COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

LEGISLATIVE AUDIT COMMITTEE REPORT
Year Ended December 31, 2004

With Reports of Independent Auditors

Clifton
Gunderson LLP
Certified Public Accountants & Consultants

To the Board of Trustees of
Colorado Public Employees' Retirement Association

We have completed our audits of the financial statements of the Colorado Public Employees' Retirement Association ("PERA") for the year ended December 31, 2004, and have issued an unqualified opinion thereon dated May 23, 2004. Our audits were conducted in accordance with auditing standards generally accepted in the United Sates of America.

We were engaged to conduct our audits pursuant to Section 24-51-204(6) of the Colorado Revised Statutes, which authorizes the State Auditor to conduct or cause to conduct audits of PERA. The accompanying Table of Contents sets forth the recommendations we have issued as part of our audits. Our audit opinion is located in the Comprehensive Annual Financial Report available from PERA.

Clifton Gunderson LLP

Denver, Colorado
May 23, 2005

LEGISLATIVE AUDIT COMMITTEE
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SECTION 1
AUDIT REPORT SUMMARY

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION AUDIT REPORT SUMMARY December 31, 2004

Audits of PERA Benefit Plans for the Year Ended December 31, 2004

Our audits of the December 31, 2004, financial statements of PERA are complete and we issued our unqualified report thereon dated May 23, 2005. There are no matters which we believe require the Audit Committee's specific attention.

- The financial statements of PERA have been prepared in conformity with accounting principles generally accepted in the United States of America and the applicable requirements of the Governmental Accounting Standards Board.

- The scope of our audits was reported to the PERA Audit Committee. There were no significant variations from the planned scope.

As part of our audits of the financial statements of PERA, we considered its internal control in order to determine our auditing procedures for the purpose of expressing an opinion on the financial statements and not to provide assurance on internal control. Based on the results of our work, our review of PERA's internal control has not disclosed any weaknesses which we believe to be material weaknesses under standards established by the American Institute of Certified Public Accountants. Refer to the Report of Independent Auditors on page 5-1. In addition, we examined PERA's compliance over financial reporting with certain provisions as included in Colorado Revised Statues and PERA Rules. Based on the results of our work, PERA complied, in all material respects, with the attestation standards established by the American Institute of Certified Public Accountants for the year ended December 31, 2004. Refer to the Report of Independent Auditors on page 5-1.

Cooperation with Management

We are pleased to inform you that we received full cooperation of the officers and employees of PERA, and we were furnished with all of the information and explanations required to perform our audits.

Communications with Audit Committee

Our responsibility for assuring that the Audit Committee is made aware of significant matters, as required by our professional standards, is outlined in Exhibit I.

Independence

We reiterate our firm's policy on independence, which stipulates that neither Clifton Gunderson LLP partners nor staff assigned to the audits of PERA are permitted to have any direct or material indirect interest in PERA. Adherence to the policy of independence is reaffirmed annually in writing by each member of our professional staff.

To the best of our knowledge, there are no circumstances or relationships between PERA and Clifton Gunderson LLP that would impair our independence in reporting on the PERA's financial statements. We hereby confirm that as of May 23, 2005, we are independent accountants with respect to PERA.

Clifton Gunderson LLP

Denver, Colorado
May 23, 2005

SECTION 2
RECOMMENDATION SUMMARY

Rec. No.	Page No.	Recommendation	PERA Response	Implementation Date
1	3-2	Employee Criminal Background Checks	Agree	To the Board in Fall 2005
2	3-4	Alternative Investments	Agree	September 2005
3	3-6	Purchase Order System	Agree	December 2005
4	3-7	Amortization Liabilities	Agree	Ongoing
5	3-10	Windows and AS/400 Passwords	Agree	April 2005
6	3-11	Program Developer Segregation of Duties	Agree	February 2005
7	3-13	Review of User Accounts and Access	Agree	May 2005
8	3-15	Date of Birth Edit Controls	Agree	April 2005
9	3-16	Employer Contribution System Edits	Agree	Decision on Request for Change by October 2005
10	3-18	Information Security Policies	Agree	June 2005

SECTION 3
CURRENT YEAR FINDINGS AND RECOMMENDATIONS

We have audited the financial statements of Colorado Public Employees' Retirement Association ("PERA") for the year ended December 31, 2004 and have issued our report thereon dated May 23, 2005. In planning and performing our audits of the financial statements, we considered PERA's internal control solely to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide assurance on internal control. We have not considered internal control or compliance over financial reporting since May 23, 2005.

Our procedures were designed primarily to enable us to form an opinion on the financial statements, and therefore may not bring to light all weaknesses in policies or procedures that may exist.

Recommendations noted in connection with the December 31, 2004 audit are detailed in the following pages.

RECOMMENDATION NO. 1
EMPLOYEE CRIMINAL BACKGROUND CHECKS

PERA, an affiliated employer that administers the net assets of the Plan, has approximately 230 employees. The Plan's net assets at December 31, 2004 were approximately $34 billion with Plan members in excess of 360,000.

Issue:
PERA processes a variety of transactions that require employee access to sensitive financial information, not only related to the entity but also to the plan members. PERA employees are privy to participant information such as birth date and social security numbers. In addition, PERA members may provide financial information, such as bank account numbers, necessary for the direct deposit of benefit payments.

Section 24-5-101(1) C.R.S., states that the fact that a person has been convicted of a felony or other offense involving moral turpitude shall not, in and of itself, prevent the person from obtaining public employment. However, statutes do not prohibit public employers from conducting background checks and using this information as one factor to be considered when making employment decisions, such as when the felony conviction is related to the position under consideration for hire. For example, an applicant's prior felony conviction for identity theft would be important for a prospective employer that handles sensitive financial information to be aware of and consider when making employment decisions.

Currently, PERA does not require criminal background checks for employees. PERA evaluates potential employees using procedures such as interviews focused on evaluating an applicant's honesty and judgment, checking references, scrutinizing prior employment terminations, investigating breaks in employment, and validating education. PERA staff believe that the hiring process includes an adequate and prudent evaluation of employment data without exposing the organization to potential legal risks that could be encountered due to the existing statutory language as a result of using criminal background checks. PERA has conducted criminal background checks on those employees associated with property management after the employment relationship was established since these personnel have access to tenant premises throughout the buildings. In addition, the applicable lease agreements with third-party tenants may also dictate certain restrictions on premises access or impose different liability risks with regard to tenant assets and systems.

Other state employers have developed procedures for using criminal background checks during the hiring process to obtain information while adhering to the provisions of Section 24-5-101(1), C.R.S. If such checks are used, adequate safeguards should be in place to ensure that confidential information is handled appropriately by the employer and restricted only to specific personnel. Given the nature of the entity, it is critical that PERA consider all relevant information when making hiring decisions.

Risk and Implication:
PERA or member financial information could be used improperly or fraudulently.

Recommendation:
PERA should require criminal background checks for employees with access to financial, demographic, or other sensitive information. The necessity and depth of the background check should be based on the employee's position within the organization, and adequate safeguards should be in place with respect to handling information obtained. If PERA believes that state statutes do not allow it to use criminal background checks, it should seek statutory change.

PERA's Response:
Agree. PERA agrees that it would be beneficial to obtain criminal histories on potential employees at the time of hire. However, the associated risk of having the information in light of the clear language of C.R.S. 24-5-101 outweighs the potential benefits. PERA believes that under the current statutory language, the risk is best managed, with regard to internal employees, through the procedures currently in place. It should be noted that in addition to the procedures outlined, PERA also obtains driving records of all persons authorized to operate PERA motor vehicles on an annual basis. Further, the employment application required from every applicant for employment requires an affirmative representation as to whether he or she has any felony convictions which can form the basis for termination of employment if not answered honestly.

Unquestionably, "an applicant's prior felony conviction for identity theft would be important for a prospective employer that handles sensitive financial information to be aware of and consider when making an employment decision." However, the statutory language prohibits PERA from considering that type of information under circumstances where the applicant is otherwise qualified to be hired. Review of the legislative history of this statute reveals that in an earlier version, language was included that would allow consideration of an applicant's criminal history where it related to the particular position in question and that language was deleted by the legislature in favor of the narrow exceptions itemized in the current version. In considering this recommendation, the question arises regarding how PERA would prepare a policy for the official use of these criminal histories that does not evidence a violation of C.R.S. 24-5-101. To be of any use, the policy would have to identify certain types of convictions that either disqualify the applicant (which violates the statute) or it would have to provide a process whereby an applicant found to have a criminal history would be scrutinized differently than other applicants for the purpose of finding some other pretence on which to base a decision not to hire (likely an actionable violation of the statute). PERA believes that a statutory change would be required to alleviate the associated risk presented by this issue and will present the matter to the Board to develop a legislative position this fall.

Auditor Addendum:
PERA is the largest public financial institution in the State with net assets of about $34 billion. It has a responsibility to utilize all available means to protect confidential information under its control. Many state agencies routinely conduct criminal background checks during the hiring process in a manner that does not violate Section 24-5-101(1), C.R.S. If PERA believes it cannot implement this critical safeguard under current State law, seeking statutory change should be a top priority.

RECOMMENDATION NO. 2
ALTERNATIVE INVESTMENTS

PERA invests in several types of alternative investments including venture capital funds and leveraged buyouts representing in excess of 150 investments. At December 31, 2004, PERA reported total alternative investments of approximately $3.3 billion or 10 percent of total net assets of approximately $34 billion.

Issue:
PERA requires annual December 31 audited financial statements from the investment advisor for each alternative investment prior to March 31 each year. As a result of the 2003 audit recommendations, PERA formalized certain procedures for obtaining financial information from investment advisors for alternative investment vehicles where no audited financial information was provided.

The 2004 audit found that approximately 80 percent of the alternative investments representing 51 investments valued at approximately $2.7 billion that were tested for compliance were not supported by audited financial statements. In these cases, the investment advisor provides certain unaudited information representing an estimate of the value of the Plan's investment prior to the March 31 reporting requirement. PERA's investment staff then reviews the valuation for reasonableness. Because of the high proportion of alternative investment vehicles that lack audited financial information and the potential volatility of these investments, PERA should continue to work with investment advisors to improve compliance with the March 31 reporting requirement, and ensure that the Board of Trustees is informed of differences between estimated and audited valuations.

Risk and Implication:
The valuation of a significant number of the alternative investments is based on unaudited information. Since the financial information underlying the valuation has not been subjected to an independent objective evaluation by external auditors, the valuation may be less accurate than one based on audited information.

Recommendation:
PERA should continue to identify those alternative investments that do not comply with PERA's required reporting policies to provide audited information by March 31 and notify investment advisors of the need to comply with these requirements. PERA should also continue to document and analyze the differences between estimated and audited valuations in cases where audited information was not received in time for inclusion in PERA's audited financial statements, and provide such information to the Board of Trustees.

PERA's Response:
Agree. PERA agrees with this recommendation and will continue to document and analyze the differences between estimated and audited valuations and notify advisors in September 2005 of the need for compliance with the stated reporting deadline.

This issue, although problematic, is an industry-wide phenomenon. All participants in these partnerships including other pension funds, endowments, foundations, and family offices experience the same reporting lag of their investment interests. PERA is working closely with trade associations to collaborate and develop best practices in the industry. Reporting timeliness and transparency are certainly areas that industry trade organizations look to influence and improve. While progress is being made, it will take time for the entire industry to meet and comply with these year-end deadlines due to technical logistics associated with the asset class.

RECOMMENDATION NO. 3
PURCHASE ORDER SYSTEM

During the year ended December 31, 2004, PERA incurred approximately $4.7 million in office supplies, printing, travel and other miscellaneous expenses.

Issue:
PERA does not obtain quotes or bids for purchases over a specific threshold or dollar amount and has not implemented a formal purchase order system. While these purchases only represent approximately 15 percent of PERA's total administrative expenses of $31.3 million in 2004, PERA has a responsibility to ensure that all administrative expenses are reasonable. In addition, a formal purchase order system would allow PERA to establish improved and standardized documentation related to the purchasing process. For example, State Fiscal Rules require that state agencies and institutions have a purchase order to obtain goods and services over $5,000, except for specific exclusions.

PERA's current accounting software system has a purchase order module that could be implemented to achieve this objective. PERA should also develop formal policies and procedures for obtaining sufficient documentation for all purchases including copies of receipts or other relevant documentation that should be attached to a completed purchase order.

Risk and Implication:
There is a risk that purchases may not be made for the optimum price or may not include sufficient supporting documentation or approvals indicating that quotes or bids were obtained. Since PERA does not obtain quotes or bids for purchases over specified limits, the organization may be spending funds unnecessarily.

Recommendation:
PERA should implement a formal purchase order system and develop policies and procedures related to purchasing, such as establishing thresholds over which formal quotes or bids need to be obtained and approved prior to purchase and the documentation that should be maintained.

PERA's Response:
Agree. PERA agrees with this recommendation and is currently evaluating its existing purchase order system and accompanying policies and procedures. This evaluation will include upgrading the system by using the existing financial management software. The evaluation will be completed by September 30 and any recommended changes to policies and procedures will be accomplished in the fourth quarter of 2005.

RECOMMENDATION NO. 4
AMORTIZATION OF LIABILITIES

Issue:
As part of the preparation of its annual financial statements, PERA is required to estimate the unfunded liability for each of the three divisions that participate in the defined benefit plan offered to state employees. The total estimated unfunded liability as of December 31 is as follows:

	(In thousands) 2004	2003
State and School Division	$ 12,188,832	$ 9,392,280
Municipal Division	$ 586,336	$ 471,443
Judicial Division	$ 39,843	$ 31,723
Combined Unfunded Liability	$ 12,815,011	$ 9,895,446

Section 24-51-211, C.R.S., "Amortization of liabilities", states:

> "An amortization period for each of the state and school division, municipal division, and judicial division trust funds shall be calculated separately. A maximum amortization period of forty years shall be deemed actuarially sound. Upon recommendation of the board, and with the advice of the actuary, the employer or member contributions rates for the plan may be adjusted by the general assembly when indicated by actuarial experience."

Through review of the 2004 Actuarial Valuation completed by Buck Consultants, dated May 23, 2005, it was noted that the remaining amortization period with current funding is infinite for each of the three divisions (i.e., state and school division, municipal division, and judicial division), as was the case as of December 31, 2003. In other words, the results of the valuation study indicated that under PERA's current actuarial assumptions, none of the divisions are expected to receive sufficient contributions and earnings to fund all the benefits that PERA is obligated under current state law to pay. The funding ratios as of December 31 are as follows:

	2004	2003
State and School Division	70.1%	75.2%
Judicial Division	77.2%	80.2%
Municipal Division	81.0%	84.0%
Combined Funded Ratio	70.6%	76.0%

In addition, because the amortization period exceeds 40 years for all three divisions, the divisions are not considered actuarially sound under Section 24-51-211, C.R.S.

During the 2003 Session, PERA initiated legislation that would have increased employer contributions rates in order to properly amortize unfunded liabilities, terminate the MatchMaker contributions after the December 31, 2003 payrolls, and resume gainsharing only if PERA were to become 110 percent funded at some future point. Although this legislation was passed by the General Assembly, it was vetoed by the Governor.

During the 2004 Session, PERA worked with the Governor and the General Assembly on the passage of Senate Bill 132 and Senate Bill 257. The major provisions of these bills include:

Senate Bill 04-132. Suspension of MatchMaker Contributions (passed by the Legislature on April 20, 2004, and signed by the Governor on April 30, 2004):

- Suspend MatchMaker contributions beginning June 12, 2004.
- Reduce interest credit on member contributions to a maximum of 5 percent per year, beginning July 1, 2004.
- The due date for contributions to be delivered by PERA employers to PERA will change to five business days after the payroll date, effective July 1, 2004.
- Reallocate 0.08 percent of salary of future employer contributions to the PERA pension trust funds rather than to the PERA Health Care Trust Fund.
- Provide that members hired on or after July 1, 2005:
    - Will not be eligible for full retirement benefits at age 50 with 30 years service.
    - Will receive annual post-retirement increases of 3 percent or the actual change in the Consumer Price Index, whichever is lower.

Senate Bill 04-257. Public Employee Retirement Plans (passed the Senate on April 30, 2004, and the House passed the bill on May 5, 2004; signed by the Governor on June 4, 2004):

- An "Amortization Equalization Disbursement" (AED) will be established which requires each PERA employer to pay 0.5 percent of salary to PERA each year, beginning January 1, 2006, increasing by 0.5 percent of salary in 2007 and by 0.4 percent of salary each year thereafter, reaching a maximum of 3 percent of salary in 2012 and thereafter. If at some point in the future the AED reduces the amortization period below 40 years, the AED payment would be scaled back below 3 percent of salary. If PERA approached 100 percent funded status, the AED would be repealed.
- The State and School Divisions will separate beginning January 1, 2006. The School Division will not have the DC (defined contribution) plan option and creating a separate division protects the School Division from any funding deterioration the DC option could cause in the State Division.
- Increase in School employer rates. The actuarial cost of PERA benefits for school members is about 0.4 percent of salary higher than for state members. To reflect this cost in School Division rates, the School employer contribution rate to PERA will increase by 0.4 percent of salary, beginning January 1, 2013.
- New State employees hired on or after January 1, 2006, will have the option to be covered by PERA or the State Defined Contribution (DC) Plan. This decision will be made in the first 60 days of employment and will be irrevocable. If the member chooses PERA, he or she may elect into the PERA DC Plan if they wish. If no election is made within 60 days, the new employee will be covered by the PERA Defined Benefit (DB) Plan. The AED will be paid by employers on the payroll of PERA members as well as on the payroll of new hire state employees who elect the State DC Plan instead of PERA.
- Employees in higher education would not have the options added by SB 257.
- An employee covered by the State DC Plan, or by the PERA DC Plan, who moves to a position at an institution of higher education could continue membership in that plan while in higher education. Existing higher education employees, and new hires coming

directly into higher education positions remain covered as they have been under PERA's current DB plan or by an Optional Retirement Plan, if the institution has one for their faculty and other employees who are exempt from the State personnel system.

- Requires employer contributions to be paid for a PERA retiree working for a PERA-affiliated employer beginning July 1, 2005.
- Renames the Municipal Division the PERA Local Government Division.

While these measures are expected to improve PERA's financial condition, PERA's actuary has determined that the contribution rates are currently not sufficient to support the Plan's benefit structure on a long-term basis. Further, the actuary reports that unless there is a significant recovery in the investment markets in the near future, it will be difficult to support the current level of benefits without significant increases in the contribution rates. The table below represents the current employer contribution rate, and the employer contribution rate that would be needed at the present time to amortize the unfunded actuarial accrued liability within a 40-year period, as reported by PERA.

Employer Contribution Rates as of December 31, 2004:

State and School Division (except State Troopers)	10.15%
State and School Division—State Troopers only	12.85%
Municipal Division	10.00%
Judicial Division	13.66%

Employer Contribution Rates Needed for 40-Year Amortization as of December 31, 2004:

State and School Division	16.91%
Municipal Division	11.73%
Judicial Division	14.87%

In addition, under Governmental Accounting Standard No. 25 *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans,* ten years after the effective date (June 15, 1996) of this standard, the maximum acceptable amortization period is 30 years. The application of a 30-year amortization period would greatly increase the employer contribution rates that would be needed to reflect a fully funded status.

Recommendation:
PERA should continue to work with the Governor and the General Assembly to seek changes in the employer and/or member contributions and other plan provisions for the State and School Division, the Municipal Division, and the Judicial Division trust funds in order to achieve the 40-year amortization period deemed to be actuarially sound under Section 24-51-211, C.R.S.

PERA's Response:
Agree. This recommendation continues to be PERA's highest priority. The topic will be the primary focus of the Board of Trustees at their annual planning meeting in July. PERA will maintain its efforts to ensure the General Assembly, PERA members and benefit recipients are aware of developments impacting the funded status of the plan. The implementation of this will be ongoing.

RECOMMENDATION NO. 5
WINDOWS AND AS/400 PASSWORDS

PERA has 182 AS/400 platform user accounts and 234 Windows platform user accounts. The Benefits Administration System (running on an AS/400 platform) maintains membership data for active and retired members. As of December 2004, there were 176,840 active members, with 65,943 members receiving benefits. Per National Institute of Standards (NIST) Special Publication 800-12 "An Introduction to Computer Security", an information system should force the user to select passwords with a certain minimum length and special characters, which make passwords more difficult to guess.

Issue:
We found that Windows and AS/400 network passwords are not required to consist of a combination of alphanumeric characters, and complex Windows password authentication parameters have not been enabled. However, users are locked out after 3 invalid password attempts, and passwords are required to have a minimum length of 6 characters, and expire every 90 days.

Risk and Implication:
Easy to guess passwords can potentially undermine a strong security. The strength of a system's security is in direct proportion to its weakest link.

Recommendation:
PERA should implement password parameters for both the Windows and AS/400 platforms that require a combination of alphanumeric characters. The recommendation requires ISD corrective action.

PERA's Response:
Agree. This recommendation was implemented in April of 2005. Both the Windows and AS/400 (iSeries) platforms were configured to require passwords that include alphanumeric characters, and the iSeries platform was additionally configured to use Kerberos authentication based on prior authentication to the Windows network for all user accounts.

RECOMMENDATION NO. 6
PROGRAM DEVELOPER SEGREGATION OF DUTIES

Issue:
Information Systems Department (ISD) Release Managers can function both as program developers and move changes into the production environment. ISD is responsible for the management of information technology for PERA. The principle of "separation of duties" refers to dividing roles and responsibilities so that a single individual cannot subvert a critical process. Additionally, the principle of "least privilege" refers to the security objective of granting users only those accesses they need to perform their official duties.

We noted that several individuals function in dual roles (e.g. program developer and able to move changes into production) presenting the risk that developers who are also release managers could move unauthorized changes into production. We understand that the expertise required for developers and release managers are similar and limited in availability, and it may not be practical to separate these functions. In these instances, compensating controls should be in place to ensure unauthorized changes do not occur.

Changes to an existing information system (IS) are inevitable and the purpose of Configuration Management (CM) is to ensure that these changes take place in a controlled environment and that they do not adversely affect any trust properties of the system. CM should provide assurance that addition, deletion and changes to the IS do not compromise its inherent trust. CM therefore is of critical importance with regard to life–cycle assurance during development and in operation. The IS software and hardware must not be changed improperly or without authorization, control and accountability.

Ensuring least privilege requires identifying what the user's job is, determining the minimum set of privileges required to perform that job, and restricting the user to a domain with those privileges and nothing more. Access to transactions not necessary for the performance of a user's duties should be denied, so those denied privileges couldn't be used to circumvent the organizational security policy.

Risk and Implication:
Due to the dynamic nature of development and varying size, scope and components of projects, there is a potential risk that an unauthorized change could be moved to production.

Recommendation:
PERA should ensure that a formal change handover process, involving only authorized personnel, is in place that allows only authorized, tested and documented changes to be accepted in production. As part of this, PERA should implement a compensating control to mitigate the risk of unauthorized changes being moved into production, such as having the Promotion Manager run weekly reports to determine the reasonableness of all system changes moved into production. The recommendation requires ISD corrective action.

PERA's Response:
Agree. This recommendation was implemented in February of 2005. The compensating control implemented consists of a weekly report of all change management activity that is reviewed by the Promotion Manager and stored for subsequent review.

With the addition of this compensating control, PERA believes that this policy, procedure, and software change management application meet the requirements of the audit recommendation.

RECOMMENDATION NO. 7
REVIEW OF USER ACCOUNTS AND ACCESS

Issue:
PERA system user access is not recertified on a regular basis to ensure access is commensurate with job responsibilities. As of December 2004, there were approximately 182 users with access to the AS/400 system, 234 to PeopleSoft HR, 137 to the PeopleSoft Financials system, and 55 to the PORTIA system

Access to information systems should be controlled by the job assignment or function (i.e. the role) of the user who is seeking access. The process of defining roles should be based on a thorough analysis of how PERA operates and should include input from a wide spectrum of users in an organization. As noted earlier, the principle of "least privilege" refers to the security objective of granting users only those accesses they need to perform their official duties.

During the 2004 audit, it was noted that PERA did not have consistent and formal procedures for reviewing the appropriateness of user accounts and profiles. In the current audit, we noted that PERA system owners (e.g. managers, security administrators, or both) are not required to review the reasonableness of user access to their systems on a regular basis. We found that different individuals with the same job title could have access to different systems or functions not necessary to perform their position responsibilities. For several systems, "Similar To" access is utilized to assign new users access, instead of mapping to position titles based upon position responsibilities. It was noted that although a few applications do assign permissions based upon job functions (i.e. Peoplesoft, Portia, and Longview) the majority of system access is not role-based. A periodic review of job duties and user profiles ensures access to systems remains appropriate over time and that user access is commensurate with assigned duties involving the use of the key business applications and the PERA network. These reviews can be conducted on at least two levels: (1) on an application-by-application basis, or (2) on a system wide basis.

We understand that ISD is working with PERA management and system owners to obtain upper management approval for a recertification process covering users of all applications and systems. PERA is also planning to create system profiles per job title and assign standard application and menu assignments.

Risk and Implication:
The lack of review procedures or recertification of user access for key business applications and the PERA network could lead to unauthorized access to key financial data, which could result in the intentional or accidental misstatement of financial data.

Recommendation:
PERA management should ensure that re-certifications are performed periodically on the appropriateness of user's access to PERA's key business application and network. Key business applications include PERA-maintained systems and various third party financial applications (e.g. CitiStreet and Northern Trust). This recommendation requires joint ISD and PERA management corrective action.

PERA's Response:
Agree. PERA management completed a recertification of user access to PERA's key business applications and the Windows network in May of 2005. This recertification process was a joint effort between PERA management and the Information Systems Division (ISD). The process for recertification has been documented and will be performed on an annual basis going forward.

In addition, PERA management has implemented a formal policy on System Administration for systems that are managed outside of ISD. This policy requires that such systems be adequately documented, and that system users be reviewed and updated annually. External vendor account administration, such as CitiStreet and Northern Trust, are covered by this new policy.

RECOMMENDATION NO. 8
DATE OF BIRTH EDIT CONTROLS

Issue:
The Member Enrollment and Maintenance screen within the AS/400 system does not provide front-end edit controls to reject the input of unreasonable dates of birth. For example, when Clifton Gunderson requested the PERA technical lead to enter an obviously erroneous date of birth during the member enrollment process, we noted that this entry which identified a PERA member as being more than 140 years old, was not rejected by the system. The purpose of having edits in place at the beginning of the processing cycle is to identify and correct errors as early as possible.

PERA does have edit checks to prevent entry of an unreasonable number of months (greater than 12) or of current year dates as dates of birth, and an independent review of data input is performed. Also, during the retirement application process, dates of birth are compared to Social Security Administration records for accuracy. However, the edits over the date of birth could be improved by having a system flag presented to the user on the front end that tests for reasonableness.

Without adequate front-end validation system edits, user input/source document data integrity errors may not be captured on a timely basis. Front-end edits detect common and/or obvious errors in order to expedite the rejection of the transaction, eliminating delays caused by flawed transactions moving forward through an application. These edits may include error messages or an indication or acknowledgement of data for processing.

Risk and Implication:
The lack of sufficient front-end edit controls to prevent the input of unreasonable dates of birth prevents the early detection of these errors, which could result in erroneous member benefit payments and could result in the intentional or accidental misstatement of financial data.

Recommendation:
PERA should establish appropriate front-end edit controls on the member enrollment data and the maintenance application to ensure retirement payments are not made inappropriately. This recommendation requires joint ISD and PERA management corrective action.

PERA's Response:
Agree. In April 2005, the Information Systems Division added the specific front-end edit control mentioned in this finding. The control now issues either a warning or an error message depending upon the date of birth entered.

RECOMMENDATION NO. 9
EMPLOYER CONTRIBUTION SYSTEM EDITS

As of December 2004, there were 399 employers for 176,840 active contributing members that report monthly information to PERA on employee compensation.

Issue:
There are no built-in system edits or reports to flag or identify wages reported to PERA by affiliated employers that are missing or appear out of the norm, such as large bonuses or missing monthly wages, at the time or year of occurrence.

Clifton Gunderson walked through the benefits calculation/retirement process with the PERA Benefits Counselor/Team Leader. We determined that counselors manually review monthly wages and contributions over the member's entire service period (up to 30 years) and investigate discrepancies (e.g. out of the ordinary or missing amounts) in employer reported information. PERA affiliated employers contribute a percentage of their total payroll to the PERA Retirement Trust Fund. Despite the lack of built in edits or reports to flag (identify) wages that appear out of the norm, there is a process in place where the team leader randomly samples 5% of all benefit forms processed each week by counselors, checking for accuracy and reasonableness.

Based upon discussions with the PERA IT Director and Internal Audit Director, there is a Member Information Accuracy Project underway to improve controls over the accuracy of contribution and wage information provided by participating employers. This effort involves the issuance of various Requests for Change (RFCs) to the ISD to put certain procedures and edits in place on a staggered basis. For example, one RFC in process involves an edit check to ensure all contributions equal 8% of the reported wages. Additionally, Clifton Gunderson identified a group of edits called "After Post" Inhouse Edits, one item which specifically targets salary variances. This edit is intended to identify salary fluctuations for a member that appear questionable. This planned edit is similar to the missing flag (edit) on the front end of contribution reporting by employers.

Risk and Implication:
Contribution reporting errors detected during PERA's internal quality review process could potentially occur 20-30 years after the discrepancy took place. After lengthy periods of time, personnel and records needed to clarify contribution errors may no longer be available or very difficult to obtain. Also, since the team leader responsible for testing the accuracy of benefit calculations perform these tests on a small sample (5%) of benefit calculations (randomly selected for review), there is the possibility that salary aberrations missed by benefit counselors would not be detected.

Recommendation:
PERA should continue to implement the initiatives and edits identified within the Member Information Accuracy Project to improve the accuracy of contributions reporting from employers to PERA. This recommendation requires joint ISD and PERA management corrective action.

PERA's Response:
Agree. PERA recognizes the importance of accurate data and initiated the Member Information Accuracy (MIA) initiative in 2004. The initiative addresses the accuracy of all member information including contributions. The initiative is underway and has submitted an initial Request for Change (RFC) to PERA management. If approved, work on the project will begin as PERA resources are available.

Implementation Date: Decision on the RFC is anticipated by October 2005. Completion date of the project will depend on the nature and scope of the work approved.

RECOMMENDATION NO. 10
INFORMATION SECURITY POLICIES

Issue:
PERA employees have not signed an agreement indicating their acceptance of PERA information security policies. These policies cover areas such as acceptable use of computer resources and user responsibilities. As of December 2004, PERA had 234 employees. This agreement is identified within PERA's current information security policies, and is presently undergoing legal review. Until this agreement is finalized, distributed and signed by all PERA employees, management is dependent upon individual interpretation of management's expectations to ensure compliance.

Risk and Implication:
Having employees sign agreements indicating acceptance of PERA's information security policies is essential to adequately control PERA's security environment. Without signed acceptance of security policies there is no assurance employees agreed to current policies and could potentially result in the intentional or accidental misstatement of financial data.

Recommendation:
PERA management should require employees to read information security policies and then sign a security agreement to indicate their understanding and acceptance of the policies. This recommendation requires PERA management corrective action.

PERA's Response:
Agree. PERA has implemented procedures requiring new employees to read through the User Information Security Policy document and sign a compliance agreement attesting to their understanding and acceptance of information security policies prior to granting access to any of PERA's computer systems.

Additionally, existing users are required to read and sign compliance agreements in order to maintain their account access to PERA's computer systems on an annual basis.

The implementation of the policy was completed in June of 2005.

SECTION 4
DISPOSITION OF PRIOR YEAR RECOMMENDATIONS

DISPOSITION OF PRIOR YEAR RECOMMENDATIONS

The following are the audit recommendations included in the Colorado Public Employees' Retirement Association audit report for the year ending December 31, 2003, and their disposition as of December 31, 2004

Recommendation	Disposition
Administration Expense	Implemented 2004
Alternative Investments	Implemented 2004
Internal Audit Functions	Implemented 2004
Use of a Service Organization	Implemented 2004
Security – Documented Information Security Policy	Implemented 2004
Security – Sharing of Administrator Accounts	Implemented 2004
Security – AS/400 Platform	Implemented 2004
Security – Monitoring of Security events	Implemented 2004
Review of User Accounts and Access	Recommendation No. 7
Change Management Process	Implemented 2004
Direct Access to Production	Implemented 2004
Development and Implementation	Implemented 2004
Purchase of Service Credit Relating to Noncovered Employees	Implemented 2004
Amortization of Liabilities	Recommendation No. 4
Investment Restrictions	Implemented 2004

SECTION 5
REPORTS OF INDEPENDENT AUDITORS

Independent Auditor's Report

Board of Trustees
Colorado Public Employees' Retirement Association
Denver, Colorado

We have audited the accompanying statements of fiduciary net assets and the related statements of changes in fiduciary net assets of the Colorado Public Employees' Retirement Association as of and for the year ended December 31, 2004 which collectively comprise Colorado Public Employees' Retirement Association's basic financial statements as listed in the table of contents. These financial statements are the responsibility of the Colorado Public Employees' Retirement Association's management. Our responsibility is to express an opinion on these financial statements based on our audit. The prior year combined comparative totals were derived from financial statements audited by other auditors whose report was dated June 11, 2004.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the statements of fiduciary net assets of the Colorado Public Employees' Retirement Association as of December 31, 2004, and related statement of changes in fiduciary net assets for the year then ended in conformity with accounting principles generally accepted in the United States of America.

The management's discussion and analysis on pages 19 through 29, and the schedule of funding progress and schedule of employer contributions on pages 46 and 47 are not a required part of the basic financial statements but are supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it. The auditors referred to above reported on the prior year supplementary information but did not audit that information or express an opinion on it.

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Colorado Public Employees' Retirement Association's basic financial statements. The supplementary schedules listed in the table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

The introductory section, investment section, actuarial section and statistical section 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 express no opinion on them.

Clifton Gunderson LLP

Denver, Colorado
May 23, 2005, except for Note 9 for
which the date is June 2, 2005

Clifton Gunderson LLP
Certified Public Accountants & Consultants

Report of Independent Auditors

To the Board of Trustees of
Colorado Public Employees' Retirement Association
Denver, Colorado

In planning and performing our audit of the financial statements of Colorado Public Employees' Retirement Association ("PERA") for the year ended December 31, 2004, we considered its internal control in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements, not to provide assurance on internal control.

The management of PERA is responsible for establishing and maintaining internal control. In fulfilling this responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of controls. Generally, controls that are relevant to an audit pertain to the entity's objective of preparing financial statements for external purposes that are fairly presented in conformity with generally accepted accounting principles.

Because of inherent limitations in internal control, errors or fraud may occur and not be detected. Also, projection of any evaluation of internal control to future periods is subject to the risk that controls may become inadequate because of changes in conditions or that the effectiveness of their design and operation may deteriorate.

Our consideration of internal control would not necessarily disclose all matters in internal control that might be material weaknesses under standards established by the American Institute of Certified Public Accountants. A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements caused by error or fraud in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. However, we noted no matters involving internal control and its operation, including controls for safeguarding securities, that we consider to be material weaknesses as defined above as of December 31, 2004.

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

Clifton Gunderson LLP

Denver, Colorado
May 23, 2005

Clifton Gunderson LLP
Certified Public Accountants & Consultants

Independent Auditor's Report

To the Board of Trustees of
Colorado Public Employees' Retirement Association

We have examined Colorado Public Employees' Retirement Association's ("PERA") compliance with PERA Rules and the Colorado Revised Statutes related to financial reporting during the year ended December 31, 2004. The following sections were specific to our review:

- PERA Rules
  - 2.90 Actuarial Assumptions
  - 4.40 Refunds
  - 5.30 Payments for Purchase Service Credits
  - 5.40 Interest Rate
  - 10 Increase in Benefits
  - 10.30 Retroactive Effective Date of Retirement or Survivor Benefit

- Colorado Revised Statutes
  - 24-51-206 Investments
  - 24-51-208 Allocation of Moneys
  - 24-51-210 Allocation of Assets and Liabilities
  - 24-51-211 Amortization of Liabilities
  - 24-51-401 Employer and Member Contributions
  - 24-51-405 Refund of a Members Contribution Account
  - 24-51-406 Payments from the Judicial Division
  - 24-51-407 Interest (Member Contributions)
  - 24-51-503 Purchase of Service Credit Related to a Refunded Account
  - 24-51-603 Benefit Formula for Service Retirement
  - 24-51-1206 Health Care Premium Subsidiary
  - 24-51-1403 Expenses of Voluntary Investment Program (VIP)

Management is responsible for PERA's compliance with those requirements. Our responsibility is to express an opinion on PERA's compliance based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and, accordingly, included examining, on a test basis, evidence about PERA's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion. Our examination does not provide a legal determination on PERA's compliance with specified requirements.

In our opinion, PERA complied, in all material respects, with the aforementioned requirements for the year ended December 31, 2004.

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

Clifton Gunderson LLP

Denver, Colorado
May 23, 2005

EXHIBIT I
CLIFTON GUNDERSON LLP RESPONSIBILITY

Clifton Gunderson LLP
Certified Public Accountants & Consultants

May 23, 2005

To the Audit Committee of the Board of Trustees
Colorado Public Employees' Retirement Association

The purpose of this letter is to provide you with information about significant matters related to our audit of the basic financial statements of Colorado Public Employees' Retirement Association (the Association) for the year ended December 31, 2004, in order to assist you with your oversight responsibilities of the financial reporting process, and so that we may comply with our professional responsibilities to the Audit Committee. This letter is intended solely for the information and use of the Audit Committee and is not intended to be and should not be used by anyone other than this specified party.

We have provided a letter, dated May 23, 2005, concerning the internal control conditions that we noted during our audit of the Association's financial statements for the year ended December 31, 2004.

Auditor's Responsibility Under Generally Accepted Auditing Standards. Our audit of the financial statements of Colorado Public Employees' Retirement Association for the year ended December 31, 2004, was conducted in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable, but not absolute, assurance about whether the financial statements are free of material misstatement. Reasonable assurance in an audit is obtained by examining evidence supporting the amounts and disclosures in the financial statements on a test basis. An audit does not include verification of all transactions and account balances, nor does it represent a certification of the absolute accuracy of the financial statements.

In testing whether the basic financial statements are free of material misstatement, we focus more of our attention on items with a higher potential of material misstatement, and less on items that have a remote chance of material misstatement. For this purpose, accounting literature has defined materiality as "the magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement."

An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. Although we may make suggestions as to the form and content of the financial statements, or even prepare them in whole or in part, the financial statements remain the representations of management. In

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an audit, our responsibility with respect to the financial statements is limited to forming an opinion as to whether the financial statements are a fair presentation of the Association's financial position, results of operations, and cash flows.

Significant Accounting Policies. There were no significant accounting policies or their application which were either initially selected or changed during the year. In addition, there were no significant, unusual transactions in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

Management Judgments and Accounting Estimates. Significant estimates include management's estimate of the valuation of certain investments not traded on exchanges and certain real estate investments. These estimates are based on periodic relevant financial information, the value of comparables, independent appraisals or other relevant data. Significant estimates also include an estimate of the Association's actuarial liabilities based on an actuarial valuation.

Our conclusion regarding the reasonableness of the valuation of investments and the actuarial liabilities was based primarily on recalculation, comparison to third party information and analytical procedures.

Significant Audit Adjustments. There were no adjustments arising from the audit that could, in our judgment, either individually or in the aggregate, have a significant effect on the entity's financial reporting process.

Disagreements With Management. There were no disagreements with management on financial accounting and reporting matters, auditing procedures, or other matters which would be significant to the Association's financial statements or our report on those financial statements.

Consultations With Other Accountants. We were informed by management that they made no consultations with other accountants on the application of generally accepted accounting principles and generally accepted auditing standards.

Major Issues Discussed With Management Prior to Retention. There were no major issues, including the application of accounting principles and auditing standards, which were discussed with management prior to our retention as auditors.

Difficulties Encountered in Performing the Audit. There were no difficulties in dealing with management related to the performance of our audit.

We will be pleased to respond to any questions you have regarding the foregoing comments.

Clifton Gunderson LLP

The electronic version of this report is available on the Web site of the
Office of the State Auditor
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 the Report Control Number below when requesting this report.

Report Control Number 1686