

**COLORADO PUBLIC EMPLOYEES'
RETIREMENT ASSOCIATION**

FINANCIAL AUDIT

YEAR ENDED DECEMBER 31, 2017

LEGISLATIVE AUDIT COMMITTEE

Senator Tim Neville – Chair

Senator Nancy Todd - Vice-Chair

Senator Rhonda Fields
Representative Tracy Kraft-Tharp
Representative Timothy Leonard

Representative Lori Saine
Senator Jim Smallwood
Representative Faith Winter

OFFICE OF THE STATE AUDITOR

Dianne E. Ray

State Auditor

Kerri Hunter

Deputy State Auditor

CliftonLarsonAllen LLP

Contractor

AN ELECTRONIC VERSION OF THIS REPORT IS AVAILABLE AT
WWW.STATE.CO.US/AUDITOR

A BOUND REPORT MAY BE OBTAINED BY CALLING THE
OFFICE OF THE STATE AUDITOR **303.869.2800**

PLEASE REFER TO REPORT NUMBER 1713F WHEN REQUESTING THIS REPORT

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

Table of Contents

	Page(s)
Report Summary	1
Recommendation Locator	2
Financial Audit Report Section:	
Description of the Colorado Public Employees' Retirement Association	3
Findings and Recommendations	4-6
Independent Auditors' Report	7-9
Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	10-11
Required Communications to Legislative Audit Committee	12-15
Comprehensive Annual Financial Report for the year ended December 31, 2017	Under Separate Cover

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

Financial Audit

Report Summary

Year ended December 31, 2017

Purpose and Scope

The Office of the State Auditor engaged CliftonLarsonAllen LLP (CLA) to conduct a financial and compliance audit of the Colorado Public Employees' Retirement Association (Colorado PERA) for the year ended December 31, 2017. CLA performed this audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. We conducted the related fieldwork from December 2017 to June 2018.

The purposes and scope of our audit was to:

- Express an opinion on the basic financial statements of Colorado PERA as of and for the year ended December 31, 2017. This includes a consideration of internal control as required by auditing standards generally accepted in the United States of America and *Government Auditing Standards*.
- Evaluate Colorado PERA's compliance and report on internal control over financial reporting based on our audit of the basic financial statements performed in accordance with *Government Auditing Standards*.
- Evaluate progress in implementing prior audit findings and recommendations.

Audit Opinion and Reports

We expressed an unmodified opinion on Colorado PERA's basic financial statements as of and for the year ended December 31, 2017.

There were no audit adjustments proposed and made to the financial statements.

We issued a report on Colorado PERA's internal control over financial reporting and on compliance and other matters based on an audit of basic financial statements performed in accordance with *Government Auditing Standards*. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control that might be material weaknesses. A deficiency in internal control exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. We noted no instances involving the internal control over financial reporting and its operation that we consider to be a material weakness.

Summary of Key Findings

During our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a certain deficiency in internal control that we consider to be a significant deficiency, which is described in the accompanying schedule of findings and recommendations as item 2017-001.

Summary of Progress in Implementing Prior Year Audit Recommendations

There were no outstanding prior year audit recommendations as of our 2017 audit.

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

Financial Audit

Recommendation Locator

Year ended December 31, 2017

Rec. No.	Page. No.	Recommendation Summary	PERA Response	Implementation Date
2017-001	7	<p>The Colorado Public Employees Retirement Association (PERA) should strengthen its internal controls over financial reporting by:</p> <p>a) Developing written policies and procedures requiring staff to annually complete a robust review of actuarial firm-provided information and assumptions. This should include required procedures to confirm assumptions used by the actuary match those approved by the board of trustees and to verify the calculation of key assumptions back to original, validated source documentation.</p> <p>b) Establishing and implementing internal analytical procedures designed to identify indicators of actuarial calculation errors or disclosures.</p> <p>c) Assigning PERA's Internal Audit Department responsibility for reviewing PERA's financial reporting controls. This should include implementing a process for Internal Audit Department staff to review and assist in the documentation and validation of the enhanced financial reporting procedures established as a result of this recommendation.</p>	<p>Agree</p> <p>Agree</p> <p>Agree</p>	<p>May 31, 2019</p> <p>May 31, 2019</p> <p>May 31, 2019</p>

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

Financial Audit

Description of the Colorado Public Employees' Retirement Association

Year Ended December 31, 2017

Organization

Colorado PERA was established in 1931. Colorado PERA administers cost-sharing multiple-employer defined benefit plans for the State Division Trust Fund, School Division Trust Fund, Local Government Division Trust Fund, and Judicial Division Trust Fund, and a single-employer defined benefit plan for the Denver Public Schools Trust Fund (Division Trust Funds). Colorado PERA also administers cost-sharing multiple-employer defined benefit other postemployment benefit plans (Health Care Trust Fund and Denver Public Schools Health Care Trust Fund), a multiple-employer private purpose trust fund (Life Insurance Reserve), two multiple-employer defined contribution plans and one single-employer defined contribution plan. The purpose of the Division Trust Funds is to provide benefits to members at retirement or disability, or to their beneficiaries in the event of death. Members of Colorado PERA are employed by public employers located in the State of Colorado and affiliated with Colorado PERA.

Responsibility for the organization and administration of the Division Trust Funds, Health Care Trust Funds, the Life Insurance Reserve, and the defined contribution plans is placed with the Board of Trustees of Colorado PERA.

The number of active affiliated employers for the five Division Trust Funds as of December 31, 2017 is listed below. The School and Denver Public Schools Divisions' employer counts include charter schools operating within the respective public school districts and under the Colorado Charter School Institute.

State	32
School	234
Local government	140
Judicial	2
Denver Public Schools	1
Total employers	<u>409</u>

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

Financial Audit

Findings and Recommendations

Year ended December 31, 2017

2017-001 Accuracy of Actuarial Calculations (Significant Deficiency)

Background: Among the several important items/inputs needed for the calculation of PERA's pension liability is the discount rate, or Single Equivalent Interest Rate (SEIR), as described by GASB 67. To determine the SEIR, the Fiduciary Net Position (FNP) must be projected, using GASB 67 guidelines, into the future for as long as there are anticipated benefits payable under the Plans' provisions applicable to the members and beneficiaries of PERA on the measurement date. If the FNP is not projected to be depleted at any point in the future, the long-term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted at a future measurement date, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long-term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax exempt municipal bond rate (rating AA/Aa or higher) rate. The rate used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate published monthly.

Condition: During the performance of our audit procedures over the actuarial valuations provided by PERA's contracted actuarial firm to support certain footnote disclosures in the financial statements, we identified the following errors:

- An error in the calculation of the discount rate or Single Equivalent Interest Rate (SEIR) of the School Division Trust Fund, which required a correction in the calculation to decrease the SEIR from 4.89% to 4.78%.
- An error in the calculation of the discount rate or SEIR of the State Division Trust Fund, which required a correction in the calculation to decrease the SEIR from 4.82% to 4.72%.
- An error in the calculation of the discount rate or SEIR of the Judicial Division Trust Fund, which required a correction in the calculation to decrease the SEIR from 5.49% to 5.41%.
- An error in the calculation of the allocation of the discount rate impact due to experience change versus assumption change of the Judicial Division Trust Fund, which required the following corrections to the deferred inflow and deferred outflow components of pension expense:
 - Decrease of deferred outflow of the differences between expected and actual experience at the end of the year of \$18,717,000.
 - Decrease of deferred inflow of the changes of assumptions or other inputs of \$18,717,000.

Criteria: Management is responsible for the preparation and fair presentation of financial statements according to *Government Auditing Standards* 3.46. The financial statements of a cost-sharing pension plan include the plan's total pension liability and resulting employers' net pension liability at the measurement date. Internal control should be based on a systematic and risk-oriented approach, to ensure that there are adequate individual controls in areas with high risk. While it is common practice to rely on specialists such as actuaries for relevant financial reporting, it is management's responsibility to ensure the financial statements are free from material error by reviewing the key inputs, as well as the form and content of actuarial reports.

Additionally, the function of internal audit within an organization includes a periodic review of the design and operation of controls. Internal auditors also are expected to recommend changes where desired results are not obtained.

Cause: PERA's review process over its actuarial firm's provided actuarial valuations failed to identify calculation errors resulting from the actuarial firm's improper use of secondary source data to calculate the SEIR for the funds impacted. Specifically, PERA's review process did not include a requirement to obtain independent source data to validate the actuarial firm's assumptions and did not include required steps to verify that the actuarial firm had access to and was utilizing the appropriate original source data. In addition, PERA's internal review process over the actuarial firm's calculations lacked analytical comparisons which may have identified the erroneously calculated deferred inflows and deferred outflows.

In addition to an existing review control and process regarding actuarial valuations and the assumptions related thereto, we have considered ways to further reduce the risk of material inaccuracies within this complex area. PERA currently does not utilize its internal audit function for routine review of financial reporting controls.

Effect: Colorado PERA requested the actuary perform revised valuations and update the financial reporting for the resulting changes listed as follows:

- A revised accounting valuation for the School Division Trust Fund was performed by Colorado PERA's actuaries resulting in a total pension liability increase of \$844.3 million, an increase of 1.5%.
- A revised accounting valuation for the State Division Trust Fund was performed by Colorado PERA's actuaries resulting in a total pension liability increase of \$442.2 million, an increase of 1.3%.
- A revised accounting valuation for the Judicial Division Trust Fund was performed by Colorado PERA's actuaries resulting in a total pension liability increase of \$4.9 million, an increase of 0.9%.
- A revised calculation of deferred inflows and deferred outflows for the Judicial Division Trust Fund was performed by Colorado PERA's actuaries resulting in a reallocation of \$18,717,000 within the deferred inflows and deferred outflows.
- Without sufficient monitoring to identify and correct weaknesses in internal control, PERA cannot ensure that it identifies and corrects errors that could result in significant misstatements to the financial statements.

Auditors' Recommendation: The Colorado Public Employees Retirement Association (PERA) should strengthen its internal controls over financial reporting by:

- a) Developing written policies and procedures requiring staff to annually complete a robust review of actuarial firm-provided information and assumptions. This should include required procedures to confirm assumptions used by the actuary match those approved by the board of trustees and to verify the calculation of key assumptions back to original, validated source documentation.
- b) Establishing and implementing internal analytical procedures designed to identify indicators of actuarial calculation errors or disclosures.
- c) Assigning PERA's Internal Audit Department responsibility for reviewing PERA's financial reporting controls. This should include implementing a process for Internal Audit Department staff to review and assist in the documentation and validation of the enhanced financial reporting procedures established as a result of this recommendation.

Management's Response:

Management 'Agrees' with the above recommendation and plans to fully implement said recommendation no later than May 31, 2019. A formal response to the recommendation(s) is as follows:

- (a) Management is documenting the robust procedures currently being performed in the review of the actuarial reports issued for financial reporting. As part of these existing procedures, PERA staff responsible for the review of the actuarial reports currently reviews whether the assumptions stated by the actuarial reports match the assumptions approved by the PERA Board of Trustees. In direct response to the errors noted above, management has enhanced the existing procedure from a "review and reasonability check" to a "review and verify" of the calculation of the Single Equivalent Interest Rate (SEIR), including verification of the applied 20-year Municipal Bond Index Rate back to the original source data.
- (b) Management has undertaken a review of the current procedures in place for the review of the actuarial reports and will implement additional procedures as necessary to further assist in the identification of actuarial calculation errors or disclosures.
- (c) PERA Internal Audit Department's annual plan is approved by the Audit Committee of the PERA Board. The process of developing the annual audit plan is designed to identify auditable processes based on inherent risk. Inherent risk is the risk that exists before controls are implemented to mitigate or manage the risk. This process focuses the Internal Audit Department's resources on auditable processes of higher inherent risk and/or criticality to PERA. As a result of this process, PERA's internal controls are audited on a periodic basis. Management has undertaken a review of PERA's controls over financial reporting and will include the Internal Audit Department in the process of identifying areas where PERA's controls should be enhanced to reasonably ensure accuracy in PERA's financial reporting.

INDEPENDENT AUDITORS' REPORT

Legislative Audit Committee and The Board of Trustees of
Colorado Public Employees' Retirement Association
Denver, Colorado

Report on the Financial Statements

We have audited the accompanying financial statements of Colorado Public Employees' Retirement Association (Colorado PERA), as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise Colorado PERA's basic financial statements, as listed in the table of contents. We have also audited the financial statements of each individual fund of Colorado PERA as of and for the year ended December 31, 2017 as displayed in Colorado PERA's basic financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of Colorado PERA as of December 31, 2017, and the respective changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statements referred to previously present fairly, in all material respects, the respective fiduciary net position of each individual fund of Colorado PERA as of December 31, 2017, and the respective changes in fiduciary net position thereof for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Report on Summarized Comparative Information

We have previously audited Colorado PERA's 2016 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated June 23, 2017. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2016, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the division trust funds' schedules of changes in net pension liability, net pension liability, employer contributions, and investment returns and related notes, and the health care trust funds' schedules of changes in net OPEB liability, net OPEB liability, employer contributions, and investment returns and related notes, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary and Other Information

Our audit was conducted for the purpose of forming an opinion on Colorado PERA's basic financial statements. The schedules of administrative expenses, other additions, other deductions, investment expenses and payments to consultants (supplementary information) and the introductory, investment, actuarial and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated June 22, 2018 on our consideration of Colorado PERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of PERA's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Colorado PERA's internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Denver, Colorado
June 22, 2018

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

Legislative Audit Committee and The Board of Trustees of
Colorado Public Employees' Retirement Association
Denver, Colorado

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Colorado Public Employees' Retirement Association (Colorado PERA), as of and for the year ended December 31, 2017 and the related notes to the financial statements, which collectively comprise Colorado PERA's basic financial statements, and have issued our report thereon dated June 22, 2018.

We have also audited the financial statements of each individual fund of Colorado PERA as of and for the year ended December 31, 2017 as displayed in Colorado PERA's basic financial statements, and have issued our report thereon dated June 22, 2018.

Internal Control Over Financial Reporting

In planning and performing our audits of the financial statements, we considered Colorado PERA's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Colorado PERA's internal control. Accordingly, we do not express an opinion on the effectiveness of Colorado PERA's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of Colorado PERA's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a certain deficiency in internal control that we consider to be a significant deficiency, that is described in the accompanying schedule of findings and responses as item 2017-001.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Colorado PERA's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Colorado PERA's Response to Findings

Colorado PERA's response to the finding identified in our audit is described in the accompanying schedule of findings and responses. Colorado PERA's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of Colorado PERA's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Colorado PERA's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



CliftonLarsonAllen LLP

Denver, Colorado
June 22, 2018

Legislative Audit Committee and The Board of Trustees of
Colorado Public Employees' Retirement Association
Denver, Colorado

We have audited the basic financial statements of the Colorado Public Employees' Retirement Association (Colorado PERA) and each individual fund of Colorado PERA as of and for the year ended December 31, 2017, and have issued our report thereon dated June 22, 2018. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Significant audit findings

Qualitative aspects of accounting practices

Accounting policies

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Colorado PERA are described in Note 2 to the basic financial statements.

Colorado PERA implemented the provisions of GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans other than Pension Plans* for the year ended December 31, 2017. The statement establishes standards of financial reporting for separately issued financial reports and specifies the required approach to measuring the other post-employment benefits (OPEB) liability of employers and non-employer contributing entities for benefits provided through the OPEB plan (net OPEB liability). GASB 74 requires expanded note disclosures.

We noted no transactions entered into by Colorado PERA during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. These estimates relate to the valuation of investments in private markets, including real estate, hedge funds and private equity investments; the total pension liability; and the funding progress for other post-employment benefits. Management relied on the use of outside specialists to help derive these estimates.

The actuarial valuations were based on the actuarial assumptions and methods adopted by the Board. In accordance with GASB 67, the total pension liability of the State, School, Local Government, Judicial and Denver Public Schools Divisions was based upon the December 31, 2016 actuarial valuations. An expected total pension liability for each respective fund was determined as of December 31, 2017 using standard roll-forward techniques. In accordance with GASB 74, the total OPEB liability of the Health Care Trust Fund and Denver Public Schools Health Care Trust Fund was based upon the December 31, 2016 actuarial valuations. An expected total OPEB liability for each respective fund was determined as of December 31, 2017 using standard roll-forward techniques. We evaluated the key factors and assumptions used to develop these estimates in determining that the estimates are reasonable in relation to the financial statements taken as a whole.

Financial statement disclosures

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There were no particularly sensitive financial statement disclosures.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties encountered in performing the audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Uncorrected misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

Corrected misstatements

The following material misstatements detected as a result of audit procedures were corrected by management:

- An error in the calculation of the discount rate or Single Equivalent Interest Rate (SEIR) of the School Division Trust Fund was identified requiring a SEIR decrease from 4.89% to 4.78%. A revised accounting valuation was performed by Colorado PERA's actuaries resulting in a total pension liability increase of \$844.3 million, an increase of 1.5%.
- An error in the calculation of the discount rate or SEIR of the State Division Trust Fund was identified requiring a SEIR decrease from 4.82% to 4.72%. A revised accounting valuation was performed by Colorado PERA's actuaries resulting in a total pension liability increase of \$442.2 million, an increase of 1.3%.
- An error in the calculation of the discount rate or SEIR of the Judicial Division Trust Fund was identified requiring a SEIR decrease from 5.49% to 5.41%. Additionally, another error was identified in the allocation of the discount rate impact due to experience change versus assumption change. A revised accounting valuation was performed by Colorado PERA's actuaries resulting in a total pension liability increase of \$4.9 million, an increase of 0.9%.

Disagreements with management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

Management representations

We have requested certain representations from management that are included in the attached management representation letter dated June 22, 2018.

Management consultations with other independent accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Significant issues discussed with management prior to engagement

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to engagement as Colorado PERA's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

Other information in documents containing audited financial statements

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

With respect to the schedules of administrative expenses, other additions, other deductions, investment expenses, payments to consultants and related notes (collectively, the supplementary information) accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period or the reasons for such changes, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the additional information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated June 22, 2018.

Legislative Audit Committee and The Board of Trustees of
Colorado Public Employees' Retirement Association

The introductory, investment, actuarial and statistical sections (collectively, the other information) accompanying the financial statements, which is the responsibility of management, was prepared for purposes of additional analysis and is not a required part of the financial statements. Such information was not subjected to the auditing procedures applied in the audit of the financial statements, and, accordingly, we did not express an opinion or provide any assurance on it.

Our auditors' opinion, the audited financial statements, and the notes to financial statements should only be used in their entirety. Inclusion of the audited financial statements in a document you prepare, such as an annual report, should be done only with our prior approval and review of the document.

* * *

This communication is intended solely for the information and use of the Legislative Audit Committee, the Board of Trustees, and management of the Colorado PERA and is not intended to be, and should not be, used by anyone other than these specified parties. However, upon release by the Legislative Audit committee, this report is a public document.



CliftonLarsonAllen LLP

Denver, Colorado
June 22, 2018