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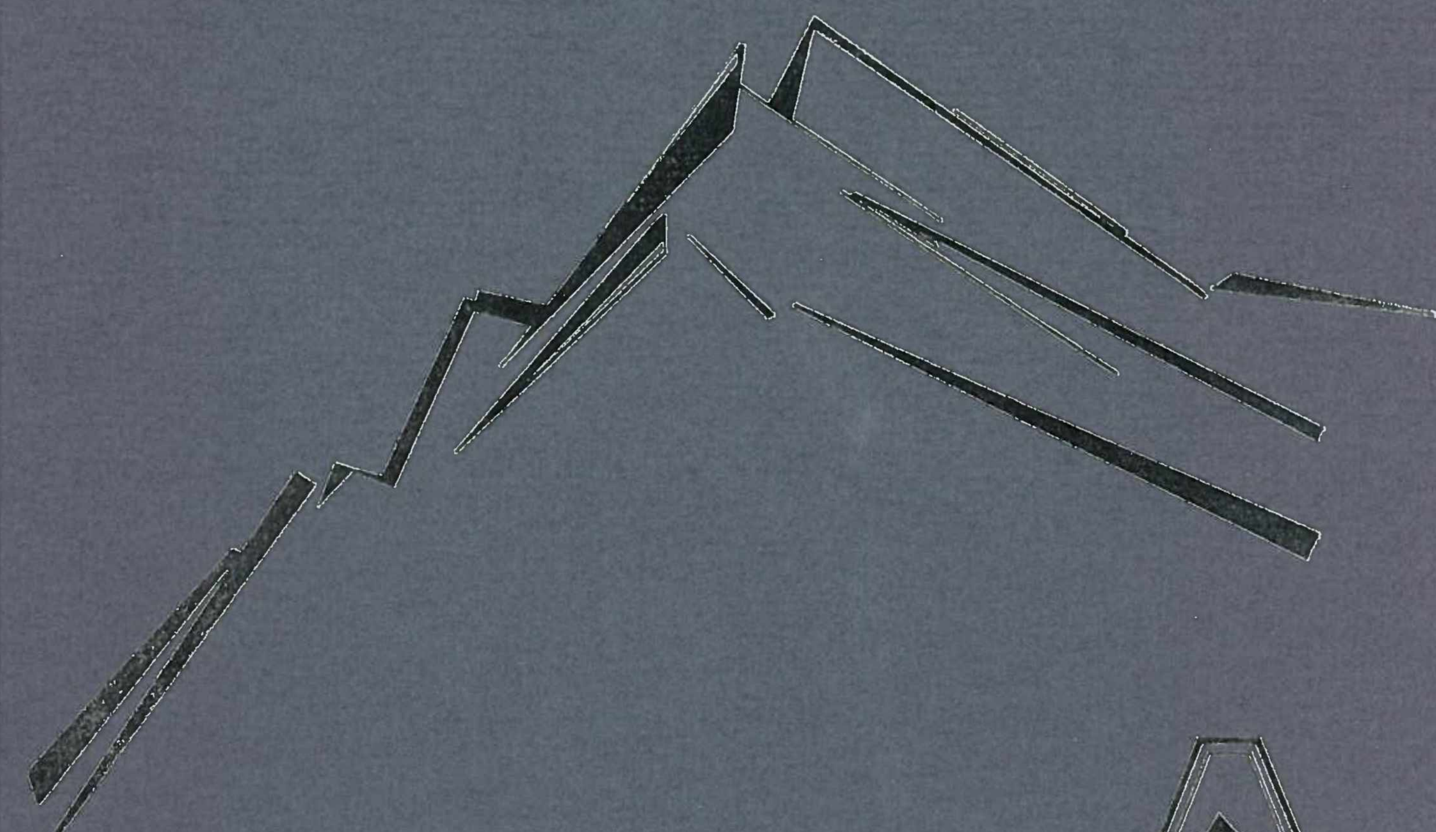
PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO



Comprehensive Annual Financial Report
for the fiscal year ended December 31, 1986

PERA

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.

1986 Statistical Highlights

- Active Members Contributing 99,027
- Benefit Recipients 27,633
- Service Retirements 1,707
- Disability Retirements 304
- Active Member Deaths 197
- Deaths After Retirement 823

- PERA Investment Assets $6,684,691,000
- Benefits Paid .... $ 226,221,000
- Refunds .... $ 28,237,000
- Member Contributions .... $ 187,020,000
- Employer Contributions .... $ 284,810,000
- Investment Income .... $ 884,386,000

- Investment Rate of Return 13.8%

Public Employees' Retirement Association of Colorado

Comprehensive Annual Financial Report

For the fiscal year ended December 31, 1986

Robert J. Scott, Executive Director

1300 Logan Street
Denver, Colorado 80203
(303) 832-9550

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Prepared by the
PERA Communications Division

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Introductory Section

Letter of Transmittal

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

June 18, 1987

Dear Members of the Board of Trustees,

I am pleased to present the Comprehensive Annual Financial Report for the Public Employees' Retirement Association of Colorado for the year ended December 31, 1986.

This report consists of seven sections. The Introductory Section contains this Letter of Transmittal, the Board Chairman's Letter, information about the Board of Trustees, the administrative organization, the consulting services used by PERA and a summary of the plan. The Financial Section contains the opinion of the independent certified public accountants, Arthur Andersen & Co., and the financial statements of the Association followed by a Supporting Schedules Section. The Investment Section presents information regarding the fund's investments including the Investment Policy and Summary, information about the fund's performance, and lists PERA common stock holdings and brokers used. For the first time, we have also included special information regarding PERA's investments in Colorado.

The Actuarial Section contains the certification of the consulting actuary, Gabriel, Roeder, Smith & Company, along with the results of the annual actuarial valuation and other actuarial statistics. The Statistical Section contains statistical tables of significant data pertaining to the Association. A new section, Other PERA Programs, explains the scope and activities of other programs in which the Association is involved for the good of its members and retirees. This includes the Health Care Program, the Life Insurance Program and the Voluntary Investment Plan.

Accounting System and Reports

This report has been prepared in accordance with generally accepted accounting principles applied on a consistent basis as agreed upon by the Governmental Accounting Standards Board (GASB) and the American Institute of Certified Public Accountants. Financial statements are presented in accordance with guidelines promulgated by the Financial Accounting Standards Board Statement #35 (FASB). The Notes to Financial Statements were prepared in accordance with the Governmental Accounting Standards Board Statement #5.

In developing and evaluating the Association's accounting system, it was found that internal controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to PERA for its financial report for the fiscal year ended December 31, 1985. To be awarded a Certificate of Achievement, a public employee retirement system must publish a readable and organized report that conforms to program standards. We believe our current report continues to meet GFOA requirements, and we are submitting this report to GFOA to determine its eligibility for another certificate.

Transactions of the Public Employees' Retirement Association are reported on the accrual basis of accounting for assets, liabilities, revenues and expenses. Revenues for PERA are taken into account when earned without regard to the date of collection, and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Fixed assets are recorded at cost and depreciated through charges to expense over the estimated useful lives of the assets. Contributions are based on the principles of level-cost financing with current service financed on a current basis. Prior service is amortized over varying periods depending upon the respective Division, i.e. 16 years for the State Division, 10 years for the School Division, 5 years for the Municipal Division and 5 years for the Judges' Division.

Revenues

The reserves needed to finance retirement benefits are accumulated through the collection of employer and member contributions and through income on investments reported at market value.

Contributions and investment income including unrealized income for 1986 totaled $1,300,894,000. Contribution rates from both members and employers remained the same, however, there was an increase in total contributions of approximately $34,760,000 resulting from increases in the number of members and the amount of their salaries.

Expenses

The primary expense of a retirement system relates to the purpose for which it is created, that is, the disbursement of retirement and survivor benefits. Consequently, recurring benefit payments, refunds of contributions to terminated employees and the cost of administering the Association comprise the total expense. For 1986 this totaled $263,431,000, an increase of 10.6 percent over 1985. This increase resulted primarily from a growth in the number and the average size of benefit payments as well as from a cost-of-living adjustment. Revenues of $1,300,894,000 exceeded expenses of $263,431,000 by $1,037,463,000 during 1986. Administrative expenses are controlled by an annual budget approved by the Board of Trustees.

Value of Accumulated Plan Benefits (Reserves)

The total accumulated plan benefits as presented in our audited financial statements total $4,970,008,000. This amount is calculated in accordance with FASB #35 which does not take into consideration the effect of future salary increases. For clarification, we also present in the Actuarial Section a summary of PERA's unfunded accrued liabilities which is calculated using assets on a historical cost basis and includes the effect of projected future salary increases on liabilities. Footnotes to Financial Statements governed by GASB Statement #5 present actuarial valuations which include future salary increases and assets at market value.

Investments

The investment portfolio is regarded as a major contributor to the Association. Realized income from both long-term and short-term investments amounted to $884,386,000 which represents 65 percent of total revenues. This far exceeded the approximate 14 percent and 21 percent of total revenue contributed by the members and the employers respectively. Changes in the composition of the total portolio during the year are reflected in the Investment Summary on page 29. Proper funding and healthy investment returns are very important to the financial soundness of PERA. The high ratio of investment earnings to total revenues is evidence of PERA's continued strong financial management. PERA is actively pursuing Colorado investments to promote economic development within the state.

Funding

The bottom line for a retirement system is its level of funding. The better the level of funding, the larger the ratio of assets accumulated to total liabilities and the greater the investment income potential. Also, a better funding level gives the participants a higher degree of assurance that their pension benefits are secure. The advantage of a well-funded plan is that the participants can see assets which are irrevocably committed to the payment of promised benefits. Although the historical level of funding for PERA is very good (as illustrated by the Solvency Test on page 44), constant effort is being directed at improving that level. Funding levels are presented in the Actuarial Section of the Report.

Professional Services

Professional consultants are hired to perform services essential to the efficient operation of PERA. Certifications from our outside auditor and actuary are included in this report. The consultants providing services to the Association are listed on page 9.

Review of Operations & Activities of 1986

The PERA staff is dedicated to professionally and personally serving the Association's members, retirees and other benefit recipients. Counseling these members on their current or future benefits and assisting them in making personal data record changes receives much attention. During 1986, the Association's staff counseled more than 3,400 members and benefit recipients individually in the PERA administrative offices, and responded to more than 47,700 telephone inquiries and 28,800 letters. Also, 180 group meetings were held around Colorado to provide information about plan benefits, the health care program and the Voluntary Investment Plan; more than 17,500 members, retirees and other persons attended these sessions.

The PERA Voluntary Investment Plan (VIP), a 401(k) tax-deferred supplemental retirement program, was developed in 1985 and continues to grow and become strong. In the 18-month period since the plan's inception, VIP accumulated assets of more than $1.7 million and increased membership to 902 participants. In 1986 alone, plan assets grew $1,547,401 -- from $203,272 at the end of 1985 to $1,750,673 at the end of 1986.

For the benefit of members, the Association began working on a legislative bill to recodify the law under which PERA operates. The bill is intended to simplify and better organize the law so there will be consistent interpretation by members, affiliated employers, PERA staff and legal representatives. The recodified law will not significantly change costs or benefits in any way.

PERA also initiated two new programs during 1986. The PERA Health Care Program began in July for benefit recipients and their eligible dependents. This new benefit helps many retirees who did not have access to any other group health insurance program. Individual premium cost is determined by the number of years of service credit accrued, however, PERA provides a subsidy for each individual enrolled in the program. At the end of the year, more than 16,000 of the Association's 27,633 benefit recipients and 6,186 of their dependents were enrolled in the program. Also, late in the year, an information systems study was begun to ensure that PERA will have systems in place to effectively support the activities of the organization as we move into the future.

In May 1986, Board of Trustee elections were held. Bill Maguire was elected to represent state members, Frank V. Taulli to represent school members and Wilborn S. Whitehead to represent municipal members. Gar McInnis was appointed to fill the seat previously occupied by Bernal Brooks who retired from the City of Colorado Springs. Late in the year, Marsha M. Jackson was appointed to replace Steven R. Brown, who resigned to accept an appointment as PERA's Deputy Executive Director of Administration. Also, Gail S. Schoettler was elected State Treasurer in November and became an ex-officio member of the Board in January 1987.

Since the 1985 Report, two key staff changes were made. As mentioned above, Steven Brown became the Deputy Executive Director of Administration in November upon the retirement of Carl S. Wilkerson. More recently, Deputy Executive Director of Investment Norman Jaskol resigned to accept a position in private business. Norman Benedict is temporarily serving in this capacity.

Acknowledgements

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

This report is being mailed to all affiliated employers of the system, while a summary of it will be distributed in August to all members, retirees and other benefits recipients in PERA's Member Report and Retiree Report. The cooperation of PERA affiliated employers contributes significantly to the success of the Association. We trust that members and their employers will find this report informative.

I would like to express my gratitude to the staff, consultants, Board and to other associates who worked diligently to ensure the successful operation of PERA in 1986.

Respectfully submitted,

Robert J. Scott

Robert J. Scott
Executive Director

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, 1985

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to governmental units and public employee retirement systems whose comprehensive annual financial reports (CAFR's) are judged to substantially conform to program standards.

Betty Jo Harker
President

Jeffrey L. Esser
Executive Director

PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO
1300 Logan Street Denver, Colorado 80203 (303) 832-9550

To all PERA Members, Employers and Retirees, June 1, 1987

The 1986 Comprehensive Annual Financial Report of the Public Employees' Retirement Association of Colorado presents an in-depth review of the financial status of your retirement system. I believe you will be pleased with PERA's steady growth and reassured that the funds will continue to be available to provide good retirement benefits to the employees of the 374 governmental entities affiliated with the Association.

The Board of Trustees is dedicated to preserving the financial integrity of the fund through a sound fiscal management program. Likewise, each Board member takes his or her role as a fiduciary of the retirement fund seriously. Accordingly, we have begun a program to become more knowledgeable in investment policies and strategies, more involved in PERA's long-range planning and more aggressive in addressing the issues facing public pension funds.

The Board carefully considers initiatives for benefit improvements or other legislative actions which will impact the system. During the 1986 General Assembly, four bills concerning PERA were supported by the Association and became law. These bills are explained below.

- A supplemental cost-of-living adjustment for the 23,000 benefit recipients who began receiving a benefit in 1984 or earlier was approved.

- School and Municipal Division retirees were given greater flexibility in working after retirement. They are now allowed to work up to 110 days per year for a PERA-affiliated employer without affecting their PERA benefit.

- Senate Bill 97 earmarked 0.8 percent of salary from the Judges' Division employer contribution rate for the PERA Health Care Fund, following similar action in 1985 for the other three PERA divisions.

- Finally, the State Treasurer is no longer required to serve as the PERA fund custodian since duplicate recordkeeping and transaction controls are already maintained through security clearinghouses.

In late 1986, the Board reviewed various benefit recommendations and initiated several plan improvements now under consideration by the General Assembly. The Board will continue to seek other plan improvements when appropriate.

In closing, the Board and I extend our thanks to you for your support and interest. With your involvement, PERA continues to be a leader in public employee retirement systems.

Sincerely,

Terry L. Lantry

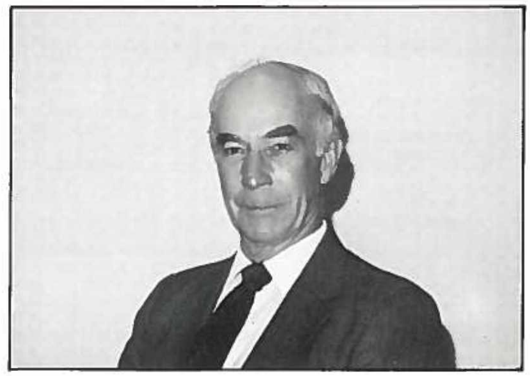
Terry L. Lantry, J.D., C.P.A.
Chairman, Board of Trustees

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 comprised of 15 members including the State Auditor and the State Treasurer. The 13 representative members are elected by mail ballot of their respective division members to serve on the Board for a four-year term. Five members are from the School Division, four from the State Division, two from the Municipal Division and two are elected by the retired members. If a Board member resigns, the Board appoints a new member from the respective Division to complete the term.

Dr. Terry L. Lantry, Chairman of the Board
- Member since 1976
- Represents state employees
- Professor, Accounting & Business Law, Colorado State University
- Current term expires July 1, 1988



John Moreland, Vice Chairman
- Member since 1983; also served 1972-77
- Represents retired members
- Current term expires July 1, 1987

Roberta Altenbern
- Member since 1977
- Represents school employees
- Middle school media specialist, Adams County School District 14
- Current term expires July 1, 1991

Ada Houck
- Member since 1973
- Represents retired members
- Current term expires July 1, 1989

J. Kim Natale
- Member since 1985
- Represents school employees
- Math and science teacher, Jefferson County Public Schools
- Current term expires July 1, 1989

Suzanne S. Schulze
- Member since 1980
- Represents state employees
- Librarian, University of Northern Colorado
- Current term expires July 1, 1987

Frank V. Taulli
- Member since 1977
- Represents school employees
- Elementary school principal, Pueblo Public Schools #60
- Current term expires July 1, 1990

William Maguire
- Member since 1985
- Represents state employees
- Personnel specialist, Colorado State Hospital
- Current term expires July 1, 1990

Marsha M. Jackson
- Appointed to replace Steven Brown, November 1986
- Represents school employees
- Elementary classroom teacher, Mesa County School District
- Current term expires July 1, 1988

Edward W. Murrow
- Member since 1977
- Represents state employees
- Treasurer, University of Colorado
- Current term expires July 1, 1989

John Young
- Member since 1980
- Represents school employees
- Biology teacher, Jefferson County Public Schools
- Current terms expire July 1, 1988

Wilborn S. Whitehead
- Member since 1970
- Represents municipal employees
- Manager, Buildings and Grounds Department, City of Arvada
- Current term expires July 1, 1990

Gar McInnis
- Appointed in May 1986; Re-elected 1987
- Represents municipal employees
- Risk and Insurance Administrator City of Colorado Springs
- Current term expires July 1, 1991

Steven Brown
- Member since 1982
- Represented school employees
- Supervisor, Financial Services, St. Vrain Valley School District
- Resigned in November 1986 to accept position at PERA

Timothy M. O'Brien
- Member since 1985
- State Auditor
- Continuous term, ex-officio

Roy Romer
- Member since 1977
- State Treasurer and Governor-elect, 1986
- Ex-officio term ended in January 1987

Gail Schoettler
- Elected State Treasurer, November 1986
- Continuous term, ex-officio, effective January 1, 1987

BOARD OF TRUSTEES

Robert J. Scott
Executive Director

Investments
Norman Jaskol*
Deputy Executive Director

Norman Benedict
Assistant Director

Daryl Roberts
Director, Investment Operations

Benefits
Nancy Williams
Deputy Executive Director

Lana Calhoun
Director, Member Services

Paula Westerdahl
Director, Retirement Services

Administration
Steve Brown**
Deputy Executive Director

Dennis Blake
Director, Information Systems

Don Clippinger
Director, Accounting

Ralph Doronzo
Director, Property Management

Patricia Richards
Director, Personnel

Donald Schaefer
Director, Communications

Rob Gray
Director, Government Relations

David Maurek
Internal Auditor

*Resigned February 1987. Norman Benedict is Acting Director
**Appointed to position in November 1986 to replace Carl Wilkerson.

CONSULTANTS

Pension Actuary
Gabriel, Roeder, Smith & Company
407 East Fort Street
Suite 200
Detroit, MI 48226

Auditor
Arthur Andersen & Company
Petro Lewis Tower
717 - 17th Street
Suite 1900
Denver, CO 80202

Investment Counsel
Bankers Trust Company
280 Park Avenue
New York, NY 10017

Provident National Bank
Broad and Chestnut Streets
P.O. Box 7648
Philadelphia, PA 19101

Investment Performance Analysts
R. V. Kuhns & Associates, Inc.
1211 Southwest Fifth Avenue
Suite 2850
Portland, OR 97204

Health Care Actuary
Mercer-Meidinger-Hansen
1050 Seventeenth Street
Suite 1790
Denver, CO 80265

Long-Range Planning Consultant
Touche-Ross
1700 Lincoln Street
Suite 4100
Denver, CO 80203

The Plan Summary

The PERA Retirement Plan, established in 1931, began by covering state employees only. Since then, the Plan has expanded greatly with membership now including employees of the State of Colorado, all Colorado school districts except Denver, and numerous municipalities, public health departments and other local governmental entities.

The Plan's purpose is to provide income to members and their families at retirement or in case of death or disability. Funding for the Plan operates on an actuarial reserve basis with money being set aside for retirement benefits while they are being earned and before they will be paid. The average active member pays only 15 percent of the amount he or she actually obtains in benefits. The remainder of the benefits are funded through employer contributions and investment income.

Administration of the Plan

The authority to manage the Association is vested in the Public Employees' Retirement Association Board of Trustees which is comprised of 15 members including the State Auditor and the State Treasurer.

The Board appoints an executive director who is responsible for the daily operation of the Association. The legal advisor to the Board is the Colorado Attorney General. An actuary who makes annual actuarial valuations to determine the adequacy of the funding of retirement benefit liabilities accrued under the Plan is employed, and various advisory committees such as Investment, Audit, Legislative, and Health Insurance are appointed.

Administrative expenses of the Association are paid from a $5 membership fee charged to each member upon employment, and from an allocation from division trust funds.

The funds of the retirement system are invested primarily in corporate bonds, U.S. Treasury and agency securities, common stock of top-rated companies, real estate mortgages, and direct ownership of real estate properties. The law limits investments in common and preferred stocks and convertible bonds to 50 percent of the portfolio.

Member Contributions

Members contribute 8 percent of their salaries to an individual account in the Association fund except for state highway troopers who contribute 9 percent. The salary amount includes pay for overtime and additional duties but excludes reimbursement for expenses. The accumulated amount in each account will be used for the employee's benefit if the member remains in service.

Employer Contributions

While the member is contributing to the fund, his or her employer also is making contributions on behalf of the employee. Employer contributions are determined on the basis of actuarial valuation. The member and employer contributions and investment income provide the money needed for PERA retirement benefits promised. Percentage rates for PERA divisions differ and are set by law.

State Division	12.2%	Municipal Division	10.2%
State Troopers	13.2%	Judges' Division	15.0%
School Division	12.5%		

Resignation

A resigning member is entitled to a complete refund of all deposits he or she made to PERA. If the member has five or more years of service, he or she may leave the money on deposit and, without further payment, receive a lifetime monthly benefit payable as early as age 60.

Retirement

A member is eligible for a reduced retirement benefit as early as age 55 provided he or she has accumulated at least 20 years of PERA service credit, or at age 60 with as few as five years of service credit.

Regular retirement benefits without any reduction are available to members at age 55 with at least 30 years of service, at age 60 with at least 20 years of service or at age 65 with at least five years of service.

PERA uses the member's Final Average Salary (FAS) to calculate benefits. FAS is the average of the three highest years of earnings within the member's career, usually the last three. Within the three years, any annual salary increase between the three years is limited to 15 percent for the calculation.

The FAS formula is used to compute regular retirement benefits. A reduction factor is applied for reduced retirement benefits.

- 2½ percent of FAS for each year up to 20 years of service.
- Additionally, 1 percent of FAS for each year from 21-40 years of service.
- Maximum benefit is 70 percent of FAS.

Disability Retirement

Members with five or more years of earned service credit since the last date of membership may qualify for disability retirement if determined to be permanently disabled. The benefit is paid until the member recovers from the disability, or for the remainder of the member's life. Many disabled members receive 50 percent of FAS, although certain exceptions exist.

Death Before Retirement

If a member dies before retirement, his or her eligible unmarried children will receive monthly survivor benefits. Children are eligible until age 18 or, if enrolled in school, until age 23. If there are no eligible children or after benefits to the children have ceased, the member's widow or widower will receive a monthly benefit beginning at age 60. This benefit will begin earlier if the member had more than 10 years service at the time of death.

For dependents to be eligible for survivor benefits, the member must have had at least one year of service under PERA unless the death is service incurred, in which case there is no service credit requirement. If there are no eligible survivors, the designated beneficiary will receive a refund of the amount of money the member had deposited with PERA.

Financial Section

ARTHUR ANDERSEN & CO.
DENVER, COLORADO

To the Participants and Retirement Board of

The Public Employees' Retirement Association of Colorado:

We have examined the combined statements of net assets available for benefits and of accumulated plan benefits of the PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO (a public association of the State of Colorado) as of December 31, 1986 and 1985, and the related combined statements of changes in net assets available for benefits and of changes in accumulated plan benefits for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the net assets and accumulated plan benefits of the Public Employees' Retirement Association of Colorado as of December 31, 1986 and 1985, and the changes in its net assets and accumulated plan benefits for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Arthur Andersen & Co.

Denver, Colorado,

May 29, 1987.

Combined Statements of Net Assets Available For Benefits

As of December 31, 1986 and 1985
(In Thousands of Dollars)

Assets	**1986**	**1985**
Investments, at fair market value:		
U.S. Government obligations	$1,678,294	$ 736,543
Corporate bonds	518,455	413,749
Common stocks	2,653,482	2,306,523
Guaranteed note	122,115	106,700
Mortgages	667,709	790,062
Real estate	301,476	166,847
Municipal bonds	25,117	–
Total Investments	5,966,648	4,520,424
Receivables:		
Employers	14,775	15,316
Employees	9,649	10,011
Interest and dividends	70,128	53,725
Other	55,115	874
Total Receivables	149,667	79,926
Cash and Short-Term Investments	713,480	1,090,213
Property and Equipment, at cost, net of accumulated depreciation of $2,199 and $1,790, respectively	4,563	4,232
Total Assets	6,834,358	5,694,795
Liabilities and Reserves		
Refunds Payable and Other	115,870	14,155
Reserves:		
Insurance dividend reserve	11,758	10,689
Health insurance fund	24,501	–
Total Reserves	36,259	10,689
Total Liabilities and Reserves	152,129	24,844
Commitments and Contingencies (Note 5)		
Net Assets Available for Benefits	$6,682,229	$5,669,951

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

Combined Statements of Changes in Net Assets Available for Benefits

For the Years Ended December 31, 1986 and 1985

(In Thousands of Dollars)

	1986	1985
Investment Income:		
Realized gain on investments	$ 488,493	$ 246,511
Interest	305,407	288,241
Dividends	85,297	75,710
Unrealized appreciation (depreciation) in fair market value of invesments	(55,322)	389,750
Real estate income, net	4,969	3,720
Other	220	970
Total Investment Income	829,064	1,004,902
Contributions:		
Employers	284,810	263,200
Employees	187,020	173,870
Total Contributions	471,830	437,070
Transfers:		
Benefits paid to retirees and other recipients	(217,403)	(193,936)
Benefits paid to survivors	(8,818)	(7,485)
Refunds of contributions	(28,237)	(32,069)
Other, net	(1,219)	1,211
Total Transfers	(255,677)	(232,279)
Administrative Expenses	(7,754)	(5,912)
Interest Credited to Insurance Dividend Reserve Net of Administrative Fees	(684)	(625)
Net Increase Credited to Reserve for Health Insurance Fund	(24,501)	–
Net Increase	1,012,278	1,203,156
Net Assets Available for Benefits:		
Beginning of year	5,669,951	4,466,795
End of year	$6,682,229	$5,669,951

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

Combined Statements of Accumulated Plan Benefits

As of December 31, 1986 and 1985

(In Thousands of Dollars)

	1986	1985
Actuarial Present Value of Accumulated Plan Benefits:		
Vested benefits		
Participants currently receiving benefits	$2,179,458	$1,784,440
Other participants	2,290,203	2,324,673
Total Vested Benefits	4,469,661	4,109,113
Non-vested benefits	500,347	126,505
Total Actuarial Present Value of Accumulated Plan Benefits	$4,970,008	$4,235,618

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

Combined Statements of Changes in Accumulated Plan Benefits

For the Years Ended December 31, 1986 and 1985

(In Thousands of Dollars)

	1986	1985
Actuarial Present Value of Accumulated Plan Benefits at Beginning of Year	$4,235,618	$3,327,218
Increase (Decrease) During the Year Attributable to:		
Change in actuarial assumptions	268,100	370,604
Benefits accumulated and interest amortization, net of refunds	692,511	739,217
Benefits paid	(226,221)	(201,421)
Actuarial Present Value of Accumulated Plan Benefits at End of Year	$4,970,008	$4,235,618

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

Notes to Combined Financial Statements

December 31, 1986 and 1985

(1) GENERAL DESCRIPTION OF PLAN

Organization

The Public Employees' Retirement Association of Colorado (the "Association") was established under Title 24, Article 51, Section 102 of the Colorado Revised Statutes, as amended. It was created in 1931 as a public association for the purpose of providing present and future retirement, disability or survivor benefits for persons who are employed by public employers (most of whom do not participate under Social Security) located in the State of Colorado and affiliated with the Association. This is accomplished through its operations as a cost-sharing multiple-employer defined benefit pension plan (the "Plan"). Responsibility for the organization and administration of the Plan is vested in the Public Employees' Retirement Association Board of Trustees (the "Board"). The State Employees' Division was established in 1931, the School and Municipal Employees' Divisions in 1944 and the Judges' Division in 1949.

On December 31, 1986, the number of participating public employers for its four divisions was as follows:

State	118
School	201
Municipal	49
Judges	6
Total	374

The participants of the Association consisted of the following as of December 31, 1986:

	State	**School**	**Municipal**	**Judges**	**Total**
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	13,660	14,745	1,419	149	29,973
Active participants:					
Vested	21,428	34,063	3,521	180	59,192
Non-vested	14,677	22,457	3,593	58	40,785
Total	49,765	71,265	8,533	387	129,950

Reporting Entity

The combined financial statements of the Association include all funds over which the Board has the ability to exercise oversight responsibility. This oversight responsibility includes designation of management, the ability to significantly influence operations and accountability for fiscal matters.

By law, the Association is not an agency of state government, nor is it subject to administrative direction by any department, commission, board, bureau or agency of the state. Accordingly, the Association's financial statements are not included in the financial statements of any other organization.

Contributions and Participants' Accounts

Employer and participant contributions are defined by state statute based upon actuarial valuations performed annually, using the methods prescribed by National Council on Governmental Accounting Statement #1. Participants are required to contribute 8 percent of their annual salary to the Association, except for State Patrol Troopers ("Troopers") and certain agents of the Colorado Bureau of Investigation ("Agents"), who contribute 9 percent.

Effective July 1, 1984, these contributions are tax-deferred for federal income tax purposes to the participants. Prior to that date, contributions were made on an after-tax basis. These contributions are credited directly to their "active member" accounts. Participants' contributions are fully refundable, without interest, upon request at termination of employment from Association-affiliated employers. If participants have at least five years of credited service, they are eligible to receive a future monthly retirement benefit. Any refund of contributions paid waives all future rights to any benefits. However, eligible participants with one or more years of credited service who previously refunded their contributions may reinstate withdrawn service through lump-sum or installment payments. Any participant of the Association who has non-covered public service time may purchase credit for that service through a lump-sum payment or installments to receive additional credited service which will increase their future retirement benefits.

The Association's funding policy also requires contributions by employers ranging from 10.2 percent to 15 percent of participant salaries. These contributions are credited to the participant's division for the purpose of creating actuarial reserves so each employee's benefits will be fully provided for upon retirement.

Benefits

Participants are eligible for retirement benefits upon reaching (a) age 65 with five or more years of credited service, (b) age 60 with 20 or more years of credited service, (c) age 55 with 30 or more years of service or (d) by earning 35 or more years of credited service (State Divison participants only). In addition, Troopers and Agents are eligible for retirement benefits upon (a) reaching age 55 with 20 or more years of credited service or (b) earning 30 or more years of credited service. Such benefits are equivalent to 2.5 percent of their Final Average Salary ("FAS") during their highest paid three years of service (defined as three periods of 12 consecutive months) prior to retirement for each year of service up to 20 years, and 1 percent for each year over 20 years. The maximum benefit available is 70 percent of their FAS. The Plan also permits early retirement at age 55 (age 50 for Troopers and Agents) with 20 or more years of credited service, or at age 60 with five or more years of credited service in a reduced amount. Participants may elect to receive their benefits in the form of single life or joint life payments.

The Plan also provides for disability retirement and survivor benefits. Members who become permanently disabled with at least five years of credited service since the beginning of the most recent period of membership can receive disability benefits that are based on service credit projected to age 65, to a maximum of 20 years of credit. The FAS calculation is the same as that used for regular retirement. There are also provisions for a partial disability retirement benefit when the individual is disabled from regular but not comparable employment.

If an active member dies after accumulating at least one year of service credit, a benefit based upon the accumulated credited service as of the time of death and the number and relationship of family survivors is payable to such survivors.

Termination of the Association

The law provides that should the Association be terminated or partially terminated for any reason, the rights of all members and former members to all benefits accrued to the date of such termination to the extent then funded shall become nonforfeitable.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Fund Accounting

The financial activities of the Association are recorded in separate divisions (State, School, Municipal and Judges) established by statute, with investments owned by the divisions recorded in the Combined Investment Fund. A Cost of Living Stabilization Fund, Retired Public Employees' Health Insurance Fund and Common Operating Fund are also maintained. Each division maintains separate accounts and all actuarial determinations are made on the basis of each division's separate actuarial information.

The Cost of Living Stabilization Fund (the "CLSF") was created on May 1, 1980, through the enactment of Senate Bill 62 to offset inflation by providing increased benefits payable to beneficiaries of the Association. The CLSF is funded by payments from employers equal to 2 percent of active member salaries. Such payments are collected by each division on behalf of the CLSF. The increased benefits to beneficiaries are paid directly by each division to the beneficiaries and are then reimbursed by transfer from the CLSF. The net assets of the CLSF as of December 31, 1986 and 1985, amounting to $27,772,000 and $25,835,000 respectively, are included in net assets available for benefits presented in the Combined Statements of Net Assets Available for Benefits. Conversely, the computation of the total actuarial present value of accumulated plan benefits included in the Combined Statements of Accumulated Plan Benefits and Combined Statements of Changes in Accumulated Plan Benefits does not include a provision for cost-of-living increases from the CLSF, in accordance with Statement of Financial Accounting Standards No. 35.

The Retired Public Employees' Health Insurance Fund (the "HIF") was created on July 1, 1985, through the enactment of Senate Bill 67 to provide group health insurance to retired Association members. The HIF is funded by payments from employers equal to 0.8 percent of active member salaries. Such payments are collected by each division on behalf of the HIF. Beginning July 1, 1986, the HIF began contributing towards enrolled benefit recipients' health care premiums by making payments directly to insurance companies and Health Maintenance Organizations selected for this program.

The Common Operating Fund (the "COF") accounts for all administrative activities common to the divisions. Operating assets and liabilities which are held for the benefit of all divisions are also recorded in the COF. The expenses incurred by the Association are allocated from the COF to the various divisions on the basis of the relationship of the number of members in the division to the total membership in the Association.

The 1986 financial statements of the various divisions and funds have been presented on a combined basis. All interfund balances and transactions have been eliminated in the combined financial statements.

Investments

Plan investments (excluding the guaranteed contract with an insurance company) are presented at fair market value. Securities which are traded on a national securities exchange are valued at the last reported sales price during the year. For other investments which do not have an established market, estimated fair values are presented. Corporate bonds are valued based on yields currently available on comparable securities of issuers with similar credit ratings. Mortgages are valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar instruments. The fair market value of real estate investments, principally rental property, has been based upon estimates prepared by independent appraisers.

In addition, the guaranteed Aetna Life and Casualty Note (Notes 3 and 4) is valued at contract value, representing principal plus accrued interest at the stated contract rate.

The change in the market value of investments held as of year-end is reflected in the Combined Statement of Changes in Net Assets Available for Benefits as unrealized appreciation or depreciation.

On October 1, 1985, plan investments (and investment-related amounts) owned by the divisions were transferred to a Combined Investment Fund ("CIF"). Upon transfer, each division received ownership units in the CIF based upon the fair market value of the divisions investment portfolio (and investment-related amounts) held on September 30, 1985. On March 1 and July 1, 1986, investments (and investment-related amounts) of the HIF and CLSF, respectively, were transferred to the CIF in exchange for ownership units in the CIF. Under this system, each fund's ownership units in the CIF are adjusted upward or downward based upon the fund's activity. Results of investment performance and the value of the CIF are allocated among the funds based upon each fund's ownership units as a percentage of the total units outstanding. As of December 31, 1986 and 1985, the ownership units of each fund are as follows:

	Units as of December 31	
	1986	**1985**
State	41,440,270	40,422,905
School	56,513,183	54,649,786
Municipal	5,308,042	5,076,398
Judges	600,384	588,226
HIF	407,375	-
CLSF	372,070	-
Total	104,641,324	100,737,315

Actuarial Valuation

Accumulated plan benefits are those future periodic payments, plus lump-sum distributions, which are attributable under the Plan's provisions to the service employees have rendered. Accumulated plan benefits include benefits expected to be paid to (a) retired or terminated employees or their beneficiaries, (b) beneficiaries of employees who have died and (c) present employees or their beneficiaries.

The actuarial present value of accumulated plan benefits included in the Combined Statements of Accumulated Plan Benefits and Combined Statements of Changes in Accumulated Plan Benefits is presented in accordance with Statement of Financial Accounting Standards No. 35.

The actuarial present value of accumulated plan benefits was determined by the firm of Gabriel, Roeder, Smith and Company on the basis of the "entry age normal" cost method. The resulting amount adjusts accumulated plan benefits to reflect the time value of money (through discounts for interest) and the probability of payment (by means of decrements for death, disability, withdrawal or retirement) between the valuation date and the expected date of payment. The following summarizes the significant actuarial assumptions underlying the actuarial computations as of December 31, 1986 and 1985:

	Valuation as of December 31	
Actuarial Assumptions	**1986**	**1985**
Investment Return	7.5% compounded annually	9.8% in the 1st year, decreasing uniformly to 7% in the 11th year and thereafter
Average Retirement Age		
Men	Ranging from 61 to 66	Ranging from 61 to 66
Women	Ranging from 59 to 60	Ranging from 59 to 60
Life Expectancy	1971 Group Annuity Mortality Table projected to 1984	1971 Group Annuity Mortality Table projected to 1984

These actuarial assumptions are based on the presumption that the Association will continue. If the Plan were to terminate, different actuarial assumptions and other factors might be applicable in determining the actuarial present value of accumulated plan benefits.

Unfunded Actuarial Accrued Liabilities

The actuarial calculation compares the present value of future benefits less the Association's assets. The accompanying financial statements reflect plan assets on a fair market value basis. If the plan assets had been presented on a historical cost basis and future salary increases were considered, the unfunded actuarial accrued liabilities for the various divisions on December 31, 1986, would be as follows:

State	$495,305,322
School	386,552,691
Municipal	16,874,024
Judges	2,339,842
Total	$901,071,879

Contributions totaling $405,540,000 ($218,520,000 employer and $187,020,000 employee) were made to the divisions in accordance with actuarially determined contribution requirements determined through an actuarial valuation performed as of December 31, 1986. These contributions consisted of $324,255,000 normal cost and $81,284,000 amortization of the unfunded actuarial accrued liabilities.

The actuarially computed periods for funding these liabilities are equivalent to amortization periods ranging from five to 16 years.

Property and Equipment

Property and equipment are carried at cost. Costs of major additions and improvements are capitalized. Expenditures for maintenance and repairs are charged to operations as incurred. Depreciation is computed on the straight-line method using estimated lives ranging from three to 50 years.

Federal Income Tax Status

During the years ended December 31, 1986 and 1985, the Association continued to receive from the Internal Revenue Service a favorable determination for exemption from federal income taxes.

(3) GUARANTEED NOTE

In 1980, the Association acquired a guaranteed note from the Aetna Life and Casualty Insurance Company for $50,000,000. The note earns interest annually at a rate of 14.3 percent which is guaranteed through 1989.

(4) INVESTMENTS

The table on page 21 presents fair market value of those investments held by the Association on December 31, 1986 and 1985.

Categories of Asset Risk

The investments of the Association are regulated by statutory limitations and internal investment policy. The Association's investments are categorized to give an indication of the level of risk assumed by the Association. Category 1 includes investments that are insured or registered, or for which the securities are held by the Association or its agent in the Association's name. Category 2 includes uninsured and unregistered investments for which the securities are held by the broker's or dealer's trust department or agent in the Association's name. Category 3 includes uninsured and unregistered investments for which the securities are held by the broker or dealer, or by its trust department or agent but not in the Association's name. As of December 31, 1986, all investments of the Association are classified in Category 1 which bears the least risk.

Securities underlying repurchase agreements have an average market to loan value of 103 percent as of December 31, 1986. The Association's collateral interest in the underlying securities is perfected by delivery of the securities to the Association's safekeeping account.

(5) COMMITMENTS AND CONTINGENCIES

On December 31, 1986, the Association was committed to the future purchase of investments at an aggregate cost of approximately $4,200,000. In addition, various legal proceedings are pending against the Association which are the result of the normal activities of the Association. Based on the facts presently available, the Association, with advice from legal counsel, has concluded that the aggregate liability, if any, of the Association resulting therefrom will not have an adverse impact on the financial condition of the Association.

(6) FUNDING STATUS AND PROGRESS

The amount shown below as the "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits adjusted for the effects of projected salary increases and estimated to be payable in the future as a result of employee service-to-date. The measure is the actuarial present value of credited projected benefits and is intended to (a) help users assess the Plan's funding status on a going concern basis, (b) assess progress being made in accumulating sufficient assets to pay benefits when due and (c) allow for comparisons among public employee retirement plans. The measure is independent of the actuarial funding method used to determine contributions to the Plan.

The pension benefit obligation was determined as part of an actuarial valuation of the Plan as of December 31, 1986. Significant actuarial assumptions used in determining the pension benefit obligation include (a) a rate of return on the investment of present and future assets of 7.5 percent per year compounded annually; (b) projected salary increases of 5.5 percent per year compounded annually, attributable to inflation; (c) additional projected salary increases ranging from 0.0 percent to 7.4 percent per year depending on age, attributable to seniority/merit; and (d) projected benefit increases ranging from 1.5 percent to 3 percent per year after retirement.

On December 31, 1986, assets in excess of pension benefit obligation, as determined in accordance with generally accepted accounting principles prescribed by Statement No. 5 of the Governmental Accounting Standards Board, were as follows:

	(In Thousands of Dollars)
Pension benefit obligation:	
Retirees and beneficiaries currently receiving benefits	$2,179,458
Terminated employees not yet receiving benefits	54,783
Current employees:	
Accumulated employee contributions including allocated investment income	1,131,426
Employer financed--vested	2,776,466
Employer financed--non-vested	81,603
Total Pension Benefit Obligation	6,223,736
Net assets available for benefits, at fair market value (net of CLSF net assets)	6,654,457
Assets in excess of pension benefit obligation	$ 430,721

(7) INSURANCE DIVIDEND RESERVE

The Insurance Dividend Reserve is an accumulation of dividends received from an insurance company as a return of the premiums paid, adjusted for actual historical experience by participating members. The reserve is used to purchase paid-up life insurance for eligible members when they retire and additional paid-up insurance for active insured members.

Interest is credited to the Insurance Dividend Reserve at the rate of 7 percent of the average reserve balance during the year. In addition, the reserve is also charged with an administrative fee based upon the number of policies in force.

(8) TEN-YEAR HISTORICAL TREND INFORMATION

Ten-year historical trend information designed to provide information about the Association's progress made in accumulating sufficient assets to pay benefits when due is presented on pages 25, 51, and 52 of the Comprehensive Annual Financial Report.

Investments at Fair Market Value

	1986	1985
	(In Thousands of Dollars)	
Investments at fair market value as determined by quoted market price:		
U.S. government obligations	$1,678,294	$ 736,543
Corporate bonds	319,274	272,629
Common stocks	2,653,482	2,306,523
Municipal bonds	25,117	-
Total	4,676,167	3,315,695
Investments at estimated fair market value:		
Corporate bonds	199,181	141,120
Mortgages	667,709	790,062
Real estate	301,476	166,847
Total	1,168,366	1,098,029
Investments at contract value:		
Guaranteed note	122,115	106,700
Total	$5,966,648	$4,520,424

During the years ended December 31, 1986 and 1985, the Association's investments appreciated (depreciated) in value by $(55,322,000) and $389,750,000 respectively, as follows:

	1986	1985
	(In Thousands of Dollars)	
Investments at fair market value as determined by quoted market price:		
U.S. government obligations	$ 34,722	$ 50,697
Corporate bonds	18,548	8,558
Common stocks	(129,023)	250,285
Municipal bonds	117	–
Total	(75,636)	309,540
Investments at estimated fair market value:		
U.S. government obligations	$ –	$ (3,827)
Corporate bonds	5,197	31,796
Mortgages	27,297	55,847
Real estate	(12,180)	(3,606)
Total	20,314	80,210
Net appreciation (depreciation)	$ (55,322)	$389,750

Supporting Schedules For Financial Section*

*unaudited

Schedule of Administrative Expenses

For the Years Ended December 31, 1986 and 1985

	Expenditures 1986	Expenditures 1985
Personnel Services		
Salaries	$3,530,324	$ 2,940,074
Employee Benefits	810,142	697,299
Total Personnel Services	$4,340,466	$ 3,637,373
Staff Education		
Personal Improvement Program	19,769	21,573
PERA Required Education	22,776	17,229
Other	198	100
Total Staff Education	$ 42,743	$ 38,902
Professional Contracts		
Actuarial Contracts	217,686	87,800
Audits	65,900	54,100
Medical Exams	125,179	86,161
Investment Counsel	76,432	61,050
Legal and Legislative Counsel	103,025	42,554
Construction Superintendent	26,450	22,917
Other	126,242	39,180
Total Professional Contracts	$ 740,914	$ 393,762
Other Contractual Contracts	$ 23,137	$ 46,399
Equipment Rental		
Computer	852	16,544
Investment Systems	48,577	129,127
Misc. Equipment	2,607	2,140
Total Equipment Rental	$ 52,036	$ 147,811
Equipment and Furniture Services		
Service Agreements	41,172	113,681
Repair and Cleaning	3,809	2,022
Computer Servicing/Repairs	105,726	2,298
Total Equipment and Furniture Services	$ 150,707	$ 118,001
Miscellaneous		
Memberships	11,438	9,576
Publications & Subscriptions	21,942	11,785
Travel and Local Expense	67,213	63,259
Board Expense	100,242	71,915
Board Fiduciary Expense	225,000	-0-
Auto Expense	7,134	6,690
Telephone	64,435	61,075
Postage	139,491	166,918
Insurance	227,287	184,632
Printing	156,040	110,781
Office Supplies	81,856	75,216
Rent	519,596	425,909
Other	22,763	1,999
Total Miscellaneous	$1,644,437	$ 1,189,755
Total Budgeted Expense	$6,994,440	$ 5,572,003
Depreciation Expense	381,061	291,125
Health Care Operating Expense	437,773	-0-
Total Expense	$7,813,274	$ 5,863,128
Interfund Transactions	(59,930)	49,000
Total Administrative Expense	$7,753,344	$ 5,912,128
Allocation of Administrative Expense		
State Division	2,809,766	2,287,994
School Division	4,014,703	3,233,343
Municipal Division	470,165	371,873
Judges' Division	20,937	18,918
Health Care Fund	437,773	-0-
Total Allocation	$7,753,344	$ 5,912,128

Schedule of Cash Receipts and Disbursements

For the Years Ended December 31, 1986 and 1985
(In Thousands of Dollars)

	1986	1985
Cash balance at beginning of year	$ 18,080	$ 11,245
Add Cash Receipts:		
Investment Sales	18,376,584	8,326,593
Contributions:		
Employees	186,050	173,335
Employers	217,471	211,321
Cost of Living Stabilization Fund	68,109	42,674
Health Insurance Fund	23,915	-0-
Investment Income	852,365	591,069
Other Receipts	15,952	7,015
Total Cash Receipts	$19,740,446	$9,352,007
Less Cash Disbursements:		
Investment Purchases	$19,467,033	$9,106,341
Benefit Payments	226,284	201,375
Refunds	29,344	31,593
Administrative Expenses	7,151	5,863
Total Cash Disbursements	$19,729,812	$9,345,172
Cash Balance at End of Year	$ 28,714	$ 18,080

Schedule of Funding Progress**

Analysis of the dollar amounts of net assets available for benefits, pension benefit obligation and assets in excess of pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the Association's funding status on a going concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stonger or weaker. Generally, the greater the percentage, the stronger the retirement system. Trends in assets in excess of pension benefit obligation and annual covered payroll are both affected by inflation. Expressing the assets in excess of inflation aids analysis of PERA's progress made in accumulating sufficient assets to pay benefits when due.

(In Millions of Dollars)

Fiscal Year	(1) Net Assets Available for Benefits*	(2) Pension Benefit Obligation	(3) Percentage Funded (1)÷(2)	(4) Assets In Excess of Pension Benefit Obligation (2)-(1)	(5) Annual Covered Payroll	(6) Assets In Excess of Benefit Obligation as a Percentage of Covered Payroll (4)÷(5)
1986	$6,654	$6,224	106.91%	$431	$2,409	17.89%

*At market
**The information for this schedule is for 1986 only; previous years are unavailable.

Investments* Section

*unaudited

PERA Investment Policy

Goal

The function of the Public Employees' Retirement Association is to provide retirement and survivor benefits for its members. In keeping with that function, the preservation of capital is of paramount importance. Every effort is made to manage the portfolio so that benefits will be paid from regular income and not from contributions or anticipated appreciation of investments. A substantial improvement in the rate of return over a reasonable period of time should reduce unfunded accrued liabilities and allow consideration of improving benefits while maintaining a level contribution rate.

Investment Decisions

The fund is long-term in nature. The selection of investments is regulated by statutory limitations, limits of acceptable risk and the objective of maximizing total rate of return. Approval of all purchases and sales of investments is vested by law in the PERA Board of Trustees. The deputy executive director in charge of investments is authorized to execute investment transactions on behalf of the Board, as permitted under prescribed policies and procedures. In making investment decisions, PERA will use the highest caliber advice obtainable, both internally and externally.

Investment decisions are made within the framework of the goal established for the rate of return, limits of acceptable risk and fund objectives. At any point in time, certain types of investments have greater relative attractiveness than others. To maximize the realized rate of return, it is necessary to determine the relative values ascribed to differing types of investments within a given investment environment. The Association believes that individual holdings should stand alone on merit as well as complement the entire portfolio.

Diversification will be considered as part of the effort to minimize risk. Since the portfolio is long-term in nature and 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 deteriorating markets.

No holding will be a "permanent" part of the portfolio. Any security can be sold at any time either to maximize gains or to minimize losses. The portfolio will be continuously monitored to identify over or under-valued stocks as well as above or below average yielding bonds so appropriate action may be taken.

Investment in foreign securities will not be undertaken, however, this does not preclude investments in securities of U.S. corporations doing business abroad.

Divestment of companies which do business in South Africa will not be made solely because of those operations. U.S. businesses operating there are, and can continue to be, a force for positive change. PERA representatives make resolutions at corporate stockholder meetings urging companies that operate in South Africa to implement or improve their ratings in complying with the Sullivan Principles. Also, when considering new investments which are equally promising, companies doing business in South Africa will not be selected.

State law limits the amount of the fund to be invested in equity stock to 50 percent at book value. It also limits investing more than 5 percent of PERA assets at the then book value in any single company, and limits PERA to own no more than 7 percent of any single corporation's outstanding stocks or bonds.

Colorado Investments

Preference will be given to Colorado investments, all other factors being equal. However, to provide adequate portfolio diversification by geographical location and asset classes, and to maintain fiduciary responsibility, investments located within the State of Colorado shall not exceed 20 percent of the combined portfolio at cost. Within the 20 percent limitation, every effort will be made to diversify within the available asset classes — Commercial Real Estate Mortgages, Common Stocks, Corporate Debt, Equity Real Estate, etc.

Review and Reporting

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

Generally Accepted Accounting Principles (GAAP) will be followed in accounting for the portfolio, however, GAAP should not restrict investment decisions. The completed transaction method will be used to account for gains and losses. Securities will be recorded at adjusted cost; market values will be reported to the Board quarterly and used for the annual statements. The firm preparing the annual audit shall be consulted when questions concerning accounting procedures arise.

Colorado Investment Profile

The Association continues to seek out high-quality Colorado investments such as mortgage and equity real estate, and equity stock and corporate bonds in Colorado-based companies, or other corporations having large operations in the state. Total PERA investment in Colorado is valued at more than $543 million.

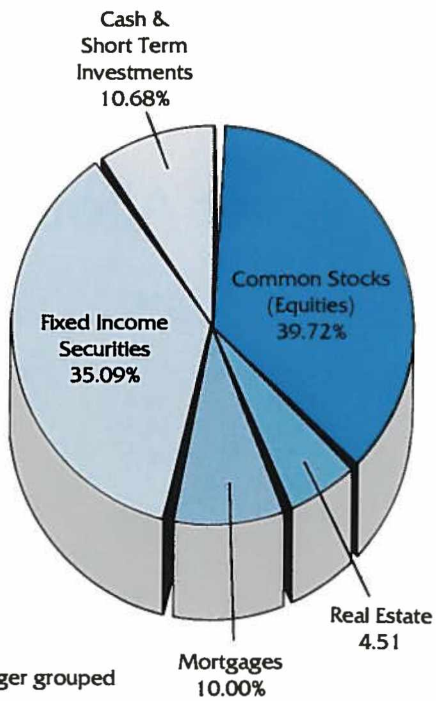
Commercial Mortgages	$190,086,000
Committed for Future Funding	4,200,000
Corporate Bonds and Notes	70,277,000
Equity in Companies Headquartered in Colorado	11,229,530
Real Estate	223,308,761
Residential Mortgage Pools	44,018,000
Total	**$543,119,291**

Investment Summary[1]

(In Thousands of Dollars)

Type of Investment	January 1, 1986 Book Value	January 1, 1986 Market Value	Purchases	Reductions[2]	December 31, 1986 Book Value	December 31, 1986 Market Value	% Total Market	Yield[3] at Market
Cash & Short-Term Investments	$1,090,213	$1,090,213	$5,725,578	$6,102,311	$713,480	$713,480	10.68%	5.51%
Fixed Income Securities[4]								
Corporate Bonds:								
Public Utilities	84,216	71,210	–	2,273	81,943	77,621	1.16%	8.03%
Industrials	102,729	109,649	49,827	6,949	145,607	159,571	2.38%	9.55%
Bank & Finance	88,311	91,770	–	12,509	75,802	82,081	1.23%	10.65%
Non-Publicly Traded	142,697	141,120	60,145	7,280	195,562	199,178	2.99%	10.22%
Total Corporate Bonds	417,953	413,749	109,972	29,011	498,914	518,455	7.76%	9.76%
Municipal Bonds	–	–	25,000	–	25,000	25,117	0.38%	8.96%
Government Securities:								
U.S. Bonds & Notes	587,348	629,340	705,366	369,346	923,368	999,486	14.96%	8.38%
U.S. Agency Obligations	100,271	107,203	596,105	25,096	671,280	678,808	10.16%	8.78%
Total Government Securities	687,619	736,543	1,301,471	394,442	1,594,648	1,678,294	25.12%	8.54%
Guaranteed Investment Contracts:	106,700	106,700	15,415	–	122,115	122,115	1.83%	14.30%
Total Fixed Income Securities	1,212,272	1,256,992	1,451,858	423,453	2,240,677	2,343,981	35.09%	9.11%
Common Stocks	1,947,110	2,306,523	2,403,441	1,927,459	2,423,092	2,653,482	39.72%	3.40%
Mortgages[4]	756,170	790,062	16,495	166,145	606,520	667,709	10.00%	10.66%
Real Estate	161,491	166,847	151,512	4,703	308,300	301,476	4.51%	1.94%
Total Investments	**$5,167,256**	**$5,610,637**	**$9,748,884**	**$8,624,071**	**$6,292,069**	**$6,680,128**	**100.00%**	**6.28%**

Investments
(At Market)
As of December 31, 1986



[1] Post-closing figures.
[2] Sales, redemptions and principal reductions.
[3] Return on capital invested.
[4] Mortgages moved to separate listing and are no longer grouped under Fixed Income Securities.

Fund Performance Evaluation

PERA retained R. V. Kuhns & Associates to evaluate the PERA fund performance.

In its analysis, R. V. Kuhns & Associates includes all investments, cash, accrued income and Guaranteed Investment Contracts. It also makes the calculations on pre-closing figures for annual rates of return.

Asset Allocation. The asset allocation between equities, bonds, cash and short-term investments and other assets is determined on an on-going basis, depending on the level of the respective markets and the total rate of return which can reasonably be expected to be derived from each category. The PERA Board of Trustees has allocation discretion subject to a statutory limit of no more than 50 percent of the fund in equities on a cost basis.

Total Portfolio Composite Results. These figures illustrate PERA's consistent, long-term nature rather than immediate gains. Also, the fund is well-diversified to protect against lean market times. The Wilshire Median Fund serves as an effective standard for determining a "reasonable" rate of return for the years shown.

Equities Only. Over the last five years the average return has been slightly under the performance of the Standard and Poors 500, a measure of the stock market. During this period PERA equities either equaled or out-performed the S&P 500 in two of five years, and under-performed in three years. This is not unusual since the Association's equity investments tend to be less volatile than the market which serves to dampen results in years when more speculative issues are in favor.

Bonds Only. PERA bond performance is compared to the Shearson Lehman Bond Index. In three of the past five years, PERA bonds have out-performed the Shearson Index. This was, in large part, due to the bond market rally in 1982 and significant adjustments in the maturity schedules in 1983.

Annual Rate of Return

	1982	1983	1984	1985	1986	Annualized
PERA Portfolio:	31.0%	12.2%	10.4%	21.5%	13.8%	17.5%
PERA Fund Excluding Real Estate:	31.7	12.8	9.0	22.3	14.4	17.8
Wilshire Median Fund	25.5	14.9	9.0	24.9	15.8	17.9
Equities:						
PERA	26.6	17.6	6.3	29.8	15.6	18.9
Standard & Poors 500	21.5	22.6	6.3	31.7	18.5	19.8
Bonds:						
PERA	38.6	8.6	13.2	20.9	16.8	19.2
Shearson Lehman Bond Index	31.1	8.0	15.0	21.3	15.6	18.0

Average Percent of Asset Allocation*

	1982	1983	1984	1985	1986
Equities	38.4%	43.4%	36.8%	40.9%	38.5%
Bonds	41.8	35.8	32.5	31.6	35.6
Other Assets	15.0	14.3	15.7	15.7	14.6
Cash & Equivalents	4.8	6.5	15.0	11.8	11.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%

*Pre-closing at cost.

ISSUE DESCRIPTION	SHARES HELD	COST	MARKET VALUE
Abbott Laboratories	950,000	$ 28,799,050	$ 43,343,750
Aetna Life & Casualty Co	465,000	20,593,998	26,214,375
Air Products & Chemicals Inc	400,000	13,281,083	14,050,000
Allied Signal Inc	500,000	9,510,190	20,062,500
Aluminum Company of America	840,600	33,240,879	28,475,325
American Telephone & Telegraph	585,000	15,227,650	14,625,000
American Cyanamid	270,000	14,790,120	21,026,250
American Express Co	500,000	17,596,168	28,312,500
American Home Products	400,000	26,944,712	30,750,000
Amoco Corp	479,400	31,315,397	31,280,850
AMP Inc	500,000	16,973,548	18,062,500
Atlantic Richfield	125,000	7,548,500	7,500,000
Automatic Data Processing Inc	656,100	14,641,473	23,127,525
Bankers Trust New York Corp	560,000	25,604,624	25,340,000
Baxter Travenol Laboratories	650,000	9,816,845	12,512,500
Bellsouth Corp	625,000	38,077,375	36,093,750
Boeing Co	620,000	31,691,675	31,697,500
Boise Cascade Corp	200,000	9,845,959	11,950,000
Bristol Myers Co	350,000	18,636,242	28,918,750
Caterpillar Tractor	425,000	17,846,662	17,053,125
Chevron Corp	625,000	26,460,714	28,359,375
Citicorp	505,000	23,584,906	26,765,000
Coca Cola Co	625,000	20,426,358	23,593,750
Colgate Palmolive Co	500,000	19,277,311	20,437,500
Cooper Industries	600,000	23,476,975	24,825,000
CSX Corp	637,800	19,313,679	18,575,925
Dayton Hudson Corp	640,000	27,977,053	27,200,000
Digital Equipment Corp	190,300	15,316,636	19,933,925
Disney (Walt) Co	750,000	33,401,500	32,343,750
Dominion Resources	1,025,000	49,595,388	45,356,250
Donnelley (RR) and Sons	457,600	31,036,898	28,028,000
Dover Corp	859,300	33,029,969	38,238,850
Dow Chemical	250,000	11,081,936	14,625,000
Dresser Industries Inc	925,000	20,698,409	17,921,875
duPont (EI) de Nemours	220,000	17,001,753	18,480,000
Eastman Kodak Co	375,000	19,927,431	25,734,375
Eaton Corp	335,000	20,736,882	24,706,250
Emerson Electric Co	253,000	15,909,702	21,188,750
Exxon Corp	600,000	38,595,406	42,075,000
Fireman's Fund Corp	700,000	22,827,215	24,587,500
First Interstate Bancorp	400,000	18,418,124	20,800,000
FPL Group Inc	1,000,000	34,468,409	31,625,000
General Electric Co	600,000	30,956,710	51,600,000
General Motors Corp	425,000	33,483,840	28,050,000
General RE Corp	650,000	27,367,056	36,075,000
General Signal Corp	580,000	26,638,893	25,665,000
Genuine Parts Co	400,000	13,543,610	17,250,000
Georgia Pacific Corp	220,000	5,888,610	8,140,000
Gould Inc	870,000	20,780,743	14,137,500
Grace (W.R.) & Co	250,000	12,220,470	12,093,750
Halliburton Co	1,300,000	35,579,789	31,687,500
Harris Corp	650,000	22,885,985	19,337,500
Henley Group	163,775	3,316,444	3,705,409
Hewlett Packard Co	600,000	20,856,654	25,125,000
International Business Machines	375,000	39,312,992	45,000,000
International Paper	100,000	6,182,468	7,512,500
Johnson & Johnson	425,000	21,968,975	27,890,625
K-Mart Corp	500,000	24,803,909	21,937,500

Common Stock

ISSUE DESCRIPTION	SHARES HELD	COST	MARKET VALUE
Knight-Ridder Inc	615,000	26,342,542	28,828,125
McDonalds Corp	400,000	21,063,410	24,350,000
Melville Corp	650,000	35,375,931	35,100,000
Merck & Co Inc	265,000	18,384,271	32,826,875
Miniscribe Corp	65,498	113,286	573,108
Minnesota Mining & Manufacturing	255,000	23,577,651	29,739,375
Mobil Corp	140,000	5,599,125	5,617,500
Motorola Inc	625,000	22,664,641	22,265,625
Penney J. C. Inc	250,000	15,351,440	18,062,500
PepsiCo Inc	875,000	17,384,697	22,750,000
Pfizer Inc	445,000	20,664,983	27,145,000
Philip Morris Inc	350,000	20,025,726	25,156,250
Pillsbury Co	989,400	36,588,118	33,515,925
Procter & Gamble Co	405,000	27,416,613	30,931,875
Public Service Enterprises Inc	1,050,000	45,803,025	42,262,500
RJR Nabisco	550,000	17,357,363	27,087,500
Rockwell International Corp	361,200	12,051,577	16,389,450
Royal Dutch Petroleum	61,000	5,671,350	5,825,500
Sears Roebuck & Co	947,500	37,305,008	37,663,125
Southern California Edison	1,050,000	37,641,263	35,568,750
Southland Corp	325,000	14,084,679	15,275,000
Standard Oil Co	396,900	19,205,070	19,596,938
Tandy Corp	500,000	18,152,887	21,250,000
Texas Instruments	184,700	21,791,421	21,817,688
Travelers Corp	700,000	31,972,559	31,237,500
Union Camp Corp	244,100	10,872,719	12,449,100
Union Pacific Corp	200,000	10,105,074	12,450,000
United Technologies	899,000	37,760,814	41,354,000
Unocal Corp	58,700	1,540,658	1,562,888
USF&G Corp	683,300	26,320,940	27,161,175
Westinghouse Electric Co.	300,000	9,484,053	16,725,000
Weyerhaeuser Co	300,000	9,999,142	11,325,000
Centennial Business Development Fund	80,000	800,000	802,321
Centennial Fund	500,000	4,886,714	4,729,385
Centennial Fund II	200,000	2,000,000	1,898,809
S&P 500 Index Fund	11,361,391	467,400,868	491,183,804
Total Equity Securities		$2,423,091,570	$2,653,482,150

Investment Brokers

Boettcher & Co. Inc.
Capitol Markets Corp.
Dean Witter Reynolds Inc.
Drexel Burnham Lambert Inc.
First Boston Corp.
Goldman Sachs & Co.
Hanifen Imhoff Inc.
Kidder Peabody & Co. Inc.
Merrill Lynch Pierce Fenner & Smith Inc.
Morgan Stanley & Co. Inc.
Paine Webber Inc.
Smith Barney
Shearson Lehman Brothers
Salomon Brothers Inc.
S. G. Warberg, Rowe & Pitman, Akroyd Inc.

Actuarial Section*

*unaudited

GABRIEL, ROEDER, SMITH & COMPANY
Actuaries & Consultants

200 Globe Building • 407 East Fort • Detroit, Michigan 48226 • 313-961-3346

June 8, 1987

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

Ladies and Gentlemen:

The basic financial objective of PERA is to establish and receive contributions which, expressed as percents of active member payroll, will remain approximately level from generation to generation of Colorado citizens.

Annual actuarial valuations test how well the basic objective is being achieved and measure PERA's present financial position. The last completed actuarial valuations were based upon data as of December 31, 1986. These valuations indicate that the contribution rates established by State law meet the basic objective.

Actuarial valuations are based upon assumptions of future experience in various financial risk areas. Assumptions are adopted by the Board after consulting with the actuary and were last revised in 1986. We believe the assumptions used in the December 31, 1986 valuations produce results which are reasonable.

The relationship between assumed experience and actual experience in each risk area is then observed annually by an actuarial gain/loss analysis. Since 1982, actual experience has been more favorable than assumed, primarily as the result of historically high real rates of investment return. (During the decade prior to 1982, experience was less favorable due to high rates of inflation which are damaging to financial security programs such as PERA.)

Based upon the valuation results, it is our opinion that the Public Employees' Retirement Association of Colorado continues in sound condition in accordance with actuarial principles of level cost financing.

Respectfully submitted,

Norman Jones   R G Roeder

Norman L. Jones   Richard G. Roeder

NLJ:ct

Once vested in the Plan, each PERA member acquiring a year of service credit is, in effect, given an "IOU" by PERA which says: "The Public Employees' Retirement Association of Colorado owes the member one year of retirement benefits to be paid when the member retires." The law governing PERA financing intends that 1986 members and taxpayers contribute the money to cover the IOU's being handed out this year. By following this principle, the contribution rates will remain approximately level from generation to generation.

An inevitable by-product of the level cost design is the accumulation of reserve assets and investment income from those assets. Invested assets increase as contributions accumulate and income is earned. Investment income then becomes third contributor for benefits and is directly related to the contribution amounts required from members and employers. The chart below depicts this level-cost design.

In actuarial terminology, this level-cost objective means that the contribution rates must total at least the current cost of the members' service being given this year, and the interest on unfunded actuarial accrued liabilities (UAAL). UAAL is the difference between actuarial liabilities for service already rendered and the accrued assets of PERA.

Computing Contributions to Support Fund Benefits

From a given schedule of benefits and from the member and asset data furnished, the actuary determines the contribution rates to support the benefits by means of an actuarial valuation and funding method.

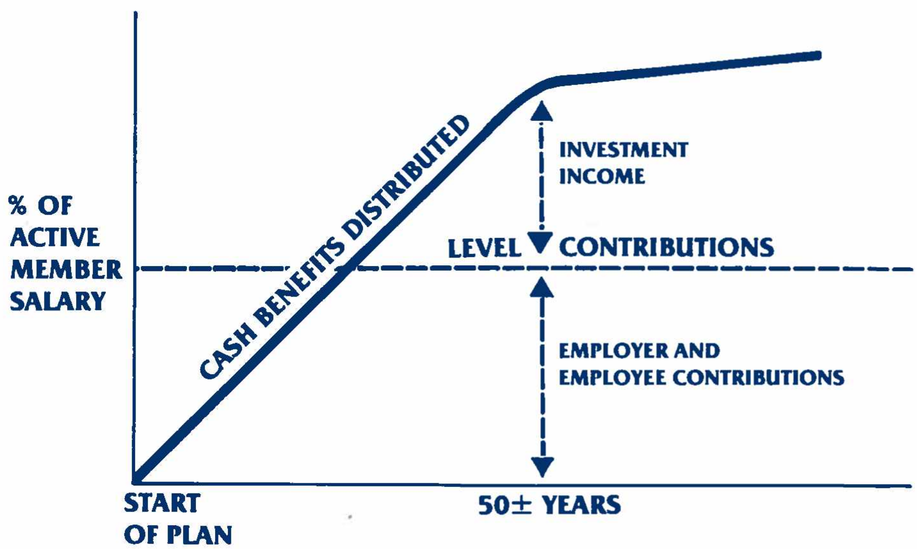
An actuarial valuation uses the rate of investment income which plan assets will earn, the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit, the rates of mortality, the rates of disability, the rates of salary increases and the assumed ages at actual retirement.

In making an actuarial valuation, assumptions must be made as to what the above rates will be for the next year and for decades in the future. Only the subsequent actual experience of the Plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed and Actual Experience

Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions or the skill of the actuary and the many calculations made. The future can be predicted with considerable precision, except for inflation, but not with 100 percent accuracy.

PERA copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continuing adjustments in financial position.



Level Contribution Line - Determining the level contribution line requires detailed assumptions concerning experiences in future decades, including:

Rate of withdrawal of active members (turnover)
Rates of mortality
Rates of disability
Ages at actual retirement
Rates of pay increases
Investment income
Change in active member group size

Cash Benefits Line - This relentlessly increasing line is the fundamental reality of retirement plan financing. As the ratio of retired to active working members rises, the benefits paid rise as a percent of salary.

The line increases over time, even if new benefits aren't added, and regardless of the financing method being followed.

Summary of Actuarial Assumptions

The following economic and non-economic actuarial assumptions were adopted by the Board of Trustees after consulting with the actuary following the December 31, 1985, actuarial valuation. The assumptions are reviewed in depth every five years and are established to make projections for the Plan's experience decades into the future.

Economic Assumptions

The investment return rate used in making the valuations was 7.5 percent per year compounded annually (net after administrative expenses. The real rate of return is the portion of total investment return which is more than the inflation rate. Considering other financial assumptions, the 7.5 percent investment return rate translates into an assumed real rate of return of 2 percent.

The overall active member payroll is assumed to increase 5.5 percent annually. Pay increase assumptions for individual active members are shown for sample ages in Exhibits A,B,C and D. Part of the assumption for each age is for merit and/or seniority increase, and the other 5.5 percent recognizes inflation.

The number of active members is assumed to continue at the present number.

Non-Economic Assumptions

The 1971 Group Annuity Mortality Table, projected to 1984, was used in evaluating the cost of benefits to be paid. Related values are shown in Exhibits F and G.

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

The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages in Exhibits A, B, C, D and E. For disability retirement, impaired longevity was recognized by basing benefit values on an adjusted age midway between attained age and normal retirement age. For other withdrawal it was assumed that all members terminating before age 35 with less than five years of service and 25 percent of members terminating after 35 with over five years of service would withdraw their contributions and forfeit their entitlement to a monthly benefit at retirement age.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. Differences in the past between assumed experience and actuarial experience ("actuarial gains and losses") become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest) which are level percents of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer fiscal year.

Present assets (cash and investments) were used at book value.

The data about persons now covered and about present assets was furnished by PERA's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE RETIREMENT & INDIVIDUAL PAY INCREASE ASSUMPTIONS

Exhibit A - State Division

Sample Ages	Percent of Active Members Separating Within the Next Year: Withdrawal		Death		Disability		Pay Increase Assumptions For An Individual Employee		
	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
STATE DIVISION MEMBERS CONTRIBUTING 8%									
20	7.70%	11.00%	0.05%	0.02%	0.01%	0.01%	7.40%	5.50%	12.90%
25	7.70	10.40	0.06	0.03	0.04	0.04	5.00	5.50	10.50
30	6.50	9.50	0.07	0.04	0.06	0.05	3.40	5.50	8.90
35	5.00	8.00	0.10	0.05	0.20	0.12	2.20	5.50	7.70
40	4.50	5.90	0.15	0.08	0.27	0.19	1.40	5.50	6.90
45	4.50	5.00	0.27	0.12	0.43	0.32	0.90	5.50	6.40
50	4.50	5.00	0.49	0.18	0.83	0.76	0.60	5.50	6.10
55	4.50	5.00	0.78	0.27	1.12	1.10	0.50	5.50	6.00
60	4.50	5.00	1.21	0.46	1.20	1.20	0.30	5.50	5.80
65	4.50	5.00	1.95	0.81	1.20	1.20	—	5.50	5.50

Sample Ages	Percent of Active Members Separating Within the Next Year: Withdrawal		Death		Disability		Pay Increase Assumptions For An Individual Employee		
	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
STATE DIVISION MEMBERS CONTRIBUTING 9% (State Troopers)									
20	7.94%	7.94%	0.05%	0.02%	0.06%	0.06%	7.40%	5.50%	12.90%
25	7.72	7.72	0.06	0.03	0.06	0.06	5.00	5.50	10.50
30	7.22	7.22	0.07	0.04	0.06	0.06	3.40	5.50	8.90
35	6.28	6.28	0.10	0.05	0.07	0.07	2.20	5.50	7.70
40	5.15	5.15	0.15	0.08	0.10	0.10	1.40	5.50	6.90
45	3.98	3.98	0.27	0.12	0.17	0.17	0.90	5.50	6.40
50	2.56	2.56	0.49	0.18	0.31	0.31	0.60	5.50	6.10
55	0.94	0.94	0.78	0.27	0.56	0.56	0.50	5.50	6.00
60	0.09	0.09	1.21	0.46	1.19	1.19	0.30	5.50	5.80
65	—	—	1.95	0.81	—	—	—	5.50	5.50

Exhibit B - School Division

Sample Ages	Percent of Active Members Separating Within the Next Year: Withdrawal		Death		Disability		Pay Increase Assumptions For An Individual Employee		
	Men	Women	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
20	6.40%	8.00%	0.05%	0.02%	0.02%	0.02%	5.00%	5.50%	10.50%
25	6.40	8.00	0.06	0.03	0.02	0.02	3.70	5.50	9.20
30	5.60	8.00	0.07	0.04	0.02	0.02	2.70	5.50	8.20
35	4.20	6.30	0.10	0.05	0.04	0.04	2.00	5.50	7.50
40	3.50	4.50	0.15	0.08	0.10	0.10	1.40	5.50	6.90
45	3.50	4.00	0.27	0.12	0.24	0.20	1.00	5.50	6.50
50	3.50	4.00	0.49	0.18	0.49	0.30	0.80	5.50	6.30
55	3.50	4.00	0.78	0.27	0.88	0.57	0.60	5.50	6.10
60	3.50	4.00	1.21	0.46	1.42	1.00	0.40	5.50	5.90
65	3.50	4.00	1.95	0.81	1.65	1.00	—	5.50	5.50

Exhibit C - Municipal Division

Sample Ages	Percent of Active Members Separating Within the Next Year: Withdrawal Men	Withdrawal Women	Death Men	Death Women	Disability Men	Disability Women	Pay Increase Assumptions For An Individual Employee: Merit & Seniority	Base (Economy)	Increase Next Year
20	8.00%	12.00%	0.05%	0.02%	0.01%	0.01%	7.40%	5.50%	12.90%
25	8.00	12.00	0.06	0.03	0.04	0.04	5.00	5.50	10.50
30	8.00	10.50	0.07	0.04	0.06	0.05	3.40	5.50	8.90
35	6.30	9.00	0.10	0.05	0.20	0.12	2.20	5.50	7.70
40	4.50	6.90	0.15	0.08	0.27	0.19	1.40	5.50	6.90
45	4.00	5.30	0.27	0.12	0.43	0.32	0.90	5.50	6.40
50	4.00	5.00	0.49	0.18	0.83	0.76	0.60	5.50	6.10
55	4.00	5.00	0.78	0.27	1.12	1.10	0.50	5.50	6.00
60	4.00	5.00	1.21	0.46	1.20	1.20	0.30	5.50	5.80
65	4.00	5.00	1.95	0.81	1.20	1.20	–	5.50	5.50

Exhibit D - Judges' Division

Sample Ages	Percent of Active Members Separating Within the Next Year: Withdrawal Men	Withdrawal Women	Death Men	Death Women	Disability Men	Disability Women	Pay Increase Assumptions For An Individual Employee: Merit & Seniority	Base (Economy)	Increase Next Year
20	5.00%	5.00%	0.05%	0.02%	0.06%	0.06%	5.00%	5.50%	10.50%
25	5.10	5.10	0.06	0.03	0.06	0.06	3.70	5.50	9.20
30	4.90	4.90	0.07	0.04	0.06	0.06	2.70	5.50	8.20
35	4.40	4.40	0.10	0.05	0.07	0.07	2.00	5.50	7.50
40	3.60	3.60	0.15	0.08	0.10	0.10	1.40	5.50	6.90
45	2.80	2.80	0.27	0.12	0.17	0.17	1.00	5.50	6.50
50	2.00	2.00	0.49	0.18	0.31	0.31	0.80	5.50	6.30
55	1.30	1.30	0.78	0.27	0.56	0.56	0.60	5.50	6.10
60	1.00	1.00	1.21	0.46	1.19	1.19	0.40	5.50	5.90
65	–	–	1.95	0.81	–	–	–	5.50	5.50

Exhibit E

Percent of Active Members With Less Than 5 Years of Service Withdrawing from Employment Next Year

Years of Service	State & Municipal Division: Men	State & Municipal Division: Women	School Division: Men	School Division: Women
0	25.00%	30.00%	30.00%	30.00%
1	15.00	18.00	18.00	18.00
2	12.00	16.00	14.00	14.00
3	10.00	14.00	10.00	10.00
4	8.00	12.00	8.00	8.00

Single Life Retirement Values

Based on 1971 Group Annuity Mortality Projected to 1984 & 7.5% Interest

Exhibit F - State, School, Municipal Divisions

Sample Attained Ages	Present Value of $1.00 Monthly for Life		Present Value of $1.00 Mo. the First Year Increasing $.03 Yearly		Future Life Expectancy (Years)		Sample Attained Ages	Present Value of $1.00 Monthly for Life		Present Value of $1.00 Mo. the First Year Increasing $.03 Yearly		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women		Men	Women	Men	Women	Men	Women
40	$148.30	$155.13	$194.49	$207.11	$36.69	$43.22	65	$102.12	$118.98	$121.85	$145.70	$15.55	$20.09
45	142.21	151.24	183.78	199.50	32.01	38.41	70	88.28	105.19	102.90	125.66	12.25	15.99
50	134.71	146.05	171.18	189.88	27.53	33.66	75	74.58	89.73	84.92	104.45	9.49	12.33
55	125.72	139.18	156.74	177.86	23.28	28.99	80	60.87	74.20	67.78	84.16	7.17	9.28
60	114.86	130.21	140.21	163.11	19.27	24.44	85	49.24	59.13	53.73	65.36	5.43	6.78

Exhibit G-Judges' Division

Sample Attained Ages	Present Value of $1.00 Monthly for Life		Present Value of $1.00 Mo. the First Year Increasing $.015 Yearly		Future Life Expectancy (Years)		Sample Attained Ages	Present Value of $1.00 Monthly for Life		Present Value of $1.00 Mo. the First Year Increasing $.015 Yearly		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women		Men	Women	Men	Women	Men	Women
40	$148.30	$155.13	$171.40	$181.12	$36.69	$43.22	65	$102.12	$118.98	$111.99	$132.34	$15.55	$20.09
45	142.21	151.24	163.00	175.37	32.01	38.41	70	88.28	105.19	95.59	115.43	12.25	15.99
50	134.71	146.05	152.93	167.97	27.53	33.66	75	74.58	89.73	79.75	97.09	9.49	12.33
55	125.72	139.18	141.23	158.52	23.28	28.99	80	60.87	74.20	64.33	79.18	7.17	9.28
60	114.86	130.21	127.54	146.66	19.27	24.44	85	49.24	59.13	51.49	62.25	5.43	6.78

Percent of Eligible Active Members Retiring Next Year

Exhibit H

Retirement Ages	State Division	School Division	Municipal Division	Judges' Division
55	13%	12%	13%	–
56	13	12	13	–
57	13	12	13	–
58	13	12	13	–
59	13	12	13	–
60	17	20	17	15
61	17	20	17	10
62	17	20	17	10
63	17	20	17	10
64	17	20	17	10
65	40	60	40	40
66	40	40	40	20
67	40	50	40	20
68	40	60	40	20
69	40	80	40	20
70 & over	100	100	100	100

Schedule of Retirees and Survivors by Type of Benefit

December 31, 1986

Division	Number of Benefit Recipients	Type of Benefit 1	2	3	4	5	6
State	13,117	10,107	2,108	80	765	57	522
School	13,565	11,417	1,305	40	735	68	1,167
Municipal	1,369	948	256	6	144	15	49
Judges'	145	114	10	1	18	2	4

	Option Selected 1	2	3	4	Surviving retiree	Surviving cobeneficiary
State	6,846	1,259	2,305	536	995	274
School	8,623	1,187	1,706	375	546	285
Municipal	579	156	262	68	122	17
Judges'	25	12	47	10	24	6

Benefit Types: 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 deferred future benefit.
6-Former member with deferred future benefit.

Option Selection: Age and service retirees and disability retirees select an option at retirement to provide death benefits. They are as follows:

1-Single Life Benefit.
2-Joint Benefit with ½ to Surviving Cobeneficiary.
3-Joint and Survivor Benefit.
4-Joint Benefit with ½ to Either Survivor
Surviving Retiree-Cobeneficiary has predeceased the retiree.
Surviving Cobeneficiary-Retiree has predeceased the cobeneficiary.

Schedule of Active Member Valuation Data

Year	Number Active Members	Annual Payroll	Annual Average Salary	% Increase in Average Pay
1976	86,319	$1,042,355,760	$12,076	—
1977	88,243	1,141,555,008	12,936	7.13%
1978	89,783	1,237,221,852	13,780	6.52
1979	91,131	1,361,116,764	14,936	8.39
1980	93,741	1,518,107,964	16,195	8.43
1981	91,672	1,649,921,520	17,998	11.13
1982	92,076	1,802,596,767	19,577	8.77
1983	92,346	1,923,936,063	20,834	6.42
1984	94,766	2,091,707,220	22,072	5.94
1985	98,315	2,270,948,105	23,092	4.62
1986	99,977	2,409,384,090	24,099	4.36

Total of 374 employers in 1986.

Schedule of Retirees and Beneficiaries Added to and Removed from Benefit Payroll*

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.	Payroll-End of Year Annual Benefits	Cost of Living Stabilization Fund	Increase In Annual Benefits	Average Annual Benefits
6/30/76	1,677	$7,073,529	433	$1,051,963	13,773	$42,116,587	$1,725,888	—	$3,183
6/30/77	1,672	7,915,392	492	1,366,137	14,953	48,671,648	2,365,600	7.2%	3,413
7/1/77-12/31/77	1,048	4,883,337	219	668,998	15,782	52,942,700	2,792,076	3.5%	3,532
12/31/78	1,725	8,365,952	494	1,451,876	17,013	60,999,693	4,410,064	8.9%	3,845
12/31/79	1,634	9,730,250	497	1,540,411	18,150	69,189,637	5,363,952	6.8%	4,108
12/31/80	1,673	11,514,467	503	1,450,894	19,320	79,257,635	20,747,124	26.0%	5,176
12/31/81	1,595	11,760,232	599	2,174,169	20,316	88,843,513	20,057,160	3.6%	5,360
12/31/82	2,413	21,263,055	673	2,523,386	22,056	107,582,521	39,978,816	24.8%	6,690
12/31/83	2,202	21,365,407	736	3,048,446	23,522	125,899,802	38,624,028	4.6%	6,994
12/31/84	2,247	23,813,326	717	3,009,065	25,052	146,704,999	45,747,060	9.8%	7,682
12/31/85	2,275	27,050,513	567	3,565,127	26,760	170,190,060	42,286,322	3.4%	7,940
12/31/86	2,293	28,173,779	857	4,386,095	28,196	193,978,656	44,138,479	6.4%	8,445

*Numbers derived on a accrual basis

Active-Retired Member Comparison*

The number of persons receiving monthly retirement benefits has grown steadily in relation to active membership. This trend will continue for many years into the future.

The level-cost financing principle assures that contribution rates will not have to be raised to meet the benefit load. The current percentages of salaries will be sufficient to meet the increasing retirement payroll if the benefit provisions contained in state law are not changed.

The retirement payroll shown in the right-hand column includes cost of living increases paid in years since 1970. Figures shown are for the State, School, and Municipal Divisions. Prior to 1981, figures are for years ended June 30.

Year	Number of retired members on 12/31	Number of member accounts on 12/31	Retired members as % of active members on 12/31	Total benefits paid - yr. 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
1986	26,217	104,460	25.1	217,402,612

*Numbers derived on a cash basis

Active Members in Valuation

By Attained Age and Years of Service -- 12-31-86

School Division Active members included in the School Division valuation totaled 56,520, involving annual salaries totaling $1,279,455,840.

Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Totals No.	Totals Valuation Payroll
Under 20	34							34	$ 297,672
20-24	1,079	16						1,095	15,479,256
25-29	4,125	709	10					4,844	84,124,752
30-34	4,018	2,786	664					7,468	147,473,184
35-39	4,807	2,820	2,918	570				11,115	250,572,624
40-44	3,830	2,522	2,073	2,008	290	1		10,724	261,526,344
45-49	2,168	1,858	1,494	1,300	1,065	192	1	8,078	201,605,532
50-54	1,194	1,248	1,176	1,044	812	701	81	6,256	159,907,452
55-59	722	700	833	892	523	441	157	4,268	103,478,736
60-64	368	430	399	421	234	121	90	2063	44,616,072
65-69	91	103	115	93	65	20	21	508	9,345,108
70 & Over	21	19	11	5	4	5	2	67	1,029,108
Totals	22,457	13,211	9,693	6,333	2,993	1,481	352	56,520	$1,279,455,840

The average age for School Division members was 42 years, and the average service was 8 years.

State Division Active members included in the State Division valuation totaled 36,105, involving annual salaries totaling $957,468,048.

Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Totals No.	Totals Valuation Payroll
Under 20	30							30	$ 279,096
20-24	984	30						1,014	15,178,020
25-29	2,731	714	23					3,468	68,585,124
30-34	3,256	1,714	537	9				5,516	129,258,576
35-39	2,898	1,862	1,430	278	9			6,477	171,485,184
40-44	2,066	1,436	1,209	805	263	7		5,786	165,467,592
45-49	1,200	937	866	840	526	100	7	4,476	132,408,720
50-54	717	679	647	700	537	267	77	3,624	108,808,320
55-59	499	564	605	687	475	267	118	3,215	94,961,964
60-64	230	332	414	513	241	125	90	1945	56,097,696
65-69	60	96	131	118	66	24	25	520	14,007,696
70 & Over	6	9	2	9	5	2	1	34	930,060
Totals	14,677	8,373	5,864	3,959	2,122	792	318	36,105	$957,468,048

The average age for State Division members was 42 years, and the average service was 9 years.

Active Members in Valuation

By Attained Age and Years of Service -- 12-31-86

Municipal Division Active members included in the Municipal Division valuation totaled 7,114, involving annual salaries totaling $161,641,362.

Attained Age	Years of Service to Valuation Date: 0-4	5-9	10-14	15-19	20-24	25-29	30+	Totals: No.	Valuation Payroll
Under 20	18							18	$ 104,319
20-24	345	13						358	5,171,419
25-29	822	218	5					1,045	20,213,260
30-34	852	393	139	2				1,386	30,425,210
35-39	673	421	248	65	1			1,408	33,883,687
40-44	402	290	175	111	42			1,020	25,353,535
45-49	219	157	127	82	53	7	1	646	16,282,781
50-54	107	119	99	75	57	27	12	496	12,784,544
55-59	94	80	85	91	27	24	13	414	10,130,553
60-64	44	52	50	60	14	15	5	240	5,587,703
65-69	8	13	12	13	7	5	1	59	1,428,768
70 & Over	9	11		2		1	1	24	275,583
Totals	3,593	1,767	940	501	201	79	33	7,114	$161,641,362

The average age for Municipal Division members was 39 years, and the average service was 7 years.

Judges' Division Active members included in the Judges' Division valuation totaled 238, involving annual salaries totaling $10,818,840.

Attained Age	Years of Service to Valuation Date: 0-4	5-9	10-14	15-19	20-24	25-29	30+	Totals: No.	Valuation Payroll
Under 30									–
30-34	4							4	$ 148,776
35-39	15	11	3					29	1,093,968
40-44	21	24	7	1				53	2,478,708
45-49	10	14	13	3				40	1,942,044
50-54	3	9	8	7	2	1		30	1,424,088
55-59	3	12	9	3	3			30	1,320,588
60-64	2	6	10	7	6	1		32	1,627,956
65-69		1	2	3	4			10	378,516
70 & Over		2	3	2	3			10	404,196
Totals	58	79	55	26	18	2		238	$10,818,840

The average age for Judges' Division members was 50 years, and the average service was 10 years.

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 taxpayers 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.

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) Active 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 active 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 active 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. Liability 3 being fully funded is very rare.

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

TOTAL ACCRUED ACTUARIAL LIABILITIES

Valuation Date	Active Member Contributions (1)	Retirees and Beneficiaries*	Active Members (Employer Financed Portion) (3)	Valuation Assets	Portion of Accrued Actuarial Liabilities Covered by Reported Assets (1)	(2)	(3)
12-31-76	$ 362,667,690	$ 558,464,069	$1,169,709,064	$1,274,730,330	100%	100%	30.2%
12-31-77	421,131,834	626,256,830	1,364,206,936	1,539,589,373	100	100	36.1
12-31-78	475,439,269	686,029,604	1,395,583,599	1,769,105,963	100	100	43.5
12-31-79	536,381,823	798,562,567	1,579,233,427	2,090,081,827	100	100	47.8
12-31-80	600,657,499	926,253,210	1,978,725,621	2,438,498,055	100	100	46.1
12-31-81	674,778,335	1,039,344,715	2,236,428,561	2,731,317,956	100	100	45.5
12-31-82	752,901,555	1,261,240,932	2,527,282,001	3,199,623,171	100	100	46.9
12-31-83	843,058,135	1,505,814,909	2,751,961,085	3,752,861,340	100	100	51.0
12-31-84	937,173,328	1,753,309,252	3,084,444,755	4,393,831,995	100	100	55.2
12-31-85	1,042,574,126	2,020,932,989	3,405,202,669	5,194,918,164	100	100	62.6
12-31-86	1,160,217,971	2,216,934,541	3,771,614,184	6,247,694,817	100	100	76.1

*Liabilities for retirees and beneficiaries are as of the following June 30, for valuation dates through 12-31-76. Beginning in 1977, liabilites for both members and retirees are figured as of December 31 of each year.

Summary of Unfunded Accrued Actuarial Liabilities

Unfunded accrued actuarial 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 liabilities be financed systematically over future years. The period for amortizing unfunded accrued actuarial liabilities is currently under the 60-year limit specified in state law in all divisions of PERA. (The law requires that contribution rates be set at a level which, if actuarial experience matches plan assumptions, will pay off unfunded liabilities over 60 years or less.) The amortization periods have shown stability over the last decade.

Benefits to retirees are "full funded" -- assets reserved for benefits currently being paid equal liabilities for those benefits. Liabilities for active members are based on service rendered toward their retirement benefits which will be payable in the future. Unfunded accrued actuarial liabilities exist because liabilities for such service by active members exceed assets currently on hand for such future benefits.

Because inflation continues, though at a much lower rate in the last few years, the value of dollars is decreasing. Looking at just the dollar amounts of assets, benefits paid, active member salaries and unfunded accrued actuarial liabilities will be misleading.

While no one or two measures can fully describe the financial condition of the plan, unfunded accrued actuarial liabilities dollars divided by active member salary dollars provides 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 whether the system is becoming financially stronger or weaker.

This ratio has increased at times over the last decade, but the recent trend shows stability. Actuarial assumptions were revised in 1986 to recognize higher investment returns expected over the long term. The high investment returns in the last two years have helped to increase assets, reduce unfunded accrued actuarial liabilities and lower the ratio of unfunded liabilities to active member salaries.

UNFUNDED ACCRUED ACTUARIAL LIABILITIES

Valuation Date	Total Accrued Actuarial Liabilities	Valuation Assets	Assets as a % of Accrued Liabilities	Unfunded Accrued Liabilities	Active Member Salaries	UAAL as a % of Active Member
12-31-76	$2,090,840,823	$1,274,730,330	61.0%	$ 816,110,493	$1,042,355,760	78.3%
12-31-77	2,411,595,600	1,539,589,373	63.8	872,006,227	1,141,555,008	76.4
12-31-78	2,557,052,472	1,769,105,963	69.2	787,946,509	1,237,221,852	63.7
12-31-79	2,914,177,817	2,090,081,827	71.7	824,095,990	1,361,116,760	60.6
12-31-80	3,505,636,330	2,438,498,055	69.6	1,067,138,275	1,518,107,964	70.3
12-31-81	3,950,551,611	2,731,317,956	69.1	1,219,233,655	1,649,921,520	73.9
12-31-82	4,541,424,488	3,199,623,171	70.5	1,341,801,317	1,802,596,767	74.4
12-31-83	5,100,834,129	3,752,861,340	73.6	1,347,972,789	1,923,936,078	70.1
12-31-84	5,774,927,335	4,393,831,995	76.1	1,381,095,340	2,091,707,220	66.0
12-31-85	6,468,709,784	5,194,918,164	80.3	1,273,791,620	2,270,948,105	56.1
12-31-86	7,148,766,696	6,247,694,817	87.4	901,071,879	2,409,384,090	37.4

Schedule of Gains and Losses in Accrued Liabilities

Years Ended December 31
Resulting From Differences Between Assumed Experiece and Actual Experience

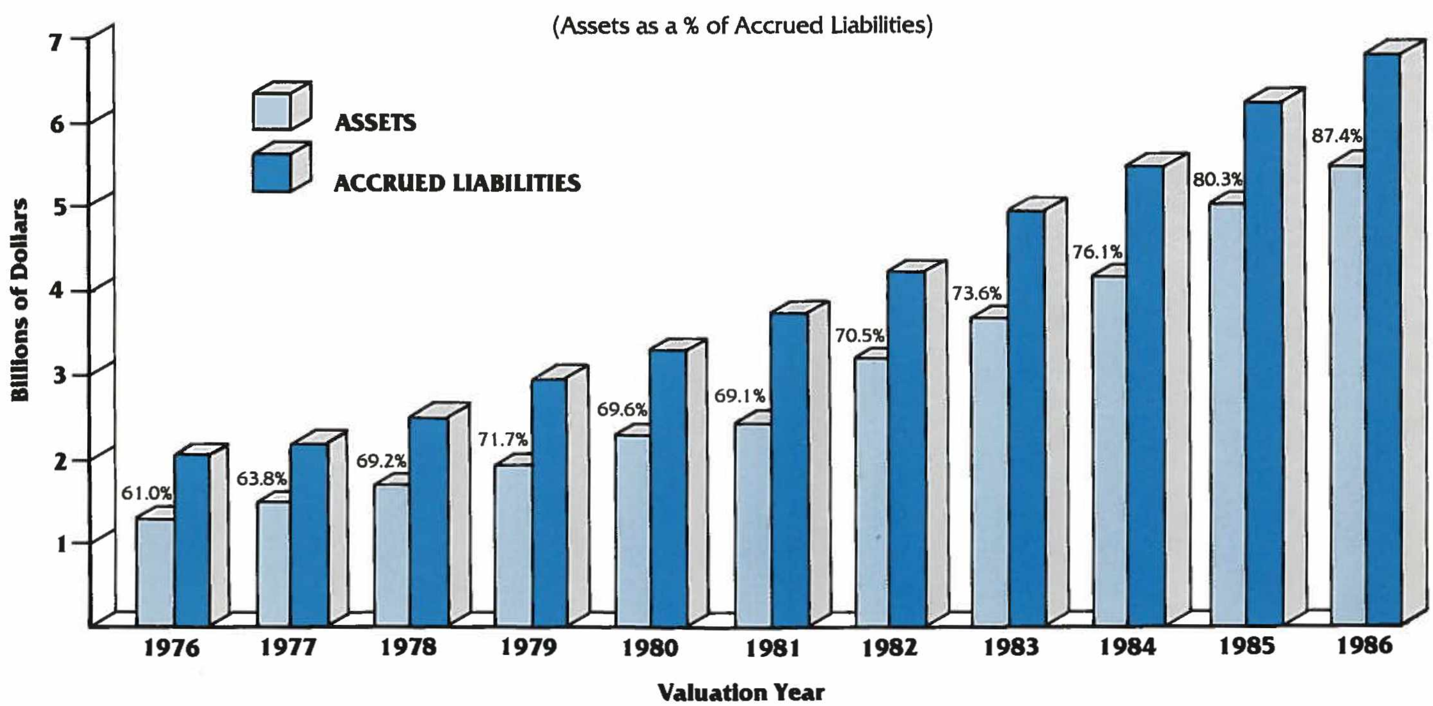
(In Millions of Dollars)

$ Gain (or Loss) For Year

Type of Activity	**1986**[1]	**1985**[1]	**1984**	**1983**	**1982**[2]
Age and Service Retirements	$ (5.30)	$ (5.60)	$ (5.14)	$ (8.10)	$ (4.08)
Disability Retirements	(2.12)	(2.77)	(3.58)	(16.57)	(16.33)
Death-in-Service Benefits	2.36	1.66	4.34	4.04	3.98
Withdrawal From Employment	20.31	(51.24)	(47.48)	(13.04)	(12.33)
Pay Increases	25.30	(31.61)	(33.08)	(37.93)	(87.91)
Investment Income	471.26	293.16	174.30	126.42	78.95
Other	38.18	(20.77)	(30.06)	(0.03)	(14.75)
Gain (or Loss) During Year From Financial Experience	549.99	182.83	59.30	54.85	(52.47)
Non-Recurring Items[3]	(138.54)	(48.38)	(63.23)	(16.55)	(23.40)
Composite Gain (or Loss) During Year	**$ 411.45**	**$134.45**	**$ (3.93)**	**$ 38.30**	**$ (75.87)**

[1] Plan amended.
[2] Revised assumptions.
[3] Non-recurring items include changes due to amendments, changes in actuarial method or assumptions and special transfers to retired life funds.

Assets and Accrued Liabilities 1976-1986



Computed Employer Contribution Rate

	Expressed as Percents of Active Member Payroll			
	State Division	**School Division**	**Municipal Division**	**Judges' Division**
Contributions for Normal Cost:				
Age and Service Benefits	9.46%	11.23%	8.92%	11.72%
Disability Benefits	1.47	0.86	1.36	1.19
Survivor Benefits	0.72	0.56	0.72	1.26
Total	11.65	12.65	11.00	14.17
Member Current Contributions	8.03[1]	8.00	8.00	7.65[2]
(Future Refunds)	(1.88)	(1.72)	(1.99)	(0.81)
Available for Benefits	6.15	6.28	6.01	6.84
Employer Normal Cost	5.50	6.37	4.99	7.33
Unfunded Actuarial Accrued Liabilities	3.92	3.33	2.41	4.87
(Amortization Period)	(16 years)	(10 years)	(5 years)	(5 years)
TOTAL EMPLOYER CONTRIBUTION RATE FOR ACTUARIALLY FUNDED BENEFITS	9.42%	9.70%	7.40%	12.20%
Cost of Living Stabilization Fund[3]	2.00	2.00	2.00	2.00
Health Care Reserve Fund[4]	0.80	0.80	0.80	0.80
STATUTORY EMPLOYER CONTRIBUTION RATE	**12.22%**	**12.50%**	**10.20%**	**15.00%**

[1] Weighted average of more than one statutory rate.
[2] Equivalent rate to reflect refund of contributions which were made during the 17th and through the 20th years of service.
[3] Used to provide ad-hoc increases to retirees and beneficiaries.
[4] Used to pay a portion of health care premium for retirees and beneficiaries.

Statistical Section*

*unaudited

Schedule of Disbursements By Function

(In Thousands of Dollars)

	YEAR	REFUNDS	BENEFIT PAYMENTS	ADMINISTRATIVE EXPENSES	TOTAL EXPENSES
STATE DIVISION	1977	$ 9,724	$ 24,425	$ 1,076	$ 35,225
	1978	9,522	28,131	862	38,515
	1979	13,435	32,293	1,030	46,758
	1980[1]	13,980	29,586	1,037	44,603
	1981	16,550	53,094	1,161	70,805
	1982	17,091	65,067	1,358	83,516
	1983	12,934	77,262	1,782	91,978
	1984	14,951	87,948	1,960	104,859
	1985	15,246	99,239	2,248	116,733
	1986[2]	13,358	111,483	2,810[3]	127,651
SCHOOL DIVISION	1977	8,650	22,864	1,436	32,950
	1978	10,448	26,333	1,163	37,944
	1979	12,240	29,958	1,385	43,583
	1980[1]	12,525	26,000	1,424	39,949
	1981	14,597	47,181	1,570	63,348
	1982	13,242	58,369	1,885	73,496
	1983	12,280	71,506	2,486	86,272
	1984	13,868	81,989	2,726	98,583
	1985	13,290	92,511	3,173	108,974
	1986[2]	12,152	103,500	4,015[3]	119,667
MUNICIPAL DIVISION	1977	904	1,878	137	2,919
	1978	1,666	2,185	115	3,966
	1979	2,136	2,555	142	4,833
	1980[1]	2,134	2,318	126	4,578
	1981	2,304	4,040	167	6,511
	1982	1,911	4,937	198	7,046
	1983	2,122	5,989	273	8,384
	1984	2,715	7,137	314	10,166
	1985	2,796	8,008	365	11,169
	1986[2]	2,661	9,352	470[3]	12,483
JUDGES' DIVISION	1977	10	398	8	416
	1978	14	499	6	519
	1979	13	618	8	639
	1980[1]	53	398	8	459
	1981	84	927	8	1,019
	1982	27	1,072	10	1,109
	1983	13	1,367	14	1,394
	1984	41	1,496	15	1,552
	1985	85	1,664	17	1,766
	1986[2]	66	1,886	21[3]	1,973

[1] The fiscal year was changed in 1980 to a calendar year. Amounts prior to that time have been allocated on calendar-year basis.

[2] Information for 1986 is on an accrual basis; prior years on a cash basis.

[3] Total for 1986 does not include Health Care Fund.

Schedule of Receipts By Source

(In Thousands of Dollars)

	YEAR	EMPLOYEE CONTRIBUTION	EMPLOYER CONTRIBUTION	INVESTMENT INCOME	MISC. INCOME[2]	TOTAL REVENUES
STATE DIVISION	1977	$37,030	$ 50,777	$ 40,945	$108	$128,860
	1978	40,019	54,806	48,763	116	143,704
	1979	43,716	59,876	59,042	150	162,784
	1980[1]	48,140	68,435	75,553	141	192,269
	1981	53,153	83,369	50,932	158	187,612
	1982	58,995	89,973	114,948	117	264,033
	1983	61,865	94,148	146,782	26	302,821
	1984	66,838	101,341	178,807	26	347,012
	1985	71,777	108,263	251,086	34	431,160
	1986	75,086	87,901[3]	333,992[4]	41	497,020
SCHOOL DIVISION	1977	42,055	65,206	52,193	231	159,685
	1978	45,910	71,228	63,635	264	181,037
	1979	50,448	78,244	76,707	300	205,699
	1980[1]	56,083	87,375	98,027	235	241,720
	1981	62,747	100,234	64,749	259	227,989
	1982	67,985	110,520	148,913	255	327,673
	1983	74,736	118,813	192,869	56	386,474
	1984	80,604	126,826	243,906	30	451,366
	1985	89,181	138,009	329,785	49	557,024
	1986	98,030	117,210[3]	447,388[4]	47	662,675
MUNICIPAL DIVISION	1977	4,373	5,554	4,256	10	14,193
	1978	4,948	6,289	5,261	10	16,508
	1979	5,667	7,204	6,602	16	19,489
	1980[1]	6,542	8,329	8,088	10	22,969
	1981	7,438	9,762	4,774	18	21,992
	1982	8,882	11,347	13,867	14	34,110
	1983	9,888	12,604	18,493	10	40,995
	1984	10,977	13,938	21,744	8	46,667
	1985	12,033	15,305	30,812	7	58,157
	1986	13,029	12,044[3]	41,087[4]	7	66,167
JUDGES' DIVISION	1977	427	731	690	—	1,848
	1978	442	757	805	—	2,004
	1979	498	854	951	—	2,303
	1980[1]	533	971	1,203	3	2,710
	1981	476	1,224	749	1	2,450
	1982	722	1,366	1,882	—	3,970
	1983	736	1,380	2,541	—	4,657
	1984	874	1,476	2,831	—	5,181
	1985	879	1,623	3,469	—	5,971
	1986	875	1,365[3]	4,438[4]	—	6,678

[1]The fiscal year was changed in 1980 to a calendar year. Amounts prior to that time have been allocated on calendar-year basis.
[2]Membership fees not available for benefits.
[3]Contribution in 1986 is net of Health Care Fund and Stabilization Fund contributions.
[4]Investment income for 1986 does not include the Health Care Fund, Stabilization Fund and Common Operating Fund.

Schedule of Benefit Disbursements By Type

(In Thousands of Dollars)

Year Ended	Retirement Benefits	Survivor Benefits	Refunds	Total
6/30/77	$ 43,631	$1,942	$15,623	$ 61,196
6/30/78	50,842	2,315	22,639	75,796
6/30/79	58,378	2,661	24,370	85,409
6/30/80	66,703	2,987	29,454	99,144
7/1-12/31/80*	47,184	1,946	14,921	64,051
12/31/81	101,108	4,134	32,794	138,036
12/31/82	124,494	4,951	27,733	157,178
12/31/83	150,378	5,746	28,843	184,967
12/31/84	171,980	6,385	34,519	212,884
12/31/85	193,936	7,485	32,069	233,490
12/31/86	217,403	8,818	28,237	254,458

*Fiscal year changed

Membership and Benefit Recipient Statistics*

	State Division	School Division	Municipal Division	Judges' Division	Total
Active members-Dec. 31, 1986	35,956	55,751	7,083	237	99,027
Retirements During 1986:					
Disability retirements	147	127	29	1	304
Service retirements	791	825	81	10	1,707
Retirement Benefits:					
Total receiving retirement benefits on Dec. 31, 1985	11,645	12,076	1,121	117	24,959
Total retired during 1986	938	952	110	11	2,011
Cobeneficiaries continued after retiree's death	114	65	12	2	193
Returned to retirement rolls from suspension	22	10	1	0	33
Total	12,719	13,103	1,244	130	27,196
Retirees deceased during year	(430)	(354)	(34)	(5)	(823)
Retirees returning to work	(23)	(8)	(0)	(0)	(31)
Total receiving retirement benefits-Dec. 31, 1986	**12, 266**	**12,741**	**1,210**	**125**	**26,342**
Total paid in retirement benefits in 1986	$106,897,768	$100,110,192	$8,700,127	$1,694,525	$217,402,612
Average monthly benefit on Dec. 31, 1986	$ 761	$ 618	$ 642	$ 1,212	$ 727
Average monthly benefit for members retired during 1986	$ 979	$ 853	$ 919	$ 1,462	$ 920
Survivor Benefits:					
Total survivor benefit accounts on Dec. 31, 1986	627	538	109	17	1,291
Total survivor benefits paid in 1986	$ 4,585,197	$ 3,390,271	$ 651,609	$ 191,458	$ 8,818,535
Deferred Benefits:					
Deferred retirements to age 60 or 65	522	1,167	49	4	1,742
Total annual future benefits	$ 3,399,545	$ 6,660,864	$ 308,407	$ 34,709	$ 10,403,525
Future survivor beneficiaries	21	13	1	0	35
Total annual future benefits	$ 39,942	$ 27,874	$ 3,302	$ 0	$ 71,118

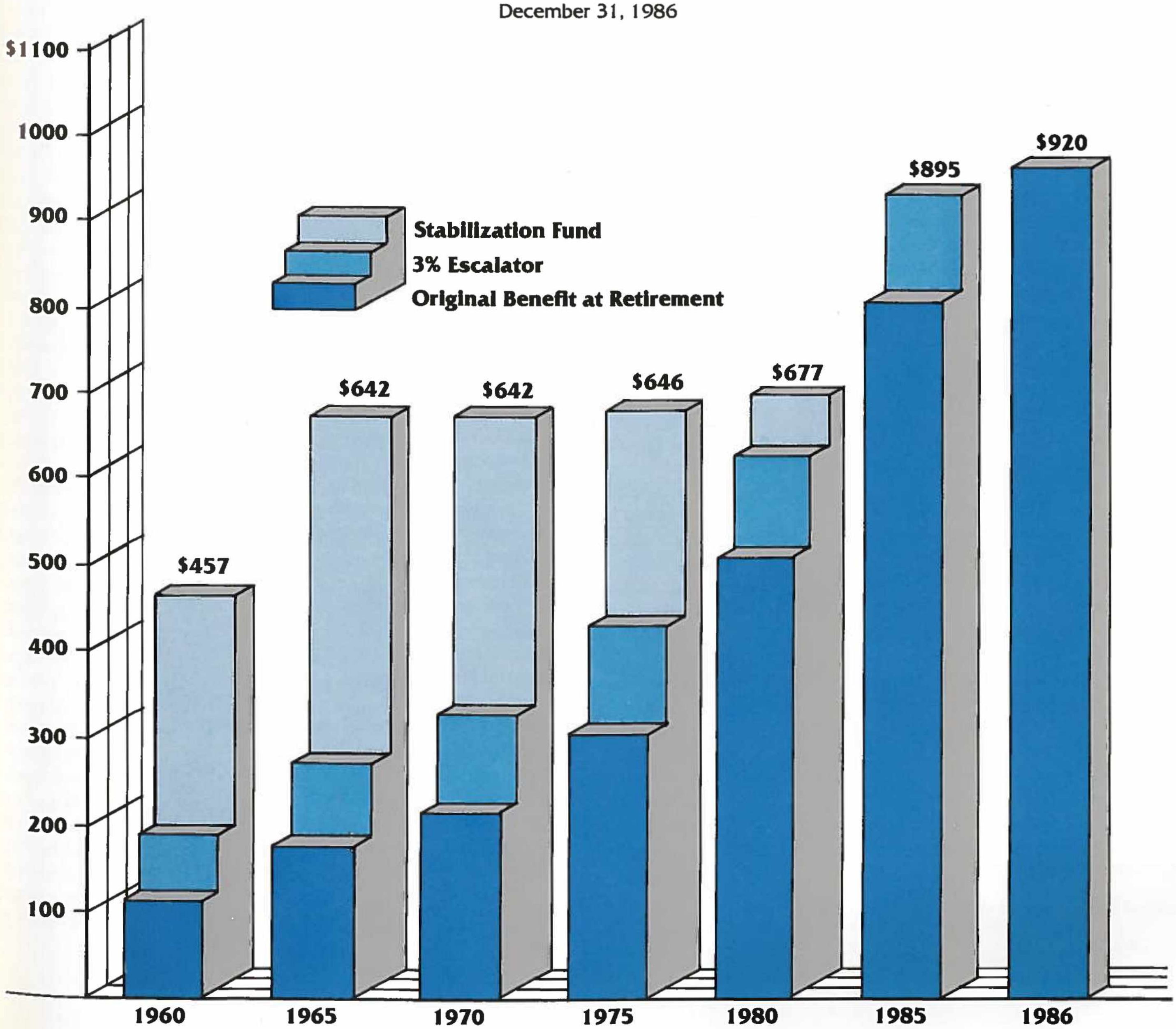
*Numbers derived on a cash/calendar year. Cost-of-Living Stabilization Fund and death benefits are included.

Schedule of Average Retirement Benefits Payable

Year Ending	Average Monthly Benefit	Average Age at Retirement	Average Current Age of Retirees	Average Years of Service at Retirement
December 31, 1981	$457	62.7	70.2	16.4
December 31, 1982	570	62.5	70.0	16.7
December 31, 1983	596	62.3	70.0	17.0
December 31, 1984	648	62.1	70.0	17.2
December 31, 1985	676	61.8	70.1	17.4
December 31, 1986	727	61.6	70.1	17.5

Average Monthly Benefit by Year of Retirement

December 31, 1986



Schedule of Participating Employers

State Division

Adams State College
Administration of Rehabilitation
Arapahoe Community College
Auraria Higher Education Center
Aurora Community College
Civil Rights Commission
Civil Service - Personnel
Colorado Advanced Technical Institute
Colorado Association of School Boards
Colorado Council on Arts and Humanities
Colorado Department of Public Safety
Colorado Guarantee Student Loan Program
Colorado High School Activities Association
Colorado Lottery
Colorado Medical Services Foundation, Inc.
Colorado Racing Commission
Colorado School for the Deaf and Blind
Colorado School of Mines
Colorado State Fair
Colorado State Hospital
Colorado State Reformatory
Colorado State University
Colorado State Veterans Center
Colorado State Veterans Nursing Home-Florence
Colorado Supreme Court Board of Law Examiners
Colorado Water Resources and Power Division
Commission on Consumer Credit
Commission on Higher Education
Community College of Denver
Correctional and Industries
Court of Appeals-Judicial Department
Deferred Compensation Staff
Department of Administration
Department of Agriculture
Department of Corrections
Department of Education
Department of Highways
Department of Institutions
Department of Labor and Employment
Department of Local Affairs
Department of Military Affairs
Department of Natural Resources
Department of Public Health
Department of Planning and Budgeting
Department of Regulatory Agencies
Department of Revenue
Department of Social Services
Department of the Treasury
District Courts-Judicial Department
Division of Adult Parole
Division of Banking
Division of Highway Safety
Division of Insurance
Division of Labor and Employment
Division of Land Commission
Division of Legal Affairs
Division of Parks
Division of Savings and Loan
Division of Securities
Division of Water Resoures
Division of Wildlife
Division of Youth Services
Fire and Police Pension Association Staff
Fort Lewis College
Fort Logan Mental Health Center
Front Range Community College
General Assembly
Governor's Job Training Office
Governor's Office, Medicaid Fraud Control Unit
Grand Junction Regional Center
Joint Budget Committee
Judicial Administration
Lamar Community College
Legislative Council
Legislative Drafting Office
Mesa College
Metropolitan State College
Moffat Tunnel Commission
Morgan Community College
Office of Revisor of Statutes
Office of Secretary of State
Office of the District Attorneys
Office of the Governor and Executive Mansion
Office of the Lieutenant Governor
Otero Junior College
Pikes Peak Community College
Public Defender-Judicial Department
Public Employees' Retirement Association
Public Utilities Commission
Pueblo Regional Center
Pueblo Vocational Community College
Red Rocks Community College
Risk Management
Special District Association of Colorado
State Auditor's Office
State Board for Community Colleges and Occupational Education
State Compensation Insurance Fund
State Employee Health Insurance Staff
State Historical Society
State Penitentiary
Supreme Court-Judicial Department
Trinidad State Junior College
Trinidad State Nursing Home
Trustees of State College
University of Colorado
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
Wheat Ridge Regional Center

School Districts

Adams No. 1
Adams No. 12
Adams No. 14
Adams No. 27J
Adams No. 28J
Adams No. 29J
Adams No. 31J
Adams No. 50
Adams County BOCES
Alamosa Re-11J
Alamosa Re-22J
San Luis Valley BOCS
Arapahoe No. 1
Arapahoe No. 2
Arapahoe No. 5
Arapahoe No. 6
Arapahoe No. 26J
Arapahoe No. 32J
SE Metro BOCES
Archuleta No. 50Jt
Baca Re-1
Baca Re-3
Baca Re-4
Baca Re-5
Baca Re-6
Bent Re-1
Bent Re-2
Boulder Re-1J
Boulder Re-2
Colorado BOCES
Chaffee R-31
Chaffee R-32(J)
Cheyenne Re1
Cheyenne Re5
Clear Creek Re-1
Conejos Re-1
Conejos Re-6
Conejos Re-10
Costilla Re-1
Costilla Re-30
Crowley Re-1
Custer C-1
Delta Re-50(J)
Delta-Montrose Voc. Tech Sch.
Dolores Re-1
Douglas Re-1
Eagle Re-50
Elbert C-1
Elbert C-2
Elbert 100J
Elbert 200
Elbert 300
El Paso Re 1
El Paso No. 2
El Paso No. 3
El Paso No. 8
El Paso No. 11
El Paso No. 12
El Paso No. 14
El Paso No. 20
El Paso No. 22
El Paso No. 23J
El Paso No. 28
El Paso No. 38
El Paso No. 49
El Paso No. 54Jt
El Paso No. 60Jt
El Paso Pikes Peak BOCS
Fremont 1
Fremont 2
Fremont 3
Garfield Re-1
Garfield Re-2
Garfield No. 16
Colorado Mt. College
Mountain BOCS
Gilpin Re-1
Grand West No. 1
Grand East No. 2
Gunnison Re-1
Hinsdale Re-1
Huerfano Re-1
Huerfano Re-2
Jackson R-1
Jefferson RE-1
Kiowa Re-1
Kiowa Re-2
Kit Carson R-3
Kit Carson R-4
Kit Carson R-5
Kit Carson Re-6
Kit Carson R-1
Lake R-1
La Plata R9
La Plata 10Jt
La Plata 11Jt
La Plata - San Juan BOCS
Larimer RE1
Larimer RE2 (Poudre)
Larimer RE3
Larimer County Voc. Tech. Cen.
Las Animas No. 1
Las Animas R-2
Las Animas R-3
Las Animas R-6
Las Animas R-82
Las Animas R-88
Lincoln Re-4J
Lincoln Re-1
Lincoln Re-13
Lincoln Re-23
East Central BOCES
Logan NE Junior College
Logan Re-1
Logan Re-3
Buffalo School Dist. Re-4
Logan Re-5
Mesa 49-5
Mesa 50
Mesa 51
Mineral No. 1
Moffat Re-1
Montezuma Re-1
Montezuma Re-4
Montezuma Re-6
Montezuma SW BOCS
Montezuma - San Juan Basin Voc. Tech.
Montrose Re-1
Montrose Re-2
Morgan Re-2
Morgan Re-3
Morgan Re-20
Morgan Re-50
Morgan South Platte BOCS
Otero R-1
Otero R-2
Otero R-3
Otero R-4
Otero 31
Otero 33
Otero Valley BOCES
Ouray R-1
Ouray R-2
Park Re-1
Park Re-2
Phillips Re-1
Phillips Re-2
Phillips Northeast BOCES
Pitkin No. 1
Prowers Re-1
Prowers Re-2
Prowers Re-3
Prowers Re-13
Prowers Southeast BOCS
Pueblo No. 60
Pueblo No. 70
S. Central BOCES
Rio Blanco Re-1
Rio Blanco Re-4
Rio Blanco NW Community College
Rio Blanco BOCS
Rio Grande 7
Rio Grande 8
Rio Grande 33
Routt Re-1
Routt Re-2
Routt Re-3
Routt Northwest BOCS
Saguache Re-1
Saguache C2
Saguache 26-Jt
San Juan No. 1
San Miguel R-1
San Miguel R-2
San Miguel No. 18
Sedgwick Re-1
Sedgwick Re-3
Summit Re-1
Teller Re-1
Teller Re-2
Washington R-1
Washington R-2
Washington R-3
Washington 101
Washington 104
Weld Re-1
Weld Re-2
Weld Re-3
Weld Re-4
Weld Re-5
Weld Re-6
Weld Re-7
Weld Re-8
Weld Re-9
Weld Re-10
Weld Re-11
Weld Re-12
Weld Aims Junior College
Weld BOCES
West Yuma R1
East Yuma R2

BOCES = Board of Cooperative Educational Services
BOCS = Board of Cooperative Services

Municipal Division

Alamosa, City of
Alamosa Housing Authority
Arvada, City of
Aurora Housing Authority
Bayfield, Town of
Blanca/Fort Garland Metropolitan District
Boulder, City of
Carbon Valley Park & Recreation District, Frederick
Castle Pines Metropolitan District, Castle Rock
Cedaredge, Town of
Center Housing Authority
Colorado Housing Authority, Denver
Colorado Springs, City of
Colorado Springs Memorial Hospital
Colorado Springs Public Utilities District
Costilla Housing Authority, San Luis
Crawford, Town of
Durango, City of
Durango Southwest Regional Library
Eastern Rio Blanco Parks & Recreation District, Meeker
East Larimer County Water District, Fort Collins
Estes Park,Town of
Fairmont Fire Protection District, Golden
Fort Morgan, City of
Fremont Sanitation District, Florence
Lafayette, City of
Lakewood, City of
Lamar, City of
Lamar Housing Authority
Longmont Housing Authority
Manitou Springs, City of
Meeker Regional Library District
Milliken Sanitation District
Northeast Colorado Health Department, Sterling
Northern Chaffee County Regional Library, Buena Vista
Parker, Town of
Parker Water & Sanitation District
Platteville, Town of
Pueblo, City of
Pueblo City/County Health Department
Pueblo Regional Library
Rio Blanco Western Recreation Parks, Rangely
South Lakewood Sanitation Department
Tri-County Health Department, Englewood
Weld County Health Department, Greeley
Windsor-Severance Library District*
Wray, Town of
Yuma, Town of
Yuma Housing Authority

*Affiliated in 1986.

Judges' Division

Denver County Court
District Court
Juvenile Court
Probate Court
County Courts

Other PERA Programs*

*unaudited

Health Care Program

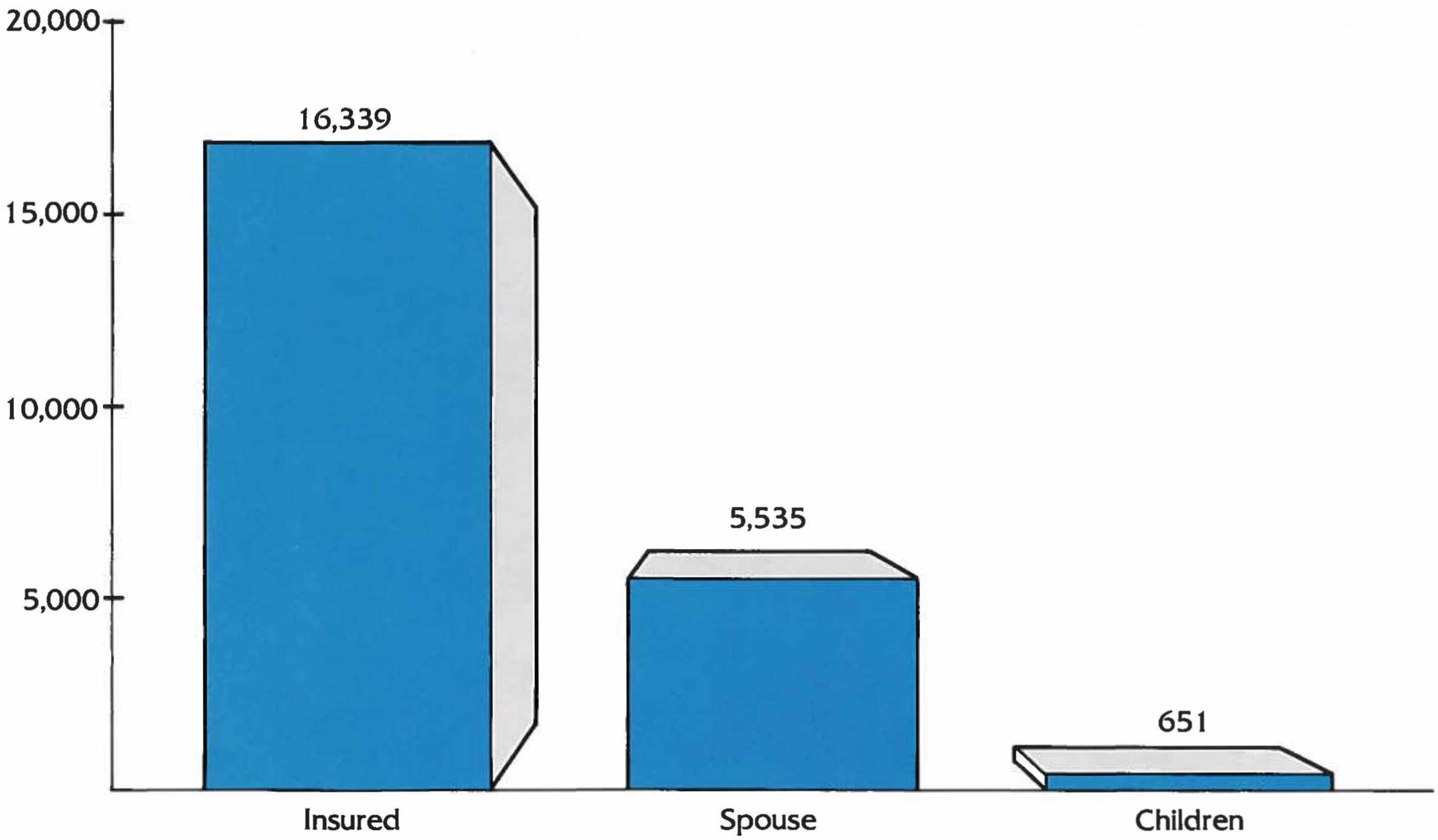
The PERA Health Care Program began covering retirees and other benefit recipients on July 1, 1986. This benefit was developed after legislation in 1985 established the program and the PERA Health Care Fund which is used to subsidize premium costs. Prior to this, while many retirees received coverage through their employers, many others had no group health care coverage available to them after they retired. Still, others had group plans in which they could enroll, but they had to pay the full premium.

Initially, PERA selected a major medical indemnity carrier, American Medical International (AMI), and six Health Maintenance Organizations (HMOs) around Colorado to offer health care coverage. In August 1986, PERA was notified by AMI that it was terminating its insurance activities. The Association immediately began to redesign and improve coverage, and select a new carrier. Within a few weeks, the PERA Board of Trustees selected Blue Cross and Blue Shield of Colorado to offer its major medical indemnity and Medicare Supplement plans to benefit recipients. The Board also added another HMO in northern Colorado. An open enrollment period was held in November 1986 to allow retirees to designate a new choice for health care coverage.

Under the program, PERA pays a portion of the monthly premium for health care coverage while the benefit recipient pays any remaining amount through an automatic deduction from his or her monthly retirement benefit. This amount depends on the plan selected, the number of persons being covered, Medicare eligibilty and the number of years of PERA service credit the benefit recipient has. The Health Care Fund receives a small portion of the monthly PERA contribution from affiliated employers. This is then invested, and that income is added to the fund.

By the end of the year, 16,339 of the 27,633 PERA benefit recipients were enrolled in the program. Also, 6,186 dependents were covered.

1986 Health Care Enrollment



Life Insurance Program

PERA provides its members access to two group life insurance plans offered by Prudential and New York Life. Members of the Association may join one or both of the plans at the time of membership or during annual open enrollment periods without evidence of good health. Benefit recipients are not eligible to join the plan, however, members who are enrolled may continue coverage into retirement.

Monthly premiums are paid by payroll deduction, and are $9 for Prudential and $10 for New York Life.

Life Insurance Enrollment

Year	New York Life	Prudential	Total Enrollments
1976	18,685	6,025	24,710
1977	18,443	7,364	25,807
1978	17,625	8,155	25,780
1979	17,691	9,425	27,116
1980	18,098	10,925	29,023
1981	17,729	11,472	29,201
1982	17,553	12,077	29,630
1983	18,242	12,298	30,540
1984	19,643	12,837	32,480
1985	21,296	13,635	34,931
1986	23,052	13,863	36,915

Life Insurance Dollars Paid

Year	New York Life	Prudential	Total Paid
1976	$ 744,364	$281,484	$1,025,848
1977	709,246	223,504	932,750
1978	1,086,319	255,442	1,341,761
1979	992,477	394,377	1,386,854
1980	1,026,473	442,340	1,468,813
1981	1,137,044	619,274	1,756,318
1982	1,388,697	528,458	1,917,155
1983	1,114,010	447,706	1,561,716
1984	1,484,583	872,860	2,357,443
1985	1,950,696	910,057	2,860,753
1986	1,670,531	802,016	2,472,547

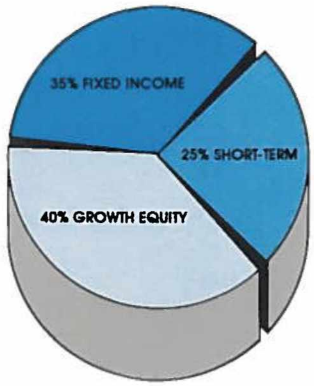
Voluntary Investment Plan

The PERA Voluntary Investment Plan (VIP) was established under section 401(k) of the Internal Revenue Code effective July 1, 1985. Strictly voluntary, VIP is completely separate from the monthly contribution members make to the Association, and it allows participants to defer federal taxes on a portion of their current salary by investing it for use during retirement.

Members may place up to 12 percent of their annual gross salary or $7,000 (whichever is less) in one, two or all three VIP investment vehicles: the Short-Term Investment Fund (money market securities and Guaranteed Investment Contracts), the Fixed Income Fund (bonds) and the Growth Equity Fund (stocks). Each quarter, members have the option of changing the total contribution amount, transferring balances between funds and changing the contribution percentage to each fund. The plan also has loan and hardship withdrawal provisions.

In the 18-month period since the Plan's inception, VIP has accumulated assets of $1,750,673 and 902 participants as of December 31, 1986.

VIP Investment Distribution



Fund Annualized Rate of Return*

	July-Dec 1985	Jan-Mar 1986	Apr-Jun 1986	July-Sept 1986	Oct-Dec 1986
Short-Term	10.54%	8.04%	9.78%	9.19%	9.02%
Fixed Income	43.26%	45.14%	13.65%	7.13%	10.30%
Growth Equity	35.53%	42.60%	8.56%	(20.73%)	15.42%

*The annualized rate of return is based on the average investments per day annualized on a 360-day basis. Rates are not a prediction of future investment performance.

Public Employees' Retirement Association of Colorado
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