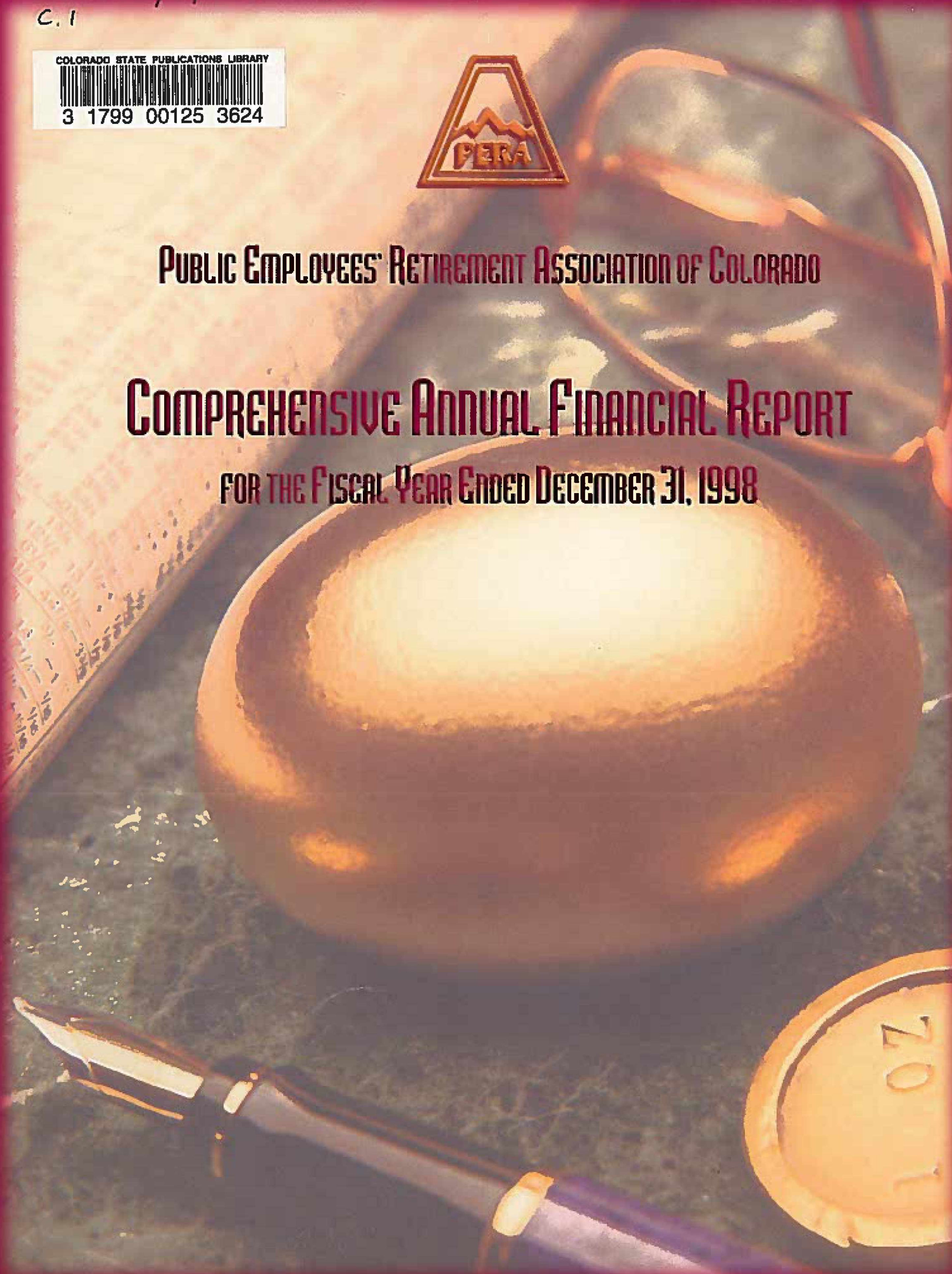


Public Employees' Retirement Association of Colorado

Comprehensive Annual Financial Report

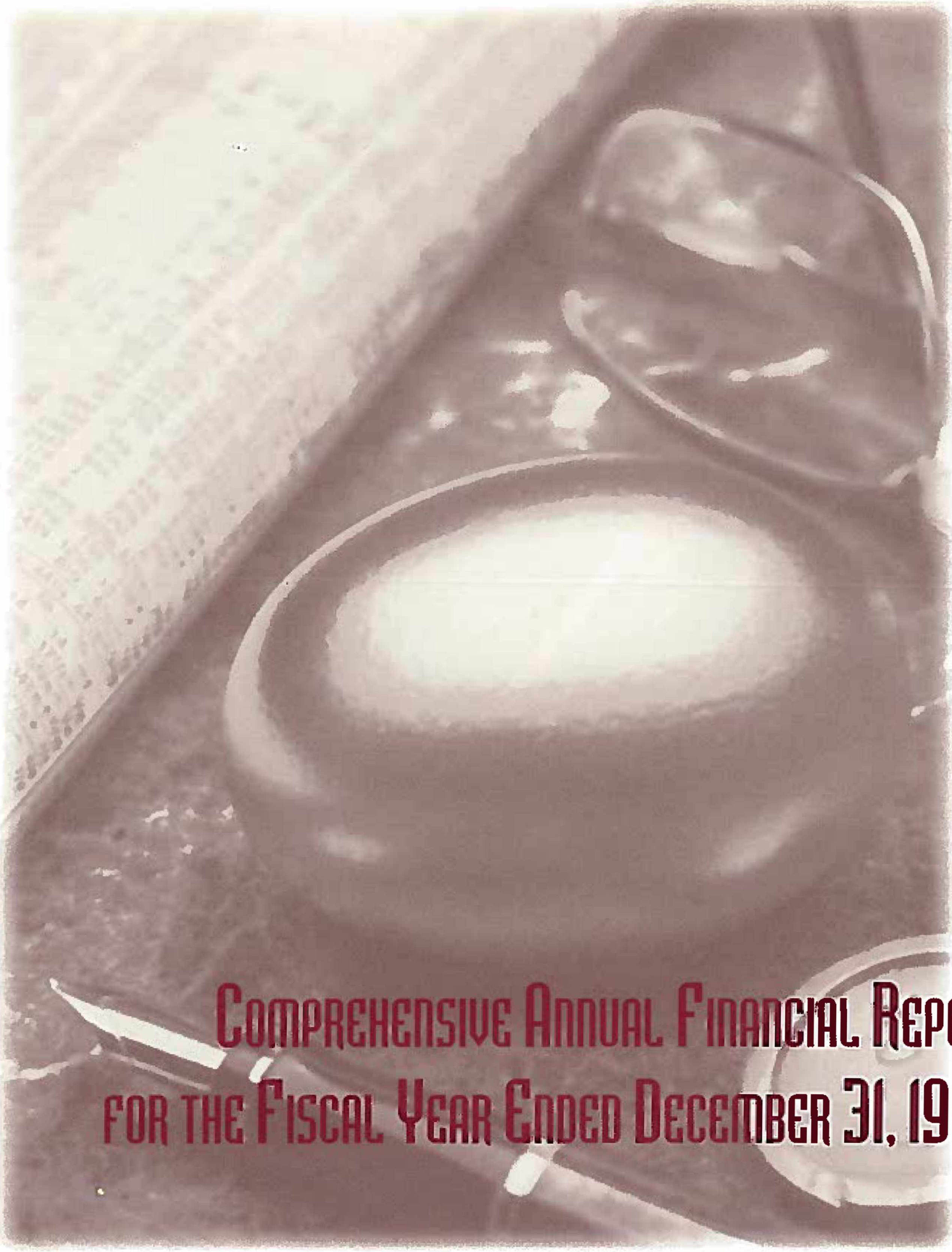
for the Fiscal Year Ended December 31, 1998

1998 Statistical Highlights[1]

The Public Employees' Retirement Association of Colorado provides retirement and survivor benefits for the employees of 374 state, school, and local government entities in Colorado.

■ Benefit Recipients		49,808
■ Contributing Members		154,235
■ Service Retirements		2,805
■ Disability Retirements		334
■ Survivor Benefits Started		57
■ Benefit Payments	$	956,206,000
■ Refunds Paid	$	73,927,000
■ Net Assets Available for Benefits	$	26,457,604,000
■ 1998 Investment Rate of Return		15.7%
■ Investment Income	$	3,455,451,000
■ Three-Year Annualized Rate of Return		16.4%
■ Five-Year Annualized Rate of Return		14.7%
■ Ten-Year Annualized Rate of Return		13.2%
■ Employer Contributions	$	476,150,000
■ Member Contributions	$	336,144,000

[1] *Excludes 401(k) Plan information.*



Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 1998

Robert J. Scott, Executive Director
1300 Logan Street
Denver, Colorado 80203
303-832-9550
www.copera.org
Prepared by the PERA Staff

Table of Contents

Introductory Section

Letter of Transmittal

PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO
Mailing Address: PO Box 5800 Denver, Colorado 80217-5800
Street Address: 1300 Logan Street Denver, Colorado 80203-2386
303-832-9550 or 1-800-759-PERA (7372)

June 30, 1999

Dear Members of the Board of Trustees,

I am pleased to present PERA's *Comprehensive Annual Financial Report (CAFR)* for the fiscal year ended December 31, 1998. We are proud of PERA's achievements during the year, and we will continue striving to improve service to our members and benefit recipients in the future. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation rests with PERA's management.

Report Contents

This *Report* consists of five sections:

The **Introductory Section** contains the administrative organizational chart, the Certificate of Achievement for Excellence in Financial Reporting, information about the Board of Trustees, this Letter of Transmittal, and the Board Chairman's Report.

The **Financial Section** contains the report of the independent accountants, the financial statements of the Association, and certain required supplementary information.

The **Investment Section** contains a report on investment activity, investment policies, investment results (including the 401(k) Plan), and various schedules.

The **Actuarial Section** contains the certification letter from the independent actuary, Watson Wyatt, along with the results of the annual actuarial valuation and other actuarial statistics.

The **Statistical Section** contains tables of significant data pertaining to PERA, a list of affiliated employers, and information on other programs in which the Association is involved for the good of its members and benefit recipients.

Plan Overview

PERA was established in 1931 by the Colorado General Assembly as an instrumentality of the state. Initially covering only state employees, the Plan has expanded to include all Colorado school districts except Denver, the State's judicial system, and numerous municipalities, public health departments, and other local government entities. The Plan's purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability. The Plan is funded on an actuarial reserve basis, with money being set aside for benefits while the benefits are being earned and before they are paid.

Major Initiatives

The PERA Board of Trustees did not initiate any major legislation in 1998, although it did initiate a bill to bring state law governing PERA into conformance with state insurance law. That bill increased the age limits for children covered under PERA's Health Care Program (to age 19, unless in school full-time, then to age 24).

The Legislature itself initiated legislation that directly affected PERA members. House Bill (HB) 98-1191, as amended, allows elected officials in state government, non-classified employees of the Governor, and several other employees whose tenures are subject to the political process to elect coverage under an IRC 401(a) defined contribution (DC) plan, instead of coverage under PERA. Initially, the bill would have provided for all state employees to make this choice. After explaining to the bill's sponsor that this would adversely affect PERA, the sponsor amended the bill to this limited group of about 440 positions. HB 98-1191 requires that contribution rates in the DC plan equal contribution rates for PERA's State and School Division members. The Board took no position on HB 98-1191, as amended, stating that the scaled-back version of the bill would not affect PERA's actuarial soundness.

Near the end of the 1998 legislative session, HB 98-1191 was amended in a cost-saving move to encourage earlier retirement by PERA members. The amendment changed PERA's retirement provisions by allowing:

- Unreduced retirement benefits for members who retire on or after July 1, 1998, with 30 or more years of service and are age 50 or older. Prior to passage of this legislation, unreduced benefits were available at age 55 with 30 years of service.
- A reduction in the reduced service retirement factor from 4 percent to 3 percent per year for members age 55 to 60 with 20 to 30 years of service credit.

Supporters of the amendment to HB 98-1191 expect that PERA employers will save money by generating earlier retirements and replacing the retiring employees with new employees hired at lower salaries. While PERA did not initiate this amendment, PERA did not oppose it.

Also in 1998, the Legislature passed House Bill 98-1242 to reduce the contribution rate for state and school employers by 0.1 percent of salary from 11.5 percent to 11.4 percent, beginning July 1, 1998. The reduction saves more than $3.7 million per year for these employers. PERA's Board of Trustees took no position on this legislation; the reduction was anticipated as the last element of the package of PERA benefit improvements and contribution changes initiated by HB 97-1082. The 0.1 percent rate reduction will not harm PERA's actuarial soundness.

Letter of Transmittal (continued)

In 1998, the Board worked on legislation for 1999. Senate Bill 90, signed by the Governor on April 16, 1999, contains features that affect the PERA Health Care Program and improve pension portability (see Note 10 on page 29).

Also in 1998, in conformance with PERA's "Competitiveness Study" initiated in 1993, the Board approved long-term development of new retirement plans to better serve public employers.

Accounting System and Reports

This CAFR was prepared to conform with the principles of governmental accounting and reporting set forth by the Governmental Accounting Standards Board (GASB) in Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans," and Statement No. 26, "Financial Reporting for Postemployment Healthcare Plans Administered by Defined Benefit Pension Plans," as well as generally accepted accounting principles that apply to government accounting for fiduciary funds.

GASB Statement No. 25 establishes financial reporting standards for defined benefit plans and standards for the notes to the financial statements of defined contribution plans. GASB Statement No. 26 provides financial reporting guidance for defined benefit pension plans that administer postemployment health care plans.

The accompanying financial statements are prepared using the accrual basis of accounting. Member and employer contributions are recognized in the period in which employee services are performed. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made.

In developing and evaluating PERA's accounting program, it was determined that internal controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

Recognition of Achievements

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Association for its CAFR for the fiscal year ended December 31, 1997. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR, whose contents meet or exceed program standards. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid only for one year. PERA has been awarded this distinction for the last 13 years. We believe this report continues to meet GFOA requirements. Therefore, we are submitting it to the GFOA to determine its eligibility for another Certificate.

In 1998, PERA also was awarded the biennial "Public Pension Principles Achievement Award" from the Public Pension Coordinating Council, a national organization that researches and reviews pension issues. This award is granted to retirement systems that comply with eleven "required principles" and five "exemplary principles" pertaining to actuarial valuation and review, benefits, financial reporting and auditing, investments, and disclosure. PERA has received this award since the award's inception in 1994.

PERA also received a Small Business Administration award for its investment program with the Colorado Housing and Financing Authority supporting small businesses.

Additions/Deductions to Plan Net Assets

The collection of employer and member contributions and investment income provide the reserves needed to finance retirement and health care benefits. Defined benefit, health care, and 401(k) Plan contributions and investment income, including unrealized gains and losses for 1998, totaled $4,442,383,000. Member and employer contributions increased by $31,269,000 (8.5 percent) and $21,867,000 (4.8 percent), respectively. The increase in contributions was due to increased membership, salaries, and voluntary contributions to the 401(k) Plan.

The primary expense of a retirement system is the disbursement of retirement and survivor benefits. These recurring benefit payments, along with refunds of contribution accounts to members who terminate employment, subsidies toward health care premiums, and the cost of administering PERA comprise the total expense.

In 1998, expenses totaled $1,061,813,000, an increase of about 12.9 percent from 1997 largely due to an increase in retirement benefits and the passage of HB 97-1082.

Revenues of $4,442,383,000 exceeded expenses of $1,061,813,000 by $3,380,570,000 during 1998. Administrative expenses are controlled by an annual budget approved by the PERA Board of Trustees and represented less than 0.1 percent of total assets.

Economic Condition and Outlook

Last year the nation enjoyed strong growth and low inflation. In 1998, the gross national product rose 3.9 percent, unemployment averaged 4.5 percent, and non-agricultural employment increased at a 2.6 percent rate. Low interest rates, increased personal income, and continued labor market growth pushed consumer spending up 4.8 percent in 1998, the highest in 14 years. Real wages and benefits climbed 3.4 percent in 1998, the highest gain in five years. Consumer inflation rose only 1.6 percent in 1998, largely due to reduced demand and lower prices for many goods that resulted from the Asian financial crisis. Low mortgage rates, record unemployment, and a booming economy led to major growth in the nation's building sector in 1998. However, the loss in exports to Asia in 1998 caused the U.S. manufacturing sector to experience the poorest net export performance in 15 years. In 1999, slower economic growth is forecasted, due to rising wages and inflation, and sluggish exports.

Colorado's economy continued to be one of the strongest in the nation, with 1998 marking the eighth consecutive year of expansion for the state. Although the Asian financial crisis adversely affected the advanced technology, agricultural,

Letter of Transmittal (continued)

mining, and oil and gas sectors, the state enjoyed solid growth. Colorado ranked as the third fastest-growing state with a 2.0 percent population growth rate last year. Inflation remained low at 2.4 percent, the lowest rate in nine years. Personal income growth in Colorado was the second fastest in the nation, rising 8.1 percent, while consumer spending rose 6.4 percent. The state's low unemployment rate (3.8 percent) made 1998 the ninth consecutive year that Colorado's unemployment rate was lower than the national average.

The advanced technology, communications, and services sectors are expected to fuel the state's growth, while the construction sector experiences a modest recession. Economists predict that growth in Colorado's economy will be constrained by the labor shortage, and by reduced demand for the state's exports that continues to result from the Asian economic crisis. In 1999, Colorado's job growth rate is expected to equal 3.0 percent. While the unemployment rate should rise to 4.0 percent in 1999, a tight labor market is still anticipated.

Investments

The investment portfolio income is a major contributor to PERA. The Investment Committee (a committee of the whole Board) oversees the Fund's portfolio, managers, and performance. It also reviews and approves potential investment opportunities, with input from PERA staff members.

In 1998, net investment income totaled $3,500,910,000. This exceeded total contributions by members and employers of $397,949,000 and $476,536,000, respectively.

For the year ended December 31, 1998, the total fund had a rate of return of 15.7 percent on a market value basis. The Association's annualized rate of return over the last three years was 16.4 percent, and over the last five years it was 14.7 percent. The average annualized market rate of return over the last 10 years was 13.2 percent. PERA assumes an investment return of 8.75 percent over the long term.

Proper funding and healthy investment returns are very important to the financial soundness of PERA. The ratio of investment earnings to total revenue is evidence of the Association's continued solid financial management. Changes in the composition of the portfolio are reflected in the "Investment Summary" on page 40.

An integral part of the overall investment policy is the strategic asset allocation policy. The targeted strategic asset allocation is designed to provide an optimal diversification to reduce risk and maximize total rate of return relative to risk. This emphasizes a maximum diversification of the portfolio that protects the Fund from declines that a particular asset class may experience in a given period. Both traditional and nontraditional assets are incorporated into the asset allocation mix. PERA also has a derivatives program in the equity portfolio as an investment technique to reduce volatility and enhance the portfolio returns over a full-market cycle. A further explanation of PERA's investment policies and strategies is presented in the "PERA Report on Investment Activity" on page 38.

Funding

The bottom-line for a retirement system is its level of funding. If the funding level is adequate, the ratio of total accumulated assets to total liabilities will be larger, and more funds will be available for investment purposes. Also, an adequate funding level gives the participants assurance that their pension benefits are secure. The advantage of a well-funded plan is that participants can see assets that are committed to the payment of promised benefits.

The PERA funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service earned in that year by PERA members. If the retirement system follows level contribution rate financing principles–as PERA does (with current service financed on a current basis)–the system will be able to pay all promised benefits when due. This is the ultimate test of financial soundness.

The "funding ratio" and "solvency test" calculations are two ways of measuring a retirement system's funding progress. PERA directs its efforts at keeping the funding ratio (the ratio of assets to accrued liabilities) at a minimum of 80 percent. On December 31, 1998, PERA's funding ratio equaled 96.5 percent. The historical level of funding for PERA is exemplary, as illustrated on page 62.

The difference between the actuarial assets and the actuarial liability is the unfunded liability. PERA's unfunded liability is amortized over varying periods depending on the respective Division (e.g., 6 years for the State and School Division and 1 year for the Municipal Division). The Judicial Division has no unfunded liability. The amortization period for the Health Care Fund was 52 years as of December 31, 1998.

PERA's actuarial assumptions, which are reviewed every five years by an independent actuary retained by PERA, are used to project the Plan's future experience. Also, every five years an actuarial review is performed by another external actuarial consulting firm.

The most recent five-year actuarial review was conducted by Watson Wyatt Worldwide, based on PERA's 1995 experience data. The most recent five-year review of actuarial assumptions was conducted by Towers Perrin based on PERA's 1991–1995 experience data. A presentation of PERA's actuarial methods and assumptions is provided in the Actuarial Section of this *Report* on page 54.

Review of Operations and Activities in 1998

In 1998, the net membership of PERA increased by 1.2 percent to 154,235, and the number of benefit recipients increased by 4.6 percent to 49,808. New service and disability retirees during the year numbered 2,805 and 334, respectively. There were 1,694 benefit recipient deaths and 57 survivor benefits that began during the year.

As a result of legislation in 1997, a new Disability Program began on January 1, 1999, for PERA members with five or more years of service. The two-tier program includes short-term disability (STD) insurance and a disability retirement

Letter of Transmittal (continued)

benefit at no cost to members. Standard Insurance Company is the Program administrator and provides the insurance for the STD plan. Members approved for STD receive payments and other benefits from Standard, while members approved for disability retirement will receive benefits from PERA.

A Long-Term Care (LTC) Program was initiated on January 1, 1998, to help PERA members and retirees protect themselves from the potentially devastating costs of long-term care. The LTC Program offers three plans and is managed by U.S. Care and underwritten by MEDAmerica.

With PERA's focus on providing the best services and programs to members and retirees, PERA conducted a member/retiree satisfaction survey in May 1998. Surveys were mailed to a random sampling of 1,200 retirees, 3,000 non-vested members, and 2,500 vested members, with a 24 percent response rate. The majority of respondents agreed that the service they receive from PERA today is better than it was five years ago, and that the PERA employees they have dealt with are professional and helpful.

PERA devotes much effort in communicating and advising members and retirees about their current or future benefits. In 1998:

- Counselors provided counseling to 1,211 members in 20 cities, 212 Saturday appointments, and 1,733 appointments at PERA.
- The Customer Service Center handled nearly 206,100 calls, responded to more than 970 e-mails, and assisted 4,352 visitors to PERA. The Legislative Status Hotline received 3,604 calls.
- The high demand for member counseling prompted PERA to pilot Group Counseling Sessions at various cities in 1998. These sessions provided information to almost 200 members. Also, PERA introduced Retirement Process Meetings to make the transition from work to retirement smoother.
- Field Education staff conducted 659 information meetings and 95 information tables throughout Colorado. Close to 20,000 persons attended these meetings, and more than 4,600 persons were contacted at information tables. In addition, 28 training meetings were held to educate 600 PERA-affiliated employer staff members about procedures and policies. Also in 1998, several employer meetings were conducted to educate employers about PERA's new disability program.
- Staff assisted at 114 Long-Term Care information meetings at which nearly 6,900 people attended.

In 1998, the Board of Trustees adopted a Year 2000 position statement documenting their commitment to supporting staff efforts with PERA's business partners to minimize the possibility of major disruptions of services provided by PERA to members and retirees. During 1998, PERA continued to address the business issues associated with the Year 2000. (See page 35 for detailed information on PERA's Year 2000 preparations.)

The annual Board of Trustees election was held in May 1998. PERA members re-elected two incumbents to the Board, and a third Trustee was unopposed in seeking another four-year term. State members re-elected Donna Bottenberg, and School members re-elected Kim Natale for four-year terms. Municipal Division Trustee Mark Anderson was unopposed for re-election.

Also in 1998, one new public employer, the San Miguel Regional and Telluride Housing Authority, affiliated with PERA.

401(k) Plan net assets grew from $272,053,000 at the end of 1997 to $362,874,000 at the end of 1998, with 20,112 participant accounts in the Plan by the close of the 1998 year–a 22.7 percent net increase in members over 1997. Effective January 1, 1998, the Board of Trustees reinstated the 401(k) Plan's administrative fee to pay for recordkeeping, communication, education, consulting, and staff costs. PERA had waived the fee in 1996 and 1997. The Investment Section contains a detailed report on the 401(k) Plan on page 45.

Professional Services

Professional consultants are chosen by the Board of Trustees to perform professional services that are critical to PERA's operation. The opinions of Ernst & Young LLP, the independent certified public accounting firm that provides financial statement audit services for PERA, and Watson Wyatt, the actuarial firm that conducts PERA's annual actuarial valuation, are included in this *Report*. A listing of the major investment, actuarial, and other consultants that provide professional services to PERA are in this Introductory Section.

Acknowledgments

The cooperation of our affiliated employers contributes significantly to PERA's success. We thank them for their continuing support.

The compilation of this *Report* reflects the combined efforts of PERA staff. It is intended to provide complete and reliable information as a basis for making management decisions, determining compliance with legal provisions, and determining responsible stewardship of assets contributed by the members and their employers.

This *Report* is being mailed to all affiliated employers and other interested parties; a summary will be sent to members and benefit recipients.

Finally, I would like to express my gratitude to the staff, Board of Trustees, consultants, and other associates who worked diligently to ensure the successful operation of PERA in 1998.

Respectfully submitted,

Robert J. Scott
Executive Director

Certificate of Achievement

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Public Employees' Retirement Association of Colorado

For its Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 1997

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.

Government Finance Officers Association of the United States and Canada Corporation Seal Chicago

Douglas R Ellsworth

President

Jeffrey L. Esser

Executive Director

Board Chairman's Report

PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO
Mailing Address: PO Box 5800 Denver, Colorado 80217-5800
Street Address: 1300 Logan Street Denver, Colorado 80203-2386
303-832-9550 or 1-800-759-PERA (7372)

June 30, 1999

To all PERA Members, Benefit Recipients, and Employers:

As Chairman of the Board of Trustees for the Public Employees' Retirement Association of Colorado, I am pleased to present PERA's 1998 Comprehensive Annual Financial Report. This report offers a detailed view of the financial and actuarial status of your retirement system.

Despite an unpredictable and turbulent year in domestic and international equity markets, the nation enjoyed strong growth, low inflation, low interest rates, and low unemployment. Owing in part to the Federal Reserve Board's decision to cut interest rates three times during the last four months of the year, the overall stock market posted its fourth consecutive year of 20 percent plus gains. By the end of 1998, the PERA pension trust fund exceeded $26 billion, with an annual rate of return on investments of 15.7 percent.

In 1998, the PERA Board of Trustees did not initiate any major pieces of legislation. However, two bills were passed by the Legislature that directly affect PERA members.

House Bill (HB) 98-1191 allowed elected officials in state government, non-classified employees of the Governor, and several other employees whose tenures are subject to the political process to elect coverage under an IRC 401(a) defined contribution plan, rather than coverage under PERA. An amendment to HB 98-1191 also changed two PERA retirement provisions; the amendment was added as a cost-savings measure to encourage early retirement by PERA members. The PERA fund will remain actuarially sound with these changes.

House Bill 98-1242 reduced the contribution rate for state and school employers by 0.1 percent of salary from 11.5 percent to 11.4 percent, beginning July 1, 1998. The reduction was anticipated as the last element of the package of PERA benefit improvements and contribution changes initiated by HB 97-1082. The 0.1 percent rate reduction will not harm PERA's actuarial soundness.

During 1998, the Board worked on drafting and gathering support for its 1999 Legislative program. This included developing several features that will affect the PERA Health Care Program and improve pension portability for short-service PERA members.

In closing, I extend my appreciation for your continued support and interest in PERA. With it, PERA continues to be a leader among public employee retirement systems providing competitive retirement programs and excellent customer service.

Sincerely,

Jack Ehnes

Jack Ehnes
Chairman, Board of Trustees

Board of Trustees

By state law, the management of the public employees' retirement fund is vested in the Board of Trustees of the Public Employees' Retirement Association of Colorado. The Board is composed of 16 members, including the State Auditor and the State Treasurer as ex-officio members. The 14 representative members are elected by mail ballot by their respective Division members to serve on the Board for a four-year term. Five members are elected from the School Category and four from the State Category in the State and School Division, two from the Municipal Division, and one from the Judicial Division. Two members represent benefit recipients. If a Board member resigns, a new member is appointed from the respective division for the remainder of the year until the next election.

Jack Ehnes
Chairman of the Board
Member since 1989; Represents state employees
Director of Benefits & Risk Management, State of Colorado
Current term expires June 30, 2001

J. Kim Natale
Vice Chairman of the Board
Member since 1985; Represents school employees
Math and Science Teacher, Jefferson County School District R-1
Current term expires June 30, 2002

Mark J. Anderson
Member since 1993
Represents municipal employees
Insurance and Claims Manager, City of Colorado Springs
Current term expires June 30, 2002

Jack L. Darnell
Member since 1992
Represents state employees
Colorado State Patrol Sergeant
Current term expires June 30, 2000

Michael J. Morris
Member since 1994
Represents school employees
Principal, Boulder Valley Public Schools
Current term expires June 30, 2000

Dave Barba
Ex-officio member since November 1995
State Auditor
Continuous term

Patricia K. Kelly
Member since 1993
Represents municipal employees
City Attorney, City of Colorado Springs
Current term expires June 30, 1999

Bill Owens
Ex-officio member since January 1995–State Treasurer
Continuous term
Term ended when sworn in office as Governor in January 1999

Donna J. Bottenberg
Member since 1993
Represents state employees
Professor on special assignment, University of Northern Colorado
Current term expires June 30, 2002

Ann Kelly-Bunjer
Member since 1994
Represents state employees
Workplace Issues Coordinator, Colorado Department of Personnel/GSS
Current term expires June 30, 1999

Leonard P. Plank
Member since 1993
Represents judges
Judge, Colorado Court of Appeals
Current term expires June 30, 1999

Mike Coffman
Ex-officio member effective January 1999
Elected State Treasurer in November 1998
Continuous term

Richard Lansford
Member since 1997
Represents retirees (represented School Division members from 1990-1993)
Retired Teacher
Current term expires June 30, 2001

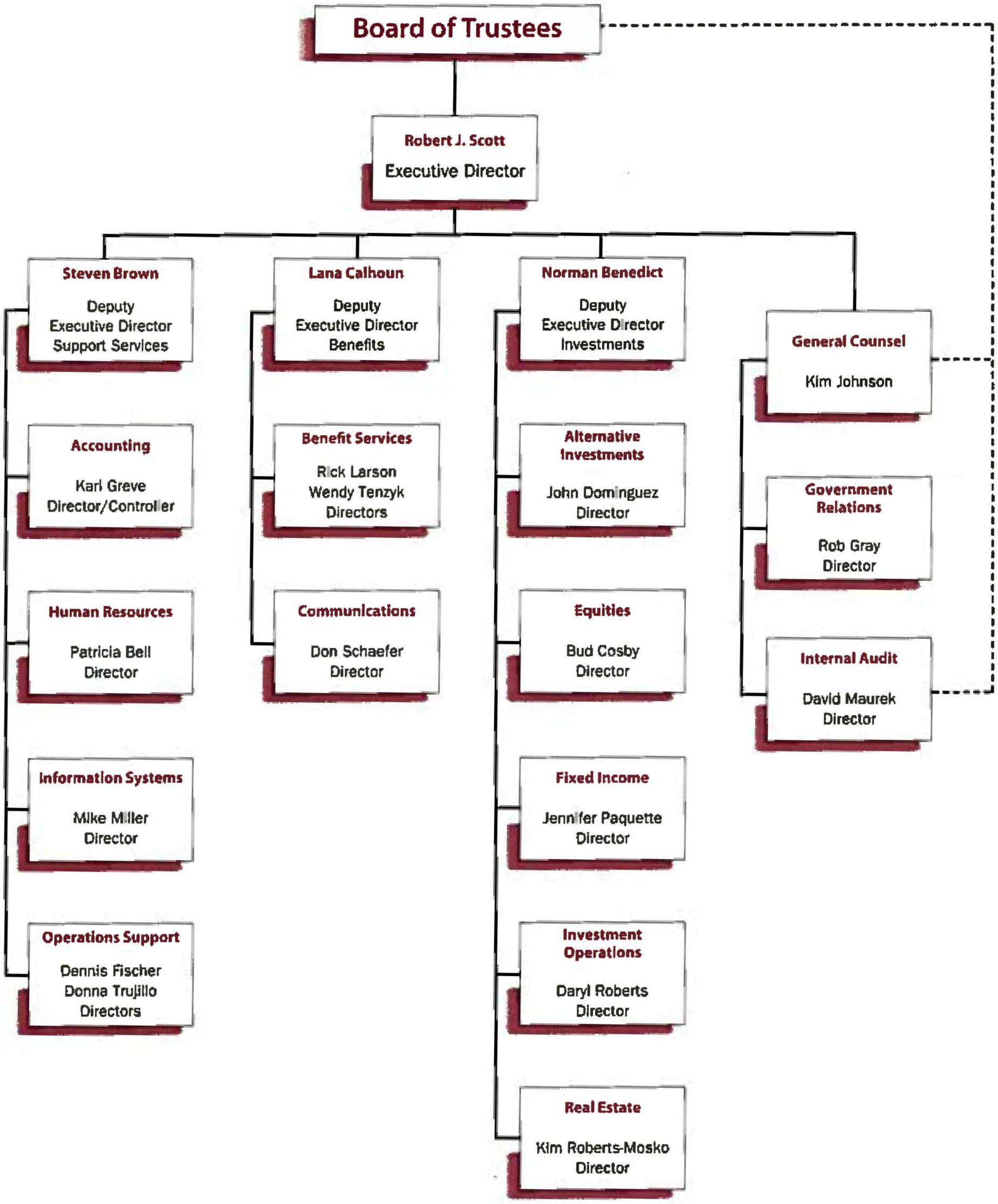
Gloria Santistevan-Feeback
Member since 1996
Represents school employees
Math Teacher, Pueblo School District #60
Current term expires June 30, 2001

Julie A. Coleman
Member since 1995
Represents school employees
Physical Education Teacher, Mesa County Valley School District 51
Current term expires June 30, 1999

William Maguire
Member since 1995
Represents retirees (represented State Division members from 1985-1994)
Retired Personnel Specialist
Current term expires June 30, 1999

Carole Wright
Member since 1993
Represents school employees
Reading Specialist, Aurora Public School District 28J
Current term expires June 30, 2000

*Administrative Organizational Chart**



* As of 5-1-99

Consultants

Health Care Program Consultants

Buck Consultants
1200 17th St., Suite 1200
Denver, CO 80202

Independent Accountants

Ernst & Young LLP
370 17th St., Suite 4300
Denver, CO 80202

Investments—Economists

Primark Decision Economics, Inc.
1 World Trade Center, 18th Floor
New York, NY 10048

The Northern Trust Company
50 South LaSalle St.
Chicago, IL 60675

Investment Performance Analysts

R.V. Kuhns & Associates, Inc.
1211 SW Fifth Ave., Suite 2850
Portland, OR 97204

The Northern Trust Company
50 South LaSalle St.
Chicago, IL 60675

Investments—Portfolio Consultant

Mercer Investment Consulting, Inc.
777 South Figueroa St., Suite 2000
Los Angeles, CA 90017

Investments—Real Estate Performance

Institutional Property Consultants, Inc.
4330 La Jolla Village Dr., Suite 300
San Diego, CA 92122

Master Custodian

The Northern Trust Company
50 South LaSalle St.
Chicago, IL 60675

Pension and Health Care Program Actuary

Watson Wyatt & Company
950 17th St., Suite 1400
Denver, CO 80202

Risk Management

Arthur Gallagher
7900 E. Union Ave., Suite 200
Denver, CO 80237

401(k) Recordkeeper/Consultant

William M. Mercer, Inc.
370 17th St., Suite 4000
Denver, CO 80203

Financial Section

Report of the Independent Accountants

Ernst & Young LLP

Suite 4300
370 – 17th Street
Denver, Colorado 80202-5663

Phone: 303 534 4300
Fax: 303 454 6750

Board of Trustees
Public Employees' Retirement Association of Colorado

We have audited the accompanying general-purpose financial statements, consisting of the State and School Division Trust Fund, Municipal Division Trust Fund, Judicial Division Trust Fund (the "Defined Benefit Plans"), the Voluntary Investment Program, the Health Care Fund and the Insurance Dividend Reserve, of the Public Employees' Retirement Association of Colorado ("PERA") as of December 31, 1998, and for the year then ended. These general-purpose financial statements are the responsibility of the management of PERA. Our responsibility is to express an opinion on these general-purpose financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the general-purpose financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the general-purpose 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 general-purpose financial statements referred to above present fairly, in all material respects, the financial status of PERA as of December 31, 1998, and its changes in financial status for the year then ended, in conformity with generally accepted accounting principles.

The supplementary information on pages 30-35 is not a required part of the general-purpose financial statements but is supplementary information required by the Governmental Accounting Standards Board ("GASB"). We have applied limited procedures to the information on pages 30-34, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit and do not express an opinion on the information on pages 30-35. Further, we were unable to apply to the Year 2000 information, on page 35, certain procedures prescribed by professional standards because disclosure criteria specified by GASB Technical Bulletin No. 98-1 as amended are not sufficiently specific to permit us to perform procedures that would provide meaningful results. In addition, we do not provide assurance that PERA is or will become Year 2000 compliant, that PERA's Year 2000 remediation efforts will be successful in whole or in part, or that parties with which PERA does business are or will become Year 2000 compliant.

Our audit was conducted for the purpose of forming an opinion on the general-purpose financial statements taken as a whole. The schedule of administrative expenses contained in the Financial Section is presented for purposes of additional analysis and is not a required part of the general-purpose financial statements. Such information has been subjected to the auditing procedures applied in the audit of the general-purpose financial statements and, in our opinion, is fairly presented in all material respects in relation to the general-purpose financial statements taken as a whole.

Ernst + Young LLP

May 21, 1999

Ernst & Young LLP is a member of Ernst & Young International, Ltd.

Statements of Pension Plan and Postemployment Healthcare Plan Net Assets

As of December 31, 1998, with Comparative Totals for 1997
(In Thousands of Dollars)

	State and School Division Trust Fund	Municipal Division Trust Fund
ASSETS		
Cash and short-term investments		
Cash and short-term investments	$ 542,559	$ 32,352
Securities lending collateral	2,263,321	134,964
Total cash and short-term investments	2,805,880	167,316
Receivables		
Benefit	69,201	6,306
Interfund	3,887	0
Investment settlement and income	111,950	6,676
Total receivables	185,038	12,982
Investments, at fair value:		
U.S. government obligations	1,104,052	65,836
Domestic corporate bonds	1,166,136	69,538
Domestic stocks	14,268,759	850,860
International stocks	3,396,841	202,557
International fixed income	551,505	32,887
Real estate equity	1,607,924	95,882
Real estate debt	178,079	10,619
Alternative investments	1,761,104	105,016
Total investments	24,034,400	1,433,195
Property and equipment, at cost, net of accumulated depreciation of $14,553 and $11,086 at December 31, 1998, and 1997 respectively	13,427	1,097
Total assets	27,038,745	1,614,590
LIABILITIES		
Investment settlements and other	29,966	2,253
Security lending obligations	2,263,321	134,964
Interfund	5,809	364
Total liabilities	2,299,096	137,581
Commitments and contingencies (Note 6)		
Net assets held in trust for pension plan benefits and postemployment healthcare plan benefits	$24,739,649	$1,477,009
Net assets held in trust for:		
Defined contribution pension plan benefits	$ 0	$ 0
Postemployment healthcare plan benefits[1]	0	0
Defined benefit pension plan benefits[1]	24,739,649	1,477,009
Net assets held in trust for pension plan benefits and postemployment healthcare plan benefits	$24,739,649	$1,477,009

[1] (A schedule of funding progress is presented for each plan on page 30.)

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

Judicial Division Trust Fund	Total Defined Benefit Plans	401(k) Voluntary Investment Program	Total Pension Trust Funds	Health Care Fund	Insurance Dividend Reserve (Agency Fund)	Totals (Memorandum Only) 1998	1997
$ 3,095	$ 578,006	$ 23,074	$ 601,080	$ 2,357	$ 454	$ 603,891	$ 906,793
12,909	2,411,194	0	2,411,194	9,829	1,896	2,422,919	1,806,092
16,004	2,989,200	23,074	3,012,274	12,186	2,350	3,026,810	2,712,885
791	76,298	8,474	84,772	1,915	0	86,687	76,120
6	3,893	0	3,893	2,933	0	6,826	2,896
638	119,264	6,713	125,977	486	94	126,557	95,285
1,435	199,455	15,187	214,642	5,334	94	220,070	174,301
6,297	1,176,185	0	1,176,185	4,795	925	1,181,905	651,449
6,651	1,242,325	90,865	1,333,190	5,064	977	1,339,231	1,181,645
81,380	15,200,999	234,505	15,435,504	61,968	11,956	15,509,428	13,240,036
19,373	3,618,771	7,765	3,626,536	14,753	2,846	3,644,135	3,081,178
3,145	587,537	0	587,537	2,395	462	590,394	1,010,854
9,171	1,712,977	0	1,712,977	6,983	1,347	1,721,307	1,678,579
1,016	189,714	0	189,714	773	149	190,636	338,440
10,044	1,876,164	0	1,876,164	7,648	1,476	1,885,288	1,247,861
137,077	25,604,672	333,135	25,937,807	104,379	20,138	26,062,324	22,430,042
26	14,550	0	14,550	0	0	14,550	14,894
154,542	28,807,877	371,396	29,179,273	121,899	22,582	29,323,754	25,332,122
149	32,368	7,869	40,237	12,608	20,686	73,531	83,226
12,909	2,411,194	0	2,411,194	9,829	1,896	2,422,919	1,806,092
0	6,173	653	6,826	0	0	6,826	2,896
13,058	2,449,735	8,522	2,458,257	22,437	22,582	2,503,276	1,892,214
$141,484	$26,358,142	$362,874	$26,721,016	$ 99,462	$ 0	$26,820,478	$23,439,908
$ 0	$ 0	$362,874	$ 362,874	$ 0	$ 0	$ 362,874	$ 272,053
0	0	0	0	99,462	0	99,462	91,172
141,484	26,358,142	0	26,358,142	0	0	26,358,142	23,076,683
$141,484	$26,358,142	$362,874	$26,721,016	$ 99,462	$ 0	$26,820,478	$23,439,908

Statements of Changes in Pension Plan and Postemployment Healthcare Plan Net Assets

For the Year Ended December 31, 1998, with Comparative Totals for 1997
(In Thousands of Dollars)

	State and School Division Trust Fund	Municipal Division Trust Fund
ADDITIONS		
Contributions		
Employers	$ 409,749	$ 30,186
Members	308,379	26,248
Purchased service	43,762	1,339
Retiree health care premiums	0	0
Total contributions	761,890	57,773
Investment income		
Net appreciation in fair value of investments	2,683,183	159,175
Interest	244,733	14,428
Dividends	254,372	14,996
Real estate net operating income	93,961	5,540
Securities lending income	128,169	7,556
	3,404,418	201,695
Less investment expense	(58,817)	(3,467)
Less securities lending borrower rebates	(110,119)	(6,492)
Less securities lending agent fees	(4,013)	(237)
Net investment income	3,231,469	191,499
Total additions	3,993,359	249,272
DEDUCTIONS		
Benefits		
Benefits paid to retirees/cobeneficiaries	834,459	35,625
Benefits paid to survivors	17,217	1,342
Benefits paid to health care participants	0	0
Total benefits	851,676	36,967
Refunds of contribution accounts, including match and interest	65,811	8,070
Administrative expense	14,142	1,158
Other	2,068	(824)
Total deductions	933,697	45,371
Net increase in assets available	3,059,662	203,901
Net assets available for pension plan and postemployment healthcare plan benefits		
Beginning of year	21,679,987	1,273,108
Ending of year	$ 24,739,649	$1,477,009

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

Judicial Division Trust Fund	Total Defined Benefit Plans	401(k) Voluntary Investment Program	Total Pension Trust Funds	Health Care Fund	Totals (Memorandum Only) 1998	Totals (Memorandum Only) 1997
$ 2,693	$ 442,628	$ 386	$ 443,014	$33,522	$ 476,536	$ 454,669
1,517	336,144	61,805	397,949	0	397,949	366,680
89	45,190	0	45,190	0	45,190	28,222
0	0	0	0	21,798	21,798	20,124
4,299	823,962	62,191	886,153	55,320	941,473	869,695
15,287	2,857,645	37,987	2,895,632	11,642	2,907,274	3,052,504
1,387	260,548	3,411	263,959	1,092	265,051	277,421
1,442	270,810	4,016	274,826	1,135	275,961	269,787
532	100,033	0	100,033	419	100,452	96,075
726	136,451	728	137,179	572	137,751	109,321
19,374	3,625,487	46,142	3,671,629	14,860	3,686,489	3,805,108
(333)	(62,617)	0	(62,617)	(262)	(62,879)	(66,087)
(624)	(117,235)	(664)	(117,899)	(491)	(118,390)	(97,009)
(23)	(4,273)	(19)	(4,292)	(18)	(4,310)	(3,537)
18,394	3,441,362	45,459	3,486,821	14,089	3,500,910	3,638,475
22,693	4,265,324	107,650	4,372,974	69,409	4,442,383	4,508,170
4,829	874,913	0	874,913	0	874,913	769,130
339	18,898	0	18,898	0	18,898	17,998
0	0	0	0	62,395	62,395	59,652
5,168	893,811	0	893,811	62,395	956,206	846,780
46	73,927	16,529	90,456	0	90,456	77,989
25	15,325	1,056	16,381	846	17,227	15,644
(442)	802	(756)	46	(2,122)	(2,076)	(89)
4,797	983,865	16,829	1,000,694	61,119	1,061,813	940,324
17,896	3,281,459	90,821	3,372,280	8,290	3,380,570	3,567,846
123,588	23,076,683	272,053	23,348,736	91,172	23,439,908	19,872,062
$141,484	$26,358,142	$362,874	$26,721,016	$99,462	$26,820,478	$23,439,908

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

NOTE 1—PLAN DESCRIPTION

Organization

The Public Employees' Retirement Association of Colorado (PERA) was established in 1931; the statute relating to PERA is Title 24, Article 51 of the Colorado Revised Statutes (C.R.S.). PERA administers cost-sharing multiple-employer defined benefit plans for the State and School Division Trust Fund, Municipal Division Trust Fund, and Judicial Division Trust Fund (Division Trust Funds). PERA also administers a cost-sharing multiple-employer defined benefit postemployment healthcare plan (Health Care Fund–see Note 8), the Insurance Dividend Reserve, and a multiple-employer Internal Revenue Code (IRC) Section 401(k) defined contribution plan (Voluntary Investment Program–see Note 7). 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 PERA are employed by public employers (most of whom do not participate under Social Security) located in the state of Colorado and affiliated with PERA.

Responsibility for the organization and administration of the Division Trust Funds, Health Care Fund (HCF), Voluntary Investment Program, and Insurance Dividend Reserve is placed with the Board of Trustees (the Board) of PERA. The State Division Trust Fund was established in 1931, the School and Municipal Division Trust Funds in 1944, and the Judicial Division Trust Fund in 1949. The State and School Division Trust Funds were combined in 1997.

The number of affiliated employers for the three divisions is as follows:

	As of December 31	
	1998	**1997**
State and School	271	271
Municipal	97	96
Judicial	6	6
Total employers	374	373

Membership

Division Trust Funds–Defined Benefit Pension Plans

Benefit recipients and members of PERA consisted of the following as of December 31, 1998, and 1997:

	State and School	**Municipal**	**Judicial**	**Totals 1998**	**Totals 1997**
Retirees and beneficiaries currently receiving benefits	47,104	2,485	219	49,808	47,621
Terminated members entitled to benefits, but not yet receiving them	6,805	453	12	7,270	7,085
Non-vested Inactive Members	60,916	6,825	2	67,743	62,050
Active Members:					
Vested					
General Employees	75,768	5,248	205	81,221	83,094
State Troopers	438	0	0	438	426
Non-vested					
General Employees	66,426	5,836	46	72,308	68,708
State Troopers	268	0	0	268	247
Total Active Members	142,900	11,084	251	154,235	152,475
Totals	257,725	20,847	484	279,056	269,231

Voluntary Investment Program

See Note 7.

Health Care Fund

See Note 8.

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

Benefit Provisions

Division Trust Funds-Defined Benefit Pension Plans

Benefit provisions for the defined benefit pension plans are established by and may be amended by state statute. Title 24, Article 51 of the C.R.S. assigns the authority to establish and amend the benefit provisions of the plan to the state Legislature. Retirement benefits are determined by the higher of a defined retirement benefit or a money purchase benefit. Members with five or more years of service automatically receive the higher of the defined benefit retirement benefit or money purchase benefit at retirement. Members are eligible to receive a monthly retirement benefit when they reach age 65 or meet the age and service requirements listed below. With the passage of House Bill 98-1191 effective July 1, 1998, eligibility for unreduced service retirement benefits with 30 or more years of service was lowered to age 50. Prior to enactment of this legislation, eligibility for unreduced benefits was age 55 with 30 years of service. Members elect to receive their benefits in the form of single or joint-life monthly payments.

Service Retirement Eligibility

January 1, 1998—June 30, 1998

Minimum Service Credit	Minimum Age
35 or more years	Any Age
30 years	55
20 years	60
5 years	65
60 months on payroll	65

July 1, 1998—December 31, 1998

Minimum Service Credit	Minimum Age
30 years	50
20 years	60
5 years	65
60 months on payroll	65

Reduced Service Retirement Eligibility

January 1, 1998—December 31, 1998

Minimum Service Credit	Minimum Age
25 years	50
20 years	55
5 years	60

Service retirement benefits are based on the member's years of service, age, and Highest Average Salary (HAS). Members who meet the eligibility for service retirement receive monthly defined retirement benefits equal to 2.5 percent of their HAS for each year of service credit. The benefit shall not exceed 100 percent, nor shall it exceed the maximum amount allowed by federal law.

HAS is calculated as one-twelfth of the average of the highest annual salaries on which PERA contributions were paid that are associated with three periods of 12 consecutive months of service credit. A 15 percent annual limit in salary increases applies if any salary used in the HAS calculation is from the three years prior to retirement. The three 12-month periods do not have to be consecutive nor do they have to be the last three years of employment. In calculating the HAS for members in the Judicial Division Trust Fund, only one period of 12 consecutive months of service credit is used.

A money purchase benefit is determined by the member's life expectancy and the value of the member's contribution account (as of the date of retirement). The value of the member's account at the time of valuation includes a 50 percent matching amount of the member's contributions and interest.

Until July 1, 1998, except for members who retired under age 55, reduced service retirement benefits were calculated the same as a service retirement benefit, then decreased 0.333 percent for each month before the eligible date for service retirement; this reduction equaled 4 percent per year. With the passage of House Bill 98-1191 effective on July 1, 1998, the reduction factor used to calculate PERA benefits was lowered from 4 percent to 3 percent per year for members retiring from age 55 through age 59 with 20 through 29 years of service (0.25 percent per month). House Bill 98-1191 did not affect the 4 percent annual reduction on benefits paid to members retiring at age 60 with 5 years of service.

Prior to July 1, 1998, benefits paid to members who retired under age 55 were reduced 6 percent for each year under age 55 and 4 percent for each year over age 55 that members retired before they would have become eligible for service retirement benefits. Effective July 1, 1998, members who retire under age 55 receive benefits reduced 6 percent for each year under age 55 and 3 percent for each year over age 55 that members retire prior to service retirement eligibility.

PERA also provides disability retirement and survivor benefits. Through the year ending December 31, 1998, members who became permanently disabled with at least five years of earned service, six months of which have been earned since the most recent period of membership, were eligible to apply for disability retirement. This benefit was a percentage of HAS based on actual service credit, plus projected service to age 65 or 20 years of service, whichever was earlier. The HAS calculation was the same calculation used for service retirement. Disability retirees who were under service retirement age may have had their benefits reduced if their earned incomes exceeded PERA's maximum earnings limit.

Monthly benefits paid to qualified survivors of members are based on the defined benefit formula; however, a surviving spouse may be eligible to receive the higher of the money purchase benefit or the defined benefit formula. The minimum monthly benefit, based on the defined benefit formula, that is paid to an eligible surviving spouse equals 25 percent of HAS.

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

If a member dies with less than one year of PERA service credit or with no survivors qualified to receive a monthly benefit, the named beneficiary or the estate will receive a lump-sum payment of the member's contribution account, in addition to a matching amount equal to 50 percent of the member's contributions and interest.

Annual increases in retirement benefits and survivor benefits occur on March 1 for all benefits that have been paid for at least three months preceding March 1. The percentage amount of the increase is the lesser of 3.5 percent compounded annually for the number of years the benefit has been in effect since March 1, 1993, or the percentage increase in the Consumer Price Index from 1992, or the year prior to the year in which the benefit becomes effective, whichever is later, to the year preceding March 1. The percentage is multiplied by the base benefit to determine the increase.

Retirement benefits for State Troopers and members of the Judicial Division differ slightly.

Members who withdraw their accounts before reaching age 65 or meeting the age and service requirements for retirement eligibility receive refunds that include their member contributions and interest, and a matching amount equal to 25 percent of the member's contributions and interest. Members who withdraw their accounts upon or after reaching age 65 or retirement eligibility receive a 50 percent matching amount of the member's contributions and interest.

Interest credited to member contribution accounts is set at 80 percent of PERA's actuarial investment assumption rate. For 1998, the actuarial investment assumption rate was 8.75 percent and the member interest rate was 80 percent of that, or 7.0 percent.

Members who previously received refunds of their contributions may reinstate this service credit through lump-sum or installment payments once they have one year of service credit. Also, any PERA member can accelerate vesting by purchasing service for paid sabbatical leaves and certain periods of non-vested private or public sector employment not covered by PERA through lump-sum or installment payments.

<u>Voluntary Investment Program</u>

See Note 7.

<u>Health Care Fund</u>

See Note 8.

<u>Insurance Dividend Reserve</u>

The Insurance Dividend Reserve (IDR) is an accumulation of dividends received from an insurance company as a return on the premiums paid, adjusted for actual historical experience by members. The IDR is used to provide increased life insurance benefits without increasing premiums to life insurance participants.

Federal Income Tax Status

PERA is exempt from federal income taxes under the Internal Revenue Code.

Termination of PERA

If PERA is partially or fully terminated for any reason, state law provides that the rights of all members and benefit recipients to all benefits on the date of termination, to the extent then funded, will become nonforfeitable.

NOTE 2—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

The Board oversees all funds included in the general purpose financial statements of PERA and has the ability to influence operations. The Board's responsibilities include designation of management, membership eligibility, investment of funds, and accountability for fiscal matters.

PERA is an instrumentality of the state; it is not an agency of state government. Also, it is not subject to administrative direction by any department, commission, board, bureau, or agency of the state. Accordingly, PERA's general purpose financial statements are not included in the financial statements of any other organization.

Basis of Presentation

The accompanying financial statements are prepared in accordance with Government Accounting Standards Board (GASB) Statements 25 and 26, as well as generally accepted accounting principles that apply to governmental accounting for fiduciary funds.

Basis of Accounting

The accompanying general purpose financial statements are prepared using the accrual basis of accounting. Member and employer contributions are recognized as revenues in the period in which compensation is paid to the member by the employer. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

Changes in Accounting Policies

In October of 1998, GASB issued Technical Bulletin (TB) 98-1, "Disclosures about Year 2000 Issues," which was amended with the issuance of TB 99-1 in March of 1999. TB 98-1 and 99-1 provide that disclosures are required to be made about Year 2000 issues and its effects, if any, on the ability that a government can meet its obligations and provide its necessary services. The Year 2000 disclosures for PERA are presented as required supplementary information on page 35.

Fund Accounting

The financial activities of the State and School Division Trust Fund, the Municipal Division Trust Fund, the Judicial Division Trust Fund, the HCF, the IDR, and the Voluntary Investment Program are recorded in separate funds. The State and School, Municipal, and Judicial Divisions maintain separate accounts, and all actuarial determinations are made using separate Division-based information.

The Division Trust Funds, the HCF, and the IDR pool their investments into a combined investment portfolio. Investment value and earnings of the investment pool are allocated among the funds based on each fund's percentage ownership. As of December 31, 1998, and 1997, the ownership percentages of each fund were as follows:

	Ownership Percentage as of December 31	
	1998	**1997**
State and School	93.41%	93.48%
Municipal	5.57	5.49
Judicial	0.53	0.53
HCF	0.41	0.42
IDR	0.08	0.08
Total	100.00%	100.00%

The administrative activities and operating assets and liabilities of PERA are pooled and recorded in a common operating fund. Expenses incurred and net operating assets are allocated from the common operating fund to the Division Trust Funds based on the ratio of the number of members and benefit recipients at the beginning of the year in each Division to the total for all the Division Trust Funds.

Fair Value of Investments

Plan investments are presented at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. Real estate debt is valued on the basis of future principal and interest payments, and is discounted at prevailing interest rates for similar instruments. The fair value of real estate and timber investments (timber investments are included within the alternative investment category, see Note 4) is based on periodic independent appraisals. Other investments that do not have an established market (including venture capital, leveraged buyout funds, and international private equity funds within the alternative investment category, see Note 4) are recorded at estimated fair value. Short-term investments are carried at cost, which approximates fair value.

Property and Equipment

Property and equipment are carried at cost, less accumulated depreciation. Costs of major additions and improvements are capitalized. Expenditures for maintenance and repairs are charged to operations as incurred. Depreciation is calculated using the straight-line method, with estimated lives ranging from three to forty years in the following major classes: vehicles, five years; computer and office equipment, three years to five years; office furniture and leasehold improvements, ten years; and building and building additions, forty years.

Reclassification of Prior Year Amounts

Certain amounts in the prior year financial statements have been reclassified to conform with the current year presentation.

NOTE 3—CONTRIBUTIONS

Division Trust Funds–Defined Benefit Pension Plans

Members and employers are required to contribute to PERA at a rate set by statute. The contribution requirements of plan members and affiliated employers are established under Title 24, Article 51, Part 4 of the C.R.S.

Members are required to contribute 8 percent of their gross salary to PERA, except for State Troopers and Colorado Bureau of Investigation officers, who contribute 11.5 percent. These contributions are placed in individual member accounts. Member contributions are tax-deferred for federal and state income tax purposes, effective July 1, 1984, and January 1, 1987, respectively. Prior to those dates, contributions were made on an after-tax basis.

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

PERA-affiliated employers also contribute a percentage of payroll. The contribution rates for the combined retirement benefits and health care benefits from January 1, 1998, through December 31, 1998, were as follows:

Employer Contributions as a Percent of Members' Salaries
January 1, 1998, through June 30, 1998

Division	Membership	Contributions
State and School	All members, except State Troopers	11.5%
State and School	State Troopers	13.1%
Municipal	All members	10.0%
Judicial	All members	15.0%

Employer Contributions as a Percent of Members' Salaries
July 1, 1998, through December 31, 1998

Division	Membership	Contributions
State and School	All members, except State Troopers	11.4%
State and School	State Troopers	13.1%
Municipal	All members	10.0%
Judicial	All members	15.0%

These contributions are deposited, less the portion of contributions for health care benefits, which are transferred to the HCF, in a trust fund established for each Division for the purpose of creating actuarial reserves for future benefits.

Voluntary Investment Program

See Note 7.

Health Care Fund

See Note 8.

NOTE 4—INVESTMENTS

Investment Authority

Under C.R.S. § 24-51-206, the Board has responsibility for the investment of PERA's funds, with the following investment limitations:

- The aggregate amount of monies invested in corporate stocks or corporate bonds, notes, or debentures that are convertible into stock or in investment trust shares cannot exceed 65 percent of the then book value of the fund.
- No investment of the fund in common or preferred stock (or both) of any single corporation can exceed 5 percent of the then book value of the fund.
- The fund cannot acquire more than 12 percent of the outstanding stock or bonds of any single corporation.

The above limitations and the fund's diversification over several asset classes are intended to reduce the overall investment risk exposure.

Investment Concentrations

No investments (other than those issued or guaranteed by the U.S. government) represent 5 or more percent of the Plan net assets.

Cash

The following table presents the PERA combined total deposits and money market funds as of December 31, 1998:

	Carrying Value	Bank Balance
Deposits (overdrafts) with banks (fully insured by federal depository insurance)	$ (17,980)	$ 5,380
Deposits held at bank (fully collateralized by the underlying securities, held by PERA's agent in PERA's name)	98,666	98,666
Money market funds held at bank (fully collateralized by the underlying securities, held by PERA's agent in PERA's name)	352,075	352,075
Total deposits and money market funds	$432,761	$456,121

The differences between carrying values and bank balances are due to outstanding checks and deposits not yet processed by the bank.

The carrying value of cash and short-term investments at December 31, 1998, on the Statements of Pension Plan and

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

Postemployment Healthcare Plan Net Assets includes short-term fixed income investments of $171,130 and deposit and money market funds of $432,761 for a total of $603,891. PERA considers fixed income and mortgage investments purchased with a maturity of 12 months or less to be short-term investments.

Other Investments

The following table presents the combined PERA total investments held at December 31, 1998, categorized to give an indication of the level of risk assumed by PERA. The categories are:

1. Insured or registered securities, which are held by PERA or its agent in PERA's name.
2. Uninsured and unregistered, collateralized with securities held by the counterparty's trust department or agent in PERA's name.
3. Uncollateralized.

Investments not evidenced by securities are not categorized.

	Carrying Amount (Fair Value)
Investments—Category 1 (held by PERA's agent in PERA's name)	
U.S. government obligations	$ 378,469
Domestic corporate bonds	1,206,817
Domestic stocks	14,341,195
International stocks	3,104,841
International fixed income	497,484
Short-term domestic fixed income	27,183
Short-term commercial paper	37,681
Total investments—category 1	19,593,670
Investments—Not categorized	
Investments held by broker-dealers under securities loans with cash collateral	
U.S. government obligations	789,271
Domestic corporate bonds	77,423
Domestic stocks	1,054,227
International stocks	398,088
International fixed income	44,641
Subtotal	2,363,650
Investments held by broker-dealers under securities loans with pooled non-cash collateral	
U.S. government obligations	14,165
Domestic corporate bonds	8,725
Domestic stocks	114,006
International stocks	141,206
International fixed income	48,269
Subtotal	326,371
Securities lending short-term collateral investment pool	2,422,919
Domestic corporate bonds (private placements)	46,266
Short-term fixed income (private placements)	485
Short-term fixed income (mortgages)	105,781
Real estate equity	1,721,307
Real estate debt	190,636
Alternative investments	1,885,288
Total investments—not categorized	9,062,703
Total investments	$28,656,373

Short-term domestic fixed income of $27,183, short-term commercial paper of $37,681 and short-term private debt of $106,266 are included in the total investment amount shown in this disclosure while being included in cash and short-term investments in the financial statements, due to their maturity being less than 12 months.

Securities Lending Transactions

C.R.S. § 24-51-206, and Board of Trustees' policies permit PERA to lend its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. PERA's custodian, The Northern Trust Company, lends securities of the type on loan at year-end for collateral in the form of U.S. and non-U.S. currencies, Organization for Economic Cooperation and Development (OECD) government securities, equities, or irrevocable letters of credit. U.S. securities are lent versus collateral valued at 102 percent of the fair value of the securities plus any accrued interest. Non-U.S. securities are lent versus collateral valued at 105 percent of the fair value of the securities, plus any accrued interest, except that

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

fixed-income securities can be loaned against same currency collateral at 102 percent, plus any accrued interest. Collateral is marked to market daily. There are no restrictions on the amount of securities that can be lent at one time. Securities lent at year-end for cash and securities collateral are classified according to the category for the collateral in the preceding schedule of custodial credit risk.

As of December 31, 1998, PERA had no credit risk exposure to borrowers because the amounts PERA owes the borrowers exceed the amounts the borrowers owe PERA. The contract with PERA's custodian requires it to indemnify PERA if the borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent). PERA had no losses on securities lending transactions resulting from the default of a borrower or the lending agent for the year ended December 31, 1998.

All securities loans can be terminated on demand by either PERA or the borrower. The weighted average loan life of overall loans was 37 days in December 1998. Cash collateral is invested in a custom collateral account made up of a combination of The Northern Trust Company's Collective Short-Term Extendible Portfolio (65.7 percent), The Northern Trust Company's Short-Term Advantage Fund (2.6 percent), and The Northern Trust Company's Global Core Collateral Section (31.7 percent). Though the weighted average maturities of these funds as of December 31, 1998, were 39, 230, and 29 days, respectively, withdrawals for U.S. securities can be made within one to three days. Longer periods are required for non-U.S. securities. Cash collateral may also be invested separately in term loans, in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. PERA cannot pledge or sell non-cash collateral unless the borrower defaults.

The following represents the balances relating to the securities lending transactions as of December 31, 1998, and December 31, 1997.

Securities Lent	Carrying Amount (Fair Value) of Underlying Securities December 31, 1998	Carrying Amount (Fair Value) of Underlying Securities December 31, 1997
U.S. government obligations	$ 803,436	$ 62,955
Short-term U.S. government obligations	0	410
Domestic corporate bonds	86,148	218,337
Domestic stocks	1,168,233	1,204,884
International stocks	539,294	515,198
International fixed income	92,910	93,994
Short-term international fixed income	0	45,681
Total	$ 2,690,021	$ 2,141,459

As of December 31, 1998, the fair value of lent securities was $2,690,021. The fair value of associated collateral was $2,766,348. Of this amount, $2,422,919 represents the fair value of cash collateral and $343,429 represents the fair value of the non-cash collateral. Non-cash collateral, which PERA does not have the ability to pledge or sell unless the borrower defaults, is not reported in the balance sheet. The system's income net of expenses from securities lending was $15,051 for the year ended December 31, 1998. As of December 31, 1997, the fair value of lent securities was $2,141,459. The fair value of associated collateral was $2,229,294. Of this amount, $1,806,092 represents the fair value of cash collateral and $423,202 represents the fair value of the non-cash collateral. The system's income net of expenses from securities lending was $8,775 for the year ended December 31, 1997.

Alternative Investments

The following table presents the categories of investments within the alternative investment asset class at December 31, 1998.

	Fair Value at December 31, 1998
Leveraged buyout funds	$ 886,120
Venture capital	390,334
International private equity funds	344,149
Timber investments	264,685
Total Alternative Investments	$1,885,288

NOTE 5—FINANCIAL INSTRUMENTS WITH OFF-BALANCE SHEET RISK

Covered Call Options

PERA writes covered call options as an investment technique to enhance portfolio returns and to reduce portfolio volatilities. When a call option is sold (written), it obligates the seller to deliver stock at a set price for a specific period of time. PERA receives premium income for options written, and the value of the options are recorded as a liability due to the obligation to deliver stock.

Notes to General Purpose Financial Statements

(In Thousands of Dollars)

The liability is adjusted to reflect the current fair value of the options written. Fair value is the amount that PERA would pay to terminate the contracts at the reporting date. If a call option expires, PERA realizes a gain to the extent of the premium received. If a call option is exercised, the premium received is realized as a gain. A gain or loss is also realized on the purchase and subsequent sale of the underlying security to satisfy the delivery obligation. PERA may repurchase a call option written at its discretion when it is favorable to do so. When a contract is repurchased, the liability is reduced and the difference between the premium received and the amount paid to close the contract is realized as a gain or loss.

By writing covered call options, in exchange for the premium income, PERA foregoes the opportunity for capital appreciation above the exercise price should the market price of the underlying security increase. As a result, PERA bears the risk of an unfavorable change in the price of the security underlying the written option.

PERA has written covered call options on 228 companies' securities as of December 31, 1998. Premiums received on the sales of these options were $1.4 billion and the fair value as of December 31, 1998, was ($1.6) billion.

Index Options

PERA purchases and sells call option spreads on the S&P 500 Index to enhance portfolio returns. The positions vary in order to take advantage of option premium levels and market conditions. The domestic option spreads are exchange traded with margin required. As of December 31, 1998, PERA pledged 81 securities in the underlying S&P 500 Index Portfolio for collateral. PERA pledged shares with a fair value of $2.0 billion.

Premiums paid are recorded as an asset and premiums received as a liability at the inception of the contract. The open contracts are marked-to-market to reflect the current fair value. When the contracts are exercised, the asset or liability is taken off record, a realized gain or loss is recognized, and a cash settlement is made. If the options expire out of the money, the asset or liability position is removed and a realized gain or loss is recognized for the premium paid or received. The option contracts may also be closed or repurchased by PERA, at which time the asset or liability is removed, a realized gain or loss is recognized, and cash is received on closing a contract or cash is paid on the amount repurchased.

Market risk may arise from an imperfect correlation between the change in the fair value of the underlying index and the contracts open. The maximum exposure to loss for a purchased option is limited to the premium initially paid for the option.

As of December 31, 1998, PERA received net premiums of $457 million and the fair value of the open contracts was ($564) million.

Forward Foreign Exchange Contracts

A currency forward is a contractual agreement between two parties to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. Forward commitments are not standardized and carry credit risk due to the possible nonperformance by one of the counterparties. The maximum potential loss is the aggregate face value in U.S. dollars at the time the contract was opened; however, the likelihood of such loss is remote. No losses occurred in 1998 or 1997. Forwards are usually transacted over-the-counter. These transactions are entered into in order to hedge risks from exposure to foreign currency rate fluctuation and to facilitate trade settlement of foreign security transactions. Forwards carry market risk resulting from adverse fluctuations in foreign exchange rates. Recognition of realized gain or loss depends on whether the currency exchange rate has moved favorably or unfavorably to the contract holder upon termination of the contract. Prior to termination of the contract, PERA records the unrealized translation gain or loss based on the applicable forward exchange rates.

At December 31, 1998, PERA had outstanding forward foreign exchange contracts to purchase foreign currencies with a fair value of $566 million and outstanding contracts to sell foreign currencies with a fair value of ($562) million.

Futures

A futures contract is an agreement for delayed delivery of securities, commodities, or money market instruments in which the seller agrees to make delivery at a specified future date of a specified instrument, at a specific price or yield. Futures are exchange traded and the exchange assumes the risk of nonperformance by a counterparty. PERA is required to pledge to the broker cash or U.S. government securities, (the initial margin), equal to a certain percentage of the contract amount. The fair value of U.S. Treasury Bill collateral was $9 million as of December 31, 1998. Subsequent payments, known as "variation margin," are made by PERA each day, depending on the daily fluctuations in the value of the underlying security. Such variation margin is recorded as realized gain or loss in the financial statements.

PERA buys and sells futures contracts for portfolio yield enhancement, to reduce the transaction costs of buying the underlying assets and as a hedge against market risk, which is the exposure to the possibility of financial loss caused by adverse changes in the underlying assets. Should interest rates move unexpectedly, PERA may not achieve the anticipated benefits of the futures contracts and may realize a loss.

The fair value of U.S. Long Bond Futures (Short) was ($307) million and the fair value of the DAX Index Futures was $26 million as of December 31, 1998.

The financial instruments discussed above involve, to varying degrees, elements of market risk to the extent of future market movements in excess of the amount recognized in the Statements of Pension Plan and Postemployment Healthcare Plan Net Assets.

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

Market risk arises from the potential unfavorable change in the value of the underlying instruments. The following contract or notional amounts of these instruments reflect the extent of PERA's involvement in each class of financial instrument as of December 31, 1998. The contract or notional amounts do not represent the exposure to market loss.

Contracts	Description	Contract or Notional Value
721,079	Covered call options written—domestic	$ 4,756,241
87,600	Long index call options—domestic	$ 10,768,055
87,600	Short index call options—domestic	$(10,768,055)
86	Long index futures contracts—international	$ 26,148
2,400	Short fixed income futures contracts—domestic	$ (306,675)
52	Long forward foreign exchange contracts	$ 555,338
52	Short forward foreign exchange contracts	$ (555,338)

Mortgage-Backed Securities

A mortgage-backed security depends on the underlying pool of mortgage loans to provide the cash flow to make principal and interest payments on the security. A decline in interest rates can result in prepayments, which reduces the fair value of the security. If homeowners pay on mortgages longer than anticipated, the cash flows are greater and the return on investment would be higher than anticipated. A collateralized mortgage obligation (CMO), is a mortgage-backed security that is comprised of classes of bonds created by prioritizing the cash flows of the underlying mortgage pool. This redistributes prepayment risk among the various bond classes in the CMO structure.

PERA invests in mortgage-backed securities to enhance fixed income returns. Mortgage-backed securities are subject to credit risk, the risk that the borrower will be unable to meet its obligations. These securities are also subject to prepayment risk, which is the risk that a payment will be made in excess of the regularly scheduled principal payment. Prepayment risk is comprised of two risks: call risk, the risk that prepayments will occur when interest rates have declined, and extension risk, the risk that prepayments will not be made when interest rates have increased.

As of December 31, 1998, the fair value of government mortgage-backed securities was $310 million and the fair value of asset-backed securities was $181 million. The fair value of CMOs as of December 31, 1998, was $28 million.

NOTE 6—COMMITMENTS AND CONTINGENCIES

At December 31, 1998, PERA was committed to the future purchase of investments at an aggregate cost of approximately $2,841,145.

Certain legal proceedings are pending against PERA arising from its normal activities that, based on the facts presently available and the advice of legal counsel, will not have an adverse effect on PERA's financial condition on settlement.

NOTE 7—VOLUNTARY INVESTMENT PROGRAM—PERA'S 401(k) DEFINED CONTRIBUTION PENSION PLAN DESCRIPTION

The Voluntary Investment Program is an Internal Revenue Code Section 401(k) defined contribution plan administered by PERA to provide benefits at retirement to PERA members in the State and School, Municipal, and Judicial Division Trust Funds. Plan participation is voluntary to all PERA members, and contributions are separate from the defined benefit contributions made to PERA.

Members may contribute up to 23 percent of covered salary, to a maximum of $10,000 (actual dollars) for 1998; employer contributions are optional. The contribution requirements for the program are established under C.R.S. § 24-51-1402. At December 31, 1998, there were 20,112 participants with account balances.

Members of the program are allowed to change their contribution amounts, transfer account balances among seven investment funds, or change the contribution percentages designated to each fund on a monthly basis. The seven investment funds are: Money Market, Short-Term Bond, Long-Term Bond, Balanced, Growth and Income Stock, Growth Stock, and International Stock. Members may access their funds through loans, in-service withdrawals, and distributions as allowed under the Internal Revenue Code. Plan provisions are established or are authorized to be established by the PERA Board of Trustees under Title 24, Article 51, Part 14 of the C.R.S.

Significant Accounting Policies—401(k) Voluntary Investment Program

Basis of Accounting

The Voluntary Investment Program financial statements are prepared using the accrual basis of accounting. Employer and member contributions are recognized in the period that the contributions are due.

Method Used to Value Investments

Plan investments are presented at fair value. Securities traded on a national or international exchange are valued at the last reported

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

sales price at current exchange rates. Other investments that do not have an established market are recorded at estimated fair value.

Investment Concentrations

The following investments of the Voluntary Investment Program represent 5 or more percent of the total plan net assets at December 31, 1998.

Pacific Investment Management Company (PIMCO) Total Return Fund	$28,737
Dodge & Cox Balanced Fund	45,235
PERA Growth and Income Stock Fund (Managed by PERA Staff)	161,384
Fidelity Contrafund	88,468

NOTE 8—HEALTH CARE FUND—PERA'S COST-SHARING MULTIPLE-EMPLOYER DEFINED BENEFIT POSTEMPLOYMENT HEALTHCARE PLAN

Plan Description and Benefit Provisions

The Health Care Fund (HCF) provides a health care premium subsidy to participating PERA benefit recipients and their eligible beneficiaries who choose to enroll in the Program. Title 24, Article 51, Part 12 of the C.R.S., specifies the eligibility for enrollment and the amount of the premium subsidy. In 1998 the maximum monthly subsidy was $115 (actual dollars) for benefit recipients whose retirement benefits were based on 20 years or more of service credit. For those with less service credit, the subsidy was reduced by 5 percent ($5.75 actual dollars) for each year under 20 years. The benefit recipient paid the remaining portion of the premium if the subsidy did not cover the entire amount.

The HCF offers two general types of health plans–"insurance-purchasing pools" and "risk-sharing pools." The health maintenance organization (HMO) plans the HCF uses are considered to be insurance-purchasing pools. The Mutual of Omaha health care plans and the Express Scripts/ValueRx prescription drug program the HCF uses are considered to be self-insured risk-sharing pools.

The Board has the authority to contract, self-insure, and make disbursements necessary to carry out the purposes of the Program. PERA contracts with a major medical indemnity carrier to administer claims for the self-insured plans and with HMOs providing services within Colorado.

Membership

Enrollment in the Health Care Program (the Program) is voluntary for the following: (1) any PERA benefit recipient; (2) guardians of children receiving PERA survivor benefits if children are enrolled in the Program; (3) retirees temporarily not receiving PERA benefits; (4) surviving spouses of deceased retirees who are not receiving PERA benefits, but were enrolled in the Program when death occurred; and (5) divorced spouses of retirees who are not receiving PERA benefits, but were enrolled in the Program when the divorce occurred. As of December 31, 1998, the Program had 30,291 enrollees of whom 7,974 were under 65 and 22,317 who were 65 or older.

Contributions

The HCF is funded by affiliated employer contributions equal to 0.8 percent of covered salaries, included in the above combined rates, for all PERA members as set by statute. The contribution requirements for the affiliated employers are established under C.R.S. § 24-51-208.

Schedule of Benefits Paid

Breakdown of "Risk-Sharing Pool" and "Insurance-Purchasing Pool" HCF Benefits Paid to Participants

Risk-Sharing Pool Benefits Paid	1998	1997
Mutual of Omaha claims expenses before incurred but not reported (IBNR) adjustment	$ 29,618	$ 27,466
Net change in Mutual of Omaha IBNR adjustment expense for current and prior years	441	1,160
Total Mutual of Omaha claims and claims adjustment expenses	30,059	28,626
Mutual of Omaha administrative expenses before adjustment for IBNR run-out	3,173	3,089
Accrual of administrative expenses for IBNR run-out adjustments	18	64
Total administrative expenses including adjustments for IBNR run-out	3,191	3,153
Express Scripts/ValueRx prescription drug expenses	15,269	15,090
Total risk-sharing pool benefits paid	48,519	46,869
Insurance-Purchasing Pool Benefits Paid		
Premium subsidy for non-risk sharing HMO health care plans and other net benefits	12,600	12,783
Total benefits paid to health care participants	$ 61,119	$ 59,652

Notes to General Purpose Financial Statements
(In Thousands of Dollars)

Basis for Estimated Liabilities for "Risk-Sharing Pools"

The HCF establishes claims liabilities based on the estimates of the ultimate costs of claims (including future claims adjustment expenses) that have been "incurred but not reported" (IBNR). The estimated claims liability for the self-insured health care plan was calculated by Mutual of Omaha, the Fund's third-party administrator, acting as an actuary, using a variety of actuarial and statistical techniques and then adjusted for actual experience to produce current estimates that reflect recent settlements, claim frequency, and other economic and social factors. Estimated IBNR claim liability for year ended December 31, 1998, is $7,840. The IBNR for the self-insured prescription drug program is negligible due to the speed in processing the claims.

The estimated IBNR related to Administration Fee charged by Mutual of Omaha is calculated as 15 percent of the average Administration Fee for the Year. The estimated Administration Fee IBNR is calculated at $513 for the year ended December 31, 1998.

The following represents the changes in the aggregate estimated claims liability IBNR and related Administration Fee IBNR for the self-insured policies:

Changes in Estimated Claims Liability

	1998	1997
Unpaid claims and claims adjustment expenses at beginning of year	$ 7,399	$ 6,239
Incurred claims and claims adjustment expenses:		
Provision for insured events of current year	44,637	43,135
Increase (decrease) in provision for insured events of prior years	691	581
Total incurred claims and claims adjustment expenses	45,328	43,716
Payments:		
Claims and claims adjustment expenses attributable to insured events of current year	36,797	35,736
Claims and claims adjustment expenses attributable to insured events of prior years	8,090	6,820
Total claims payments	44,887	42,556
Unpaid Claims and Claims Adjustment Expenses at Year End	$ 7,840	$ 7,399

NOTE 9—INSURANCE DIVIDEND RESERVE NOTE DISCLOSURES

The following represents the changes in assets and liabilities for the Insurance Dividend Reserve (Agency Fund) for the year ended 1998.

	Balance 1/1/98	Net Change	Balance 12/31/98
Assets			
Cash and short-term investments	$ 729	$ (275)	$ 454
Securities lending collateral	1,498	398	1,896
Receivables	79	15	94
Investments at fair value	18,409	1,729	20,138
Total assets	$ 20,715	$ 1,867	$ 22,582
Liabilities			
Investment settlements and other	$ 19,217	$ 1,469	$ 20,686
Securities lending obligations	1,498	398	1,896
Total liabilities	$ 20,715	$ 1,867	$ 22,582

Notes to General Purpose Financial Statements

(In Thousands of Dollars)

NOTE 10—SUBSEQUENT EVENTS

House Bill 1082 enacted into law in 1997 established a two-tiered disability retirement program as explained below applicable to members who apply for disability on or after January 1, 1999.

- Disability retirement benefits are provided to members who are totally and permanently mentally or physically incapacitated from regular and substantial gainful employment.
- Short-term disability payments are provided to members who are mentally or physically incapacitated from performance of essential job duties with reasonable accommodation, but who are not totally and permanently incapacitated from regular and substantial gainful employment. PERA shall provide reasonable income replacement, and rehabilitation or retraining services.

In 1999, Senate Bill 90, initiated by the PERA Board of Trustees, was enacted into law. This legislation contains several features that will affect the PERA Health Care Program and improve pension portability for short-service PERA members. Pension provisions specified in Senate Bill 90 include:

1. Increasing the money purchase benefit matching percentages on payments to terminating members to 50 percent of the member's contributions and interest if refunded prior to retirement eligibility or age 65, and 100 percent if refunded when eligible for retirement or age 65, or upon the death of a member. Increases in the money purchase benefit match distribution and money purchase benefit are effective July 1, 1999.
2. Establishing an employer match on members' voluntary contributions to defined contributions plans, once PERA's unfunded liability is fully amortized, or January 1, 2001, whichever is later. When the employer match starts, contribution rates for employers will be reduced as provided in the act.
3. Reducing the employee contribution rate for state troopers from 11.5 percent to 10 percent effective July 1, 1999.
4. Changing the special benefit formula that applies to judges hired before July 1, 1973.

Senate Bill 90 improves the PERA Health Care Program by:

1. Establishing the Health Care Trust Fund, effective July 1, 1999.
2. Increasing the employer contribution rate designated for the Health Care Trust Fund from 0.8 percent of salary to 1.1 percent by reducing the rate designated for the pension trust fund by 0.3 percent on July 1, 1999. The resulting employer contribution rates that will be deposited in the pension trust fund, effective July 1, 1999, will be as follows: State and School Division 10.3 percent, Municipal Division 8.9 percent, and Judicial Division 13.9 percent.
3. Doubling the amount of the Health Care Program subsidy for pre-Medicare retirees up to a maximum of $230 (actual dollars) per month for a retiree with 20 or more years of service, effective July 1, 2000.
4. Authorizing PERA to offer a Health Care Program to PERA-affiliated employers on a voluntary basis for their active PERA members, effective January 1, 2001.

Required Supplementary Information

Schedule of Funding Progress For the Years Ended December 31

(In Thousands of Dollars)

Valuation Year

State and School Division Trust Fund	**1998**	**1997**
Actuarial Value of Assets (a)	$21,644,949	$18,572,185
Actuarial Accrued Liability (b)	22,498,963	20,264,739
Total Unfunded Actuarial Accrued Liability (UAAL) (b-a)	854,014	1,692,553
Funded Ratio (a/b)	96.2%	91.6%
Covered Payroll (c)	4,098,423	3,877,988
UAAL as a Percentage of Covered Payroll	20.8%	43.6%

State Division Trust Fund[1]	**1996**	**1995**	**1994**	**1993**
Actuarial Value of Assets (a)	$ 6,562,389	$ 5,838,863	$ 5,239,957	$ 4,862,052
Actuarial Accrued Liability (b)	7,211,331	6,922,184	6,395,090	5,992,398
Total Unfunded Actuarial Accrued Liability (UAAL) (b-a)	648,942	1,083,321	1,155,133	1,130,346
Funded Ratio (a/b)	91.0%	84.4%	81.9%	81.1%
Covered Payroll (c)	1,546,194	1,510,353	1,429,026	1,398,002
UAAL as a Percentage of Covered Payroll	42.0%	71.7%	80.8%	80.9%

School Division Trust Fund[1]	**1996**	**1995**	**1994**	**1993**
Actuarial Value of Assets (a)	$ 9,717,424	$ 8,599,151	$ 7,675,230	$ 7,076,984
Actuarial Accrued Liability (b)	9,767,811	9,248,544	8,529,017	8,031,939
Total Unfunded Actuarial Accrued Liability (UAAL) (b-a)	50,386	649,393	853,788	954,955
Funded Ratio (a/b)	99.5%	93.0%	90.0%	88.1%
Covered Payroll (c)	2,114,118	1,994,914	1,869,673	1,790,555
UAAL as a Percentage of Covered Payroll	2.4%	32.6%	45.7%	53.3%

Municipal Division Trust Fund	**1998**	**1997**	**1996**	**1995**	**1994**	**1993**
Actuarial Value of Assets (a)	$ 1,300,574	$ 1,098,291	$ 949,049	$ 829,117	$ 728,217	$ 660,431
Actuarial Accrued Liability (b)	1,301,869	1,121,444	920,713	842,576	759,365	695,564
Total Unfunded (Overfunded) Actuarial Accrued Liability (UAAL/OAAL) (b-a)	1,295	23,153	(28,336)	13,459	31,148	35,133
Funded Ratio (a/b)	99.9%	97.9%	103.1%	98.4%	95.9%	94.9%
Covered Payroll (c)	359,025	314,167	289,818	280,999	263,249	245,471
UAAL/OAAL as a Percentage of Covered Payroll	0.4%	7.4%	(9.8)%	4.8%	11.8%	14.3%

Judicial Division Trust Fund	**1998**	**1997**	**1996**	**1995**	**1994**	**1993**
Actuarial Value of Assets (a)	$ 124,059	$ 106,012	$ 92,908	$ 82,384	$ 73,981	$ 68,635
Actuarial Accrued Liability (b)	115,228	107,888	92,051	87,003	80,605	77,131
Total Unfunded (Overfunded) Actuarial Accrued Liability (UAAL/OAAL) (b-a)	(8,831)	1,876	(856)	4,619	6,624	8,496
Funded Ratio (a/b)	107.7%	98.3%	100.9%	94.7%	91.8%	89.0%
Covered Payroll (c)	19,854	19,666	18,832	17,533	17,023	17,279
UAAL/OAAL as a Percentage of Covered Payroll	(44.5)%	9.5%	(4.5)%	26.3%	38.9%	49.2%

Valuation Year

Health Care Fund	**1998**	**1997**	**1995**	**1992**	**1990**
Actuarial Value of Assets (a)	$ 82,929	$ 76,957	$ 72,423	$ 65,021	$ 52,647
Actuarial Accrued Liability (b)	591,222	595,597	551,699	501,684	548,172
Total Unfunded Actuarial Accrued Liability (UAAL) (b-a)	508,293	518,639	479,276	436,663	495,525
Funded Ratio (a/b)	14.0%	12.9%	13.1%	13.0%	9.6%
Covered Payroll (c)	4,477,302	4,211,821	3,803,799	3,436,694	2,912,712
UAAL as a Percentage of Covered Payroll	11.4%	12.3%	12.6%	12.7%	17.0%

[1]The State Division Trust Fund and the School Division Trust Fund were merged on July 1, 1997.

The accompanying notes are an integral part of the Required Supplementary Information.

Required Supplementary Information

Schedule of Employer Contributions for the Years Ended December 31

(In Thousands of Dollars)

State and School Division Trust Fund	**1998**	**1997**
Dollar Amount of Annual Required Contribution (ARC)	$409,749	$392,898
ARC[1]	10.61%	10.71%
% ARC Contributed	100%	100%

State Division Trust Fund[2]	**1996**	**1995**	**1994**	**1993**
Dollar Amount of Annual Required Contribution (ARC)	$159,057	$153,472	$147,269	$137,587
ARC[1]	10.83%	10.83%	10.83%	10.33%
% ARC Contributed	100%	100%	100%	100%

School Division Trust Fund[2]	**1996**	**1995**	**1994**	**1993**
Dollar Amount of Annual Required Contribution (ARC)	$214,155	$200,889	$188,161	$181,593
ARC[1]	10.80%	10.80%	10.80%	10.80%
% ARC Contributed	100%	100%	100%	100%

Municipal Division Trust Fund	**1998**	**1997**	**1996**	**1995**	**1994**	**1993**
Dollar Amount of Annual Required Contribution (ARC)	$ 30,186	$ 27,253	$ 25,149	$ 23,980	$ 22,359	$ 20,763
ARC[1]	9.20%	9.20%	9.20%	9.20%	9.20%	9.20%
% ARC Contributed	100%	100%	100%	100%	100%	100%

Judicial Division Trust Fund	**1998**	**1997**	**1996**	**1995**	**1994**	**1993**
Dollar Amount of Annual Required Contribution (ARC)	$ 2,693	$ 2,636	$ 2,531	$ 2,353	$ 2,294	$ 2,301
ARC[1]	14.2%	14.20%	14.20%	14.20%	14.20%	14.20%
% ARC Contributed	100%	100%	100%	100%	100%	100%

Health Care Fund	**1998**	**1997**	**1995**	**1992**	**1990**
Dollar Amount of Annual Required Contribution (ARC)	$ 33,522	$ 31,750	$ 28,467	$ 27,460	$ 20,974
ARC[1]	0.80%	0.80%	0.80%	0.80%	0.80%
% ARC Contributed	100%	100%	100%	100%	100%

[1] As a percent of covered payroll.
[2] The State Division Trust Fund and the School Division Trust Fund were merged on July 1, 1997.

The accompanying notes are an integral part of the Required Supplementary Information.

Notes to Required Supplementary Information

NOTE 1—DESCRIPTION

The historical trend information about the State and School Division Trust Fund, Municipal Division Trust Fund, Judicial Division Trust Fund, and the Health Care Fund is presented as required supplementary information. This information is intended to help users assess the funding status on a going-concern basis and to assess progress made in accumulating assets to pay benefits when due.

Information for the required supplementary schedules of funding progress and employer contributions is available for six years for the Division Trust Funds. The Health Care Fund required supplementary information is provided for years when actuarial valuations were performed.

NOTE 2—ACTUARIAL ASSUMPTIONS AND METHODS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

	State and School Division Trust Fund	Municipal Division Trust Fund	Judicial Division Trust Fund	Health Care Fund
Valuation date	12/31/98	12/31/98	12/31/98	12/31/98
Actuarial cost method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization method	Level percent Open	Level percent Open	Level percent Open	Level percent Open
Remaining amortization period	6	1	0	52
Asset valuation method	4-year smoothed market	4-year smoothed market	4-year smoothed market	4-year smoothed market
Actuarial assumptions				
Investment rate of return*	8.75%	8.75%	8.75%	8.75%
Projected salary increases*	5.0-10.0%	5.5-12.9%	5.0-6.01%	Not applicable
*Includes inflation at	4.50%	4.50%	4.50%	4.50%
Cost-of-living adjustments	CPI increase maximum 3.5%	CPI increase maximum 3.5%	CPI increase maximum 3.5%	None
Health care inflation factor	Not applicable	Not applicable	Not applicable	Zero

NOTE 3—SIGNIFICANT FACTORS AFFECTING TRENDS IN ACTUARIAL INFORMATION

Pension Plans

1998 Changes in Plan Provisions Since Prior Year—Combined State and School, Municipal, and Judicial Division Trust Funds:

- The employer contribution rate for the State and School Division, except State Troopers, was changed from 11.5 percent to 11.4 percent, effective July 1, 1998.
- The eligibility for service retirement benefits for members, except State Troopers, was changed to include age 50 with 30 years of service credit.
- In the calculation of reduced service retirement benefits for members, except State Troopers, the reduction was changed from 4 percent to 3 percent for members who retire at or after age 55 and before age 60.
- In the calculation of reduced service retirement for State Troopers, the reduction was changed from 4 percent to 3 percent for members who retire at or after age 50 and before age 60.

1997 Changes in Plan Provisions Since Prior Year—Combined State and School, Municipal, and Judicial Division Trust Funds:

- The Highest Average Salary (HAS) for members of the Judicial Division was changed from a three-year average to the highest one year's salary.
- The State Division Trust Fund and the School Division Trust Fund were merged into the State and School Division Trust Fund.
- The maximum amortization period for the three Division Trust Funds was reduced from 60 years to 40 years.
- The employer contribution rate for the State and School Division was reduced 0.1 percent to 11.5 percent.
- The benefit formula for years over 20 was changed retroactively from 1.5 percent to 2.5 percent of HAS beginning July 1997, up to a maximum of 100 percent of HAS.

Notes to Required Supplementary Information

1996 Changes in Plan Provisions Since Prior Year—State, School, Municipal, and Judicial Division Trust Funds:

- The investment rate of return assumption was increased from 8.5 percent to 8.75 percent.
- Mortality, withdrawal, retirement, disability, and pay increase assumptions were changed based on the actuarial experience study performed in 1996.

1995 Changes in Plan Provisions Since Prior Year—State, School, Municipal, and Judicial Division Trust Funds:

- The interest rate credited on member contribution accounts was changed to equal 80 percent of the actuarial investment assumption rate.
- Interest credited on member contribution accounts is calculated from date of membership rather than just calculated from July 1, 1991.
- Established a "matching" refund amount before attaining retirement eligibility age equal to 25 percent of contributions and interest or equal to 50 percent of contributions and interest after attaining retirement eligibility age or age 65.
- The money purchase benefit was established and is actuarially determined based on the member contribution account and the matching contribution amount and interest.

1994 Changes in Plan Provisions Since Prior Year—State, School, Municipal, and Judicial Division Trust Funds:

- No significant changes in Plan provisions.

1993 Changes in Plan Provisions Since Prior Year—State, School, Municipal, and Judicial Division Trust Funds:

- The annual benefit adjustment was changed from a simple increase of 4 percent per year to a compound increase of 3.5 percent per year.
- The Cost of Living Stabilization Fund was merged into the State, School, Municipal, and Judicial Division Trust Funds.

Health Care Fund

1998 Changes in Plan Provisions Since Prior Actuarial Valuation—Health Care Fund:

- The plan provisions were changed to allow benefit recipients to cover dependent children up to age 24.

1997 Changes in Plan Provisions Since Prior Actuarial Valuation—Health Care Fund:

- The investment rate of return assumption was increased from 8.5 percent to 8.75 percent.
- Mortality and inflation assumptions were changed based on the actuarial experience study performed in 1996.

1995 Changes in Plan Provisions Since Prior Actuarial Valuation—Health Care Fund:

- No significant changes in Plan provisions.

1992 Changes in Plan Provisions Since Prior Actuarial Valuation—Health Care Fund:

- State law changed requiring membership for all employees who are not exempt by federal law. Active membership increased 24 percent during the year of this change.
- The method of valuing assets was changed from a cost method to the 4-year smoothed market value of assets method.
- The investment rate of return assumption was increased from 7.5 percent to 8.5 percent.

1990 Changes in Plan Provisions Since Prior Actuarial Valuation—Health Care Fund:

- No significant changes in Plan provisions.

Required Supplementary Information

Health Care Fund
Required Supplemental Schedule of Claims Development Information

The Claims Development Information Table illustrates how the Health Care Fund's earned revenues and investment income compares to the costs of loss and other expenses related to the Mutual of Omaha and the Express Scripts/ValueRx policies as of the end of 1997 and 1998 (information for years prior to 1997 is not available). The rows of the table are defined as follows:

1. This line shows the total of the year's gross earned premiums, employer contributions, and reported investment revenues.
2. This line shows the year's other operating costs of the Health Care Fund including overhead and claims expenses not allocable to individual claims.
3. This line shows the incurred claims and allocated claims adjustment expenses, claims assumed by re-insurers, and net incurred claims and claims adjustment expenses (both paid and accrued) as originally reported at the end of the year in which the event that triggered coverage occurred (called service year).
4. This section shows the cumulative amounts paid on the Mutual of Omaha and Express Scripts/ValueRx policies as of the end of successive years for each service year.
5. This line shows the latest re-estimated amount of claims assumed by re-insurers for each successive year. The Health Care Fund does not use reinsurance agreements.
6. This section shows how each service year's incurred claims increased or decreased as of the end of successive years. (This annual re-estimation results from new information received on known claims, re-evaluation of existing information on known claims, and emergence of new claims not previously known.)
7. This line compares the latest re-estimated incurred claims amount to the amount originally established (line 3) and shows whether this latest estimate of claims cost is greater or less than originally thought. As data of individual service years mature, the correlation between original estimates and re-estimated amounts is commonly used to evaluate the accuracy of incurred claims currently recognized in less mature service years.

Claims Development Information Table
(In Thousands of Dollars)

	1998	1997
1. Premium revenues, employer contribution, and investment income:		
Total premium revenues	$21,798	$20,124
Employer contributions	33,522	31,750
Total investment income	14,089	15,711
Total premium revenue, contributions, and investment income	$69,409	$67,585
2. HCF unallocated expenses:		
Premium subsidy expense and other unallocated deductions	$12,600	$12,783
3. Estimated losses and expenses:		
Administrative expense	$ 3,191	$ 3,153
Express Scripts/ValueRx claims expense	15,269	15,090
Mutual of Omaha claims expense	30,059	28,626
Total estimated losses and expenses	$48,519	$46,869
4. Net paid (cumulative) as of:		
End of service year	$39,988	$38,889
One year later		46,299
5. Re-estimated ceded losses and expenses	$ 0	$ 0
6. Re-estimated net incurred losses and expenses		
End of service year	$48,519	$46,299
One year later		46,299
7. Increase (decrease) in estimated net incurred losses and expenses from end of service year	$ 0	$ (570)

Required Supplementary Information

Year 2000 Issues and Activity

PERA recognizes that the Year 2000 (Y2K) issue presents serious and complex issues. PERA is currently addressing Y2K issues relating to all of its computer systems and other electronic equipment. The Y2K issue refers to the fact that many computer programs use only the last two digits to refer to a year. Therefore, both 1900 and 2000 would be referred to as "00." Computer programs have to be adjusted to recognize the differences between those two years or the programs may process data inaccurately or stop processing data altogether. Another factor that may cause problems in programs is whether the programs are able to detect that the Year 2000 is a leap year. The Y2K issue encompasses all computer systems and any equipment that is dependent on date-sensitive microchip technology, such as environmental systems, elevators, and vehicles. The Y2K issue not only involves PERA's internal systems but also services provided by external parties and those with whom PERA interacts with on benefit- and investment-related activities.

PERA has devoted a significant amount of in-house personnel resources to the awareness, assessment, remediation, validation/testing stages of our systems for Y2K issues. As of December 31, 1998, PERA has not entered into any external contractual agreements with respect to making computer systems Y2K compliant.

In the fourth quarter of 1997 PERA formalized its dealings on these issues by initiating a Y2K compliance project. PERA has completed an inventory of computer systems and other electronic equipment that may be affected by the Y2K issue and that are necessary in conducting the Plans' operations. PERA relies upon four mission-critical computer systems to manage the responsibilities of the retirement system: (1) the benefit system, which maintains contribution and service credit history for all members, and processes all refund and retiree payments, (2) the investment system, which maintains records of all security transactions for each portfolio held at PERA, (3) the document management system, which is utilized to maintain an image of all pertinent member documents, and (4) the accounting system, which is utilized to record and reconcile all financial transactions, prepare the various financial statements, process members receivables and accounts payable.

PERA has identified the above-mentioned information systems that are mission critical and is subjecting those systems and its electronic equipment to the following stages of work to address Year 2000 issues:

Awareness stage—Establishing a budget and project plan for dealing with the Year 2000 issue.

Assessment stage—Identifying the systems and components for which the Year 2000 compliant work is needed.

Remediation stage—Making changes to systems and equipment.

Validation/testing stage—Validating and testing the changes that were made during the remediation stage.

PERA Year 2000 remediation work is in the following stages below. "C" means complete, "P" means in progress, "A" means still need to be addressed.

	Awareness	Assessment	Remediation	Validation/Testing
Benefit Systems				
Retiree Payroll	C	C	C	C
Active Member	C	C	C	C
401(k) (External Recordkeeper)	C	C	C	C
Investment Systems				
Portfolio Management	C	C	C	C
Custodian Bank Interface	C	C	C	C
Trading	C	C	P	A
Document Management System	C	C	C	C
Accounting Systems				
Accounts Receivable	C	C	C	C
Accounts Payable	C	C	P	A
General Ledger	C	C	P	A
Electronic Equipment				
Computer Hardware	C	C	C	P
Telephone/Communication	C	C	C	C

PERA has also contacted all outside parties (i.e., investment service providers, information systems vendors, employers, and other service providers) whose Y2K compliance could affect the operations of the retirement system. PERA expects to receive assurances that the outside parties' systems will be Y2K compliant prior to January 1, 2000.

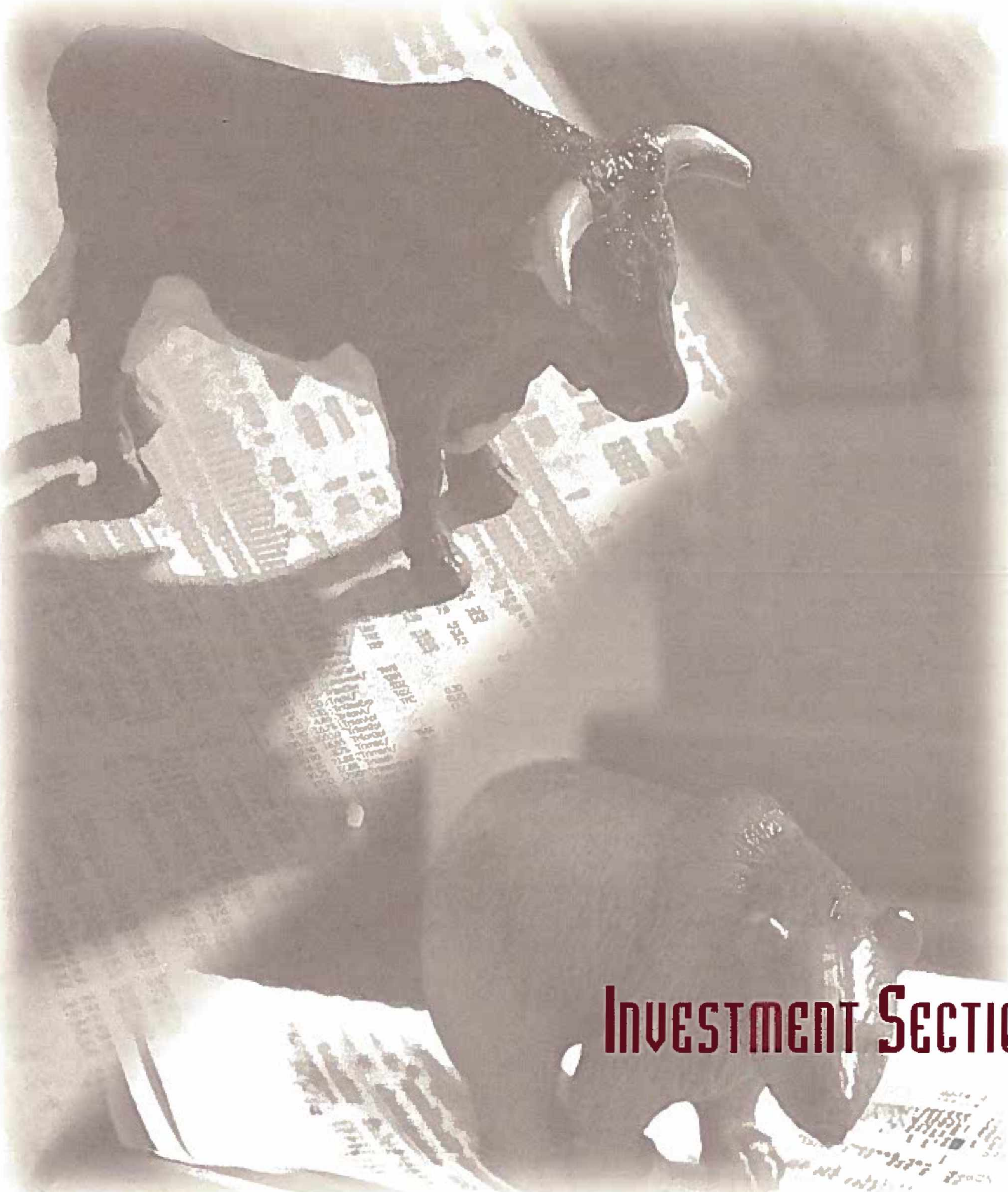
Because of the unprecedented nature of the Y2K issue, its effects and the success of related remediation efforts will not be fully determinable until the Year 2000 and thereafter. Management cannot assure that PERA is or will be Y2K ready, that PERA's remediation efforts will be successful in whole or in part, or that parties with whom PERA does business with will be Y2K ready. In response to the Year 2000 issue, payments to all of our retirees will be made earlier in December 1999, rather than on December 31, 1999. Contingency plans for all other systems are being developed, and transactions could be recorded manually if necessary.

Schedule of Administrative Expenses

For the Year Ended December 31

(In Thousands of Dollars)

	1998	1997
Personnel services:		
Salaries	$ 9,160	$ 8,269
Employee benefits	2,470	2,206
Total personnel services	11,630	10,475
Staff education:		
Tuition assistance program	74	56
PERA-required education	395	312
Total staff education	469	368
Professional contracts:		
Actuarial contracts	254	310
Audits	90	82
Medical exams	339	333
Investment counsel	548	457
Legal and legislative counsel	552	353
Computer services and consulting	373	418
Management consulting	73	210
Health care consultants	191	102
Other	311	187
Total professional contracts	2,731	2,452
Miscellaneous:		
Equipment rental and services	882	728
Memberships	102	84
Publications and subscriptions	84	72
Travel and local expense	562	531
Auto expense	15	17
Telephone	143	154
Postage	693	639
Insurance	128	129
Printing	382	424
Office supplies	332	307
Building rent, supplies, and utilities	418	441
Other	59	87
Total miscellaneous	3,800	3,613
Total budgeted expense	18,630	16,908
Depreciation expense	2,316	1,352
401(k) Voluntary Investment Program expense	565	523
Total expenses	21,511	18,783
Interfund–tenant and other expense	94	111
Interfund–Life Insurance Reserve	(265)	0
Interfund–CIF investment expense	(4,113)	(3,250)
Total administrative expense	$17,227	$ 15,644
Allocation of administrative expense:		
State and School Division	$14,142	$ 14,090
Municipal Division	1,158	996
Judicial Division	25	35
401(k) Voluntary Investment Program	1,056	523
Health Care Fund	846	0
Total allocation	$17,227	$ 15,644



Investment Section

PERA Report on Investment Activity

(Does not include the 401(k) Voluntary Investment Program)

State Law

State law gives complete responsibility for the investment of PERA's funds to the Board of Trustees, with some stipulations including:

- The aggregate amount of monies invested in corporate stocks or corporate bonds, notes or debentures which are convertible into stock or in investment trust shares cannot exceed 65 percent of the then book value of the fund.
- No investment of the fund in common or preferred stock (or both) of any single corporation can exceed 5 percent of the then book value of the fund.
- The fund cannot acquire more than 12 percent of the outstanding stock or bonds of any single corporation.

Board of Trustees' Statutory Fiduciary Responsibility

By state law, the management of PERA's retirement fund is vested in the PERA Board of Trustees who are held to the standard of conduct of fiduciaries in discharging their responsibilities. According to C.R.S. § 24-51-207(2), PERA's trustees, as fiduciaries, must carry out their functions solely in the interest of PERA members and benefit recipients and for the exclusive purpose of providing benefits.

Goal

The function of the Association is to provide present and future retirement or survivor benefits for its members. In keeping with that function, the preservation of capital is of paramount importance.

The future investment performance of the Fund directly affects its future financial strength. Earnings of portfolio assets in excess of the assumed actuarial rate of return reduce unfunded actuarial liabilities.

Outline of Investment Policy

The Fund is long-term in nature and the selection of investments is regulated by: statutory limitation, investment time horizon, the limits of acceptable risk, and the objective of optimizing the total rate of return. The Deputy Executive Director of Investments is authorized to execute investment transactions on behalf of the Board.

Investment decisions shall be made under the framework of the goal established for the rate of return, limits of acceptable risk, and Fund objectives. The goal is to optimize the return of the portfolio, as opposed to maximizing the rate of return.

The optimal portfolio mix is one that carefully equates expected rate of return with expected risk of all investment categories utilized in the portfolio. In setting the optimal mix of assets for the portfolio, the Board has developed a strategic (long-term) asset allocation policy, which incorporates a diversified asset mix.

The targeted strategic asset allocation is designed to provide an optimal diversification to reduce risk and maximize total rate of return relative to risk. Since the investment time horizon of the portfolio is long-term, and the portfolio is constructed to avoid the necessity of liquidating holdings to meet benefit payments, liquidity is not a first consideration. However, every reasonable effort will be made to provide protection for the portfolio in future deteriorating markets.

The Board recognizes that individual investment holdings contain substantially higher risk than portfolios constructed of such holdings. Consequently, primary emphasis will be given to diversification of the portfolio on an optimal basis, utilizing the diversified strategic asset allocation mix.

While efforts can be made to maintain the quality of individual holdings, it is recognized that the utilization of certain non-traditional asset categories such as venture capital, leveraged buyout funds, international equities, and real estate may contain substantially higher risk than with individual issues. Consequently, primary effort will be made to reduce the risk of the total portfolio through optimal diversification, as opposed to concentrating on individual issues.

The portfolio will be managed by a carefully constructed mix of internal and external management. No holding will be considered a "permanent" part of the portfolio. Any security can be sold at any time either to increase gains or decrease losses.

PERA utilizes a derivatives program. Its objective is to enhance portfolio returns by generating incremental income and to reduce volatility on a portion of the Standard and Poor's (S&P) 500 Index portfolio. The strategy is to sell "at-the-money covered-call options," which gives the owner the right to buy the underlying stock at a predetermined "strike" price. PERA receives a cash premium from selling the options. If the stock moves above the strike price, PERA can buy back the options or allow the stock to be "called-away" at the strike price. This program provides a means of reducing overall portfolio risk in addition to receiving additional income provided by the program over a full market cycle.

The targeted strategic asset allocation is designed to provide the optimal mix of asset categories over the investment time horizon of the portfolio. In doing so, characteristics of expected return, risk, and correlation of return of the various asset categories have been carefully projected. Both traditional (cash, bonds, domestic stocks, fixed income, mortgages) and non-traditional investments (real estate, international investments, including stocks and fixed income, and alternative investments) have been incorporated into the targeted strategic asset mix.

Preference will be given to Colorado investments, all other things being equal. However, to provide optimal portfolio diversification by geographical location and asset categories, and to maintain fiduciary responsibility, investments located within Colorado can be up to 20 percent of the aggregate (combined) portfolio at cost. Within the 20 percent, every effort will be made to further diversify the available asset classes (commercial real estate mortgages, common stock holdings, corporate debt, equity ownership of real estate, residential mortgage pools, and venture capital).

PERA Report on Investment Activity (continued)

(Does not include the 401(k) Voluntary Investment Program)

In making investment decisions, the Board shall avail itself of the highest caliber advice obtainable both internally and externally. This advice may include the internal investment staff, outside investment managers selected for both traditional and non-traditional asset classes, and investment consultants selected by the Board for specific expertise in implementing and carrying out the portfolio process.

Generally accepted accounting principles (GAAP) will be followed in accounting for the portfolio. However, GAAP should not restrict investment decisions. Securities recorded at original cost, adjusted cost, and market value will be reported to the Board. The firm engaged for the annual audit shall be consulted when questions concerning accounting issues arise. An annual evaluation shall be conducted by a performance evaluation service from the investment industry.

In addition, the annual external financial audit and the annual actuarial evaluation shall be reviewed in conjunction with an evaluation of the investment performance. All evaluations will be related to the Association's stated goals. Because these goals are long-term, cumulative performance results will be considered as more important than performance in any one year.

Corporate Governance

General Policy

Although PERA is not generally subject to the Employee Retirement Income Security Act of 1974 (ERISA), the PERA Board complies with the position taken by the U.S. Department of Labor (DOL) in February 1988. The DOL has stated that the right to vote shares of stock owned by a pension plan is, in itself, an asset of the plan, and therefore the fiduciary's responsibility to manage the assets includes proxy voting.

Board of Trustees Shareholder Responsibility Committee

To assist the Board of Trustees in carrying out its fiduciary responsibilities in voting proxies, the Board established a Shareholder Responsibility Committee. The General Counsel serves as an advisor to the Committee. The Board and the Shareholder Responsibility Committee have delegated to the Legal Department the authority to execute and vote all proxies according to the Board Proxy Voting Policy. All proxy issues are reviewed by staff on a case-by-case basis and then voted according to guidelines established by the Policy. PERA retains corporate governance consultants to assist in the proxy voting process.

Proxy Voting Policy

The Board's Proxy Voting Policy sets forth directives on the following nine issues: Board of Directors, Proxy Contests and Corporate Defenses, Tender Offers and Corporate Defenses, Corporate Restructurings, State of Incorporation, Proxy System, Executive Compensation, Corporate Governance, and Social Issues. The Proxy Voting Policy on Social Issues states that "PERA will abstain on all social issues, and will only vote on financial issues." The voting of proxy ballots for international stocks is delegated to PERA's external international equity managers consistent with certain requirements established by the Board.

Companies Targeted by PERA Annually

The Board takes an active role as fiduciaries in safeguarding the investments held in trust for current and future PERA beneficiaries. Approximately 58 percent of PERA's assets are invested in domestic stock of public companies. PERA monitors the performance of PERA's domestic stock investments based on the ratings of companies included in the S&P 500 Index[1] and the S&P 400 throughout a five-year period.

As part of this review process, PERA's Board Chairman mails letters annually to the board chairmen of the 10 best and 10 worst performing companies listed in the S&P 500 Index and the S&P MidCap 400 Index for those domestic companies with stock held by PERA.

Letters sent to the top performing companies thank them for their excellent investment performance. Letters directed to the poor performing companies express PERA's concerns about the adverse impact of their stock's performance on PERA beneficiaries' retirement assets, and explain that PERA will be withholding votes from nominees for that company's Board of Directors.

[1]*Market capitalization is computed by multiplying a company's common shares outstanding by its stock price.*

(PERA's Report on Investment Activity was prepared by internal staff.)

Investment Brokers/Advisors

A.G. Edwards
Bear Stearns & Co., Inc.
Bridge Information Systems
Chicago Corp.
Donaldson Lufkin & Jenrette
First Boston Corp.
First Chicago Corp.
Goldman Sachs & Co.
Hanifen, Imhoff Inc.
Heitman Advisory Corp.
ING-Barings
InstiNet Corp.
INVESCO Realty Advisors
J.P. Morgan Securities, Inc.
La Salle Advisors Ltd.
Lehman Brothers Inc.
Lend Lease AKA ERE Yarmouth
Merrill Lynch & Co., Inc.
Morgan Stanley Dean Witter Asset Management
Oppenheimer & Co., Inc.
Paine Webber Inc.
Piper Jaffray Inc.
Prudential Realty Investors
RREEF
Salomon Smith Barney, Inc.
Sanford Bernstein

Investment Summary

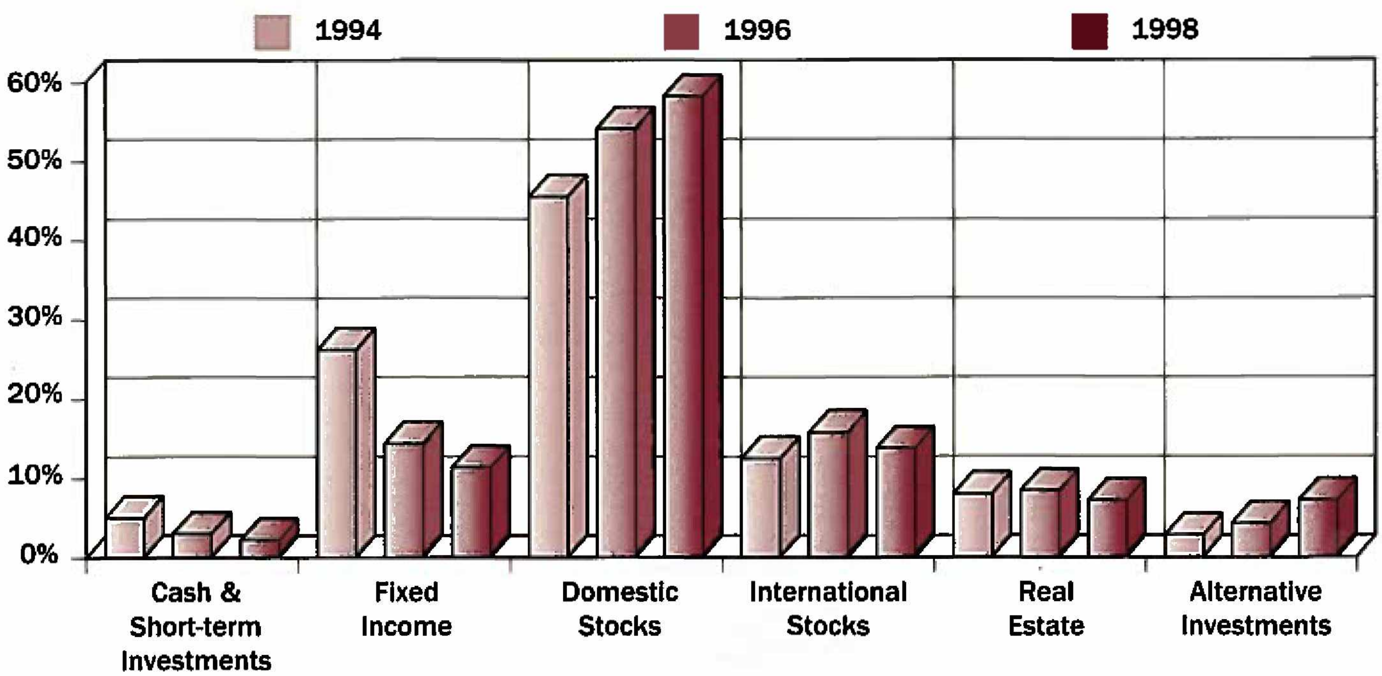
(Does not include the 401(k) Voluntary Investment Program)

	(In Thousands of Dollars) Market Value December 31, 1998	Percent of Total Market Value 1998	1996	1994
Cash and Short-Term Investments	$ 580,817	2.2%	3.0%	5.0%
Fixed Income				
U.S. Government Obligations	1,181,905	4.5%	4.0%	8.9%
Domestic Corporate Bonds	1,248,366	4.7%	8.4%	15.3%
International Fixed Income	590,394	2.2%	2.0%	2.0%
Total Fixed Income	3,020,665	11.4%	14.4%	26.2%
Domestic Stocks	15,274,923	58.2%	54.1%	45.5%
International Stocks	3,636,370	13.8%	15.8%	12.5%
Real Estate				
Real Estate Equity	1,721,307	6.5%	6.1%	4.9%
Real Estate Debt	190,636	0.7%	2.3%	3.1%
Total Real Estate	1,911,943	7.2%	8.4%	8.0%
Alternative Investments				
Venture Capital	390,334	1.5%	1.2%	0.9%
Leveraged Buyout Funds	886,120	3.4%	1.8%	1.2%
International Private Equity Funds	344,149	1.3%	0.3%	0.0%
Timber Investments	264,685	1.0%	1.0%	0.7%
Total Alternative Investments	1,885,288	7.2%	4.3%	2.8%
Total Investments	$26,310,006	100.0%	100.0%	100.0%

Asset Allocation At Market Value

(Does not include the 401(k) Voluntary Investment Program)

Year End December 31



Fund Performance Evaluation

(Does not include the 401(k) Voluntary Investment Program)

Evaluation

PERA retains R.V. Kuhns and Associates and The Northern Trust Company to evaluate its Fund performance. Institutional Property Consultants is utilized for the real estate portfolio performance evaluation and industry comparisons. In their analyses, R.V. Kuhns and The Northern Trust include all investments within the portfolio, including cash and accrued income. They also make the calculations for annual rates of return. Information prepared and presented in this Report is in compliance with the Global Investment Performance Standards of the Association for Investment Management and Research.

Asset Allocation

The Association's long-term strategic asset allocation policy sets the following portfolio targets as a percentage of cost: 45 percent in domestic equity, 20 percent in international equity, 16 percent in domestic fixed income, 2 percent in international fixed income, 12 percent in real estate, and 5 percent in alternative investments. To accommodate changing market valuations, the Board has approved an allocation range for each asset category in which staff must invest.

Total Portfolio Results

For the year ended December 31, 1998, the total fund returned 15.7 percent, compared to the R.V. Kuhns' Median Public Fund return of 15.3 percent. The R.V. Kuhns' Median Public Fund measure is comprised of 91 different public pension funds with assets of approximately $1,163.4 billion used for comparative analysis. This universe is used to determine the effectiveness of the respective performance of the Association's portfolio managers.

Despite considerable unpredictability and turbulence for all asset classes this past year, stock and bond markets experienced solid returns. Owing in part to three interest rate cuts by the Federal Reserve in the closing months of the year, the nation enjoyed continued low inflation, low unemployment, and steady growth. The stock market experienced more than its share of ups and downs in 1998, but by the end of the year, the overall stock market posted its fourth consecutive 20 percent plus gain, although much of this was due to a few large company high-growth stocks. The U.S. Treasury market also benefited from continued global instability, as investors throughout the world sought relative safety in U.S. Treasuries.

The Association's three– and five–year annualized rates of return of 16.4 percent and 14.7 percent, respectively, exceeded the R.V. Kuhns' Median Public Fund returns of 15.5 percent and 13.7 percent, respectively, for these periods. PERA's five–year annualized return was 14th out of 91 public pension funds in the Kuhns' universe. PERA's 10–year annualized rate of return of 13.2 percent exceeded inflation and PERA's actuarial investment assumption rate of 8.75 percent.

Compared to all funds, PERA was "overweighted" in the following categories: U.S. and international equities, real estate and alternative investments, and "underweighted" in U.S. and global fixed income.

Domestic Stocks

Volatility in the average 1998 trading day was unusually heavy. After dropping sharply in January, the stock market rebounded quickly before taking a downturn in the second and third quarters. The stock market staged a strong and rapid recovery in the fourth quarter. By the close of 1998, a small group of large-cap stocks–particularly technology issues–posted huge gains, pushing the indexes to a record-setting fourth consecutive year of major gains. With only about 28 percent of the stocks in the Standard and Poor's (S&P) 500 Index outperforming the index for the year, it was almost impossible for portfolio managers to outperform the S&P 500 Index in 1998. Many less-prominent stock and small capitalization issues were left behind in the stock rally.

In 1998, PERA's domestic stock portfolio returned 21.3 percent, trailing the S&P 500 Index return of 28.6 percent and the Russell 3000 return of 24.1 percent. However, it slightly overperformed the return of the median domestic equity portfolio in the Kuhns' universe of 21.3 percent. Of 89 public funds that invested in domestic equities in 1998, only four outperformed the S&P 500 Index return. Equities are invested through 15 different portfolios, each of which impacts the overall equity return. The under-performance of the domestic stock portfolio was attributed to the partial hedge or options program, which is designed to reduce volatility and risk, and enhance portfolio returns over a full-market cycle. For 1998, the equity return excluding the options program was 26.2 percent. This program has allowed PERA to have a greater equity exposure and this exposure has had an overall positive impact on the total portfolio.

About 66 percent of the domestic equity portfolio is "indexed" compared to 55 percent for the median large public fund. About 19 percent of the portfolio is invested in small- and mid-cap equities, compared to the median of 5.3 percent.

International Stocks

The benchmark by which PERA's international equity managers are evaluated is a custom benchmark using 75 percent of the Europe-Australia-Far East (EAFE) Index and 25 percent of the EAFE Excluding Japan Index. The opening of the European Monetary Union enhanced the performance of European stock issues, but Asian and Latin American investment markets fared poorly due to currency devaluations, high interest rates, and failing economies. PERA's international equity return was 14.4 percent, compared with the custom benchmark return of 21.6 percent. Of the 83 public funds in the R.V. Kuhns' universe with international investments in 1998, the median return was 14.5 percent.

Fund Performance Evaluation (continued)

(Does not include the 401(k) Voluntary Investment Program)

Domestic Fixed Income

Persistent concerns over economic problems in Asia, Russia, and Latin America contributed to a widespread flight to quality last year, as investors throughout the world sought safety in U.S. Treasuries. However, other sectors of the fixed-income market did not fare well in 1998, with investment grade corporate bonds and high-yield bonds hurt by fears that global problems would lead to lower U.S. corporate earnings and growth.

PERA's domestic fixed income investments returned 3.7 percent in 1998 compared to its benchmark, the Lehman Aggregate Bond Index return of 8.7 percent, which was also the median for 87 funds in the Kuhns' universe. The fixed income under performance was due to the portfolios' overweighting in "below investment grade" bonds.

During the year, PERA terminated NCM Capital Management Group, Inc. as an external manager in the domestic fixed income portfolio.

International Fixed Income

The benchmark by which international fixed income is measured is the Salomon World Non-U.S. Government Bond Index. International fixed income returns in 1998 reflected the escalating instability in Asia's financial markets, with PERA's international fixed income portfolio returning 19.3 percent, compared with the Salomon Index return of 15.3 percent.

In 1998, the Board of Trustees approved allowing Julius Baer Investment Management, PERA's external international fixed income manager, to invest in all markets.

Alternative Investments

During 1998, the Board approved PERA's funding of eight new alternative investments: four in domestic leveraged buyout partnerships, three in international private equity partnerships, and one in domestic venture capital partnerships. In 1998, PERA's venture capital, leveraged buyout, international private equity, and timberland partnerships returned 10.7 percent, -5.8 percent, 12.1 percent, and 8.9 percent, respectively. The alternative investment portfolio composite returned 3.3 percent in 1998, and 15.7 percent and 17.4 percent on a three- and five-year annualized basis, respectively.

Real Estate

PERA's objective is to invest 12 percent of its total net assets in real estate with 9.6 percent in real estate equity, and 2.4 percent in real estate debt. At year-end 1998, 7.2 percent of PERA's total net assets were invested in real estate including 6.5 percent in real estate equity and 0.7 percent in real estate debt.

In 1998, R.V. Kuhns recommended PERA adopt a custom benchmark reflecting its target real estate sector weights as a more accurate comparison for performance of the real estate portfolio. The COLPERA Composite Index was adopted by PERA effective December 31, 1998. This index is comprised of four separate indices and weighted according to the targeted real estate asset sectors set by the Board (15 percent NAREIT Index, 45 percent NCREIF Property Index, 20 percent Salomon Brothers Mortgage Index, and 20 percent GPR-Life Index). PERA's real estate portfolio returned 5.2 percent, compared to the COLPERA Composite Index of 3.7 percent. On a three- and five-year annualized basis, the real estate portfolio returned 12.3 percent and 9.8 percent, respectively, surpassing the custom benchmark return of 10.1 percent and 8.8 percent for the same periods.

PERA invested $402.5 million in real estate (equity and debt combined) transactions and received $341.7 million in net proceeds from dispositions of equity assets and mortgage payoffs. Unfunded real estate commitments as of year-end totaled $756.6 million.

Schedule of Investment Results

(Does not include 401(k) Voluntary Investment Program)

	1998	3-Year Annualized	5-Year Annualized	10-Year Annualized
PERA Total Portfolio	**15.7%**	**16.4%**	**14.7%**	**13.2%**
Median Plan (R.V. Kuhns' Median Public Fund)	15.3%	15.5%	13.7%	12.6%
Domestic Stocks	**21.3%**	**22.6%**	**19.6%**	**17.5%**
Standard & Poor's (S&P 500)	28.6%	28.2%	24.0%	19.2%
Russell 3000	24.1%	25.8%	22.3%	18.5%
International Stocks	**14.4%**	**8.4%**	**7.8%**	**7.5%**
Europe-Australia-Far East (EAFE) Custom Index[1]	21.6%	11.4%	10.7%	7.9%
Domestic Fixed Income	**3.7%**	**5.4%**	**6.5%**	**9.0%**
Lehman Brothers Aggregate Bond Index	8.7%	7.3%	7.3%	9.3%
Custom Fixed Income Benchmark[2]	7.2%	9.0%	8.1%	N/A
International Fixed Income	**19.3%**	**8.3%**	**10.3%**	**N/A**
Salomon World Non-U.S. Government Bond Index	15.3%	6.2%	7.9%	N/A
Real Estate (Includes Mortgages)	**5.2%**	**12.3%**	**9.8%**	**4.1%**
Custom Real Estate Benchmark[3]	3.7%	10.1%	8.8%	(4.4)%
Frank Russell/NCREIF Index[4]	16.1%	13.4%	10.8%	5.4%
Salomon Pass Thru Index	6.8%	7.3%	7.4%	9.3%
Alternative Investments	**3.3%**	**15.7%**	**17.4%**	**N/A**
PERA Venture Capital Funds	**10.7%**	21.0%	20.0%	14.1%
PERA LBO Funds	**(5.8)%**	11.1%	16.4%	12.6%
PERA International Private Equity	**12.1%**	N/A	N/A	N/A
PERA Timber Investments	**8.9%**	11.8%	9.6%	N/A

1 (75 percent EAFE and 25 percent EAFE Excluding Japan)
2 (80 percent Lehman Aggregate, 10 percent Lehman High Yield, and 10 percent Lehman Emerging Markets)
3 (15 percent NAREIT, 45 percent NCREIF, 20 percent Salomon Bros. Mortgage, and 20 percent GPR)
4 (National Council of Real Estate Investment Fiduciaries)

Colorado Investment Profile

(Does not include 401(k) Voluntary Investment Program)
As of December 31, 1998
(In Thousands of Dollars)

The Association continues to seek out high-quality Colorado investments. At the end of 1998, PERA's investments in Colorado were valued at more than $1.33 billion, an increase of more than $80 million from 1997.

	Market Value
Commercial mortgages	$ 84,100
Committed to future funding	27,700
Common stock of companies headquartered in Colorado	157,700
Bonds and notes	61,700
Real estate	129,600
Funds under management of Colorado companies (Venture capital and stock managers)	871,500
Total	$1,332,300

Largest Stock Holdings (Market Value)

As of December 31, 1998

(In Thousand of Dollars)

	Shares	Stocks	Market Value
1.	3,999,225	Microsoft, Corp.	$554,643
2.	5,035,955	General Electric Co.	513,667
3.	2,633,900	Intel Corp.	312,282
4.	3,760,700	Wal-Mart Stores, Inc.	306,262
5.	3,236,525	Cisco Systems, Inc.	300,390
6.	2,390,875	Pfizer, Inc.	298,859
7.	1,988,900	Merck and Company, Inc.	293,363
8.	3,607,910	Dell Computer Corp.	264,054
9.	3,560,400	Coca Cola Co.	238,547
10.	2,144,600	Lucent Technologies	235,772

Largest Bond Holdings (Market Value)

As of December 31, 1998

(In Thousands of Dollars)

	Par	Bonds			Market Value
1.	$300,000	U.S. Treasury Bonds	5.500%	due 08/15/28	$314,016
2.	265,000	U.S. Treasury Bonds	5.625%	due 05/15/08	282,723
3.	105,000	U.S. Treasury Bonds	4.000%	due 10/31/00	103,919
4.	50,000	U.S. Treasury Bonds	4.250%	due 11/15/03	49,360
5.	30,000	U.S. Treasury Bonds	5.250%	due 08/15/03	30,761
6.	25,000	U.S. West Cap Funding	6.375%	due 07/15/08	26,405
7.	22,500	Anixter Inc.	8.000%	due 09/15/03	24,140
8.	22,165	FNMA FNR	6.000%	due 09/18/26	22,110
9.	22,000	Lehman Bros. Inc.	6.625%	due 02/15/08	21,952
10.	20,000	Tupperware Financial	7.250%	due 10/01/05	21,240

More detailed information on PERA's investment holdings is available.
Requests should be sent to PERA, 1300 Logan Street, Denver, Colorado 80203.

PERA's 401(k) Voluntary Investment Program Report on Investment Activity

The PERA 401(k) Voluntary Investment Program [401(k) Plan] was established on July 1, 1985, under Section 401(k) of the Internal Revenue Code. Plan participation is voluntary, and contributions are entirely separate from those that members make to PERA each month. This section includes information about the 401(k) Plan; however, a separate 401(k) Plan Annual Report is published and mailed to all Plan participants.

In 1998, members were able to make tax-deferred contributions of up to 23 percent of their annual gross salary including any IRC Section125 flexible spending account deductions, up to a maximum of $10,000. Contributions to the 401(k) Plan are deducted from the participant's monthly salary, and earnings on 401(k) Plan investments are also tax-deferred.

On December 31, 1998, the 401(k) Plan had net assets of $362,874,000 and 20,112 accounts, a net increase of nearly 33.4 percent in the total Plan value in one year, and 22.7 percent in membership.

Year-End Statistics (In Thousands of Dollars)

Year	Assets	Number of Accounts
1991	$ 30,018	3,094
1992	42,369	4,545
1993	60,711	6,019
1994	78,687	8,080
1995	125,692	10,155
1996	186,541	13,064
1997	272,053	16,391
1998	362,874	20,112

1998 Activities

On January 1, 1998, the management of the 401(k) Plan's Long-Term Bond Fund was transferred from Norwest Investment Management to the Pacific Investment Management Company (PIMCO), where it is part of PIMCO's Total Return Fund.

Also, an administrative fee to pay for recordkeeping, communications, education, consulting, staff, and other overhead expenses was reinstated on January 1, 1998, after being waived for two years. The new fee was set at 0.25 percent of a participant's account balance (0.0625 percent quarterly) with a minimum fee of $25 per year per account and a maximum fee of $100 per year per account.

During the year, the following plan provision and procedure changes and other activity occurred:

- The maximum allowable annual percent of pay contribution increased from 18 percent to 23 percent on January 1, 1998, with salary for the first time including deductions to Section 125 flexible spending accounts. Also, the maximum annual dollar contribution remained at $10,000.
- In March 1998, participants began making contribution changes through their payroll office, rather than contacting PERA first.
- In May 1998, paperless loan processing began; this procedure automatically deducts the $50 loan fee from the participant's account and deletes the requirement for a promissory note to be signed and returned to PERA. Rather, the member accepts the terms of the loan and promises to pay back the loan under those terms when he or she negotiates (cashes, deposits or endorses) the check.
- The Board of Trustees eliminated one distribution option that allowed monthly payments that changed each month and were based on the balance of the account.
- The Aggressive Stock Fund was renamed the Growth Stock Fund to be consistent with how Fidelity identifies its Contrafund in its prospectus.
- A recordkeeping review group was formed to study the feasibility of bringing the 401(k) recordkeeping in-house and whether that would reduce plan costs. As of the end of 1998, the group had not made a recommendation.
- PERA was working on legislation that would allow a match to voluntary contributions by participants to the 401(k) Plan and other tax-deferred plans once PERA becomes "fully-funded."

Returns on investments for 1998 were volatile and mixed, with some funds surpassing their benchmarks and other funds underperforming their benchmarks. The economic markets were variable during the year with volatility experienced in domestic markets in January and during the third quarter due to the concerns regarding the impact of the Asian financial crisis. Despite this, the Dow Jones Industrial Average (DJIA) reached an all-time high during the year, and stock watchers point out that the U.S. equity markets' good showing was mainly due to the excellent performance of a small number of large companies. The international markets rebounded in the second quarter. During the third quarter, the DJIA declined about 12 percent, the worst quarterly performance since 1990, but recovered during the fourth quarter. Likewise, the fourth quarter of 1998 was a turbulent and unpredictable one in the nation's bond markets with bond yields below 5 percent for the first time since 1967.

Investment Policy and Objectives

The 401(k) Plan conforms to the following policies and objectives set forth by PERA's Board of Trustees.

The PERA 401(k) Plan is designed to provide members with a savings vehicle that meets their needs for financial protection and serves as members' primary supplemental tax-deferred retirement savings arrangement. While this Plan is primarily intended to create resources to supplement PERA's basic retirement benefits, members should be able to access their funds to meet other long-term financial needs.

All services supporting the Plan (e.g., investment of assets and recordkeeping) need not be performed by PERA staff. Costs of operation should be kept to a minimum, while providing state-of-the-art services to members. To maximize the utility of the 401(k) Plan for all members, the Plan should be actively managed and compare favorably with all other funds competing for members' contributions in the following areas:

PERA's 401(k) Voluntary Investment Program Report on Investment Activity (continued)

- Level of tax-deferred savings.
- Availability of funds.
- Range and flexibility of investment choices.
- Accessibility of information about fund balances and Plan features.
- Cost of service (both actual and perceived) to participants.

Investment Options

The Plan assets are invested in one or more of the following types of investments. Among the specific investment funds designated by the Board, some variety is provided with respect to the expected risk and the expected potential for earnings and appreciation.

Money Market Fund (managed by The Northern Trust): Primarily invests in high-grade money market instruments with short maturities such as U.S. government obligations, commercial paper, and certificates of deposit.

Short-Term Bond Fund (managed by PIMCO): Primarily invests in domestic corporate and government fixed income securities of varying maturities with a portfolio duration ranging between one and three years, and some foreign securities.

Long-Term Bond Fund (managed by PIMCO): Primarily invests in U.S. government and corporate securities based on an analysis of major changes in the direction of long-term interest rates.

Balanced Fund (managed by Dodge&Cox): The fund is a combination of common stocks and fixed income securities (primarily high quality bonds), with no more than 75 percent of the assets in stocks.

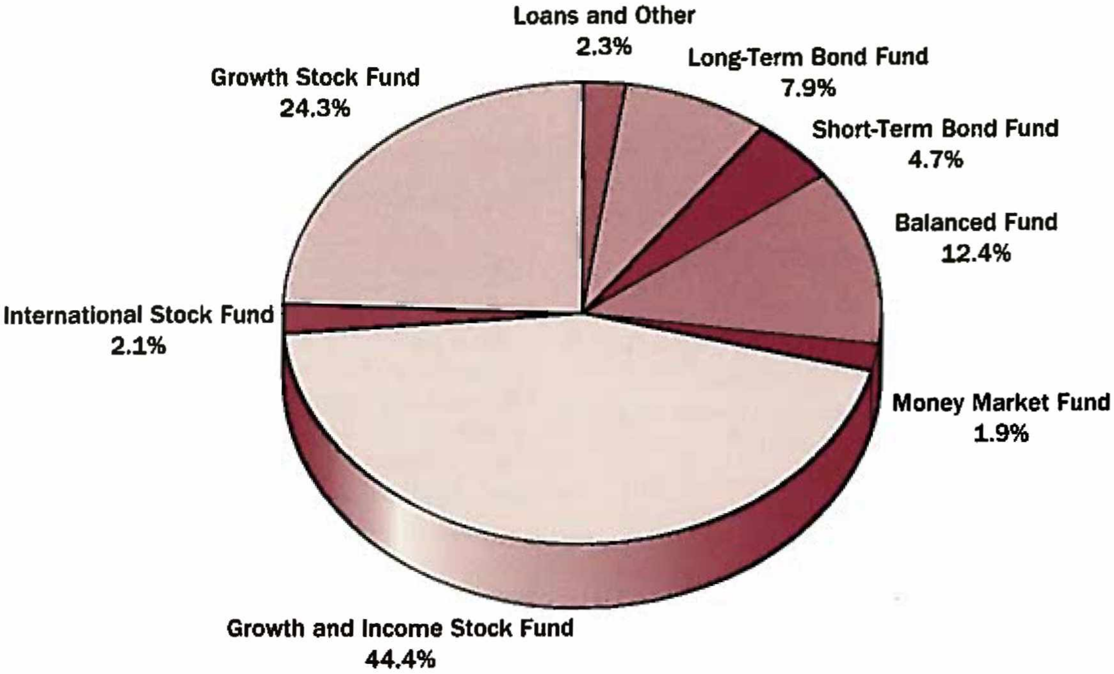
Growth and Income Stock Fund (managed by PERA's Investment Staff): Primarily invests in common stocks of high-quality companies with a broad range of capitalization.

Growth Stock Fund (managed by Fidelity Investments): Primarily invests in common stocks and securities convertible into common stocks of companies with high growth potential.

International Stock Fund (managed by The American Funds Group): Primarily invests in equity securities of issuers domiciled in Europe or the Pacific Basin. May also invest in securities through depository receipts, securities convertible into common stocks, straight debt securities, government securities, or non-convertible preferred stocks.

Asset Allocation by 401(k) Voluntary Investment Program Investment Funds

As of December 31, 1998



401(k) Voluntary Investment Program Schedule of Investment Results

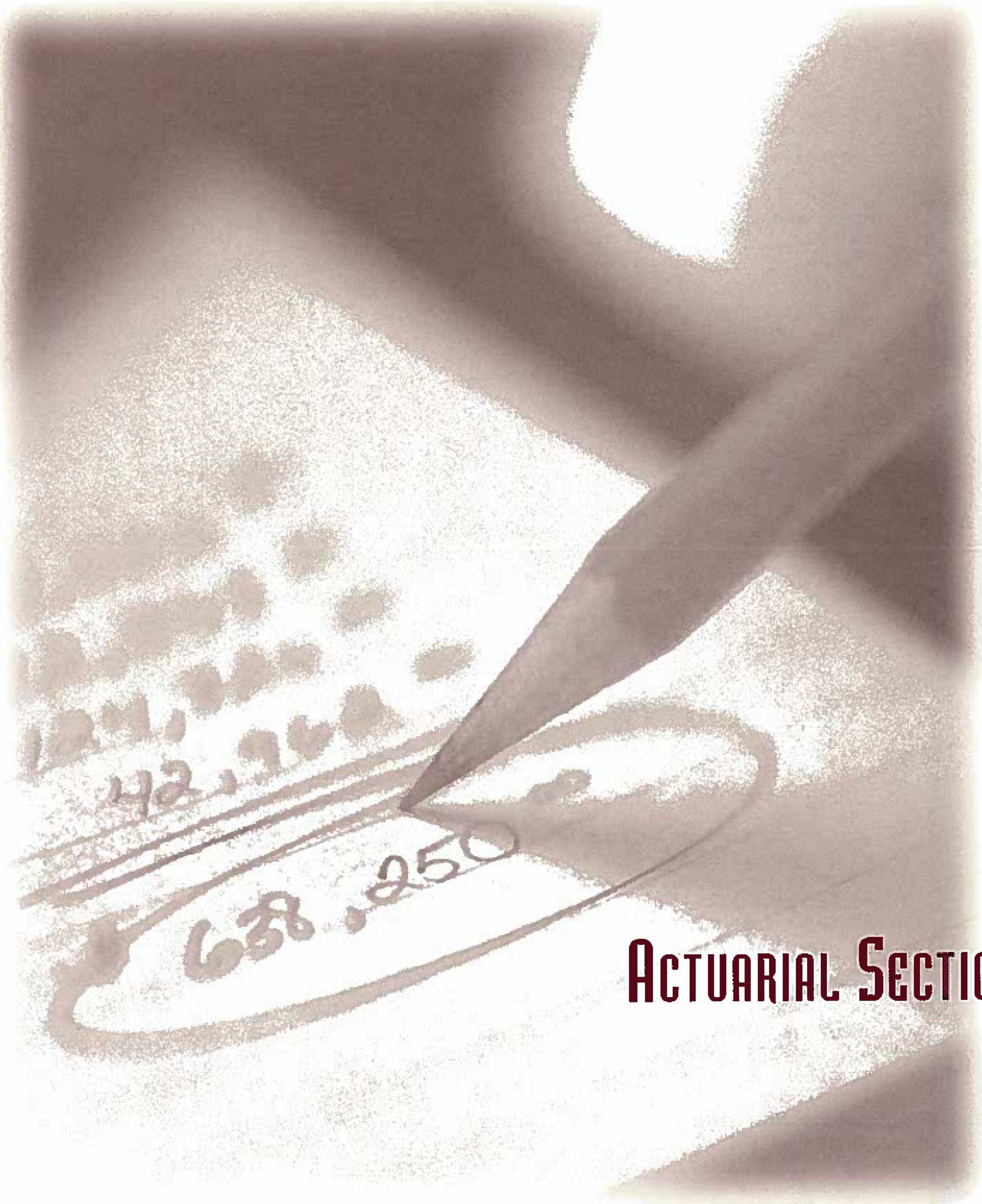
Fund	1998	1997	Annualized Returns 3-Year	5-Year	10-Year
Money Market Fund[2]	6.2%	5.7%	5.3%	5.5%	5.9%
Short-Term Bond Fund[1]	7.2%	8.0%	7.1%	6.8%	8.3%
Long-Term Bond Fund	9.4%	8.4%	8.2%	7.9%	10.3%
Balanced Fund[1]	6.7%	21.0%	14.0%	14.1%	14.1%
Growth and Income Stock Fund	13.3%	30.3%	24.5%	21.4%	18.3%
Growth Stock Fund[1]	31.5%	22.8%	25.3%	21.6%	24.0%
International Stock Fund[2]	15.5%	8.9%	14.4%	11.3%	13.3%

[1] This fund joined PERA's 401(k) Plan in April 1994.
[2] This fund joined PERA's 401(k) Plan in January 1997.

401(k) Voluntary Investment Program Total Assets

	(In Thousands of Dollars) Market Value December 31, 1998	December 31, 1997	Percent of Total Portfolio at Market Value 1998	1996	1994
Money Market Fund[2]	$ 6,759	$ 2,134	1.9%	N/A[2]	N/A[2]
Short-Term Bond Fund[1]	16,905	14,767	4.7%	7.8%	15.1%
Long-Term Bond Fund	28,737	21,989	7.9%	11.5%	23.7%
Balanced Fund[1]	45,235	35,665	12.4%	12.2%	5.7%
Growth and Income Stock Fund	161,384	127,806	44.4%	45.3%	42.0%
Growth Stock Fund[1]	88,468	58,141	24.3%	20.7%	11.0%
International Stock Fund[2]	7,766	5,134	2.1%	N/A[2]	N/A[2]
Loans, receivables, cash, and other	8,474	6,416	2.3%	2.5%	2.5%

[1] This fund joined PERA's 401(k) Plan in April 1994.
[2] This fund joined PERA's 401(k) Plan in January 1997.



Actuarial Section

Report of the Independent Actuary

Watson Wyatt
Worldwide

Watson Wyatt & Company
Suite 1400
950 Seventeenth Street
Denver, CO 80202-2831
Telephone 303 298 7878
Fax 303 623 5633

May 14, 1999

Board of Trustees
Public Employees' Retirement Association of Colorado
1300 Logan Street
Denver, Colorado 80203

Dear Members of the Board:

PERA's basic financial goal is to establish contributions which, as a percentage of payroll, remain level for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

The most recent valuations are based on the plan provisions and assumptions in effect on December 31, 1998. PERA provided the participant data and the asset information. Watson Wyatt reviewed the data for reasonableness. The following plan provisions have changed since the prior valuation:

> The employer contribution rate for the State and School Division (except State Troopers) was changed from 11.5% to 11.4%.
>
> The eligibility for Service Retirement benefits for Members except State Troopers was changed to include age 50 with 30 years of service credit.
>
> In the calculation of Reduced Service Retirement benefits for Members except State Troopers, the reduction was changed from 4% per year to 3% per year for Members who retire after age 55 and before age 60.
>
> In the calculation of Reduced Service Retirement for State Troopers, the reduction was changed from 4% per year to 3% per year for Members who retire after age 50 and before age 60.

The experience assumptions used in the valuations were developed from actual system experience and were adopted by the Board in 1996. The retirement rates were updated this year to reflect the changes in eligibility for service retirement. In our opinion, the assumptions are internally consistent and produce results which are reasonable in the aggregate. We also believe the assumptions and actuarial methods meet the requirements of Governmental Accounting Standards Board Statement No. 25.

Watson Wyatt updated the following schedules for the December 31, 1998 CAFR:

<u>Financial Section</u>

> Schedule of Funding Progress for the Years Ended December 31
> Schedule of Employer Contributions for the Years Ended December 31
> (Annual Required Contribution and % ARC Contributed Only)
> Notes to Required Supplementary Information

Report of the Independent Actuary

Board of Trustees
May 14, 1999

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Actuarial Section

Percent of Eligible Members Retiring Next Year
Schedule of Retirees Beneficiaries Added to and Removed from Benefit Payroll
Member – Retiree Comparison
Total Actuarial Liabilities
Unfunded Actuarial Accrued Liabilities
Schedule of Gains and Losses in Accrued Liabilities
Schedule of Active Member Valuation Data
Schedule of Members in Valuation
Schedule of Computed Employer Contribution Rates
Schedule of Contribution Rate History

Statistical Section

Member and Benefit Recipient Statistics
Schedule of Average Retirement Benefits Payable
Current Average Monthly Benefit by Year of Retirement
Schedule of Retirees and Survivors by Type of Benefit
Schedule of Average Benefit Payments

We certify that this valuation was performed in accordance with standards of practice and by qualified actuaries as prescribed by the Actuarial Standards Board. We are Members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems.

It is our opinion that PERA continues in sound financial condition.

Sincerely,

Gene H. Wickes, FSA, MAAA

John R. Grange, ASA, MAAA

The Plan Summary For Calendar Year 1998

The Public Employees' Retirement Association was established in 1931 by the Colorado General Assembly as an instrumentality of the state. It initially covered only state employees, but membership has expanded to include all school districts except Denver, numerous municipalities, special districts, public health departments and other local government entities, as well as the State's judicial system.

The Plan's purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability. The Plan is funded on an actuarial reserve basis, with money being set aside for benefits while the benefits are being earned and before they are paid.

Administration of the Plan

The Plan operates by the authority of the Colorado General Assembly, with benefits and administration defined under Title 24, Article 51, of the Colorado Revised Statutes. PERA is governed by a 16-member Board of Trustees, 14 of whom are elected by the membership to four-year terms and serve without compensation except for necessary expenses. The State Auditor and the State Treasurer serve as ex-officio members.

The Board appoints an Executive Director who is responsible for the daily administration of the Association. The Board retains an actuary to make annual valuations of the funding adequacy of the liabilities accrued under the Plan. The Board also retains other consultants as necessary.

Member Contributions

Most members contribute 8 percent of their gross salary to a member contribution account. State Troopers contribute 11.5 percent. Generally, salary is compensation for services rendered and is specifically defined in state law.

Member contributions have been tax-deferred for federal income tax purposes since July 1, 1984, and for state income tax purposes since January 1, 1987. Therefore, contributions are not considered as income for federal or state income tax purposes until they are withdrawn through a refund or a benefit.

Employer Contributions

Affiliated employers also contribute a percentage of their total payroll to the Fund. Respective employer contribution rates are shown on the "Schedule of Contribution Rate History" on page 64.

The "Schedule of Computed Employer Contribution Rates" on page 63 shows a detailed explanation of how the employer contributions are determined. These contributions are credited to the respective Division for the purpose of creating actuarial reserves, so each member's benefits are fully provided for at retirement. PERA is exempt from federal income taxes under the Internal Revenue Code.

Termination

A member who terminates PERA-covered employment may request a member contribution account refund or leave the account with PERA; a refund cancels a former PERA member's rights to future PERA benefits.

A member who withdraws their account before reaching age 65 or meeting age and service requirements for retirement receives a refund that includes his or her member contributions and interest, and a matching amount equal to 25 percent of the member's contributions and interest. A member who withdraws their account upon or after reaching age 65 or retirement eligibility, receives a 50 percent matching amount.

The interest rate used to credit member contribution accounts is set at 80 percent of PERA's actuarial investment assumption rate. The rate used to credit interest to member contribution accounts in 1998 was 7.0 percent.

Members who leave their contribution account with PERA until they reach age 65 or meet PERA's age and service requirements may apply for lifetime monthly benefits instead of withdrawing their accounts.

Retirement Benefits

Members are eligible to receive monthly retirement benefits when they reach age 65 or meet PERA's age and service retirement eligibility requirements. Retirement benefits are equal to the higher of a defined service retirement benefit or a money purchase retirement benefit. However, members who apply for a monthly retirement benefit at age 65 with less than five years of service or 60 months on the payroll are eligible for a money purchase retirement benefit only.

Defined Retirement Benefits

Defined service retirement benefits are based on the member's years of service, age, and Highest Average Salary (HAS). HAS is one-twelfth of the average of highest annual salaries on which PERA contributions were paid that are associated with three periods of 12 consecutive months of service credit. A 15 percent annual limit in salary increases applies if any salary used in the HAS calculation is from the three years prior to retirement. A one-year HAS applies for judges.

Defined retirement benefits equal 2.5 percent of HAS for each year of service credit up to a maximum of 100 percent of HAS.

Until July 1, 1998, service retirement benefits were available to members at any age with 35 years of service, age 55 with at least 30 years of service, age 60 with at least 20 years of service, or age 65 with at least 5 years of service. Legislation effective July 1, 1998, allowed members retiring at age 50 with 30 or more years of service to receive unreduced service retirement benefits. Prior to enactment of this legislation, unreduced service retirement benefits were paid at age 55 with 30 years of service.

Prior to July 1, 1998, reduced defined retirement benefits available to members who retired at age 55 with 20 years of service credit or at age 60 with 5 years of service were calculated the same as a service retirement benefit, then decreased 0.333 percent for each month before the eligible date for service retirement; this reduction equaled 4 percent per year. Effective July 1, 1998, the reduction factor used to calculate PERA retirement benefits was lowered from 4 percent to 3 percent per year for members retiring between ages 55 through 59 with 20 to 29 years of service; the 4 percent annual reduction factor still applies to members retiring at age 60 with 5 years of service credit.

The Plan Summary For Calendar Year 1998 (continued)

Members also are eligible to receive reduced service retirement benefits at age 50 with 25 years of service. Before July 1, 1998, benefits for these members were reduced 6 percent for each year under age 55 and 4 percent for each year over age 55 that members retired before they would have become eligible for service retirement benefits. Effective July 1, 1998, benefits for members retiring under age 55 are reduced 6 percent for each year under age 55 and 3 percent for each year over age 55 that members retire before they would have become eligible for service retirement benefits.

Retirement benefits for State Troopers and members of the Judicial Division differ slightly.

Money Purchase Retirement Benefit

A money purchase benefit is determined by the member's life expectancy and the value of the member's contribution account and the matching amount equal to 50 percent of the member's contributions and interest, at the member's effective date of retirement.[1]

Survivor Benefits

The benefit amount that qualified survivors receive is determined by which survivors are eligible to receive benefits and the member's HAS. The order in which qualified survivors receive benefits depends on whether or not the member is eligible for retirement (whether reduced service or service) at the time of the member's death.

If a member dies with less than one year of PERA service credit, or with no survivors qualified to receive a monthly benefit, the named beneficiary or the estate will receive a lump-sum payment of the member's contribution account, in addition to a matching amount equal to 50 percent of the member's contributions and earned interest.[1]

If a member had more than one year of service and qualified survivors at the time of death, a monthly benefit may be paid to the qualified survivors. If the member's death was job-incurred, the service credit minimum is waived, and qualified survivors may be eligible for a monthly benefit. If the member is not eligible for retirement, children receive a benefit first, but if the member is eligible for retirement, the cobeneficiary receives the benefit first.

Children are eligible to receive survivor benefits if under age 18, or if enrolled full-time in an accredited school within six months of the member's death, until they reach age 23. If there are no eligible children, or after benefits to children have ceased, the member's surviving spouse receives a monthly benefit at age 60 if the member had less than 10 years of service credit or immediately if the member had more than 10 years of service at the time of death. If there is no eligible spouse, financially dependent parents will receive a survivor benefit.

Disability Retirement Benefits

Throughout the calendar year ending December 31, 1998, members with five or more years of earned service credit, six months of which were earned since the most recent period of membership, were eligible for disability retirement benefits if determined by the Board to be permanently disabled from performing their jobs. The disability retirement benefit was a percentage of HAS based on actual service credit plus projected service credit to age 65 or 20 years of service, whichever is less. Many disabled retirees received 50 percent of their HAS.

A revision to the law governing PERA in 1997 provides for PERA to establish a two-tiered disability program applicable to disability applicants on and after January 1, 1999.[1]

Annual Benefit Increases

Benefits are increased up to 3.5 percent compounded annually from the date of the initial benefit if the Consumer Price Index has increased at a similar rate. This increase is recalculated on the last workday of each March and is based on the total benefit.

[1] *Please see Note 10 to the General Purpose Financial Statements (page 29) for an explanation of plan changes effective after the calendar year ending December 31, 1998.*

Summary of Actuarial Methods and Assumptions

Actuarial Methods

The ultimate cost that a retirement plan such as PERA incurs equals benefits paid plus the expenses resulting from administration and financing. These costs are paid for through contributions to the Plan and investment earnings on the Plan's assets.

Using the Plan's schedule of benefits, the member data and a carefully selected set of actuarial assumptions, the Plan's actuary estimates the cost of the benefits that will be paid. Then, using a particular actuarial funding method, the actuary allocates these costs and determines a systematic manner to fund for future plan benefits.

In the case of PERA (as well as most public sector plans), the objective is to fund in a manner that keeps contribution rates approximately level from generation to generation. The funding method best designed to keep annual costs level as a percent of pay is the "Entry Age Actuarial Cost Method." This method is described briefly below.

Entry Age Actuarial Cost Method

Under the Entry Age Actuarial Cost Method, projected service retirement, termination, disability and death benefits are determined for all active members. Cost factors, which are developed to produce level annual costs in each year from the age at hire (entry age) to the assumed retirement age, are applied to the projected benefits to determine what the "normal cost" should be. The normal cost is the portion of the total cost of the Plan allocated to the current year. The "actuarial accrued liability" for active members is then calculated as the portion of the total cost of the Plan allocated to prior years.

The actuarial accrued liability for members currently receiving benefits, for active members beyond the assumed retirement age, and for inactive members entitled to future benefits, is equal to the present value of the benefits expected to be paid. No normal costs are now payable for these participants.

The excess of the total actuarial accrued liability over the value of the Plan assets is called the "unfunded actuarial accrued liability." Funding requirements under the Entry Age Actuarial Cost Method are determined by adding the normal cost and the cost to amortize the unfunded liability. Under Colorado state law, the amortization period cannot exceed 40 years.

The actuarial assumptions are used to determine the projected benefits and cost factors. The effect of differences between these assumptions and the actual experience of the Plan is calculated each year when the annual actuarial valuation is performed. These differences produce either actuarial gains or losses, which result in an adjustment of the unfunded liability.

Asset Valuation Method

The method for valuing assets is intended to recognize a "smoothed" market value of assets. This means that the difference between actual market value, actuarial gains, and the expected actuarial gains is recognized over a four-year period. The "smoothed market" method of valuing assets was adopted by PERA's Board of Trustees in 1992.

Actuarial Assumptions

PERA's actuarial assumptions are used to project the Plan's future experience. Every five years the actuarial assumptions are reviewed and an actuarial review is performed by an external actuarial consulting firm to verify the following:

- Accuracy of membership data, financial data, actuarial and benefit calculations, and employer contributions.
- Consistency of calculations with respect to statutory requirements.
- Consistency and reasonableness of assumptions and methods.
- Valuation of all significant benefits.
- A review of the valuation report content.

The most recent actuarial review was conducted by Watson Wyatt Worldwide, based on PERA's 1995 experience data. The review's findings were received by PERA's Board of Trustees in mid-1996. The most recent five-year review of actuarial assumptions was conducted by Towers Perrin, the independent retained actuary, based on PERA's 1991–1995 experience data. As a result, Towers Perrin recommended new assumptions, which were reviewed by Watson Wyatt Worldwide and adopted by the PERA Board. These new assumptions were first used in the valuation for the 1996 plan year.

Economic Assumptions

The investment return rate used in the 1998 valuations is 8.75 percent per year compounded annually, net after administrative expenses. The real rate of return is the portion of the total investment return, which is in excess of the inflation rate. Considering other financial assumptions, the 8.75 percent investment return rate translates into an assumed real rate of return of 4.25 percent.

The overall member payroll was assumed to increase 5.5 percent annually in 1998. Pay increase assumptions for individual members in 1998 are shown for sample ages in Exhibits A,B,C, and D. At each age, 4.5 percent of the increase is attributable to the assumed inflation rate, and the remainder is for merit and seniority increases. Judicial Division pay increases (Exhibit D) are determined by the State Legislature. Benefits are assumed to increase at a rate of 3.5 percent after payments begin.

Non-Economic Assumptions

The mortality table (Colorado Projected Experience Table) is based on PERA experience. The table is used to estimate the value of benefits expected to be paid. Related values are shown in Exhibit F. For disability retirement, impaired longevity is recognized by basing benefit values on an adjusted age midway between attained age and normal retirement age.

The probabilities of age and service retirement are shown in Exhibit G.

The probabilities of withdrawal from service, disability, and death-in-service are shown for sample ages in Exhibits A, B, C, D, and E. It is assumed that one-half of the vested members who terminate will elect to withdraw their accounts while the remaining one-half will elect to leave their accounts in the Plan in order to be eligible for a benefit at their retirement date.

Separations From Employment Before Retirement and Individual Pay Increase Assumptions

Exhibit A—State Category

MEMBERS OTHER THAN STATE TROOPERS

	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death		Disability				
Sample Ages	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
20	6.80%	8.00%	0.03%	0.02%	0.01%	0.01%	5.10%	4.50%	9.60%
25	6.80%	8.00%	0.03%	0.02%	0.04%	0.03%	3.80%	4.50%	8.30%
30	5.38%	7.63%	0.04%	0.03%	0.05%	0.05%	2.80%	4.50%	7.30%
35	4.00%	6.29%	0.06%	0.04%	0.18%	0.16%	2.10%	4.50%	6.60%
40	3.43%	4.80%	0.10%	0.06%	0.24%	0.22%	1.50%	4.50%	6.00%
45	3.40%	4.12%	0.21%	0.10%	0.39%	0.34%	1.10%	4.50%	5.60%
50	3.40%	3.92%	0.43%	0.18%	0.75%	0.66%	0.90%	4.50%	5.40%
55	3.40%	3.72%	0.60%	0.25%	1.01%	0.90%	0.70%	4.50%	5.20%
60	3.40%	3.60%	0.76%	0.38%	1.08%	0.96%	0.50%	4.50%	5.00%
65	3.40%	3.60%	1.18%	0.67%	1.08%	0.96%	0.50%	4.50%	5.00%

STATE TROOPERS

	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death		Disability				
Sample Ages	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
20	6.00%	6.00%	0.03%	0.02%	0.02%	0.02%	5.50%	4.50%	10.00%
25	6.00%	6.00%	0.03%	0.02%	0.08%	0.08%	4.20%	4.50%	8.70%
30	5.10%	5.10%	0.04%	0.03%	0.12%	0.12%	3.20%	4.50%	7.70%
35	2.70%	2.70%	0.06%	0.04%	0.40%	0.40%	2.50%	4.50%	7.00%
40	1.60%	1.60%	0.10%	0.06%	0.54%	0.54%	1.90%	4.50%	6.40%
45	1.10%	1.10%	0.21%	0.10%	0.86%	0.86%	1.50%	4.50%	6.00%
50	1.00%	1.00%	0.43%	0.18%	1.66%	1.66%	1.30%	4.50%	5.80%
55	1.00%	1.00%	0.60%	0.25%	2.24%	2.24%	1.10%	4.50%	5.60%
60	1.00%	1.00%	0.76%	0.38%	2.40%	2.40%	0.90%	4.50%	5.40%
65	1.00%	1.00%	1.18%	0.67%	2.40%	2.40%	0.50%	4.50%	5.00%

Exhibit B—School Category

	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death		Disability				
Sample Ages	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
20	6.17%	6.40%	0.03%	0.02%	0.01%	0.01%	2.50%	4.50%	7.00%
25	5.93%	6.40%	0.03%	0.02%	0.04%	0.02%	2.50%	4.50%	7.00%
30	4.62%	6.08%	0.04%	0.03%	0.05%	0.03%	1.60%	4.50%	6.10%
35	3.04%	4.45%	0.06%	0.04%	0.11%	0.07%	1.50%	4.50%	6.00%
40	2.49%	3.41%	0.10%	0.06%	0.18%	0.11%	1.10%	4.50%	5.60%
45	2.40%	2.95%	0.21%	0.10%	0.30%	0.19%	0.80%	4.50%	5.30%
50	2.40%	2.80%	0.43%	0.18%	0.72%	0.46%	0.60%	4.50%	5.10%
55	2.40%	2.80%	0.60%	0.25%	1.05%	0.66%	0.50%	4.50%	5.00%
60	2.40%	2.80%	0.76%	0.38%	1.14%	0.72%	0.50%	4.50%	5.00%
65	2.40%	2.80%	1.18%	0.67%	1.14%	0.72%	0.50%	4.50%	5.00%

Separations From Employment Before Retirement and Individual Pay Increase Assumptions

Exhibit C—Municipal Division

	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death		Disability				
Sample Ages	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
20	6.40%	8.00%	0.03%	0.02%	0.01%	0.01%	8.40%	4.50%	12.90%
25	6.40%	8.00%	0.03%	0.02%	0.04%	0.04%	6.00%	4.50%	10.50%
30	5.06%	7.63%	0.04%	0.03%	0.07%	0.05%	4.40%	4.50%	8.90%
35	3.77%	6.29%	0.06%	0.04%	0.22%	0.18%	3.20%	4.50%	7.70%
40	3.23%	4.80%	0.10%	0.06%	0.30%	0.24%	2.40%	4.50%	6.90%
45	3.20%	4.12%	0.21%	0.10%	0.47%	0.39%	1.90%	4.50%	6.40%
50	3.20%	3.92%	0.43%	0.18%	0.91%	0.75%	1.60%	4.50%	6.10%
55	3.20%	3.72%	0.60%	0.25%	1.23%	1.01%	1.50%	4.50%	6.00%
60	3.20%	3.60%	0.76%	0.38%	1.32%	1.08%	1.30%	4.50%	5.80%
65	3.20%	3.60%	1.18%	0.67%	1.32%	1.08%	1.00%	4.50%	5.50%

Exhibit D—Judicial Division

	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death		Disability				
Sample Ages	Men	Women	Men	Women	Men	Women	Seniority[1]	Base (Economy)	Increase Next Year
30	2.00%	2.00%	0.04%	0.03%	0.06%	0.06%	1.51%	4.50%	6.01%
35	2.00%	2.00%	0.06%	0.04%	0.07%	0.07%	1.20%	4.50%	5.70%
40	2.00%	2.00%	0.10%	0.06%	0.10%	0.10%	0.70%	4.50%	5.20%
45	2.00%	2.00%	0.21%	0.10%	0.17%	0.17%	0.50%	4.50%	5.00%
50	2.00%	2.00%	0.43%	0.18%	0.31%	0.31%	0.50%	4.50%	5.00%
55	2.00%	2.00%	0.60%	0.25%	0.56%	0.56%	0.50%	4.50%	5.00%
60	2.00%	2.00%	0.76%	0.38%	1.19%	1.19%	0.50%	4.50%	5.00%
65	2.00%	2.00%	1.18%	0.67%	1.65%	1.65%	0.50%	4.50%	5.00%

[1] Pay raises are subject to legislative approval. Percentages are based on prior experience.

Exhibit E

Percent of Members With Less Than Five Years of Service Withdrawing from Employment Next Year[2]

	State Category		School Category		Municipal Division	
Years of Service	Men	Women	Men	Women	Men	Women
0	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
1	15.00%	17.00%	15.00%	15.00%	14.00%	16.00%
2	12.00%	14.00%	12.00%	11.00%	11.00%	14.00%
3	10.00%	11.00%	8.00%	8.00%	9.00%	13.00%
4	8.00%	9.00%	7.00%	6.00%	7.00%	11.00%

[2] There are no select withdrawal assumptions for the Judicial Division and State Troopers.

Single Life Retirement Values

Based on the Colorado Projected Experience Table and 8.75 Percent Interest

Exhibit F—State and School, Municipal, and Judicial Divisions

Sample Attained Ages	Present Value of $1 Monthly for Life Men	Present Value of $1 Monthly for Life Women	Present Value of $1 Monthly Increasing 3.5% Annually Men	Present Value of $1 Monthly Increasing 3.5% Annually Women	Future Life Expectancy (Years) Men	Future Life Expectancy (Years) Women
40	$ 134.42	$137.85	$ 199.38	$ 209.04	40.37	45.45
45	$ 130.69	$135.44	$ 189.60	$ 201.37	35.62	40.61
50	$ 126.16	$132.21	$ 178.56	$ 192.09	31.09	35.85
55	$ 120.89	$127.93	$ 166.40	$ 181.03	26.83	31.20
60	$ 113.73	$121.94	$ 151.73	$ 167.46	22.63	26.61
65	$ 103.99	$114.11	$ 134.18	$ 151.59	18.52	22.20
70	$ 92.59	$104.13	$ 115.45	$ 133.42	14.80	18.01
75	$ 80.16	$ 91.70	$ 96.60	$ 113.11	11.56	14.10
80	$ 67.35	$ 77.62	$ 78.59	$ 92.11	8.83	10.64
85	$ 55.18	$ 61.78	$ 62.57	$ 70.61	6.66	7.61

Percent of Eligible Members Retiring Next Year

Exhibit G

Retirement Ages	State Category Men	State Category Women	State Troopers	School Category Men	School Category Women	Municipal Division Men	Municipal Division Women	Judicial Division
50	12%	14%	15%	16%	16%	10%	11%	10%
51	12%	14%	15%	16%	16%	10%	11%	10%
52	12%	14%	15%	16%	16%	10%	11%	10%
53	12%	14%	15%	16%	16%	10%	11%	10%
54	12%	14%	15%	16%	16%	10%	11%	10%
55	14%	12%	25%	20%	16%	11%	14%	10%
56	14%	12%	25%	20%	16%	11%	14%	10%
57	14%	12%	25%	20%	16%	11%	14%	10%
58	14%	12%	25%	20%	16%	11%	14%	10%
59	14%	12%	25%	20%	16%	11%	14%	10%
60	16%	14%	50%	18%	18%	15%	15%	10%
61	16%	14%	60%	18%	18%	15%	15%	10%
62	16%	14%	70%	18%	18%	15%	15%	10%
63	16%	14%	80%	18%	18%	15%	15%	10%
64	16%	14%	90%	18%	18%	15%	15%	10%
65	30%	30%	100%	25%	25%	25%	25%	25%
66	30%	30%	100%	25%	25%	25%	25%	15%
67	30%	30%	100%	25%	25%	25%	25%	15%
68	30%	30%	100%	25%	25%	25%	25%	15%
69	30%	30%	100%	25%	25%	25%	25%	15%
70	100%	100%	100%	100%	100%	100%	100%	40%
71	100%	100%	100%	100%	100%	100%	100%	40%
72	100%	100%	100%	100%	100%	100%	100%	100%
73	100%	100%	100%	100%	100%	100%	100%	–
74	100%	100%	100%	100%	100%	100%	100%	–
75	100%	100%	100%	100%	100%	100%	100%	–

Schedule of Retirees and Beneficiaries Added to and Removed from Benefit Payroll[1]

Year Ended	Added to Payroll No.	Added to Payroll Annual Benefits	Removed from Payroll No.	Removed from Payroll Annual Benefits	Payroll—End of Year No.[3]	Payroll—End of Year Annual Benefits	Cost of Living Stabilization Fund (CLSF)	Average Annual Benefits	Increase in Average Benefits
12/31/89	2,341	$ 26,812,386	960	$ 3,704,135	33,447	$296,210,412	$ 43,993,557	$ 10,171	5.0%
12/31/90	2,472	30,727,020	979	4,241,455	34,940	330,668,124	47,742,599	10,830	6.5%
12/31/91	2,601	33,363,027	1,119	4,319,340	36,422	367,985,496	51,154,160	11,508	6.3%
12/31/92	2,996	44,840,160	1,230	7,905,996	38,188	424,857,912	64,202,904	12,809	11.3%
12/31/93	3,624	63,975,396	1,270	9,695,472	40,542	492,925,488	61,040,724	13,664	6.7%
12/31/94	3,121	51,809,484	1,301	10,650,936	42,362	605,429,820	N/A[2]	14,292	4.6%
12/31/95	3,174	54,087,286	1,496	17,421,180	44,040	657,482,568	N/A[2]	14,929	4.5%
12/31/96	3,074	53,056,140	1,390	15,449,340	45,716	726,848,793	N/A[2]	15,899	6.5%
12/31/97	3,411	71,578,344	1,477	18,628,140	47,621	863,077,468	N/A[2]	18,124	14.0%
12/31/98	3,139	78,278,484	1,694	13,692,660	49,808	926,962,944	N/A[2]	18,611	2.7%

[1] Numbers derived on an accrual basis.

[2] On March 1, 1994, in accordance with House Bill 93-1324, the CLSF was terminated and the assets of the CLSF were transferred to the retirement benefits reserve within each of the four Division Trust Funds. The 2 percent of salary contribution earmarked for the CLSF reverted to the Division Trust Funds.

[3] The number includes retirees and beneficiaries not being paid at the end of the year (e.g., future spousal benefits).

Member-Retiree Comparison[1]

The number of persons receiving monthly retirement benefits has grown steadily in relation to membership. This trend will continue for many years into the future. The level-cost financing principle is designed so that contribution rates will not have to be raised to meet promised benefits. The current contribution rates should be sufficient to meet the increasing retirement payroll if the benefit provisions contained in the state law are not changed. The retirement benefit disbursements shown in the right-hand column include cost-of-living increases paid in years since 1970. Prior to 1981, figures are for years ended June 30.

Year	Number of Retiree Accounts on 12/31	Number of Member Accounts on 12/31[2]	Retiree Accounts as % of Members on 12/31	Total Benefits Paid - Year Ended 12/31
1940	93	3,715	2.5%	$ 72,588
1945	171	5,585	3.1%	137,442
1950	280	11,853	2.4%	237,866
1955	747	21,185	3.5%	745,679
1960	1,775	33,068	5.4%	2,055,139
1965	3,631	49,701	7.3%	5,486,225
1970	6,308	65,586	9.6%	13,115,234
1975	11,650	84,781	13.7%	32,820,433
1980	17,301	96,473	17.9%	71,289,456
1985	24,842	101,409	24.5%	192,456,029
1990	32,955	115,350	27.4%	350,398,094
1991	34,481	146,818	23.5%	401,187,591
1992	36,186	162,980	22.2%	453,538,219
1993	38,500	174,685	22.0%	523,746,160
1994	40,257	187,907	21.4%	586,645,446
1995	41,909	203,102	20.6%	639,501,796
1996	43,611	210,893	20.7%	694,349,889
1997	45,525	220,860	20.6%	787,128,075
1998	47,735	221,978	21.5%	893,810,708

[1] Numbers derived on a cash basis.

[2] Includes inactive member accounts.

Schedule of Members in Valuation

By Attained Age and Years of Service As of December 31, 1998

State Category

Members included in the State Category valuation totaled 51,369 and involved annual salaries totaling $1,699,293,162. The average age for these members (excluding State Troopers) was 43.7 years, and the average service was 8.4 years. The average age for State Troopers was 38.5 years, and the average service was 10.2 years.

	Years of Service to Valuation Date							*Totals*	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	678							678	$ 5,508,496
20-24	1,778	13						1,791	$ 28,103,127
25-29	3,584	457	12					4,053	$ 97,471,617
30-34	3,297	1,313	346	23				4,979	$ 139,131,833
35-39	3,762	1,752	1,127	398	35			7,074	$ 207,634,631
40-44	3,146	1,983	1,499	1,023	462	21		8,134	$ 276,970,956
45-49	2,983	2,132	1,709	1,204	1,069	353	5	9,455	$ 350,903,825
50-54	1,905	1,516	1,339	1,088	999	766	158	7,771	$ 311,811,478
55-59	1,020	899	793	636	515	479	223	4,565	$ 184,654,509
60	133	109	111	104	67	56	23	603	$ 23,751,520
61	111	119	85	58	42	27	22	464	$ 17,085,600
62	81	91	74	57	33	33	25	394	$ 14,451,294
63	67	61	56	40	42	17	22	305	$ 11,299,176
64	47	46	47	37	23	11	12	223	$ 7,734,300
65	49	40	27	32	25	5	12	190	$ 6,359,850
66	46	32	23	22	10	9	8	150	$ 4,128,600
67	33	28	14	14	12	6	2	109	$ 3,133,200
68	40	13	18	11	8	7	4	101	$ 2,486,400
69	23	12	10	12	6	5	4	72	$ 2,212,350
70+	129	58	13	18	20	10	10	258	$ 4,460,400
Totals	22,912	10,674	7,303	4,777	3,368	1,805	530	51,369	$ 1,699,293,162

School Category

Members included in the School Category valuation totaled 91,531 and involved annual salaries totaling $2,398,531,346. The average age for these members was 43.2 years, and the average service was 8.2 years.

	Years of Service to Valuation Date							*Totals*	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	1,126							1,126	$ 7,409,750
20-24	3,212	27						3,239	$ 45,844,150
25-29	7,108	800	5					7,913	$ 165,790,695
30-34	5,804	2,566	363	11				8,744	$ 195,098,720
35-39	7,845	2,716	1,897	455	9			12,922	$ 274,421,105
40-44	7,031	3,432	2,108	1,910	588	13		15,082	$ 365,427,007
45-49	5,196	4,038	2,656	1,952	2,375	765	2	16,984	$ 521,523,374
50-54	3,018	2,655	2,505	1,994	1,800	1,976	351	14,299	$ 509,429,845
55-59	1,488	1,280	1,164	1,157	915	719	301	7,024	$ 226,661,400
60	210	175	119	139	104	48	33	828	$ 21,557,550
61	178	117	100	103	75	62	15	650	$ 16,893,450
62	151	120	72	78	59	33	18	531	$ 12,646,200
63	125	99	50	68	50	26	11	429	$ 9,496,200
64	123	67	53	52	38	27	11	371	$ 7,875,000
65	103	63	27	40	26	13	8	280	$ 5,045,250
66	92	48	24	20	21	4	5	214	$ 3,159,450
67	85	47	15	18	11	8	6	190	$ 2,955,750
68	76	32	13	11	5	6	1	144	$ 1,911,000
69	52	31	10	7	8	6	1	115	$ 1,204,350
70+	232	131	30	20	15	8	10	446	$ 4,181,100
Totals	43,255	18,444	11,211	8,035	6,099	3,714	773	91,531	$ 2,398,531,346

Schedule of Members in Valuation

By Attained Age and Years of Service As of December 31, 1998

Municipal Division

Members included in the Municipal Division valuation totaled 11,084 and involved annual salaries totaling $358,818,910. The average age for these members was 40.7 years, and the average service was 7.1 years.

	Years of Service to Valuation Date							*Totals*	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	450							450	$ 3,091,202
20-24	653	4						657	$ 9,429,188
25-29	885	132	1					1,018	$ 25,931,307
30-34	983	262	75	3				1,323	$ 37,518,796
35-39	886	398	277	116	12			1,689	$ 58,513,834
40-44	750	450	342	230	82	7		1,861	$ 67,576,158
45-49	583	410	280	225	146	96	3	1,743	$ 68,382,600
50-54	301	259	179	169	138	117	28	1,191	$ 49,204,353
55-59	188	134	97	120	65	47	26	677	$ 26,094,268
60	25	13	9	14	5	7	2	75	$ 2,502,170
61	24	15	9	9	4	1	4	66	$ 1,879,008
62	12	19	3	15	5	2	2	58	$ 1,952,279
63	13	15	7	6	5	4	3	53	$ 1,603,469
64	17	13	6	8	2	4	3	53	$ 1,449,888
65	8	8	3	7	5	2	2	35	$ 1,169,995
66	11	2	3	1	0	0	0	17	$ 300,675
67	5	5	1	1	2	1	1	16	$ 1,094,035
68	6	1	2	2	2	0	0	13	$ 298,565
69	7	0	1	0	1	0	0	9	$ 87,565
70+	52	16	6	4	1	0	1	80	$ 739,555
Totals	5,859	2,156	1,301	930	475	288	75	11,084	$ 358,818,910

Judicial Division

Members included in the Judicial Division valuation totaled 251 and involved annual salaries totaling $19,867,005. The average age for Judicial Division members was 52.7 years, and the average service was 12.6 years.

	Years of Service to Valuation Date							*Totals*	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20									
20-24									
25-29									
30-34	1	0	0	0	0	0	0	1	$ 79,425
35-39	2	2	1	0	0	0	0	5	$ 222,408
40-44	8	9	4	1	0	0	0	22	$ 1,749,822
45-49	12	16	18	7	5	0	0	58	$ 4,461,450
50-54	15	15	21	17	9	2	0	79	$ 6,297,900
55-59	6	3	11	14	13	2	0	49	$ 4,204,200
60	0	1	1	1	1	2	0	6	$ 471,450
61	1	0	0	1	1	0	0	3	$ 235,200
62	0	1	0	1	0	2	0	4	$ 208,950
63	0	2	1	0	2	1	1	7	$ 591,150
64	0	1	0	2	0	1	0	4	$ 274,050
65	0	0	1	0	0	1	0	2	$ 178,500
66	1	0	4	0	0	1	0	6	$ 526,050
67	0	0	1	1	0	0	0	2	$ 173,250
68	0	0	0	1	1	0	0	2	$ 176,400
69	0	0	0	1	0	0	0	1	$ 16,800
70+	0	0	0	0	0	0	0	0	$ 0
Totals	46	50	63	47	32	12	1	251	$19,867,005

Summary of Solvency Test

The PERA funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service accrued in that year by PERA members. Occasionally rates are increased, but only to add or improve benefit provisions. Likewise, rates have been decreased by the State Legislature. (See "Schedule of Contribution Rate History" on page 64.)

If the retirement system follows level contribution rate financing principles, the system will pay all promised benefits when due–the ultimate test of financial soundness.

A short-term solvency test is one means of checking PERA's funding progress. In a short-term solvency test, the retirement plan's present assets (investments and cash) are compared with: (1) Member contributions on deposit, (2) the liabilities for future benefits to persons who have retired, and (3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level contribution rate financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retirees (liability 2) will be fully covered by present assets, except in rare circumstances.

In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time. It is unusual for liability 3 to be fully funded.

The schedule below illustrates the progress of funding liability 3 of PERA and is indicative of PERA's policy to follow the discipline of level contribution rate funding.

Total Actuarial Liabilities

Valuation Date	Member Contributions (1)[1]	Retirees and Beneficiaries (2)	Employer-Financed Portion of Active Members (3)	Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Reported Assets (1)	(2)	(3)
12/31/89	$ 1,500,592,533	$ 3,455,861,901	$ 4,723,623,212	$ 8,722,658,715	100%	100%	79.7%
12/31/90	1,635,129,849	3,842,084,802	5,076,877,515	9,477,521,126	100%	100%	79.0%
12/31/91	1,834,998,407	4,272,349,404	5,414,471,940	10,508,670,579	100%	100%	81.3%
12/31/92	2,050,729,958	4,887,166,176	5,487,483,258	11,339,310,964	100%	100%	80.2%
12/31/93	2,093,693,307	6,516,956,622	6,186,381,981	12,668,101,503	100%	100%	66.5%
12/31/94	2,395,959,381	7,163,767,095	6,204,351,274	13,717,384,820	100%	100%	67.0%
12/31/95	3,727,497,280	7,862,779,572	5,510,030,884	15,349,515,165	100%	100%	68.2%
12/31/96	4,040,814,028	8,339,476,944	5,611,614,086	17,321,769,518	100%	100%	88.1%
12/31/97	4,161,334,387	10,303,331,080	7,029,404,533	19,776,487,860	100%	100%	75.6%
12/31/98	4,413,349,123	11,659,836,332	7,842,874,545	23,069,582,456	100%	100%	89.2%

[1] Includes accrued interest on member contributions.

Summary of Unfunded Actuarial Accrued Liabilities

Unfunded actuarial accrued liabilities are the difference between actuarially calculated liabilities for service already rendered and the assets of the retirement fund. It is natural for unfunded liabilities to exist for PERA and other retirement plans.

The law governing PERA requires that these unfunded liabilities be financed (amortized) systematically over future years. This law requires that contribution rates be set at a level so that if actual experience matches actuarial assumptions, unfunded actuarial accrued liabilities would be paid off over a maximum 40-year period. PERA's amortization periods in 1998 for these unfunded actuarial accrued liabilities were well under the 40-year limit.

The amortization periods have continually improved over the last decade. As of December 31, 1998, the amortization period was six years for the State and School Division and one year for the Municipal Division. There were no unfunded liabilities in the Judicial Division as of December 31, 1998. (With the changes enacted by Senate Bill 99-90 that increase liabilities to the fund effective July 1, 1999, the amortization period is nine years for the State and School Division and five years for the Municipal Division. The Judicial Division continues to have no unfunded liabilities.)

Benefits to retirees are "fully funded," that is, assets reserved for benefits currently being paid equal liabilities for those benefits. Liabilities for members are based on service rendered toward their retirement benefits payable in the future. Unfunded actuarial accrued liabilities exist because liabilities for such service by members exceed assets currently on hand for such future benefits.

Because inflation continues, the value of dollars is decreasing. Looking at just the dollar amounts of assets, benefits paid, member salaries, and unfunded actuarial accrued liabilities will be misleading.

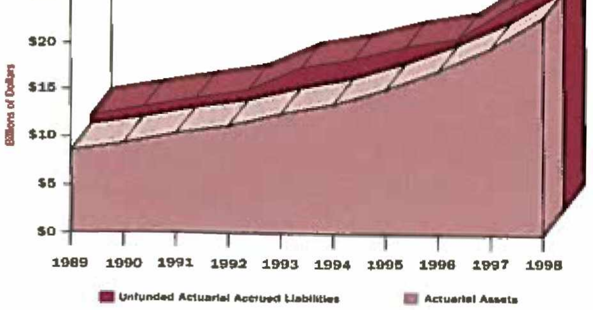
While no one or two measures can fully describe the financial condition of the Plan, unfunded actuarial accrued liability dollars divided by member salary dollars provide a meaningful index. The smaller the ratio, the stronger the system. Observation of this relative index over a period of years will give an indication of the financial strength of the system. This ratio has increased at times over the last decade, but the recent trend shows stability.

Unfunded actuarial accrued liabilities shown in PERA's valuation are based upon actuarial assumptions adopted by the PERA Board in 1996. Investment returns during the last several years have helped to increase assets, reduce unfunded actuarial accrued liabilities, and lower the ratio of unfunded liabilities to member salaries.

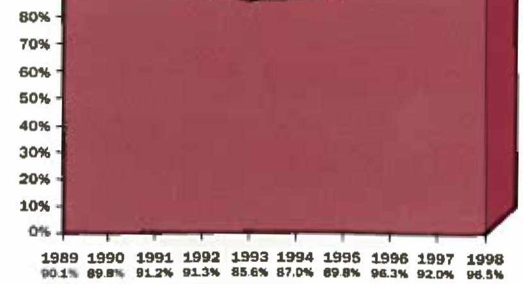
Unfunded Actuarial Accrued Liabilities (UAAL)

Valuation Date	Total Actuarial Accrued Liabilities	Valuation Assets	Assets as a % of Accrued Liabilities	Unfunded Actuarial Accrued Liabilities	Member Salaries	UAAL as a % of Member Salaries
12/31/89	$ 9,680,077,646	$ 8,722,658,715	90.1%	$ 957,418,931	$2,755,113,097	34.8%
12/31/90	10,554,092,157	9,477,521,126	89.8%	1,076,571,031	2,912,712,448	37.0%
12/31/91	11,521,819,751	10,508,670,579	91.2%	1,013,149,172	3,213,117,152	31.5%
12/31/92	12,425,379,392	11,339,310,964	91.3%	1,086,068,428	3,436,693,500	31.6%
12/31/93	14,797,031,910	12,668,101,503	85.6%	2,128,930,407	3,451,307,428	61.7%
12/31/94	15,764,077,750	13,717,384,820	87.0%	2,046,692,930	3,578,972,051	57.2%
12/31/95	17,100,307,736	15,349,515,165	89.8%	1,750,792,571	3,803,799,573	46.0%
12/31/96	17,991,905,058	17,321,769,518	96.3%	670,135,540	3,968,963,337	16.9%
12/31/97	21,494,070,000	19,776,487,860	92.0%	1,717,582,140	4,211,820,401	40.8%
12/31/98	23,916,060,522	23,069,582,456	96.5%	846,478,066	4,477,302,776	18.9%

Assets vs. Accrued Liabilities 1989–1998



Assets as Percent of Accrued Liabilities 1989–1998



Schedule of Gains and Losses in Accrued Liabilities
Resulting From Differences Between Assumed Experience and Actual Experience

$ Gain (or Loss) for Years Ended December 31
(In Millions of Dollars)

Type of Activity	1998	1997	1996	1995	1994	1993
Age and service retirements[1]	$ (306.5)	$ (301.5)	$ (99.6)	$ (60.5)	$ (82.6)	$ (116.5)
Disability retirements[2]	(23.8)	(72.0)	(58.4)	(19.2)	27.2	(26.5)
Deaths[3]	(9.3)	6.9	2.8	(8.6)	.5	1.3
Withdrawal from employment[4]	(49.2)	(105.2)	(133.4)	(137.4)	(42.3)	(88.6)
New entrants[5]	(49.1)	(39.3)	(23.2)	(22.7)	(3.7)	(4.1)
Pay increases[6]	110.4	118.8	152.1	109.7	207.1	287.4
Investment income[7]	1,729.5	1,045.9	715.2	461.2	(68.5)	180.1
Other	(292.6)	4.4	35.6	(63.6)	53.8	(1.8)
Gain (or loss) during year	1,109.4	658.0	591.1	258.9	91.5	231.3
Non-recurring items[8]	(269.4)	(1,917.5)	472.4	39.2	(14.6)	(1,277.1)
Composite gain (or loss) during year	$ 840.0	$(1,259.5)	$1,063.5	$ 298.1	$ 76.9	$(1,045.8)

[1] Age and service retirements: If members retire at older ages than assumed, there is a gain. If members retire at younger ages, a loss occurs.

[2] Disability retirements: If disability claims are lower than was assumed, there is a gain. If a higher number of disability claims was experienced, there is a loss.

[3] Deaths: If survivor claims are lower than was assumed, there is a gain. If a higher number of survivor claims was experienced, there is a loss. If retirees live longer than assumed, there is a loss; if retirees die sooner than assumed, there is a gain.

[4] Withdrawal from employment: If more members terminate and more liabilities are released by withdrawals than are assumed, there is a gain. If fewer liabilities are released, a loss occurs.

[5] New entrants: If the number of new members entering the Plan is lower than was assumed, there is a loss. If a higher number of new members entered the Plan than was assumed, there is a gain.

[6] Pay increases: If there are smaller salary increases than assumed, there is a gain. If greater increases occur, a loss results.

[7] Investment income: If there is greater investment income than assumed, there is a gain. If less income is received, a loss occurs.

[8] Non-recurring items: Include changes to plan benefits, changes in actuarial method or assumptions, and special transfers to retired life funds.

Schedule of Computed Employer Contribution Rates

Expressed as a Percentage of Member Payroll

	State and School Division	Municipal Division	Judicial Division
Contributions:			
Service retirement benefits	10.37%	10.55%	12.76%
Disability retirement benefits	1.07%	1.49%	1.93%
Survivor benefits	0.54%	0.67%	1.40%
Termination withdrawals	2.84%	3.12%	1.52%
Total normal cost	14.82%	15.83%	17.61%
Member contributions	8.03%[1]	8.00%	8.00%[2]
Employer normal cost	6.79%	7.83%	9.61%
Percentage available to amortize unfunded actuarial accrued liabilities	3.82%	1.37%	4.59%
Amortization period	6 years	1 year	0 years
Total employer contribution rate for actuarially funded benefits	11.41%	10.00%	15.00%
Health care fund	0.80%	0.80%	0.80%
Statutory employer contribution rate	10.61%[1]	9.20%	14.20%

[1] Weighted average of more than one statutory rate.

[2] Assumes no judge will elect a refund of contributions made for the 17th through the 20th year of service.

Schedule of Contribution Rate History

State and School Division[3]

Members (Other Than State Troopers)

From		To	Member Contribution Rate (Percent of Payroll)	Employer Contribution Rate[1] (Percent of Payroll)
7-1-97	to	6-30-98	8.00%	11.50%
7-1-98	to	12-31-98	8.00%	11.40%

State Division[3]

Members (Other Than State Troopers)

From		To	Member Contribution Rate (Percent of Payroll)	Employer Contribution Rate[1] (Percent of Payroll)
8-1-31	to	6-30-38	3.50%	0.00%
7-1-38	to	6-30-49	3.50%	3.50%
7-1-49	to	6-30-58	5.00%	5.00%
7-1-58	to	6-30-69	6.00%	6.00%
7-1-69	to	6-30-70	7.00%	7.00%
7-1-70	to	6-30-71	7.00%	8.00%
7-1-71	to	6-30-73	7.00%	8.50%
7-1-73	to	6-30-74	7.75%	9.50%
7-1-74	to	6-30-75	7.75%	10.50%
7-1-75	to	8-31-80	7.75%	10.64%
9-1-80	to	12-31-81	7.75%	12.20%
1-1-82	to	6-30-87	8.00%	12.20%
7-1-87	to	6-30-88	8.00%	10.20%
7-1-88	to	6-30-91	8.00%	12.20%
7-1-91	to	4-30-92	8.00%	11.60%
5-1-92	to	6-30-92	8.00%	5.60%[2]
7-1-92	to	6-30-93	8.00%	10.60%
7-1-93	to	6-30-97	8.00%	11.60%

Municipal Division

From		To	Member Contribution Rate (Percent of Payroll)	Employer Contribution Rate[1] (Percent of Payroll)
1-1-44	to	12-31-49	3.50%	3.50%
1-1-50	to	6-30-58	5.00%	5.00%
7-1-58	to	6-30-69	6.00%	6.00%
7-1-69	to	12-31-69	7.00%	6.00%
1-1-70	to	12-31-70	7.00%	7.00%
1-1-71	to	6-30-73	7.00%	7.50%
7-1-73	to	12-31-73	7.75%	7.50%
1-1-74	to	12-31-74	7.75%	8.50%
1-1-75	to	12-31-75	7.75%	9.50%
1-1-76	to	12-31-80	7.75%	9.86%
1-1-81	to	12-31-81	7.75%	10.20%
1-1-82	to	6-30-91	8.00%	10.20%
7-1-91	to	12-31-98	8.00%	10.00%

State Troopers

From		To	Member Contribution Rate (Percent of Payroll)	Employer Contribution Rate[1] (Percent of Payroll)
7-1-45	to	6-30-69	7.00%	7.00%
7-1-69	to	6-30-70	8.00%	8.00%
7-1-70	to	6-30-71	8.00%	9.00%
7-1-71	to	6-30-73	8.00%	9.50%
7-1-73	to	6-30-74	8.75%	10.50%
7-1-74	to	6-30-75	8.75%	11.50%
7-1-75	to	8-31-80	8.75%	11.64%
9-1-80	to	12-31-81	8.75%	13.20%
1-1-82	to	6-30-87	9.00%	13.20%
7-1-87	to	6-30-88	9.00%	11.20%
7-1-88	to	6-30-89	9.00%	13.20%
7-1-89	to	4-30-92	12.30%	13.20%
5-1-92	to	6-30-92	12.30%	7.20%[1]
7-1-92	to	6-30-93	11.50%	12.20%
7-1-93	to	6-30-97	11.50%	13.20%
7-1-97	to	12-31-98	11.50%	13.10%

School Division[3]

From		To	Member Contribution Rate (Percent of Payroll)	Employer Contribution Rate[1] (Percent of Payroll)
1-1-44	to	12-31-49	3.50%	3.50%
1-1-50	to	6-30-58	5.00%	5.00%
7-1-58	to	6-30-69	6.00%	6.00%
7-1-69	to	12-31-69	7.00%	6.00%
1-1-70	to	12-31-70	7.00%	7.50%
1-1-71	to	12-31-71	7.00%	8.50%
1-1-72	to	6-30-73	7.00%	9.25%
7-1-73	to	12-31-73	7.75%	9.25%
1-1-74	to	12-31-74	7.75%	10.25%
1-1-75	to	12-31-75	7.75%	11.25%
1-1-76	to	12-31-80	7.75%	12.10%
1-1-81	to	12-31-81	7.75%	12.50%
1-1-82	to	6-30-87	8.00%	12.50%
7-1-87	to	6-30-88	8.00%	11.50%
7-1-88	to	6-30-91	8.00%	12.50%
7-1-91	to	6-30-92	8.00%	12.20%
7-1-92	to	6-30-97	8.00%	11.60%

Judicial Division

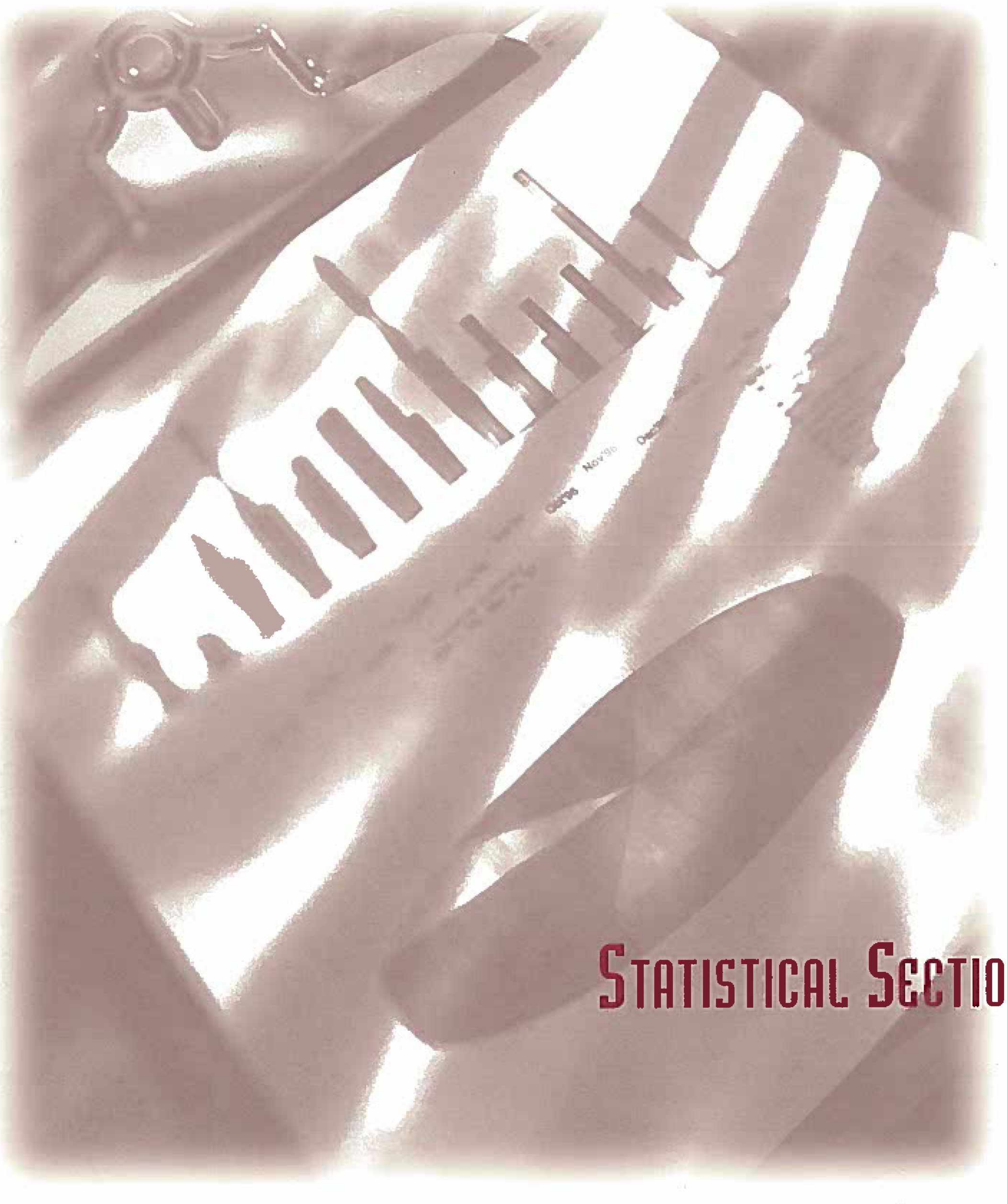
From		To	Member Contribution Rate (Percent of Payroll)	Employer Contribution Rate[1] (Percent of Payroll)
7-1-49	to	6-30-57	5.00%	5.00%
7-1-57	to	6-30-73	6.00%	12.00%
7-1-73	to	6-30-80	7.00%	12.00%
7-1-80	to	8-30-80	7.00%	13.00%
9-1-80	to	12-31-81	7.00%	15.00%
1-1-82	to	6-30-87	8.00%	15.00%
7-1-87	to	6-30-88	8.00%	13.00%
7-1-88	to	12-31-98	8.00%	15.00%

1 All employer contribution rates shown include 0.8 percent used to pay a portion of health care premiums for benefit recipients.
2 Legislation created an annual reduction equal to 1 percent of salary retroactive to July 1, 1991, to be taken during May and June of 1992.
3 State and School Divisions were merged July 1, 1997.

Schedule of Active Member Valuation Data

Year	Number of Employers	Number of Members	Annual Payroll	Average Annual Salary	% Increase in Average Pay
1989	337	105,377	$2,755,113,097	$26,145	2.00 %
1990	342	106,898	2,912,712,448	27,248	4.22 %
1991	359	132,311	3,213,117,152	24,285	5.62 %[1]
1992	365	136,898	3,436,693,500	25,104	3.37 %
1993	355	139,807	3,451,307,428	24,686	(1.67)%
1994	360	140,194	3,578,972,051	25,529	3.41 %
1995	367	144,420	3,803,799,573	26,338	3.17 %
1996	370	147,670	3,968,963,337	26,877	2.05 %
1997	373	152,475	4,211,820,401	27,623	2.78 %
1998	374	154,235	4,477,302,776	29,029	5.09 %

[1] After adjustment for inclusion of temporary, part-time, substitute, and seasonal personnel beginning July 1, 1991.



Statistical Section

Schedule of Expenses by Type
(In Thousands of Dollars)

Year	Benefit Payments	Refunds[1]	Administrative Expenses	Other	Total
STATE AND SCHOOL DIVISION[2]					
1997	$ 749,313	$ 60,686	$ 14,090	$ 377	$ 824,466
1998	851,676	65,811	14,142	2,068	933,697
STATE DIVISION[2]					
1993	$ 235,191	$ 12,062	$ 5,543	$(19,145)	$ 233,651
1994	262,012	15,772	6,014	(1,481)	282,317
1995	283,375	18,507	6,565	(9,567)	298,880
1996	305,658	31,880	5,503	(3,902)	339,139
SCHOOL DIVISION[2]					
1993	$ 263,322	$ 11,672	$ 8,075	$(25,265)	$ 257,804
1994	296,970	12,908	8,656	(1,782)	316,752
1995	325,819	17,185	9,834	10,599	363,437
1996	355,521	27,343	8,548	4,237	395,649
MUNICIPAL DIVISION					
1993	$ 21,696	$ 3,017	$ 976	$ 272	$ 25,961
1994	23,889	3,636	1,065	(272)	28,318
1995	26,117	5,149	1,183	599	33,048
1996	28,723	7,330	999	249	37,301
1997	32,823	8,112	996	150	42,081
1998	36,967	8,070	1,158	(824)	45,371
JUDICIAL DIVISION					
1993	$ 3,536	$ –	$ 37	$ (471)	$ 3,102
1994	3,785	47	39	(119)	3,752
1995	4,190	53	43	(225)	4,061
1996	4,449	9	36	(67)	4,427
1997	4,992	145	35	(53)	5,119
1998	5,168	46	25	(442)	4,797
HEALTH CARE FUND					
1993	$ 44,538	$ –	$ –	$ (4)	$ 44,534
1994	45,563	–	–	(1)	45,562
1995	55,040	–	–	–	55,040
1996	57,102	–	–	–	57,102
1997	59,652	–	–	–	59,652
1998	62,395	–	846	(2,122)	61,119

1 Refunds include interest and matching amounts as required by law.

2 The State and School Divisions were merged in 1997.

Schedule of Revenue by Source

(In Thousands of Dollars)

Year	Member Contributions[1]	Employer Contributions[1]	Service Credit Purchases	Retiree Health Care Premiums	Net Investment Income	Other Income[2]	Total Revenues
STATE AND SCHOOL DIVISION[3]							
1997	$293,059	$392,898	$27,029	$ –	$3,361,986	$ –	$4,074,972
1998	308,379	409,749	43,762	–	3,231,469	–	3,993,359
STATE DIVISION[3]							
1993	$107,515	$110,902	$ 8,210	$ –	$ 664,567	$ –	$ 891,194
1994	109,635	142,913	15,969	–	25,933	49,338	343,788
1995	114,278	153,472	7,294	–	1,265,032	–	1,540,076
1996	118,472	159,057	5,513	–	840,178	–	1,123,220
SCHOOL DIVISION[3]							
1993	$134,501	$147,969	$10,547	$ –	$ 960,053	$ –	$1,253,070
1994	139,349	182,509	21,215	–	37,733	71,524	452,330
1995	148,784	200,889	11,825	–	1,849,069	–	2,210,567
1996	158,675	214,155	8,018	–	1,232,953	–	1,613,801
MUNICIPAL DIVISION							
1993	$ 18,025	$ 16,228	$ 336	$ –	$ 88,915	$ –	$ 123,504
1994	19,443	21,590	1,082	–	3,550	6,681	52,346
1995	20,852	23,980	1,152	–	176,405	–	222,389
1996	21,872	25,149	814	–	119,221	–	167,056
1997	23,701	27,253	853	–	195,741	–	247,548
1998	26,248	30,186	1,339	–	191,499	–	249,272
JUDICIAL DIVISION							
1993	$ 1,296	$ 1,977	$ 79	$ –	$ 9,273	$ –	$ 12,625
1994	1,291	2,240	159	–	362	692	4,744
1995	1,326	2,353	131	–	17,738	–	21,548
1996	1,426	2,531	62	–	11,802	–	15,821
1997	1,485	2,636	340	–	19,086	–	23,547
1998	1,517	2,693	89	–	18,394	–	22,693
HEALTH CARE FUND							
1993	$ –	$ 26,113	$ –	$16,459	$ 9,529	$ –	$ 52,101
1994	–	26,896	–	17,261	342	–	44,499
1995	–	28,467	–	17,795	17,035	–	63,297
1996	–	30,008	–	18,932	10,383	–	59,323
1997	–	31,750	–	20,124	15,711	–	67,585
1998	–	33,522	–	21,798	14,089	–	69,409

1 Member and employer contribution rate history is shown on page 64.

2 Other income in 1994 is due to assets transferred from the Cost of Living Stabilization Fund as required by House Bill 93-1324.

3 The State and School Divisions were merged in 1997.

Member and Benefit Recipient Statistics[1]

	State Category	School Category	Municipal Division	Judicial Division	Total
Active members—12/31/98[2]	51,369	91,531	11,084	251	154,235
Retirements during 1998:					
Disability retirements	148	152	32	2	334
Service retirements	1,009	1,677	113	6	2,805
Total	1,157	1,829	145	8	3,139
Retirement benefits:					
Total receiving disability and service retirement benefits on Dec. 31, 1997	19,233	23,911	2,230	196	45,570
Total retiring during 1998	1,157	1,829	145	8	3,139
Cobeneficiaries continuing after retiree's death	279	207	37	6	529
Returning to retirement rolls from suspension	28	36	2	0	66
Total	20,697	25,983	2,414	210	49,304
Retirees and cobeneficiaries deceased during year	824	748	110	12	1,694
Retirees suspending benefits to return to work	5	14	1	0	20
Total receiving retirement benefits	19,868	25,221	2,303	198	47,590
Total retirement benefits payable on 12/31/98	$385,085,916	$475,514,172	$36,587,628	$4,962,000	$902,149,716
Average monthly benefit on 12/31/98	$ 1,615	$ 1,571	$ 1,324	$ 2,088	$ 1,580
Average monthly benefit for all members who retired during 1998	$ 2,195	$ 2,016	$ 1,848	$ 3,537	$ 2,078
Survivor benefit accounts:					
Total benefits being paid on 12/31/98	775	858	152	19	1,804
Total benefits payable on 12/31/98	$ 9,640,716	$ 8,830,500	$ 1,453,644	$ 361,452	$ 20,286,312
Future benefits:					
Future retirements to age 60 or 65	2,469	4,129	433	11	7,042
Total annual future benefits	$ 18,690,927	$ 21,555,277	$ 3,177,704	$ 143,947	$ 43,567,855
Future survivor beneficiaries of inactive members	88	119	20	1	228
Total annual future benefits	$ 421,375	$ 300,288	$ 98,330	$ 5,831	$ 825,824

1 Numbers in this table vary slightly from those shown in the Financial Section due to corrections to prior year's data and to actuarial adjustments to current year's data.

2 In addition, as of 12/31/98, there was a total of 67,743 non-vested terminated members due a refund of their contributions—State and School Division: 60,916; Municipal Division: 6,825; and Judicial Division: 2.

Schedule of Average Retirement Benefits Payable[1]

Year Ended	Average Monthly Benefit	Average Age at Retirement	Average Current Age of Retirees	Average Years of Service at Retirement
12/31/89	$ 864	61.1	70.0	18.2
12/31/90	935	60.9	70.0	18.3
12/31/91	980	60.7	70.1	18.5
12/31/92	1,085	60.5	70.0	18.7
12/31/93	1,158	60.2	69.7	19.1
12/31/94	1,213	60.0	69.7	19.2
12/31/95	1,266	59.7	69.7	19.4
12/31/96	1,334	59.6	69.2	19.6
12/31/97	1,533	59.2	69.5	19.8
12/31/98	1,580	59.2	69.6	20.1

1 Includes disability retirements, but not survivor benefits.

Schedule of Benefit Disbursements by Type[1]

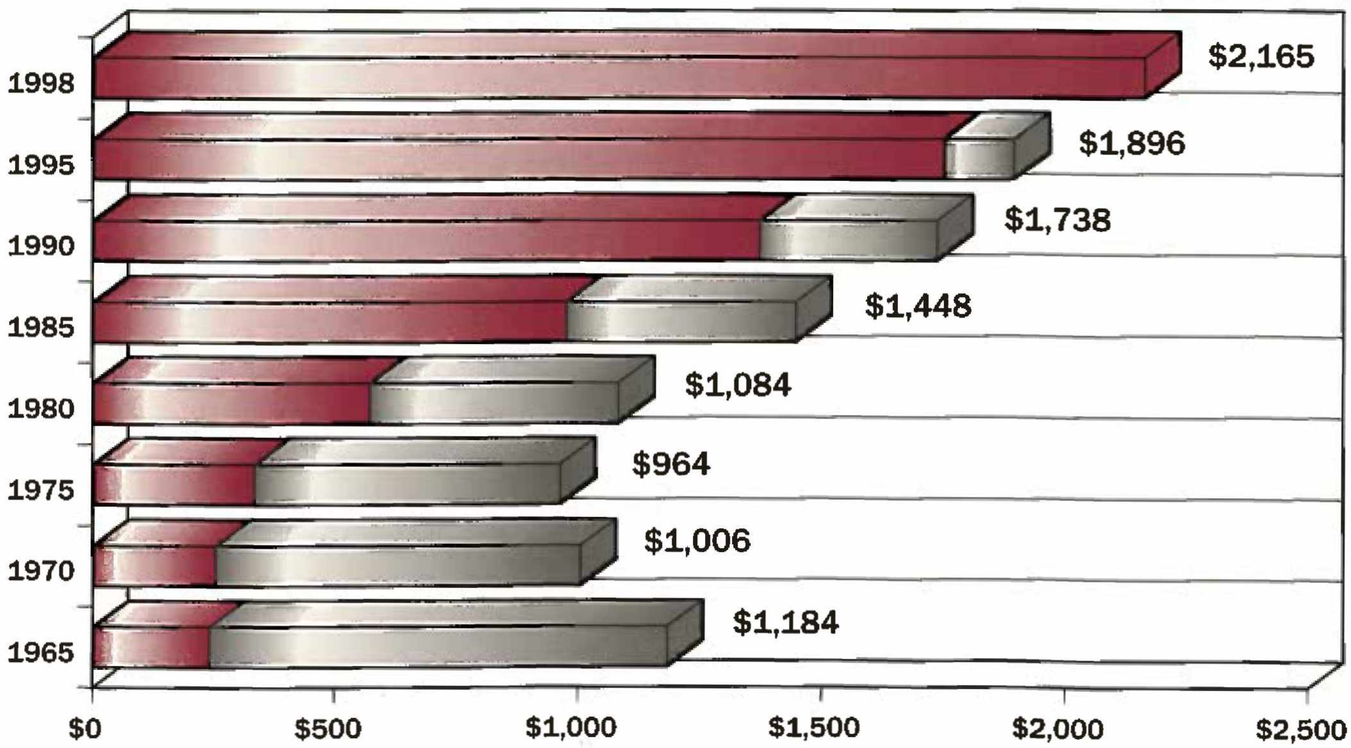
(In Thousands of Dollars)

Year Ended	Retirement Benefits	Survivor Benefits	Contribution Refunds	Interest and Matching Amount Paid	Health Care	Total
12/31/93	$509,629	$14,116	$25,086	$ 1,665	$44,538	$ 595,034
12/31/94	571,655	15,001	30,104	2,259	45,563	664,582
12/31/95	622,149	17,352	26,616	14,278	55,040	735,435
12/31/96	677,181	17,170	39,022	27,540	57,102	818,015
12/31/97	769,130	17,998	39,326	29,617	59,652	915,723
12/31/98	874,913	18,898	41,884	32,043	62,395	1,030,133

[1]Numbers do not include 401(k) Voluntary Investment Program.

Current Average Monthly Benefit by Year of Retirement

Service Retiree Accounts as of December 31, 1998



	1965	1970	1975	1980	1985	1990	1995	1998
Original Benefit at Retirement	$241	$254	$335	$573	$978	$1,374	$1,753	$2,165
Benefit Increases	$943	$752	$629	$511	$470	$ 364	$ 143	$ 0

Schedule of Retirees and Survivors by Type of Benefit

As of December 31, 1998

Types of Benefits:

1 – Age and service retirement.
2 – Disability retirement.
3 – Survivor payment—Option 3.
4 – Survivor payment—children, spouse, or dependent parent.
5 – Surviving spouse with future benefit.
6 – Former member with future benefit.

Option Selected:

Retirees select one of the following options at retirement:

1 —Single life benefit.
2 —Joint benefit with 1/2 to surviving cobeneficiary.
3 —Joint and survivor benefit.
4 —Joint benefit with 1/2 to either survivor. (No longer offered to members retiring.)

Surviving Cobeneficiary:

Retiree has predeceased the cobeneficiary.

Surviving Retiree:

Cobeneficiary has predeceased the retiree.

State and School Division

		Type of Benefit					
Amount of Benefit	**Total (Columns 1–5)**	**1**	**2**	**3**	**4**	**5**	**6**
$1-$250	2,940	2,667	108	3	162	0	2,207
$251-$500	4,837	3,890	552	6	382	7	1,851
$501-$750	4,732	3,604	821	13	281	13	1,040
$751-$1,000	4,762	3,353	1,134	13	236	26	595
$1,001-$1,250	4,622	3,253	1,162	14	176	17	381
$1,251-$1,500	4,347	3,245	948	15	124	15	221
$1,501-$1,750	3,686	2,891	696	9	82	8	161
$1,751-$2,000	3,285	2,707	492	13	68	5	128
Over $2,000	13,893	12,930	770	65	119	9	221
Totals	47,104	38,540	6,683	151	1,630	100	6,805

	Option Selected					
Amount of Benefit	**1**	**2**	**3**	**4**	**Surviving Cobeneficiary**	**Surviving Retiree**
$1-$250	1,866	115	367	23	307	98
$251-$500	2,844	267	536	41	605	149
$501-$750	2,642	377	604	52	602	147
$751-$1,000	2,599	502	707	60	464	155
$1,001-$1,250	2,476	562	777	67	383	150
$1,251-$1,500	2,368	532	838	51	299	105
$1,501-$1,750	1,879	523	803	71	210	101
$1,751-$2,000	1,619	594	702	37	177	70
Over $2,000	6,342	2,821	3,682	186	479	190
Totals	24,635	6,293	9,016	588	3,526	1,165

Schedule of Retirees and Survivors by Type of Benefit (continued)

As of December 31, 1998

Types of Benefits:
1 – Age and service retirement.
2 – Disability retirement.
3 – Survivor payment—Option 3.
4 – Survivor payment—children, spouse, or dependent parent.
5 – Surviving spouse with future benefit.
6 – Former member with future benefit.

Option Selected:
Retirees select one of the following options at retirement:

1 —Single life benefit.
2 —Joint benefit with 1/2 to surviving cobeneficiary.
3 —Joint and survivor benefit.
4 —Joint benefit with 1/2 to either survivor. (No longer offered to members retiring.)

Surviving Cobeneficiary:
Retiree has predeceased the cobeneficiary.

Surviving Retiree:
Cobeneficiary has predeceased the retiree.

Municipal Division

		Type of Benefit					
Amount of Benefit	**Total (Columns 1–5)**	**1**	**2**	**3**	**4**	**5**	**6**
$1-$250	143	122	8	0	12	1	85
$251-$500	261	204	31	0	26	0	139
$501-$750	324	211	64	3	42	4	98
$751-$1,000	324	179	110	2	30	3	48
$1,001-$1,250	388	195	175	0	17	1	31
$1,251-$1,500	284	161	112	2	9	0	17
$1,501-$1,750	210	126	74	2	8	0	16
$1,751-$2,000	154	109	38	2	5	0	7
Over $2,000	397	353	41	2	1	0	12
Totals	2,485	1,660	653	13	150	9	453

	Option Selected					
Amount of Benefit	**1**	**2**	**3**	**4**	**Surviving Cobeneficiary**	**Surviving Retiree**
$1-$250	75	4	20	0	25	6
$251-$500	111	10	31	4	67	12
$501-$750	129	22	54	4	58	8
$751-$1,000	128	39	69	6	45	2
$1,001-$1,250	162	60	102	8	27	11
$1,251-$1,500	114	51	72	5	24	7
$1,501-$1,750	76	25	73	5	14	7
$1,751-$2,000	60	33	43	3	6	2
Over $2,000	114	98	149	9	17	7
Totals	969	342	613	44	283	62

Schedule of Retirees and Survivors by Type of Benefit (continued)

As of December 31, 1998

Types of Benefits:
1 – Age and service retirement.
2 – Disability retirement.
3 – Survivor payment—Option 3.
4 – Survivor payment—children, spouse, or dependent parent.
5 – Surviving spouse with future benefit.
6 – Former member with future benefit.

Option Selected:
Retirees select one of the following options at retirement:

1 —Single life benefit.
2 —Joint benefit with 1/2 to surviving cobeneficiary.
3 —Joint and survivor benefit.
4 —Joint benefit with 1/2 to either survivor. (No longer offered to members retiring.)

Surviving Cobeneficiary:
Retiree has predeceased the cobeneficiary.

Surviving Retiree:
Cobeneficiary has predeceased the retiree.

Judicial Division

Amount of Benefit	Total (Columns 1–5)	Type of Benefit 1	2	3	4	5	6
$1-$250	3	3	0	0	0	0	1
$251-$500	15	14	1	0	0	0	1
$501-$750	12	9	1	0	2	0	3
$751-$1,000	8	6	0	0	2	0	1
$1,001-$1,250	16	14	1	0	1	0	0
$1,251-$1,500	18	12	2	0	4	0	3
$1,501-$1,750	18	14	0	0	3	1	0
$1,751-$2,000	14	13	0	0	1	0	0
Over $2,000	115	95	14	1	5	0	3
Totals	219	180	19	1	18	1	12

Amount of Benefit	Option Selected 1	2	3	4	Surviving Cobeneficiary	Surviving Retiree
$1-$250	0	0	3	0	0	0
$251-$500	5	2	3	0	5	0
$501-$750	2	0	1	0	5	2
$751-$1,000	2	0	2	0	2	0
$1,001-$1,250	5	1	3	1	3	0
$1,251-$1,500	2	0	7	1	5	1
$1,501-$1,750	1	0	3	0	8	2
$1,751-$2,000	1	1	5	0	3	3
Over $2,000	20	22	40	4	21	2
Totals	38	26	67	6	52	10

Schedule of Average Benefit Payments

Year Retired	Years of Service Credit					
Period 1/1/98 to 12/31/98	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 296	$ 611	$ 975	$1,586	$ 2,194	$3,293
Average Highest Average Salary	$1,815	$2,296	$2,543	$3,249	$ 3,709	$4,398
Number of Service Retirees	153	191	160	754	488	1,059
Period 1/1/97 to 12/31/97	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 600	$ 828	$1,159	$1,588	$ 2,171	$3,097
Average Highest Average Salary	$2,011	$2,395	$2,716	$3,322	$ 3,727	$4,170
Number of Service Retirees	322	308	277	775	556	736
Period 1/1/96 to 12/31/96	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 599	$ 800	$1,023	$1,514	$ 2,200	$3,211
Average Highest Average Salary	$1,917	$2,298	$2,444	$3,098	$ 3,671	$4,169
Number of Service Retirees	304	313	265	714	374	559
Period 1/1/95 to 12/31/95	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 628	$ 797	$1,082	$1,544	$ 2,190	$3,248
Average Highest Average Salary	$1,964	$2,242	$2,450	$3,043	$ 3,526	$4,119
Number of Service Retirees	337	318	286	724	466	519
Period 1/1/94 to 12/31/94	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 614	$ 755	$1,121	$1,574	$ 2,225	$3,243
Average Highest Average Salary	$2,004	$2,168	$2,449	$3,068	$ 3,507	$4,050
Number of Service Retirees	349	332	284	724	477	512
Period 1/1/93 to 12/31/93	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 591	$ 853	$1,080	$1,701	$ 2,406	$3,270
Average Highest Average Salary	$2,022	$2,247	$2,378	$3,212	$ 3,749	$3,955
Number of Service Retirees	324	356	343	901	627	677
Period 1/1/92 to 12/31/92	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 556	$ 820	$1,104	$1,616	$ 2,348	$3,184
Average Highest Average Salary	$1,791	$2,099	$2,403	$2,943	$ 3,360	$3,701
Number of Service Retirees	331	363	336	738	349	414
Period 1/1/91 to 12/31/91	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 554	$ 758	$1,093	$1,606	$ 2,311	$3,211
Average Highest Average Salary	$1,756	$2,016	$2,262	$2,820	$ 3,194	$3,599
Number of Service Retirees	282	330	332	658	252	365
Period 1/1/90 to 12/31/90	**0-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
Average Monthly Benefit	$ 537	$ 790	$1,143	$1,619	$ 2,426	$3,101
Average Highest Average Salary	$1,743	$1,993	$2,292	$2,736	$ 3,213	$3,392
Number of Service Retirees	279	295	269	668	263	312

Schedule of Affiliated Employers

STATE CATEGORY

Agencies and Instrumentalities

Colorado Association of School Boards
Colorado Compensation Insurance Authority
Colorado Council on Arts and Humanities
Colorado High School Activities Association
Colorado Student Loan Program
Colorado Uninsurable Health Insurance Plan
Colorado Water Resources and Power Development Authority
Department of Agriculture
Department of Corrections
Department of Education
Department of Health Care Policy and Financing
Department of Human Services
Department of Labor and Employment
Department of Law
Department of Local Affairs
Department of Military Affairs
Department of Natural Resources
Department of Public Health and Environment
Department of Public Safety
Department of Regulatory Agencies
Department of Revenue
Department of State
Department of Transportation
Department of the Treasury
Fire and Police Pension Association
General Assembly
General Support Services/Department of Personnel
Joint Budget Committee
Judicial Department
Legislative Council
Office of the District Attorneys
Office of the Governor
Office of Legislative Legal Services
Office of the Lieutenant Governor
Public Employees' Retirement Association of Colorado
Special District Association of Colorado
State Auditor's Office
State Historical Society

Institutions of Higher Education

Adams State College
Aims Community College
Arapahoe Community College
Auraria Higher Education Center
Aurora Community College
Colorado Advanced Technology Institute
Colorado Mountain College
Colorado Northwestern Community College
Colorado School of Mines
Colorado State University
Commission on Higher Education
Denver Community College
Fort Lewis College
Front Range Community College
Lamar Community College
Lowry Higher Education Center
Mesa State College
Metropolitan State College of Denver
Morgan Community College
Northeastern Junior College
Otero Junior College
Pikes Peak Community College
Pueblo Vocational Community College
Red Rocks Community College
School for the Deaf & Blind
State Board for Community Colleges and Occupational Education
The State Colleges in Colorado
Trinidad State Junior College
University of Colorado at Boulder
University of Colorado at Colorado Springs
University of Colorado at Denver
University of Colorado Health Sciences Center
University of Northern Colorado
University of Southern Colorado
Western State College

Schedule of Affiliated Employers

SCHOOL CATEGORY

Adams County
Adams County School District 14
Bennett School District 29J
Brighton School District 27J
Mapleton School District 1
Northglenn-Thornton School District 12
Strasburg School District 31J
Westminster School District 50

Alamosa County
Alamosa County School District Re-11J
Sangre de Cristo School District Re-22J

Arapahoe County
Adams-Arapahoe School District 28J
Byers School District 32J
Cherry Creek School District 5
Deer Trail School District 26J
Englewood School District 1
Littleton School District 6
Sheridan School District 2

Archuleta County
Archuleta County School District 50 Jt

Baca County
Campo School District RE-6
Pritchett School District RE-3
Springfield School District RE-4
Vilas School District RE-5
Walsh School District RE-1

Bent County
Las Animas School District RE-1
McClave School District RE-2

Boulder County
Boulder Valley School District RE2
St. Vrain Valley School District RE1J

Chaffee County
Buena Vista School District R-31
Salida School District R-32(J)

Cheyenne County
Cheyenne County School District Re-5
Kit Carson School District R-1

Clear Creek County
Clear Creek School District RE-1

Conejos County
North Conejos School District RE1J
Sanford School District 6J
South Conejos School District RE 10

Costilla County
Centennial School District R-1
Sierra Grande School District R-30

Crowley County
Crowley County School District RE-1

Custer County
Custer County Consolidated School District C-1

Delta County
Delta County School District 50(J)

Dolores County
Dolores County School District Re No. 2

Douglas County
Douglas County School District Re 1

Eagle County
Eagle County School District Re 50

Elbert County
Agate School District 300
Big Sandy School District 100J
Elbert School District 200
Elizabeth School District C-1
Kiowa School District C-2

El Paso County
Academy School District 20
Calhan School District RJ1
Cheyenne Mountain School District 12
Colorado Springs School District 11
Edison School District 54 Jt
Ellicott School District 22
Falcon School District 49
Fountain School District 8
Hanover School District 28
Harrison School District 2
Lewis-Palmer School District 38
Manitou Springs School District 14
Miami/Yoder School District 60 Jt
Peyton School District 23 Jt
Widefield School District 3

Fremont County
Canon City School District Re-1
Cotopaxi School District Re-3
Florence School District Re-2

Garfield County
Garfield School District Re-2
Garfield School District 16
Roaring Fork School District Re-1

Gilpin County
Gilpin County School District Re-1

Grand County
East Grand School District 2
West Grand School District 1

Gunnison County
Gunnison Watershed School District Re1J

Hinsdale County
Hinsdale County School District Re-1

Huerfano County
Huerfano School District Re-1
La Veta School District Re-2

Jackson County
North Park School District R-1

Schedule of Affiliated Employers

Jefferson County
Jefferson County School District R-1

Kiowa County
Eads School District Re-1
Plainview School District Re-2

Kit Carson County
Arriba-Flagler Consolidated School District No. 20
Bethune School District R-5
Burlington School District Re-6J
Hi-Plains School District R-23
Stratton School District R-4

Lake County
Lake County School District R-1

La Plata County
Bayfield School District 10Jt-R
Durango School District 9-R
Ignacio School District 11 Jt

Larimer County
Park School District R-3
Poudre School District R-1
Thompson School District R-2J

Las Animas County
Aguilar Reorganized School District 6
Branson Reorganized School District 82
Hoehne Reorganized School District 3
Kim Reorganized School District 88
Primero Reorganized School District 2
Trinidad School District 1

Lincoln County
Genoa/Hugo School District C-113
Karval School District Re 23
Limon School District Re 4J

Logan County
Buffalo School District Re-4
Frenchman School District Re-3
Plateau School District Re-5
Valley School District Re-1

Mesa County
De Beque School District 49 Jt
Mesa County Valley School District 51
Plateau Valley School District 50

Mineral County
Creede Consolidated School District 1

Moffat County
Moffat County School District Re No.1

Montezuma County
Dolores School District RE 4A
Mancos School District Re-6
Montezuma-Cortez School District Re 1

Montrose County
Montrose County School District Re-1J
West End School District Re-2

Morgan County
Brush School District Re-2 (J)
Fort Morgan School District Re-3
Weldon Valley School District Re-20 (J)
Wiggins School District Re-50 (J)

Otero County
Cheraw School District 31
East Otero School District R1
Fowler School District R4J
Manzanola School District 3J
Rocky Ford School District R2
Swink School District 33

Ouray County
Ouray School District R-1
Ridgway School District R-2

Park County
Park County School District Re-2
Platte Canyon School District 1

Phillips County
Haxtun School District Re-2J
Holyoke School District Re-1J

Pitkin County
Aspen School District 1

Prowers County
Granada School District Re-1
Holly School District Re-3
Lamar School District Re-2
Wiley School District Re-13 Jt

Pueblo County
Pueblo City School District 60
Pueblo County School District 70

Rio Blanco County
Meeker School District RE1
Rangely School District RE4

Rio Grande County
Del Norte School District C-7
Monte Vista School District C-8
Sargent School District Re-33J

Routt County
Hayden School District Re 1
South Routt School District Re 3
Steamboat Springs School District Re 2

Saguache County
Center Consolidated School District 26 Jt
Moffat School District 2
Mountain Valley School District Re 1

San Juan County
Silverton School District 1

San Miguel County
Norwood School District R-2J
Telluride School District R-1

Schedule of Affiliated Employers

Sedgwick County
- Julesburg School District Re 1
- Platte Valley School District Re3

Summit County
- Summit School District Re 1

Teller County
- Cripple Creek-Victor School District Re-1
- Woodland Park School District RE-2

Washington County
- Akron School District R-1
- Arickaree School District R-2
- Lone Star School District 101
- Otis School District R-3
- Woodlin School District R-104

Weld County
- Ault-Highland School District Re-9
- Briggsdale School District Re-10
- Eaton School District Re-2
- Fort Lupton School District Re-8
- Gilcrest School District Re-1
- Greeley School District 6
- Johnstown School District Re-5J
- Keenesburg School District Re-3
- Pawnee School District Re-12
- Platte Valley School District Re-7
- Prairie School District Re-11
- Windsor School District Re-4

Yuma County
- East Yuma County School District R-J-2
- West Yuma County School District R-J-1

Boards of Cooperative Educational Services (BOCES)
- East Central BOCES
- Expeditionary Learning School BOCES
- Grand Valley BOCES
- Mountain BOCES
- Mount Evans BOCES
- Northeast BOCES
- Northern Colorado BOCES
- Northwest Colorado BOCES
- Pikes Peak BOCES
- Rio Blanco BOCES
- South Central BOCES
- South Platte Valley BOCES
- Southeastern BOCES
- Uncompaghre BOCES
- Weld BOCES
- West Central BOCES

Boards of Cooperative Services (BOCS)
- Adams County BOCS
- Arkansas Valley BOCS
- San Juan BOCS
- San Luis Valley BOCS
- Southwest BOCS

Vocational Schools
- Delta-Montrose Area Vocational School
- San Juan Basin Area Vocational School

MUNICIPAL DIVISION
- Alamosa Housing Authority
- Aurora Housing Authority
- Baca Grande Water & Sanitation District
- Beulah Water Works District
- Black Hawk-Central City Sanitation District
- Blanca-Fort Garland Metropolitan District
- Boxelder Sanitation District
- Brush Housing Authority
- Carbon Valley Park & Recreation District
- Castle Pines Metropolitan District
- Castle Pines North Metropolitan District
- Centennial Soil Conservation District
- Center Housing Authority
- City of Alamosa
- City of Boulder
- City of Colorado Springs
- City of Fort Morgan
- City of Manitou Springs
- City of Pueblo
- City of Wray
- City of Yuma
- Colorado Housing & Finance Authority
- Colorado School District Self-Insurance Pool
- Colorado Springs Utilities
- Columbine Knolls-Grove Metropolitan Recreation District
- Costilla Housing Authority
- Cunningham Fire Protection District
- Douglas Public Library District
- East Cheyenne Ground Water Management District
- East Larimer County Water District
- Eastern Rio Blanco Parks & Recreation Department
- Eaton Housing Authority
- Estes Valley Public Library District
- Forest Lakes Metropolitan District
- Fremont Sanitation District
- Fremont Soil Conservation District
- Garfield County Housing Authority
- Housing Authority of Arriba
- Housing Authority of the City of Boulder *(affiliated in 1999)*
- Housing Authority of the County of Saguache
- Housing Authority of the Town of Limon
- Lamar Housing Authority
- Lamar Utilities Board
- Left Hand Water District
- Longs Peak Water District
- Longmont Housing Authority
- Louisville Fire Protection District
- Meeker Regional Library District
- Memorial Hospital-Colorado Springs
- Montrose Fire Protection District
- Montrose Recreation District
- Monument Sanitation District *(affiliated in 1999)*
- Morgan Soil Conservation District
- Mountain View Fire Protection District
- Mountain Village Metropolitan District
- Mountain Water and Sanitation District
- Niwot Sanitation District
- North Chaffee County Regional Library
- Northeast Colorado Health Department
- Park Center Water District *(affiliated in 1999)*

Schedule of Affiliated Employers

Pine Drive Water District
Pueblo City-County Health Department
Pueblo Library District
Rampart Regional Library District
Rangely Regional Library District
Red, White & Blue Fire Protection District
Rifle Fire Protection District
Rio Blanco Fire Protection District
Rio Blanco Water Conservancy District
Routt County Soil Conservation District *(inactive affiliate)*
Sable-Altura Fire Protection District
San Luis Valley Development Resources Group
San Luis Valley Water Conservancy District *(affiliated in 1999)*
San Miguel County Public Library
San Miguel Regional and Telluride Housing Authority
Sheridan Sanitation District #1
Soldier Canyon Filter Plant
Southwest Regional Library
Steamboat II Water and Sanitation District
Steamboat Springs Rural Fire Protection District
Town of Bayfield
Town of Crawford
Town of Dinosaur
Town of Eckley
Town of Estes Park
Town of Firestone
Town of Lake City
Town of Mountain Village
Town of Platteville
Town of Rico
Town of Siebert
Town of Silver Plume
Tri-County Health Department
Upper Colorado Environmental Plant Center
Washington-Yuma Counties Combined Communications Center
Weld County Health Department
West Greeley Soil Conservation District
Western Rio Blanco Metropolitan Recreation & Park District
Windsor-Severance Library District
Yuma Housing Authority

JUDICIAL DIVISION

1st-23rd District Court
24th District-Denver Probate Court
25th District-Denver Juvenile Court
Adams County Court
Alamosa County Court
Arapahoe County Court
Archuleta County Court
Baca County Court
Bent County Court
Boulder County Court
Chaffee County Court
Cheyenne County Court
Clear Creek County Court
Conejos County Court
Costilla County Court
Court of Appeals
Crowley County Court
Custer County Court
Delta County Court
Denver County Court
Dolores County Court
Douglas County Court
Eagle County Court
El Paso County Court
Elbert County Court
Fremont County Court
Garfield County Court
Gilpin County Court
Grand County Court
Gunnison County Court
Hinsdale County Court
Huerfano County Court
Jackson County Court
Jefferson County Court
Kiowa County Court
Kit Carson County Court
La Plata County Court
Lake County Court
Larimer County Court
Las Animas County Court
Lincoln County Court
Logan County Court
Mesa County Court
Mineral County Court
Moffat County Court
Montezuma County Court
Montrose County Court
Morgan County Court
Otero County Court
Ouray County Court
Park County Court
Phillips County Court
Pitkin County Court
Prowers County Court
Pueblo County Court
Rio Blanco County Court
Rio Grande County Court
Routt County Court
Saguache County Court
San Juan County Court
San Miguel County Court
Sedgwick County Court
Summit County Court
Supreme Court
Teller County Court
Washington County Court
Weld County Court
Yuma County Court

Health Care Program

The PERA Health Care Program began covering enrolled benefit recipients and qualified dependents on July 1, 1986. This benefit was developed after legislation in 1985 established the Program and the Health Care Fund (HCF).

The HCF receives employer contributions equal to 0.8 percent of member salaries from affiliated employers. This allocation is invested, and earnings are added to the Fund.

Under the Program, PERA subsidizes a portion of the monthly premium for health care coverage. The benefit recipient pays any remaining part of that premium through an automatic deduction from the monthly retirement benefit. In 1998, the maximum subsidy continued to be $115 per month for benefit recipients whose retirement benefits were based on 20 years or more of PERA service credit. For those with less service, the subsidy was reduced by 5 percent ($5.75) for each year under 20 years.

Monthly premium costs for participants depend on the health care plan selected, the total premium, the PERA subsidy amount, Medicare eligibility, and the number of persons being covered.

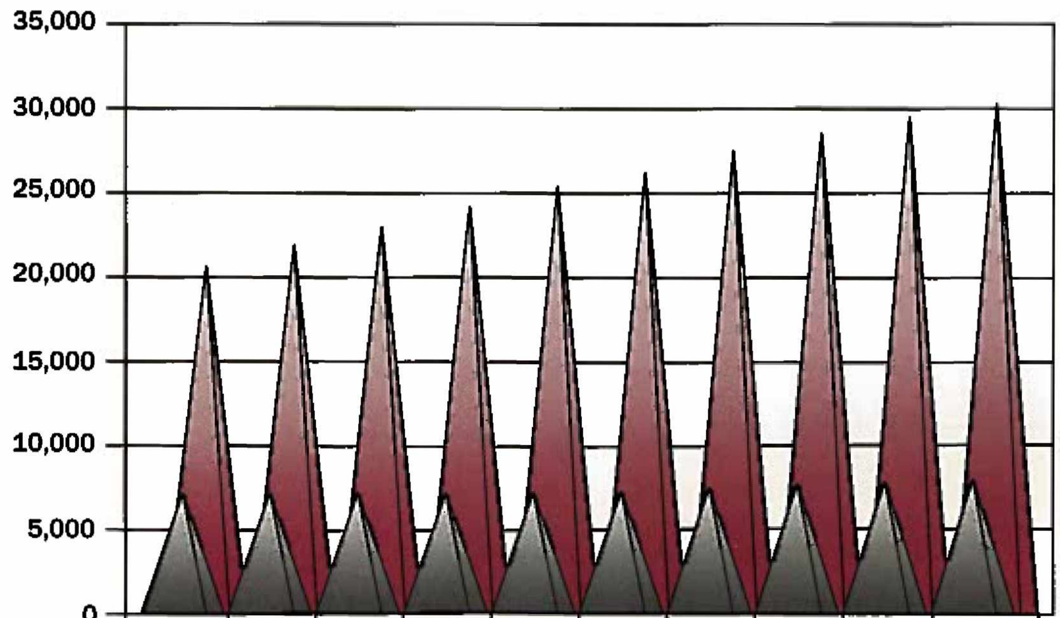
Effective July 1, 1998, contracts with four health maintenance organizations (HMOs) were renewed for the following 12 months: PacifiCare of Colorado, Kaiser Permanente, Rocky Mountain HMO, and QualMed HMO. Mutual of Omaha continued to administer the two self-insured plans.

The Board continues to pursue efforts that will improve health care coverage and cost to PERA's retirees. In 1998, the Board worked on drafting Senate Bill (SB) 90 that was enacted into law in 1999. SB 90 contains several features that will affect the PERA Health Care Program.

Health Care Program provisions specified in SB 90 include:

1. Increasing the amount of the regular employer contribution earmarked for the PERA Health Care Fund from 0.8 percent of salary to 1.1 percent of salary, effective July 1, 1999.
2. Doubling the maximum premium subsidy to $230 per month for enrollees under age 65, beginning July 1, 2000.
3. Creating the PERA Health Care Trust Fund, effective July 1, 1999.
4. Allowing PERA employers to obtain PERA health coverage for their active employees, beginning January 1, 2001.

Health Care Program Enrollments



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Benefit Recipients	20,690	21,938	23,037	24,236	25,444	26,270	27,531	28,575	29,571	30,291
Spouses & Dependents	7,196	7,241	7,289	7,271	7,321	7,334	7,534	7,731	7,817	7,974

Life Insurance Program

PERA has provided its members with access to voluntary supplemental life insurance benefits since 1956 when it contracted with New York Life Insurance Company for coverage. The Board transferred the plan underwritten by New York Life to Rocky Mountain Life, a subsidiary of Blue Cross and Blue Shield of Colorado, in 1988. However, New York Life retained coverage for members and retirees having a paid-up policy, and certain disability retirees with waiver of premium coverage.

In 1986, PERA assumed responsibility from the state of Colorado for administering a Rocky Mountain Life plan for retired state employees. This plan is a closed group with no provision for new participants.

Currently, PERA offers two group, decreasing-term life insurance plans—the Rocky Mountain Life coverage and a plan offered by the National Conference on Public Employee Retirement Systems through Prudential. Active members may join one or both of the plans, and may continue coverage into retirement or after leaving PERA-covered employment if they retain their PERA account. Inactive members may continue life insurance coverage as long as they retain their PERA member contribution account. During the annual open enrollment period, members enrolling are not required to furnish evidence of good health for themselves or their dependents. Members may enroll outside the enrollment period, but must provide a statement of good health.

Life Insurance Program Enrollment

Year	Rocky Mountain Life	Prudential	Rocky Mountain Life (Closed Group)	New York Life[1]	Total Enrollments
1989	33,241	14,306	4,462	—	52,009
1990	34,245	15,129	4,208	—	53,582
1991	36,191	16,332	3,602	—	56,125
1992	37,028	16,809	3,451	—	57,288
1993	36,857	16,899	3,051	—	56,807
1994	36,265	16,555	2,884	—	55,704
1995	36,979	16,032	2,576	18,738	74,325
1996	37,062	17,135	2,489	16,297	72,983
1997	37,382	17,270	2,154	15,936	72,742
1998	37,477	17,327	1,997	15,513	72,314

[1] New York Life, with paid-up coverage and no premiums assessed, not listed before 1995.

Life Insurance Program Claims

	Rocky Mountain Life		*Prudential*		*Rocky Mountain Life (Closed Group)*		*New York Life* [2]		*Total Program*	
Year	Amt. of Claims Paid	No. of Claims Paid[1]	Amt. of Claims Paid	No. of Claims Paid[1]	Amt. of Claims Paid	No. of Claims Paid[1]	Amt. of Claims Paid	No. of Claims Paid	Amt. of Claims Paid	No. of Claims Paid[1]
1989	$3,548,164	N/A	$1,080,144	N/A	$209,504	N/A	$ —	—	$4,837,812	N/A
1990	4,766,110	N/A	951,121	N/A	302,809	N/A	—	—	6,020,040	N/A
1991	5,383,194	808	1,276,347	188	361,256	180	—	—	7,020,797	1,176
1992	4,715,336	787	1,264,979	187	277,618	177	—	—	6,257,933	1,151
1993	5,114,319	751	1,250,563	169	236,675	155	—	—	6,601,557	1,075
1994	5,241,796	876	1,384,378	223	265,185	177	—	—	6,891,359	1,276
1995	5,064,415	653	1,561,740	246	288,416	172	444,602	282	7,359,173	1,353
1996	4,660,358	599	1,462,712	210	268,815	157	399,868	288	6,791,753	1,254
1997	5,116,641	679	1,469,340	226	171,175	127	378,422	282	7,135,578	1,314
1998	4,875,713	691	1,731,344	283	246,473	149	395,834	333	7,249,364	1,456

[1] Number of claims paid not available before 1991.
[2] New York Life, with paid-up coverage and no premiums assessed, not listed before 1995.

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