



October 9, 2023

Members of the Pension Review Commission:

In response to questions received during the recent committee meeting, PERA staff has prepared the attached information.

Please let us know if any members would like to discuss this information in greater detail.

Thank you,

Amy C. McGarrity  
Interim Executive Director/Chief Investment Officer

Michael Steppat  
Public & Government Affairs Manager

## Investments

### 1. **What percentage of the portfolio is in extractive industries (oil/gas)?**

As of 8/31/2023, PERA had just over \$1 billion in fossil fuel direct investments (\$937 million in equities, \$98 million in fixed income). This represents approximately 1.7% of the entire portfolio. Please note this exposure does not include any private investments.

### 2. **What is the calculation behind the \$60 million savings in 2022 due to internal investment management?**

Aon (PERA Board of Trustees' investment consultant) estimates it would cost \$87 million to outsource the investments PERA staff manages internally (Global Equity and Fixed Income only). Total Internal costs for 2022 were \$36 million (all asset classes plus other supporting investment divisions). This \$36 million number does not match the number in the ACFR as we include additional resources allocated to Investments (IT, HR, etc.) that for financial reporting purposes are required to be classified as administrative expenses. We assume if we didn't manage assets internally, we would have a 50% staff reduction, so the math works out to:  $\$87 - (36 * .5) = \$68$ . To be conservative and to have less volatility from year to year in the number, we published \$60 million in our materials.

### 3. **What is your investment strategy/philosophy for succession planning that describes investment decision-making approaches?**

PERA works consistently to develop the next generation of leaders within the organization. PERA's leaders focus on enhancing our ability to manage change, including succession planning, while also developing a culture of collaboration, continuous learning, and improvement.

#### **Succession Planning for PERA's Investment Department**

As it relates specifically to our Investment Department, PERA operates with a **team-based** approach, encompassing teams of portfolio managers and analysts, organized by asset class. This structure not only mitigates risks from unforeseen personnel changes but also fortifies long-term consistency across diverse asset classes.

Starting with a coherent understanding and articulation of the long-term objectives and philosophies of each asset class, we set the foundation for our succession planning. This stated philosophy ensures that potential successors are in sync with PERA's envisioned goals and strategy. We have identified key roles, such as portfolio managers, analysts, and traders, pivotal to our operational success. Furthermore, we continuously assess our employees' competencies, achievements, and potential. In order to nurture the growth of our identified successors, we commit to their professional enhancement through structured training, role rotation, and immersion in various facets of asset class construction and risk oversight. Refer to the subsequent slide for a detailed illustration, using Global Equities as an example.

## Colorado PERA – Investments Succession Planning

This slide uses the Global Equity Asset Class as an example

*(Global Equities is PERA's largest asset class)*

### ■ Team Structures

- Equity Analysts: At least two people covering each sector
- Equity Portfolio Managers: At least two people managing each fund
- Many people have dual roles (e.g., Portfolio Manager and Analyst)
- Benefits of Team Structures:
  - More eyes on a given sector or portfolio
  - Allows for succession planning if/when needed

### ■ Staff Engagement and Training

- PERA's Equity Division has a rotation program where Equity Analysts rotate between actively managed portfolios to gain portfolio management insights (e.g., learn about each fund's investment process)
- Analysts also rotate between other roles, such as asset class construction and external manager selection and oversight

In summary, succession planning at PERA is a continuous process that involves foresight, strategic thinking, and a commitment to nurturing and developing talent. This process is essential for ensuring the longevity of our investment capabilities and navigating the challenges of the ever-evolving investment landscape.

#### 4. What is the investment expense of Private Equity expressed as a percentage of total assets?

For 2022, Private Equity paid \$62.582 million in management fees. This represents 1.2% of the Private Equity Portfolio or 11 bps of the entire PERA portfolio. PE also paid \$73.209 million in carried interest during 2022. This represents 1.4% of the Private Equity Portfolio or 13 bps of the entire PERA portfolio. The combined \$135.791 million represents 2.6% and 24 bps of the Private Equity and entire PERA portfolios, respectively. Carried interest represents the share of profits paid to external entities (usually general partners) due to investment returns surpassing agreed-upon thresholds. Amounts will vary, potentially significantly, from year to year depending on the timing of sales of the underlying investments and the magnitude of the gains. Amounts are based on best available information provided by external entities. Actual results could differ from those amounts.

#### 5. What is the yield on the Real Estate portfolio?

For 2022, the PERA Real Estate portfolio had a total return of 13.4% which was comprised of 11.0% appreciation and 2.4% income.

Other

**6. Can you provide information on the Annual Increase Reserve?**

Please see attached letter dated June 20, 2023, from the Board’s actuarial service provider (Segal), Re: Public Employees’ Retirement Association of Colorado (PERA) –Tier 2 Annual Increase Calculation. This actuarial analysis is performed in late June, annually, to inform PERA staff of the official annual increase (AI) rate, effective as of July 1, of that year, applicable for Tier 2 members (those with a membership date on or after January 1, 2007). In addition to the AI rate, the letter communicates the number of benefit recipients, by division, that are eligible to receive an AI as well as the amount of dollars to transfer to the retirement reserve within each division trust fund, including the appropriate interest adjustment.

**7. What is PERA’s annual cash flow (additions/deductions)?**

As exemplified below, this information is easily attainable within the financial statements, specifically the “Statements of Changes in Fiduciary Net Position” in the Financial Section of the Annual Comprehensive Financial Report (ACFR), page 46 of the 2022 ACFR.

It is worth noting that mature pension plans, such as PERA, are not expected to be “pay-as-you-go” systems, but typically operate in negative cash flow environments by design. As exemplified by the benefit and efficiency of prefunding future anticipated benefit payments, it is the expectation of this design that realized investment returns will eventually pay a portion of the benefit payments due.

Directly below is a five-year cash flow summary of the total of the five Division Trust Funds for your convenience, to provide a sense of history and trend:

**Colorado PERA – Cash Flows (2018 – 2022)**  
(Dollars in Thousands)

	2022	2021	2020	2019	2018
<b>Contributions</b>	\$3,987,925	\$3,351,077	\$2,865,431	\$2,863,322	\$2,657,462
<b>Other Additions</b>	11,189	11,642	12,095	10,127	17,680
<b>Subtotal</b>	\$3,999,114	\$3,362,719	\$2,877,526	\$2,873,449	\$2,675,142
<b>Total Benefits</b>	(\$5,153,727)	(\$4,984,779)	(\$4,825,842)	(\$4,708,541)	(\$4,611,125)
<b>Refunds and Distributions</b>	(201,198)	(184,072)	(148,014)	(161,202)	(168,387)
<b>Disability and Life Ins Premiums</b>	(2,687)	(3,175)	(4,264)	(6,162)	(6,487)
<b>Administrative Expenses</b>	(45,669)	(40,739)	(39,377)	(39,186)	(41,089)
<b>Other Deductions</b>	(19,124)	(17,919)	(18,241)	(15,057)	(14,813)
<b>Subtotal</b>	(\$5,422,405)	(\$5,230,684)	(\$5,035,738)	(\$4,930,148)	(\$4,841,901)
<b>Net Cash Flow</b>	<b>(\$1,423,291)</b>	<b>(\$1,867,965)</b>	<b>(\$2,158,212)</b>	<b>(\$2,056,699)</b>	<b>(\$2,166,759)</b>

**Financial Section**
**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION**

For the Year ended December 31, 2022, with Summarized Financial Information for 2021  
(Dollars in Thousands)

	State Division Trust Fund	School Division Trust Fund	Local Government Division Trust Fund	Judicial Division Trust Fund	Denver Public Schools Division Trust Fund	Total Defined Benefit Pension Plans
<b>Additions</b>						
<b>Contributions</b>						
Employers	\$704,797	\$1,201,265	\$108,748	\$12,318	\$74,199	\$2,101,327
Nonemployer	198,247	350,393	—	3,576	52,784	605,000
Members	360,523	642,202	71,339	7,844	92,164	1,174,072
Purchased service	35,699	57,469	9,420	978	3,960	107,526
<b>Total contributions</b>	<b>1,299,266</b>	<b>2,251,329</b>	<b>189,507</b>	<b>24,716</b>	<b>223,107</b>	<b>3,987,925</b>
<b>Investment income (loss)</b>						
Net appreciation (depreciation) in fair value of investments	(2,961,892)	(5,155,092)	(870,905)	(70,813)	(690,504)	(9,749,206)
Interest	92,210	160,935	27,027	2,212	21,547	303,931
Dividends	183,210	319,760	53,699	4,395	42,812	603,876
Real estate, private equity, and alternatives net operating income	89,793	156,716	26,318	2,153	20,983	295,963
Less investment expense	(63,740)	(111,246)	(18,682)	(1,529)	(14,895)	(210,092)
<b>Net income (loss) from investing activities</b>	<b>(2,660,419)</b>	<b>(4,628,927)</b>	<b>(782,543)</b>	<b>(63,582)</b>	<b>(620,057)</b>	<b>(8,755,528)</b>
Securities lending income	3,621	6,320	1,061	87	846	11,935
Less securities lending expense	(233)	(406)	(68)	(6)	(54)	(767)
<b>Net income from securities lending</b>	<b>3,388</b>	<b>5,914</b>	<b>993</b>	<b>81</b>	<b>792</b>	<b>11,168</b>
<b>Net investment income (loss)</b>	<b>(2,657,031)</b>	<b>(4,623,013)</b>	<b>(781,550)</b>	<b>(63,501)</b>	<b>(619,265)</b>	<b>(8,744,360)</b>
Other additions	171	5,545	73	4,525	875	11,189
<b>Total additions</b>	<b>(1,357,594)</b>	<b>(2,366,139)</b>	<b>(591,970)</b>	<b>(34,260)</b>	<b>(395,283)</b>	<b>(4,745,246)</b>
<b>Deductions</b>						
<b>Benefits</b>						
Benefits paid to retirees/cobeneficiaries	1,763,225	2,707,594	333,811	32,450	280,944	5,118,024
Benefits paid to survivors	14,842	16,073	2,910	265	1,613	35,703
Benefits paid on behalf of health care participants	—	—	—	—	—	—
<b>Total benefits</b>	<b>1,778,067</b>	<b>2,723,667</b>	<b>336,721</b>	<b>32,715</b>	<b>282,557</b>	<b>5,153,727</b>
Refunds and distributions	82,321	88,355	13,391	218	16,913	201,198
Disability and life insurance premiums	849	1,435	195	18	190	2,687
Administrative expenses	13,312	25,562	3,450	212	3,133	45,669
Other deductions	9,139	3,935	5,794	33	223	19,124
<b>Total deductions</b>	<b>1,883,688</b>	<b>2,842,954</b>	<b>359,551</b>	<b>33,196</b>	<b>303,016</b>	<b>5,422,405</b>
<b>Net increase (decrease) in fiduciary net position</b>	<b>(3,241,282)</b>	<b>(5,209,093)</b>	<b>(951,521)</b>	<b>(67,456)</b>	<b>(698,299)</b>	<b>(10,167,651)</b>
<b>Fiduciary net position restricted for pensions and other postemployment benefits, and private purpose trust fund participants</b>						
Beginning of year	19,985,566	34,654,724	5,844,117	477,126	4,633,727	65,595,260
<b>End of year</b>	<b>\$16,744,284</b>	<b>\$29,445,631</b>	<b>\$4,892,596</b>	<b>\$409,670</b>	<b>\$3,935,428</b>	<b>\$55,427,609</b>

The accompanying notes are an integral part of these financial statements.

## 8. What is the history of PERA's unfunded actuarial accrued liability?

Following is a summary of the reconciliation of PERA's unfunded actuarial accrued liability (UAAL) from 2001, the most recent period for which PERA was "100% funded", through 2022, the most recent funding actuarial valuation. The reconciliation identifies all actuarial gains and loss, by source (investment, retirement, mortality, contribution deficiencies/excess, etc.), as of each actuarial valuation date (December 31, of each year). The reconciliation also identifies other gains and losses resulting from non-recurring items, such as changes in plan provisions and changes in actuarial assumption and methods.

**RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**By Source for Years 2001 through 2022**  
*(Dollars in Millions)*

Type of Activity	(Gain) or Loss for Years Ended December 31					
	2001	2002	2003	2004	2005	2006
<b>UAAL beginning of year</b>	(\$1,459.7)	\$431.8	\$4,041.6	\$9,895.4	\$12,814.9	\$12,479.1
<b>Experience (gains) and losses</b>						
Age and service retirements	178.4	557.4	435.7	436.3	32.4	60.7
Disability retirements	(0.1)	3.1	19.7	0.7	5.8	(24.3)
Deaths	(11.5)	(5.9)	26.0	50.7	(130.7)	(0.3)
Withdrawal from employment	(0.6)	20.4	(18.1)	(13.0)	(104.1)	88.9
New members	41.0	68.6	110.7	66.3	129.1	136.2
Pay increases	495.5	182.7	(716.4)	(97.4)	332.1	(59.6)
Investment income	780.1	2,710.8	2,612.1	1,697.7	(89.4)	(682.7)
Administrative expense & other	(5.7)	323.9	753.1	23.0	(70.3)	(46.3)
<b>Experience (gain)/loss during year</b>	<b>1,477.1</b>	<b>3,861.0</b>	<b>3,222.8</b>	<b>2,164.3</b>	<b>104.9</b>	<b>(527.4)</b>
<b>Non-recurring items</b>						
Change in plan provisions	0.0	0.0	0.0	(275.6)	0.0	0.0
Change in plan assumptions and methods	572.6	0.0	981.3	0.0	(1,534.4)	0.0
Purchase of noncovered service	0.0	0.0	1,241.6	215.0	73.2	0.0
DPSRS UAAL transfer	0.0	0.0	0.0	0.0	0.0	0.0
<b>Non-recurring items</b>	<b>572.6</b>	<b>0.0</b>	<b>2,222.9</b>	<b>(60.6)</b>	<b>(1,461.2)</b>	<b>0.0</b>
<b>Contribution deficiency<sup>1,2</sup></b>	<b>0.0</b>	<b>0.0</b>	<b>246.6</b>	<b>473.2</b>	<b>576.8</b>	<b>380.6</b>
<b>Expected change in UAAL<sup>1</sup></b>	<b>(158.2)</b>	<b>(251.2)</b>	<b>161.5</b>	<b>342.6</b>	<b>443.7</b>	<b>471.3</b>
<b>Total (gain)/loss for year</b>	<b>1,891.5</b>	<b>3,609.8</b>	<b>5,853.8</b>	<b>2,919.5</b>	<b>(335.8)</b>	<b>324.5</b>
<b>UAAL end of year</b>	<b>\$431.8</b>	<b>\$4,041.6</b>	<b>\$9,895.4</b>	<b>\$12,814.9</b>	<b>\$12,479.1</b>	<b>\$12,803.6</b>

<sup>1</sup> The required amortization period was 40 years prior to 2006 and 30 years for 2006 forward.

<sup>2</sup> The determination of the contribution deficiency/(excess) values shown on this schedule considers interest at the assumed rate of investment return. These deficiency values differ from the information required to be shown under GASB 67, Required Supplementary Information, Schedule of Employer Contributions [paragraph 32(c)], which is determined with no adjustment for interest.

**RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**By Source for Years 2001 through 2022**  
*(Dollars in Millions)*

Type of Activity	(Gain) or Loss for Years Ended December 31					
	2007	2008	2009	2010 <sup>4</sup>	2011	2012
<b>UAAL beginning of year</b>	\$12,803.6	\$13,043.6	\$16,813.0	\$16,937.6	\$20,108.8	\$23,549.6
<b>Experience (gains) and losses</b>						
Age and service retirements	56.9	47.1	18.7	4.2	(1.7)	49.0
Disability retirements	(26.6)	(29.1)	(31.2)	(9.1)	(9.2)	(9.9)
Deaths	(9.4)	79.1	91.2	59.7	33.8	5.2
Withdrawal from employment	107.7	113.0	139.7	16.3	154.1	(44.1)
New members	113.5	100.6	105.5	139.7	147.1	160.0
Pay increases	221.3	147.9	(407.1)	(727.1)	(901.0)	(385.3)
Investment income	(833.3)	2,632.8	2,908.6	2,806.5	3,188.9	(1,062.4)
Administrative expense & other	(157.6)	97.1	368.6	(230.2)	(18.3)	68.6
<b>Experience (gain)/loss during year</b>	<b>(527.5)</b>	<b>3,188.5</b>	<b>3,194.0</b>	<b>2,060.0</b>	<b>2,593.7</b>	<b>(1,218.9)</b>
<b>Non-recurring items</b>						
Change in plan provisions	0.0	(131.4)	(8,873.2)	0.0	0.0	0.0
Change in plan assumptions and methods	0.0	0.0	4,827.5	0.0	0.0	(663.7)
Purchase of noncovered service	0.0	0.0	0.0	0.0	0.0	0.0
DPSRS UAAL transfer	0.0	0.0	0.0	386.8	0.0	0.0
<b>Non-recurring items</b>	<b>0.0</b>	<b>(131.4)</b>	<b>(4,045.7)</b>	<b>386.8</b>	<b>0.0</b>	<b>(663.7)</b>
<b>Contribution deficiency<sup>1,2</sup></b>	<b>461.2</b>	<b>377.1</b>	<b>468.5<sup>3</sup></b>	<b>469.1<sup>3</sup></b>	<b>125.8</b>	<b>157.3</b>
<b>Expected change in UAAL<sup>1</sup></b>	<b>306.3</b>	<b>335.2</b>	<b>507.8<sup>3</sup></b>	<b>255.3<sup>3</sup></b>	<b>721.3</b>	<b>886.9</b>
<b>Total (gain)/loss for year</b>	<b>240.0</b>	<b>3,769.4</b>	<b>124.6</b>	<b>3,171.2</b>	<b>3,440.8</b>	<b>(838.4)</b>
<b>UAAL end of year</b>	<b>\$13,043.6</b>	<b>\$16,813.0</b>	<b>\$16,937.6</b>	<b>\$20,108.8</b>	<b>\$23,549.6</b>	<b>\$22,711.2</b>

<sup>1</sup> The required amortization period was 40 years prior to 2006 and 30 years for 2006 forward.

<sup>2</sup> The determination of the contribution deficiency/(excess) values shown on this schedule considers interest at the assumed rate of investment return. These deficiency values differ from the information required to be shown under GASB 67, Required Supplementary Information, Schedule of Employer Contributions [paragraph 32(c)], which is determined with no adjustment for interest.

<sup>3</sup> Corrected values based on 2009 and 2010 Actuarial Valuation Reports.

<sup>4</sup> The DPS Division Trust Fund was established on January 1, 2010, and received the net assets of DPSRS.

**RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**By Source for Years 2001 through 2022**  
*(Dollars in Millions)*

Type of Activity	(Gain) or Loss for Years Ended December 31					
	2013	2014	2015	2016	2017	2018
<b>UAAL beginning of year</b>	\$22,711.2	\$25,798.0	\$25,874.6	\$26,824.9	\$32,241.8	\$28,777.1
<b>Experience (gains) and losses</b>						
Age and service retirements	32.7	180.4	132.1	139.0	211.4	177.5
Disability retirements	24.2	23.9	22.7	22.3	22.9	13.3
Deaths	70.4	67.1	68.5	79.9	(21.0)	118.0
Withdrawal from employment	122.4	204.1	172.7	205.9	251.2	(5.2)
New members	215.3	176.0	149.9	213.0	238.3	231.4
Pay increases	(230.2)	(52.6)	(64.4)	(275.0)	(214.3)	162.0
Investment income	(1,139.1)	(579.1)	(418.0)	236.3	(175.5)	580.4
Administrative expense & other	(11.4)	(52.0)	(35.7)	68.2	61.2	511.0 <sup>5</sup>
<b>Experience (gain)/loss during year</b>	(915.7)	(32.2)	27.8	689.6	374.2	1,788.4
<b>Non-recurring items</b>						
Change in plan provisions	0.0	0.0	0.0	0.0	(4,832.3)	(5.6)
Change in plan assumptions and methods	3,140.3	(636.9)	0.0	3,947.3	0.0	0.0
Purchase of noncovered service	0.0	0.0	0.0	0.0	0.0	0.0
DPSRS UAAL transfer	0.0	0.0	0.0	0.0	0.0	0.0
<b>Non-recurring items</b>	3,140.3	(636.9)	0.0	3,947.3	(4,832.3)	(5.6)
<b>Contribution deficiency<sup>1,2</sup></b>	301.7	55.3	380.9	249.6	195.2	450.0
<b>Expected change in UAAL<sup>1</sup></b>	560.5	690.4	541.6	530.4	798.2	(10.6)
<b>Total (gain)/loss for year</b>	<b>3,086.8</b>	<b>76.6</b>	<b>950.3</b>	<b>5,416.9</b>	<b>(3,464.7)</b>	<b>2,222.2</b>
<b>UAAL end of year</b>	<b>\$25,798.0</b>	<b>\$25,874.6</b>	<b>\$26,824.9</b>	<b>\$32,241.8</b>	<b>\$28,777.1</b>	<b>\$30,999.3</b>

<sup>1</sup> The required amortization period was 40 years prior to 2006 and 30 years for 2006 forward.

<sup>2</sup> The determination of the contribution deficiency/(excess) values shown on this schedule considers interest at the assumed rate of investment return. These deficiency values differ from the information required to be shown under GASB 67, Required Supplementary Information, Schedule of Employer Contributions [ paragraph 32(c)], which is determined with no adjustment for interest.

<sup>3</sup> Corrected values based on 2009 and 2010 Actuarial Valuation Reports.

<sup>4</sup> The DPS Division Trust Fund was established on January 1, 2010, and received the net assets of DPSRS.

<sup>5</sup> Predominantly attributable to the change in actuarial service provider and valuation software.

**RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**By Source for Years 2001 through 2022**  
*(Dollars in Millions)*

Type of Activity	(Gain) or Loss for Years Ended December 31				Total 2001-2022
	2019	2020	2021	2022	
<b>UAAL beginning of year</b>	\$30,999.3	\$29,809.8	\$30,976.6	\$27,195.9	(\$1,459.7)
<b>Experience (gains) and losses</b>					
Age and service retirements	95.4	91.0	44.9	56.6	3,036.1
Disability retirements	9.5	4.2	6.6	5.6	45.0
Deaths	4.7	(164.3)	(159.4)	(256.6)	(4.8)
Withdrawal from employment	150.1	296.5	114.1	(74.2)	1,897.8
New members	213.4	176.5	266.2	400.1	3,598.4
Pay increases	391.6	(24.8)	207.2	454.4	(1,560.5)
Investment income	(1,176.7)	(2,754.3)	(3,033.7)	(1,139.3)	7,070.7
Administrative expense & other	47.5	(78.7)	47.7	197.0 <sup>6,7</sup>	1,860.7
<b>Experience (gain)/loss during year</b>	(264.5)	(2,453.9)	(2,506.4)	(356.4)	15,943.4
<b>Non-recurring items</b>					
Change in plan provisions	(1,494.3)	0.0	(1,579.0)	0.0	(17,191.4)
Change in plan assumptions and methods	0.0	3,107.9	0.0	0.0	13,741.9
Purchase of noncovered service	0.0	0.0	0.0	0.0	1,529.8
DPSRS UAAL transfer	0.0	0.0	0.0	0.0	386.8
<b>Non-recurring items</b>	(1,494.3)	3,107.9	(1,579.0)	0.0	(1,532.9)
<b>Contribution deficiency/(excess)<sup>1,2</sup></b>	132.9	280.2	(216.6)	(417.4)	5,148.0
<b>Expected change in UAAL<sup>1</sup></b>	436.4	232.6	521.3	(155.7)	8,167.6
<b>Total (gain)/loss for year</b>	<b>(1,189.5)</b>	<b>1,166.8</b>	<b>(3,780.7)</b>	<b>(929.5)</b>	<b>27,726.1</b>
<b>UAAL end of year</b>	<b>\$29,809.8</b>	<b>\$30,976.6</b>	<b>\$27,195.9</b>	<b>\$26,266.4</b>	<b>\$26,266.4</b>

<sup>1</sup> The required amortization period was 40 years prior to 2006 and 30 years for 2006 forward.

<sup>2</sup> The determination of the contribution deficiency/(excess) values shown on this schedule considers interest at the assumed rate of investment return. These deficiency values differ from the information required to be shown under GASB 67, Required Supplementary Information, Schedule of Employer Contributions [ paragraph 32(c)], which is determined with no adjustment for interest.

<sup>3</sup> Corrected values based on 2009 and 2010 Actuarial Valuation Reports.

<sup>4</sup> The DPS Division Trust Fund was established on January 1, 2010, and received the net assets of DPSRS.

<sup>5</sup> Predominantly attributable to the change in actuarial service provider and valuation software.

<sup>6</sup> Includes recognition of change in default service accrual method for certain members.

<sup>7</sup> Includes recognition of revised programming in response to 2022 actuarial audit.