9	10	1	—
	\$133,730	—	\$227,328	\$128,956	\$121,982	\$140,677	\$117,610	\$126,007	\$137,555	—
60 - 64	46	1	7	12	3	9	7	5	—	2
	\$126,454	\$97,157	\$130,433	\$115,777	\$157,636	\$133,178	\$95,018	\$185,655	—	\$76,221
65 - 69	17	—	1	3	6	4	—	1	—	2
	\$118,454	—	\$70,523	\$140,115	\$121,144	\$144,600	—	\$95,150	—	\$61,222
70 & over	5	—	—	2	1	1	—	—	—	1
	\$163,790	—	—	\$156,841	\$95,407	\$137,401	—	—	—	\$272,462
<b>Total</b>	<b>392</b>	<b>28</b>	<b>63</b>	<b>86</b>	<b>84</b>	<b>83</b>	<b>22</b>	<b>19</b>	<b>2</b>	<b>5</b>
	<b>\$134,195</b>	<b>\$125,470</b>	<b>\$144,993</b>	<b>\$133,756</b>	<b>\$129,622</b>	<b>\$139,448</b>	<b>\$107,549</b>	<b>\$145,618</b>	<b>\$155,651</b>	<b>\$109,469</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### General Tier 3 Enhanced

Age	Years of Benefit Service									
	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	43	8	23	12	—	—	—	—	—	—
	\$90,755	\$103,255	\$80,440	\$102,193	—	—	—	—	—	—
35 - 39	244	20	83	110	31	—	—	—	—	—
	\$103,014	\$105,727	\$112,695	\$98,553	\$91,174	—	—	—	—	—
40 - 44	468	16	88	198	139	27	—	—	—	—
	\$113,922	\$120,941	\$118,640	\$119,222	\$106,936	\$91,480	—	—	—	—
45 - 49	601	22	94	188	170	121	6	—	—	—
	\$112,316	\$126,139	\$114,063	\$108,283	\$117,337	\$108,454	\$96,251	—	—	—
50 - 54	714	16	96	165	164	191	54	28	—	—
	\$110,076	\$118,325	\$109,179	\$106,520	\$113,985	\$114,880	\$103,345	\$86,718	—	—
55 - 59	705	14	70	138	155	174	76	58	18	2
	\$106,195	\$106,088	\$95,186	\$100,262	\$97,337	\$106,189	\$121,212	\$137,974	\$108,078	\$79,680
60 - 64	464	5	61	99	103	91	46	37	16	6
	\$103,820	\$137,318	\$95,696	\$99,839	\$103,590	\$103,929	\$115,232	\$117,008	\$89,653	\$95,453
65 - 69	214	1	41	48	32	56	14	15	5	2
	\$105,116	\$151,361	\$102,200	\$108,451	\$107,684	\$102,241	\$103,926	\$103,876	\$101,931	\$126,733
70 & over	53	2	7	15	13	6	5	3	2	—
	\$96,411	\$117,798	\$97,680	\$99,341	\$97,019	\$79,236	\$107,151	\$68,639	\$110,974	—
<b>Total</b>	<b>3,506</b>	<b>104</b>	<b>563</b>	<b>973</b>	<b>807</b>	<b>666</b>	<b>201</b>	<b>141</b>	<b>41</b>	<b>10</b>
	<b>\$108,127</b>	<b>\$116,372</b>	<b>\$106,966</b>	<b>\$106,909</b>	<b>\$107,553</b>	<b>\$107,613</b>	<b>\$112,744</b>	<b>\$117,191</b>	<b>\$100,279</b>	<b>\$98,555</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 4 – 2% COLA

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	1	1	—	—	—	—	—	—	—	—
	\$85,497	\$85,497	—	—	—	—	—	—	—	—
25 - 29	3	3	—	—	—	—	—	—	—	—
	\$54,487	\$54,487	—	—	—	—	—	—	—	—
30 - 34	6	6	—	—	—	—	—	—	—	—
	\$82,352	\$82,352	—	—	—	—	—	—	—	—
35 - 39	4	3	1	—	—	—	—	—	—	—
	\$85,941	\$81,041	\$100,641	—	—	—	—	—	—	—
40 - 44	3	3	—	—	—	—	—	—	—	—
	\$81,364	\$81,364	—	—	—	—	—	—	—	—
45 - 49	8	8	—	—	—	—	—	—	—	—
	\$83,160	\$83,160	—	—	—	—	—	—	—	—
50 - 54	8	5	3	—	—	—	—	—	—	—
	\$105,697	\$115,212	\$89,840	—	—	—	—	—	—	—
55 - 59	6	3	3	—	—	—	—	—	—	—
	\$84,398	\$95,226	\$73,569	—	—	—	—	—	—	—
60 - 64	1	1	—	—	—	—	—	—	—	—
	\$65,502	\$65,502	—	—	—	—	—	—	—	—
65 - 69	1	1	—	—	—	—	—	—	—	—
	\$107,178	\$107,178	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>41</b>	<b>34</b>	<b>7</b>	<b>—</b>						
	<b>\$85,874</b>	<b>\$86,176</b>	<b>\$84,410</b>	<b>—</b>						

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 4 – 3% COLA

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	4	4	—	—	—	—	—	—	—	—
	\$63,397	\$63,397	—	—	—	—	—	—	—	—
25 - 29	20	17	3	—	—	—	—	—	—	—
	\$82,654	\$77,150	\$113,840	—	—	—	—	—	—	—
30 - 34	44	29	15	—	—	—	—	—	—	—
	\$98,545	\$89,820	\$115,414	—	—	—	—	—	—	—
35 - 39	34	20	14	—	—	—	—	—	—	—
	\$102,209	\$100,584	\$104,530	—	—	—	—	—	—	—
40 - 44	39	25	14	—	—	—	—	—	—	—
	\$108,151	\$102,640	\$117,992	—	—	—	—	—	—	—
45 - 49	26	15	11	—	—	—	—	—	—	—
	\$94,968	\$91,655	\$99,486	—	—	—	—	—	—	—
50 - 54	21	16	5	—	—	—	—	—	—	—
	\$106,169	\$105,943	\$106,892	—	—	—	—	—	—	—
55 - 59	20	10	10	—	—	—	—	—	—	—
	\$99,519	\$92,019	\$107,019	—	—	—	—	—	—	—
60 - 64	10	5	5	—	—	—	—	—	—	—
	\$92,564	\$78,367	\$106,760	—	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	1	—	1	—	—	—	—	—	—	—
	\$94,764	—	\$94,764	—	—	—	—	—	—	—
<b>Total</b>	<b>219</b>	<b>141</b>	<b>78</b>	<b>—</b>						
	<b>\$98,836</b>	<b>\$93,117</b>	<b>\$109,174</b>	<b>—</b>						

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 5 – 2% COLA

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	73	73	—	—	—	—	—	—	—	—
	\$60,278	\$60,278	—	—	—	—	—	—	—	—
25 - 29	383	353	30	—	—	—	—	—	—	—
	\$74,055	\$74,394	\$70,073	—	—	—	—	—	—	—
30 - 34	711	554	157	—	—	—	—	—	—	—
	\$80,883	\$79,444	\$85,958	—	—	—	—	—	—	—
35 - 39	632	438	194	—	—	—	—	—	—	—
	\$86,113	\$84,198	\$90,437	—	—	—	—	—	—	—
40 - 44	507	370	137	—	—	—	—	—	—	—
	\$83,777	\$83,037	\$85,776	—	—	—	—	—	—	—
45 - 49	428	296	132	—	—	—	—	—	—	—
	\$84,737	\$84,355	\$85,593	—	—	—	—	—	—	—
50 - 54	351	233	117	1	—	—	—	—	—	—
	\$82,685	\$83,491	\$80,663	\$131,472	—	—	—	—	—	—
55 - 59	291	195	95	1	—	—	—	—	—	—
	\$81,345	\$79,105	\$85,393	\$133,630	—	—	—	—	—	—
60 - 64	215	140	74	1	—	—	—	—	—	—
	\$78,393	\$75,844	\$83,472	\$59,390	—	—	—	—	—	—
65 - 69	75	43	31	1	—	—	—	—	—	—
	\$78,700	\$78,888	\$77,692	\$101,924	—	—	—	—	—	—
70 & over	17	12	5	—	—	—	—	—	—	—
	\$80,700	\$92,053	\$53,454	—	—	—	—	—	—	—
<b>Total</b>	<b>3,683</b>	<b>2,707</b>	<b>972</b>	<b>4</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	<b>\$81,526</b>	<b>\$80,251</b>	<b>\$84,974</b>	<b>\$106,604</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

General Tier 5 – 3% COLA

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25 - 29	17	15	2	—	—	—	—	—	—	—
	\$63,067	\$60,743	\$80,497	—	—	—	—	—	—	—
30 - 34	82	17	64	1	—	—	—	—	—	—
	\$78,278	\$57,789	\$83,761	\$75,689	—	—	—	—	—	—
35 - 39	127	18	109	—	—	—	—	—	—	—
	\$92,461	\$99,127	\$91,360	—	—	—	—	—	—	—
40 - 44	130	16	114	—	—	—	—	—	—	—
	\$90,382	\$79,493	\$91,910	—	—	—	—	—	—	—
45 - 49	100	12	88	—	—	—	—	—	—	—
	\$94,247	\$89,756	\$94,859	—	—	—	—	—	—	—
50 - 54	72	12	58	2	—	—	—	—	—	—
	\$85,778	\$81,790	\$86,254	\$95,874	—	—	—	—	—	—
55 - 59	66	8	56	2	—	—	—	—	—	—
	\$87,821	\$102,521	\$85,148	\$103,861	—	—	—	—	—	—
60 - 64	60	4	55	1	—	—	—	—	—	—
	\$81,269	\$86,271	\$81,198	\$65,124	—	—	—	—	—	—
65 - 69	31	1	29	1	—	—	—	—	—	—
	\$81,159	\$105,892	\$80,625	\$71,916	—	—	—	—	—	—
70 & over	5	1	4	—	—	—	—	—	—	—
	\$84,967	\$54,502	\$92,584	—	—	—	—	—	—	—
<b>Total</b>	<b>690</b>	<b>104</b>	<b>579</b>	<b>7</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	<b>\$87,242</b>	<b>\$80,134</b>	<b>\$88,516</b>	<b>\$87,457</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### Safety Tier A Non-Enhanced

Age	Years of Benefit Service									
	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	—	—	—	—	—	—	—	—
	\$105,137	\$105,137	—	—	—	—	—	—	—	—
40 - 44	2	—	2	—	—	—	—	—	—	—
	\$148,024	—	\$148,024	—	—	—	—	—	—	—
45 - 49	3	—	—	—	1	2	—	—	—	—
	\$155,888	—	—	—	\$161,201	\$153,231	—	—	—	—
50 - 54	4	—	1	—	—	1	—	2	—	—
	\$158,761	—	\$144,828	—	—	\$160,815	—	\$164,700	—	—
55 - 59	1	—	—	—	—	—	—	1	—	—
	\$169,883	—	—	—	—	—	—	\$169,883	—	—
60 - 64	1	—	—	—	—	—	1	—	—	—
	\$246,450	—	—	—	—	—	\$246,450	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>12</b>	<b>1</b>	<b>3</b>	<b>—</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>—</b>	<b>—</b>
	<b>\$160,019</b>	<b>\$105,137</b>	<b>\$146,958</b>	<b>—</b>	<b>\$161,201</b>	<b>\$155,759</b>	<b>\$246,450</b>	<b>\$166,427</b>	<b>—</b>	<b>—</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### Safety Tier A Enhanced

Age	Years of Benefit Service									
	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	20	2	14	4	—	—	—	—	—	—
	\$137,819	\$129,716	\$133,104	\$158,371	—	—	—	—	—	—
35 - 39	101	8	26	51	16	—	—	—	—	—
	\$150,853	\$136,939	\$138,950	\$155,460	\$162,471	—	—	—	—	—
40 - 44	147	6	11	54	66	10	—	—	—	—
	\$153,910	\$156,408	\$127,753	\$150,130	\$161,333	\$152,601	—	—	—	—
45 - 49	204	3	5	20	92	79	5	—	—	—
	\$158,612	\$181,252	\$184,425	\$159,759	\$153,881	\$161,096	\$162,450	—	—	—
50 - 54	134	1	6	15	43	56	9	4	—	—
	\$164,439	\$159,468	\$153,717	\$148,006	\$169,508	\$160,408	\$182,028	\$205,747	—	—
55 - 59	49	—	3	5	14	19	4	3	1	—
	\$157,431	—	\$155,638	\$169,134	\$148,908	\$157,581	\$161,235	\$177,791	\$144,499	—
60 - 64	20	—	3	1	8	4	4	—	—	—
	\$136,322	—	\$126,588	\$102,579	\$131,905	\$136,679	\$160,537	—	—	—
65 - 69	4	—	—	1	1	—	—	2	—	—
	\$170,514	—	—	\$103,744	\$101,240	—	—	\$238,535	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>679</b>	<b>20</b>	<b>68</b>	<b>151</b>	<b>240</b>	<b>168</b>	<b>22</b>	<b>9</b>	<b>1</b>	<b>—</b>
	<b>\$156,306</b>	<b>\$149,831</b>	<b>\$140,773</b>	<b>\$153,220</b>	<b>\$158,061</b>	<b>\$159,382</b>	<b>\$169,890</b>	<b>\$203,715</b>	<b>\$144,499</b>	<b>—</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### Safety Tier C

Age	Years of Benefit Service									
	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	21	—	14	7	—	—	—	—	—	—
	\$133,622	—	\$133,093	\$134,680	—	—	—	—	—	—
35 - 39	46	1	18	27	—	—	—	—	—	—
	\$133,927	\$115,752	\$133,484	\$134,895	—	—	—	—	—	—
40 - 44	21	—	8	12	—	1	—	—	—	—
	\$131,695	—	\$128,769	\$135,324	—	\$111,556	—	—	—	—
45 - 49	13	—	1	12	—	—	—	—	—	—
	\$133,368	—	\$125,680	\$134,009	—	—	—	—	—	—
50 - 54	10	—	3	7	—	—	—	—	—	—
	\$137,122	—	\$139,804	\$135,973	—	—	—	—	—	—
55 - 59	3	—	1	2	—	—	—	—	—	—
	\$186,714	—	\$124,647	\$217,748	—	—	—	—	—	—
60 - 64	1	—	1	—	—	—	—	—	—	—
	\$126,297	—	\$126,297	—	—	—	—	—	—	—
65 - 69	1	—	—	1	—	—	—	—	—	—
	\$127,604	—	—	\$127,604	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>116</b>	<b>1</b>	<b>46</b>	<b>68</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	<b>\$134,925</b>	<b>\$115,752</b>	<b>\$132,439</b>	<b>\$137,233</b>	<b>—</b>	<b>\$111,556</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### Safety Tier D

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	1	1	—	—	—	—	—	—	—	—
	\$134,994	\$134,994	—	—	—	—	—	—	—	—
25 - 29	25	23	2	—	—	—	—	—	—	—
	\$126,131	\$128,878	\$94,536	—	—	—	—	—	—	—
30 - 34	41	14	27	—	—	—	—	—	—	—
	\$125,687	\$134,605	\$121,063	—	—	—	—	—	—	—
35 - 39	40	10	30	—	—	—	—	—	—	—
	\$127,026	\$136,141	\$123,987	—	—	—	—	—	—	—
40 - 44	9	1	8	—	—	—	—	—	—	—
	\$128,458	\$145,801	\$126,290	—	—	—	—	—	—	—
45 - 49	8	1	7	—	—	—	—	—	—	—
	\$116,265	\$137,027	\$113,299	—	—	—	—	—	—	—
50 - 54	4	—	4	—	—	—	—	—	—	—
	\$123,620	—	\$123,620	—	—	—	—	—	—	—
55 - 59	2	1	1	—	—	—	—	—	—	—
	\$127,478	\$161,969	\$92,986	—	—	—	—	—	—	—
60 - 64	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>130</b>	<b>51</b>	<b>79</b>	<b>—</b>						
	<b>\$125,832</b>	<b>\$133,135</b>	<b>\$121,117</b>	<b>—</b>						

## Section 3: Supplemental Information

### Exhibit B: Members in Active Service as of December 31, 2021 by Age, Years of Service, and Average Projected Compensation (continued)

#### Safety Tier E

Age	Years of Benefit Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	27	27	—	—	—	—	—	—	—	—
	\$96,893	\$96,893	—	—	—	—	—	—	—	—
25 - 29	157	120	37	—	—	—	—	—	—	—
	\$103,582	\$100,440	\$113,773	—	—	—	—	—	—	—
30 - 34	197	97	100	—	—	—	—	—	—	—
	\$109,765	\$103,184	\$116,150	—	—	—	—	—	—	—
35 - 39	67	30	37	—	—	—	—	—	—	—
	\$110,312	\$99,887	\$118,766	—	—	—	—	—	—	—
40 - 44	28	14	14	—	—	—	—	—	—	—
	\$107,249	\$98,089	\$116,408	—	—	—	—	—	—	—
45 - 49	17	9	8	—	—	—	—	—	—	—
	\$117,001	\$112,050	\$122,570	—	—	—	—	—	—	—
50 - 54	19	12	7	—	—	—	—	—	—	—
	\$116,051	\$117,133	\$114,194	—	—	—	—	—	—	—
55 - 59	13	10	3	—	—	—	—	—	—	—
	\$133,611	\$130,980	\$142,379	—	—	—	—	—	—	—
60 - 64	7	2	5	—	—	—	—	—	—	—
	\$136,631	\$139,085	\$135,650	—	—	—	—	—	—	—
65 - 69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 & over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>532</b>	<b>321</b>	<b>211</b>	<b>—</b>						
	<b>\$108,616</b>	<b>\$102,958</b>	<b>\$117,223</b>	<b>—</b>						

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit

#### Total Plan

Age	Years of Retirement									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	17	4	4	4	3	1	1	—	—	—
	\$689	\$222	\$181	\$833	\$1,604	\$315	\$1,651	—	—	—
30 - 34	13	2	3	4	2	1	1	—	—	—
	\$1,230	\$2,396	\$181	\$1,555	\$1,578	\$785	\$489	—	—	—
35 - 39	26	6	8	3	2	4	3	—	—	—
	\$2,185	\$3,790	\$2,563	\$1,171	\$1,309	\$1,394	\$618	—	—	—
40 - 44	35	10	9	9	3	—	4	—	—	—
	\$3,013	\$3,611	\$3,984	\$3,006	\$749	—	\$1,049	—	—	—
45 - 49	81	29	18	11	10	5	4	3	1	—
	\$3,279	\$4,523	\$2,793	\$3,082	\$3,713	\$847	\$1,136	\$1,064	\$1,148	—
50 - 54	354	253	40	17	17	13	10	4	—	—
	\$4,507	\$4,797	\$4,888	\$4,425	\$3,715	\$2,494	\$1,160	\$938	—	—
55 - 59	829	415	293	56	26	24	9	5	1	—
	\$4,807	\$4,696	\$4,895	\$6,813	\$3,702	\$3,644	\$3,015	\$1,649	\$990	—
60 - 64	1,311	461	389	355	46	29	17	9	5	—
	\$4,391	\$3,750	\$3,512	\$6,303	\$4,518	\$3,982	\$2,570	\$4,847	\$2,711	—
65 - 69	1,860	462	471	534	276	50	38	12	10	7
	\$4,460	\$3,530	\$3,417	\$5,634	\$6,011	\$3,649	\$3,166	\$3,357	\$3,274	\$1,745
70 - 74	2,060	214	394	625	529	176	62	33	15	12
	\$4,423	\$2,975	\$3,264	\$4,991	\$6,006	\$2,853	\$3,455	\$3,077	\$3,292	\$2,154
75 - 79	1,749	36	120	399	584	352	145	45	39	29
	\$4,480	\$2,036	\$2,518	\$4,232	\$5,499	\$4,895	\$3,068	\$3,757	\$3,284	\$3,307
80 - 84	929	8	18	90	214	277	170	82	38	32
	\$4,276	\$2,545	\$2,266	\$2,617	\$4,038	\$5,465	\$4,534	\$3,519	\$3,134	\$3,741
85 - 89	586	—	3	18	49	147	157	110	71	31
	\$3,770	—	\$2,018	\$2,871	\$2,274	\$4,087	\$4,590	\$3,920	\$2,502	\$3,534
90 & Over	428	—	1	2	5	25	68	100	116	111
	\$3,561	—	\$855	\$755	\$2,305	\$2,480	\$3,881	\$4,399	\$3,426	\$3,124
<b>Total</b>	<b>10,278</b>	<b>1,900</b>	<b>1,771</b>	<b>2,127</b>	<b>1,766</b>	<b>1,104</b>	<b>689</b>	<b>403</b>	<b>296</b>	<b>222</b>
	<b>\$4,353</b>	<b>\$3,920</b>	<b>\$3,585</b>	<b>\$5,112</b>	<b>\$5,352</b>	<b>\$4,375</b>	<b>\$3,817</b>	<b>\$3,795</b>	<b>\$3,108</b>	<b>\$3,198</b>

**Note:** Total retired benefit \$44,743,043, average age 70.9, and average years of retirement 14.4. Includes members from withdrawn employers.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### General Tier 1

Age	Years of Retirement									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	2	—	—	2	—	—	—	—	—	—
	\$131	—	—	\$131	—	—	—	—	—	—
30 - 34	2	—	—	1	—	—	1	—	—	—
	\$823	—	—	\$1,156	—	—	\$489	—	—	—
35 - 39	7	1	1	2	—	1	2	—	—	—
	\$1,007	\$901	\$1,320	\$1,156	—	\$1,537	\$489	—	—	—
40 - 44	2	—	—	—	—	—	2	—	—	—
	\$710	—	—	—	—	—	\$710	—	—	—
45 - 49	7	1	1	—	1	—	2	1	1	—
	\$1,363	\$901	\$1,450	—	\$2,753	—	\$1,068	\$1,151	\$1,148	—
50 - 54	25	15	2	1	1	1	4	1	—	—
	\$2,160	\$2,387	\$2,386	\$4,342	\$1,023	\$2,621	\$1,071	\$1,158	—	—
55 - 59	83	48	21	4	1	4	2	2	1	—
	\$3,313	\$4,263	\$1,910	\$3,744	\$637	\$1,621	\$1,986	\$1,598	\$990	—
60 - 64	200	60	73	44	7	4	7	2	3	—
	\$3,437	\$4,043	\$3,694	\$2,891	\$2,239	\$2,459	\$1,814	\$2,481	\$1,632	—
65 - 69	421	51	87	184	54	17	12	5	6	5
	\$4,438	\$4,412	\$3,518	\$5,858	\$2,799	\$2,328	\$3,492	\$2,058	\$2,052	\$892
70 - 74	609	17	56	195	200	87	24	16	3	11
	\$4,750	\$2,575	\$4,403	\$6,503	\$4,770	\$2,748	\$3,013	\$2,525	\$2,288	\$1,962
75 - 79	634	3	10	81	257	153	81	23	12	14
	\$4,844	\$1,650	\$1,904	\$6,284	\$6,085	\$4,234	\$2,353	\$2,735	\$3,366	\$2,315
80 - 84	412	1	1	5	67	160	90	52	21	15
	\$4,588	\$3,637	\$1,304	\$1,997	\$6,603	\$5,783	\$3,131	\$2,523	\$2,380	\$2,991
85 - 89	350	—	1	1	9	79	106	78	57	19
	\$3,980	—	\$383	\$1,123	\$3,831	\$5,892	\$4,747	\$2,771	\$1,987	\$3,106
90 & Over	305	—	—	—	1	10	39	84	93	78
	\$3,487	—	—	—	\$1,424	\$4,261	\$4,953	\$4,550	\$2,866	\$2,276
<b>Total</b>	<b>3,059</b>	<b>197</b>	<b>253</b>	<b>520</b>	<b>598</b>	<b>516</b>	<b>372</b>	<b>264</b>	<b>197</b>	<b>142</b>
	<b>\$4,320</b>	<b>\$3,869</b>	<b>\$3,520</b>	<b>\$5,801</b>	<b>\$5,297</b>	<b>\$4,613</b>	<b>\$3,519</b>	<b>\$3,233</b>	<b>\$2,520</b>	<b>\$2,393</b>

**Note:** Total retired benefit \$13,215,482, average age 76.2, and average years of retirement 20.2. Includes members from withdrawn employers.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### General Tier 2

Age	Years of Retirement									
	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	—	—	—	—
40 - 44	\$931	—	—	—	—	\$931	—	—	—	—
45 - 49	8	—	—	—	1	4	2	1	—	—
50 - 54	\$967	—	—	—	\$1,524	\$818	\$1,204	\$532	—	—
55 - 59	12	1	—	—	—	3	5	3	—	—
60 - 64	\$1,131	\$24	—	—	—	\$1,540	\$1,268	\$864	—	—
65 - 69	16	9	4	—	1	—	1	1	—	—
70 - 74	\$576	\$402	\$190	—	\$724	—	\$1,873	\$2,235	—	—
75 - 79	42	11	15	8	1	4	3	—	—	—
80 - 84	\$627	\$721	\$398	\$287	\$1,870	\$1,725	\$455	—	—	—
85 - 89	66	10	10	10	21	5	9	1	—	—
90 & Over	\$995	\$769	\$667	\$870	\$826	\$2,200	\$1,227	\$3,212	—	—
	84	4	7	15	26	23	4	5	—	—
	\$989	\$664	\$362	\$979	\$1,113	\$789	\$1,655	\$1,894	—	—
	112	—	3	16	16	49	24	2	2	—
	\$1,054	—	\$1,041	\$956	\$758	\$1,153	\$993	\$2,019	\$1,548	—
	74	—	1	3	17	27	23	3	—	—
	\$1,251	—	\$30	\$388	\$1,209	\$1,566	\$1,090	\$1,160	—	—
	79	—	—	3	2	39	27	7	1	—
	\$1,127	—	—	\$1,510	\$1,486	\$1,146	\$979	\$1,347	\$911	—
	48	—	—	—	1	13	24	7	3	—
	\$1,183	—	—	—	\$68	\$1,028	\$1,557	\$693	\$374	—
<b>Total</b>	<b>543</b>	<b>35</b>	<b>40</b>	<b>55</b>	<b>86</b>	<b>169</b>	<b>122</b>	<b>30</b>	<b>6</b>	<b>—</b>
	<b>\$1,038</b>	<b>\$626</b>	<b>\$477</b>	<b>\$849</b>	<b>\$1,001</b>	<b>\$1,199</b>	<b>\$1,167</b>	<b>\$1,328</b>	<b>\$855</b>	<b>—</b>

**Note:** Total retired benefit \$563,803, average age 75.8, and average years of retirement 19.7. Includes members from withdrawn employers.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### General Tier 3

Age	Years of Retirement									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	10	4	4	2	—	—	—	—	—	—
	\$468	\$222	\$181	\$1,534	—	—	—	—	—	—
30 - 34	9	1	3	3	1	1	—	—	—	—
	\$963	\$121	\$181	\$1,689	\$2,152	\$785	—	—	—	—
35 - 39	8	—	3	1	2	1	1	—	—	—
	\$1,178	—	\$850	\$1,200	\$1,309	\$2,178	\$874	—	—	—
40 - 44	8	—	1	4	3	—	—	—	—	—
	\$935	—	\$556	\$1,169	\$749	—	—	—	—	—
45 - 49	17	5	6	3	2	1	—	—	—	—
	\$1,674	\$1,335	\$2,195	\$1,334	\$1,823	\$962	—	—	—	—
50 - 54	86	68	8	3	3	4	—	—	—	—
	\$1,859	\$1,899	\$2,123	\$1,699	\$1,288	\$1,202	—	—	—	—
55 - 59	341	231	93	8	6	3	—	—	—	—
	\$2,886	\$3,303	\$1,978	\$2,882	\$1,737	\$1,225	—	—	—	—
60 - 64	678	334	238	100	5	1	—	—	—	—
	\$3,061	\$3,681	\$2,620	\$2,090	\$2,663	\$127	—	—	—	—
65 - 69	997	344	349	235	65	4	—	—	—	—
	\$3,467	\$3,630	\$3,390	\$3,740	\$2,057	\$3,215	—	—	—	—
70 - 74	1,011	176	317	360	132	26	—	—	—	—
	\$3,271	\$3,137	\$3,048	\$3,770	\$3,015	\$1,269	—	—	—	—
75 - 79	661	29	102	284	210	35	1	—	—	—
	\$3,266	\$2,271	\$2,541	\$3,704	\$3,428	\$1,707	\$2,383	—	—	—
80 - 84	259	5	15	77	118	43	—	1	—	—
	\$2,586	\$3,129	\$2,527	\$2,676	\$2,818	\$1,762	—	\$1,703	—	—
85 - 89	75	—	2	12	38	23	—	—	—	—
	\$2,186	—	\$2,836	\$3,052	\$1,947	\$2,074	—	—	—	—
90 & Over	7	—	1	2	3	1	—	—	—	—
	\$2,545	—	\$855	\$755	\$3,345	\$5,415	—	—	—	—
<b>Total</b>	<b>4,167</b>	<b>1,197</b>	<b>1,142</b>	<b>1,094</b>	<b>588</b>	<b>143</b>	<b>2</b>	<b>1</b>	<b>—</b>	<b>—</b>
	<b>\$3,132</b>	<b>\$3,351</b>	<b>\$2,885</b>	<b>\$3,462</b>	<b>\$2,902</b>	<b>\$1,728</b>	<b>\$1,629</b>	<b>\$1,703</b>	<b>—</b>	<b>—</b>

**Note:** Total retired benefit \$13,052,223, average age 68.8, and average years of retirement 8.7.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### General Tier 4

Age	Years of Retirement									
	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	2	2	—	—	—	—	—	—	—	—
65 - 69	\$1,401	\$1,401	—	—	—	—	—	—	—	—
70 - 74	1	1	—	—	—	—	—	—	—	—
75 - 79	\$1,454	\$1,454	—	—	—	—	—	—	—	—
80 - 84	1	1	—	—	—	—	—	—	—	—
85 - 89	\$1,357	\$1,357	—	—	—	—	—	—	—	—
90 & Over	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>4</b>	<b>4</b>	—	—	—	—	—	—	—	—
	<b>\$1,403</b>	<b>\$1,403</b>	—	—	—	—	—	—	—	—

**Note:** Total retired benefit \$5,614, average age 64.8, and average years of retirement 0.3.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### General Tier 5

Age	Years of Retirement									
	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	7	7	—	—	—	—	—	—	—	—
	\$773	\$773	—	—	—	—	—	—	—	—
60 - 64	14	14	—	—	—	—	—	—	—	—
	\$521	\$521	—	—	—	—	—	—	—	—
65 - 69	32	32	—	—	—	—	—	—	—	—
	\$771	\$771	—	—	—	—	—	—	—	—
70 - 74	9	9	—	—	—	—	—	—	—	—
	\$1,103	\$1,103	—	—	—	—	—	—	—	—
75 - 79	3	3	—	—	—	—	—	—	—	—
	\$588	\$588	—	—	—	—	—	—	—	—
80 - 84	2	2	—	—	—	—	—	—	—	—
	\$539	\$539	—	—	—	—	—	—	—	—
85 - 89	—	—	—	—	—	—	—	—	—	—
90 & Over	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>67</b>	<b>67</b>	—	—	—	—	—	—	—	—
	<b>\$748</b>	<b>\$748</b>	—	—	—	—	—	—	—	—

**Note:** Total retired benefit \$50,143, average age 66.4, and average years of retirement 1.6.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### Safety Tier A and Tier C

Age	Years of Retirement									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 30	5	—	—	—	3	1	1	—	—	—
	\$1,355	—	—	—	\$1,604	\$315	\$1,651	—	—	—
30 - 34	2	1	—	—	1	—	—	—	—	—
	\$2,838	\$4,672	—	—	\$1,003	—	—	—	—	—
35 - 39	9	5	4	—	—	—	—	—	—	—
	\$4,275	\$4,368	\$4,158	—	—	—	—	—	—	—
40 - 44	25	10	8	5	—	—	2	—	—	—
	\$3,863	\$3,611	\$4,412	\$4,477	—	—	\$1,388	—	—	—
45 - 49	49	23	11	8	6	—	—	1	—	—
	\$4,487	\$5,373	\$3,242	\$3,737	\$4,867	—	—	\$1,510	—	—
50 - 54	231	169	30	13	13	5	1	—	—	—
	\$5,922	\$6,205	\$5,793	\$5,061	\$4,482	\$4,074	\$978	—	—	—
55 - 59	376	115	174	44	18	17	6	2	—	—
	\$7,184	\$8,388	\$6,937	\$7,806	\$4,693	\$4,547	\$3,549	\$1,406	—	—
60 - 64	371	36	63	203	33	20	7	7	2	—
	\$7,948	\$6,394	\$7,413	\$9,355	\$5,362	\$4,930	\$4,233	\$5,523	\$4,329	—
65 - 69	343	24	25	105	136	24	17	6	4	2
	\$8,394	\$5,149	\$4,560	\$9,936	\$9,977	\$4,960	\$3,962	\$4,463	\$5,107	\$3,877
70 - 74	346	7	14	55	171	40	34	12	12	1
	\$8,145	\$3,821	\$5,040	\$8,711	\$10,504	\$5,298	\$3,978	\$4,307	\$3,543	\$4,263
75 - 79	339	1	5	18	101	115	39	20	25	15
	\$7,335	\$712	\$4,152	\$6,236	\$9,067	\$8,339	\$5,845	\$5,106	\$3,383	\$4,234
80 - 84	182	—	1	5	12	47	57	26	17	17
	\$7,247	—	\$1,548	\$3,666	\$5,718	\$10,009	\$8,139	\$5,853	\$4,065	\$4,403
85 - 89	82	—	—	2	—	6	24	25	13	12
	\$6,867	—	—	\$4,699	—	\$7,167	\$7,959	\$8,226	\$4,884	\$4,211
90 & Over	68	—	—	—	—	1	5	9	20	33
	\$5,675	—	—	—	—	\$609	\$6,681	\$5,873	\$6,491	\$5,128
<b>Total</b>	<b>2,428</b>	<b>391</b>	<b>335</b>	<b>458</b>	<b>494</b>	<b>276</b>	<b>193</b>	<b>108</b>	<b>93</b>	<b>80</b>
	<b>\$7,346</b>	<b>\$6,600</b>	<b>\$6,395</b>	<b>\$8,784</b>	<b>\$9,093</b>	<b>\$7,248</b>	<b>\$6,090</b>	<b>\$5,873</b>	<b>\$4,501</b>	<b>\$4,627</b>

**Note:** Total retired benefit \$17,836,969, average age 67.0, and average years of retirement 16.0. Includes members from withdrawn employers.

## Section 3: Supplemental Information

### Exhibit C: Retired Members and Beneficiaries as of December 31, 2021 by Age, Years of Retirement, and Average Monthly Benefit (continued)

#### Safety Tier D and Tier E

Age	Years of Retirement									
	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	6	5	1	—	—	—	—	—	—	—
60 - 64	\$1,683	\$1,547	\$2,360	—	—	—	—	—	—	—
65 - 69	4	4	—	—	—	—	—	—	—	—
70 - 74	\$2,178	\$2,178	—	—	—	—	—	—	—	—
75 - 79	—	—	—	—	—	—	—	—	—	—
80 - 84	—	—	—	—	—	—	—	—	—	—
85 - 89	—	—	—	—	—	—	—	—	—	—
90 & Over	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>10</b>	<b>9</b>	<b>1</b>	<b>—</b>						
	<b>\$1,881</b>	<b>\$1,828</b>	<b>\$2,360</b>	<b>—</b>						

**Note:** Total retired benefit \$18,809, average age 59.7, and average years of retirement 1.5.

## Section 3: Supplemental Information

### Exhibit D: Reconciliation of Member Data

	Active Members	Inactive Vested Members <sup>1</sup>	Retired Members	Disabled Members	Beneficiaries	Total
<b>Number as of December 31, 2020</b>	<b>10,099</b>	<b>3,591</b>	<b>7,655</b>	<b>896</b>	<b>1,467</b>	<b>23,708</b>
• New members	837	128	0	0	91	1,056
• Terminations – with vested rights	(448)	448	0	0	0	0
• Contribution refunds	(112)	(241)	0	0	0	(353)
• Retirements	(381)	(68)	452	(3)	0	0
• New disabilities	(16)	0	(4)	20	0	0
• Return to work	39	(39)	0	0	0	0
• Died with or without beneficiary	(13)	(2)	(196)	(28)	(71)	(310)
• Data adjustments	<u>0</u>	<u>(5)</u>	<u>1</u>	<u>0</u>	<u>(2)</u>	<u>(6)</u>
<b>Number as of December 31, 2021</b>	<b>10,005</b>	<b>3,812</b>	<b>7,908</b>	<b>885</b>	<b>1,485</b>	<b>24,095</b>

<sup>1</sup> Includes inactive members with member contributions on deposit.

## Section 3: Supplemental Information

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

	Year Ended December 31, 2021	Year Ended December 31, 2020
<b>Net assets at market value at the beginning of the year</b>	<b>\$10,070,237,862</b>	<b>\$9,257,012,679</b>
<b>Contribution income:</b>		
• Employer contributions	\$410,759,608	\$336,356,723
• Member contributions	117,016,915	113,494,191
• Less administrative expenses	<u>(11,237,383)</u>	<u>(10,749,625)</u>
<i>Net contribution income</i>	<i>\$516,539,140</i>	<i>\$439,101,289</i>
<b>Investment income:</b>		
• Interest, dividends and other income	\$154,751,676	\$130,660,576
• Asset appreciation	1,301,941,286	796,963,948
• Less investment and administrative fees	<u>(49,349,348)</u>	<u>(45,230,463)</u>
<i>Net investment income</i>	<i><u>\$1,407,343,614</u></i>	<i><u>\$882,394,061</u></i>
<b>Total income available for benefits</b>	<b>\$1,923,882,754</b>	<b>\$1,321,495,350</b>
<b>Less benefit payments:</b>		
• Benefits paid	\$(530,203,441)	\$(499,301,074)
• Refunds of contributions	(7,797,039)	(6,857,502)
• Adjustments, transfers or other expenses	<u>(2,354,383)</u>	<u>(2,111,589)</u>
<i>Net benefit payments</i>	<i><u>\$(540,354,863)</u></i>	<i><u>\$(508,270,165)</u></i>
<b>Change in net assets at market value</b>	<b>\$1,383,527,891</b>	<b>\$813,225,183</b>
<b>Net assets at market value at the end of the year</b>	<b>\$11,453,765,753</b>	<b>\$10,070,237,862</b>

**Note:** Results may be slightly off due to rounding.

## Section 3: Supplemental Information

### Exhibit F: Summary Statement of Plan Assets

	December 31, 2021	December 31, 2020
<i>Cash equivalents</i>	\$1,237,796,371	\$882,668,630
<b>Accounts receivable:</b>		
• Investment trades	\$14,987,409	\$10,046,173
• Investment income	17,821,719	19,538,597
• Employer and member contributions	10,773,593	11,012,709
• Additional contributions	<u>6,245,892</u>	<u>8,576,210</u>
<i>Total accounts receivable</i>	\$49,828,613	\$49,173,689
<b>Investments:</b>		
• Stocks	\$5,648,984,567	\$4,660,909,084
• Bonds	2,219,364,324	2,486,582,623
• Real estate	601,655,645	595,612,663
• Alternative investments and real assets	<u>2,338,181,666</u>	<u>1,879,367,126</u>
<i>Total investments at market value</i>	\$10,808,186,202	\$9,622,471,496
<i>Other assets</i>	<u>3,359,519</u>	<u>1,495,697</u>
<b>Total assets</b>	<b>\$12,099,170,705</b>	<b>\$10,555,809,512</b>
<b>Accounts payable:</b>		
• Investment trades	\$(31,033,062)	\$(11,230,649)
• Security lending	(409,048,701)	(260,297,271)
• Employer contributions unearned	(151,108,057)	(161,368,992)
• Other	<u>(53,217,133)</u>	<u>(51,676,739)</u>
<b>Total accounts payable</b>	<b>\$(644,406,953)</b>	<b>\$(484,573,651)</b>
<b>Deferred inflows of resources</b>	<b><u>(998,000)</u></b>	<b><u>(998,000)</u></b>
<b>Net assets at market value</b>	<b>\$11,453,765,753</b>	<b>\$10,070,237,862</b>
<b>Net assets at actuarial value</b>	<b>\$10,451,125,236</b>	<b>\$9,678,508,253</b>
<b>Net assets at valuation value</b>	<b>\$10,434,412,288</b>	<b>\$9,662,282,926</b>

**Note:** Results may be slightly off due to rounding.

## Section 3: Supplemental Information

### Exhibit G: Summary of Total Allocated Reserves

	December 31, 2021	December 31, 2020
• Member Deposits <sup>1</sup>	\$1,029,847,720	\$973,635,412
• Member Cost of Living <sup>1</sup>	522,964,111	503,099,601
• Employer Advance <sup>1, 2</sup>	3,139,040,709	2,759,386,818
• Employer Cost of Living <sup>1, 2</sup>	2,190,242,717	1,129,649,739
• Retired Members <sup>1, 2</sup>	3,797,564,502	3,735,883,052
• Retired Cost of Living <sup>1, 2</sup>	2,179,759,742	2,952,638,062
• Dollar Power Cost of Living Supplement Pre-Funding <sup>1</sup>	(820,020)	271,471
• Post Retirement Death Benefit <sup>3</sup>	16,712,948	16,225,327
• Statutory Contingency (one percent) <sup>3</sup>	0	0
• Additional One Percent Contingency Designation <sup>3</sup>	0	0
• Contra Tracking Account <sup>1</sup>	<u>(2,424,187,193)</u>	<u>(2,392,281,230)</u>
<b>Total Allocated Reserves</b>	<b>\$10,451,125,236</b>	<b>\$9,678,508,253</b>
Total Deferred Return	<u>1,002,640,517</u>	<u>391,729,609</u>
<b>Net Market Value</b>	<b>\$11,453,765,753</b>	<b>\$10,070,237,862</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> Included in valuation value of assets.

<sup>2</sup> Both December 31, 2021 and December 31, 2020 information reflect a “true-up” of retired reserves.

<sup>3</sup> Not included in valuation value of assets. See reference made on page 143 with respect to the payment of benefits out of the Post Retirement Death Benefit Reserve.

## Section 3: Supplemental Information

### Exhibit H: Development of the Fund Through December 31, 2021

Year Ended December 31	Employer Contributions <sup>1</sup>	Member Contributions <sup>1</sup>	Administrative Expenses <sup>2</sup>	Net Investment Return <sup>3</sup>	Benefit Payments	Market Value of Assets at Year-End	Valuation Value of Assets at Year-End	Valuation Value as a Percent of Market Value
2012	\$212,321,325	\$73,361,712	N/A	\$668,138,997	\$351,530,368	\$5,654,581,124	\$5,482,257,062	97.0%
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%

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> Prior to 2017, employer contributions include “employer subvention of member contributions” and exclude “member subvention of employer contributions”.

<sup>2</sup> Prior to 2016, administrative expenses were shown as an offset to the net investment return.

<sup>3</sup> 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.

## Section 3: Supplemental Information

### Exhibit I: Table of Amortization Bases

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

Type	Date Established	Initial Amount <sup>1</sup>	Initial Period	Outstanding Balance	Years Remaining	Annual Payment <sup>2</sup>
Restart of Amortization	December 31, 2007	\$784,550,613	15	\$110,018,052	1	\$113,974,293
Actuarial Loss	December 31, 2008	79,980,337	18	43,925,121	5	9,763,196
Actuarial Loss	December 31, 2009	164,932,313	18	102,584,479	6	19,332,606
Assumption Change	December 31, 2009	39,537,694	18	24,591,626	6	4,634,426
Depooling Implementation	December 31, 2009	(74,652,572)	18	(46,432,352)	6	(8,750,430)
Actuarial Loss	December 31, 2010	152,969,439	18	104,788,384	7	17,220,266
Actuarial Loss	December 31, 2011	94,687,495	18	69,987,137	8	10,236,974
Actuarial Loss	December 31, 2012	116,951,818	18	91,822,614	9	12,142,918
Assumption Change	December 31, 2012	288,612,127	18	226,598,616	9	29,966,130
Actuarial Gain	December 31, 2013	(134,721,070)	18	(111,346,339)	10	(13,477,780)
Assumption Change <sup>3</sup>	December 31, 2013	(107,482,250)	18	(88,833,581)	10	(10,752,751)
Actuarial Gain	December 31, 2014	(171,785,272)	18	(147,976,787)	11	(16,558,608)
Actuarial Gain	December 31, 2015	(104,934,178)	18	(93,437,678)	12	(9,745,369)
Assumption Change	December 31, 2015	39,788,586	18	35,429,382	12	3,695,216
Actuarial Gain	December 31, 2016	(28,560,150)	18	(26,246,090)	13	(2,569,020)
Actuarial Gain	December 31, 2017	(17,925,791)	18	(16,902,450)	14	(1,561,747)
Actuarial Loss	December 31, 2018	75,214,335	18	72,404,109	15	6,346,852
Assumption Change	December 31, 2018	(6,017,706)	18	(5,792,867)	15	(507,795)
Actuarial Loss	December 31, 2019	8,869,944	18	8,679,318	16	724,943
Method Change	December 31, 2019	(9,431,611)	18	(9,228,915)	16	(770,848)
Actuarial Loss	December 31, 2020	34,716,218	18	34,398,923	17	2,748,147
Actuarial Gain	December 31, 2021	(29,835,340)	18	(29,835,340)	18	(2,287,511)
Assumption Change	December 31, 2021	114,962,352	18	114,962,352	18	8,814,300
<b>Subtotal – Cost Groups #1 and #2</b>				<b>\$464,157,712</b>		<b>\$172,618,408</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> 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.

<sup>2</sup> As of middle of year.

<sup>3</sup> 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.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Actuarial Surplus <sup>2</sup>	December 31, 2021	\$(5,763,756)		\$(5,763,756)	N/A	\$0
<b>Subtotal – Cost Group #3</b>				<b>\$(5,763,756)</b>		<b>\$0</b>

<sup>1</sup> As of middle of year.

<sup>2</sup> Consistent with CCCERA's Actuarial Funding Policy, all prior UAAL layers are considered fully amortized due to surplus.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Restart of Amortization	December 31, 2007	\$7,770,000	15	\$1,089,592	1	\$1,128,774
Actuarial Loss	December 31, 2008	1,573,513	18	864,172	5	192,079
Actuarial Loss	December 31, 2009	1,277,079	18	794,317	6	149,693
Assumption Change	December 31, 2009	425,000	18	264,341	6	49,817
Depooling Implementation	December 31, 2009	(189,275)	18	(117,725)	6	(22,186)
Actuarial Loss	December 31, 2010	619,697	18	424,510	7	69,761
Assumption Change <sup>2</sup>	December 31, 2010	(920,656)	18	(630,675)	7	(103,641)
Actuarial Loss	December 31, 2011	1,059,328	18	782,990	8	114,527
Actuarial Loss	December 31, 2012	1,912,999	18	1,501,957	9	198,624
Assumption Change	December 31, 2012	3,722,862	18	2,922,938	9	386,539
Actuarial Gain	December 31, 2013	(2,220,704)	18	(1,835,402)	10	(222,164)
Assumption Change <sup>2</sup>	December 31, 2013	(1,077,289)	18	(890,374)	10	(107,774)
Actuarial Gain	December 31, 2014	(1,360,021)	18	(1,171,529)	11	(131,094)
Actuarial Gain	December 31, 2015	(875,294)	18	(779,398)	12	(81,290)
Assumption Change	December 31, 2015	432,801	18	385,384	12	40,195
Actuarial Gain	December 31, 2016	(297,092)	18	(273,020)	13	(26,724)
Actuarial Loss	December 31, 2017	53,895	18	50,818	14	4,695
Actuarial Loss	December 31, 2018	527,741	18	508,023	15	44,533
Assumption Change	December 31, 2018	86,577	18	83,342	15	7,306
Actuarial Loss	December 31, 2019	544,467	18	532,765	16	44,499
Method Change	December 31, 2019	(103,353)	18	(101,132)	16	(8,447)
Actuarial Loss	December 31, 2020	80,685	18	79,948	17	6,387
Actuarial Gain	December 31, 2021	(439,350)	18	(439,350)	18	(33,686)
Assumption Change	December 31, 2021	1,519,858	18	1,519,858	18	116,529
<b>Subtotal – Cost Group #4</b>				<b>\$5,566,349</b>		<b>\$1,816,952</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

<sup>2</sup> 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.

## Section 3: Supplemental Information

### Exhibit I: Table of Amortization Bases (continued)

#### Cost Groups #5 – Contra Costa County Fire Protection District

Type	Date Established	Initial Amount <sup>1</sup>	Initial Period	Outstanding Balance	Years Remaining	Annual Payment <sup>2</sup>
Restart of Amortization	December 31, 2007	\$(492,460)	15	\$(69,058)	1	\$(71,541)
Actuarial Loss	December 31, 2008	98,825	18	54,274	5	12,064
Actuarial Loss	December 31, 2009	1,723,190	18	1,071,788	6	201,984
Assumption Change	December 31, 2009	362,132	18	225,239	6	42,447
Depooling Implementation	December 31, 2009	2,093,197	18	1,301,925	6	245,355
Actuarial Loss	December 31, 2010	2,823,409	18	1,934,115	7	317,840
Actuarial Loss	December 31, 2011	1,413,203	18	1,044,552	8	152,786
Actuarial Loss	December 31, 2012	1,864,724	18	1,464,054	9	193,611
Assumption Change	December 31, 2012	3,374,927	18	2,649,763	9	350,413
Actuarial Gain	December 31, 2013	(2,589,708)	18	(2,140,381)	10	(259,080)
Assumption Change <sup>3</sup>	December 31, 2013	(1,056,692)	18	(873,351)	10	(105,714)
Actuarial Gain	December 31, 2014	(2,329,297)	18	(2,006,470)	11	(224,524)
Actuarial Gain	December 31, 2015	(825,906)	18	(735,420)	12	(76,703)
Assumption Change	December 31, 2015	382,244	18	340,365	12	35,499
Actuarial Loss	December 31, 2016	1,572,498	18	1,445,088	13	141,448
Actuarial Loss	December 31, 2017	1,464,466	18	1,380,863	14	127,589
Actuarial Loss	December 31, 2018	1,545,142	18	1,487,411	15	130,385
Assumption Change	December 31, 2018	602,943	18	580,415	15	50,878
Actuarial Loss	December 31, 2019	1,838,915	18	1,799,394	16	150,295
Method Change	December 31, 2019	(872,975)	18	(854,213)	16	(71,348)
Actuarial Loss	December 31, 2020	2,595,831	18	2,572,106	17	205,487
Actuarial Gain	December 31, 2021	(1,811,591)	18	(1,811,591)	18	(138,897)
Assumption Change	December 31, 2021	1,486,425	18	1,486,425	18	113,966
<b>Subtotal – Cost Group #5</b>				<b>\$12,347,295</b>		<b>\$1,524,240</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> 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.

<sup>2</sup> As of middle of year.

<sup>3</sup> 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.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Actuarial Surplus <sup>2</sup>	December 31, 2021	\$(880,704)		\$(880,704)	N/A	\$0
<b>Subtotal – Cost Group #6</b>				<b>\$(880,704)</b>		<b>\$0</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

<sup>2</sup> Consistent with CCCERA's Actuarial Funding Policy, all prior UAAL layers are considered fully amortized due to surplus.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Restart of Amortization	December 31, 2007	\$127,662,439	15	\$17,902,188	1	\$18,545,950
Actuarial Loss	December 31, 2008	25,619,265	18	14,070,074	5	3,127,342
Actuarial Loss	December 31, 2009	55,134,940	18	34,292,789	6	6,462,664
Assumption Change	December 31, 2009	11,076,665	18	6,889,456	6	1,298,356
Depooling Implementation	December 31, 2009	23,852,078	18	14,835,498	6	2,795,831
Actuarial Loss	December 31, 2010	57,287,975	18	39,243,881	7	6,449,093
Actuarial Loss	December 31, 2011	45,209,350	18	33,415,953	8	4,887,730
Actuarial Loss	December 31, 2012	53,258,503	18	41,814,955	9	5,529,744
Assumption Change	December 31, 2012	138,353,562	18	108,625,808	9	14,365,026
Actuarial Gain	December 31, 2013	(35,024,912)	18	(28,947,928)	10	(3,503,966)
Assumption Change <sup>2</sup>	December 31, 2013	(43,771,706)	18	(36,177,112)	10	(4,379,014)
Actuarial Gain	December 31, 2014	(61,815,393)	18	(53,248,122)	11	(5,958,467)
Assumption Change <sup>3</sup>	December 31, 2014	(51,701)	18	(44,535)	11	(4,983)
Actuarial Gain	December 31, 2015	(58,489,966)	18	(52,081,855)	12	(5,432,037)
Assumption Change	December 31, 2015	39,291,409	18	34,986,675	12	3,649,043
Actuarial Gain	December 31, 2016	(13,557,811)	18	(12,459,302)	13	(1,219,542)
Actuarial Gain	December 31, 2017	(8,178,240)	18	(7,711,364)	14	(712,512)
Actuarial Loss	December 31, 2018	41,037,406	18	39,504,129	15	3,462,881
Assumption Change	December 31, 2018	(47,713,599)	18	(45,930,880)	15	(4,026,242)
Actuarial Loss	December 31, 2019	10,313,187	18	10,091,544	16	842,899
Method Change	December 31, 2019	(1,626,137)	18	(1,591,189)	16	(132,905)
Actuarial Loss	December 31, 2020	5,352,140	18	5,303,223	17	423,677
Actuarial Gain	December 31, 2021	(9,006,255)	18	(9,006,255)	18	(690,520)
Assumption Change	December 31, 2021	58,980,022	18	58,980,022	18	4,522,068
<b>Subtotal – Cost Groups #7 and #9</b>				<b>\$212,757,654</b>		<b>\$50,302,116</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

<sup>2</sup> 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.

<sup>3</sup> Effective with the December 31, 2014 valuation, leave cashout (terminal pay) assumptions were eliminated for Cost Group #9.

## Section 3: Supplemental Information

### Exhibit I: Table of Amortization Bases (continued)

#### Cost Group #8 – Contra Costa Fire Protection District

Type	Date Established	Initial Amount <sup>1</sup>	Initial Period	Outstanding Balance	Years Remaining	Annual Payment <sup>2</sup>
Restart of Amortization	December 31, 2007	\$124,138,710	15	\$17,408,053	1	\$18,034,046
CCCFPD Safety POBs	December 31, 2007	(127,509,711)	15	(17,880,711)	1	(18,523,700)
Actuarial Loss	December 31, 2008	6,780,436	18	3,723,809	5	827,688
Actuarial Loss	December 31, 2009	27,018,706	18	16,805,075	6	3,167,008
Assumption Change	December 31, 2009	4,945,000	18	3,075,687	6	579,630
Depooling Implementation	December 31, 2009	47,818,666	18	29,742,219	6	5,605,084
Actuarial Loss	December 31, 2010	38,165,445	18	26,144,407	7	4,296,408
Assumption Change <sup>3</sup>	December 31, 2010	(1,599,051)	18	(1,095,395)	7	(180,010)
Actuarial Loss	December 31, 2011	26,533,166	18	19,611,675	8	2,868,587
Actuarial Loss	December 31, 2012	31,501,440	18	24,732,788	9	3,270,744
Assumption Change	December 31, 2012	68,193,356	18	53,540,786	9	7,080,406
Actuarial Gain	December 31, 2013	(22,661,640)	18	(18,729,741)	10	(2,267,118)
Assumption Change <sup>3</sup>	December 31, 2013	(17,910,676)	18	(14,803,091)	10	(1,791,822)
Actuarial Gain	December 31, 2014	(29,217,962)	18	(25,168,515)	11	(2,816,358)
Actuarial Gain	December 31, 2015	(19,005,510)	18	(16,923,282)	12	(1,765,066)
Assumption Change	December 31, 2015	24,296,846	18	21,634,904	12	2,256,479
Actuarial Gain	December 31, 2016	(8,297,685)	18	(7,625,373)	13	(746,387)
Actuarial Gain	December 31, 2017	(10,658,502)	18	(10,050,034)	14	(928,600)
Actuarial Loss	December 31, 2018	19,301,243	18	18,580,092	15	1,628,707
Assumption Change	December 31, 2018	(23,503,820)	18	(22,625,649)	15	(1,983,335)
Actuarial Loss	December 31, 2019	11,258,256	18	11,016,303	16	920,140
Method Change	December 31, 2019	(3,057,179)	18	(2,991,477)	16	(249,864)

<sup>1</sup> 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.

<sup>2</sup> As of middle of year.

<sup>3</sup> 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.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Actuarial Gain	December 31, 2020	\$(5,495,306)	18	\$(5,445,081)	17	\$(435,010)
Actuarial Loss	December 31, 2021	7,016,144	18	7,016,144	18	537,936
Assumption Change	December 31, 2021	25,946,537	18	25,946,537	18	1,989,352
<b>Subtotal – Cost Group #8</b>				<b>\$135,640,132</b>		<b>\$21,374,945</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Restart of Amortization	December 31, 2007	\$(2,591,000)	15	\$(363,338)	1	\$(376,403)
Actuarial Loss	December 31, 2008	2,002,150	18	1,099,579	5	244,402
Actuarial Loss	December 31, 2009	5,671,684	18	3,527,670	6	664,809
Assumption Change	December 31, 2009	1,012,000	18	629,443	6	118,622
Depooling Implementation	December 31, 2009	4,873,631	18	3,031,297	6	571,265
Actuarial Loss	December 31, 2010	5,334,964	18	3,654,601	7	600,574
Assumption Change <sup>2</sup>	December 31, 2010	806,018	18	552,145	7	90,736
Actuarial Loss	December 31, 2011	6,791,005	18	5,019,491	8	734,198
Actuarial Loss	December 31, 2012	8,924,598	18	7,006,988	9	926,627
Assumption Change	December 31, 2012	12,149,892	18	9,539,269	9	1,261,504
Actuarial Gain	December 31, 2013	(1,027,440)	18	(849,174)	10	(102,787)
Assumption Change <sup>2</sup>	December 31, 2013	(3,613,981)	18	(2,986,939)	10	(361,550)
Actuarial Gain	December 31, 2014	(4,813,045)	18	(4,145,983)	11	(463,936)
Actuarial Gain	December 31, 2015	(8,490,806)	18	(7,560,560)	12	(788,552)
Assumption Change	December 31, 2015	3,844,347	18	3,423,164	12	357,029
Actuarial Loss	December 31, 2016	1,028,690	18	945,341	13	92,532
Actuarial Gain	December 31, 2017	(422,995)	18	(398,847)	14	(36,853)
Actuarial Loss	December 31, 2018	6,029,055	18	5,803,792	15	508,753
Assumption Change	December 31, 2018	(4,116,542)	18	(3,962,736)	15	(347,368)
Actuarial Loss	December 31, 2019	3,411,399	18	3,338,084	16	278,814
Method Change	December 31, 2019	(471,164)	18	(461,038)	16	(38,508)
Actuarial Gain	December 31, 2020	(864,383)	18	(856,483)	17	(68,425)
Actuarial Loss	December 31, 2021	2,537,586	18	2,537,586	18	194,560
Assumption Change	December 31, 2021	5,301,507	18	5,301,507	18	406,473
<b>Subtotal – Cost Group #10</b>				<b>\$33,824,857</b>		<b>\$4,466,516</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

<sup>2</sup> 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.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Restart of Amortization	December 31, 2007	\$58,766,000	15	\$8,240,795	1	\$8,537,133
Actuarial Loss	December 31, 2008	10,216,694	18	5,610,998	5	1,247,151
Actuarial Loss	December 31, 2009	9,262,105	18	5,760,837	6	1,085,661
Assumption Change	December 31, 2009	2,453,000	18	1,525,715	6	287,529
Depooling Implementation	December 31, 2009	(20,174,500)	18	(12,548,121)	6	(2,364,762)
Actuarial Loss	December 31, 2010	6,585,812	18	4,511,467	7	741,386
Assumption Change <sup>2</sup>	December 31, 2010	5,093,420	18	3,489,136	7	573,383
Actuarial Loss	December 31, 2011	5,513,071	18	4,074,921	8	596,036
Actuarial Loss	December 31, 2012	14,600,741	18	11,463,509	9	1,515,971
Assumption Change	December 31, 2012	26,672,143	18	20,941,153	9	2,769,325
Actuarial Gain	December 31, 2013	(4,492,900)	18	(3,713,361)	10	(449,479)
Assumption Change <sup>2</sup>	December 31, 2013	(12,984,002)	18	(10,731,217)	10	(1,298,947)
Actuarial Gain	December 31, 2014	(13,850,852)	18	(11,931,201)	11	(1,335,102)
Actuarial Gain	December 31, 2015	(9,008,582)	18	(8,021,609)	12	(836,638)
Assumption Change	December 31, 2015	5,533,144	18	4,926,937	12	513,870
Actuarial Loss	December 31, 2016	2,020,042	18	1,856,370	13	181,705
UAAL Prepayment	December 31, 2017	(303,806)	18	(286,462)	14	(26,468)
Actuarial Gain	December 31, 2017	(1,837,378)	18	(1,732,486)	14	(160,078)
UAAL Prepayment	December 31, 2018	(261,501)	18	(251,731)	15	(22,066)
Actuarial Loss	December 31, 2018	11,681,729	18	11,245,265	15	985,746
Assumption Change	December 31, 2018	(9,240,163)	18	(8,894,924)	15	(779,718)
UAAL Prepayment	December 31, 2019	(1,267,559)	18	(1,240,318)	16	(103,598)
Actuarial Loss	December 31, 2019	5,365,395	18	5,250,087	16	438,515
Method Change	December 31, 2019	(1,623,299)	18	(1,588,412)	16	(132,673)

<sup>1</sup> As of middle of year.

<sup>2</sup> 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.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
UAAL Prepayment	December 31, 2020	\$(267,529)	18	\$(265,084)	17	\$(21,178)
Actuarial Gain	December 31, 2020	(60,980)	18	(60,422)	17	(4,827)
UAAL Prepayment	December 31, 2021	(270,666)	18	(270,666)	18	(20,752)
Actuarial Loss	December 31, 2021	2,230,205	18	2,230,205	18	170,992
Assumption Change	December 31, 2021	13,908,945	18	13,908,945	18	1,066,415
<b>Subtotal – Cost Group #11</b>				<b>\$43,500,327</b>		<b>\$13,154,532</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

## Section 3: Supplemental Information

### 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 <sup>1</sup>
Restart of Amortization	December 31, 2007	\$3,960,000	15	\$555,313	1	\$575,282
Actuarial Loss	December 31, 2008	957,150	18	525,666	5	116,839
Actuarial Loss	December 31, 2009	2,872,360	18	1,786,548	6	336,685
Assumption Change	December 31, 2009	1,154,000	18	717,764	6	135,267
Depooling Implementation	December 31, 2009	(1,809,374)	18	(1,125,393)	6	(212,086)
Actuarial Loss	December 31, 2010	1,502,503	18	1,029,257	7	169,142
Assumption Change <sup>2</sup>	December 31, 2010	662,085	18	453,547	7	74,533
Actuarial Loss	December 31, 2011	2,067,217	18	1,527,959	8	223,494
Actuarial Loss	December 31, 2012	2,246,131	18	1,763,509	9	233,212
Assumption Change	December 31, 2012	3,018,796	18	2,370,153	9	313,437
Actuarial Loss	December 31, 2013	413,088	18	341,415	10	41,326
Assumption Change <sup>2</sup>	December 31, 2013	(1,169,821)	18	(966,852)	10	(117,031)
Actuarial Loss	December 31, 2014	315,937	18	272,150	11	30,454
Actuarial Gain	December 31, 2015	(990,379)	18	(881,874)	12	(91,978)
Assumption Change	December 31, 2015	775,874	18	690,870	12	72,056
Actuarial Gain	December 31, 2016	(270,731)	18	(248,795)	13	(24,353)
Actuarial Gain	December 31, 2017	(836,969)	18	(789,188)	14	(72,919)
Actuarial Gain	December 31, 2018	(71,915)	18	(69,228)	15	(6,068)
Assumption Change	December 31, 2018	(985,876)	18	(949,958)	15	(83,272)
Actuarial Loss	December 31, 2019	146,468	18	143,320	16	11,971
Method Change	December 31, 2019	(241,485)	18	(236,295)	16	(19,737)
Actuarial Loss	December 31, 2020	179,608	18	177,966	17	14,218
Actuarial Loss	December 31, 2021	744,297	18	744,297	18	57,066
Assumption Change	December 31, 2021	1,416,650	18	1,416,650	18	108,616
<b>Subtotal – Cost Group #12</b>				<b>\$9,248,801</b>		<b>\$1,886,154</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> As of middle of year.

<sup>2</sup> 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.

## Section 3: Supplemental Information

### Exhibit I: Table of Amortization Bases (continued)

#### Special Adjustments

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment <sup>1</sup>
County General POBs	December 31, 2007	\$(453,973,319)	15	\$(63,660,763)	1	\$(65,950,000)
Moraga General POBs	December 31, 2007	(701,412)	15	(98,359)	1	(101,896)
First Five UAAL Prepayment	December 31, 2011	(1,794,205)	11	(224,842)	1	(232,898)
LAFCO UAAL Prepayment	December 31, 2017	(30,817)	18	(29,058)	14	(2,685)
LAFCO UAAL Prepayment	December 31, 2019	(31,680)	18	(30,999)	16	(2,589)
LAFCO UAAL Prepayment	December 31, 2020	(31,963)	18	(31,671)	17	(2,530)
LAFCO UAAL Prepayment	December 31, 2021	(31,804)	18	(31,804)	18	(2,438)
<b>Subtotal – Special Adjustments</b>				<b>\$(64,107,496)</b>		<b>\$(66,295,036)</b>

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> 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.

## Section 3: Supplemental Information

### Exhibit I: Table of Amortization Bases (continued)

#### All Cost Groups Combined

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment <sup>1</sup>
Restart of Amortization	December 31, 2007	\$1,103,764,302	15	\$154,781,599	1	\$160,347,534
County General POBs <sup>2</sup>	December 31, 2007	(453,973,319)	15	(63,660,763)	1	(65,950,000)
Moraga General POBs <sup>2</sup>	December 31, 2007	(701,412)	15	(98,359)	1	(101,896)
CCCFPD Safety POBs <sup>2</sup>	December 31, 2007	(127,509,711)	15	(17,880,711)	1	(18,523,700)
Actuarial Loss	December 31, 2008	127,228,371	18	69,873,693	5	15,530,761
Actuarial Loss	December 31, 2009	267,892,376	18	166,623,503	6	31,401,110
Assumption Change	December 31, 2009	60,965,491	18	37,919,271	6	7,146,094
Depooling Implementation	December 31, 2009	(18,188,149)	18	(11,312,652)	6	(2,131,929)
Actuarial Loss	December 31, 2010	265,289,245	18	181,730,622	7	29,864,470
Assumption Change <sup>3</sup>	December 31, 2010	4,041,816	18	2,768,758	7	455,001
Actuarial Loss	December 31, 2011	183,273,836	18	135,464,677	8	19,814,332
First Five UAAL Prepayment <sup>2</sup>	December 31, 2011	(1,794,205)	11	(224,842)	1	(232,898)
Actuarial Loss	December 31, 2012	231,260,954	18	181,570,375	9	24,011,451
Assumption Change	December 31, 2012	544,097,665	18	427,188,487	9	56,492,780
Actuarial Gain	December 31, 2013	(202,325,285)	18	(167,220,910)	10	(20,241,048)
Assumption Change <sup>3</sup>	December 31, 2013	(189,066,417)	18	(156,262,517)	10	(18,914,603)
Actuarial Gain	December 31, 2014	(284,855,905)	18	(245,376,458)	11	(27,457,635)
Assumption Change <sup>4</sup>	December 31, 2014	(51,701)	18	(44,535)	11	(4,983)
Actuarial Gain	December 31, 2015	(202,620,622)	18	(180,421,678)	12	(18,817,633)
Assumption Change	December 31, 2015	114,345,251	18	101,817,682	12	10,619,387
Actuarial Gain	December 31, 2016	(46,362,239)	18	(42,605,782)	13	(4,170,341)

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

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

## Section 3: Supplemental Information

### 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 <sup>1</sup>
San Ramon UAAL Prepayment	December 31, 2017	\$(303,806)	18	\$(286,462)	14	\$(26,468)
LAFCO UAAL Prepayment <sup>2</sup>	December 31, 2017	(30,817)	18	(29,058)	14	(2,685)
Actuarial Gain	December 31, 2017	(38,341,514)	18	(36,152,689)	14	(3,340,425)
San Ramon UAAL Prepayment	December 31, 2018	(261,501)	18	(251,731)	15	(22,066)
Actuarial Loss	December 31, 2018	155,264,736	18	149,463,594	15	13,101,789
Assumption Change	December 31, 2018	(90,889,139)	18	(87,493,257)	15	(7,669,546)
San Ramon UAAL Prepayment	December 31, 2019	(1,267,559)	18	(1,240,318)	16	(103,598)
LAFCO UAAL Prepayment <sup>2</sup>	December 31, 2019	(31,680)	18	(30,999)	16	(2,589)
Actuarial Loss	December 31, 2019	41,748,029	18	40,850,815	16	3,412,076
Method Change	December 31, 2019	(17,427,203)	18	(17,052,672)	16	(1,424,330)
San Ramon UAAL Prepayment	December 31, 2020	(267,529)	18	(265,084)	17	(21,178)
LAFCO UAAL Prepayment <sup>2</sup>	December 31, 2020	(31,963)	18	(31,671)	17	(2,530)
Actuarial Loss	December 31, 2020	36,503,813	18	36,170,180	17	2,889,654
San Ramon UAAL Prepayment	December 31, 2021	(270,666)	18	(270,666)	18	(20,752)
LAFCO UAAL Prepayment <sup>2</sup>	December 31, 2021	(31,804)	18	(31,804)	18	(2,438)
Actuarial Gain <sup>3</sup>	December 31, 2021	(28,564,305)	18	(28,564,305)	18	(2,190,060)
Assumption Change <sup>3</sup>	December 31, 2021	223,522,296	18	223,522,296	18	17,137,719
CG#3 - Actuarial Surplus	December 31, 2021	(5,763,756)	N/A	(5,763,756)	N/A	0
CG#6 - Actuarial Surplus	December 31, 2021	(880,704)	N/A	(880,704)	N/A	0
<b>Subtotal – All Cost Groups</b>				<b>\$846,291,171</b>		<b>\$200,848,827</b>
Withdrawn Employers <sup>4</sup>				8,270,028		
<b>Total CCCERA</b>				<b>\$854,561,199</b>		

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> 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.

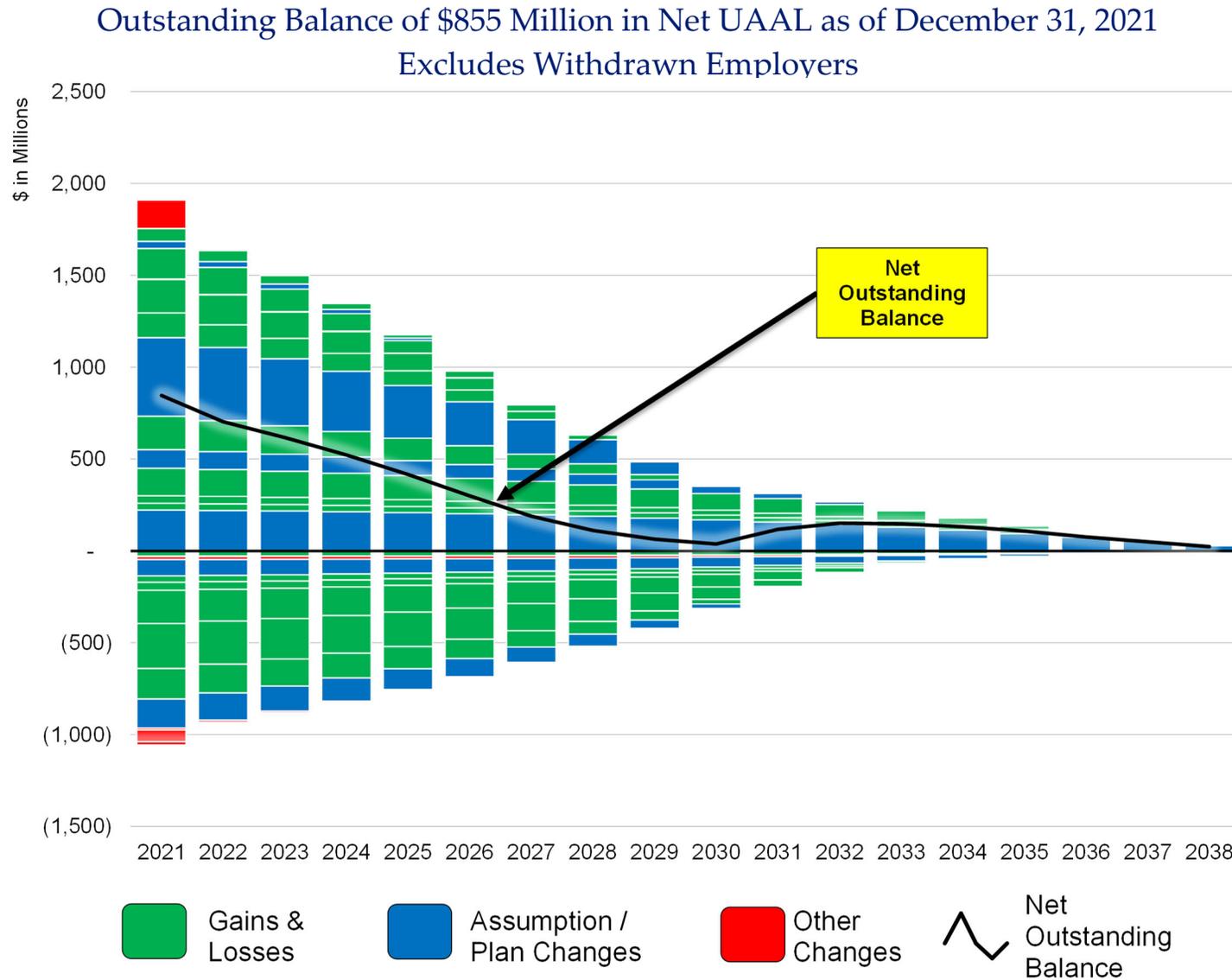
<sup>2</sup> Includes remaining balance of POBs and any other special contributions made by the County (including Courts), First 5 – Children & Families Commission, Local Agency Formation Commission, or Moraga-Orinda Fire District that have been allocated to the County General cost groups or for Con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

<sup>3</sup> Excludes the actuarial gain/loss and the impact of assumption changes for Cost Groups #3 and #6. Those impacts have been included as part of the development of the net actuarial surplus shown above for Cost Groups #3 and #6.

<sup>4</sup> 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.

## Section 3: Supplemental Information

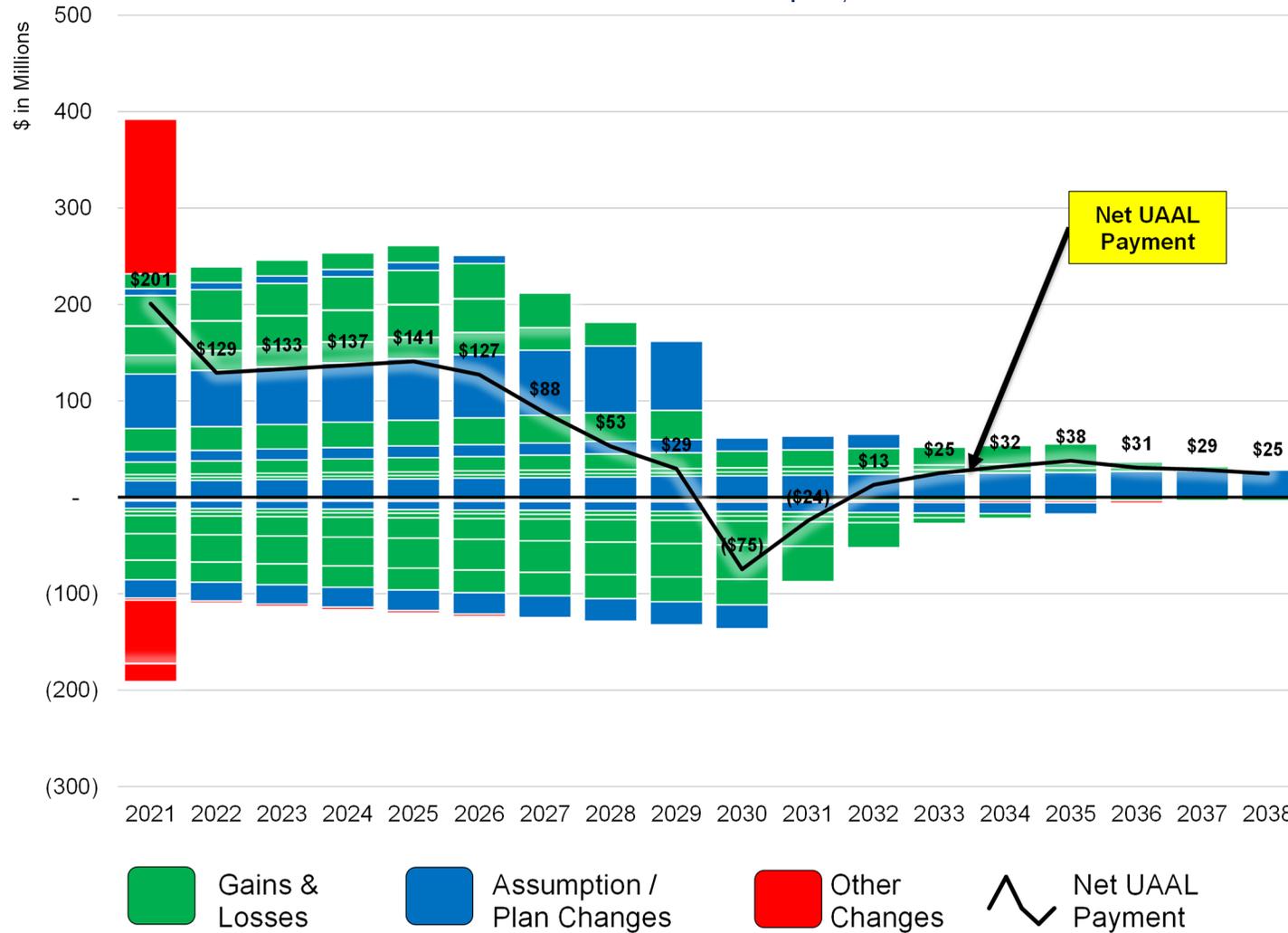
### Exhibit J: Projection of UAAL Balances and Payments



## Section 3: Supplemental Information

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

Annual Payments Required to Amortize \$855 Million in Net UAAL as of December 31, 2021  
Excludes Withdrawn Employers



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

## Section 3: Supplemental Information

### Exhibit K: Definition of Pension Terms

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

<b>Actuarial Accrued Liability for Actives:</b>	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
<b>Actuarial Accrued Liability for Pensioners and Beneficiaries:</b>	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.
<b>Actuarial Cost Method:</b>	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.
<b>Actuarial Gain or Loss:</b>	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.
<b>Actuarially Equivalent:</b>	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b>Actuarial Present Value (APV):</b>	<p>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:</p> <p>Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)</p> <p>Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and</p> <p>Discounted according to an assumed rate (or rates) of return to reflect the time value of money.</p>

## Section 3: Supplemental Information

<b>Actuarial Present Value of Future Plan Benefits:</b>	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.
<b>Actuarial Valuation:</b>	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).
<b>Actuarial Value of Assets (AVA):</b>	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.
<b>Actuarially Determined:</b>	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.
<b>Actuarially Determined Contribution (ADC):</b>	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.
<b>Amortization Method:</b>	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.
<b>Amortization Payment:</b>	The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

## Section 3: Supplemental Information

<b>Assumptions or Actuarial Assumptions:</b>	<p>The estimates upon which the cost of the Fund is calculated, including:</p> <p><u>Investment return</u> - the rate of investment yield that the Fund will earn over the long-term future;</p> <p><u>Mortality rates</u> - the death rates of employees and pensioners; life expectancy is based on these rates;</p> <p><u>Retirement rates</u> - the rate or probability of retirement at a given age or service;</p> <p><u>Disability rates</u> - the probability of disability retirement at a given age;</p> <p><u>Termination rates</u> - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;</p> <p><u>Salary increase rates</u> - the rates of salary increase due to inflation and productivity growth.</p>
<b>Closed Amortization Period:</b>	<p>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.</p>
<b>Decrements:</b>	<p>Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.</p>
<b>Defined Benefit Plan:</b>	<p>A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.</p>
<b>Defined Contribution Plan:</b>	<p>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.</p>
<b>Employer Normal Cost:</b>	<p>The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.</p>
<b>Experience Study:</b>	<p>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.</p>
<b>Funded Ratio:</b>	<p>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.</p>
<b>Investment Return:</b>	<p>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.</p>

## Section 3: Supplemental Information

<b>Normal Cost:</b>	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.
<b>Open Amortization Period:</b>	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.
<b>Unfunded Actuarial Accrued Liability:</b>	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.
<b>Valuation Date or Actuarial Valuation Date:</b>	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.
<b>Valuation Value of Assets:</b>	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:

1.15% 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.

For the 2021 calendar year, actual administrative expenses were \$11,237,383 and actual payroll was \$976,332,448. This results in the administrative expense assumption of 1.15% of payroll, allocated between employers and members as shown below:

	<b>Average Normal Cost Rate Before Administrative Expense</b>	<b>Weighting</b>	<b>Total</b>
Employer	15.15%	56.49%	0.65%
Member	11.67%	43.51%	0.50%
<b>Total</b>		<b>100.00%</b>	<b>1.15%</b>

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 PEPRAs tiers. The table below shows this allocation.

<b>Allocation of Administrative Expense Load as a % of Payroll</b>	
Addition to Employer Basic Normal Cost Rate	0.50%
Addition to Employer Basic UAAL Rate	0.15%
Addition to Member Basic Rate	0.50%
<b>Total Addition to Contribution Rates</b>	<b>1.15%</b>

## Section 4: Actuarial Valuation Basis

<b>Employee Contribution Crediting Rate:</b>	6.75%, compounded semi-annually.
<b>Consumer Price Index (CPI):</b>	Increases of 2.50% per year.
<b>Cost of Living Adjustment (COLA):</b>	<p>Increases of 2.75% per year.</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>For members that have COLA banks, they are reflected in projected future COLAs.</p> <p>The actual COLA granted by CCCERA on April 1, 2022 has been reflected for non-active members in the December 31, 2021 valuation.</p>
<b>Payroll Growth:</b>	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.
<b>Increase in Internal Revenue Code Section 401(a)(17) Compensation Limit:</b>	Increase of 2.50% per year from the valuation date.
<b>Increase in Section 7522.10 Compensation Limit:</b>	Increase of 2.50% per year from the valuation date.

## Section 4: Actuarial Valuation Basis

### 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:

Years of Service	Rate (%)	
	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, 2021 actuarial valuation is 4.9%.

## Section 4: Actuarial Valuation Basis

### 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.

## Section 4: Actuarial Valuation Basis

### 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.

Age	Rate (%)			
	General		Safety	
	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.

## Section 4: Actuarial Valuation Basis

### Disability Incidence:

Age	Rate (%)		
	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.

## Section 4: Actuarial Valuation Basis

### Termination:

Years of Service	Rate (%)	
	General	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.

## Section 4: Actuarial Valuation Basis

### Retirement Rates (General):

Age	Rate (%)					
	Tier 1 Enhanced		Tier 3 Enhanced		Tier 1 Non-Enhanced	PEPRA Tier 4 and Tier 5
	Less than 30 Years of Service	Over 30 Years of Service	Less than 30 Years of Service	Over 30 Years of Service		
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

## Section 4: Actuarial Valuation Basis

Retirement Rates (Safety):	Rate (%)			
	Tier A Enhanced			Tier A Non-Enhanced and PEPRA Tier D and Tier E
	Age	Less than 30 Years of Service	Over 30 Years of Service	
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

<b>Retirement Age and Benefit for Deferred Vested Members:</b>	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.
<b>Future Benefit Accruals:</b>	1.0 year of service per year for full-time employees. Continuation of current partial service accrual for part-time employees.

## Section 4: Actuarial Valuation Basis

<b>Unknown Data for Members:</b>	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.																										
<b>Definition of Active Members:</b>	All active members of CCCERA as of the valuation date.																										
<b>Form of Payment:</b>	All active and inactive members are assumed to elect the unmodified option at retirement. There is no explicit assumption for children's benefits.																										
<b>Percent Married:</b>	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.																										
<b>Age and Gender of Spouse:</b>	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.																										
<b>Offsets by Other Plans of the Employer for Disability Benefits:</b>	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.																										
<b>Leave Cashout Assumptions:</b>	<p>The following assumptions for leave cashouts as a percentage of final average pay are used:</p> <p><i>General Tiers 1, 2 and 3 &amp; Safety Tiers A and C</i></p> <table> <tr> <td>Cost Group 1</td> <td>1.00%</td> </tr> <tr> <td>Cost Group 2</td> <td>0.50% for Tier 2 0.75% for Tier 3</td> </tr> <tr> <td>Cost Group 3</td> <td>5.25%</td> </tr> <tr> <td>Cost Group 4</td> <td>1.00%</td> </tr> <tr> <td>Cost Group 5</td> <td>1.00%</td> </tr> <tr> <td>Cost Group 6</td> <td>0.00%</td> </tr> <tr> <td>Cost Group 7</td> <td>0.50%</td> </tr> <tr> <td>Cost Group 8</td> <td>0.25%</td> </tr> <tr> <td>Cost Group 9</td> <td>0.00%</td> </tr> <tr> <td>Cost Group 10</td> <td>0.25%</td> </tr> <tr> <td>Cost Group 11</td> <td>3.00%</td> </tr> <tr> <td>Cost Group 12</td> <td>1.75%</td> </tr> <tr> <td>Withdrawn Employers</td> <td>0.00%</td> </tr> </table> <p><i>General PEPRA Tiers 4 and 5 &amp; Safety PEPRA Tiers D and E</i></p> <p>None</p>	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%
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%																										

## Section 4: Actuarial Valuation Basis

### 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:

<i>Net Investment Return:</i>	7.00%; net of investment expenses.
<i>Administrative Expenses:</i>	1.14% 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.
<i>Employee Contribution Crediting Rate:</i>	7.00%, compounded semi-annually.
<i>Payroll Growth:</i>	Inflation of 2.75% 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.
<i>Increase in Internal Revenue Code Section 401(a)(17) Compensation Limit:</i>	Increase of 2.75% per year from the valuation date.
<i>Increase in Section 7522.10 Compensation Limit:</i>	Increase of 2.75% per year from the valuation date.

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

*Salary Increases:*

The annual rate of compensation increase includes:

- Inflation at 2.75%, plus
- “Across the board” real salary increases of 0.50% per year, plus
- The following merit and promotion increases:

Years of Service	Rate (%)	
	General	Safety
Less than 1	12.00	13.00
1 – 2	7.00	8.00
2 – 3	5.25	5.75
3 – 4	3.75	4.75
4 – 5	2.75	2.75
5 – 6	2.25	2.00
6 – 7	1.75	1.75
7 – 8	1.50	1.50
8 – 9	1.40	1.40
9 – 10	1.30	1.30
10 – 11	1.20	1.25
11 – 12	1.10	1.20
12 – 13	1.00	1.15
13 – 14	0.90	1.10
14 – 15	0.80	1.05
15 – 16	0.75	1.00
16 – 17	0.70	1.00
17 – 18	0.65	1.00
18 – 19	0.60	1.00
19 – 20	0.55	1.00
20 & Over	0.50	1.00

The average total assumed salary increase for active members in the December 31, 2020 actuarial valuation is 5.2%.

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

#### *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-2018.
- **Safety Members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) multiplied by 105% for males and 100% for females, projected generationally with the two-dimensional mortality improvement scale MP-2018.
- **All Beneficiaries:** Pub-2010 Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) multiplied by 105% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2018.

#### *Disabled*

- **General Members:** Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) multiplied by 105% for males and 100% for females, projected generationally with the two-dimensional mortality improvement scale MP-2018.
- **Safety Members:** Pub-2010 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) multiplied by 105% for males and 100% for females, projected generationally with the two-dimensional mortality improvement scale MP-2018.

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

#### *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-2018.
- **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-2018.

Age	Rate (%)			
	General <sup>1</sup>		Safety <sup>1</sup>	
	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

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

<sup>1</sup> Generational projections beyond the base year (2010) are not reflected in the above mortality rates.

#### *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-2018, 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) multiplied by 105% for males and 100% for females, projected 30 years with the two-dimensional mortality improvement scale MP-2018, weighted 85% male and 15% female.

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

*Disability Incidence:*

Age	Rate (%)		
	General Tier 1 and Tier 4	General Tier 3 and Tier 5	Safety
20	0.01	0.01	0.02
25	0.02	0.02	0.16
30	0.04	0.03	0.32
35	0.08	0.05	0.46
40	0.22	0.08	0.56
45	0.36	0.11	0.90
50	0.52	0.13	2.54
55	0.60	0.16	3.80
60	0.60	0.22	4.30
65	0.60	0.25	4.50
70	0.60	0.25	4.50

60% of General Tier 1 and Tier 4 disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected disabilities.

30% of General Tier 3 and Tier 5 disabilities are assumed to be service connected disabilities. The other 70% are assumed to be non-service connected disabilities.

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

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

Termination:	Years of Service	Rate (%)	
		General	Safety
	Less than 1	14.00	12.50
	1 – 2	9.50	10.00
	2 – 3	9.25	8.25
	3 – 4	6.50	5.75
	4 – 5	5.25	5.00
	5 – 6	5.00	4.25
	6 – 7	4.50	3.50
	7 – 8	4.25	3.25
	8 – 9	3.75	3.00
	9 – 10	3.50	2.50
	10 – 11	3.25	2.25
	11 – 12	3.00	2.10
	12 – 13	2.75	2.00
	13 – 14	2.50	1.90
	14 – 15	2.50	1.80
	15 – 16	2.25	1.70
	16 – 17	2.25	1.60
	17 – 18	2.00	1.50
	18 – 19	2.00	1.25
	19 – 20	1.75	1.00
	20 & Over	1.25	0.75

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.

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

Age	Rate (%)					
	Tier 1 Enhanced		Tier 3 Enhanced		Tier 1 Non-Enhanced	PEPRA Tier 4 and Tier 5
	Less than 30 Years of Service	Over 30 Years of Service	Less than 30 Years of Service	Over 30 Years of Service		
50	5.00	9.00	4.00	7.20	3.00	0.00
51	4.00	7.20	3.00	5.40	3.00	0.00
52	4.00	7.20	3.00	5.40	3.00	2.00
53	4.00	7.20	4.00	7.20	3.00	3.00
54	12.00	21.60	6.00	10.80	3.00	3.00
55	15.00	27.00	8.00	14.40	10.00	5.00
56	17.00	30.60	8.00	9.60	10.00	5.00
57	17.00	30.60	9.00	10.80	10.00	6.00
58	17.00	30.60	10.00	12.00	10.00	6.00
59	22.00	26.40	12.00	14.40	10.00	8.00
60	25.00	30.00	13.00	15.60	25.00	8.00
61	30.00	36.00	18.00	21.60	15.00	12.00
62	30.00	36.00	22.00	26.40	40.00	18.00
63	25.00	30.00	22.00	26.40	35.00	18.00
64	25.00	30.00	25.00	30.00	30.00	20.00
65	35.00	35.00	32.00	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	35.00	35.00	35.00	35.00	40.00	40.00
71	35.00	35.00	35.00	35.00	40.00	40.00
72	35.00	35.00	35.00	35.00	40.00	40.00
73	35.00	35.00	35.00	35.00	50.00	40.00
74	35.00	35.00	35.00	35.00	50.00	40.00
75 & Over	100.00	100.00	100.00	100.00	100.00	100.00

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

<i>Retirement Rates (Safety):</i>	Rate (%)				
	Tier A Enhanced			Tier C Enhanced	Tier A Non-Enhanced and PEPRA Tier D and Tier E
	Age	Less than 30 Years of Service	Over 30 Years of Service		
45	7.00	8.75	2.00	0.00	
46	3.00	3.75	1.00	0.00	
47	10.00	12.50	4.00	0.00	
48	10.00	12.50	4.00	0.00	
49	25.00	31.25	12.00	0.00	
50	25.00	31.25	18.00	5.00	
51	25.00	31.25	18.00	4.00	
52	18.00	22.50	15.00	4.00	
53	18.00	22.50	15.00	5.00	
54	18.00	22.50	15.00	6.00	
55	20.00	30.00	18.00	10.00	
56	20.00	30.00	15.00	10.00	
57	22.00	33.00	15.00	18.00	
58	22.00	33.00	25.00	18.00	
59	22.00	33.00	25.00	18.00	
60	25.00	37.50	25.00	18.00	
61	25.00	37.50	25.00	20.00	
62	25.00	37.50	25.00	20.00	
63	30.00	45.00	30.00	20.00	
64	40.00	60.00	35.00	25.00	
65 & Over	100.00	100.00	100.00	100.00	

<i>Retirement Age and Benefit for Deferred Vested Members:</i>	General:	59
	Safety with Reciprocity:	53
	Safety without Reciprocity:	50
40% of future General and 70% of future Safety deferred vested members are assumed to continue to work for a reciprocal employer. For reciprocals, 3.75% and 4.25% compensation increases are assumed per annum for General and Safety, respectively.		

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

*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	4.75%
Cost Group 4	0.50%
Cost Group 5	1.25%
Cost Group 6	0.25%
Cost Group 7	0.75%
Cost Group 8	0.50%
Cost Group 9	0.00%
Cost Group 10	0.50%
Cost Group 11	2.50%
Cost Group 12	2.00%
Cost Group 13	0.50%
Withdrawn Employers	0.00%

*General PEPRA Tiers 4 and 5 Safety PEPRA Tiers D and E*

None

## Section 4: Actuarial Valuation Basis

### Changed Actuarial Assumptions (continued)

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

<i>Service from Accumulated Sick Leave Conversion:</i>	The following assumptions for additional service converted from accumulated sick leave as a percentage of service at retirement are used: <i>Service Retirements:</i> General: 1.10% Safety: 1.80% <i>Disability Retirements:</i> General: 0.06% Safety: 1.20%
--	--

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.

### Actuarial Funding Policy

<b>Actuarial Cost Method:</b>	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”).
<b>Actuarial Value of Assets:</b>	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.
<b>Valuation Value of Assets:</b>	The Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.
<b>Amortization Policy:</b>	<p>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.</p> <p>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.</p> <p>Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 18 years.</p> <p>Unless the Board adopts an alternative amortization period after receiving an actuarial analysis:</p> <ul style="list-style-type: none"><li>• 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;</li></ul>

## Section 4: Actuarial Valuation Basis

- 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., wage inflation).

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 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.

## Section 4: Actuarial Valuation Basis

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, 2021. 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.

## Section 4: Actuarial Valuation Basis

### *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.

## Section 4: Actuarial Valuation Basis

### 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, 2021 are as follows:

	County General	Moraga General	First Five General	LAFCO General
Basic	\$35,341,369	\$62,237	\$128,011	\$91,040
COL	28,319,394	36,122	96,831	32,492

### 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 \$245,000 for 2022. 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.

## Section 4: Actuarial Valuation Basis

### 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.

<b>Plan Year:</b>	January 1 through December 31
<b>Membership Eligibility:</b>	
<i>General Tier 1</i>	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.
<i>General Tier 2</i>	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.
<i>General Tier 3</i>	General members with membership dates before January 1, 2013 who are not placed in Tier 1 are placed in Tier 3.
<i>General PEPPRA Tier 4</i>	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.
<i>General PEPPRA Tier 5</i>	General members with membership dates on or after January 1, 2013 who are not placed in Tier 4 are placed in Tier 5.
<i>Safety Tier A and Tier C</i>	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.
<i>Safety PEPPRA Tier D and Tier E</i>	Safety members with membership dates on or after January 1, 2013. Safety members from certain bargaining units are placed in Safety Tier E.

## Section 4: Actuarial Valuation Basis

<b>Final Compensation for Benefit Determination:</b>	
<i>General Tier 1 and Tier 3 (non-disability), Safety Tier A</i>	Highest consecutive 12 months of compensation earnable. (§31462.1) (FAS1)
<i>General Tier 2 and Tier 3 (disability), Safety Tier C</i>	Highest consecutive 36 months of compensation earnable. (§31462) (FAS3)
<i>General Tier 4 and Tier 5, Safety Tier D and Tier E</i>	Highest consecutive 36 months of pensionable compensation. (§7522.10(c), §7522.32 and §7522.34) (FAS3)
<b>Compensation Limit:</b>	
<i>General Tier 1, Tier 2 and Tier 3, Safety Tier A and Tier C</i>	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 \$305,000 for calendar year 2022. The limit is indexed for inflation on an annual basis.
<i>General Tier 4 and Tier 5, Safety Tier D and Tier E</i>	Pensionable Compensation is limited to \$134,974 for 2022 (\$161,969, if not enrolled in Social Security). The limit is indexed for inflation on an annual basis.
<b>Social Security Primary Insurance Amount:</b>	
<i>General Tier 2</i>	Estimated Social Security award at age 62 assuming level future earnings. (PIA)
<b>Service:</b>	
<i>All Tiers</i>	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)
<i>General Tier 2</i>	Maximum of 30 years (Yrs30).
<b>Service Retirement Eligibility:</b>	
<i>General Tier 1, Tier 2, and Tier 3</i>	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years of service regardless of age. (§31672)
<i>General Tier 4 and Tier 5</i>	Age 52 with 5 years of service or age 70 regardless of service. (§7522.20(a) and §31672.3)
<i>Safety Tier A and Tier C</i>	Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years of service regardless of age. (§31663.25)
<i>Safety Tier D and Tier E</i>	Age 50 with 5 years of service or age 70 regardless of service. (§7522.25(a) and §31672.3)

## Section 4: Actuarial Valuation Basis

### 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

## Section 4: Actuarial Valuation Basis

<b>Benefit Formula (continued):</b>		
<i>Safety Tier A (Non-Enhanced)</i> (§31664)	<b>Retirement Age</b>	<b>Benefit Formula</b>
	50	2.00% x FAS1 x Yrs
<i>Safety Tier A (Enhanced)</i> (§31664.1)	<b>Retirement Age</b>	<b>Benefit Formula</b>
	55 & Over	2.62% x FAS1 x Yrs
<i>Safety Tier C (Enhanced)</i> (§31664.1)	<b>Retirement Age</b>	<b>Benefit Formula</b>
	50 & Over	3.00% x FAS1 x Yrs
<i>Safety Tier D and Tier E</i> (§7522.25(d))	<b>Retirement Age</b>	<b>Benefit Formula</b>
	50	3.00% x FAS3 x Yrs
	55	2.00% x FAS3 x Yrs
	57 & Over	2.50% x FAS3 x Yrs
<hr/>		
<b>Maximum Benefit:</b>		
<i>General Tier 1 and Tier 3, Safety Tier 1 and Tier C</i>	100% of Final Compensation. (§31676.11, §31676.16, §31664, §31664.1)	
<i>General Tier 2, Tier 4 and Tier 5, Safety Tier D and Tier E</i>	None.	

## Section 4: Actuarial Valuation Basis

### Non-Service Connected Disability:

#### General Tier 1 and Tier 4

<i>Eligibility</i>	Five years of service. (§31720)
<i>Benefit Formula</i>	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

<i>Eligibility</i>	Ten years of service. (§31720.1)
<i>Benefit Formula</i>	40% of Final Compensation plus 10% of Final Compensation used in the benefit determination for each minor child (maximum of three). (§31727.01)
<i>Offset</i>	Disability benefits are offset by other plans of the employer except Workers Compensation and Social Security.

#### Safety

<i>Eligibility</i>	Five years of service (§31720).
<i>Benefit Formula</i>	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

<i>Eligibility</i>	No age or service requirements. (§31720)
<i>Benefit Formula</i>	50% of the Final Compensation. (§31727.4)

#### General Tier 2, Tier 3, and Tier 5

<i>Eligibility</i>	No age or service requirements. (§31720)
<i>Benefit Formula</i>	40% of Final Compensation plus 10% of Final Compensation for each minor child (maximum of three). (§31727.01)
<i>Offset</i>	Disability benefits are offset by other plans of the Employer except Workers Compensation and Social Security.

## Section 4: Actuarial Valuation Basis

### 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.

## Section 4: Actuarial Valuation Basis

### 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

<b>Member Contributions:</b>	Please refer to <i>Section 4, Exhibit 3</i> for specific rates.
<i>General Tier 1 and Tier 3 (Non Enhanced)</i>	
<i>Basic</i>	Entry-age based rates that provide for one-half of the \$31676.11 benefit payable at age 55.
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>General Tier 1 and Tier 3 (Enhanced)</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 60 equal to 1/120 of FAS1.
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>General Tier 4 and Tier 5</i>	50% of the total Normal Cost rate.
<i>Safety Tier A (Non Enhanced)</i>	
<i>Basic</i>	Entry-age based rates that provide for one-half of the \$31664 benefit payable at age 50.
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Safety Tier A (Enhanced)</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS1.
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Safety Tier C (Enhanced)</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS3.
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Safety Tier D and Tier E</i>	50% of the total Normal Cost rate.
<b>Other Information:</b>	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.

## Section 4: Actuarial Valuation Basis

<b>Plan Provisions Not Valued:</b>	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.
<b>Changes in Plan Provisions:</b>	<p>The following change in Plan Provisions has been reflected in the current valuation.</p> <ul style="list-style-type: none"><li>As part of the annexation of East Contra Costa Fire Protection District (East Fire) into Contra Costa Fire Protection District (Con Fire), there were certain members who have been enrolled in a different tier of benefit effective July 1, 2022. CCCERA provided us with a list of those impacted members and we have reflected those new tiers in this valuation. In particular, there were 5 East Fire General members who moved from Tier 4 with a 3% COLA, to Tier 4 with a 2% COLA, as well as 7 East Fire Safety members who moved from Tier D (with a 3% COLA) to Tier E (with a 2% COLA).</li></ul>

**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.

## Section 4: Actuarial Valuation Basis

### 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

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.79%	5.43%	1.85%	2.77%	5.64%	8.20%
16	3.85%	5.53%	1.89%	2.83%	5.74%	8.36%
17	3.92%	5.63%	1.92%	2.88%	5.84%	8.51%
18	3.99%	5.73%	1.96%	2.94%	5.95%	8.67%
19	4.05%	5.83%	2.00%	3.00%	6.05%	8.83%
20	4.12%	5.93%	2.03%	3.05%	6.15%	8.98%
21	4.19%	6.04%	2.07%	3.11%	6.26%	9.15%
22	4.27%	6.15%	2.12%	3.18%	6.39%	9.33%
23	4.33%	6.25%	2.15%	3.23%	6.48%	9.48%
24	4.41%	6.37%	2.20%	3.30%	6.61%	9.67%
25	4.49%	6.48%	2.24%	3.36%	6.73%	9.84%
26	4.56%	6.59%	2.28%	3.42%	6.84%	10.01%
27	4.64%	6.71%	2.33%	3.49%	6.97%	10.20%
28	4.72%	6.83%	2.37%	3.56%	7.09%	10.39%
29	4.80%	6.95%	2.41%	3.62%	7.21%	10.57%
30	4.89%	7.08%	2.47%	3.70%	7.36%	10.78%
31	4.97%	7.20%	2.51%	3.77%	7.48%	10.97%
32	5.05%	7.33%	2.56%	3.84%	7.61%	11.17%
33	5.14%	7.46%	2.61%	3.91%	7.75%	11.37%
34	5.23%	7.60%	2.66%	3.99%	7.89%	11.59%
35	5.33%	7.74%	2.71%	4.07%	8.04%	11.81%
36	5.42%	7.88%	2.77%	4.15%	8.19%	12.03%
37	5.51%	8.02%	2.82%	4.23%	8.33%	12.25%
38	5.61%	8.17%	2.87%	4.31%	8.48%	12.48%
39	5.72%	8.33%	2.93%	4.40%	8.65%	12.73%

## Section 4: Actuarial Valuation Basis

### 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)

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	5.82%	8.48%	2.99%	4.48%	8.81%	12.96%
41	5.92%	8.63%	3.05%	4.57%	8.97%	13.20%
42	6.03%	8.79%	3.11%	4.66%	9.14%	13.45%
43	6.13%	8.94%	3.16%	4.74%	9.29%	13.68%
44	6.23%	9.10%	3.22%	4.83%	9.45%	13.93%
45	6.34%	9.26%	3.28%	4.92%	9.62%	14.18%
46	6.45%	9.42%	3.34%	5.01%	9.79%	14.43%
47	6.55%	9.58%	3.40%	5.10%	9.95%	14.68%
48	6.66%	9.74%	3.46%	5.19%	10.12%	14.93%
49	6.75%	9.88%	3.51%	5.27%	10.26%	15.15%
50	6.85%	10.03%	3.57%	5.36%	10.42%	15.39%
51	6.96%	10.19%	3.63%	5.45%	10.59%	15.64%
52	7.07%	10.35%	3.69%	5.54%	10.76%	15.89%
53	7.17%	10.51%	3.75%	5.63%	10.92%	16.14%
54	7.27%	10.65%	3.80%	5.70%	11.07%	16.35%
55	7.36%	10.79%	3.85%	5.78%	11.21%	16.57%
56	7.43%	10.90%	3.89%	5.84%	11.32%	16.74%
57	7.43%	10.89%	3.89%	5.84%	11.32%	16.73%
58	7.39%	10.83%	3.87%	5.81%	11.26%	16.64%
59 & Over	7.23%	10.59%	3.78%	5.67%	11.01%	16.26%

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: 56.20%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.78%	5.42%	1.61%	2.41%	5.39%	7.83%
16	3.85%	5.52%	1.64%	2.46%	5.49%	7.98%
17	3.91%	5.62%	1.67%	2.51%	5.58%	8.13%
18	3.98%	5.72%	1.71%	2.56%	5.69%	8.28%
19	4.05%	5.82%	1.74%	2.61%	5.79%	8.43%
20	4.11%	5.92%	1.77%	2.65%	5.88%	8.57%
21	4.19%	6.03%	1.81%	2.71%	6.00%	8.74%
22	4.25%	6.13%	1.84%	2.76%	6.09%	8.89%
23	4.33%	6.24%	1.87%	2.81%	6.20%	9.05%
24	4.40%	6.35%	1.91%	2.87%	6.31%	9.22%
25	4.47%	6.46%	1.95%	2.92%	6.42%	9.38%
26	4.55%	6.58%	1.99%	2.98%	6.54%	9.56%
27	4.63%	6.70%	2.03%	3.04%	6.66%	9.74%
28	4.71%	6.82%	2.07%	3.10%	6.78%	9.92%
29	4.79%	6.94%	2.10%	3.15%	6.89%	10.09%
30	4.87%	7.06%	2.14%	3.21%	7.01%	10.27%
31	4.96%	7.19%	2.19%	3.28%	7.15%	10.47%
32	5.05%	7.32%	2.23%	3.34%	7.28%	10.66%
33	5.13%	7.45%	2.27%	3.40%	7.40%	10.85%
34	5.22%	7.58%	2.31%	3.47%	7.53%	11.05%
35	5.31%	7.72%	2.36%	3.54%	7.67%	11.26%
36	5.41%	7.86%	2.40%	3.60%	7.81%	11.46%
37	5.51%	8.01%	2.45%	3.68%	7.96%	11.69%
38	5.60%	8.15%	2.50%	3.75%	8.10%	11.90%
39	5.70%	8.30%	2.55%	3.82%	8.25%	12.12%

## Section 4: Actuarial Valuation Basis

### 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)

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	5.81%	8.46%	2.60%	3.90%	8.41%	12.36%
41	5.91%	8.61%	2.65%	3.97%	8.56%	12.58%
42	6.01%	8.77%	2.70%	4.05%	8.71%	12.82%
43	6.11%	8.92%	2.75%	4.12%	8.86%	13.04%
44	6.22%	9.08%	2.80%	4.20%	9.02%	13.28%
45	6.33%	9.24%	2.85%	4.28%	9.18%	13.52%
46	6.43%	9.40%	2.91%	4.36%	9.34%	13.76%
47	6.54%	9.56%	2.96%	4.44%	9.50%	14.00%
48	6.64%	9.71%	3.01%	4.51%	9.65%	14.22%
49	6.75%	9.87%	3.06%	4.59%	9.81%	14.46%
50	6.84%	10.01%	3.11%	4.66%	9.95%	14.67%
51	6.95%	10.17%	3.16%	4.74%	10.11%	14.91%
52	7.05%	10.33%	3.21%	4.81%	10.26%	15.14%
53	7.15%	10.48%	3.26%	4.89%	10.41%	15.37%
54	7.25%	10.62%	3.31%	4.96%	10.56%	15.58%
55	7.33%	10.75%	3.35%	5.02%	10.68%	15.77%
56	7.39%	10.84%	3.37%	5.06%	10.76%	15.90%
57	7.43%	10.89%	3.39%	5.09%	10.82%	15.98%
58	7.39%	10.84%	3.37%	5.06%	10.76%	15.90%
59 & Over	7.03%	10.30%	3.20%	4.80%	10.23%	15.10%

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: 48.98%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	2.83%	8.47%
16	5.74%	2.89%	8.63%
17	5.84%	2.94%	8.78%
18	5.95%	3.01%	8.96%
19	6.05%	3.06%	9.11%
20	6.16%	3.12%	9.28%
21	6.27%	3.18%	9.45%
22	6.38%	3.24%	9.62%
23	6.49%	3.30%	9.79%
24	6.61%	3.37%	9.98%
25	6.73%	3.44%	10.17%
26	6.85%	3.50%	10.35%
27	6.97%	3.57%	10.54%
28	7.09%	3.63%	10.72%
29	7.22%	3.71%	10.93%
30	7.35%	3.78%	11.13%
31	7.48%	3.85%	11.33%
32	7.61%	3.92%	11.53%
33	7.75%	4.00%	11.75%
34	7.89%	4.07%	11.96%
35	8.03%	4.15%	12.18%
36	8.18%	4.23%	12.41%
37	8.33%	4.32%	12.65%
38	8.48%	4.40%	12.88%
39	8.64%	4.49%	13.13%

## Section 4: Actuarial Valuation Basis

### 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%	4.58%	13.38%
41	8.96%	4.66%	13.62%
42	9.12%	4.75%	13.87%
43	9.28%	4.84%	14.12%
44	9.44%	4.93%	14.37%
45	9.60%	5.02%	14.62%
46	9.77%	5.11%	14.88%
47	9.93%	5.20%	15.13%
48	10.09%	5.29%	15.38%
49	10.24%	5.37%	15.61%
50	10.40%	5.46%	15.86%
51	10.55%	5.54%	16.09%
52	10.69%	5.62%	16.31%
53	10.85%	5.71%	16.56%
54	11.00%	5.79%	16.79%
55	11.16%	5.88%	17.04%
56	11.21%	5.91%	17.12%
57	11.17%	5.88%	17.05%
58	11.03%	5.81%	16.84%
59 & Over	10.48%	5.50%	15.98%

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: 55.14%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.79%	5.43%	1.80%	2.70%	5.59%	8.13%
16	3.85%	5.53%	1.84%	2.76%	5.69%	8.29%
17	3.92%	5.63%	1.87%	2.81%	5.79%	8.44%
18	3.99%	5.73%	1.91%	2.87%	5.90%	8.60%
19	4.05%	5.83%	1.95%	2.92%	6.00%	8.75%
20	4.12%	5.93%	1.99%	2.98%	6.11%	8.91%
21	4.19%	6.04%	2.03%	3.04%	6.22%	9.08%
22	4.27%	6.15%	2.07%	3.10%	6.34%	9.25%
23	4.33%	6.25%	2.10%	3.15%	6.43%	9.40%
24	4.41%	6.37%	2.15%	3.22%	6.56%	9.59%
25	4.49%	6.48%	2.19%	3.28%	6.68%	9.76%
26	4.56%	6.59%	2.23%	3.34%	6.79%	9.93%
27	4.64%	6.71%	2.27%	3.41%	6.91%	10.12%
28	4.72%	6.83%	2.31%	3.47%	7.03%	10.30%
29	4.80%	6.95%	2.36%	3.54%	7.16%	10.49%
30	4.89%	7.08%	2.41%	3.61%	7.30%	10.69%
31	4.97%	7.20%	2.45%	3.68%	7.42%	10.88%
32	5.05%	7.33%	2.50%	3.75%	7.55%	11.08%
33	5.14%	7.46%	2.55%	3.82%	7.69%	11.28%
34	5.23%	7.60%	2.60%	3.90%	7.83%	11.50%
35	5.33%	7.74%	2.65%	3.97%	7.98%	11.71%
36	5.42%	7.88%	2.70%	4.05%	8.12%	11.93%
37	5.51%	8.02%	2.75%	4.13%	8.26%	12.15%
38	5.61%	8.17%	2.81%	4.21%	8.42%	12.38%
39	5.72%	8.33%	2.87%	4.30%	8.59%	12.63%

## Section 4: Actuarial Valuation Basis

### 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)

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	5.82%	8.48%	2.92%	4.38%	8.74%	12.86%
41	5.92%	8.63%	2.97%	4.46%	8.89%	13.09%
42	6.03%	8.79%	3.03%	4.55%	9.06%	13.34%
43	6.13%	8.94%	3.09%	4.63%	9.22%	13.57%
44	6.23%	9.10%	3.15%	4.72%	9.38%	13.82%
45	6.34%	9.26%	3.21%	4.81%	9.55%	14.07%
46	6.45%	9.42%	3.26%	4.89%	9.71%	14.31%
47	6.55%	9.58%	3.32%	4.98%	9.87%	14.56%
48	6.66%	9.74%	3.38%	5.07%	10.04%	14.81%
49	6.75%	9.88%	3.43%	5.15%	10.18%	15.03%
50	6.85%	10.03%	3.49%	5.23%	10.34%	15.26%
51	6.96%	10.19%	3.55%	5.32%	10.51%	15.51%
52	7.07%	10.35%	3.60%	5.40%	10.67%	15.75%
53	7.17%	10.51%	3.66%	5.49%	10.83%	16.00%
54	7.27%	10.65%	3.71%	5.57%	10.98%	16.22%
55	7.36%	10.79%	3.77%	5.65%	11.13%	16.44%
56	7.43%	10.90%	3.81%	5.71%	11.24%	16.61%
57	7.43%	10.89%	3.80%	5.70%	11.23%	16.59%
58	7.39%	10.83%	3.78%	5.67%	11.17%	16.50%
59 & Over	7.23%	10.59%	3.69%	5.54%	10.92%	16.13%

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: 54.86%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	4.13%	11.59%
34	7.60%	4.22%	11.82%
35	7.74%	4.30%	12.04%
36	7.88%	4.38%	12.26%
37	8.02%	4.47%	12.49%
38	8.17%	4.56%	12.73%
39	8.33%	4.65%	12.98%

## Section 4: Actuarial Valuation Basis

### 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%	4.92%	13.71%
43	8.94%	5.01%	13.95%
44	9.10%	5.11%	14.21%
45	9.26%	5.20%	14.46%
46	9.42%	5.30%	14.72%
47	9.58%	5.39%	14.97%
48	9.74%	5.49%	15.23%
49	9.88%	5.57%	15.45%
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%	6.11%	16.90%
56	10.90%	6.18%	17.08%
57	10.89%	6.17%	17.06%
58	10.83%	6.14%	16.97%
59 & Over	10.59%	5.99%	16.58%

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: 59.40%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	4.29%	6.18%	1.70%	2.55%	5.99%	8.73%
16	4.36%	6.29%	1.73%	2.60%	6.09%	8.89%
17	4.43%	6.40%	1.77%	2.65%	6.20%	9.05%
18	4.51%	6.52%	1.80%	2.70%	6.31%	9.22%
19	4.59%	6.63%	1.83%	2.75%	6.42%	9.38%
20	4.67%	6.75%	1.87%	2.80%	6.54%	9.55%
21	4.75%	6.87%	1.91%	2.86%	6.66%	9.73%
22	4.83%	6.99%	1.94%	2.91%	6.77%	9.90%
23	4.91%	7.12%	1.98%	2.97%	6.89%	10.09%
24	5.00%	7.25%	2.02%	3.03%	7.02%	10.28%
25	5.09%	7.38%	2.06%	3.09%	7.15%	10.47%
26	5.17%	7.51%	2.10%	3.15%	7.27%	10.66%
27	5.26%	7.64%	2.13%	3.20%	7.39%	10.84%
28	5.35%	7.78%	2.18%	3.27%	7.53%	11.05%
29	5.45%	7.92%	2.22%	3.33%	7.67%	11.25%
30	5.55%	8.07%	2.27%	3.40%	7.82%	11.47%
31	5.65%	8.22%	2.31%	3.46%	7.96%	11.68%
32	5.75%	8.37%	2.35%	3.53%	8.10%	11.90%
33	5.85%	8.52%	2.40%	3.60%	8.25%	12.12%
34	5.95%	8.68%	2.45%	3.67%	8.40%	12.35%
35	6.06%	8.84%	2.49%	3.74%	8.55%	12.58%
36	6.17%	9.01%	2.55%	3.82%	8.72%	12.83%
37	6.27%	9.16%	2.59%	3.89%	8.86%	13.05%
38	6.39%	9.33%	2.64%	3.96%	9.03%	13.29%
39	6.49%	9.49%	2.69%	4.03%	9.18%	13.52%

## Section 4: Actuarial Valuation Basis

### 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)

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	6.61%	9.67%	2.74%	4.11%	9.35%	13.78%
41	6.72%	9.83%	2.79%	4.19%	9.51%	14.02%
42	6.83%	9.99%	2.84%	4.26%	9.67%	14.25%
43	6.95%	10.17%	2.89%	4.34%	9.84%	14.51%
44	7.05%	10.32%	2.94%	4.41%	9.99%	14.73%
45	7.15%	10.48%	2.99%	4.48%	10.14%	14.96%
46	7.25%	10.63%	3.03%	4.55%	10.28%	15.18%
47	7.37%	10.81%	3.09%	4.63%	10.46%	15.44%
48	7.47%	10.96%	3.13%	4.69%	10.60%	15.65%
49	7.58%	11.12%	3.18%	4.77%	10.76%	15.89%
50	7.69%	11.29%	3.23%	4.84%	10.92%	16.13%
51	7.75%	11.37%	3.25%	4.88%	11.00%	16.25%
52	7.77%	11.41%	3.27%	4.90%	11.04%	16.31%
53	7.71%	11.31%	3.23%	4.85%	10.94%	16.16%
54 & Over	7.45%	10.92%	3.12%	4.68%	10.57%	15.60%

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: 44.87%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	6.63%	16.53%
16	9.90%	6.63%	16.53%
17	9.90%	6.63%	16.53%
18	9.90%	6.63%	16.53%
19	9.90%	6.63%	16.53%
20	9.90%	6.63%	16.53%
21	9.90%	6.63%	16.53%
22	10.06%	6.74%	16.80%
23	10.21%	6.85%	17.06%
24	10.37%	6.96%	17.33%
25	10.53%	7.07%	17.60%
26	10.70%	7.19%	17.89%
27	10.87%	7.31%	18.18%
28	11.05%	7.44%	18.49%
29	11.23%	7.57%	18.80%
30	11.39%	7.68%	19.07%
31	11.55%	7.79%	19.34%
32	11.71%	7.90%	19.61%
33	11.89%	8.03%	19.92%
34	12.07%	8.16%	20.23%
35	12.25%	8.28%	20.53%
36	12.44%	8.42%	20.86%
37	12.65%	8.57%	21.22%
38	12.85%	8.71%	21.56%
39	13.06%	8.86%	21.92%

## Section 4: Actuarial Valuation Basis

### 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%	9.02%	22.31%
41	13.53%	9.19%	22.72%
42	13.78%	9.36%	23.14%
43	14.00%	9.52%	23.52%
44	14.17%	9.64%	23.81%
45	14.24%	9.69%	23.93%
46	14.28%	9.72%	24.00%
47	14.27%	9.71%	23.98%
48	14.09%	9.58%	23.67%
49 & Over	13.63%	9.26%	22.89%

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: 70.51%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	6.66%	16.54%
16	9.88%	6.66%	16.54%
17	9.88%	6.66%	16.54%
18	9.88%	6.66%	16.54%
19	9.88%	6.66%	16.54%
20	9.88%	6.66%	16.54%
21	9.88%	6.66%	16.54%
22	10.04%	6.78%	16.82%
23	10.19%	6.88%	17.07%
24	10.35%	7.00%	17.35%
25	10.51%	7.11%	17.62%
26	10.68%	7.23%	17.91%
27	10.85%	7.35%	18.20%
28	11.02%	7.47%	18.49%
29	11.20%	7.60%	18.80%
30	11.36%	7.71%	19.07%
31	11.52%	7.83%	19.35%
32	11.69%	7.95%	19.64%
33	11.86%	8.07%	19.93%
34	12.04%	8.20%	20.24%
35	12.23%	8.33%	20.56%
36	12.42%	8.47%	20.89%
37	12.62%	8.61%	21.23%
38	12.83%	8.76%	21.59%
39	13.04%	8.91%	21.95%

## Section 4: Actuarial Valuation Basis

### 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%	9.06%	22.32%
41	13.51%	9.24%	22.75%
42	13.74%	9.41%	23.15%
43	13.95%	9.55%	23.50%
44	14.14%	9.69%	23.83%
45	14.20%	9.73%	23.93%
46	14.22%	9.75%	23.97%
47	14.29%	9.80%	24.09%
48	13.95%	9.55%	23.50%
49 & Over	13.66%	9.35%	23.01%

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: 71.04%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	4.17%	13.67%
16	9.50%	4.17%	13.67%
17	9.50%	4.17%	13.67%
18	9.50%	4.17%	13.67%
19	9.50%	4.17%	13.67%
20	9.50%	4.17%	13.67%
21	9.50%	4.17%	13.67%
22	9.65%	4.24%	13.89%
23	9.80%	4.31%	14.11%
24	9.95%	4.38%	14.33%
25	10.11%	4.45%	14.56%
26	10.27%	4.53%	14.80%
27	10.43%	4.60%	15.03%
28	10.59%	4.68%	15.27%
29	10.75%	4.75%	15.50%
30	10.90%	4.82%	15.72%
31	11.05%	4.89%	15.94%
32	11.21%	4.96%	16.17%
33	11.38%	5.04%	16.42%
34	11.55%	5.12%	16.67%
35	11.72%	5.20%	16.92%
36	11.90%	5.28%	17.18%
37	12.09%	5.37%	17.46%
38	12.28%	5.46%	17.74%
39	12.48%	5.55%	18.03%

## Section 4: Actuarial Valuation Basis

### 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%	5.65%	18.33%
41	12.88%	5.74%	18.62%
42	13.05%	5.82%	18.87%
43	13.14%	5.86%	19.00%
44	13.21%	5.89%	19.10%
45	13.18%	5.88%	19.06%
46	13.05%	5.82%	18.87%
47	12.78%	5.69%	18.47%
48	13.19%	5.88%	19.07%
49 & Over	13.70%	6.12%	19.82%

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: 46.35%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	6.69%	16.57%
16	9.88%	6.69%	16.57%
17	9.88%	6.69%	16.57%
18	9.88%	6.69%	16.57%
19	9.88%	6.69%	16.57%
20	9.88%	6.69%	16.57%
21	9.88%	6.69%	16.57%
22	10.04%	6.81%	16.85%
23	10.19%	6.92%	17.11%
24	10.35%	7.03%	17.38%
25	10.51%	7.14%	17.65%
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%	7.75%	19.11%
31	11.52%	7.86%	19.38%
32	11.69%	7.99%	19.68%
33	11.86%	8.11%	19.97%
34	12.04%	8.24%	20.28%
35	12.23%	8.37%	20.60%
36	12.42%	8.51%	20.93%
37	12.62%	8.65%	21.27%
38	12.83%	8.80%	21.63%
39	13.04%	8.95%	21.99%

## Section 4: Actuarial Valuation Basis

### 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%	9.11%	22.37%
41	13.51%	9.29%	22.80%
42	13.74%	9.45%	23.19%
43	13.95%	9.60%	23.55%
44	14.14%	9.73%	23.87%
45	14.20%	9.78%	23.98%
46	14.22%	9.79%	24.01%
47	14.29%	9.84%	24.13%
48	13.95%	9.60%	23.55%
49 & Over	13.66%	9.39%	23.05%

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: 71.37%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	6.89%	17.02%
16	10.13%	6.89%	17.02%
17	10.13%	6.89%	17.02%
18	10.13%	6.89%	17.02%
19	10.13%	6.89%	17.02%
20	10.13%	6.89%	17.02%
21	10.13%	6.89%	17.02%
22	10.29%	7.00%	17.29%
23	10.45%	7.12%	17.57%
24	10.61%	7.23%	17.84%
25	10.78%	7.35%	18.13%
26	10.95%	7.47%	18.42%
27	11.12%	7.60%	18.72%
28	11.30%	7.72%	19.02%
29	11.48%	7.85%	19.33%
30	11.64%	7.97%	19.61%
31	11.81%	8.09%	19.90%
32	11.98%	8.21%	20.19%
33	12.16%	8.34%	20.50%
34	12.34%	8.47%	20.81%
35	12.52%	8.60%	21.12%
36	12.72%	8.74%	21.46%
37	12.93%	8.89%	21.82%
38	13.13%	9.03%	22.16%
39	13.35%	9.19%	22.54%

## Section 4: Actuarial Valuation Basis

### 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%	9.35%	22.92%
41	13.82%	9.53%	23.35%
42	14.06%	9.70%	23.76%
43	14.28%	9.86%	24.14%
44	14.45%	9.98%	24.43%
45	14.51%	10.02%	24.53%
46	14.51%	10.02%	24.53%
47	14.53%	10.03%	24.56%
48	14.23%	9.82%	24.05%
49 & Over	13.65%	9.40%	23.05%

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: 71.52%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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%	5.32%	15.34%
16	10.02%	5.32%	15.34%
17	10.02%	5.32%	15.34%
18	10.02%	5.32%	15.34%
19	10.02%	5.32%	15.34%
20	10.02%	5.32%	15.34%
21	10.02%	5.32%	15.34%
22	10.17%	5.41%	15.58%
23	10.33%	5.50%	15.83%
24	10.49%	5.59%	16.08%
25	10.66%	5.68%	16.34%
26	10.82%	5.77%	16.59%
27	11.00%	5.87%	16.87%
28	11.17%	5.97%	17.14%
29	11.35%	6.07%	17.42%
30	11.52%	6.16%	17.68%
31	11.68%	6.25%	17.93%
32	11.85%	6.35%	18.20%
33	12.03%	6.45%	18.48%
34	12.20%	6.54%	18.74%
35	12.39%	6.65%	19.04%
36	12.59%	6.76%	19.35%
37	12.79%	6.87%	19.66%
38	12.99%	6.99%	19.98%
39	13.21%	7.11%	20.32%

## Section 4: Actuarial Valuation Basis

### 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%	7.23%	20.66%
41	13.67%	7.37%	21.04%
42	13.93%	7.51%	21.44%
43	14.13%	7.62%	21.75%
44	14.29%	7.71%	22.00%
45	14.40%	7.77%	22.17%
46	14.36%	7.75%	22.11%
47	14.40%	7.77%	22.17%
48	14.16%	7.64%	21.80%
49 & Over	13.47%	7.25%	20.72%

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: 55.93%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

## Section 4: Actuarial Valuation Basis

### 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)	9.04%	2.07%	11.11%
Cost Group #1 – PEPRA Tier 4 (3% COLA)	9.34%	3.13%	12.47%
Cost Group #2 - PEPRA Tier 5 (2% COLA)	8.40%	1.89%	10.29%
Cost Group #2 - PEPRA Tier 5 (3%/4% COLA)	8.57%	2.83%	11.40%
Cost Group #3 - PEPRA Tier 4 (3% COLA)	8.55%	2.97%	11.52%
Cost Group #4 - PEPRA Tier 4 (3% COLA)	9.18%	3.09%	12.27%
Cost Group #5 - PEPRA Tier 4 (2% COLA)	10.25%	2.35%	12.60%
Cost Group #5 - PEPRA Tier 4 (3% COLA)	10.91%	3.74%	14.65%
Cost Group #6 - PEPRA Tier 4 (3% COLA)	10.66%	3.56%	14.22%

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 2022 is equal to \$134,974; for an employer that is not enrolled in Social Security, the maximum amount is \$161,969. (§7522.10) These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2022. (§7522.10(d))

## Section 4: Actuarial Valuation Basis

### 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	14.45%	5.98%	20.43%
Cost Group #8 - PEPRA Tier D	12.62%	5.32%	17.94%
Cost Group #8 - PEPRA Tier E	13.10%	3.64%	16.74%
Cost Group #9 - PEPRA Tier E	13.63%	3.77%	17.40%
Cost Group #10 - PEPRA Tier D	13.17%	5.55%	18.72%
Cost Group #11 - PEPRA Tier D	11.67%	4.92%	16.59%
Cost Group #12 - PEPRA Tier D	12.00%	5.07%	17.07%

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 2022 is equal to \$134,974; for an employer that is not enrolled in Social Security, the maximum amount is \$161,969. (§7522.10) These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2022. (§7522.10(d))

## Section 4: Actuarial Valuation Basis

### Exhibit 4: Non-Refundability Factors

		December 31, 2021		December 31, 2020	
		Legacy Tiers	PEPRA Tiers	Legacy Tiers	PEPRA Tiers
<b>General</b>					
Cost Group #1 –	County and Small Districts (Tier 1)	0.9668		0.9693	
	PEPRA Tier 4 (2% COLA)		0.9561		0.9591
	PEPRA Tier 4 (3% COLA)		0.9604		0.9625
Cost Group #2 –	County and Small Districts (Tier 3)	0.9552		0.9570	
	PEPRA Tier 5 (2% COLA)		0.9564		0.9581
	PEPRA Tier 5 (3%/4% COLA)		0.9602		0.9615
Cost Group #3 –	Central Contra Costa Sanitary District	0.9614	0.9669	0.9624	0.9678
Cost Group #4 –	Contra Costa Housing Authority	0.9601	0.9626	0.9622	0.9649
Cost Group #5 –	Contra Costa County Fire Protection District	0.9773		0.9787	
	PEPRA Tier 4 (2% COLA)		0.9583		0.9548
	PEPRA Tier 4 (3% COLA)		0.9631		0.9602
Cost Group #6 –	Small Districts (Non-Enhanced Tier 1 and 4)	0.9475	0.9484	0.9508	0.9548
<b>Safety</b>					
Cost Group #7 –	County (Tier A and D)	0.9712	0.9782	0.9630	0.9719
Cost Group #8 –	Contra Costa Fire Protection District	0.9755		0.9694	
	PEPRA Tier D (3% COLA)		0.9800		0.9754
	PEPRA Tier E (2% COLA)		0.9762		0.9719
Cost Group #9 –	County (Tier C and E)	0.9697	0.9756	0.9626	0.9696
Cost Group #10 –	Moraga-Orinda Fire District	0.9730	0.9779	0.9651	0.9723
Cost Group #11 –	San Ramon Valley Fire District	0.9770	0.9790	0.9697	0.9748
Cost Group #12 –	Rodeo-Hercules Fire Protection District	0.9865	0.9820	0.9817	0.9769

## Section 4: Actuarial Valuation Basis

### 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) <sup>1</sup>	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 134.

<sup>1</sup> Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire.

## Section 4: Actuarial Valuation Basis

### 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 <sup>1</sup>	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 134.

<sup>1</sup> Effective with the December 31, 2021 valuation, East Fire was annexed into Con Fire.

## Section 4: Actuarial Valuation Basis

### Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2021

	Cost Groups #1 and #2 General County and Small Districts <sup>1</sup>	Cost Group #3 Central Contra Costa Sanitary District	Cost Group #4 Contra Costa Housing Authority	Cost Group #5 Contra Costa County Fire Protection District <sup>2</sup>	Cost Group #6 Small Districts (General Non- Enhanced)
<b>1</b> Allocated Valuation Value of Assets as of Beginning of Year	\$5,453,541,311	\$384,219,613	\$62,950,145	\$56,524,476	\$7,952,763
<b>2</b> Contributions: <sup>3</sup>					
a. Total Member Contributions	\$78,240,239	\$4,241,574	\$699,565	\$854,543	\$128,168
b. Employer Contributions - Excludes POB and other Special Contributions	191,348,209	12,407,775	2,639,599	2,441,343	149,742
c. Employer Contributions - Special (POB, Termination, etc.)	<u>30,000</u>	<u>70,763,669</u>	<u>0</u>	<u>0</u>	<u>0</u>
d. Total Contributions	\$269,618,448	\$87,413,018	\$3,339,164	\$3,295,886	\$277,910
<b>3</b> Total Payments Excluding Post-Retirement Death	296,415,226	23,124,669	3,563,005	3,984,358	334,323
<b>4</b> Administrative Expenses <sup>4</sup>	<u>9,412,709</u>	<u>472,890</u>	<u>80,295</u>	<u>95,178</u>	<u>12,958</u>
<b>5</b> Subtotal 1 + 2d – 3 – 4	\$5,417,331,824	\$448,035,072	\$62,646,009	\$55,740,826	\$7,883,392
<b>6</b> Weighted Average Fund Balance	5,435,447,457	417,387,517	62,798,077	56,132,651	7,918,078
<b>7</b> Earnings Allocated in Proportion to 6	<u>447,886,404</u>	<u>34,393,156</u>	<u>5,174,626</u>	<u>4,625,388</u>	<u>652,458</u>
<b>8</b> Allocated Valuation Value of Assets as of End of Year 5 + 7	\$5,865,218,228	\$482,428,228	\$67,820,635	\$60,366,214	\$8,535,850

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> The beginning of year Valuation Value of Assets excludes \$1,075,551 which has been allocated to East Fire and has been included with Cost Group #5 as a result of the annexation of East Fire into Con Fire that was effective July 1, 2022.

<sup>2</sup> The beginning of year Valuation Value of Assets includes \$1,075,551 which has been allocated to East Fire as a result of the annexation of East Fire into Con Fire that was effective July 1, 2022. In the prior year's valuation this amount was included in Cost Groups #1 and #2.

<sup>3</sup> Employer contributions include "member subvention of employer contributions" and exclude "employer subvention of member contributions".

<sup>4</sup> Allocated based on expected administrative expenses from the prior valuation.

## Section 4: Actuarial Valuation Basis

### Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2021 (continued)

	Cost Groups #7 & 9 Safety County	Cost Group #8 Contra Costa Fire Protection District <sup>1</sup>	Cost Group #10 Moraga-Orinda Fire District	Cost Group #11 San Ramon Valley Fire District
<b>1</b> Allocated Valuation Value of Assets as of Beginning of Year	\$1,991,530,525	\$989,590,537	\$178,987,827	\$442,713,650
<b>2</b> Contributions: <sup>2</sup>				
a. Total Member Contributions	\$18,826,099	\$8,382,510	\$1,442,816	\$3,878,919
b. Employer Contributions - Excludes POB and other Special Contributions	70,407,400	33,297,333	5,906,936	17,829,010
c. Employer Contributions - Special (POB, Termination, etc.)	0	0	0	263,000
d. Total Contributions	\$89,233,499	\$41,679,843	\$7,349,752	\$21,970,929
<b>3</b> Total Payments Excluding Post-Retirement Death	106,462,555	63,618,569	11,497,656	21,804,882
<b>4</b> Administrative Expenses <sup>3</sup>	1,353,750	613,562	112,207	294,037
<b>5</b> Subtotal 1 + 2d – 3 – 4	\$1,972,947,719	\$967,038,249	\$174,727,716	\$442,585,660
<b>6</b> Weighted Average Fund Balance	1,982,239,122	978,314,393	176,857,772	442,629,840
<b>7</b> Earnings Allocated in Proportion to 6	163,338,522	80,614,103	14,573,261	36,473,150
<b>8</b> Allocated Valuation Value of Assets as of End of Year 5 + 7	\$2,136,286,241	\$1,047,652,352	\$189,300,977	\$479,058,810

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> The beginning of year Valuation Value of Assets includes \$51,889,630 which has been allocated to East Fire as a result of the annexation of East Fire into Con Fire that was effective July 1, 2022. In the prior year's valuation this amount was included in Cost Group #13.

<sup>2</sup> Employer contributions include "member subvention of employer contributions" and exclude "employer subvention of member contributions".

<sup>3</sup> Allocated based on expected administrative expenses from the prior valuation.

## Section 4: Actuarial Valuation Basis

### Exhibit 6: Allocation of Valuation Value of Assets as of December 31, 2021 (continued)

	Cost Group #12 Rodeo-Hercules Fire Protection District	Withdrawn Employers	Total
<b>1</b> Allocated Valuation Value of Assets as of Beginning of Year	\$40,311,204	\$53,960,875	\$9,662,282,926
<b>2</b> Contributions: <sup>1</sup>			
a. Total Member Contributions	\$322,482	\$0	\$117,016,915
b. Employer Contributions - Excludes POB and other Special Contributions	2,208,428	0	338,635,775
c. Employer Contributions - Special (POB, Termination, etc.)	0	1,067,164	72,123,833
d. Total Contributions	\$2,530,910	\$1,067,164	\$527,776,523
<b>3</b> Total Payments Excluding Post-Retirement Death	2,252,311	5,424,163	538,481,717
<b>4</b> Administrative Expenses <sup>2</sup>	31,963	0	12,479,549
<b>5</b> Subtotal 1 + 2d – 3 – 4	\$40,557,840	\$49,603,876	\$9,639,098,183
<b>6</b> Weighted Average Fund Balance	40,434,522	51,591,485	9,651,750,914
<b>7</b> Earnings Allocated in Proportion to 6	3,331,846	4,251,191	795,314,105
<b>8</b> Allocated Valuation Value of Assets as of End of Year 5 + 7	\$43,889,686	\$53,855,067	\$10,434,412,288

**Note:** Results may be slightly off due to rounding.

<sup>1</sup> Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.

<sup>2</sup> Allocated based on expected administrative expenses from the prior valuation.

## Section 4: Actuarial Valuation Basis

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

The recommended employer contribution rates found on pages 35 through 43 have been shown on an aggregate basis. Within this Exhibit we have included the recommended legacy tier employer contribution rates as of December 31, 2021 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.

Cost Group #1	Basic			COLA			Total			All Aggregate Pay
	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	
County Tier 1 w/ Courts	17.07%	25.60%	25.60%	3.72%	5.58%	5.58%	20.79%	31.18%	31.18%	30.86%
District Tier 1 w/o POB	20.33%	30.49%	30.49%	6.36%	9.54%	9.54%	26.69%	40.03%	40.03%	39.73%
District Tier 1 – Moraga	N/A	N/A	24.48%	N/A	N/A	6.12%	N/A	N/A	30.60%	30.60%
District Tier 1 – First Five	17.26%	25.89%	N/A	4.02%	6.03%	N/A	21.28%	31.92%	N/A	31.57%
District Tier 1 – LAFCO	17.66%	26.49%	N/A	5.41%	8.11%	N/A	23.07%	34.60%	N/A	34.31%
County Tier 4 (3% COLA) w/ Courts	N/A	N/A	21.36%	N/A	N/A	4.99%	N/A	N/A	26.35%	26.35%
District Tier 4 (3% COLA) w/o POB	N/A	N/A	26.28%	N/A	N/A	8.94%	N/A	N/A	35.22%	35.22%
District Tier 4 (3% COLA) – Moraga	N/A	N/A	20.51%	N/A	N/A	5.58%	N/A	N/A	26.09%	26.09%
District Tier 4 (3% COLA) – First Five	N/A	N/A	21.63%	N/A	N/A	5.43%	N/A	N/A	27.06%	27.06%
District Tier 4 (3% COLA) – LAFCO	N/A	N/A	22.29%	N/A	N/A	7.51%	N/A	N/A	29.80%	29.80%
County Tier 4 (2% COLA) w/ Courts	N/A	N/A	21.06%	N/A	N/A	3.93%	N/A	N/A	24.99%	24.99%
<b>Cost Group #2</b>										
County Tier 3 w/ Courts	16.19%	24.29%	N/A	3.54%	5.31%	N/A	19.73%	29.60%	N/A	29.22%
District Tier 3 w/o POB	19.51%	29.27%	29.27%	6.22%	9.32%	9.32%	25.73%	38.59%	38.59%	38.09%
County Tier 5 (3%/4% COLA) w/ Courts	N/A	N/A	20.59%	N/A	N/A	4.69%	N/A	N/A	25.28%	25.28%
District Tier 5 (3%/4% COLA) w/o POB	N/A	N/A	25.51%	N/A	N/A	8.64%	N/A	N/A	34.15%	34.15%
County Tier 5 (2% COLA) w/ Courts	N/A	N/A	20.42%	N/A	N/A	3.75%	N/A	N/A	24.17%	24.17%
District Tier 5 (2% COLA) w/o POB	N/A	N/A	25.34%	N/A	N/A	7.70%	N/A	N/A	33.04%	33.04%

<sup>1</sup> If employer is in Social Security.

<sup>2</sup> For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

## Section 4: Actuarial Valuation Basis

### Exhibit 7: Recommended Employer Contribution Rates (continued)

Cost Group #3	Basic			COLA			Total			All Aggregate Pay
	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	
CCCSD Tier 1	N/A	N/A	13.64%	N/A	N/A	3.87%	N/A	N/A	17.51%	17.51%
CCCSD Tier 4 (3% COLA)	N/A	N/A	8.70%	N/A	N/A	2.97%	N/A	N/A	11.67%	11.67%
<b>Cost Group #4</b>										
Contra Costa Housing Authority Tier 1	20.55%	30.82%	N/A	9.88%	14.82%	N/A	30.43%	45.64%	N/A	44.93%
Contra Costa Housing Authority Tier 4 (3% COLA)	N/A	N/A	26.05%	N/A	N/A	13.89%	N/A	N/A	39.94%	39.94%
<b>Cost Group #5</b>										
CCCYPD Tier 1	N/A	N/A	26.00%	N/A	N/A	13.30%	N/A	N/A	39.30%	39.30%
CCCYPD Tier 4 (3% COLA)	N/A	N/A	21.87%	N/A	N/A	13.05%	N/A	N/A	34.92%	34.92%
CCCYPD Tier 4 (2% COLA)	N/A	N/A	21.21%	N/A	N/A	11.66%	N/A	N/A	32.87%	32.87%
<b>Cost Group #6</b>										
Non-Enhanced District Tier 1	9.01%	13.52%	N/A	2.72%	4.07%	N/A	11.73%	17.59%	N/A	17.38%
Non-Enhanced District Tier 4 (3% COLA)	N/A	N/A	10.81%	N/A	N/A	3.56%	N/A	N/A	14.37%	14.37%
<b>Cost Group #7</b>										
County Tier A	N/A	N/A	45.15%	N/A	N/A	31.08%	N/A	N/A	76.23%	76.23%
County Tier D	N/A	N/A	36.37%	N/A	N/A	29.54%	N/A	N/A	65.91%	65.91%
<b>Cost Group #8</b>										
CCCYPD Tier A	N/A	N/A	34.92%	N/A	N/A	37.71%	N/A	N/A	72.63%	72.63%
CCCYPD Tier D	N/A	N/A	23.97%	N/A	N/A	35.22%	N/A	N/A	59.19%	59.19%
CCCYPD Safety Tier E	N/A	N/A	24.45%	N/A	N/A	33.54%	N/A	N/A	57.99%	57.99%

<sup>1</sup> If employer is in Social Security.

<sup>2</sup> For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

## Section 4: Actuarial Valuation Basis

### Exhibit 7: Recommended Employer Contribution Rates (continued)

Cost Group #9	Basic			COLA			Total			All Aggregate Pay
	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	First \$350 Monthly <sup>1</sup>	Excess of \$350 Monthly <sup>1</sup>	All Eligible Pay <sup>2</sup>	
County Tier C	N/A	N/A	43.86%	N/A	N/A	28.30%	N/A	N/A	72.16%	72.16%
County Tier E	N/A	N/A	35.55%	N/A	N/A	27.33%	N/A	N/A	62.88%	62.88%
<b>Cost Group #10</b>										
Moraga-Orinda FD Tier A	N/A	N/A	36.09%	N/A	N/A	44.71%	N/A	N/A	80.80%	80.80%
Moraga-Orinda FD Tier D	N/A	N/A	27.02%	N/A	N/A	42.92%	N/A	N/A	69.94%	69.94%
<b>Cost Group #11</b>										
San Ramon FD Tier A	N/A	N/A	55.11%	N/A	N/A	33.03%	N/A	N/A	88.14%	88.14%
San Ramon FD Tier D	N/A	N/A	42.09%	N/A	N/A	29.48%	N/A	N/A	71.57%	71.57%
<b>Cost Group #12</b>										
Rodeo-Hercules FPD Tier A	N/A	N/A	59.34%	N/A	N/A	39.53%	N/A	N/A	98.87%	98.87%
Rodeo-Hercules FPD Tier D	N/A	N/A	50.70%	N/A	N/A	37.02%	N/A	N/A	87.72%	87.72%

5730848v4/05337.002

<sup>1</sup> If employer is in Social Security.

<sup>2</sup> 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 21, 2022

Ms. Gail Strohl  
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, 2023 through June 30, 2024**

Dear Gail:

As requested, we have prepared the enclosed contribution rate packet that contains the employer and member contribution rates for the period from July 1, 2023 through June 30, 2024.

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 2023-2024

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.

Ms. Gail Strohl  
July 21, 2022  
Page 2

We will also send these documents to you electronically. Please let us know if you have any questions.

Sincerely,



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

EK/elf  
Enclosures (5733495)

cc: Christina Dunn



**CONTRA COSTA COUNTY  
EMPLOYEES' RETIREMENT ASSOCIATION**

**CONTRIBUTION RATE PACKET FOR  
JULY 1, 2023 through JUNE 30, 2024**

---

1200 Concord Avenue Suite 300 Concord CA 94520 925.521.3960  
FAX: 925.521.3969 [www.cccera.org](http://www.cccera.org)

# CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## TABLE OF CONTENTS

<u>Page</u>	<u>Description</u>
i	Memo from CEO
1	Board of Supervisors Resolution
2	Employer Rates & Non-Refundability Discount Factors for Cost Group #1 (Exhibit 1)
3	Employer Rates & Non-Refundability Discount Factors for Cost Group #2 (Exhibit 2)
4	Employer Rates & Non-Refundability Discount Factors for Cost Group #3 (Exhibit 3)
5	Employer Rates & Non-Refundability Discount Factors for Cost Group #4 (Exhibit 4)
6	Employer Rates & Non-Refundability Discount Factors for Cost Group #5 (Exhibit 5)
7	Employer Rates & Non-Refundability Discount Factors for Cost Group #6 (Exhibit 6)
8	Employer Rates & Non-Refundability Discount Factors for Cost Group #7 (Exhibit 7)
9	Employer Rates & Non-Refundability Discount Factors for Cost Group #8 (Exhibit 8)
10	Employer Rates & Non-Refundability Discount Factors for Cost Group #9 (Exhibit 9)
11	Employer Rates & Non-Refundability Discount Factors for Cost Group #10 (Exhibit 10)
12	Employer Rates & Non-Refundability Discount Factors for Cost Group #11 (Exhibit 11)
13	Employer Rates & Non-Refundability Discount Factors for Cost Group #12 (Exhibit 12)
14	General Non-PEPRA Cost Group #1 Member Rates (Exhibit A)
15	General Non-PEPRA Cost Group #2 Member Rates (Exhibit B)
16	General Non-PEPRA Cost Group #3 Member Rates (Exhibit C)
17	General Non-PEPRA Cost Group #4 Member Rates (Exhibit D)
18	General Non-PEPRA Cost Group #5 Member Rates (Exhibit E)
19	General Non-PEPRA Cost Group #6 Member Rates (Exhibit F)
20	Safety Non-PEPRA Cost Group #7 Member Rates (Exhibit G)
21	Safety Non-PEPRA Cost Group #8 Member Rates (Exhibit H)
22	Safety Non-PEPRA Cost Group #9 Member Rates (Exhibit I)
23	Safety Non-PEPRA Cost Group #10 Member Rates (Exhibit J)

## **CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

- 24 Safety Non-PEPRA Cost Group #11 Member Rates (Exhibit K)
- 25 Safety Non-PEPRA Cost Group #12 Member Rates (Exhibit L)
- 26 General and Safety PEPRA Member Rates (Exhibit M)
- 27 Examples for Subvention and Employee Cost Sharing
- 28 Prepayment Discount Factor for 2023-2024



## **MEMORANDUM**

Date: August 10, 2022

To: Interested Parties and Participating Employers

From: Gail Strohl, Chief Executive Officer

Subject: Contribution Rates Effective July 1, 2023

---

At its August 10, 2022 meeting, the Retirement Board reviewed the actuary's valuation report for the year ending December 31, 2021 and adopted the recommended employer and employee contribution rates, which will become effective on July 1, 2023. A copy of the December 31, 2021 Actuarial Valuation can be found on CCCERA's website at [www.cccera.org](http://www.cccera.org) under the Actuarial Valuations link.

Enclosed are the employer and employee contribution rates to be used effective July 1, 2023 through June 30, 2024.

Please note the following:

- ✓ **The rates are effective July 1, 2023 through June 30, 2024 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 PEPRAs 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 Resolution No. \_\_\_\_\_  
by the Contra Costa County Employees' Retirement Association.

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, 2023 through June 30, 2024.

- 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

The Pension Obligation Bonds (POB) issued by the County in March 1994 and April 2003, affected contribution rates for certain County employers. The following non-County employers who participate in the Retirement Association are referred to as "Districts".

- |   |   |
|---|---|
| Bethel Island Municipal Improvement District          | In-Home Supportive Services Authority             |
| Byron, Brentwood Knightsen Union Cemetery District    | First 5 - Children & Families Commission          |
| Central Contra Costa Sanitary District                | Contra Costa County Fire Protection District      |
| Contra Costa County Employees' Retirement Association | Contra Costa Housing Authority                    |
| Moraga-Orinda Fire Protection District                | Contra Costa Mosquito and Vector Control District |
| Rodeo-Hercules Fire Protection District               | Local Agency Formation Commission (LAFCO)         |
| San Ramon Valley Fire Protection District             | Rodeo Sanitary District                           |

All other departments/employers are referred to as "County" including the Superior Court of California, Contra Costa County.

Contra Costa County Fire Protection District and Moraga-Orinda Fire Protection District issued Pension Obligation Bonds in 2005 which affected contribution rates for these two employers. Subsequently, Contra Costa County Fire Protection District made additional payments to CCCERA for its UAAL in 2006 and 2007.

First 5 - Children & Families Commission made a UAAL prepayment in 2013 which affected contribution rates for that employer.

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 and 2021 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).

## Exhibit 1

### Contra Costa County Employees' Retirement Association

#### Employer Contribution Rates Effective for July 1, 2023 through June 30, 2024 for Cost Group #1

Cost Group #1	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
County General Tier 1 w/ Courts	25.60%	25.60%	5.58%	5.58%	0.9668
District General Tier 1 w/o POB	30.49%	30.49%	9.54%	9.54%	0.9668
District General Tier 1 – Moraga	N/A	24.48%	N/A	6.12%	0.9668
District General Tier 1 – First Five	25.89%	N/A	6.03%	N/A	0.9668
District General Tier 1 – LAFCO	26.49%	N/A	8.11%	N/A	0.9668
County General Tier 4 (3% COLA) w/ Courts		21.36%		4.99%	0.9604
District General Tier 4 (3% COLA) w/o POB		26.28%		8.94%	0.9604
District General Tier 4 (3% COLA) – Moraga		20.51%		5.58%	0.9604
District General Tier 4 (3% COLA) – First Five		21.63%		5.43%	0.9604
District General Tier 4 (3% COLA) – LAFCO		22.29%		7.51%	0.9604
County General Tier 4 (2% COLA) w/ Courts		21.06%		3.93%	0.9561

Basic rates shown include an administrative expense load of 0.65% 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)

<sup>1</sup> 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.

<sup>2</sup> 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 PEPR 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, 2023 through June 30, 2024 for Cost Group #2

Cost Group #2	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
County General Tier 3 w/ Courts	24.29%	N/A	5.31%	N/A	0.9552
District General Tier 3 w/o POB	29.27%	29.27%	9.32%	9.32%	0.9552
County General Tier 5 (3%/4% COLA) w/ Courts		20.59%		4.69%	0.9602
District General Tier 5 (3%/4% COLA) w/o POB		25.51%		8.64%	0.9602
County General Tier 5 (2% COLA) w/ Courts		20.42%		3.75%	0.9564
District General Tier 5 (2% COLA) w/o POB		25.34%		7.70%	0.9564

Basic rates shown include an administrative expense load of 0.65% 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)

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #3**

Cost Group #3	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Central Contra Costa Sanitary District General Tier 1	N/A	13.64%	N/A	3.87%	0.9614
Central Contra Costa Sanitary District General Tier 4 (3% COLA)		8.70%		2.97%	0.9669

Basic rates shown include an administrative expense load of 0.65% of payroll.

**Employers:**

- Central Contra Costa Sanitary District

**Tiers:**

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

<sup>1</sup> 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.

<sup>2</sup> 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 PEPR 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, 2023 through June 30, 2024 for Cost Group #4

Cost Group #4	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Contra Costa Housing Authority General Tier 1	30.82%	N/A	14.82%	N/A	0.9601
Contra Costa Housing Authority General Tier 4 (3% COLA)		26.05%		13.89%	0.9626

Basic rates shown include an administrative expense load of 0.65% of payroll.

#### Employers:

- Contra Costa Housing Authority

#### Tiers:

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #5

Cost Group #5	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Contra Costa County Fire Protection District General Tier 1	N/A	26.00%	N/A	13.30%	0.9773
Contra Costa County Fire Protection District General Tier 4 (3% COLA)		21.87%		13.05%	0.9583
Contra Costa County Fire Protection District General Tier 4 (2% COLA)		21.21%		11.66%	0.9631

Basic rates shown include an administrative expense load of 0.65% of payroll.

The above rates reflect a prepayment in the amount of \$201,159 that East Contra Costa Fire Protection District made towards the Unfunded Actuarial Accrued Liability (UAAL) on June 30, 2022 as part of the annexation into Contra Costa County Fire Protection District. This prepayment has been used to reduce Contra Costa County Fire Protection District's UAAL contribution rate.

#### Employers:

- Contra Costa County Fire Protection District

#### Tiers:

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #6

Cost Group #6	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Non-Enhanced District General Tier 1	13.52%	N/A	4.07%	N/A	0.9475
Non-Enhanced District General Tier 4 (3% COLA)		10.81%		3.56%	0.9484

Basic rates shown include an administrative expense load of 0.65% of payroll.

#### Employers:

- Rodeo Sanitary District
- Byron Brentwood Cemetery District

#### Tiers:

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #7

Cost Group #7	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
County Safety Tier A	N/A	45.15%	N/A	31.08%	0.9712
County Safety Tier D		36.37%		29.54%	0.9782

Basic rates shown include an administrative expense load of 0.65% of payroll.

**Employers:**

- County Safety

**Tiers:**

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #8

Cost Group #8	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Contra Costa County Fire Protection District Safety Tier A	N/A	34.92%	N/A	37.71%	0.9755
Contra Costa County Fire Protection District Safety Tier D		23.97%		35.22%	0.9800
Contra Costa County Fire Protection District Safety Tier E		24.45%		33.54%	0.9762

Basic rates shown include an administrative expense load of 0.65% of payroll.

The above rates reflect a prepayment in the amount of \$3,143,278 that East Contra Costa Fire Protection District made towards the Unfunded Actuarial Accrued Liability (UAAL) on June 30, 2022 as part of the annexation into Contra Costa County Fire Protection District. This prepayment has been used to reduce Contra Costa County Fire Protection District's UAAL contribution rate.

#### Employers:

- Contra Costa County Fire Protection District

#### Tiers:

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #9

Cost Group #9	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
County Safety Tier C	N/A	43.86%	N/A	28.30%	0.9697
County Safety Tier E		35.55%		27.33%	0.9756

Basic rates shown include an administrative expense load of 0.65% of payroll.

#### Employers:

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

#### Tiers:

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #10

Cost Group #10	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Moraga-Orinda Fire Protection District Safety Tier A	N/A	36.09%	N/A	44.71%	0.9730
Moraga-Orinda Fire Protection District Safety Tier D		27.02%		42.92%	0.9779

Basic rates shown include an administrative expense load of 0.65% of payroll.

**Employers:**

- Moraga-Orinda Fire Protection District

**Tiers:**

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #11

Cost Group #11	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
San Ramon Valley Fire Protection District Safety Tier A	N/A	55.11%	N/A	33.03%	0.9770
San Ramon Valley Fire Protection District Safety Tier D		42.09%		29.48%	0.9790

Basic rates shown include an administrative expense load of 0.65% of payroll.

#### Employers:

- San Ramon Valley Fire Protection District

#### Tiers:

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024 for Cost Group #12

Cost Group #12	Basic		COLA		Non-Refundability Factor
	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	In Social Security <sup>1</sup>	Not In Social Security <sup>2</sup>	
Rodeo-Hercules Fire Protection District Safety Tier A	N/A	59.34%	N/A	39.53%	0.9865
Rodeo-Hercules Fire Protection District Safety Tier D		50.70%		37.02%	0.9820

Basic rates shown include an administrative expense load of 0.65% of payroll.

**Employers:**

- Rodeo-Hercules Fire Protection District

**Tiers:**

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

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic <sup>2</sup>			Total	
	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.44%	5.43%	2.77%	8.21%	8.20%
16	5.54%	5.53%	2.83%	8.37%	8.36%
17	5.64%	5.63%	2.88%	8.52%	8.51%
18	5.74%	5.73%	2.94%	8.68%	8.67%
19	5.84%	5.83%	3.00%	8.84%	8.83%
20	5.94%	5.93%	3.05%	8.99%	8.98%
21	6.05%	6.04%	3.11%	9.16%	9.15%
22	6.16%	6.15%	3.18%	9.34%	9.33%
23	6.26%	6.25%	3.23%	9.49%	9.48%
24	6.38%	6.37%	3.30%	9.68%	9.67%
25	6.49%	6.48%	3.36%	9.85%	9.84%
26	6.60%	6.59%	3.42%	10.02%	10.01%
27	6.72%	6.71%	3.49%	10.21%	10.20%
28	6.84%	6.83%	3.56%	10.40%	10.39%
29	6.96%	6.95%	3.62%	10.58%	10.57%
30	7.09%	7.08%	3.70%	10.79%	10.78%
31	7.21%	7.20%	3.77%	10.98%	10.97%
32	7.34%	7.33%	3.84%	11.18%	11.17%
33	7.47%	7.46%	3.91%	11.38%	11.37%
34	7.61%	7.60%	3.99%	11.60%	11.59%
35	7.75%	7.74%	4.07%	11.82%	11.81%
36	7.89%	7.88%	4.15%	12.04%	12.03%
37	8.03%	8.02%	4.23%	12.26%	12.25%
38	8.18%	8.17%	4.31%	12.49%	12.48%
39	8.34%	8.33%	4.40%	12.74%	12.73%
40	8.49%	8.48%	4.48%	12.97%	12.96%
41	8.64%	8.63%	4.57%	13.21%	13.20%
42	8.80%	8.79%	4.66%	13.46%	13.45%
43	8.95%	8.94%	4.74%	13.69%	13.68%
44	9.11%	9.10%	4.83%	13.94%	13.93%
45	9.27%	9.26%	4.92%	14.19%	14.18%
46	9.43%	9.42%	5.01%	14.44%	14.43%
47	9.59%	9.58%	5.10%	14.69%	14.68%
48	9.75%	9.74%	5.19%	14.94%	14.93%
49	9.89%	9.88%	5.27%	15.16%	15.15%
50	10.04%	10.03%	5.36%	15.40%	15.39%
51	10.20%	10.19%	5.45%	15.65%	15.64%
52	10.36%	10.35%	5.54%	15.90%	15.89%
53	10.52%	10.51%	5.63%	16.15%	16.14%
54	10.66%	10.65%	5.70%	16.36%	16.35%
55	10.80%	10.79%	5.78%	16.58%	16.57%
56	10.91%	10.90%	5.84%	16.75%	16.74%
57	10.90%	10.89%	5.84%	16.74%	16.73%
58	10.84%	10.83%	5.81%	16.65%	16.64%
59	10.60%	10.59%	5.67%	16.27%	16.26%
60 & Over	10.60%	10.59%	5.67%	16.27%	16.26%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 56.20% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic <sup>2</sup>			Total	
	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.43%	5.42%	2.41%	7.84%	7.83%
16	5.53%	5.52%	2.46%	7.99%	7.98%
17	5.63%	5.62%	2.51%	8.14%	8.13%
18	5.73%	5.72%	2.56%	8.29%	8.28%
19	5.83%	5.82%	2.61%	8.44%	8.43%
20	5.93%	5.92%	2.65%	8.58%	8.57%
21	6.04%	6.03%	2.71%	8.75%	8.74%
22	6.14%	6.13%	2.76%	8.90%	8.89%
23	6.25%	6.24%	2.81%	9.06%	9.05%
24	6.36%	6.35%	2.87%	9.23%	9.22%
25	6.47%	6.46%	2.92%	9.39%	9.38%
26	6.59%	6.58%	2.98%	9.57%	9.56%
27	6.71%	6.70%	3.04%	9.75%	9.74%
28	6.83%	6.82%	3.10%	9.93%	9.92%
29	6.95%	6.94%	3.15%	10.10%	10.09%
30	7.07%	7.06%	3.21%	10.28%	10.27%
31	7.20%	7.19%	3.28%	10.48%	10.47%
32	7.33%	7.32%	3.34%	10.67%	10.66%
33	7.46%	7.45%	3.40%	10.86%	10.85%
34	7.59%	7.58%	3.47%	11.06%	11.05%
35	7.73%	7.72%	3.54%	11.27%	11.26%
36	7.87%	7.86%	3.60%	11.47%	11.46%
37	8.02%	8.01%	3.68%	11.70%	11.69%
38	8.16%	8.15%	3.75%	11.91%	11.90%
39	8.31%	8.30%	3.82%	12.13%	12.12%
40	8.47%	8.46%	3.90%	12.37%	12.36%
41	8.62%	8.61%	3.97%	12.59%	12.58%
42	8.78%	8.77%	4.05%	12.83%	12.82%
43	8.93%	8.92%	4.12%	13.05%	13.04%
44	9.09%	9.08%	4.20%	13.29%	13.28%
45	9.25%	9.24%	4.28%	13.53%	13.52%
46	9.41%	9.40%	4.36%	13.77%	13.76%
47	9.57%	9.56%	4.44%	14.01%	14.00%
48	9.72%	9.71%	4.51%	14.23%	14.22%
49	9.88%	9.87%	4.59%	14.47%	14.46%
50	10.02%	10.01%	4.66%	14.68%	14.67%
51	10.18%	10.17%	4.74%	14.92%	14.91%
52	10.34%	10.33%	4.81%	15.15%	15.14%
53	10.49%	10.48%	4.89%	15.38%	15.37%
54	10.63%	10.62%	4.96%	15.59%	15.58%
55	10.76%	10.75%	5.02%	15.78%	15.77%
56	10.85%	10.84%	5.06%	15.91%	15.90%
57	10.90%	10.89%	5.09%	15.99%	15.98%
58	10.85%	10.84%	5.06%	15.91%	15.90%
59	10.31%	10.30%	4.80%	15.11%	15.10%
60 & Over	10.31%	10.30%	4.80%	15.11%	15.10%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 48.98% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic	COLA	Total
15	5.64%	2.83%	8.47%
16	5.74%	2.89%	8.63%
17	5.84%	2.94%	8.78%
18	5.95%	3.01%	8.96%
19	6.05%	3.06%	9.11%
20	6.16%	3.12%	9.28%
21	6.27%	3.18%	9.45%
22	6.38%	3.24%	9.62%
23	6.49%	3.30%	9.79%
24	6.61%	3.37%	9.98%
25	6.73%	3.44%	10.17%
26	6.85%	3.50%	10.35%
27	6.97%	3.57%	10.54%
28	7.09%	3.63%	10.72%
29	7.22%	3.71%	10.93%
30	7.35%	3.78%	11.13%
31	7.48%	3.85%	11.33%
32	7.61%	3.92%	11.53%
33	7.75%	4.00%	11.75%
34	7.89%	4.07%	11.96%
35	8.03%	4.15%	12.18%
36	8.18%	4.23%	12.41%
37	8.33%	4.32%	12.65%
38	8.48%	4.40%	12.88%
39	8.64%	4.49%	13.13%
40	8.80%	4.58%	13.38%
41	8.96%	4.66%	13.62%
42	9.12%	4.75%	13.87%
43	9.28%	4.84%	14.12%
44	9.44%	4.93%	14.37%
45	9.60%	5.02%	14.62%
46	9.77%	5.11%	14.88%
47	9.93%	5.20%	15.13%
48	10.09%	5.29%	15.38%
49	10.24%	5.37%	15.61%
50	10.40%	5.46%	15.86%
51	10.55%	5.54%	16.09%
52	10.69%	5.62%	16.31%
53	10.85%	5.71%	16.56%
54	11.00%	5.79%	16.79%
55	11.16%	5.88%	17.04%
56	11.21%	5.91%	17.12%
57	11.17%	5.88%	17.05%
58	11.03%	5.81%	16.84%
59	10.48%	5.50%	15.98%
60 & Over	10.48%	5.50%	15.98%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 55.14% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic <sup>2</sup>			Total	
	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.44%	5.43%	2.70%	8.14%	8.13%
16	5.54%	5.53%	2.76%	8.30%	8.29%
17	5.64%	5.63%	2.81%	8.45%	8.44%
18	5.74%	5.73%	2.87%	8.61%	8.60%
19	5.84%	5.83%	2.92%	8.76%	8.75%
20	5.94%	5.93%	2.98%	8.92%	8.91%
21	6.05%	6.04%	3.04%	9.09%	9.08%
22	6.16%	6.15%	3.10%	9.26%	9.25%
23	6.26%	6.25%	3.15%	9.41%	9.40%
24	6.38%	6.37%	3.22%	9.60%	9.59%
25	6.49%	6.48%	3.28%	9.77%	9.76%
26	6.60%	6.59%	3.34%	9.94%	9.93%
27	6.72%	6.71%	3.41%	10.13%	10.12%
28	6.84%	6.83%	3.47%	10.31%	10.30%
29	6.96%	6.95%	3.54%	10.50%	10.49%
30	7.09%	7.08%	3.61%	10.70%	10.69%
31	7.21%	7.20%	3.68%	10.89%	10.88%
32	7.34%	7.33%	3.75%	11.09%	11.08%
33	7.47%	7.46%	3.82%	11.29%	11.28%
34	7.61%	7.60%	3.90%	11.51%	11.50%
35	7.75%	7.74%	3.97%	11.72%	11.71%
36	7.89%	7.88%	4.05%	11.94%	11.93%
37	8.03%	8.02%	4.13%	12.16%	12.15%
38	8.18%	8.17%	4.21%	12.39%	12.38%
39	8.34%	8.33%	4.30%	12.64%	12.63%
40	8.49%	8.48%	4.38%	12.87%	12.86%
41	8.64%	8.63%	4.46%	13.10%	13.09%
42	8.80%	8.79%	4.55%	13.35%	13.34%
43	8.95%	8.94%	4.63%	13.58%	13.57%
44	9.11%	9.10%	4.72%	13.83%	13.82%
45	9.27%	9.26%	4.81%	14.08%	14.07%
46	9.43%	9.42%	4.89%	14.32%	14.31%
47	9.59%	9.58%	4.98%	14.57%	14.56%
48	9.75%	9.74%	5.07%	14.82%	14.81%
49	9.89%	9.88%	5.15%	15.04%	15.03%
50	10.04%	10.03%	5.23%	15.27%	15.26%
51	10.20%	10.19%	5.32%	15.52%	15.51%
52	10.36%	10.35%	5.40%	15.76%	15.75%
53	10.52%	10.51%	5.49%	16.01%	16.00%
54	10.66%	10.65%	5.57%	16.23%	16.22%
55	10.80%	10.79%	5.65%	16.45%	16.44%
56	10.91%	10.90%	5.71%	16.62%	16.61%
57	10.90%	10.89%	5.70%	16.60%	16.59%
58	10.84%	10.83%	5.67%	16.51%	16.50%
59	10.60%	10.59%	5.54%	16.14%	16.13%
60 & Over	10.60%	10.59%	5.54%	16.14%	16.13%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 54.86% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

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%	4.13%	11.59%
34	7.60%	4.22%	11.82%
35	7.74%	4.30%	12.04%
36	7.88%	4.38%	12.26%
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%	4.92%	13.71%
43	8.94%	5.01%	13.95%
44	9.10%	5.11%	14.21%
45	9.26%	5.20%	14.46%
46	9.42%	5.30%	14.72%
47	9.58%	5.39%	14.97%
48	9.74%	5.49%	15.23%
49	9.88%	5.57%	15.45%
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%	6.11%	16.90%
56	10.90%	6.18%	17.08%
57	10.89%	6.17%	17.06%
58	10.83%	6.14%	16.97%
59	10.59%	5.99%	16.58%
60 & Over	10.59%	5.99%	16.58%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 59.40% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic <sup>2</sup>			Total	
	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	6.19%	6.18%	2.55%	8.74%	8.73%
16	6.30%	6.29%	2.60%	8.90%	8.89%
17	6.41%	6.40%	2.65%	9.06%	9.05%
18	6.53%	6.52%	2.70%	9.23%	9.22%
19	6.64%	6.63%	2.75%	9.39%	9.38%
20	6.76%	6.75%	2.80%	9.56%	9.55%
21	6.88%	6.87%	2.86%	9.74%	9.73%
22	7.00%	6.99%	2.91%	9.91%	9.90%
23	7.13%	7.12%	2.97%	10.10%	10.09%
24	7.26%	7.25%	3.03%	10.29%	10.28%
25	7.39%	7.38%	3.09%	10.48%	10.47%
26	7.52%	7.51%	3.15%	10.67%	10.66%
27	7.65%	7.64%	3.20%	10.85%	10.84%
28	7.79%	7.78%	3.27%	11.06%	11.05%
29	7.93%	7.92%	3.33%	11.26%	11.25%
30	8.08%	8.07%	3.40%	11.48%	11.47%
31	8.23%	8.22%	3.46%	11.69%	11.68%
32	8.38%	8.37%	3.53%	11.91%	11.90%
33	8.53%	8.52%	3.60%	12.13%	12.12%
34	8.69%	8.68%	3.67%	12.36%	12.35%
35	8.85%	8.84%	3.74%	12.59%	12.58%
36	9.02%	9.01%	3.82%	12.84%	12.83%
37	9.17%	9.16%	3.89%	13.06%	13.05%
38	9.34%	9.33%	3.96%	13.30%	13.29%
39	9.50%	9.49%	4.03%	13.53%	13.52%
40	9.68%	9.67%	4.11%	13.79%	13.78%
41	9.84%	9.83%	4.19%	14.03%	14.02%
42	10.00%	9.99%	4.26%	14.26%	14.25%
43	10.18%	10.17%	4.34%	14.52%	14.51%
44	10.33%	10.32%	4.41%	14.74%	14.73%
45	10.49%	10.48%	4.48%	14.97%	14.96%
46	10.64%	10.63%	4.55%	15.19%	15.18%
47	10.82%	10.81%	4.63%	15.45%	15.44%
48	10.97%	10.96%	4.69%	15.66%	15.65%
49	11.13%	11.12%	4.77%	15.90%	15.89%
50	11.30%	11.29%	4.84%	16.14%	16.13%
51	11.38%	11.37%	4.88%	16.26%	16.25%
52	11.42%	11.41%	4.90%	16.32%	16.31%
53	11.32%	11.31%	4.85%	16.17%	16.16%
54	10.93%	10.92%	4.68%	15.61%	15.60%
55	10.93%	10.92%	4.68%	15.61%	15.60%
56	10.93%	10.92%	4.68%	15.61%	15.60%
57	10.93%	10.92%	4.68%	15.61%	15.60%
58	10.93%	10.92%	4.68%	15.61%	15.60%
59	10.93%	10.92%	4.68%	15.61%	15.60%
60 & Over	10.93%	10.92%	4.68%	15.61%	15.60%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 44.87% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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.

<sup>2</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic	COLA	Total
15	9.90%	6.63%	16.53%
16	9.90%	6.63%	16.53%
17	9.90%	6.63%	16.53%
18	9.90%	6.63%	16.53%
19	9.90%	6.63%	16.53%
20	9.90%	6.63%	16.53%
21	9.90%	6.63%	16.53%
22	10.06%	6.74%	16.80%
23	10.21%	6.85%	17.06%
24	10.37%	6.96%	17.33%
25	10.53%	7.07%	17.60%
26	10.70%	7.19%	17.89%
27	10.87%	7.31%	18.18%
28	11.05%	7.44%	18.49%
29	11.23%	7.57%	18.80%
30	11.39%	7.68%	19.07%
31	11.55%	7.79%	19.34%
32	11.71%	7.90%	19.61%
33	11.89%	8.03%	19.92%
34	12.07%	8.16%	20.23%
35	12.25%	8.28%	20.53%
36	12.44%	8.42%	20.86%
37	12.65%	8.57%	21.22%
38	12.85%	8.71%	21.56%
39	13.06%	8.86%	21.92%
40	13.29%	9.02%	22.31%
41	13.53%	9.19%	22.72%
42	13.78%	9.36%	23.14%
43	14.00%	9.52%	23.52%
44	14.17%	9.64%	23.81%
45	14.24%	9.69%	23.93%
46	14.28%	9.72%	24.00%
47	14.27%	9.71%	23.98%
48	14.09%	9.58%	23.67%
49 & Over	13.63%	9.26%	22.89%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 70.51% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic	COLA	Total
15	9.88%	6.66%	16.54%
16	9.88%	6.66%	16.54%
17	9.88%	6.66%	16.54%
18	9.88%	6.66%	16.54%
19	9.88%	6.66%	16.54%
20	9.88%	6.66%	16.54%
21	9.88%	6.66%	16.54%
22	10.04%	6.78%	16.82%
23	10.19%	6.88%	17.07%
24	10.35%	7.00%	17.35%
25	10.51%	7.11%	17.62%
26	10.68%	7.23%	17.91%
27	10.85%	7.35%	18.20%
28	11.02%	7.47%	18.49%
29	11.20%	7.60%	18.80%
30	11.36%	7.71%	19.07%
31	11.52%	7.83%	19.35%
32	11.69%	7.95%	19.64%
33	11.86%	8.07%	19.93%
34	12.04%	8.20%	20.24%
35	12.23%	8.33%	20.56%
36	12.42%	8.47%	20.89%
37	12.62%	8.61%	21.23%
38	12.83%	8.76%	21.59%
39	13.04%	8.91%	21.95%
40	13.26%	9.06%	22.32%
41	13.51%	9.24%	22.75%
42	13.74%	9.41%	23.15%
43	13.95%	9.55%	23.50%
44	14.14%	9.69%	23.83%
45	14.20%	9.73%	23.93%
46	14.22%	9.75%	23.97%
47	14.29%	9.80%	24.09%
48	13.95%	9.55%	23.50%
49 & Over	13.66%	9.35%	23.01%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 71.04% applied to Basic Rates prior to adjustment for administrative expenses

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

<b>Entry Age</b>	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
15	9.50%	4.17%	13.67%
16	9.50%	4.17%	13.67%
17	9.50%	4.17%	13.67%
18	9.50%	4.17%	13.67%
19	9.50%	4.17%	13.67%
20	9.50%	4.17%	13.67%
21	9.50%	4.17%	13.67%
22	9.65%	4.24%	13.89%
23	9.80%	4.31%	14.11%
24	9.95%	4.38%	14.33%
25	10.11%	4.45%	14.56%
26	10.27%	4.53%	14.80%
27	10.43%	4.60%	15.03%
28	10.59%	4.68%	15.27%
29	10.75%	4.75%	15.50%
30	10.90%	4.82%	15.72%
31	11.05%	4.89%	15.94%
32	11.21%	4.96%	16.17%
33	11.38%	5.04%	16.42%
34	11.55%	5.12%	16.67%
35	11.72%	5.20%	16.92%
36	11.90%	5.28%	17.18%
37	12.09%	5.37%	17.46%
38	12.28%	5.46%	17.74%
39	12.48%	5.55%	18.03%
40	12.68%	5.65%	18.33%
41	12.88%	5.74%	18.62%
42	13.05%	5.82%	18.87%
43	13.14%	5.86%	19.00%
44	13.21%	5.89%	19.10%
45	13.18%	5.88%	19.06%
46	13.05%	5.82%	18.87%
47	12.78%	5.69%	18.47%
48	13.19%	5.88%	19.07%
49 & Over	13.70%	6.12%	19.82%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 46.35% applied to Basic Rates prior to adjustment for administrative expenses

---

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

<b>Entry Age</b>	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
15	9.88%	6.69%	16.57%
16	9.88%	6.69%	16.57%
17	9.88%	6.69%	16.57%
18	9.88%	6.69%	16.57%
19	9.88%	6.69%	16.57%
20	9.88%	6.69%	16.57%
21	9.88%	6.69%	16.57%
22	10.04%	6.81%	16.85%
23	10.19%	6.92%	17.11%
24	10.35%	7.03%	17.38%
25	10.51%	7.14%	17.65%
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%	7.75%	19.11%
31	11.52%	7.86%	19.38%
32	11.69%	7.99%	19.68%
33	11.86%	8.11%	19.97%
34	12.04%	8.24%	20.28%
35	12.23%	8.37%	20.60%
36	12.42%	8.51%	20.93%
37	12.62%	8.65%	21.27%
38	12.83%	8.80%	21.63%
39	13.04%	8.95%	21.99%
40	13.26%	9.11%	22.37%
41	13.51%	9.29%	22.80%
42	13.74%	9.45%	23.19%
43	13.95%	9.60%	23.55%
44	14.14%	9.73%	23.87%
45	14.20%	9.78%	23.98%
46	14.22%	9.79%	24.01%
47	14.29%	9.84%	24.13%
48	13.95%	9.60%	23.55%
49 & Over	13.66%	9.39%	23.05%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 71.37% applied to Basic Rates prior to adjustment for administrative expenses

---

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic	COLA	Total
15	10.13%	6.89%	17.02%
16	10.13%	6.89%	17.02%
17	10.13%	6.89%	17.02%
18	10.13%	6.89%	17.02%
19	10.13%	6.89%	17.02%
20	10.13%	6.89%	17.02%
21	10.13%	6.89%	17.02%
22	10.29%	7.00%	17.29%
23	10.45%	7.12%	17.57%
24	10.61%	7.23%	17.84%
25	10.78%	7.35%	18.13%
26	10.95%	7.47%	18.42%
27	11.12%	7.60%	18.72%
28	11.30%	7.72%	19.02%
29	11.48%	7.85%	19.33%
30	11.64%	7.97%	19.61%
31	11.81%	8.09%	19.90%
32	11.98%	8.21%	20.19%
33	12.16%	8.34%	20.50%
34	12.34%	8.47%	20.81%
35	12.52%	8.60%	21.12%
36	12.72%	8.74%	21.46%
37	12.93%	8.89%	21.82%
38	13.13%	9.03%	22.16%
39	13.35%	9.19%	22.54%
40	13.57%	9.35%	22.92%
41	13.82%	9.53%	23.35%
42	14.06%	9.70%	23.76%
43	14.28%	9.86%	24.14%
44	14.45%	9.98%	24.43%
45	14.51%	10.02%	24.53%
46	14.51%	10.02%	24.53%
47	14.53%	10.03%	24.56%
48	14.23%	9.82%	24.05%
49 & Over	13.65%	9.40%	23.05%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 71.52% applied to Basic Rates prior to adjustment for administrative expenses

---

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

Entry Age	Basic	COLA	Total
15	10.02%	5.32%	15.34%
16	10.02%	5.32%	15.34%
17	10.02%	5.32%	15.34%
18	10.02%	5.32%	15.34%
19	10.02%	5.32%	15.34%
20	10.02%	5.32%	15.34%
21	10.02%	5.32%	15.34%
22	10.17%	5.41%	15.58%
23	10.33%	5.50%	15.83%
24	10.49%	5.59%	16.08%
25	10.66%	5.68%	16.34%
26	10.82%	5.77%	16.59%
27	11.00%	5.87%	16.87%
28	11.17%	5.97%	17.14%
29	11.35%	6.07%	17.42%
30	11.52%	6.16%	17.68%
31	11.68%	6.25%	17.93%
32	11.85%	6.35%	18.20%
33	12.03%	6.45%	18.48%
34	12.20%	6.54%	18.74%
35	12.39%	6.65%	19.04%
36	12.59%	6.76%	19.35%
37	12.79%	6.87%	19.66%
38	12.99%	6.99%	19.98%
39	13.21%	7.11%	20.32%
40	13.43%	7.23%	20.66%
41	13.67%	7.37%	21.04%
42	13.93%	7.51%	21.44%
43	14.13%	7.62%	21.75%
44	14.29%	7.71%	22.00%
45	14.40%	7.77%	22.17%
46	14.36%	7.75%	22.11%
47	14.40%	7.77%	22.17%
48	14.16%	7.64%	21.80%
49 & Over	13.47%	7.25%	20.72%

Administrative Expense: 0.50% of payroll added to Basic Rates

COLA Loading: 55.93% applied to Basic Rates prior to adjustment for administrative expenses

---

<sup>1</sup> 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, 2023 through June 30, 2024**

Expressed as a Percentage of Monthly Payroll<sup>1</sup>

<b>General Tiers</b>	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
Cost Group #1 – PEPRA Tier 4 (2% COLA)	9.04%	2.07%	11.11%
Cost Group #1 – PEPRA Tier 4 (3% COLA)	9.34%	3.13%	12.47%
Cost Group #2 – PEPRA Tier 5 (2% COLA)	8.40%	1.89%	10.29%
Cost Group #2 – PEPRA Tier 5 (3%/4% COLA)	8.57%	2.83%	11.40%
Cost Group #3 – PEPRA Tier 4 (3% COLA)	8.55%	2.97%	11.52%
Cost Group #4 – PEPRA Tier 4 (3% COLA)	9.18%	3.09%	12.27%
Cost Group #5 – PEPRA Tier 4 (2% COLA)	10.25%	2.35%	12.60%
Cost Group #5 – PEPRA Tier 4 (3% COLA)	10.91%	3.74%	14.65%
Cost Group #6 – PEPRA Tier 4 (3% COLA)	10.66%	3.56%	14.22%

<b>Safety Tiers</b>	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
Cost Group #7 – PEPRA Tier D	14.45%	5.98%	20.43%
Cost Group #8 – PEPRA Tier D	12.62%	5.32%	17.94%
Cost Group #8 – PEPRA Tier E	13.10%	3.64%	16.74%
Cost Group #9 – PEPRA Tier E	13.63%	3.77%	17.40%
Cost Group #10 – PEPRA Tier D	13.17%	5.55%	18.72%
Cost Group #11 – PEPRA Tier D	11.67%	4.92%	16.59%
Cost Group #12 – PEPRA Tier D	12.00%	5.07%	17.07%

Administrative Expense: 0.50% of payroll added to Basic Rates

<sup>1</sup> 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.

# CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## 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% ( $25\% \times 6.00\%$ )

Employer rate should be increased by 1.44% ( $1.50\% \times 0.9614$ )

Please note that for PEPRAs 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 PEPRAs 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.

## CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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% ( $8.00\% \times 0.9770$ )

### PREPAYMENT DISCOUNT FACTOR FOR 2023-2024

Employer Contribution Prepayment Program & Discount Factor for 2023-2024 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, 2023 through June 30, 2024 contributions on or before July 31, 2023. If you wish to start participating, please contact the Accounting Department at CCCERA by March 31, 2023.

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, 2023 through June 30, 2024 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
<b>Sum of Discount Factors Divided by 12:</b>		<b>0.9707</b>



<i>Meeting Date</i> <b>08/10/2022</b> <i>Agenda Item</i> <b>#12</b>
--

## MEMORANDUM

Date: August 10, 2022  
To: CCCERA Board of Retirement  
From: Christina Dunn, Deputy Chief Executive Officer  
Subject: Consider and take possible action to approve pay code lists

---

### Background

Pay codes for all employers that participate in the CCCERA pension plan are included in the enclosed lists, along with a notation reflecting whether each pay code is included or excluded from compensation earnable (for Legacy members) or pensionable compensation (for PEPRA members). Once approved, the summary will be posted on the CCCERA website and will continue to be updated on an annual basis.

### Recommendations

Consider and take possible action to approve the pay code lists.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

*Meeting Date*  
**08/10/2022**  
*Agenda Item*  
**#12**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
350 Offset Adjustment	RX3	EXCLUDED	EXCLUDED
Absent without Leave	R27	EXCLUDED	EXCLUDED
Absent without Pay	R26	EXCLUDED	EXCLUDED
Access Incentive Bonus	M21	INCLUDED	EXCLUDED
Additional Duty Emergency	ADE	EXCLUDED	EXCLUDED
Additional Duty Pay - base hrly rate	ADD	EXCLUDED	EXCLUDED
Additional Duty Residents	ADR	EXCLUDED	EXCLUDED
Additional Pay - Elections	REP	INCLUDED	EXCLUDED
Additional Pay County Fair	RSF	INCLUDED	EXCLUDED
Adjustment Sale of Vacation	VAD	INCLUDED	EXCLUDED
Adjustment Shift Pay	SHA	INCLUDED	EXCLUDED
Adjustment to SDI Earnings	SDA	EXCLUDED	EXCLUDED
Adjustment Uniform Allowance	A99	INCLUDED	EXCLUDED
Admin Leave Hours Taken (within base pay)	ALP	INCLUDED	INCLUDED
Advance	ADV	EXCLUDED	EXCLUDED
Agreed Upon Temp Abs Hrs Taken	ATA	EXCLUDED	EXCLUDED
Agreed Upon Temp Ded'n Adj	ATJ	EXCLUDED	EXCLUDED
Annual Registrar Stipnd	M49	INCLUDED	EXCLUDED
Assessmt Appeals Brd Stipend	M52	INCLUDED	EXCLUDED
ATA Deduction	ATD	EXCLUDED	EXCLUDED
Auto Allow Department Heads	AU3	INCLUDED	EXCLUDED
Auto Allow Elected Dept Head	AUT	INCLUDED	EXCLUDED
Auto Allowance	AU1	INCLUDED	EXCLUDED
Auto Allowance 2	AU2	INCLUDED	EXCLUDED
Benefit Replace Plan Retiree	BRP	EXCLUDED	EXCLUDED
Bi Lingual Pay \$80	M80	INCLUDED	EXCLUDED
Bilingual Pay	M65	INCLUDED	EXCLUDED
Bi-Lingual Pay	M57	INCLUDED	EXCLUDED
Bi-Lingual Pay Safety	M85	INCLUDED	EXCLUDED
Bldg Supv Diff 9%	D50	INCLUDED	EXCLUDED
Bonus Hazard Matl Response TM	B95	INCLUDED	EXCLUDED
Bonus Lateral Hire Incentive	B55	EXCLUDED	EXCLUDED
Bonus RN Special Assignment	B60	INCLUDED	EXCLUDED
Bonus Special Pay	B79	INCLUDED	EXCLUDED
CA COVID Supp Sck Lv Taken	CAL	EXCLUDED	EXCLUDED
Call Back @ 1.50 Local 1230	N77	EXCLUDED	EXCLUDED
Call-Back	N52	EXCLUDED	EXCLUDED
Callback @ 1.50 CNA	N62	EXCLUDED	EXCLUDED
Callback @ 1.50 DSA	N42	EXCLUDED	EXCLUDED
Callback @ 1.50 Local 1021	N32	EXCLUDED	EXCLUDED
Callback @ 1.50 Local 2700	N34	EXCLUDED	EXCLUDED
Callback @ 1.50 Local 512	N33	EXCLUDED	EXCLUDED
Callback @ 1.50 Local One	N35	EXCLUDED	EXCLUDED
Callback @ 1.50 PPOA	N37	EXCLUDED	EXCLUDED
Callback @ 1.50 Public Def Inv	N30	EXCLUDED	EXCLUDED
Callback @ 1.50 RNs in OR	N64	EXCLUDED	EXCLUDED
Callback @ 1.50 T856	N38	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Callback @ 1.50 T856 SterlProc	N36	EXCLUDED	EXCLUDED
Callback @ 1.50 WCE	N31	EXCLUDED	EXCLUDED
Callback @1.5 Loc 21 and Unrep	N73	EXCLUDED	EXCLUDED
Callback Additional 1 Hour	N1H	EXCLUDED	EXCLUDED
CallBack Adjustment	NAD	EXCLUDED	EXCLUDED
Callback CNA Comp Time	N67	EXCLUDED	EXCLUDED
Callback CNA Comp Time RNs OR	N68	EXCLUDED	EXCLUDED
Callback Minimum Guarantee	NMG	EXCLUDED	EXCLUDED
CALWORKS Differential	M19	INCLUDED	EXCLUDED
Canine Care Agriculture	E09	EXCLUDED	EXCLUDED
CERA Cert Diff 2.5%	C74	INCLUDED	EXCLUDED
Cert Elect/Regist Admin Diff 5%	C73	INCLUDED	EXCLUDED
Cert PD CCCERA 5.0%	C38	INCLUDED	EXCLUDED
Certificate Agriculture Commn	C11	INCLUDED	EXCLUDED
Certificate Ca Prof Engineer	C25	INCLUDED	EXCLUDED
Certificate Hazardous Materials	C28	INCLUDED	EXCLUDED
Certificate Prof Accounting	C39	INCLUDED	EXCLUDED
Certificate Prof Dev Tr/TaxCol	C15	INCLUDED	EXCLUDED
Certificate Weights/Measures	C12	INCLUDED	EXCLUDED
Charge Nurse Relief	D44	INCLUDED	EXCLUDED
Charge Nurse Relief Per Diem	D79	EXCLUDED	EXCLUDED
Charge Pay Clinical Lab Sci II	D43	INCLUDED	EXCLUDED
Charge Pay LVN Psych Tech	D47	INCLUDED	EXCLUDED
Clinical On Call	N56	EXCLUDED	EXCLUDED
CNA Code Grey Team Assgn 10%	D87	INCLUDED	EXCLUDED
CNA Code Grey Team Assgn 5%	D88	INCLUDED	EXCLUDED
CNA Emergency Dept Diff	HZE	INCLUDED	EXCLUDED
CNA Grievance Meetings Stipend	OGM	EXCLUDED	EXCLUDED
CNA Weekend Only Shift 1	E08	EXCLUDED	EXCLUDED
CNA Weekend Only Shift 2	E20	EXCLUDED	EXCLUDED
CNA Weekend Shift Bonus	B14	INCLUDED	EXCLUDED
Code Gray Loc 2700 10 Pct	D96	INCLUDED	EXCLUDED
Code Gray Loc 2700 5 Pct	D99	INCLUDED	EXCLUDED
Code Gray Loc One 5 Pct	D92	INCLUDED	EXCLUDED
Code Gray NSC 10 Pct	E78	INCLUDED	EXCLUDED
Code Gray Staff NursePD 10 Pct	E52	EXCLUDED	EXCLUDED
Code Gray T856 LVN 10 Pct	D91	INCLUDED	EXCLUDED
Comm Staff Tower Climbing	E70	INCLUDED	EXCLUDED
Commute Vehicle Taxable Fringe	Z01	EXCLUDED	EXCLUDED
Countywide Acctng Diff	C37	INCLUDED	EXCLUDED
Court Appearance Pay	OSH	EXCLUDED	EXCLUDED
Custodian Wrk Trng Juv Program	E31	INCLUDED	EXCLUDED
DAIA AWI Comp	N49	EXCLUDED	EXCLUDED
DAIA AWI Pay	N47	EXCLUDED	EXCLUDED
Detent Facility Clerical Supvr	HZS	INCLUDED	EXCLUDED
Detention Assign Staff NursePD	E50	EXCLUDED	EXCLUDED
Detention Assignment	HZX	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Detention Assignment CNA	E80	INCLUDED	EXCLUDED
Detention Assignment T856	HZT	INCLUDED	EXCLUDED
Detention Division Diff NonSw	HZ5	INCLUDED	EXCLUDED
Detention Nurse Adv Level Pay	E85	INCLUDED	EXCLUDED
DI Services Lead Pay 5%	D13	INCLUDED	EXCLUDED
Diff Appr Std Div Lead 5%	D70	INCLUDED	EXCLUDED
Diff Longevity Law Enf 7%	D74	INCLUDED	EXCLUDED
Diff RPA Sr Memb Cert 5%	D14	INCLUDED	EXCLUDED
Differential Adjustment	D01	INCLUDED	EXCLUDED
Differential Adjustment - NIR	D02	EXCLUDED	EXCLUDED
Differential Appr Standard Div 2.5%	D10	INCLUDED	EXCLUDED
Differential Assessor Educ Ach	D09	INCLUDED	EXCLUDED
Differential Bldg Management	D85	INCLUDED	EXCLUDED
Differential BOMI Certificate	D03	INCLUDED	EXCLUDED
Differential Call Back	D15	EXCLUDED	EXCLUDED
Differential Call Back @ 1.5	D19	EXCLUDED	EXCLUDED
Differential CNA Psych Assignm	E84	INCLUDED	EXCLUDED
Differential Comp Ops Supv	D53	INCLUDED	EXCLUDED
Differential DA Office Mnger	D54	INCLUDED	EXCLUDED
Differential Driver Clerk	E71	INCLUDED	EXCLUDED
Differential DSA NonSworn Trng	D30	INCLUDED	EXCLUDED
Differential DSA Training 5%	D29	INCLUDED	EXCLUDED
Differential EHSD Spec Proj	D76	INCLUDED	EXCLUDED
Differential Exec Assist CAO	D83	INCLUDED	EXCLUDED
Differential FACS	D62	INCLUDED	EXCLUDED
Differential Hazard Mat	E72	INCLUDED	EXCLUDED
Differential Heavy Equip Op/In	D84	INCLUDED	EXCLUDED
Differential HM Prog Coord	E41	INCLUDED	EXCLUDED
Differential HM Program Leader	E42	INCLUDED	EXCLUDED
Differential Hospital PSO	D67	INCLUDED	EXCLUDED
Differential Hourly Prem 12.5%	D06	EXCLUDED	EXCLUDED
Differential Hourly Prem 15%	D07	EXCLUDED	EXCLUDED
Differential Hourly Prem 17.5%	D08	EXCLUDED	EXCLUDED
Differential Hourly Prem 5%	D05	EXCLUDED	EXCLUDED
Differential Investigative Dut	D27	INCLUDED	EXCLUDED
Differential K9 Premium	DK9	EXCLUDED	EXCLUDED
Differential Lieut On-Call	D25	EXCLUDED	EXCLUDED
Differential Longevity Law Enf	D73	INCLUDED	EXCLUDED
Differential M S W II Lead	D22	INCLUDED	EXCLUDED
Differential Mgmt Struct Eng	D86	INCLUDED	EXCLUDED
Differential Off Duty Standby	F80	EXCLUDED	EXCLUDED
Differential Office of Emg Svc	D41	INCLUDED	EXCLUDED
Differential On Call	D33	EXCLUDED	EXCLUDED
Differential On Call DSA/DAI	D26	EXCLUDED	EXCLUDED
Differential On Call Local 1	D36	EXCLUDED	EXCLUDED
Differential On Call Pay @ 1.0	D32	EXCLUDED	EXCLUDED
Differential Phone Call Back	D21	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Differential Police Manager 3%	D66	INCLUDED	EXCLUDED
Differential Police Manager 6%	D68	INCLUDED	EXCLUDED
Differential Police Manager 9%	D69	INCLUDED	EXCLUDED
Differential Police Mgr 15%	D72	INCLUDED	EXCLUDED
Differential Police Mgr 4.5%	D65	INCLUDED	EXCLUDED
Differential Police Svcs 10%	D61	INCLUDED	EXCLUDED
Differential PS Project Manger	D55	INCLUDED	EXCLUDED
Differential RPA Sr Memb Cert 10%	D04	INCLUDED	EXCLUDED
Differential Spec Proj 10%	D49	INCLUDED	EXCLUDED
Differential Special Proj 5%	D48	INCLUDED	EXCLUDED
Differential Sterile Process	E25	INCLUDED	EXCLUDED
Differential Training Assignmt	E29	INCLUDED	EXCLUDED
Differential Unit Leader 5%	D18	INCLUDED	EXCLUDED
Differtial Recordble Docs Tech	D40	INCLUDED	EXCLUDED
Dir of Safety and Perf Improv Diff	E44	INCLUDED	EXCLUDED
Dispatcher Hiring Incentive	B56	INCLUDED	EXCLUDED
Double Shift Premium T856	SHC	INCLUDED	EXCLUDED
DSA Forensic Services	D12	INCLUDED	EXCLUDED
DSA Invest & Spec Invest Unit	D11	INCLUDED	EXCLUDED
DSA School Security Detail	RSD	INCLUDED	EXCLUDED
DSA Training Days	T08	EXCLUDED	EXCLUDED
DSW-Non Essential	T04	EXCLUDED	EXCLUDED
DSW-Not Available	T05	EXCLUDED	EXCLUDED
Earnings Adj-Worker Comp	WCA	EXCLUDED	EXCLUDED
Education Allow Annual 2.5%	AC3	INCLUDED	EXCLUDED
Employee Recognition Awards	Z92	EXCLUDED	EXCLUDED
ER Assignment CNA	E82	INCLUDED	EXCLUDED
ER Staff Nurse PD	E51	EXCLUDED	EXCLUDED
Exchange Day Off	EXO	EXCLUDED	EXCLUDED
Exchange Day Worked	EXW	EXCLUDED	EXCLUDED
Fire Crck-Carg Differentials	F70	EXCLUDED	EXCLUDED
Fire Differential ALSEC Param	F27	INCLUDED	EXCLUDED
Fire Dispatchers FLSA Addl Pay	F22	INCLUDED	EXCLUDED
Fire EMT Diff Rodeo Fire Only	F33	INCLUDED	EXCLUDED
Fire Investigation Standby	F68	EXCLUDED	EXCLUDED
Fire Mgmt Educ Incent Conting	F07	INCLUDED	EXCLUDED
Fire Mgmt Educ Incentive	F05	INCLUDED	EXCLUDED
Fire Mgmt Educ Incentive	F06	INCLUDED	EXCLUDED
Fire Mgmt Longevity @ 5%	F18	INCLUDED	EXCLUDED
Fire Mgmt Longevity @ 7.5%	F28	INCLUDED	EXCLUDED
Fire Mgmt Longevity Pay	F08	INCLUDED	EXCLUDED
Fire Recall & Standby @ 2.5%	F72	EXCLUDED	EXCLUDED
Fire Recall & Standby @ 5%	F67	EXCLUDED	EXCLUDED
Fire Recall/Standby ECCCCFPD	F62	EXCLUDED	EXCLUDED
Fire Sched FLSA-Additnl 24 day	F21	INCLUDED	EXCLUDED
Fire Scheduled FLSA Pay	F20	INCLUDED	EXCLUDED
Fire Temp Training Diff 40hr	F78	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Fire Traing/Prevnt Captains	F77	INCLUDED	EXCLUDED
Fire Vol/Reserve Firefighters	F40	EXCLUDED	EXCLUDED
Flex Hours in Excess	FWE	EXCLUDED	EXCLUDED
Flex Hours Pay Off	FWS	EXCLUDED	EXCLUDED
Flexible Hours Earned	FW1	EXCLUDED	EXCLUDED
Flexible Hours Used	FWP	EXCLUDED	EXCLUDED
Flexible Work Pay @ 1.00	FWM	EXCLUDED	EXCLUDED
Flexible Work Pay Adjustment	FWA	EXCLUDED	EXCLUDED
FLSA Adjustment	OFA	EXCLUDED	EXCLUDED
FLSA Overtime	OTF	EXCLUDED	EXCLUDED
FMLA+	T07	EXCLUDED	EXCLUDED
FNP Wknd Diff Hosp-Clinics	B31	INCLUDED	EXCLUDED
FNP Wknd Hosp-Clinics	B32	INCLUDED	EXCLUDED
Furlough	R29	EXCLUDED	EXCLUDED
Graveyard Shift Differential	SHG	INCLUDED	EXCLUDED
Hazard Duty Pay	HZ2	INCLUDED	EXCLUDED
Hazard Pay Adjustment	HZA	INCLUDED	EXCLUDED
Health Services Manager Diff	HZ4	INCLUDED	EXCLUDED
HMRT Differential 5%	F75	INCLUDED	EXCLUDED
Holiday Comp Excess Hours Pay	HCE	INCLUDED	EXCLUDED
Holiday Comp Hours Earned @1.0	HCM	EXCLUDED	EXCLUDED
Holiday Comp Hours Earned@1.50	HCR	EXCLUDED	EXCLUDED
Holiday Comp Hours Pay Off	HPO	EXCLUDED	EXCLUDED
Holiday Comp Hours Taken	HCP	EXCLUDED	EXCLUDED
Holiday Pay @ 1.50	HP2	INCLUDED	EXCLUDED
Holiday Pay Adjustment	HOA	INCLUDED	EXCLUDED
Holiday Pay for PS Table	HOT	INCLUDED	EXCLUDED
Holiday Pay @ 1.00	HP1	INCLUDED	EXCLUDED
Hourly Paid Leave Accrual Use	RAU	EXCLUDED	EXCLUDED
Housing Allowance	ALH	EXCLUDED	EXCLUDED
HS Education Leave Hours	T06	EXCLUDED	EXCLUDED
In Lieu of Def Comp Bene-Elect	M43	INCLUDED	EXCLUDED
ISW - Relief Pay	B97	INCLUDED	EXCLUDED
ISW Gen-Spec-Relief Cook	B73	INCLUDED	EXCLUDED
Jury Duty Hours Reported	JRY	EXCLUDED	EXCLUDED
Lateral Incentive Bonus	B58	EXCLUDED	EXCLUDED
Law School SLRP	M32	EXCLUDED	EXCLUDED
Lead Juvenile Inst Officer	B96	INCLUDED	EXCLUDED
Long Term Disability Pay	M59	EXCLUDED	EXCLUDED
Longevity Exempt @ 7.5 %	L09	INCLUDED	EXCLUDED
Longevity 10 Years	L31	INCLUDED	EXCLUDED
Longevity 15 Years	L32	INCLUDED	EXCLUDED
Longevity CNA 10 years @ 5%	L16	INCLUDED	EXCLUDED
Longevity CNA 15 years @ 7.5%	L17	INCLUDED	EXCLUDED
Longevity CNA 20 Years @ 10%	L18	INCLUDED	EXCLUDED
Longevity CNA 7 years @ 2.5%	L15	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 10 yrs	L26	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Longevity Nurs Mgrm 15 yrs	L27	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 20 yrs	L28	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 7 yrs	L25	INCLUDED	EXCLUDED
Longevity Pay @ 2.00%	L04	INCLUDED	EXCLUDED
Longevity Pay @ 2.5%	L05	INCLUDED	EXCLUDED
Longevity Pay @ 4.50%	L10	INCLUDED	EXCLUDED
Longevity Pay @ 5%	L06	INCLUDED	EXCLUDED
Longevity Pay @ 6.50%	L11	INCLUDED	EXCLUDED
Longevity Pay @ 7.00%	L07	INCLUDED	EXCLUDED
Longevity/Mgmt Inc Exempt @ 5%	L08	INCLUDED	EXCLUDED
Longevty 20 Years	L33	INCLUDED	EXCLUDED
LTD FICA EXEMPT	M68	EXCLUDED	EXCLUDED
Lump Sum Differential	DPR	INCLUDED	EXCLUDED
Lump Sum Pay	LSP	INCLUDED	EXCLUDED
Lump Sum Pay	RPR	INCLUDED	EXCLUDED
LVN Weekend Bonus	B25	INCLUDED	EXCLUDED
Merit Board Stipend	M54	EXCLUDED	EXCLUDED
MH Assigned Lead T856	E18	INCLUDED	EXCLUDED
MH Program Chief Differential	E43	INCLUDED	EXCLUDED
MH Weekend Shift Bonus	B15	INCLUDED	EXCLUDED
Month Work Hour	MWH	EXCLUDED	EXCLUDED
Moving Allowance	MAL	EXCLUDED	EXCLUDED
Moving Expense Taxable	MTX	EXCLUDED	EXCLUDED
Moving Expenses NonTaxable	MNT	EXCLUDED	EXCLUDED
Negotiations Time Off	T03	EXCLUDED	EXCLUDED
Nocturnist Pay	B86	INCLUDED	EXCLUDED
Nocturnist Pay - NIR	B87	EXCLUDED	EXCLUDED
Non-Productive Hours	T01	EXCLUDED	EXCLUDED
On Call CNA 1for2	N65	EXCLUDED	EXCLUDED
On Call CNA 1for4	N66	EXCLUDED	EXCLUDED
On Call DAI	N48	EXCLUDED	EXCLUDED
On Call DSA Lieut	N44	EXCLUDED	EXCLUDED
On Call DSA Rank & File	N43	EXCLUDED	EXCLUDED
On Call Local 1021	N12	EXCLUDED	EXCLUDED
On Call Local 21 and Unrep	N71	EXCLUDED	EXCLUDED
On Call Local 2700	N14	EXCLUDED	EXCLUDED
On Call Local 512	N13	EXCLUDED	EXCLUDED
On Call Local One	N15	EXCLUDED	EXCLUDED
On Call T856	N18	EXCLUDED	EXCLUDED
On Call T856 Cardio-Rad	N17	EXCLUDED	EXCLUDED
On Call T856 Sterile Proc	N16	EXCLUDED	EXCLUDED
On Call WCE	N11	EXCLUDED	EXCLUDED
OT Comp Hours Earned @ 1.00	OCM	EXCLUDED	EXCLUDED
OT Comp Hours Earned @ 1.50	OCR	EXCLUDED	EXCLUDED
OT Comp Hours Taken	OCP	EXCLUDED	EXCLUDED
OT DepSheriff AssignCoronerDiv	OSC	EXCLUDED	EXCLUDED
OT Earnings @ 1.50 Exempt Excl	OPE	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
OT Sgt Work as Deputy Sheriff	OSD	EXCLUDED	EXCLUDED
OT UCOA @ 40 hour rate	OTU	EXCLUDED	EXCLUDED
Overtime - Straight Time Rate	OTS	EXCLUDED	EXCLUDED
Overtime Adjustment	OTA	EXCLUDED	EXCLUDED
Overtime After Holiday Pay	OSN	EXCLUDED	EXCLUDED
Overtime Comp Excess Hrs Pay	OTE	EXCLUDED	EXCLUDED
Overtime Comp Hours Pay Off	OCS	EXCLUDED	EXCLUDED
Overtime Earnings @ 1.50	OPT	EXCLUDED	EXCLUDED
Overtime Normal Work Scheduled	ORS	EXCLUDED	EXCLUDED
Paid Military Leave	MLX	EXCLUDED	EXCLUDED
Paramedic Differential Rodeo	F35	INCLUDED	EXCLUDED
Patient Exp Incentive Bonus	M22	EXCLUDED	EXCLUDED
Payroll Adjustment-Retirement	ADJ	INCLUDED	INC /w Review Type 5
Payroll Adjust-NonRetirement	ADN	EXCLUDED	EXCLUDED
Performance Stipend	M48	INCLUDED	EXCLUDED
Pers Hol Pay Off L 5%	PP5	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 5% NIR	PN5	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 10%	PP1	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 10% NIR	PN1	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.0%	PP3	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.0% NIR	PN3	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.5%	PP7	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.5% NIR	PN7	EXCLUDED	EXCLUDED
Pers Holiday Pay Off L 4.50%	PP4	EXCLUDED	EXCLUDED
Pers Holiday Pay Off L 6.50%	PP6	EXCLUDED	EXCLUDED
Pers Holiday PO L 4.50% NIR	PN4	EXCLUDED	EXCLUDED
Pers Holiday PO L 6.50% NIR	PN6	EXCLUDED	EXCLUDED
PersHoliday Pay Off - L 2.5%	PLP	EXCLUDED	EXCLUDED
PersHoliday PayOff - L 2.5%	PLN	EXCLUDED	EXCLUDED
Personal Hol Hours Taken (within base pay)	PHL	INCLUDED	INCLUDED
Personal Holiday Hrs Pay Off	PHN	EXCLUDED	EXCLUDED
Personal Holiday Hrs Pay Off	PHP	EXCLUDED	EXCLUDED
Phys Callback Min Guarantee	NPG	EXCLUDED	EXCLUDED
Planning Comm Stipend	M53	EXCLUDED	EXCLUDED
POST Cert Allow 2.5%	AC1	INCLUDED	EXCLUDED
POST Cert Allow 5%	AC2	INCLUDED	EXCLUDED
POST Cert Allow Advanced 1.0	AC5	INCLUDED	EXCLUDED
POST Cert Allow Intermed 1.0	AC4	INCLUDED	EXCLUDED
Preceptor Pay	E01	INCLUDED	EXCLUDED
Preceptor Pay - NIR	E02	EXCLUDED	EXCLUDED
PTO Accrual Hours Pay Off	PTP	EXCLUDED	EXCLUDED
PTO Taken	PTO	EXCLUDED	EXCLUDED
Public Works Emergency Diff	E35	EXCLUDED	EXCLUDED
Public Works Seasonal Diff	E36	EXCLUDED	EXCLUDED
Quality Incentive Bonus	M23	EXCLUDED	EXCLUDED
RDA Meeting Stipend	M51	INCLUDED	EXCLUDED
REACH Partnership Helicopter Diff	F79	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Regular Pay (within base pay)	REG	INCLUDED	INCLUDED
Regular Pay - Labor Distrib	LBD	EXCLUDED	EXCLUDED
Reserved Hospital	R	EXCLUDED	EXCLUDED
Retirement Board Stipend	M58	INCLUDED	EXCLUDED
Retirement CompRate (within base pay)	RXX	INCLUDED	INCLUDED
Rodeo Fire Acting Overtime Pay	F48	EXCLUDED	EXCLUDED
Rodeo Fire Acting Pay	F47	INCLUDED	EXCLUDED
Rodeo Fire Chief Longevity	F45	INCLUDED	EXCLUDED
Rodeo Fire Longevity	F34	INCLUDED	EXCLUDED
Sabbatical Leave Hours Taken	SBL	EXCLUDED	EXCLUDED
Sabbatical Hours Pay Off	SBP	EXCLUDED	EXCLUDED
Sabbatical Leave PayOff	SBN	EXCLUDED	EXCLUDED
Sale of Vacation	V01	INCLUDED	EXCLUDED
Sale of Vacation L 2.5%	V11	INCLUDED	EXCLUDED
Sale of Vacation L 5.0%	V21	INCLUDED	EXCLUDED
Sale of Vacation L 7.5%	V31	INCLUDED	EXCLUDED
Sale of Vacation L10.0%	V41	INCLUDED	EXCLUDED
Sale of Vacation L 4.50%	V51	INCLUDED	EXCLUDED
Sale of Vacation L 6.5%	V61	INCLUDED	EXCLUDED
Sale of Vacation L 7.00%	V71	INCLUDED	EXCLUDED
SDI SickLeave BuyBack	SDI	EXCLUDED	EXCLUDED
Search Warrant Dep Dir Animal	D63	INCLUDED	EXCLUDED
Search Warrant Loc 21	D60	INCLUDED	EXCLUDED
Search Warrant Loc One	D58	INCLUDED	EXCLUDED
Settlement Pay	M15	EXCLUDED	EXCLUDED
Sheriff Scheduled FLSA Pay	OSF	INCLUDED	EXCLUDED
Shift @ 3 pct DSA Dspth Morn	SWM	INCLUDED	EXCLUDED
Shift @ 5.00 pct DSADspth Eve	SWE	INCLUDED	EXCLUDED
Shift Clerical Grave Yard PI	SHF	EXCLUDED	EXCLUDED
Shift CNA Double Premium	SHD	INCLUDED	EXCLUDED
Shift Night @ 10.00 pct T856	SNS	INCLUDED	EXCLUDED
Shift Pay @ 10%	SH4	INCLUDED	EXCLUDED
Shift Pay @ 12%	SH5	INCLUDED	EXCLUDED
Shift Pay @ 15%	SH7	INCLUDED	EXCLUDED
Shift Pay @ 5%	SH2	INCLUDED	EXCLUDED
Shift Pay @ 7.5%	SH3	INCLUDED	EXCLUDED
Sick Leave Hours Pay Off	S01	EXCLUDED	EXCLUDED
Sick Leave Hours Taken (within base pay)	SCK	INCLUDED	INCLUDED
Sick Leave Pay Off L 2.5%	S11	EXCLUDED	EXCLUDED
Sick Leave Pay Off L 5%	S12	EXCLUDED	EXCLUDED
Spec Procedure Angio T856	D51	INCLUDED	EXCLUDED
Spec Procedure Mammo-CT T856	D52	INCLUDED	EXCLUDED
Special Circumstance OT Pay	OTC	EXCLUDED	EXCLUDED
Special Procedure Angio Loc 21	D59	INCLUDED	EXCLUDED
State Comp Doctor Appointments	T02	EXCLUDED	EXCLUDED
Straight Time Pay	OVT	EXCLUDED	EXCLUDED
Tax Vehicle Usage	Z02	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Taxable Other Reimbursement	ZOT	EXCLUDED	EXCLUDED
Taxable Professional Develpmnt	ZPT	EXCLUDED	EXCLUDED
Telephone Callback @ 1.50	N76	EXCLUDED	EXCLUDED
Truck Allowance	A58	INCLUDED	EXCLUDED
Uniform Allow - Fire Mgmt	A83	INCLUDED	EXCLUDED
Uniform Allow Sher Mgmt	A82	INCLUDED	EXCLUDED
Uniform Allowance	A80	INCLUDED	EXCLUDED
Uniform Allowance - Fire	A79	INCLUDED	EXCLUDED
Uniform Allowance \$25	A64	INCLUDED	EXCLUDED
Uniform Allowance East FD	A75	INCLUDED	EXCLUDED
Uniform Allowance Rodeo Fire	A76	INCLUDED	EXCLUDED
Uniform Allowance Sheriff	A81	INCLUDED	EXCLUDED
Vacation Hours Pay Off	V02	EXCLUDED	EXCLUDED
Vacation Hours Pay Off	V03	EXCLUDED	EXCLUDED
Vacation Hours Taken (within base pay)	VAC	INCLUDED	INCLUDED
Vacation Pay Off L 2.5%	V12	EXCLUDED	EXCLUDED
Vacation Pay Off L 2.5% NIR	V13	EXCLUDED	EXCLUDED
Vacation Pay Off L 5.0%	V22	EXCLUDED	EXCLUDED
Vacation Pay Off L 5.0% NIR	V23	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.5%	V32	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.5% NIR	V33	EXCLUDED	EXCLUDED
Vacation Pay Off L 4.50%	V52	EXCLUDED	EXCLUDED
Vacation Pay Off L 4.50% NIR	V53	EXCLUDED	EXCLUDED
Vacation Pay Off L 6.50%	V62	EXCLUDED	EXCLUDED
Vacation Pay Off L 6.50% NIR	V63	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.0% NIR	V73	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.00%	V72	EXCLUDED	EXCLUDED
Vacation Pay Off L10.0%	V42	EXCLUDED	EXCLUDED
Vacation Pay Off L10.0% NIR	V43	EXCLUDED	EXCLUDED
Voluntary Salary Waiver (within base pay)	VSW	INCLUDED	INCLUDED
Voluntary Temporary Waiver	VTW	INCLUDED	EXCLUDED
Witness Pay	WPY	EXCLUDED	EXCLUDED
Workers Comp Pay @ 70%	WCB	EXCLUDED	EXCLUDED
Workers Comp Pay @ 75%	WC9	EXCLUDED	EXCLUDED
Workers Comp Pay @ 80%	WC8	EXCLUDED	EXCLUDED
Workers Comp Pay @ 86%	WC6	EXCLUDED	EXCLUDED
Workers Comp Pay @ 87%	WC2	EXCLUDED	EXCLUDED
Workers Comp Pay @ 88%	WC3	EXCLUDED	EXCLUDED
Workers Comp Pay @ 94%	WC4	EXCLUDED	EXCLUDED
Workers Comp Prior Period Adj	WC5	EXCLUDED	EXCLUDED
Wrkr Comp Full 4850 Safety EE	WC1	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County Employees' Retirement Association**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Accounting Differential 5%	C38	INCLUDED	EXCLUDED
Adjustment non-ret	AND	EXCLUDED	EXCLUDED
Adjustment ret	ADJ	INC /w Review Type 5	INC /w Review Type 5
Administrative Leave Taken (within base pay)	ALP	INCLUDED	INCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Board Stipend	M58	EXCLUDED	EXCLUDED
Comp Pay off	OCS	EXCLUDED	EXCLUDED
Comp Taken (within base pay)	OCP	INCLUDED	INCLUDED
Families First-FMLA (within base pay)	FFFMEX	INCLUDED	INCLUDED
Families First-Paid Sick Leave-EE (within base p	FFPSLE	INCLUDED	INCLUDED
Families First-Paid Sick Leave-FAM (within base	FFPSLF	INCLUDED	INCLUDED
Flexible Compensation Taken (within base pay)	FWP	INCLUDED	INCLUDED
Holiday (within base pay)	E10	INCLUDED	INCLUDED
Jury Duty (within base pay)	JRYDTY	INCLUDED	INCLUDED
Longevity 2.5%	L05	INCLUDED	EXCLUDED
Longevity 5%	L06	INCLUDED	EXCLUDED
Longevity 7%	L07	INCLUDED	EXCLUDED
Lump Sum	LMPSUM	INCLUDED	EXCLUDED
Negotiations (within base pay)	T03	INCLUDED	INCLUDED
Non-productive (within base pay)	T01	INCLUDED	INCLUDED
OT Adjustment	OTADJ	EXCLUDED	EXCLUDED
Personal Holiday no ret	PHN	EXCLUDED	EXCLUDED
Personal Holiday no-ret 2.5%	PLN	EXCLUDED	EXCLUDED
Personal Holiday ret	PHP	EXCLUDED	EXCLUDED
Personal Holiday Taken (within base pay)	PLP	INCLUDED	INCLUDED
Prior Period Overtime	POT	EXCLUDED	EXCLUDED
Severance	SEV	EXCLUDED	EXCLUDED
Sick Leave Taken (within base pay)	SCK-2RS	INCLUDED	INCLUDED
Vacation (within base pay)	VAC	INCLUDED	INCLUDED
Vacation pay off with 2.5% and no ret	V03	EXCLUDED	EXCLUDED
Vacation payoff with 5% and no ret	V23	EXCLUDED	EXCLUDED
Vacation payoff with no ret	V03	EXCLUDED	EXCLUDED
Vacation Sale	V01	INCLUDED	EXCLUDED
Vacation Sale 2.5% Long	V11	INCLUDED	EXCLUDED
Vacation Sale 5% Long	V21	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Byron Brentwood Knightsen Union Cemetery District**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Vacation Payout	VAC	EXCLUDED	EXCLUDED
Sick Pay (within base pay)	SIC	INCLUDED	INCLUDED
Bereavement Leave (within base pay)	BER	INCLUDED	INCLUDED
Personal Day (within base pay)	PER	INCLUDED	INCLUDED
Anniversary (within base pay)	ANN	INCLUDED	INCLUDED
Covid (within base pay)	COV	INCLUDED	INCLUDED
Holiday Pay (within base pay)	HOL	INCLUDED	INCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Central Contra Costa Sanitation District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Bilingual Pay	CBP	INCLUDED	EXCLUDED
CAFETERIA PLAN CASH - GENERAL	CC1	INCLUDED	EXCLUDED
CALL OUT OVERTIME		EXCLUDED	EXCLUDED
Capital Night Shift Overtime		EXCLUDED	EXCLUDED
Capital Overtime		EXCLUDED	EXCLUDED
Capital Overtime 2x		EXCLUDED	EXCLUDED
Capital Relief Ops Differential	ROD	INCLUDED	EXCLUDED
Cell Phone Stipend		EXCLUDED	EXCLUDED
CLASS A/B LICENSE PAY	CAB	INCLUDED	EXCLUDED
Crane/Boom Truck Pay	CCR	INCLUDED	EXCLUDED
DOUBLE OVERTIME		EXCLUDED	EXCLUDED
EFMLA		EXCLUDED	EXCLUDED
EPSL		EXCLUDED	EXCLUDED
Holiday Premium	HP2	INCLUDED	EXCLUDED
Holiday Premium 2x	C31	INCLUDED	EXCLUDED
Holiday Premium Night	C32	INCLUDED	EXCLUDED
Holiday Premium Swing	C26	INCLUDED	EXCLUDED
LONGEVITY PAY	L05	INCLUDED	EXCLUDED
MEAL ALLOWANCE	CMA	INCLUDED	EXCLUDED
Night Shift Differential	SNS	INCLUDED	EXCLUDED
Night Shift Overtime		EXCLUDED	EXCLUDED
Out of Class	COC	INCLUDED	EXCLUDED
OUT OF CLASS OVERTIME		EXCLUDED	EXCLUDED
Paid Overtime		EXCLUDED	EXCLUDED
Registration Differential	CRD	INCLUDED	EXCLUDED
Relief Ops Overtime		EXCLUDED	EXCLUDED
Relief Ops Overtime OM		EXCLUDED	EXCLUDED
Stand By Pay	C13	EXCLUDED	EXCLUDED
Stand By Pay Voluntary		EXCLUDED	EXCLUDED
Swing Shift Differential	C04	INCLUDED	EXCLUDED
Swing Shift Overtime		EXCLUDED	EXCLUDED
VACATION PAYOUT	V01	INCLUDED	EXCLUDED

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Bethel Island Municipal Improvement District**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Vacation Payout	VAC	EXCLUDED	EXCLUDED
Overtime		EXCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Doubletime		EXCLUDED	EXCLUDED
Vacation Pay (within base pay)		INCLUDED	INCLUDED
Sick Time (within base pay)		INCLUDED	INCLUDED
Health Insurance in Lieu		EXCLUDED	EXCLUDED
Health Insurance Allowance		INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa County Housing Authority**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Admin Leave (within base pay)	Q	INCLUDED	INCLUDED
Bilingual	D	INCLUDED	EXCLUDED
CA SPSL 22 (within base pay)	1XQ	INCLUDED	INCLUDED
CA SUP PSL (within base pay)	1XX	INCLUDED	INCLUDED
COMPTIME (within base pay)	C	INCLUDED	INCLUDED
DEFERRED INC.	K	EXCLUDED	EXCLUDED
Double Time	G	EXCLUDED	EXCLUDED
ED Auto Allowance	N	INCLUDED	EXCLUDED
Jury Duty (within base pay)	J	INCLUDED	INCLUDED
Longevity	L	INCLUDED	EXCLUDED
Misc	M	INC /w Review Type 5	INC /w Review Type 5
On Call	O	EXCLUDED	EXCLUDED
Other (within base pay)	B	INCLUDED	INCLUDED
PERSONAL (within base pay)	H	INCLUDED	INCLUDED
PRIOR OT	POT	EXCLUDED	EXCLUDED
Regular (within base pay)	REG	INCLUDED	INCLUDED
Reimbursement for Remote Office Expense	ROE	EXCLUDED	EXCLUDED
Retro Pay (within base pay)	R	INCLUDED	INCLUDED
S/L Payoff	F	EXCLUDED	EXCLUDED
Sick (within base pay)	S	INCLUDED	INCLUDED
Term Pay	T	EXCLUDED	EXCLUDED
VACATION (within base pay)	V	INCLUDED	INCLUDED
Vacation Payout	P	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Moraga Orinda Fire Protection District**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
5% Ambulance	124	INCLUDED	EXCLUDED
ACLS Incentive	181	INCLUDED	EXCLUDED
Admin	200	EXCLUDED	EXCLUDED
Admin Payoff NR	201	EXCLUDED	EXCLUDED
Ambulance Stipend NR (PEPRA)	123	EXCLUDED	EXCLUDED
Baccal & Masters	112	INCLUDED	EXCLUDED
Bachelor	113	INCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
BC Coverage	136	EXCLUDED	EXCLUDED
Ed 2.5%	110	INCLUDED	EXCLUDED
ED 2.5% Bachelors&FTM	111	INCLUDED	EXCLUDED
ED NR (PEPRA)	114	EXCLUDED	EXCLUDED
Fire Retirement Allotment	120	INCLUDED	EXCLUDED
Float	216	EXCLUDED	EXCLUDED
Float Payoff	218	INCLUDED	EXCLUDED
Float Payoff NR (PEPRA)	217	EXCLUDED	EXCLUDED
FLSA	333	INCLUDED	EXCLUDED
FLSA Additional	334	INCLUDED	EXCLUDED
FLSA NR (PEPRA)	335	EXCLUDED	EXCLUDED
FLSA+ NR (PEPRA)	336	EXCLUDED	EXCLUDED
FRA NR (PEPRA)	121	EXCLUDED	EXCLUDED
Holiday NR (PEPRA)	213	EXCLUDED	EXCLUDED
Holiday Pay 1230	215	INCLUDED	EXCLUDED
Leave WO Pay	220	INCLUDED	EXCLUDED
Leave WO Pay Non Contr	221	EXCLUDED	EXCLUDED
OT Earnings	108	EXCLUDED	EXCLUDED
Prior Period OT	POT	EXCLUDED	EXCLUDED
Retro Pay OT	156	EXCLUDED	EXCLUDED
Retro Pay ST	160	INCLUDED	EXCLUDED
SDI Pay	237	INCLUDED	EXCLUDED
Sick Leave	210	EXCLUDED	EXCLUDED
Sick Leave Payoff NR (PEPRA)	211	EXCLUDED	EXCLUDED
ST Hourly	105	EXCLUDED	EXCLUDED
Strike Team BFOT	138	EXCLUDED	EXCLUDED
Strike Team OT	137	EXCLUDED	EXCLUDED
Uniform Allowance	180	INCLUDED	EXCLUDED
Uniform NR (PEPRA)	182	EXCLUDED	EXCLUDED
Upgrade Pay	125	INCLUDED	EXCLUDED
Upgrade Pay NR	126	EXCLUDED	EXCLUDED
Vac Payoff NR (PEPRA)	206	EXCLUDED	EXCLUDED
Vac Sale	208	INCLUDED	EXCLUDED
Vacation	205	EXCLUDED	EXCLUDED
WC Pay 100%	235	INCLUDED	EXCLUDED
WC Pay 87%	236	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa Mosquito and Vector Control District**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Administrative Leave	AL	EXCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Floater Holiday	FH	EXCLUDED	EXCLUDED
Medical Waiver	MED	INCLUDED	EXCLUDED
Merit (Performance) Pay	LNG	INCLUDED	EXCLUDED
Out of Class	DIF	INCLUDED	EXCLUDED
Overtime	OT	EXCLUDED	EXCLUDED
Overtime Cash Out	OTC	EXCLUDED	EXCLUDED
Safety Award	SAF	INCLUDED	EXCLUDED
Sick Leave	SL	EXCLUDED	EXCLUDED
Vacation Cashout	VAC	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Rodeo Sanitary District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Double Time Hourly Rate		EXCLUDED	EXCLUDED
Holiday Pay @ 1.50		EXCLUDED	EXCLUDED
On Call Flat Rate Pay	OC	EXCLUDED	EXCLUDED
OT Hourly Rate		EXCLUDED	EXCLUDED
Vacation Payout	VAC	EXCLUDED	EXCLUDED
Administrative Duties (within base pay)		INCLUDED	INCLUDED
Audit (within base pay)		INCLUDED	INCLUDED
Bereavement Leave (within base pay)		INCLUDED	INCLUDED
Collection System Maintenance (within base pay)		INCLUDED	INCLUDED
Directors Payroll (within base pay)		INCLUDED	INCLUDED
District Management (within base pay)		INCLUDED	INCLUDED
Floating Holiday (within base pay)		INCLUDED	INCLUDED
Jury Duty (within base pay)		INCLUDED	INCLUDED
Laboratory (within base pay)		INCLUDED	INCLUDED
License/Certification Prep (within base pay)		INCLUDED	INCLUDED
Main Pump Station (within base pay)		INCLUDED	INCLUDED
Medical Administration (within base pay)		INCLUDED	INCLUDED
Operations (within base pay)		INCLUDED	INCLUDED
Paid Administrative Leave (within base pay)		INCLUDED	INCLUDED
Plant Maintenance (within base pay)		INCLUDED	INCLUDED
Pollution Prevention Program (within base pay)		INCLUDED	INCLUDED
Seminar/Workshop (within base pay)		INCLUDED	INCLUDED
Sewer Inspections (within base pay)		INCLUDED	INCLUDED
Sewer Lateral Program (within base pay)		INCLUDED	INCLUDED
Sick Pay (within base pay)		INCLUDED	INCLUDED
Special Class (within base pay)		INCLUDED	INCLUDED
Tormey Pump Station (within base pay)		INCLUDED	INCLUDED
Training (within base pay)		INCLUDED	INCLUDED
Vacation Pay (within base pay)		INCLUDED	INCLUDED
Medical Cash In Lieu		EXCLUDED	EXCLUDED
Phone Stipend		EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: San Ramon Valley Fire Protection District**

		<b>Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013</b>	<b>PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013</b>
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Acting Pay	ACT	INCLUDED	EXCLUDED
Annual Admin Leave Cash Out	ALC	INCLUDED	EXCLUDED
Annual Vacation Cash Out	VAO	INCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
FLSA	FOT	INCLUDED	EXCLUDED
Holiday Pay	HOL	INCLUDED	EXCLUDED
Longevity Pay	LNG	INCLUDED	EXCLUDED
Overtime		EXCLUDED	EXCLUDED
Opt-Out Medical Pay	MOO	INCLUDED	EXCLUDED
Preceptor Pay	PMP	INCLUDED	EXCLUDED
Retirement Allotment	RET	INCLUDED	EXCLUDED
Terminal Payout of Admin Leave	ADM	EXCLUDED	EXCLUDED
Terminal Payout of Vacation	VAC	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
350 Offset Adj	563	EXCLUDED	EXCLUDED
350 Offset Adj	263	EXCLUDED	EXCLUDED
Absnt w/o Pay	211	EXCLUDED	EXCLUDED
Absnt w/o Pay	511	EXCLUDED	EXCLUDED
ADJ RET BASE	290	EXCLUDED	EXCLUDED
ADJ RET BASE	590	EXCLUDED	EXCLUDED
ADJ SDI Earnings	371	EXCLUDED	EXCLUDED
Adm Leave	364	EXCLUDED	EXCLUDED
ADM P/O Long	477	EXCLUDED	EXCLUDED
ADM PAY OFF	455	EXCLUDED	EXCLUDED
ADM Payoff	476	EXCLUDED	EXCLUDED
ADM PAYOFF HR	556	EXCLUDED	EXCLUDED
ADM PAYOFF HR	256	EXCLUDED	EXCLUDED
Adm Payoff LO	456	EXCLUDED	EXCLUDED
Admin Pay	291	EXCLUDED	EXCLUDED
Admin Pay	591	EXCLUDED	EXCLUDED
Admin Payoff Retire	255	EXCLUDED	EXCLUDED
Admin Payoff Retire	555	EXCLUDED	EXCLUDED
Anniversary Day	387	EXCLUDED	EXCLUDED
AUTO ALLOW EPR	228	EXCLUDED	EXCLUDED
AUTO ALLOWANCE DH	213	EXCLUDED	EXCLUDED
AUTO ALLOWANCE EJ	214	EXCLUDED	EXCLUDED
AUTO ALLOWANCE DH	513	EXCLUDED	EXCLUDED
AUTO ALLOWANCE EJ	514	EXCLUDED	EXCLUDED
AUTO ALLOW EPR	528	EXCLUDED	EXCLUDED
BI-LINGUAL PAY	221	INCLUDED	EXCLUDED
BI-LINGUAL PAY	521	INCLUDED	EXCLUDED
BONUS SP PAY	225	EXCLUDED	EXCLUDED
Bonus Sp Pay	525	EXCLUDED	EXCLUDED
Californial Cert Real Time Reporting Differential	254	INCLUDED	EXCLUDED
Californial Cert Real Time Reporting Differential	554	INCLUDED	EXCLUDED
Cat Bnk Recvd	310	EXCLUDED	EXCLUDED
CAT COMP BNK	304	EXCLUDED	EXCLUDED
CAT COMP IND	308	EXCLUDED	EXCLUDED
CAT ER RECVD	312	EXCLUDED	EXCLUDED
CAT HLCMP BNK	303	EXCLUDED	EXCLUDED
CAT HLCMP IND	307	EXCLUDED	EXCLUDED
CAT IND RECVD	311	EXCLUDED	EXCLUDED
CAT PRHOL BNK	302	EXCLUDED	EXCLUDED
CAT PRHOL IND	306	EXCLUDED	EXCLUDED
Cat Vac Bnk	301	EXCLUDED	EXCLUDED
CAT VAC IND	305	EXCLUDED	EXCLUDED
Certified Real Time Court Reporter Pay (CRR)	502	INCLUDED	EXCLUDED
Certified Real Time Court Reporter Pay (CRR)	202	INCLUDED	EXCLUDED
Clerical Out of Class	232	INCLUDED	EXCLUDED
Clerical Out of Class	532	INCLUDED	EXCLUDED
COMP Payoff	478	EXCLUDED	EXCLUDED
Computer Aided Transcript Differential	234	INCLUDED	EXCLUDED
Computer Aided Transcript Differential	534	INCLUDED	EXCLUDED
Contract Stwh	346	EXCLUDED	EXCLUDED
Court Clerk Trainer Differential	543	INCLUDED	EXCLUDED
Court Clerk Trainer Differential	243	INCLUDED	EXCLUDED
Court Interpreter (Per Diem)	396	EXCLUDED	EXCLUDED
Court Rep Pay (Per Diem)	397	EXCLUDED	EXCLUDED
CRT Reporting	203	INCLUDED	EXCLUDED
CRT Reporting	503	INCLUDED	EXCLUDED
CT REPORT TRAIN	388	EXCLUDED	EXCLUDED
Dent-N-Qual-ER	856	EXCLUDED	EXCLUDED
Dent-Qual-ER	877	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Dual Lanugage Interpreter Differential	238	INCLUDED	EXCLUDED
Dual Lanugage Interpreter Differential	538	INCLUDED	EXCLUDED
EMP Prof Dev	318	EXCLUDED	EXCLUDED
Equity Stipend	235	INCLUDED	EXCLUDED
Equity Stipend	535	INCLUDED	EXCLUDED
Facilities Clk OT	368	EXCLUDED	EXCLUDED
Facilities to Clerk IV	549	INCLUDED	EXCLUDED
Facilities to Clerk IV	249	INCLUDED	EXCLUDED
Flex Benefit	251	INCLUDED	EXCLUDED
Flex Benefit	551	INCLUDED	EXCLUDED
Flex Benefit	750	EXCLUDED	EXCLUDED
Fringe Benefit	860	EXCLUDED	EXCLUDED
FRNG FEDOnly	859	EXCLUDED	EXCLUDED
Furlough W/O PAY	512	EXCLUDED	EXCLUDED
Furlough	566	EXCLUDED	EXCLUDED
Furlough	567	EXCLUDED	EXCLUDED
Furlough	568	EXCLUDED	EXCLUDED
Furlough	381	EXCLUDED	EXCLUDED
Furlough	266	EXCLUDED	EXCLUDED
Furlough	267	EXCLUDED	EXCLUDED
Furlough	268	EXCLUDED	EXCLUDED
Furlough W/O PAY	212	EXCLUDED	EXCLUDED
GTL Earnings	706	EXCLUDED	EXCLUDED
Holiday Excess Hours	277	EXCLUDED	EXCLUDED
Hol Hrs Ret	576	EXCLUDED	EXCLUDED
Hol Hrs Ret	276	EXCLUDED	EXCLUDED
Hol P/O Long	480	EXCLUDED	EXCLUDED
Hol Pay @1.5	231	EXCLUDED	EXCLUDED
Hol Pay @1.5	531	EXCLUDED	EXCLUDED
HOL PAY ADJ	278	EXCLUDED	EXCLUDED
HOL PAY ADJ	578	EXCLUDED	EXCLUDED
HOL PAY OFF	461	EXCLUDED	EXCLUDED
HOL PAY OFF	479	EXCLUDED	EXCLUDED
HOLIDAY EARNED	496	EXCLUDED	EXCLUDED
Holiday Excess Hours	577	EXCLUDED	EXCLUDED
Holiday Hours Taken	373	EXCLUDED	EXCLUDED
Hurricane Fund	417	EXCLUDED	EXCLUDED
Interpreter PD	570	EXCLUDED	EXCLUDED
Interpreter PD	270	EXCLUDED	EXCLUDED
Interpt PD LV	369	EXCLUDED	EXCLUDED
Jury Duty Hours	377	EXCLUDED	EXCLUDED
Lead Court Reporter (after 6 months)	544	INCLUDED	EXCLUDED
Lead Court Reporter (after 6 mos.)	244	INCLUDED	EXCLUDED
Lead Court Reporter (first 6 months)	540	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (afert 6 months)	545	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (first 6 months)	541	INCLUDED	EXCLUDED
Lead Court Reporter Cert. CRR (first 6 months)	542	INCLUDED	EXCLUDED
Lead Court Reporter (first 6 months)	240	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (afert 6 months)	245	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (first 6 months)	241	INCLUDED	EXCLUDED
Lead Court Reporter Cert. CRR (first 6 months)	242	INCLUDED	EXCLUDED
LEAD CUSTODIAN	547	INCLUDED	EXCLUDED
LEAD CUSTODIAN	247	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Lead Custodian Overtime	367	EXCLUDED	EXCLUDED
Lead Differential	239	INCLUDED	EXCLUDED
Lead Differential	539	INCLUDED	EXCLUDED
LEAD Legal Research Attorney Differential	246	INCLUDED	EXCLUDED
LEAD Legal Research Attorney Differential	546	INCLUDED	EXCLUDED
LMPSUM EXMPT	285	INCLUDED	EXCLUDED
LMPSUM EXMPT	585	INCLUDED	EXCLUDED
LOA TRANSCRIPTS	223	EXCLUDED	EXCLUDED
LOA TRANSCRIPTS	523	EXCLUDED	EXCLUDED
LOA W/C APPT	224	EXCLUDED	EXCLUDED
LOA W/C APPT	524	EXCLUDED	EXCLUDED
Longevity 2.5%	222	INCLUDED	EXCLUDED
Longevity 2.5%	522	INCLUDED	EXCLUDED
Longevity 4%	229	INCLUDED	EXCLUDED
Longevity 4%	529	INCLUDED	EXCLUDED
LTD Pay	374	EXCLUDED	EXCLUDED
Lump Sum N/R	287	EXCLUDED	EXCLUDED
Lump Sum Pay No Differential	282	INCLUDED	EXCLUDED
Lump Sum Pay No Differential	582	INCLUDED	EXCLUDED
Lump Sum SPC	499	EXCLUDED	EXCLUDED
Lump Sum N/R	587	EXCLUDED	EXCLUDED
LV W/O PERM	510	EXCLUDED	EXCLUDED
LV W/O PERM	210	EXCLUDED	EXCLUDED
Med-N-Qual-ER	855	EXCLUDED	EXCLUDED
Med-Qual-ER	876	EXCLUDED	EXCLUDED
MILITARY ADMIN	422	EXCLUDED	EXCLUDED
Military Leave Hours	375	EXCLUDED	EXCLUDED
MILITARY PERHOL	423	EXCLUDED	EXCLUDED
MILITARY VAC	421	EXCLUDED	EXCLUDED
Negotiation T/O	382	EXCLUDED	EXCLUDED
NIGHT DIFF-EVEN	248	INCLUDED	EXCLUDED
Night Shift Differential	548	INCLUDED	EXCLUDED
NONTX SDI REM	350	EXCLUDED	EXCLUDED
NQ Den DP	869	EXCLUDED	EXCLUDED
Nq Dompnr Frg	880	EXCLUDED	EXCLUDED
NQ Med DP	868	EXCLUDED	EXCLUDED
NQ TTL DOM PTR	898	EXCLUDED	EXCLUDED
NQ Vis DP	870	EXCLUDED	EXCLUDED
O.T. Adj	286	EXCLUDED	EXCLUDED
O/T ADJUSTMENT	342	EXCLUDED	EXCLUDED
OT Above 1.05	361	EXCLUDED	EXCLUDED
OT Clerk III-IV	365	EXCLUDED	EXCLUDED
OT Comp 1.0	450	EXCLUDED	EXCLUDED
OT Comp 1.5	451	EXCLUDED	EXCLUDED
OT Earn 1.5	360	EXCLUDED	EXCLUDED
OT Excess Pay	457	EXCLUDED	EXCLUDED
OT Hours Pay Off	420	EXCLUDED	EXCLUDED
OT Hours Taken	363	EXCLUDED	EXCLUDED
Parental Release	385	EXCLUDED	EXCLUDED
PER HOL PAYOFF	468	EXCLUDED	EXCLUDED
Per Hol Taken	370	EXCLUDED	EXCLUDED
Personal Holiday Longevity	279	EXCLUDED	EXCLUDED
Personal Holiday Longevity	579	EXCLUDED	EXCLUDED
Personal Holiday Retire	280	EXCLUDED	EXCLUDED
Personal Holiday Retire	580	EXCLUDED	EXCLUDED
Personal Leave	378	EXCLUDED	EXCLUDED
PH P/O Long	474	EXCLUDED	EXCLUDED
PH Payoff	473	EXCLUDED	EXCLUDED
PH Payoff Long	471	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Q Dompnr Fring	881	EXCLUDED	EXCLUDED
QL TTL DOM PTR	899	EXCLUDED	EXCLUDED
Qual Den DP	866	EXCLUDED	EXCLUDED
Qual Med DP	865	EXCLUDED	EXCLUDED
Qual Vis DP	867	EXCLUDED	EXCLUDED
Registered Merit Reporter Differential	252	INCLUDED	EXCLUDED
Registered Merit Reporter Differential	552	INCLUDED	EXCLUDED
Registered Professional Reporter Differential	253	INCLUDED	EXCLUDED
Registered Professional Reporter Differential	553	INCLUDED	EXCLUDED
Regular Pay (within base pay)	200	INCLUDED	INCLUDED
Regular Pay (within base pay)	500	INCLUDED	INCLUDED
RET COMP RATE	564	EXCLUDED	EXCLUDED
RET COMP RATE	264	EXCLUDED	EXCLUDED
RET HRS ADJ	293	EXCLUDED	EXCLUDED
RET HRS ADJ	593	EXCLUDED	EXCLUDED
Retro Salary Pay (within base pay)	281	INCLUDED	INCLUDED
Retro Salary Pay (within base pay)	581	INCLUDED	INCLUDED
SDI Sick Leave	344	EXCLUDED	EXCLUDED
Service Award	288	INCLUDED	EXCLUDED
Service Award	588	INCLUDED	EXCLUDED
Settlement Pay	493	EXCLUDED	EXCLUDED
Share the Savings	250	INCLUDED	EXCLUDED
Share the Savings	550	INCLUDED	EXCLUDED
Sick Leave Taken	384	EXCLUDED	EXCLUDED
Sick Lv Payoff	466	EXCLUDED	EXCLUDED
Sick Pay Off	416	EXCLUDED	EXCLUDED
State CMP Doc	494	EXCLUDED	EXCLUDED
STOT ClerkIII-I	366	EXCLUDED	EXCLUDED
Supp Paid Sick	390	EXCLUDED	EXCLUDED
Suspense WOP	292	EXCLUDED	EXCLUDED
Suspense WOP	592	EXCLUDED	EXCLUDED
Temp Judge	398	EXCLUDED	EXCLUDED
Union Training	389	EXCLUDED	EXCLUDED
VAC ADJUSTMENT	275	EXCLUDED	EXCLUDED
VAC ADJUSTMENT	575	EXCLUDED	EXCLUDED
VAC Cashout	453	EXCLUDED	EXCLUDED
VAC Cashout L	454	EXCLUDED	EXCLUDED
Vac Hrs Taken	386	EXCLUDED	EXCLUDED
Vac P/O Long	475	EXCLUDED	EXCLUDED
Vac Payoff	472	EXCLUDED	EXCLUDED
VAC PAYOFF HRS	274	EXCLUDED	EXCLUDED
VAC PAYOFF HRS	574	EXCLUDED	EXCLUDED
Vacation Payoff Retire	273	EXCLUDED	EXCLUDED
Vacation Payoff Retire	573	EXCLUDED	EXCLUDED
Vacation Sale	271	INCLUDED	EXCLUDED
Vacation Sale	571	INCLUDED	EXCLUDED
Vacation Sale Longevity	272	INCLUDED	EXCLUDED
Vacation Sale Longevity	572	INCLUDED	EXCLUDED
Vis-N-Qual-ER	857	EXCLUDED	EXCLUDED
Vis-Qual-ER	878	EXCLUDED	EXCLUDED
VTO Even	265	EXCLUDED	EXCLUDED
VTO Odd	565	EXCLUDED	EXCLUDED
WC 100 Offest	204	EXCLUDED	EXCLUDED
WC 100 OFFSET	206	EXCLUDED	EXCLUDED
WC 100 OFFSET	208	EXCLUDED	EXCLUDED
Wc 100 Offset	294	EXCLUDED	EXCLUDED
Wc 100 Offset	296	EXCLUDED	EXCLUDED
Wc 100 Offset	504	EXCLUDED	EXCLUDED
WC 100 OFFSET	506	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association  
Compensation for Retirement Purposes**

**Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
<b>Pay Code Description</b>	<b>Pay Code</b>	<b>INCLUDED/EXCLUDED</b>	<b>INCLUDED/EXCLUDED</b>
Wc 100 Offset	508	EXCLUDED	EXCLUDED
WC 100 OFFSET	226	EXCLUDED	EXCLUDED
Wc 100 Offset	594	EXCLUDED	EXCLUDED
Wc 100 Offset	596	EXCLUDED	EXCLUDED
WC 100 OFFSET	215	EXCLUDED	EXCLUDED
WC 100 OFFSET	217	EXCLUDED	EXCLUDED
WC 100 OFFSET	219	EXCLUDED	EXCLUDED
Wc 100 Offset	515	EXCLUDED	EXCLUDED
WC 100 OFFSET	517	EXCLUDED	EXCLUDED
Wc 100 Offset	519	EXCLUDED	EXCLUDED
Wc 100 Offset	526	EXCLUDED	EXCLUDED
WC 100%	295	EXCLUDED	EXCLUDED
WC 66.67%	297	EXCLUDED	EXCLUDED
WC 66.67%	597	EXCLUDED	EXCLUDED
WC ADJ EARN	372	EXCLUDED	EXCLUDED
WC PRIOR ADJ	337	EXCLUDED	EXCLUDED
WC100%	595	EXCLUDED	EXCLUDED
WRK CMP 71%	227	EXCLUDED	EXCLUDED
Wrk Cmp 71%	527	EXCLUDED	EXCLUDED
WRK CMP 73%	220	EXCLUDED	EXCLUDED
WRK CMP 73%	520	EXCLUDED	EXCLUDED
WRK CMP 75%	218	EXCLUDED	EXCLUDED
Wrk Cmp 75%	518	EXCLUDED	EXCLUDED
WRK CMP 77%	216	EXCLUDED	EXCLUDED
WRK CMP 77%	516	EXCLUDED	EXCLUDED
WRK CMP 80%	209	EXCLUDED	EXCLUDED
Wrk Cmp 80%	509	EXCLUDED	EXCLUDED
WRK CMP 86%	205	EXCLUDED	EXCLUDED
WRK CMP 86%	505	EXCLUDED	EXCLUDED
WRK CMP 87%	207	EXCLUDED	EXCLUDED
Wrk Cmp 87%	507	EXCLUDED	EXCLUDED
WRK CMP MSP	380	EXCLUDED	EXCLUDED



## MEMORANDUM

Date: August 10, 2022  
To: CCCERA Board of Retirement  
From: Karen Levy, General Counsel  
Subject: Continuing teleconference meetings under Government Code section 54953 (e)

---

### Background

All meetings of the Board of Retirement are open to the general public, as required by the Ralph M. Brown Act, California Government Code sections 54950 *et seq.* Section 54953 (e) of the Brown Act authorizes conducting public meetings via teleconferencing during a state of emergency. The Board has approved conducting its meetings via teleconferencing under Section 54953 (e), finding that in-person meetings of the Board are open to the general public and would risk the health or safety of the public, staff, outside consultants and trustees attending public meetings, in light of the COVID-19 pandemic and related state of emergency. Under the law, if the Board wishes to continue using these special teleconferencing rules it must reconsider the circumstances of the state of emergency and make certain findings.

### Proclaimed State of Emergency and Health and Safety Guidance

Currently, the COVID-19 state of emergency proclaimed by the Governor is in effect. On June 14, 2022, the Contra Costa County Health Officer issued recommendations for safely holding public meetings that included recommended measures to promote social distancing. (See Attachment A, Health Officer's Recommendations). The Health Officer has recommended as follows:

Online meetings (i.e. teleconferencing meetings) are encouraged, where practical, as these meetings present the lowest risk of transmission of SARS CoV-2, the virus that causes COVID 19. This is particularly important when community prevalence rates are high. Our current trends as of June 14, 2022 in Covid-19 case rate, test positivity, and Covid-19 hospitalizations are increasing at this time. In addition to this, the predominant variant of Covid-19 being identified continues to be the Omicron variant and it's subvariants the impact of which on the spread of Covid-19 has shown to dramatically increase COVID-19 transmission.

**Recommendation**

Consider and take possible action to authorize the Board and its committee(s) to continue to conduct teleconference meetings for the next 30 days under Government Code section 54953 (e) and make the following findings:

1. The Board has reconsidered the circumstances of the statewide state of emergency proclaimed by the Governor on March 4, 2020 and the countywide local emergency proclaimed by the Governor on March 10, 2020.
2. The following circumstances currently exist:
  - a. The statewide state of emergency and the countywide local emergency continue to directly impact the ability of the Board and its committee(s) to meet safely in person at meetings that are open to the general public because of the COVID-19 pandemic.
  - b. The County Health Officer's recommendations for safely holding public meetings, which encourage virtual meetings and other measures to promote social distancing, are still in effect.

*Attachment*

**A**



### Recommendations for safely holding public meetings

Each local government agency is authorized to determine whether to hold public meetings in person, on-line (teleconferencing only), or via a combination of methods. The following are recommendations from the Contra Costa County Health Officer to minimize the risk of COVID 19 transmission during a public meeting.

1. Online meetings (i.e. teleconferencing meetings) are encouraged, where practical, as these meetings present the lowest risk of transmission of SARS CoV-2, the virus that causes COVID 19. This is particularly important when community prevalence rates are high. Our current trends as of June 14, 2022 in Covid-19 case rate, test positivity, Covid-19 hospitalizations, and Covid-19 wastewater surveillance are increasing at this time. In addition to this, the predominant variant of Covid-19 being identified continues to be the Omicron variant and it's subvariants the impact of which on the spread of Covid-19 has shown to dramatically increase COVID-19 transmission.
2. If a local agency determines to hold in-person meetings, offering the public the opportunity to attend via a call-in option or an internet-based service option is recommended, when possible, to give those at higher risk of and/or higher concern about COVID-19 an alternative to participating in person.
3. A written safety protocol should be developed and followed. It is recommended that the protocol require social distancing, where feasible – i.e. six feet of separation between attendees; and consider requiring or strongly encouraging face masking of all attendees and encouraging attendees to be up-to-date on their COVID-19 vaccine.
4. Seating arrangements should allow for staff and members of the public to easily maintain at least six-foot distance from one another at all practicable times.
5. Consider holding public meetings outdoors. Increasing scientific consensus is that outdoor airflow reduces the risk of COVID-19 transmission compared to indoor spaces. Hosting events outdoors also may make it easier to space staff and members of the public at least 6 feet apart. If unable to host outdoors, consider ways to [increase ventilation and flow](#) of the indoor space to reduce the risk of COVID-19 while indoors.
6. Current evidence is unclear as to the added benefit of temperature checks in addition to symptom checks. We encourage focus on symptom checks as they may screen out individuals with other Covid-19 symptoms besides fever and help reinforce the message to not go out in public if you are not feeling well.
7. Consider a voluntary attendance sheet with names and contact information to assist in contact tracing of any cases linked to a public meeting.

Revised 6-14-2022

*Sefanit Mekuria*

Sefanit Mekuria, MD, MPH  
Deputy Health Officer, Contra Costa County





Meeting Date  
08/10/2022  
Agenda Item  
#14a.

NATIONAL CONFERENCE ON PUBLIC EMPLOYEE RETIREMENT SYSTEMS

ADVOCACY

RESEARCH

EDUCATION

# 2022 PUBLIC SAFETY CONFERENCE NASHVILLE

★ TENNESSEE ★

SHERATON GRAND NASHVILLE DOWNTOWN

OCTOBER 23 - 26

**NCPERS Accredited Fiduciary Program (NAF)  
October 22-23**

**Register by September 30 for Early-Bird Registration Rates.**



# NCPERS UNIVERSITY

## NCPERS ACCREDITED FIDUCIARY PROGRAM (NAF)

The NCPERS Accredited Fiduciary (NAF) Program is a trustee accreditation program specifically designed and tailored for individuals involved in public pension governance. NAF divides plan governance, oversight, and administration into four modules (see below). Each module delves into the fundamental components and strategies necessary for governing a public pension fund, allowing trustees and plan staff to walk away with the key competencies critical to fulfilling their fiduciary responsibilities.



**RESERVE YOUR SEAT AT THE TABLE TODAY! CLASS SIZE LIMITED TO 45**

### COST

**\$855** (early-bird rate through September 30) | **\$1,055** (after September 30)

### ELIGIBILITY

Elected or appointed pension trustees and staff interested in pursuing the next level of professional development.

### CERTIFICATION REQUIREMENTS

- 1** It is recommended that candidates first complete the NCPERS Trustee Educational Seminar (TEDS) as a refresher course.
- 2** Candidates are required to complete all four NAF modules (in any order), earning a total of twelve (12) hours of continuing education credit.
- 3** Candidates must demonstrate mastery of content through an online exam.

Upon successful completion of all requirements and receipt of a passing grade on the examination, NAF candidates will earn their Accredited Fiduciary (AF) designation.



## MODULE 1 AND 2

### SATURDAY, OCTOBER 22

- 7:00 am – 8:00 am Breakfast
- 7:00 am – 1:00 pm Registration
- 8:00 am – 3:00 pm Module 1 – Governance & The Board's Role
- Board Governance
  - Role of the Board (Part 1)
  - Role of the Board (Part 2)
  - Board Performance
  - Case Study

### SUNDAY, OCTOBER 23

- 7:00 am – 8:00 am Breakfast
- 7:00 am – 1:00 pm Registration
- 8:00 am – 3:00 pm Module 2 – Investment & Finance
- Introduction
  - Investment Approach & ESG Considerations
  - External Advisors
  - Financial Reporting and Disclosure
  - Alternative Investing
  - Case Study

## MODULE 3 AND 4

### SATURDAY, OCTOBER 22

- 7:00 am – 8:00 am Breakfast
- 7:00 am – 1:00 pm Registration
- 8:00 am – 3:00 pm Module 3 – Legal, Risk Management & Communication
- Legal
  - Audit Priorities
  - Risk Management and Corporate Reputation
  - Effective Communication
  - Case Study

### SUNDAY, OCTOBER 23

- 7:00 am – 8:00 am Breakfast
- 7:00 am – 1:00 pm Registration
- 8:00 am – 3:00 pm Module 4 – Human Capital
- Internal vs. External Management Models
  - Executive Employment Contracts
  - Executive Compensation
  - Executive Evaluations
  - Trustee Remuneration
  - Succession Planning
  - Case Study



# 2022 PUBLIC SAFETY CONFERENCE

For over 30 years, the Public Safety Conference has been the premier forum bringing together pension administrators, trustees, union leaders and representatives of the financial community to discuss issues related exclusively to retirement and other benefits for public safety employees. Public safety employees – whether they are police officers, firefighters or other first responders – have traditionally required and received a higher level of benefits due to the risks they take in the course of their duties. The Public Safety Conference strives to provide an agenda focused on enriching your professional development, develop best practices in the industry, and help you enhance your knowledge and skills in areas pertinent to your fiduciary responsibilities.

## WHY ATTEND

It is the perfect opportunity to participate in education, training, and professional development activities specifically focused on your area of expertise, and the conference will provide you with networking events and speakers who will motivate and inspire you.

## WHO ATTENDS

Public safety employees, including police officers, firefighters, first responders, and service providers in the public safety industry.



## THE PUBLIC SAFETY CONFERENCE IS THE IDEAL VENUE TO:

- meet other top pension and benefits professionals
- exchange information
- participate in engaging educational discussions
- increase your working knowledge
- hear examples of best practices techniques
- learn the latest strategies in investment and management

# 2022 PRELIMINARY AGENDA



## SUNDAY, OCTOBER 23

3:00 pm – 6:30 pm Registration  
4:00 pm – 5:00 pm General Session  
5:00 pm – 6:30 pm Exhibition & Reception

## MONDAY, OCTOBER 24

7:00 am – 8:00 am Breakfast  
7:00 am – 1:00 pm Registration  
7:00 am – 1:00 pm Exhibition  
8:00 am – 1:30 pm General Session  
    8:00 am – 8:15 am *Opening Remarks*  
    8:15 am – 9:00 am *Session*  
    9:00 am – 9:30 am *Session*  
    9:30 am – 10:15 am *Session*  
10:15 am – 10:30 am Exhibit Break  
    10:30 am – 11:15 am *Session*  
    11:15 am – 12:00 pm *Session*  
12:00 pm – 12:15 pm Exhibit Break  
    12:15 pm – 1:00 pm *Session*  
    1:00 pm – 1:30 pm *Session*  
5:00 pm – 6:00 pm Networking Reception

## TUESDAY, OCTOBER 25

7:00 am – 8:00 am Breakfast  
7:00 am – 1:00 pm Registration  
7:00 am – 1:00 pm Exhibition  
8:00 am – 1:30 pm General Session  
    8:00 am – 8:45 am *Session*  
    8:45 am – 9:30 am *Session*  
    9:30 am – 10:15 am *Session*  
10:15 am – 10:30 am Exhibit Break  
    10:30 am – 11:15 am *Session*  
    11:15 am – 12:00 pm *Session*  
12:00 pm – 12:15 pm Exhibit Break  
    12:15 pm – 1:00 pm *Session*  
    1:00 pm – 1:30 pm *Session*  
5:00 pm – 6:00 pm Networking Reception

## WEDNESDAY, OCTOBER 26

7:00 am – 8:00 am Breakfast  
7:00 am – 12:00 pm Registration  
7:00 am – 10:30 am Exhibition  
8:00 am – 12:30 pm General Session  
    8:00 am – 9:00 am *Session*  
    9:00 am – 9:45 am *Session*  
    9:45 am – 10:15 am *Session*  
10:15 am – 10:30 am Exhibit Break  
    10:30 am – 11:00 am *Session*  
    11:00 am – 11:30 am *Session*  
    11:30 am – 12:00 pm *Session*  
12:00 pm – 12:15 pm Exhibit Break  
    12:15 pm – 1:00 pm *Session*  
    1:00 pm – 1:30 pm *Session*



# SHERATON GRAND NASHVILLE DOWNTOWN

623 Union Street | Nashville, TN 37219 | (615) 259-2000



Elevate your stay in Music City at the Sheraton Grand Nashville Downtown. The Sheraton's impeccable location places you in the heart of the Nashville Historic District, Music City Center, the Tennessee Performing Arts Center, and more. Don't forget to check out the Sheraton's Skye Lounge, a rooftop venue on the 28th floor which offers stunning views of downtown Nashville.

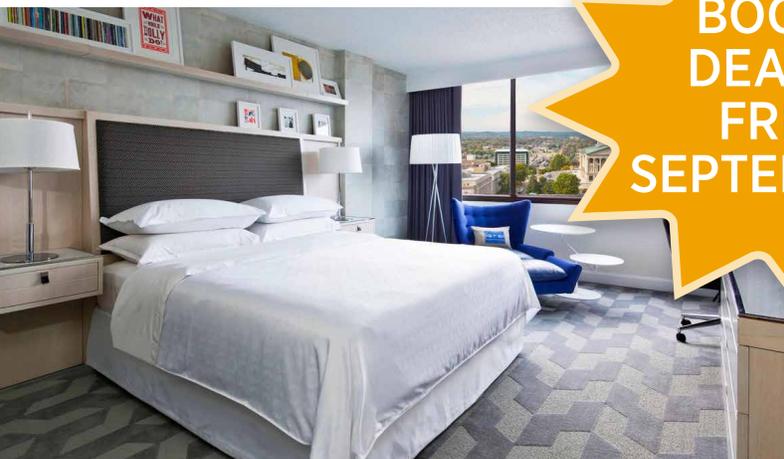
## RESERVATIONS

Book your stay at the Sheraton Grand Nashville Downtown, official location for the 2022 Public Safety Conference. Discounted group rate is subject to availability of group block and may be available 3 days before and 3 days after actual conference dates but are based on hotel's availability.

**Room Rate:** \$269 single/double occupancy

**Reservations:** Call reservations at (615) 259-2000 or (888) 236-2427 and reference the NCPERS Public Safety Conference or register online at [www.ncpers.org/public-safety-hotel-reservations](http://www.ncpers.org/public-safety-hotel-reservations).

**BOOKING  
DEADLINE  
FRIDAY,  
SEPTEMBER 30**



# GENERAL INFORMATION

## COVID-19 POLICY

It is NCPERS policy that during the COVID-19 pandemic, attendees of in person meetings must adhere to the following rules:

- Must adhere to local or venue social distancing protocols, even if fully vaccinated.
- Must respect personal space & contact preferences of other attendees & staff, as indicated by the color coding.

## MEMBERSHIP STATUS

The Public Safety Conference is a members-only conference. Your organization must be a current member of NCPERS in order for your registration to be processed. To verify your organization's membership status, please e-mail [membership@ncpers.org](mailto:membership@ncpers.org).

## WHO ARE SERVICE PROVIDERS

NCPERS classifies all companies and organizations that provide products and services to pension plans and the larger public pension community as service providers. This includes, but is not limited to law firms, banks, investment consultants, actuaries, asset managers and insurance companies.

## CONTINUING EDUCATION (CE) CREDITS

NCPERS is recognized as a learning provider in the public pension industry and is an accredited sponsor of continuing education in several States.

**2022 Public Safety Conference = up to 15.5 hours of CE**

## REGISTRATION FEES

There are no per-day registration rates for the Public Safety Conference. If you register onsite, the full conference rate will apply, regardless of the day you register.

Registration fees include (unless otherwise noted) the following events:

- Conference materials
- Three daily breakfasts
- Three daily refreshment breaks
- Three receptions

The registration fee does not include hotel accommodations, airfare, or transportation.

## SPEAKER REGISTRATION FEE

CorPERS members will receive one (1) complimentary speaker at the conference as part of their enhanced membership level.

NCPERS charges speaker registration fees to our service provider members to cover the cost of conference materials, food and beverage, and facility/audio visual usage. We understand that some speakers may only attend for one day, but this is difficult to monitor.

## GUEST REGISTRATION

A guest refers to a spouse or personal friend, not a business associate, staff member, or colleague. All guests must be registered to attend NCPERS events. No admittance will be given to guests without a registration name badge.

The guest fee includes access to the following functions:

- Breakfast (valued at \$65 per person)
- Receptions (valued at \$85 per person)

## REGISTRATION DEADLINE

Register by Friday, September 30, to receive the early-bird conference rates and be included in the preliminary attendee list (this list is used by our Service Providers to send invitations to their client events). You may still register for the conference after this date, but higher conference fees will apply.

## ATTENDEE LISTS

The preliminary attendee list will be available after the September 30 early-bird registration deadline. The list will be emailed to all registered attendees. To request a copy of the list, email [registration@ncpers.org](mailto:registration@ncpers.org). To be included on this list, please register BEFORE September 30.

**The final attendee list will be available onsite at the conference.**

## MEMBER EVENT/INVITATIONS

Service Providers should not schedule/host client events during any NCPERS activities.

NCPERS does not publish the e-mail addresses of its members. If you would like your event invitation e-mailed to attendees, please contact Cassandra Smoot at 202-601-2447 or [cassandra@ncpers.org](mailto:cassandra@ncpers.org).

## REGISTRATION CHANGES

All registration changes must be received in writing. Please e-mail all registration changes to [registration@ncpers.org](mailto:registration@ncpers.org) or fax to 202-688-2387.

## CANCELLATIONS

All registration cancellations must be received in writing before September 30 to receive a refund and will be subject to a processing fee of \$100.

**No refunds will be given to cancellations received after September 30 or to no-shows.**

All COVID-19 related refunds will be approved on a case by case basis. Please email your cancellation request to [registration@ncpers.org](mailto:registration@ncpers.org) or call 202-601-2445.

## REGISTRATION METHODS



Submit your registration online at [www.NCPERS.org](http://www.NCPERS.org). You will need your individual username and password to login.



E-mail the registration form directly to [registration@ncpers.org](mailto:registration@ncpers.org).



Fax the registration form to 202-688-2387.



Mail the registration form to:

NCPERS  
1201 New York Avenue, NW  
Suite 850  
Washington, DC 20005

# EXHIBITING INFORMATION

The Public Safety Conference exhibit hall is a table-top style exhibition. We ask that you only bring your small booth/banners to this conference.

## EXHIBIT BOOTH FEE Exhibit Booth Fee \$2,420

### WHY EXHIBIT

The Public Safety Conference is an exceptional opportunity for you and your company's representatives to meet face-to-face with more than 250 public safety pension trustees and union representatives. It is your chance to get an audience with trustees with the authority and influence to manage the assets of their pension funds.

### WHAT COMES WITH MY BOOTH?

Registering for an exhibit booth includes the following:

- Two registration passes for your booth staffers
- One six-foot table and two chairs with a wastebasket
- Access to NCPERS educational sessions and events at the conference

Shipping costs and additional services ordered through hotel will be at the exhibiting company's expense.

### EXHIBIT HALL SCHEDULE

All exhibit booths must be open and staffed during these times. Please note setup hours are subject to change.

### SETUP HOURS

Sunday, October 23 12:00 pm – 4:30 pm

### EXHIBIT HALL OPEN HOURS

Sunday, October 23 5:00 pm – 6:30 pm

Monday, October 24 7:00 am – 1:00 pm

Tuesday, October 25 7:00 am – 1:00 pm

Wednesday, October 26 7:00 am - 10:30 am

### MOVE-OUT HOURS

Wednesday, October 26 10:30 am – 4:00 pm



### WHY SPONSOR

Studies say it takes seven to 11 times for somebody to see your company's message and remember it. One of the best reasons to sponsor an event is the number of people that will have eyes on your brand. Sponsorship is an opportunity for your company to solidify its presence in the public pension market and show support to public pensions and NCPERS mission to educate pension trustees and staff.

# NAF REGISTRATON FORM

The NAF programs will run concurrently. Attendees should register for only one of the programs.

ATTENDEE REGISTRATION		
EVENT	Early-Bird Registration Fee (Before September 30)	Registration Fee (After September 30)
<input type="checkbox"/> NAF Modules 1 & 2	\$855/person	\$1,055/person
<input type="checkbox"/> NAF Modules 3 & 4	\$855/person	\$1,055/person

(Please print clearly)

Organization Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Title: \_\_\_\_\_

Preferred Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_

E-mail Address\*: \_\_\_\_\_

\*Please provide your e-mail address for conference updates and registration confirmation.

## REGISTRATION/ORDER SUMMARY

NAF Module 1 & 2 Registration \$ \_\_\_\_\_

NAF Module 3 & 4 Registration \$ \_\_\_\_\_

**GRAND TOTAL** (U.S. funds) \$ \_\_\_\_\_

## PAYMENT METHOD

All payments must be in U.S. funds.

Electronic payment is strongly encouraged.



ONLINE at [www.ncpers.org](http://www.ncpers.org). You will need your username and password to log in.



E-MAIL completed registration to [registration@ncpers.org](mailto:registration@ncpers.org).



FAX completed registration to 202-688-2387.



CHECK: Mail to NCPERS at 1201 New York Avenue, NW, Suite 850, Washington, DC 20005

## CREDIT CARD

American Express   Visa   MasterCard 

Credit Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CC Verification Code: \_\_\_\_\_

Name on the card: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Authorized Amount to Charge: \$ \_\_\_\_\_

*By submitting this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.*

Signature: \_\_\_\_\_

## GUEST POLICY

NAF events are not open to spouses or guests.

## CANCELLATION POLICY

All registration cancellations must be received in writing before September 30 to receive a refund and will be subject to a processing fee of \$100. **No refunds will be given to cancellations received after September 30 or to no-shows.** All COVID-19 related refunds will be approved on a case by case basis. Please email your cancellation request to [registration@ncpers.org](mailto:registration@ncpers.org) or call 202-601-2445.

# 2022 PUBLIC SAFETY CONFERENCE FUND REGISTRATION FORM

## ATTENDEE REGISTRATION

	Early-Bird Registration Fee (Before September 30)	Registration Fee (After September 30)
<input type="checkbox"/> Fund Member	\$750	\$850

(Please print clearly)

Organization Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Title: \_\_\_\_\_

Preferred Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail Address\*: \_\_\_\_\_

\*Please provide your e-mail address for conference updates and registration confirmation.

## GUEST REGISTRATION

	Early-Bird Registration Fee (Before September 30)	Registration Fee (After September 30)
<input type="checkbox"/> Guest*	\$110	\$160
<input type="checkbox"/> Children Under 12	\$50	\$75

\*A guest refers to a spouse or personal friend, not a business associate, staff member or colleague. All guests must be registered to attend NCPERS events. The registration fee covers all breakfasts and receptions. Guest registration does not include NAF events.

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

## REGISTRATION SUMMARY

Fund Member Registration \$ \_\_\_\_\_

Guest Registration \$ \_\_\_\_\_

**GRAND TOTAL** (U.S. funds) \$ \_\_\_\_\_

## PAYMENT METHOD

**All payments must be in U.S. funds.**

Electronic payment is strongly encouraged.



ONLINE at [www.ncpers.org](http://www.ncpers.org). You will need your username and password to log in.



E-MAIL completed registration to [registration@ncpers.org](mailto:registration@ncpers.org).



FAX completed registration to 202-688-2387.



CHECK: Mail to NCPERS at 1201 New York Avenue, NW, Suite 850, Washington, DC 20005

## CREDIT CARD

American Express   Visa   MasterCard 

Credit Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CC Verification Code: \_\_\_\_\_

Name on the card: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Authorized Amount to Charge: \$ \_\_\_\_\_

*By submitting this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.*

Signature: \_\_\_\_\_

## CANCELLATION POLICY

All registration cancellations must be received in writing before September 30 to receive a refund and will be subject to a processing fee of \$100. **No refunds will be given to cancellations received after September 30 or to no-shows.** All COVID-19 related refunds will be approved on a case by case basis. Please email your cancellation request to [registration@ncpers.org](mailto:registration@ncpers.org) or call 202-601-2445.

# 2022 PUBLIC SAFETY CONFERENCE SERVICE PROVIDER REGISTRATION FORM

## ATTENDEE REGISTRATION

	Early-Bird Registration Fee (Before September 30)	Registration Fee (After September 30)
<input type="checkbox"/> Service Provider	\$960	\$1,060
<input type="checkbox"/> Speaker	\$960	\$1,060

(Please print clearly)

Organization Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Title: \_\_\_\_\_

Preferred Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail Address\*: \_\_\_\_\_

\*Please provide your e-mail address for conference updates and registration confirmation.

## GUEST REGISTRATION

	Early-Bird Registration Fee (Before September 30)	Registration Fee (After September 30 or onsite)
<input type="checkbox"/> Guest*	\$110	\$160
<input type="checkbox"/> Children Under 12	\$50	\$75

\*A guest refers to a spouse or personal friend, not a business associate, staff member or colleague. All guests must be registered to attend NCPERS events. The registration fee covers all breakfasts and receptions. Guest registration does not include NAF events.

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

## REGISTRATION SUMMARY

Service Provider Registration \$ \_\_\_\_\_

Speaker Registration \$ \_\_\_\_\_

Guest Registration \$ \_\_\_\_\_

**GRAND TOTAL** (U.S. funds) \$ \_\_\_\_\_

## PAYMENT METHOD

**All payments must be in U.S. funds.**

Electronic payment is strongly encouraged.



ONLINE at [www.ncpers.org](http://www.ncpers.org). You will need your username and password to log in.



E-MAIL completed registration to [registration@ncpers.org](mailto:registration@ncpers.org).



FAX completed registration to 202-688-2387.



CHECK: Mail to NCPERS at 1201 New York Avenue, NW, Suite 850, Washington, DC 20005

## CREDIT CARD

American Express   Visa   MasterCard 

Credit Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CC Verification Code: \_\_\_\_\_

Name on the card: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Authorized Amount to Charge: \$ \_\_\_\_\_

*By submitting this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.*

Signature: \_\_\_\_\_

## CANCELLATION POLICY

All registration cancellations must be received in writing before September 30 to receive a refund and will be subject to a processing fee of \$100.

**No refunds will be given to cancellations received after September 30 or to no-shows.** All COVID-19 related refunds will be approved on a case by case basis.

Please email your cancellation request to [registration@ncpers.org](mailto:registration@ncpers.org) or call 202-601-2445.

# 2022 PUBLIC SAFETY CONFERENCE EXHIBITOR REGISTRATION

**TABLETOP EXHIBIT FEE: \$2,420 Fee includes registration for two people.**

## PRIMARY CONTACT FOR BOOTH LOGISTICS

This individual will receive all information regarding your exhibit booth.

Primary Contact Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

## FIRST BOOTH STAFFER

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Organization Name \_\_\_\_\_

Daytime Phone \_\_\_\_\_

E-mail Address \_\_\_\_\_

## SECOND BOOTH STAFFER

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Organization Name \_\_\_\_\_

Daytime Phone \_\_\_\_\_

E-mail Address \_\_\_\_\_

## INDEMNIFICATION AND HOLD HARMLESS

The exhibitor indemnifies and agrees to hold harmless NCPERS and Sheraton Grand Nashville Hotel, and their officers, directors, employees, and agents from any and all actions, claims, damages, losses, and expenses, including attorney's fees, arising from any and all damages or losses to properties of; or bodily injuries to exhibitor, his/her agents, representatives, employees, or invitees by reason of the exhibitor's occupancy or use of the exhibition facilities.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 2022

By: \_\_\_\_\_

For: \_\_\_\_\_

## PAYMENT METHOD

**All payments must be in U.S. funds.**

Electronic payment is strongly encouraged.



ONLINE at [www.ncpers.org](http://www.ncpers.org). You will need your username and password to log in.



E-MAIL completed registration to [registration@ncpers.org](mailto:registration@ncpers.org).



FAX completed registration to 202-688-2387.



CHECK: Mail to NCPERS at 1201 New York Avenue, NW, Suite 850, Washington, DC 20005

## CREDIT CARD

American Express   Visa   MasterCard 

Credit Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CC Verification Code: \_\_\_\_\_

Name on the card: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Authorized Amount to Charge: \$ \_\_\_\_\_

*By submitting this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.*

Signature: \_\_\_\_\_

Failure to occupy booth space does not release the exhibitor from the obligation to pay for full cost of the rental. These terms shall apply regardless of the execution date of this contract.

## CANCELLATION POLICY

Exhibit booth cancellations must be received in writing before September 30 to receive a refund and will be subject to a processing fee of \$100. **No refunds will be given to cancellations received after September 30 or to no-shows.** All COVID-19 related refunds will be approved on a case by case basis. Please email your cancellation request to [registration@ncpers.org](mailto:registration@ncpers.org) or call 202-601-2445.

# SPONSORSHIP OPPORTUNITIES

Expand your marketing reach and brand exposure during the Public Safety Conference with these premium support opportunities.

**Sponsorship packages must be reserved by Monday, September 19.**

**PLATINUM**  
○  
**\$20,000**

- The Platinum package level includes:
- Three (3) complimentary registrations.
  - One complimentary exhibit booth.
  - Full splash page in conference mobile app.
  - Branding at conference recognizing your organization as platinum sponsor.
  - Acknowledgment in any printed materials.
  - Acknowledgment on conference webpage.
  - Sponsor ribbons for your organization's representatives.

**GOLD**  
○  
**\$10,000**

- The Gold package level includes:
- Two (2) complimentary registrations.
  - Banner ad in conference mobile app.
  - Branding at conference recognizing your organization as a sponsor.
  - Acknowledgment in any printed materials.
  - Acknowledgment on conference webpage.
  - Sponsor ribbons for your organization's representatives.

**SILVER**  
○  
**\$5,000**

- The Silver package level includes:
- One (1) complimentary registration.
  - Branding at conference recognizing your organization as a sponsor.
  - Acknowledgment in any printed materials.
  - Acknowledgment on conference webpage.
  - Sponsor ribbons for your organization's representatives.

**BRONZE**  
○  
**\$2,500**

- The Bronze package level includes:
- Branding at conference recognizing your organization as a sponsor.
  - Acknowledgment in any printed materials.
  - Acknowledgment on conference webpage.
  - Sponsor ribbons for your organization's representatives.

## ANCILLARY SPONSORSHIP ITEMS

The following support opportunities will offer your company exclusivity as the sole sponsor of these items. Please note deadline for each item.

### ○ LANYARDS — \$4,000

**Reserve by Monday, August 22**

Everyone will be wearing your logo when you sponsor the lanyards. Your company logo will be imprinted on the lanyards and distributed to all attendees during registration.

### ○ RECEPTION (3 available) — \$5,000

**Reserve by Monday, September 19**

Further establish your company as a supporter by sponsoring a bar at one of the networking receptions.

### ○ REFRESHMENT BREAK (6 available) — \$2,500

**Reserve by Monday, September 19**

Learning is hard work and people need a break. Be the hero, while gaining premium exposure, by offering attendees that much-needed cup of coffee. Coffee breaks are offered in the exhibit hall. Your company logo will appear on signage posted at coffee stations.

### CUSTOM SPONSORSHIP

Customized sponsorship opportunities available upon request. Please contact Cassandra Smoot for more details at [cassandra@ncpers.org](mailto:cassandra@ncpers.org) or 202-601-2447.

## SUPPORT AGREEMENT AND REGISTRATION

By completing and signing this support commitment form, the below-mentioned organization or firm agrees to support the Public Safety Conference at the amount selected. NCPERS agrees to comply with the terms for the selected level of support. Refunds or cancellations will not be allowed for sponsorships.

Organization Name: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Preferred Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

Signature: \_\_\_\_\_

## PAYMENT METHOD

**All payments must be in U.S. funds.**

Electronic payment is strongly encouraged.

 ONLINE at [www.ncpers.org](http://www.ncpers.org). You will need your username and password to log in.

 E-MAIL completed registration to [registration@ncpers.org](mailto:registration@ncpers.org).

 FAX completed registration to 202-688-2387.

 If you must pay by check, please e-mail [registration@ncpers.org](mailto:registration@ncpers.org) for mailing instructions.

## CREDIT CARD

American Express   Visa   MasterCard 

Credit Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CC Verification Code: \_\_\_\_\_

Name on the card: \_\_\_\_\_

Billing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Authorized Amount to Charge: \$ \_\_\_\_\_

*By submitting this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.*

Signature: \_\_\_\_\_