

# UTAH RETIREMENT SYSTEMS

1998 Comprehensive Annual Financial Report

*For the Year Ended December 31, 1998*

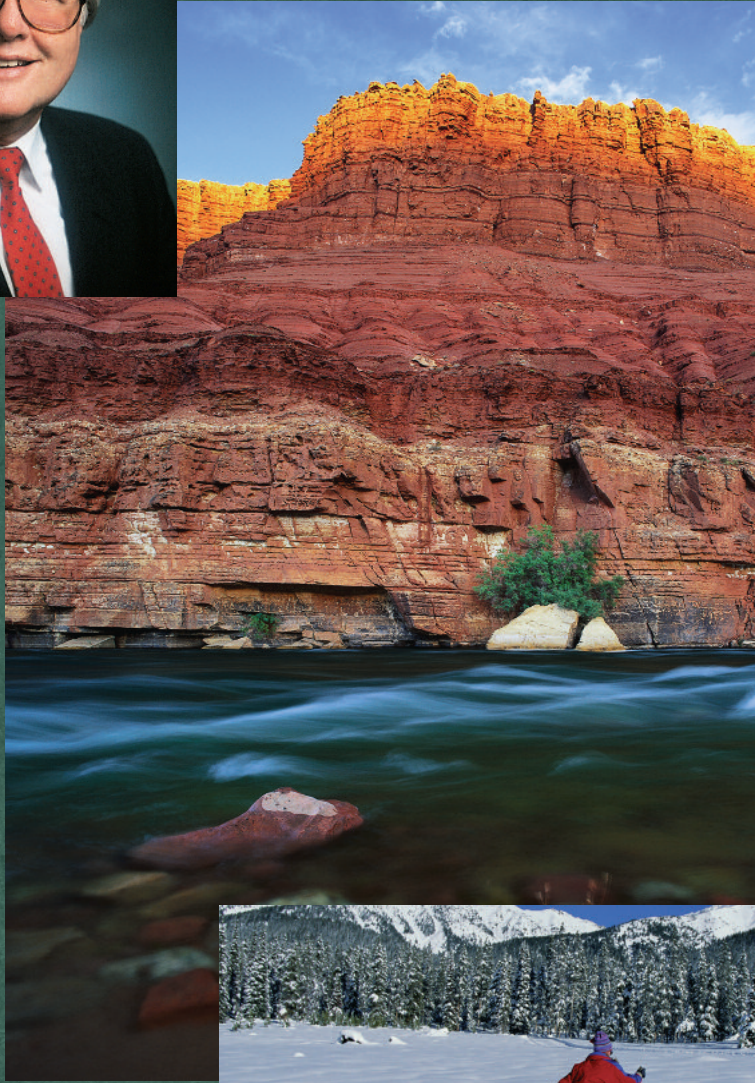


*Contributory Retirement System  
Noncontributory Retirement System  
Public Safety Retirement System  
Firefighters Retirement System  
Judges Retirement System  
Governors and Legislative Pension Plan  
401(k) and 457 Plans*





**M. Dee Williams**  
**Executive Director**  
**Utah Retirement Systems**



*On the Cover (Left to Right):  
Mark Hamel, Golf Course Maintenance  
Dean Cooper, Superintendent  
St. George Golf Club, St. George*





# UTAH RETIREMENT SYSTEMS

## **1998 Comprehensive Annual Financial Report**

*For the Year Ended December 31, 1998*

*Contributory Retirement System*

*Noncontributory Retirement System*

*Public Safety Retirement System*

*Firefighters Retirement System*

*Judges Retirement System*

*Governors and Legislative Pension Plan*

*401(k) and 457 Plans*

Prepared by

Finance Department • Utah Retirement Systems  
540 East 200 South • Salt Lake City, Utah 84102-2099

M. Dee Williams, Executive Director  
Robert J. Stringham, CPA, Chief Financial Officer

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## Certificate of Achievement

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# Certificate of Achievement for Excellence in Financial Reporting

Presented to

## Utah Retirement Systems

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

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



*Douglas R. Ellsworth*  
President

*Jeffrey L. Essler*  
Executive Director



Utah Retirement Systems  
1998 Comprehensive  
Annual Financial Report



# INTRODUCTORY SECTION

*Letter of  
Transmittal*  
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Letter*  
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*Utah State  
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*Organization  
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**12**

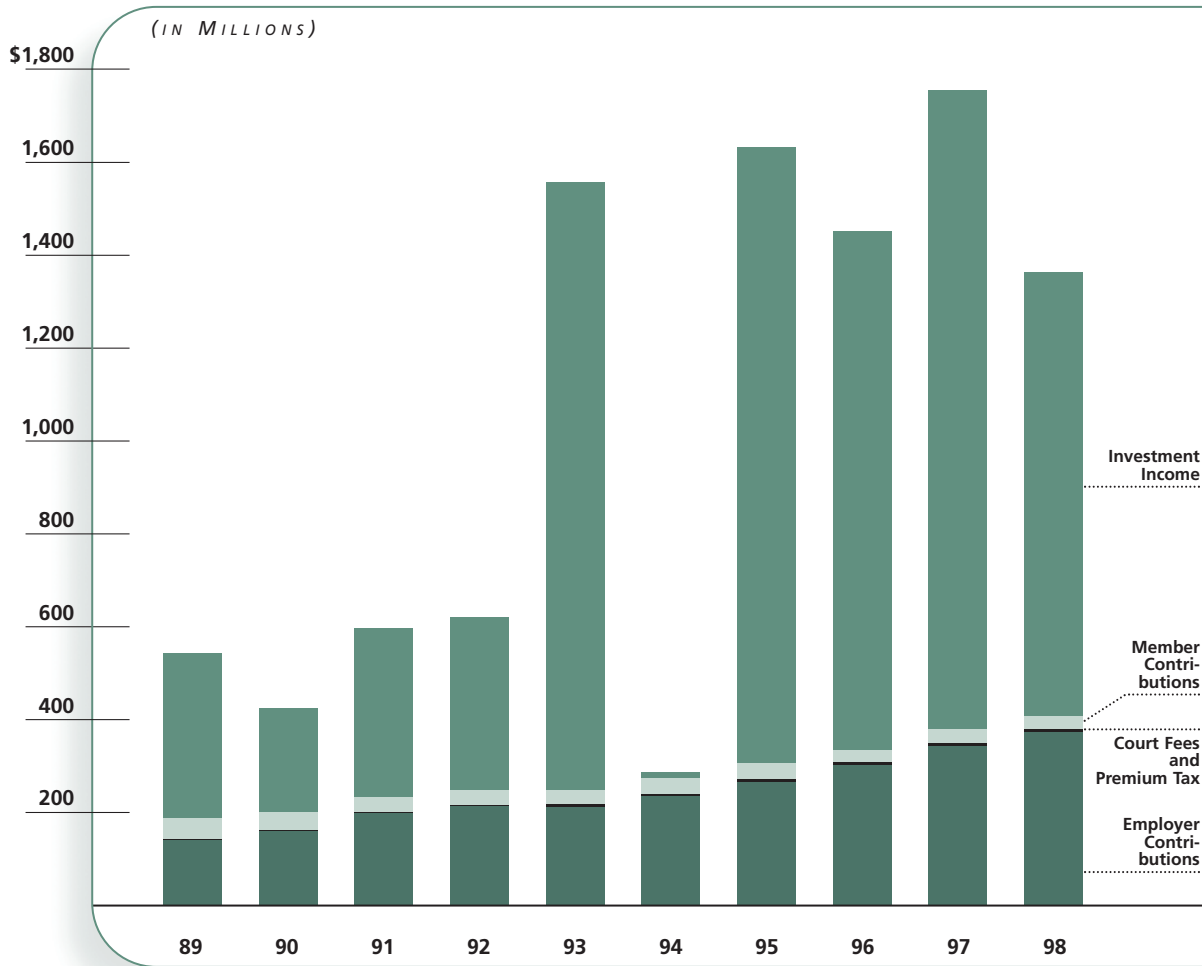
*Administrative  
Staff and  
Professional  
Consultants*  
**13**

*Systems'  
Highlights*  
**14**



All Retirement Systems

# Additions by Source



(IN MILLIONS)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Investment Income</b>	\$357	224	364	375	1,312	14	1,330	1,118	1,381	958
<b>Member Contributions</b>	44	39	32	31	32	33	34	28	29	29
<b>Court Fees and Premium Tax</b>	3	3	3	4	5	5	6	6	6	6
<b>Employer Contributions</b>	140	159	198	213	212	235	266	302	344	374
<b>Totals</b>	<b>\$544</b>	<b>425</b>	<b>597</b>	<b>623</b>	<b>1,561</b>	<b>287</b>	<b>1,636</b>	<b>1,454</b>	<b>1,760</b>	<b>1,367</b>



# Letter of Transmittal

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UTAH STATE RETIREMENT BOARD  
**UTAH RETIREMENT SYSTEMS**  
 540 East 200 South  
 Salt Lake City, Utah 84102-2099  
 (801) 366-7700  
 (800) 365-8772 TOLL FREE  
 (801) 366-7734 FAX

M. DEE WILLIAMS  
 EXECUTIVE DIRECTOR

February 26, 1999

Utah State Retirement Board  
 540 East 200 South  
 Salt Lake City, UT 84102

Dear Board Members:

We are pleased to present the Comprehensive Annual Financial Report of the Utah Retirement Systems (Systems) and 401(k) and 457 Plans (Plans) administered by the Utah State Retirement Board for calendar year 1998. The financial reporting entity of the Systems and Plans include the Public Employees Contributory and Noncontributory Retirement Systems, for both governmental and public education employees, the Public Safety, Firefighters and Judges Retirement Systems, the Governors and Legislative Pension Plan, and the 401(k) and 457 Plans.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the management of the Systems. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the fiduciary funds of the Systems.

For financial reporting purposes, the Systems utilize Governmental Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*. Assets of the Systems and Plans are presented at fair value. The actuarial value of assets and the actuarial accrued liability are presented in the required supplementary information following the notes to the financial statements.

The Utah Retirement Systems and 401(k) and 457 Plans were established by legislation as indicated in the notes to the financial statements on page 34. The Summary of Plan Provisions is presented on pages 102 through 109. The number of active and retired members and beneficiaries for each system is presented in the Systems' Highlights on pages 14

through 26. The purpose of the Systems and Plans is to provide benefits for all eligible state, local governmental and most public education employees whose employers have elected to participate. All services provided by the staff are performed to meet that objective.

The 1998 Comprehensive Annual Financial Report is presented in five sections. The Introductory Section contains the transmittal letter, the Board President's letter, identification of the Systems' administrative organization and professional consultants, as well as Systems' Highlights for each retirement system. The Financial Section contains the opinion of the independent certified public accountants, the financial statements and required supplementary information of the Systems and further information about the Systems at division levels. The Investment Section contains investment information and a list of largest holdings. The Actuarial Section contains the independent consulting actuary's certification, an outline of actuarial assumptions and methods, and other actuarial statistics. The Statistical Section contains tables of significant data pertaining to the Systems.

## **Economic Condition and Outlook**

The economic condition of the Systems is based primarily upon investment earnings. For 1998 the Systems experienced a 9.6% fair value rate of return and for the last five years, an average annualized rate of return of 12.2%. The Systems' investments were evaluated at year end by Callan Associates, Inc., Investment Measurement Service. A comparative analysis of rates of return is presented on page 82 of this report.

## **For the Future**

During 1998, actuarial assumptions and contribution rates were based on the recommendations of our actuary. See the Actuarial Section of this report and the notes to the general purpose financial statements for explanations of these rates. Rate changes resulted from actuarial assumption modifications, economic conditions, actuarial experience gains and losses and benefit enhancements in the Systems.

The Utah Retirement Systems are maintained on an actuarially sound basis as certified in this report by our actuary, thus protecting participants' future benefits. We anticipate that investment earnings will continue to meet or exceed actuarially assumed earning rates. We expect all systems to continue toward fully funded positions.

## **Financial Information**

The management of the Systems is responsible for maintaining a system of adequate internal accounting controls designed to provide reasonable assurance that

## Letter of Transmittal

(Continued)

transactions are executed in accordance with management's general or specific authorization, and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with generally accepted accounting principles. This system includes written policies and procedures and an internal audit department that reports to the Board.

### Additions

The reserves needed to finance retirement benefits are accumulated through the collection of employer and employee retirement contributions and through earnings on investments. Contributions and net investment income for calendar year 1998 totaled \$1.6 billion for all Systems and Plans (see Table 1).

**TABLE 1. Additions (All Systems and Plans)**

	(DOLLARS IN MILLIONS)			
	1998	1997	Increase (Decrease) Amount	Increase (Decrease) Percentage
Member contributions	\$ 149	135	14	10.5%
Employer contributions	380	350	30	8.6
Investment income	1,118	1,534	(416)	(27.1)
<b>Total additions</b>	<b>\$1,647</b>	<b>2,019</b>	<b>(372)</b>	<b>(18.4)%</b>

The overall additions decreased \$372 million compared to those of 1997 due to decreased investment earnings. Retirement contributions increased 10.5%. The Investment Section of this report reviews activity and results of the investments for 1998. The fair value of the investments of the Systems and Plans exceeded \$12.4 billion on December 31, 1998, an increase of approximately \$1.3 billion over 1997.

### Deductions

The primary deductions of the Systems include the payment of benefits to members and beneficiaries, the refund of contributions to former members and the cost of adminis-

**TABLE 2. Deductions (All Systems and Plans)**

	(DOLLARS IN MILLIONS)			
	1998	1997	Increase Amount	Increase Percentage
Benefit payments	\$330	299	31	10.4%
Refunds	61	58	3	5.2
Administrative expenses	11	9	2	2.2
<b>Total deductions</b>	<b>\$402</b>	<b>366</b>	<b>36</b>	<b>9.8%</b>

tering the retirement systems. Deductions for calendar year 1998 totaled approximately \$402 million, an increase of 9.8% over 1997 deductions (see Table 2).

The increase in benefit payments resulted primarily from an increase in both the number and average amount of benefits paid. Additions of \$1.6 billion exceeded deductions of approximately \$402 million by \$1.2 billion during 1998.

### Funding

Funds are derived from the excess of additions over deductions and are accumulated to meet future benefit obligations to retirees and beneficiaries. This accumulated balance is referred to as the net assets held in trust for pension benefits in the Statement of Plan Net Assets in the financial section of this report. The actuarial accrued liability is not disclosed in the financial statements but is disclosed in the required supplementary information schedules immediately following the notes to the financial statements. These schedules show the actuarial value of assets which is based on a five-year smoothed valuation wherein the excess or shortfall of investment income over or under the actuarial assumed income of 8% is recognized over a five-year period. This is the value of assets used by the actuary in determining contribution rates for the Systems as disclosed in note 5 to the financial statements.

The actuarial accrued liability of the Systems is determined by the actuary. It is a measure of the present value of actuarial accrued liabilities estimated to be payable in the future to current retirees, beneficiaries and employees for service earned to date. The percentage computed by dividing the actuarial value of net assets available for benefits by the actuarial accrued liability is generally referred to as the "funding ratio". This ratio provides an indication of the funding status of the Systems on a going-concern basis and generally, the greater this percentage, the stronger the System. A higher level of funding gives the participants a greater degree of assurance that their pension benefits are secure.

Although the historical level of funding is good, constant effort will be directed at funding progress, assuring participants of financially sound retirement systems. Funding status and progress for overall Systems are presented in the Required Supplementary Information Schedules of Funding Progress on page 43. The current funding ratios range from 95% to 142%.

### Investments

The investment portfolio mix at fair value as of the end of 1998 was 26% fixed income, 52% equities, 7% venture capital, 10% real estate and 5% cash equivalents. The 26% fixed income is comprised of 16% domestic and 10% inter-



## Letter of Transmittal

(Continued)

national instruments. The 52% equities are comprised of 37% domestic and 15% international equities. The Systems' investment outlook is long-term allowing the portfolio to take advantage of the favorable risk-return characteristics of equities by placing more emphasis on this category.

The Board utilizes internal and external portfolio managers employing both passive (indexed) and active strategies. The portfolio is broadly diversified among equities, fixed income, real estate, and venture capital with additional diversification achieved through domestic and international investing.

### Cash Management

Cash is invested in demand deposits, short-term investment funds and high grade commercial paper. The short-term portion of the portfolio achieved a 5.6% rate of return compared to the 91-day Treasury bill rate of 5.23% for the same period.

### Investment Risk

The Systems' investment policy is to minimize credit and market risks while maintaining a competitive yield on its portfolio. Accordingly, deposits are either insured by federal depository insurance or collateralized. All collateral on deposits is held in the counterparties' joint custody accounts at the Federal Reserve Bank. On occasion, deposits may be significantly greater than collateral due to investment purchase "fails," receipt of interest earnings on the 15th of each month and proceeds from investment sales and maturities. Of \$12.4 billion in investments at fair value at December 31, 1998, none of the Systems' investments were in the category of highest custodial credit risk as defined by the GASB.

### Independent Audit

An annual audit of the Systems and Plans was conducted by the independent accounting firm of Deloitte & Touche LLP. The auditors' report on the general purpose financial statements is included in the Financial Section of this report.

### Actuarial Survey and Valuation

An actuarial review of the Systems is performed annually. An assumption experience study is performed at least every other year. The actuarial firm, Watson Wyatt & Company, completed the actuarial reviews and valuations and served as technical advisor to the Systems. Actuarial certification and supporting statistics are included in the Actuarial and Statistical Sections of this report.

### Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Utah Retirement Systems for its Comprehensive Annual Financial Report for the fiscal year ended December 31, 1997. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report whose contents conform to program standards. Such financial reports must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. The Utah Retirement Systems has received a Certificate of Achievement for the last 14 years. We believe our current report continues to conform to the Certificate of Achievement Program requirements, and we are submitting it to GFOA.

### Acknowledgments

The compilation of this report reflects the combined efforts of the staff under the leadership of the Utah State Retirement Board. It is intended to provide extensive and reliable information for making management decisions, determining compliance with legal provisions, and determining responsible stewardship for the assets contributed by the Systems' members and their employers.

We would like to take this opportunity to express our gratitude to the Board, the staff, the advisors, and the many people who have worked so diligently to assure the successful operation and financial soundness of the Utah Retirement Systems.

Sincerely yours,



Robert J. Stringham, CPA  
Chief Financial Officer



M. Dee Williams  
Executive Director

## Board President's Letter

---

UTAH STATE RETIREMENT BOARD  
**UTAH RETIREMENT SYSTEMS**  
540 East 200 South  
Salt Lake City, Utah 84102-2099  
(801) 366-7700  
(800) 365-8772 TOLL FREE  
(801) 366-7734 FAX

M. DEE WILLIAMS  
EXECUTIVE DIRECTOR

February 26, 1999

Dear Members of the Utah Retirement Systems:

It is my duty and honor to report to you, the participating members of the Utah Retirement Systems, on the activities and programs of the Retirement Systems and Plans during 1998.

**1. The Systems Remain Actuarially Sound.** Our Systems continue to be the envy of the nation. Your benefits are guaranteed; and thanks to prudent funding decisions by the Governor, Legislature, Board, participating employers, and members alike, the prognosis for the future is equally promising.

**2. Investment Return Exceeds Expectations.** While caution is warranted in a volatile financial market, the Retirement Systems' investments achieved a 9.6% rate of return in 1998. The Systems' five-year average return is 12.2%, and its ten-year average is 12.4%. I can reaffirm to you that the Board has and will continue to prudently manage the monies entrusted to it by balancing investment return and risk in a diversified investment portfolio.

**3. 401(k) and 457 Plans.** More and more members in 1998 recognized the value of saving for their retirement years through the Board's tax-deferred 401(k) and 457 Plans. Beginning this year, several new investment options were offered to participants in the 401(k) and 457 Plans. Member accounts in these plans grew in 1998 by more than 22% from \$996 million to \$1.2 billion, no doubt encouraged by outstanding returns.

**4. Legislation.** The 1998 Legislature authorized a study of the Retirement Systems with a view to consolidating one or more of the systems; members of the Public Safety system successfully lobbied the passage of legislation improving their death benefits.

**5. Board and Staff.** We are pleased to announce the reappointment of Ed Thronsen and Chad Hamilton to the Board. But it's with mixed feelings we bid adieu to your friend and ours, the Systems' director, M. Dee Williams, who will retire this year. His career has spanned four decades as a school teacher, board member, public relations officer and finally, executive director. The assets have grown from \$3.9 billion in 1989 when he took the reins, to almost \$12.5 billion today. He has served with distinction and honor, compassion and courage.

We wish him and his wife, Dionne, well in their golden years. He leaves some big shoes to fill!

Sincerely,



Dannie R. McConkie, President  
Utah State Retirement Board



## Utah State Retirement Board and Executive Director

### Retirement Board

Standing, Left to Right

**Edward T. Alter**

- Member since January 1, 1981
- Ex-officio member
- State Treasurer

**Dannie R. McConkie**

- President*
- Appointed July 1, 1987
  - Term expires June 30, 1999
  - County Commissioner
  - Represents public employees

**J. Chad Hamilton**

- Appointed July 1, 1994
- Term expires July 1, 1999
- Senior Vice President, Zion's First National Bank
- Represents investment community



Seated, Left to Right

**Edgar H. Thronsen**

- Appointed July 1, 1987
- Term expires July 1, 2001
- Represents investment community

**Lily Eskelsen**

- Appointed July 1, 1995
- Term expires June 30, 1999
- Past President, Utah Education Association
- Represents education employees

**Marvin J. Hammond**

- Vice-President*
- Appointed August 19, 1993
  - Term expires June 30, 2001
  - Represents investment community

**Mary A. Garner**

- Appointed August 19, 1991
- Term expires June 30, 2001
- Represents investment community

### Executive Director



**M. Dee Williams**  
*Executive Director*

### Membership Council

**Member/Represents**

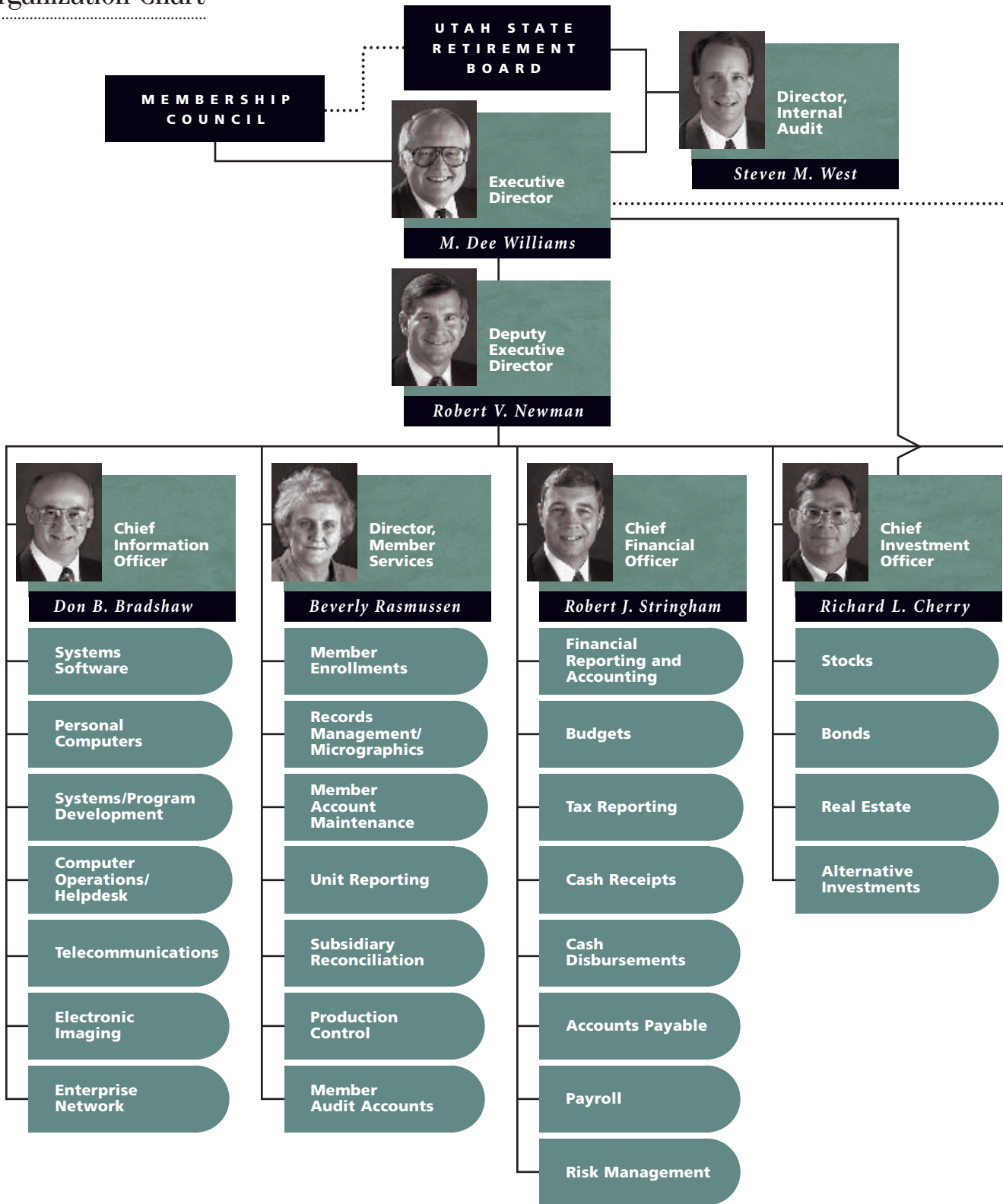
- Judge Leslie D. Brown\***  
Utah Judicial Council
- Mr. Ken Budge\*(Chair)**  
Professional Firefighters of Utah
- Mr. Dennis D. Ewing**  
Utah Association of Counties
- Mr. Phil Goodrich**  
Utah League of Cities and Towns
- Mr. Dean Holbrook**  
Utah Association of Retired Public Employees
- Mr. Dan Howlett\***  
Utah Peace Officers Association
- Mr. Jim James\***  
Utah Education Association

**Member/Represents**

- Ms. Karen Maestas**  
Utah School Employees Association
- Dr. Norman D. Riggs**  
Utah Retired School Employees Association
- Mr. Ken Serre\*(Vice-Chair)**  
Utah Public Employees Association
- Ms. Phyllis Sorensen**  
Utah Education Association
- Ms. Elaine Tzourtzouklis**  
Utah Education Association
- Mr. Fred Van Der Veur**  
Utah Public Employees Association

*\*Executive Committee*

**Utah State Retirement Board**  
**Organization Chart**

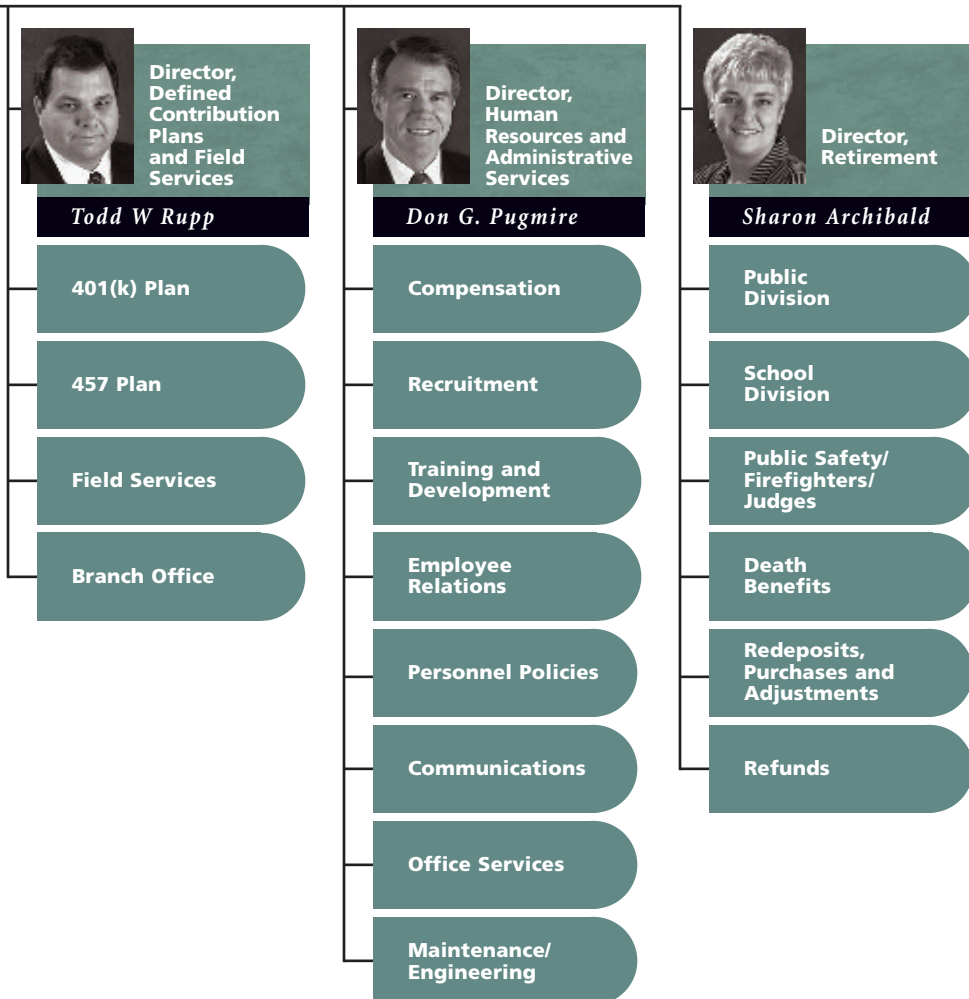




**Professional Services**

*Actuary • Auditor • Legal • Consultants  
Investment Advisors • Medical Examiner*

Detail for professional service providers is shown at right.  
Investment professionals are presented on pages 85 and 87.



**Administrative Staff**

M. Dee Williams  
*Executive Director*

Robert V. Newman, CPA  
*Deputy Executive Director*

Steven M. West, CPA  
*Director, Internal Audit*

Don B. Bradshaw  
*Chief Information Officer*

Robert J. Stringham, CPA  
*Chief Financial Officer*

Beverly Rasmussen  
*Director, Member Services*

Don G. Pugmire  
*Director, Human Resources*

Sharon Archibald  
*Director, Retirement*

Todd W Rupp, CPA  
*Director, Defined Contribution Plans and Field Services*

Richard L. Cherry  
*Chief Investment Officer*

**Professional Consultants**

**ACTUARY**

Watson Wyatt & Company  
2121 San Jacinto Street  
Dallas, TX 75201

**AUDITOR**

Deloitte & Touche LLP  
Certified Public Accountants  
50 South Main  
Salt Lake City, UT 84144

**LEGAL COUNSEL**

Howard and Associates  
560 East 200 South  
Salt Lake City, UT 84102

**MEDICAL EXAMINER**

Howard McQuarrie, M.D.  
1141 East 3900 South  
Salt Lake City, UT 84117

**CONSULTANTS**

Advanced Risk Mgmt. Techniques Inc.  
23701 Birtcher Dr.  
Lake Forest, CA 92630

The Segal Company  
6300 S. Syracuse Way  
Suite 200  
Englewood, CO 80111

# Contributory System Highlights



## Contributory Retirement System Composite Picture

**Total  
Membership**.....15,038  
Active .....4,287  
Terminated  
vested .....1,513  
Retired .....9,238

**1998 Active  
Members** .....4,287  
Average age .....47.7  
Average  
years of service.....15.5  
Average  
annual salary .....\$32,296

**1998 Retirees**  
Number .....70  
Average age .....64.2  
Average  
years of service.....17.3  
Final average  
annual salary .....\$23,342  
Average  
annual benefit .....\$7,379

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Average  
annual benefit  
—all retirees .....\$6,168

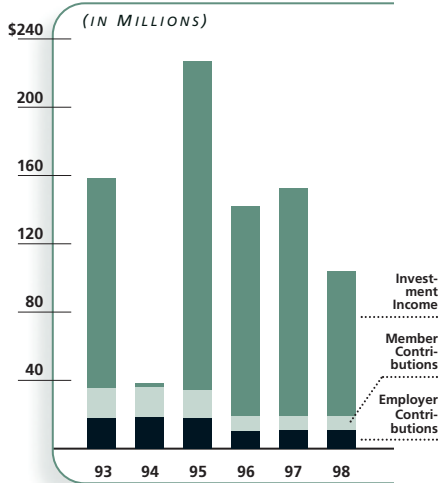


*Eric S. Nemcek  
Plant Operations Leader  
South Davis County Sewer Improvement District  
North Salt Lake*

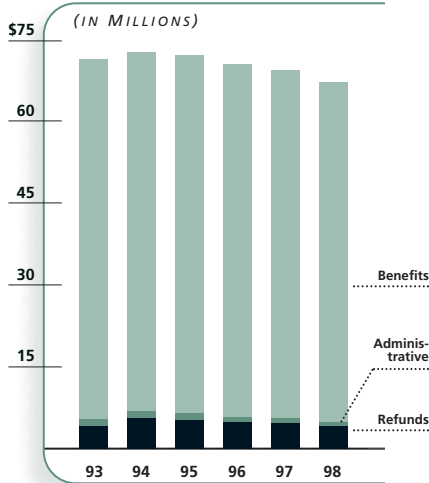


**Contributory Retirement System**

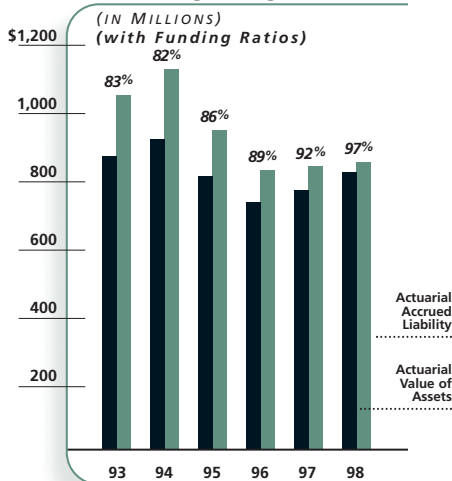
**Additions by Source**



**Deductions by Type**



**Funding Progress**



**Membership**

The Public Employees Contributory Retirement System includes eligible public employees of the State of Utah and its political subdivisions and public education employees of those entities covered by the System.

**Service Retirement**

Age	Years of Service	Allowance Reduction
Any age	30	None
60-61	20	3% each year before age 65
62-64	10	3% each year before age 65
65	4	None

**Service Benefit Formula**

- Number of years of service before 7-1-67 x 1.10%\*\* x FAS\*
- Number of years of service between 7-1-67 and 6-30-75 x 1.25% x FAS\*
- Number of years of service after 7-1-75 x 2.0% x FAS\*
- Plan 1 allowance = total of 1, 2 and 3.

\*FAS (Final Average Salary) = highest five years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.

\*\*If FAS is \$500 or less the formula is 1.15% for each year of service before 7-1-67.

**Cost of Living Allowance**

Up to 4% annually on original retirement benefit.

**Contribution Rates (as of 12-31-98)**

Member rate is 6.00% of covered salary.

Employer rate for the State and School Division (Level A) is 9.67% of covered salary and 6.73% for the Local Governmental Division (Level B).

For more detail see Summary of Plan Provisions on page 102.

(IN MILLIONS)

Additions by Source	1993	1994	1995	1996	1997	1998
Investment Income	\$123.3	2.2	193.7	123.0	133.3	84.7
Member Contributions	17.6	17.6	16.4	8.8	8.5	8.4
Employer Contributions	17.9	18.7	17.7	10.2	10.7	10.7
<b>Totals</b>	<b>\$158.8</b>	<b>38.5</b>	<b>227.8</b>	<b>142.0</b>	<b>152.5</b>	<b>103.8</b>

Deductions by Type	1993	1994	1995	1996	1997	1998
Benefit Payments	\$66.0	65.8	65.6	64.5	63.9	62.2
Administrative Expense	1.2	1.2	1.2	1.0	0.8	0.7
Refunds	4.1	5.6	5.3	4.8	4.7	4.2
<b>Totals</b>	<b>\$71.3</b>	<b>72.6</b>	<b>72.1</b>	<b>70.3</b>	<b>69.4</b>	<b>67.1</b>

Funding Progress	1993	1994	1995	1996	1997	1998
Actuarial Value of Assets	\$ 911.7	964.2	852.0	773.0	809.4	864.7
Actuarial Accrued Liability	1,099.2	1,176.2	992.4	868.7	880.5	894.4
<b>Funding Ratios</b>	<b>83%</b>	<b>82%</b>	<b>86%</b>	<b>89%</b>	<b>92%</b>	<b>97%</b>



# Noncontributory System Highlights



## Noncontributory Retirement System Composite Picture

### Total

**Membership**.....105,989

Active .....77,512

Terminated

vested .....13,878

Retired .....14,599

### 1998 Active

**Members** .....77,512

Average age .....43.4

Average

years of service.....9.3

Average

annual salary .....\$31,063

### 1998 Retirees

Number .....1,482

Average age .....62.2

Average

years of service.....22.2

Final average

annual salary .....\$33,993

Average

annual benefit ...\$15,206

---

Average

annual benefit

—all retirees .....\$14,184

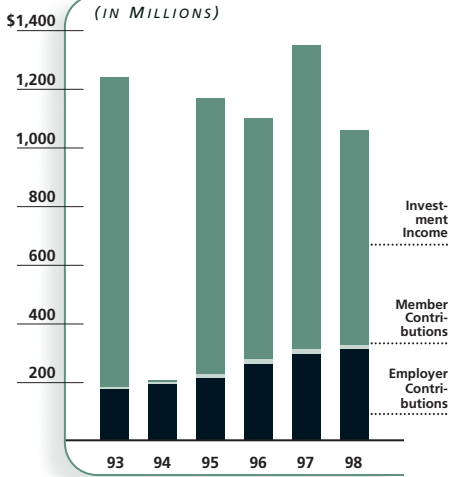


*Laurie Turnblom  
English & Theater Arts Teacher  
Wasatch High School  
Heber City*

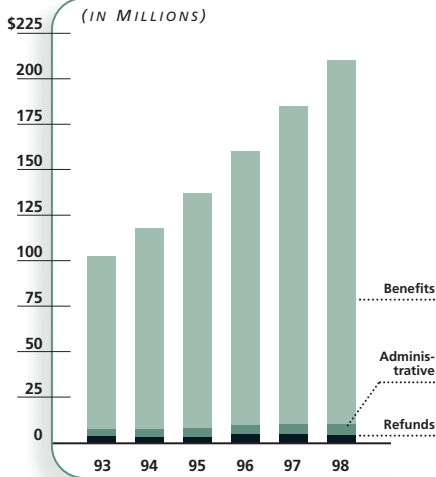


**Noncontributory Retirement System**

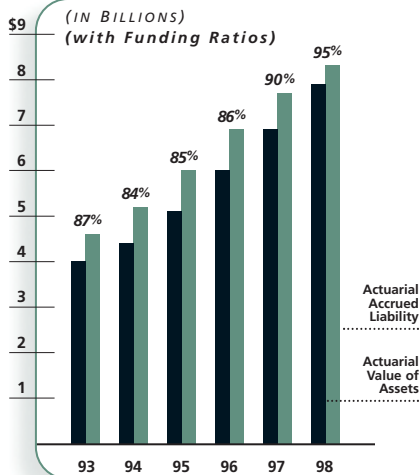
**Additions by Source**



**Deductions by Type**



**Funding Progress**



**Membership**

The Public Employees Noncontributory Retirement System includes eligible public employees of the State of Utah and its political subdivisions and public education employees of those entities covered by the System.

**Service Retirement**

Age	Years of Service	Allowance Reduction
Any age	30	None
Any age	25	Full actuarial before age 60
60-61	20	3% each year before age 65
62-64	10	3% each year before age 65
65	4	None

**Service Benefit Formula**

Number of years of service x 2.00% x FAS\*

\*FAS (Final Average Salary) = highest three years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.

**Cost of Living Allowance**

Up to 4% annually on original retirement benefit.

**Contribution Rates** (as of 12-31-98)

Employer rate for the State and School Division (Level A) is 14.16% of covered salary and 10.74% for the Local Governmental Division (Level B).

For more detail see Summary of Plan Provisions on page 103.

Additions by Source	1993	1994	1995	1996	1997	1998
Investment Income	\$1,066.4	9.9	943.7	832.5	1,047.2	734.4
Member Contributions	2.4	2.9	5.6	6.7	7.3	7.7
Employer Contributions	174.2	194.2	221.0	260.1	294.9	318.6
<b>Totals</b>	<b>\$1,243.0</b>	<b>207.0</b>	<b>1,170.3</b>	<b>1,099.3</b>	<b>1,349.4</b>	<b>1,060.7</b>

Deductions by Type	1993	1994	1995	1996	1997	1998
Benefit Payments	\$101.6	118.2	137.9	161.0	186.3	213.8
Administrative Expense	4.4	4.6	5.1	5.7	6.3	6.5
Refunds	3.8	3.5	3.6	4.8	5.0	4.5
<b>Totals</b>	<b>\$109.8</b>	<b>126.3</b>	<b>146.6</b>	<b>171.5</b>	<b>197.6</b>	<b>224.8</b>

Funding Progress	1993	1994	1995	1996	1997	1998
Actuarial Value of Assets	\$4.0	4.4	5.1	6.0	6.9	7.9
Actuarial Accrued Liability	4.6	5.2	6.0	6.9	7.7	8.3
<b>Funding Ratios</b>	<b>87%</b>	<b>84%</b>	<b>85%</b>	<b>86%</b>	<b>90%</b>	<b>95%</b>



# Public Safety System Highlights



## Public Safety Retirement System Composite Picture

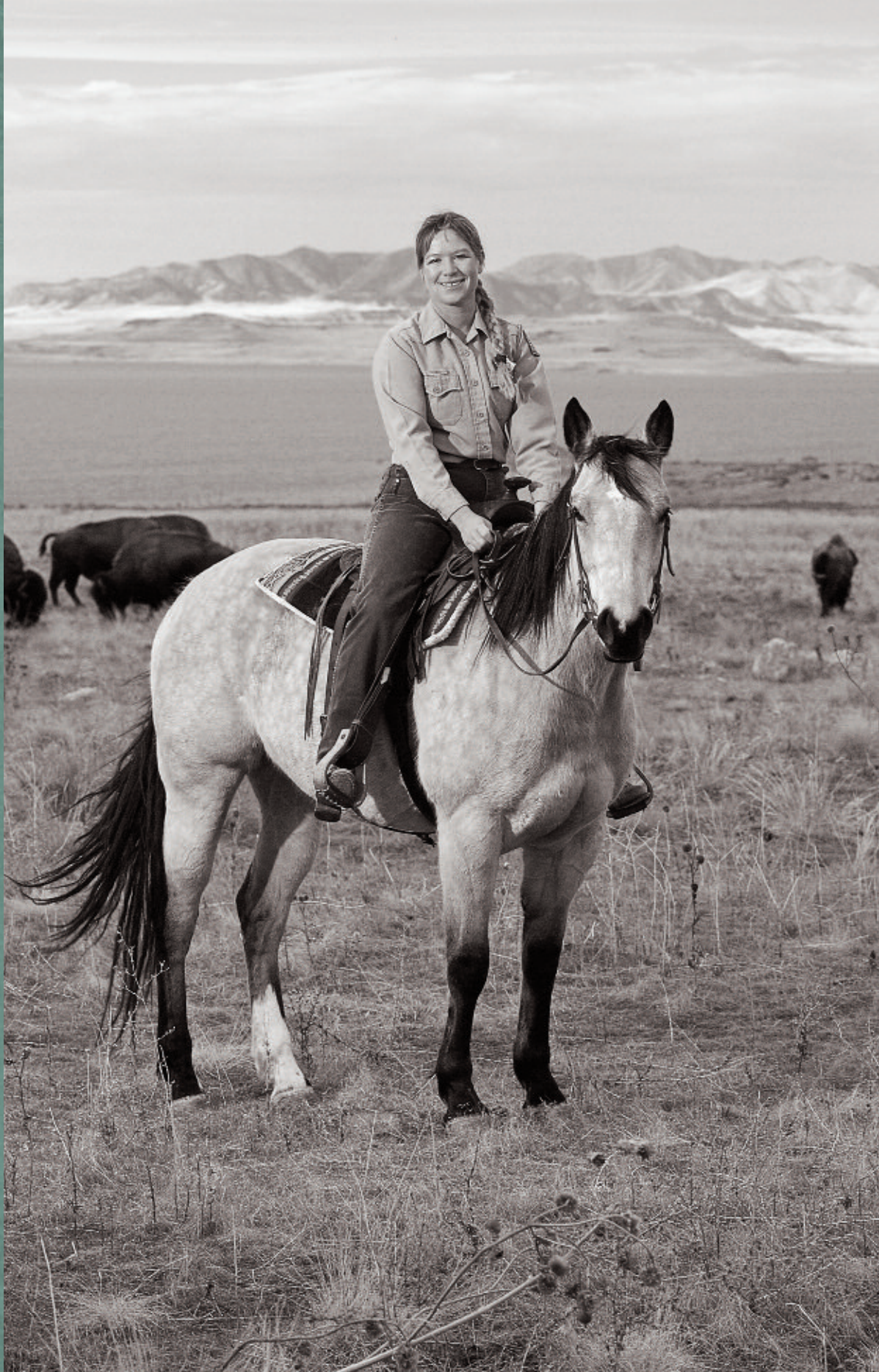
**Total  
Membership**.....9,138  
Active .....6,380  
Terminated  
vested .....672  
Retired .....2,086

**1998 Active  
Members** .....6,380  
Average age .....38.3  
Average  
years of service .....8.5  
Average  
annual salary .....\$33,842

**1998 Retirees**  
Number .....169  
Average age .....52.6  
Average  
years of service .....19.0  
Final average  
annual salary .....\$41,775  
Average  
annual benefit ...\$19,742

---

Average  
annual benefit  
—all retirees .....\$15,360

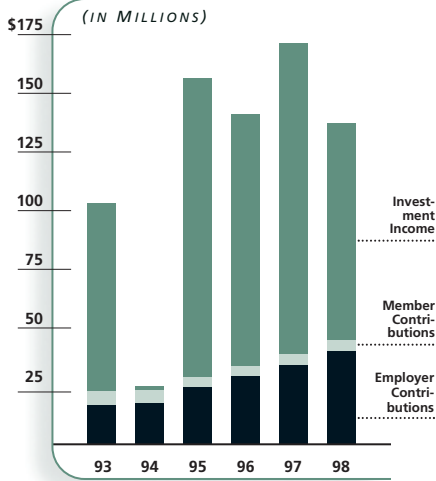


*Ellen Labotka  
Park Ranger  
Antelope Island State Park*

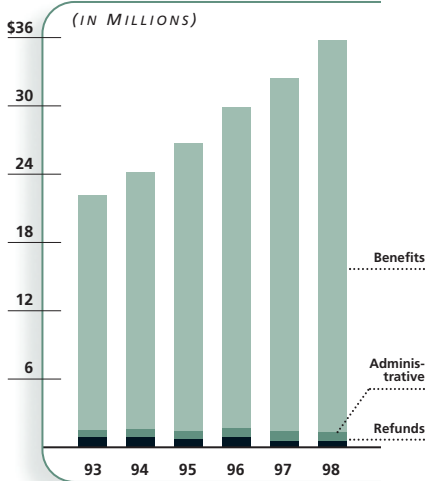


**Public Safety Retirement System**

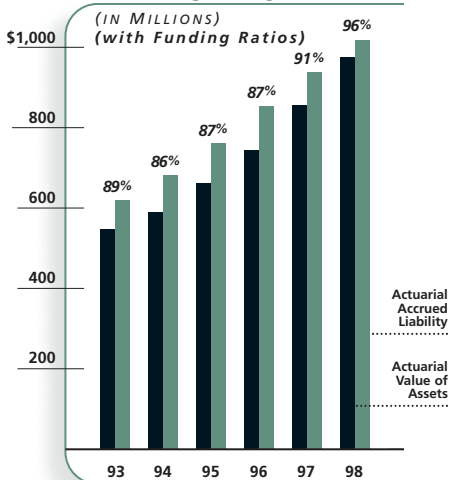
**Additions by Source**



**Deductions by Type**



**Funding Progress**



**Membership**

The Public Safety Retirement System includes eligible state and local governmental employees directly involved in law enforcement. The Public Safety System consists of the Contributory and Noncontributory divisions.

**Service Retirement**

Age	Years of Service	Allowance Reduction
Any age	20	None
60	10	None
65	4	None

**Service Benefit Formula**

- 2.5% x FAS\* x years of service up to 20 years.
- 2.0% x FAS\* x years of service over 20 years.
- Monthly benefit = total of 1 and 2.\*\*

\*FAS (Final Average Salary) = highest three years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.

\*\*Benefits paid cannot exceed 70% of FAS.

**Cost of Living Allowance**

Up to 2.5% annually on original retirement benefit.

**Contribution Rates (as of 12-31-98)**

**CONTRIBUTORY**

Member rates range from 10.50% to 13.74% of covered salary. Employer rates range from 5.87% to 21.82% of covered salary.

**NONCONTRIBUTORY**

Employer rates range from 17.07% to 33.68% of covered salary. For more detail see Summary of Plan Provisions on page 104.

(IN MILLIONS)

Additions by Source	1993	1994	1995	1996	1997	1998
Investment Income	\$ 80.1	1.3	127.2	107.1	132.5	92.3
Member Contributions	5.9	5.8	4.3	4.2	4.3	4.5
Employer Contributions	17.0	18.9	24.7	29.3	34.2	40.1
<b>Totals</b>	<b>\$103.0</b>	<b>26.0</b>	<b>156.2</b>	<b>140.6</b>	<b>171.0</b>	<b>136.9</b>

Deductions by Type	1993	1994	1995	1996	1997	1998
Benefit Payments	\$20.6	22.6	25.3	28.2	31.0	34.4
Administrative Expense	0.6	0.7	0.7	0.8	0.8	0.8
Refunds	0.9	0.9	0.7	0.9	0.6	0.6
<b>Totals</b>	<b>\$22.1</b>	<b>24.2</b>	<b>26.7</b>	<b>29.9</b>	<b>32.4</b>	<b>35.8</b>

Funding Progress	1993	1994	1995	1996	1997	1998
Actuarial Value of Assets	\$555.5	596.9	670.6	755.1	867.2	988.8
Actuarial Accrued Liability	627.4	691.1	771.2	866.5	952.1	1,033.0
<b>Funding Ratios</b>	<b>89%</b>	<b>86%</b>	<b>87%</b>	<b>87%</b>	<b>91%</b>	<b>96%</b>

# Firefighters System Highlights



## Firefighters Retirement System Composite Picture

**Total  
Membership**.....2,137  
Active .....1,349  
Terminated  
vested .....52  
Retired .....736

**1998 Active  
Members** .....1,349  
Average age .....39.7  
Average  
years of service.....11.2  
Average  
annual salary .....\$40,419

**1998 Retirees**  
Number .....32  
Average age .....52.8  
Average  
years of service.....24.5  
Final average  
annual salary .....\$46,365  
Average  
annual benefit ...\$27,103

---

Average  
annual benefit  
—all retirees .....\$18,180

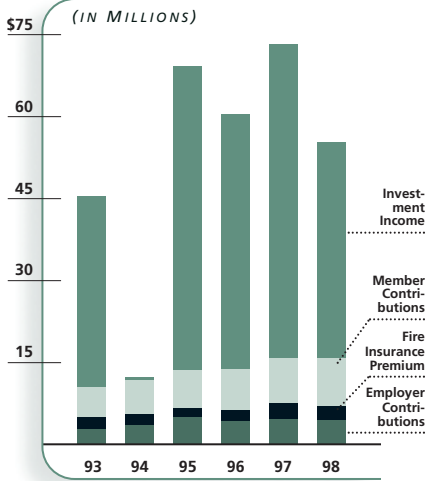


*Scott Hancock  
Salt Lake County Firefighter  
Draper*

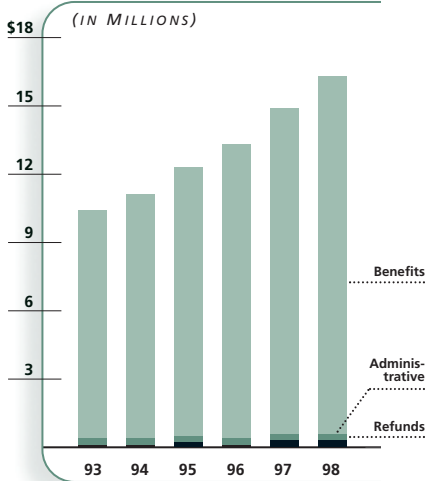


**Firefighters Retirement System**

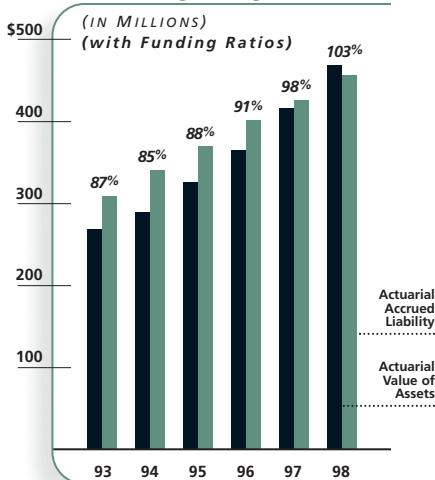
**Additions by Source**



**Deductions by Type**



**Funding Progress**



**Membership**

The Firefighters Retirement System includes eligible state and local governmental employees directly involved in fire fighting and whose duties are classified as hazardous.

**Service Retirement**

Age	Years of Service	Allowance Reduction
Any age	20	None
60	10	None
65	4	None

**Service Benefit Formula**

- 2.5% x FAS\* x years of service up to 20 years.
- 2.0% x FAS\* x years of service over 20 years.
- Monthly benefit = total of 1 and 2.\*\*

\*FAS (Final Average Salary) = highest three years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.

\*\*Benefits paid cannot exceed 70% of FAS.

**Cost of Living Allowance**

Up to 4% annually on original retirement benefit.

**Contribution Rates** (as of 12-31-98)

Member rate for Division A (with Social Security) is 13.31% of covered salary and 16.71% for Division B (without Social Security). Employer rate for Division A is 0.00% of covered salary and 4.74% for Division B. For more detail see Summary of Plan Provisions on page 105.

	(IN MILLIONS)					
<b>Additions by Source</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
Investment Income	\$ 35.0	0.6	55.6	46.6	57.5	39.7
Member Contributions	5.5	6.2	7.0	7.5	8.4	8.8
Fire Insurance Premium	2.8	3.5	4.9	4.3	4.6	4.4
Employer Contributions	2.1	2.0	1.7	2.0	2.8	2.5
<b>Totals</b>	<b>\$ 43.4</b>	<b>12.3</b>	<b>69.2</b>	<b>60.4</b>	<b>73.3</b>	<b>55.4</b>
<b>Deductions by Type</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
Benefit Payments	\$ 10.0	10.7	11.8	12.9	14.3	15.7
Administrative Expense	0.3	0.3	0.3	0.3	0.3	0.3
Refunds	0.1	0.1	0.2	0.1	0.3	0.3
<b>Totals</b>	<b>\$ 10.4</b>	<b>11.1</b>	<b>12.3</b>	<b>13.3</b>	<b>14.9</b>	<b>16.3</b>
<b>Funding Progress</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
Actuarial Value of Assets	\$ 243.2	261.5	293.8	329.5	376.2	423.4
Actuarial Accrued Liability	279.1	307.5	333.4	362.4	385.0	412.7
<b>Funding Ratios</b>	<b>87%</b>	<b>85%</b>	<b>88%</b>	<b>91%</b>	<b>98%</b>	<b>103%</b>

# Judges System Highlights



## Judges Retirement System Composite Picture

**Total  
Membership** ..... 179  
Active ..... 104  
Terminated  
vested ..... 2  
Retired ..... 73

**1998 Active  
Members** ..... 104  
Average age ..... 52.5  
Average  
years of service ..... 8.8  
Average  
annual salary ..... \$95,531

**1998 Retirees**  
Number ..... 3  
Average age ..... 69.2  
Average  
years of service ..... 18.5  
Final average  
annual salary ..... \$89,986  
Average  
annual benefit ... \$60,602

---

Average  
annual benefit  
—all retirees ..... \$39,912

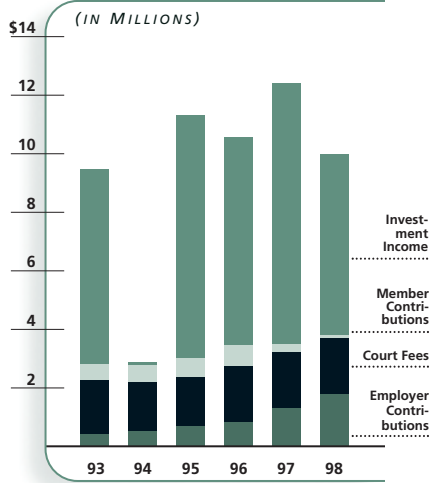


*Ben H. Hadfield  
1st District Court Judge  
Brigham City*

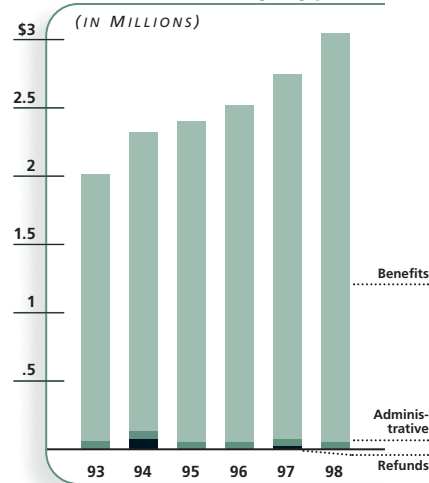


**Judges Retirement System**

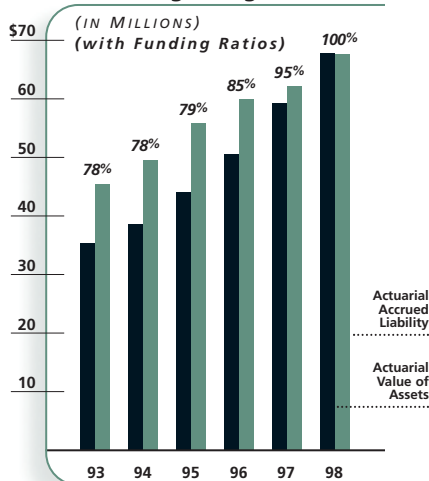
**Additions by Source**



**Deductions by Type**



**Funding Progress**



**Membership**

The Judges Retirement System includes justices and judges of the Supreme Court, appellate, district, and juvenile courts.

**Service Retirement**

Age	Years of Service	Allowance Reduction
Any age	25	None
55	20	Full actuarial reduction
62	10	None
70	6	None

**Service Benefit Formula**

- 5.00% x FAS\* x years of service up to 10 years.
- 2.25% x FAS\* x years of service between 10 and 20 years.
- 1.00% x FAS\* x years of service over 20 years.
- Monthly benefit = total of 1, 2 and 3.\*\*

\*FAS (Final Average Salary) = highest two years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.

\*\*Benefits paid cannot exceed 75% of FAS.

**Cost of Living Allowance**

Up to 4% compounded annually.

**Contribution Rates (as of 12-31-98)**

**CONTRIBUTORY**

Member rate is 8.00% of covered salary.

Employer rate is 11.00% of covered salary.

**NONCONTRIBUTORY**

Employer rate is 19.00% of covered salary.

For more detail see Summary of Plan Provisions on page 106.

	1993	1994	1995	1996	1997	1998
Investment Income	\$6,664	86	8,333	7,114	8,933	6,260
Member Contributions	561	572	654	734	482	15
Court Fees	1,855	1,709	1,670	1,898	1,901	1,912
Employer Contributions	405	504	680	833	1,305	1,792
<b>Totals</b>	<b>\$9,485</b>	<b>2,871</b>	<b>11,337</b>	<b>10,579</b>	<b>12,621</b>	<b>9,979</b>

	1993	1994	1995	1996	1997	1998
Benefit Payments	\$1,958	2,193	2,355	2,472	2,690	3,002
Administrative Expense	62	61	53	55	55	53
Refunds	—	73	—	—	8	—
<b>Totals</b>	<b>\$2,020</b>	<b>2,327</b>	<b>2,408</b>	<b>2,527</b>	<b>2,753</b>	<b>3,055</b>

	1993	1994	1995	1996	1997	1998
Actuarial Value of Assets	\$35.5	38.7	44.3	50.7	59.4	68.0
Actuarial Accrued Liability	45.6	49.8	56.0	60.1	62.4	67.8
<b>Funding Ratios</b>	<b>78%</b>	<b>78%</b>	<b>79%</b>	<b>85%</b>	<b>95%</b>	<b>100%</b>

# Governors and Legislative Pension Plan Highlights



## Governors and Legislative Pension Plan Composite Picture

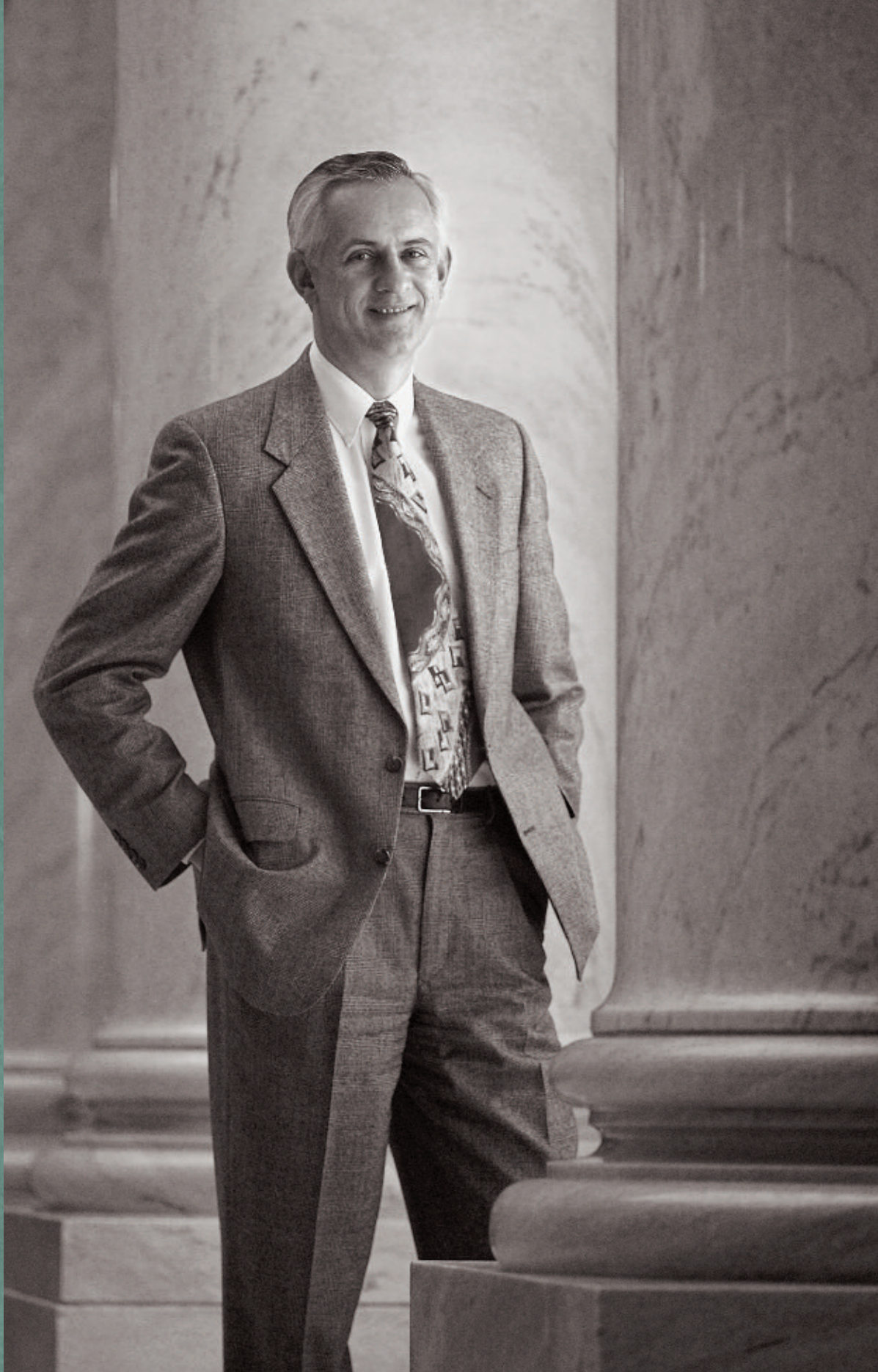
**Total  
Membership** .....384  
Active .....91  
Terminated  
vested .....80  
Retired .....213

**1998 Active  
Members** .....91  
Average age .....51.0  
Average  
years of service .....6.5  
Average  
annual salary .....\$5,440

**1998 Retirees**  
Number .....7  
Average age .....64.3  
Average  
years of service .....10.9  
Final average  
annual salary .....\$1,929  
Average  
annual benefit .....\$2,799

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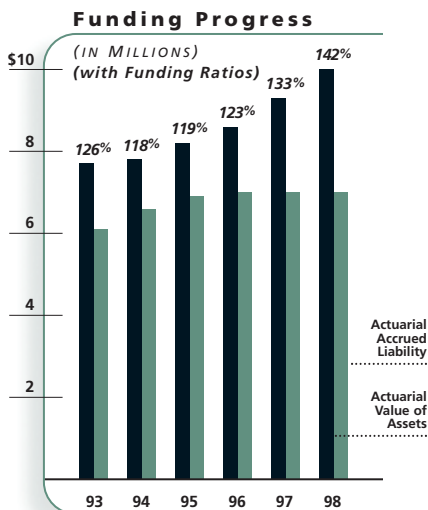
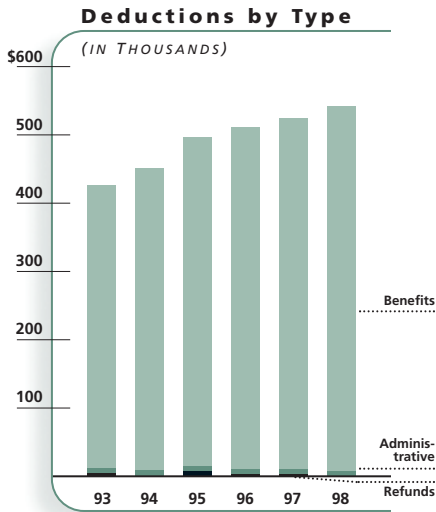
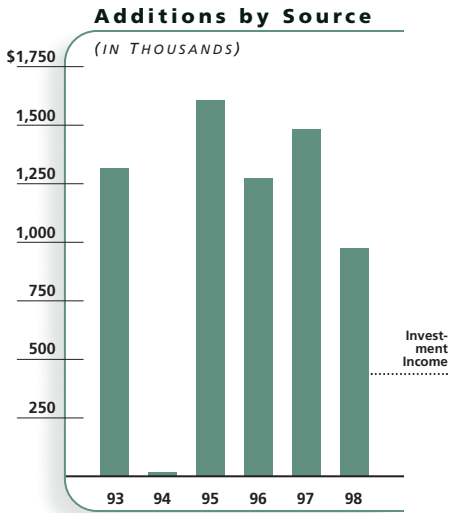
Average  
annual benefit  
—all retirees .....\$2,460



*Michael G. Waddoups  
Utah State Senator  
Salt Lake City*



**Governors and Legislative Pension Plan**



**Membership**

The Governors and Legislative Pension Plan includes only governors and legislators of the State of Utah.

**Service Retirement**

Age	Years of Service	Allowance Reduction
65	4	None
62	10	3% each year before age 65

**Service Benefit Formula**

**GOVERNORS**

\$500\* per month for one term.  
 \$1,000\* per month for two or more terms.

\*Increased semi-annually up to 2% based on the CPI. The amount as of 12-31-98 is \$1,000 for one term and \$2,000 for two or more terms.

**LEGISLATORS**

\$10\*\* per month for each year of service as a legislator.

\*\*Increased semi-annually up to 2% based on the CPI. The amount as of 12-31-98 is \$22.40.

**Cost of Living Allowance**

Up to 4% annually on original retirement benefit.

**Contribution Rates (as of 12-31-98)**

There are currently no required contributions.  
 For more detail see Summary of Plan Provisions on page 107.

(IN THOUSANDS)						
Additions by Source	1993	1994	1995	1996	1997	1998
Investment Income	\$1,315	19	1,604	1,270	1,481	973
Deductions by Type	1993	1994	1995	1996	1997	1998
Benefit Payments	\$419	445	485	504	519	538
Administrative Expense	7	7	7	7	6	6
Refunds	2	—	6	1	1	—
<b>Totals</b>	<b>\$428</b>	<b>452</b>	<b>498</b>	<b>512</b>	<b>526</b>	<b>544</b>

(IN MILLIONS)						
Funding Progress	1993	1994	1995	1996	1997	1998
Actuarial Value of Assets	\$7.7	7.8	8.2	8.6	9.3	10.0
Actuarial Accrued Liability	6.1	6.6	6.9	7.0	7.0	7.0
<b>Funding Ratios</b>	<b>126%</b>	<b>118%</b>	<b>119%</b>	<b>123%</b>	<b>133%</b>	<b>142%</b>

**401(k) and 457 Plans**

# Plan Highlights

The purpose of the 401(k) and 457 Plans is to allow public employees throughout Utah to adequately prepare themselves for retirement by investing a portion of their pre-tax income in one or both of these supplemental retirement plans. It has long been recognized that in order for employees to experience the comfortable and rewarding retirement they desire, they cannot rely entirely upon Social Security and their employer provided retirement. Employees must take the initiative to personally put aside a portion of their salary into some type of long-term savings plan.

The Plans provide the following benefits:

- Convenient, automatic payroll deduction
- Ten investment options
- Tax deferred savings
- Increase or decrease contributions as often as every pay period
- Change allocation of future contributions as often as every pay period
- Transfer funds monthly between investment options
- Rollover 401(k) funds into any qualified plan or IRA upon termination or retirement
- Upon death, funds transfer to beneficiaries
- Immediate vesting
- No sales commissions
- Low investment and administrative fees

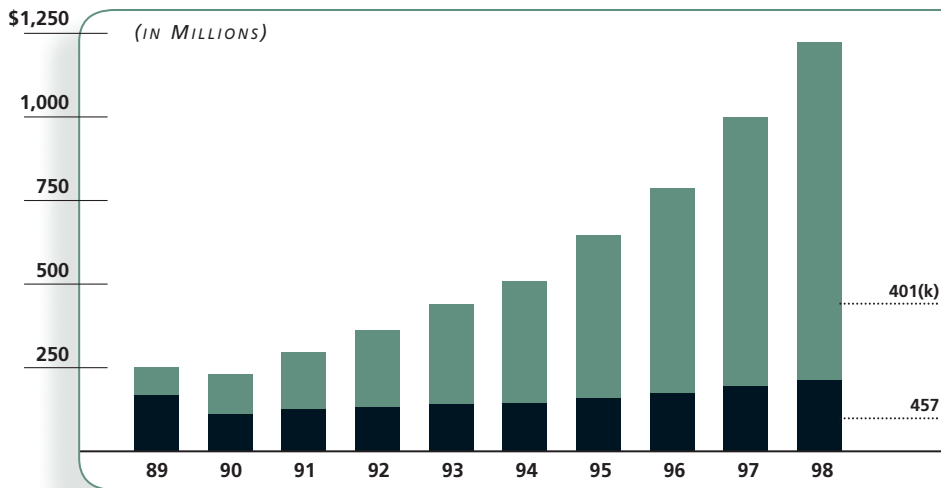
Each year the number of employees participating in these plans increases. Individuals may participate in more than one option. As of December 31, 1998 the number of participants by investment option were:

**NUMBER OF PARTICIPANTS BY OPTION**

Income Fund .....	97,495
Bond Fund .....	4,164
Balanced Fund .....	66,051
Large Cap Stock Index Fund .....	74,765
Large Cap Stock Growth Fund .....	8,638
International Fund .....	44,095
Small Cap Stock Fund.....	6,176
Short Horizon Fund.....	1,798
Medium Horizon Fund .....	3,026
Long Horizon Fund .....	5,733
Loan Fund.....	853
Group Annuity Fund .....	24,853
<b>Total 401(k) Plan participants.....</b>	<b>111,518</b>
<b>Total 457 Plan participants.....</b>	<b>8,844</b>

Annualized rates of returns for the Investment Funds are shown on page 87.

**401(k) and 457 Member Balances**



(IN MILLIONS)

MEMBER BALANCES	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>401(k)</b>	\$ 84	119	172	229	299	366	485	615	803	1,011
<b>457</b>	167	112	124	132	140	143	159	172	195	211
<b>Totals</b>	<b>\$251</b>	<b>231</b>	<b>296</b>	<b>361</b>	<b>439</b>	<b>509</b>	<b>644</b>	<b>787</b>	<b>998</b>	<b>1,222</b>



Utah Retirement Systems  
1998 Comprehensive  
Annual Financial Report



# FINANCIAL SECTION

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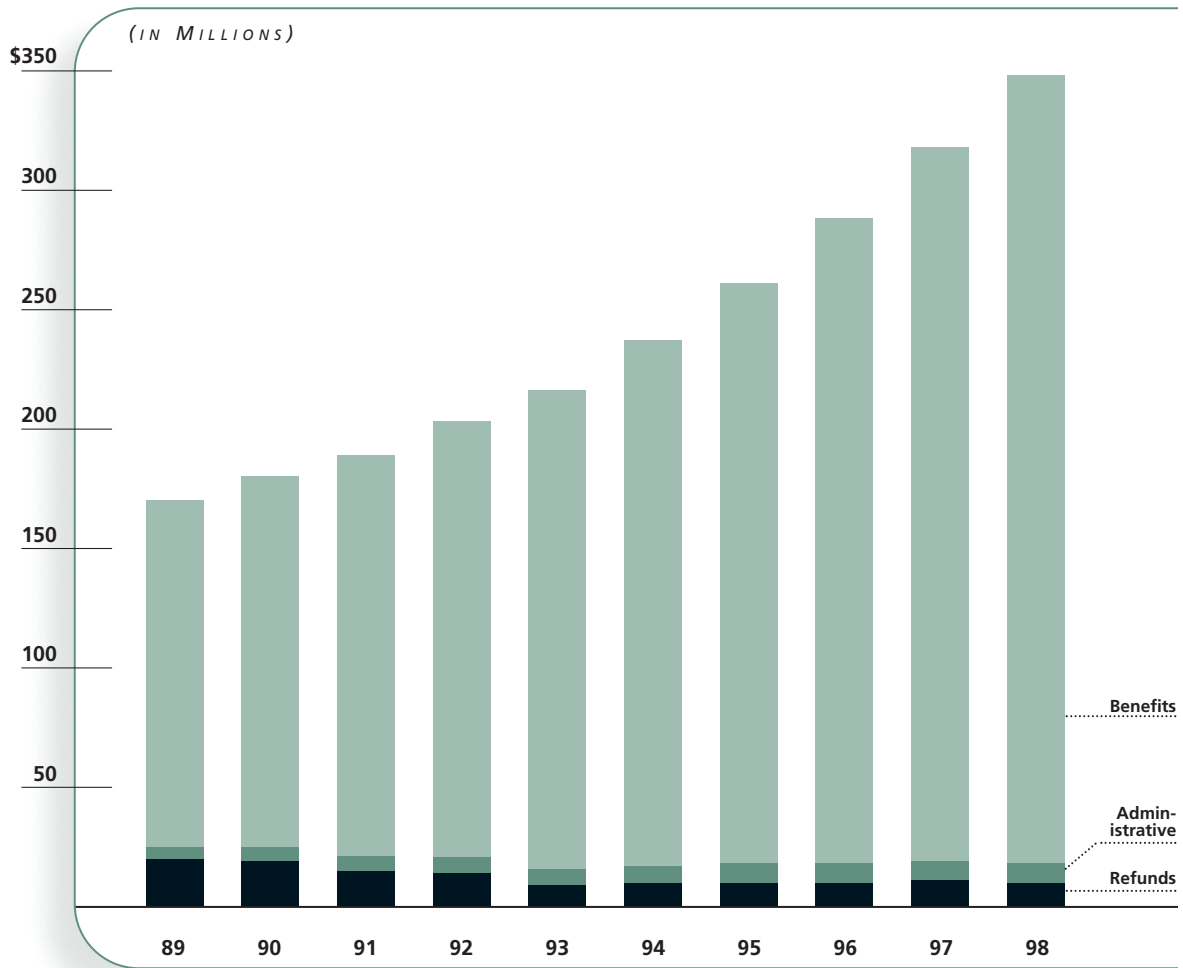
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*Schedules of  
Administrative  
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All Retirement Systems

# Deductions by Type



(IN MILLIONS)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Benefit Payments</b>	\$ 145	155	168	182	200	220	243	270	299	330
<b>Administrative Expenses</b>	5	6	6	7	7	7	8	8	8	8
<b>Refunds</b>	20	19	15	14	9	10	10	10	11	10
<b>Totals</b>	<b>\$ 170</b>	<b>180</b>	<b>189</b>	<b>203</b>	<b>216</b>	<b>237</b>	<b>261</b>	<b>288</b>	<b>318</b>	<b>348</b>



## Independent Auditors' Report

**Deloitte &  
Touche LLP**



Suite 1800  
50 South Main Street  
Salt Lake City, Utah 84144-0458

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### INDEPENDENT AUDITORS' REPORT

Utah State Retirement Board:

We have audited the accompanying general purpose financial statements of Utah Retirement Systems administered by the Utah State Retirement Board as of December 31, 1998, and for the year then ended, listed in the foregoing table of contents. These general purpose financial statements are the responsibility of the management of Utah Retirement Systems. Our responsibility is to express an opinion on these general purpose financial statements based on our audit.

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

In our opinion, the general purpose financial statements referred to above present fairly, in all material respects, the financial status of the defined benefit pension systems and the financial position of the 401(k) Plan and the 457 Plan of Utah Retirement Systems administered by the Utah State Retirement Board as of December 31, 1998, and changes in financial status of the defined benefit pensions systems, and the results of operations of the 401(k) Plan and the 457 Plan for the year then ended in conformity with generally accepted accounting principles.

Our audit was conducted for the purpose of forming an opinion on the general purpose financial statements taken as a whole. The required supplementary information and the financial supporting schedules listed in the foregoing table of contents are presented for purposes of additional analysis and are not a required part of the general purpose financial statements of Utah Retirement Systems. The required supplementary information and the supporting schedules are also the responsibility of the management of Utah Retirement Systems. Except as discussed in the following paragraph, such additional information has been subjected to the auditing procedures applied in our audit of the general purpose financial statements and, in our opinion, is fairly stated in all material respects when considered in relation to the general purpose financial statements taken as a whole.

The year 2000 supplementary information on page 45 is not a required part of the basic general purpose financial statements, but is supplementary information required by the Governmental Accounting Standards Board, and we did not audit and do not express an opinion on such information. Further, we were unable to apply to the information certain procedures prescribed by professional standards because of the unprecedented nature of the year 2000 issue and its effects, and the fact that authoritative measurement criteria regarding the status of remediation efforts have not been established. In addition, we do not provide assurance that Utah Retirement Systems are or will become year 2000 compliant, that Utah Retirement Systems' year 2000 remediation efforts will be successful in whole or in part, or that parties with which Utah Retirement Systems do business are or will become year 2000 compliant.

In accordance with *Government Auditing Standards*, we have also issued our report dated February 26, 1999, on our consideration of Utah Retirement Systems' internal control over financial reporting and our tests of their compliance with certain provisions of laws and regulations.

The Investment Section, Actuarial Section, and Statistical Section listed in the foregoing table of contents are presented for the purpose of additional analysis and are not a required part of the general purpose financial statements of Utah Retirement Systems. Such additional information has not been subjected to the auditing procedures applied in our audit of the general purpose financial statements and, accordingly, we express no opinion on it.

*Deloitte & Touche LLP*

February 26, 1999

**Deloitte Touche  
Tohmatsu  
International**

**General Purpose Financial Statements**

# Statements of Plan Net Assets—Defined Benefit Pension Plans and Balance Sheets—Expendable Trust Funds

December 31, 1998

With Comparative Totals for December 31, 1997

(IN THOUSANDS)

	Contributory System	Noncontributory System	Public Safety System	Firefighters System
<b>Assets:</b>				
Cash	\$ 2	523	14	2
<b>Receivables:</b>				
Member contributions	394	—	192	400
Employer contributions	558	18,142	1,712	91
Court fees and fire insurance premium tax	—	—	—	2,143
Investments	17,736	159,234	19,945	8,514
Total receivables	18,688	177,376	21,849	11,148
<b>Investments at fair value:</b>				
Short-term securities, domestic	22,214	199,436	24,977	10,663
Short-term securities, international	24,743	222,151	27,824	11,878
Bonds, domestic	156,454	1,401,029	175,935	75,103
Bonds, international	96,776	868,861	108,826	46,455
Equity investments, domestic	355,725	3,193,718	400,014	170,757
Equity investments, international	145,380	1,305,225	163,480	69,786
Venture capital	63,217	567,564	71,087	30,345
Real estate	98,465	884,018	110,723	47,265
Mortgage loans	315	2,828	353	151
Investment contracts	—	—	—	—
Total investments	963,289	8,644,830	1,083,219	462,403
Invested securities lending collateral	121,028	1,086,593	136,097	58,096
Property and equipment at cost, net of accumulated depreciation	141	1,265	158	68
Total assets	1,103,148	9,910,587	1,241,337	531,717
<b>Liabilities and fund balance:</b>				
<b>Liabilities:</b>				
Securities lending liability	121,028	1,086,593	136,097	58,096
Disbursements in excess of cash balance	3,004	26,969	3,379	1,442
Termination and post employment benefits	123	1,110	141	60
Due to other funds and entities	3,643	33,451	4,098	1,749
Investment accounts payable	21,203	190,363	23,841	10,180
Total liabilities	149,001	1,338,486	167,556	71,527
<b>Fund balance:</b>				
Employee deferred compensation	—	—	—	—
Administrative reserve	—	—	—	—
Total fund balance	—	—	—	—
Liabilities and fund balance	149,001	1,338,486	167,556	71,527
Net assets held in trust for pension benefits (see supplemental schedules of funding progress page 43)	\$ 954,147	8,572,101	1,073,781	460,190

See accompanying notes to general purpose financial statements.



Judges System	Pension Trust Funds		Expendable Trust Funds			Total (Memorandum Only)	
	Governors and Legislative Pension Plan	Total Pension Trust Funds	401(k) Plan	457 Plan	Total Expendable Trust Funds	1998	1997
1	1	543	\$ 2,677	244	2,921	3,464	5,594
1	—	987	—	—	—	987	998
71	—	20,574	—	—	—	20,574	20,586
1,008	—	3,151	—	—	—	3,151	2,100
1,350	204	206,983	3,581	—	3,581	210,564	81,740
2,430	204	231,695	3,581	—	—	235,276	105,424
1,691	256	259,237	—	—	—	259,237	111,732
1,884	285	288,765	—	—	—	288,765	63,868
11,911	1,801	1,822,233	293,712	44,969	338,681	2,160,914	2,396,533
7,368	1,114	1,129,400	—	—	—	1,129,400	291,495
27,082	4,096	4,151,392	619,884	122,682	742,566	4,893,958	4,902,979
11,068	1,674	1,696,613	53,374	7,755	61,129	1,757,742	1,719,452
4,813	728	737,754	—	—	—	737,754	493,988
7,496	1,134	1,149,101	—	—	—	1,149,101	1,056,026
24	4	3,675	—	—	—	3,675	3,969
—	—	—	42,694	36,637	79,331	79,331	95,756
73,337	11,092	11,238,170	1,009,664	212,043	1,221,707	12,459,877	11,135,798
9,214	1,393	1,412,421	25,241	5,459	30,700	1,443,121	1,223,260
11	2	1,645	—	—	—	1,645	2,373
84,993	12,692	12,884,474	\$1,041,163	217,746	1,258,909	14,143,383	12,472,449
9,214	1,393	1,412,421	\$ 25,241	5,459	30,700	1,443,121	1,223,260
229	35	35,058	48	210	258	35,316	16,606
9	1	1,444	—	—	—	1,444	1,209
277	42	43,260	—	—	—	43,260	83,824
1,614	245	247,446	4,439	790	5,229	252,675	25,288
11,343	1,716	1,739,629	29,728	6,459	36,187	1,775,816	1,350,187
—	—	—	1,011,435	211,287	1,222,722	1,222,722	995,907
—	—	—	—	—	—	—	1,626
—	—	—	1,011,435	211,287	1,222,722	1,222,722	997,533
11,343	1,716	1,739,629	\$1,041,163	217,746	1,258,909	2,998,538	2,347,720
73,650	10,976	11,144,845				11,144,845	10,124,729

**General Purpose Financial Statements****Statements of Changes in Plan Net Assets—  
Defined Benefit Pension Plans**

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

(IN THOUSANDS)

	Contributory System	Noncontributory System
Additions:		
Contributions:		
Member contributions	\$ 8,399	7,698
Employer contributions	10,729	318,635
Court fees and fire insurance premium tax	—	—
Total contributions	19,128	326,333
Investment income:		
Net appreciation in fair value of investments	55,224	478,301
Short-term interest, domestic	1,736	15,092
Short-term interest, international	611	5,307
Bonds interest, domestic	11,459	99,593
Bonds interest, international	3,799	33,022
Equity dividends, domestic	4,872	42,342
Equity dividends, international	1,471	12,783
Venture capital	584	5,070
Real estate net income	6,328	54,994
Mortgage loans	32	278
Securities lending	301	2,614
Total investment income	86,417	749,396
Less investment advisor fees	1,438	12,499
Less securities lending expense	12	111
Less investment administrative expenses	275	2,387
Net investment income	84,692	734,399
Total additions	103,820	1,060,732
Deductions:		
Retirement benefits	38,276	182,013
Cost of living benefits	20,419	31,739
Supplemental retirement benefits	3,554	—
Refunds	4,168	4,500
Earnings distribution	—	—
Administrative expenses	743	6,460
Total deductions	67,160	224,712
Increase from operations	36,660	836,020
Transfers between systems and affiliated funds	(26,007)	23,717
Net increase	10,653	859,737
Net assets held in trust for pension benefits beginning of year	943,494	7,712,364
Net assets held in trust for pension benefits end of year	\$954,147	8,572,101

See accompanying notes to general purpose financial statements.



Public Safety System	Firefighters System	Judges System	Governors and Legislative Pension Plan	Total Pension Trust Funds (Memorandum Only)	
				1998	1997
4,463	8,771	15	—	29,346	29,023
40,099	2,546	1,792	—	373,801	343,946
—	4,391	1,912	—	6,303	6,453
44,562	15,708	3,719	—	409,450	379,422
60,178	25,887	4,082	634	624,306	1,083,288
1,891	814	128	20	19,681	20,860
665	286	45	7	6,921	4,484
12,487	5,371	847	132	129,889	131,403
4,140	1,781	281	44	43,067	14,993
5,309	2,284	360	56	55,223	57,287
1,601	690	109	17	16,671	19,784
636	273	43	7	6,613	1,970
6,895	2,966	468	73	71,724	66,088
35	15	2	—	362	378
327	141	22	3	3,408	2,703
94,164	40,508	6,387	993	977,865	1,403,238
1,567	674	106	17	16,301	13,253
13	6	1	—	143	—
300	129	20	3	3,114	1,926
92,284	39,699	6,260	973	958,307	1,388,059
136,846	55,407	9,979	973	1,367,757	1,767,481
28,600	11,987	2,464	411	263,751	238,145
4,923	2,821	538	127	60,567	54,629
851	933	—	—	5,338	5,874
639	274	—	—	9,581	10,648
—	—	—	—	—	7,121
803	325	53	6	8,390	8,301
35,816	16,340	3,055	544	347,627	324,718
101,030	39,067	6,924	429	1,020,130	1,442,763
1,894	(61)	427	16	(14)	(29)
102,924	39,006	7,351	445	1,020,116	1,442,734
970,857	421,184	66,299	10,531	10,124,729	8,681,995
1,073,781	460,190	73,650	10,976	11,144,845	10,124,729

## General Purpose Financial Statements

# Statements of Revenues, Expenditures and Changes in Fund Balance—Expendable Trust Funds

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

	(IN THOUSANDS)		Total Expendable Trust Funds (Memorandum Only)	
	401(k) Plan	457 Plan	1998	1997
<b>Revenues:</b>				
Member contributions	\$ 113,422	5,824	119,246	105,511
Investment income:				
Net appreciation in fair value of investments	128,785	25,713	154,498	141,003
Investment contracts	3,517	2,811	6,328	6,198
Total investment income	132,302	28,524	160,826	147,201
Less investment advisor fees	832	338	1,170	1,507
Net investment income	131,470	28,186	159,656	145,694
Total revenues	244,892	34,010	278,902	251,205
<b>Expenditures:</b>				
Refunds	34,383	16,819	51,202	39,779
Administrative expenses	2,079	446	2,525	767
Total expenditures	36,462	17,265	53,727	40,546
Revenues in excess of expenditures	208,430	16,745	225,175	210,659
Transfers between systems and affiliated funds	14	—	14	29
Net increase in plan assets	208,444	16,745	225,189	210,688
Fund balance beginning of year	802,991	194,542	997,533	786,845
Fund balance end of year	\$1,011,435	211,287	1,222,722	997,533

See accompanying notes to general purpose financial statements.

## General Purpose Financial Statements

# Notes to General Purpose Financial Statements

December 31, 1998

### (1) Description of Systems and Plans

A brief description of the Utah Retirement Systems (Systems) and 401(k) and 457 Plans (Plans) follows. For a more complete description of plan provisions, membership and benefit statistics, see the Systems Summaries of Plan Provisions pages 102 through 109.

#### (A) GENERAL INFORMATION AND REPORTING ENTITY

*General*—The Utah Retirement Systems are comprised of the following defined benefit plans:

- i) the **Public Employees Contributory Retirement System (Contributory System)**; the **Public Employees Noncontributory Retirement System (Noncontributory System)**; and the **Firefighters Retirement System** which are multiple-employer, cost sharing, public

employee retirement systems;

- ii) the **Public Safety Retirement System** which is a mixed agent and cost-sharing, multiple-employer retirement system;
- iii) the **Judges Retirement System** and the **Governors and Legislative Pension Plan** which are single employer public employee retirement systems;

and two defined contribution plans comprised of the **401(k) Plan** and the **457 Plan**.



**General Purpose Financial Statements**

**Notes to General Purpose Financial Statements**

(Continued)  
December 31, 1998

These Systems and Plans cover employees of the State of Utah and participating local governmental and public education entities.

**Reporting Entity**—These general purpose financial statements cover all of the foregoing retirement systems and defined contribution plans administered by the Utah State Retirement Board (Board), the sole governing body for these Systems and Plans.

The Systems are established and governed by the respective sections of Chapter 49 of the Utah Code Annotated 1953, as amended. The Systems' defined benefit plans are amended statutorily by the State

legislature. The Utah State Retirement Office Act in Chapter 49 provides for the administration of the Systems and Plans under the direction of the Board, whose members are appointed by the Governor. The Plans are established under the authority of the same sections of the Utah Code Annotated 1953, as amended, as well as under Sections 401(k) and 457 of the Internal Revenue Code. The Plans may be amended by the Board within the parameters of Sections 401(k) and 457 of the Internal Revenue Code. The Retirement Systems are pension trust funds and the 401(k) and 457 Plans are expendable trust funds.

**(B) RETIREMENT AND DEATH BENEFITS**

Retirement Systems' benefits are specified by the statute listed in note 1 (A). The Retirement Systems are defined benefit plans wherein benefits are based on age and/or years of service and highest average salary. Various plan options within the Systems may be selected by retiring members. Some options require actuarial reductions based on attained age, age of spouse and similar actuarial factors. A brief summary of eligibility and benefits of the various Systems is shown in the following table.

**SUMMARY OF BENEFITS BY SYSTEM**

	<b>Contributory System</b>	<b>Noncontributory System</b>	<b>Public Safety System</b>	<b>Firefighters System</b>	<b>Judges System</b>
Highest average salary	Highest 5 years	Highest 3 years	Highest 3 years		Highest 2 years
Years of service required and/or age eligible for benefit	30 years any age 20 years age 60 10 years age 62 4 years age 65	30 years any age 25 years any age* 20 years age 60 10 years age 62 4 years age 65	20 years any age 10 years age 60 4 years age 65		25 years any age 20 years age 55* 10 years age 62 6 years age 70
Benefit percent per year of service**	1.10% per year to June 1967 1.25% per year July 1967 to June 1975 2.00% per year July 1975 to present	2.0% per year all years	2.5% per year up to 20 years 2.0% per year over 20 years		5.00% first 10 years 2.25% second 10 years 1.00% over 20 years

Note: The Governors and Legislative Pension Plan benefits are explained in the paragraph following this table.

\* With full actuarial reductions.

\*\*For all members and retirees in the systems prior to January 1, 1990, there is a 3% benefit enhancement.

The Governors and Legislative Pension Plan provides the following benefits. Former governors at age 65 receive \$1,000 per month per term limited to two terms. Legislators receive a benefit actuarially reduced at age 62 with ten or more years of service or an unreduced benefit at age 65 with four or more years of service at the rate of \$22.40 per month per year of service. Both the governors' and legislators' benefits are adjusted based on the CPI limited to

4% of the base benefit per year.

Death benefits for active and retired employees are in accordance with retirement statutes. Upon termination of employment, members of the Systems may leave their retirement account intact for future benefits based on vesting qualification or withdraw the accumulated funds in their individual member account and forfeit service credits and rights to future benefits upon which the contributions were based.

**(C) 401(k) AND 457 PLANS**

The 401(k) Plan and 457 Plan administered by the Board are defined contribution plans. These Plans are available as supplemental plans to the basic retirement benefits of the Retirement Systems for employees of employers who have adopted the 401(k) and 457 Plans. Voluntary contributions may be made into the Plans subject to plan and Internal Revenue Code limitations by employees of employers

**General Purpose Financial Statements**

# Notes to General Purpose Financial Statements

(Continued)  
December 31, 1998

sponsoring the Plans. Employer contributions may be made into the Plans at rates determined by the employers. There are 287 employers participating in the 401(k) Plan and 152 employers participating in the 457 Plan. There are 111,518 employees and retirees who are members of the 401(k) Plan and 8,844 who are members of the 457 Plan.

After termination of employment, benefits are paid out to individuals in lump-sum, or as periodic benefit payments, at the option of the participant based on individual account balances. The 401(k) and 457 Plans account balances are fully vested to the participants at the time of deposit.

Investments in the 401(k) and 457 Plans are individually directed and controlled by plan participants who direct the investment of their funds among several investment options of varying degrees of risk and earnings potential. Participants may transfer their funds between these options no more than once a month. Investments of the Plans are reported at fair value.

**(D) CONTRIBUTIONS**

As a condition of participation in the Systems, employers and/or employees are required to contribute certain percentages of salaries and wages as authorized by statute and specified by the Board. Employee contributions may be paid in part or in whole by the

employer. Contributions in some Systems are also augmented by fees or insurance premium taxes. Contribution rates are listed in note 6. In the defined contribution plans, voluntary deferral of compensation within the limits of Plan provisions may be made by employees. In addition to employee voluntary deferrals, employer contributions may be made into the Plans in behalf of employees. The recognition of deferred compensation, employer contributions and earnings on the accounts are deferred for income tax purposes until actually paid to the participant or beneficiary.

Employee (member) contributions are placed into member accounts, and in systems where it is authorized, interest is credited to member accounts. Upon termination of employment, a member may withdraw their account balance, including interest which has been credited. The member then forfeits a right to the service credit which corresponds to the member contributions withdrawn. The noncontributory retirement systems have no member contributions flowing into the systems. However, where members had a balance transferred in or purchased service credit in the system, these balances and on-going interest, where authorized, are credited to individual member accounts which may be withdrawn upon the termination of employment.

**(E) COVERED EMPLOYEES**

The **Public Employees Contributory Retirement System (Contributory System)** includes eligible public employees of the State of Utah and its political subdivisions including public education employees of those entities covered by the System. Members of this System are those who did not elect to transfer to the Public Employees Noncontributory Retirement System during the period when they were eligible to transfer or whose employers are not participants in the Noncontributory System.

The **Public Employees Noncontributory Retirement System (Noncontributory System)** was established on July 1, 1986. All eligible employees of the State and school entities hired subsequent to that date are automatically members of the Noncontributory System. Local governmental entities had the option of adopting the new System or remaining with the Contributory System. All Contributory System members whose employers adopted the Noncontributory System were given the opportunity to transfer to the new System during limited window periods. All eligible new hires subsequent to adoption of the noncontributory plans are automatically members of that plan.

The **Public Safety Retirement System** includes eligible state and local governmental employees directly involved in law enforcement (e.g., game wardens, prison guards, police officers

**PARTICIPATING MEMBERS BY SYSTEM**

	Contributory System	Noncontributory System	Public Safety System	Firefighters System	Judges System	Governors and Legislative Pension Plan
Number of participating:						
Employers	167	349	115	35	1	1
Members:						
Active	4,287	77,512	6,380	1,349	104	91
Terminated vested	1,513	13,878	672	52	2	80
Retirees and beneficiaries:						
Service benefits	9,024	14,599	2,031	674	73	213
Disability benefits	214	—	55	62	—	—



**General Purpose Financial Statements**

# Notes to General Purpose Financial Statements

(Continued)

December 31, 1998

and highway patrol officers). The Public Safety System consists of both contributory and noncontributory divisions. The noncontributory divisions were authorized by the Legislature effective July 1, 1989.

The **Firefighters Retirement System** includes eligible state and local govern-

mental employees directly involved in fire fighting.

The **Judges Retirement System** includes eligible state and local, appointed or elected judges.

The **Governors and Legislative Pension Plan** includes only governors and legislators of the State.

The **401(k) and 457 Plans** may be utilized by employers adopting the Plans and by their employees.

At December 31, 1998 participating members by System are included in the table on page 36.

## (2) Summary of Significant Accounting Policies

The following are the significant accounting policies followed by the Systems and Plans:

### (A) METHOD OF ACCOUNTING

The Systems maintain records and accounts, and prepare financial statements using fund accounting principles and the accrual basis of accounting, under which expenses are recorded when the liability is incurred and revenues are recorded in the accounting period in which they are earned and become measurable. The 401(k) and 457 Plans are now reported as expendable trusts in which revenue is recorded when received and the expenditures are recorded when they occur.

Utah Retirement Systems adhere to Statement No. 25 of the Governmental Accounting Standards Board (GASB No. 25), *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*. Investments are presented at fair value. The actuarial accrued liability under the entry age actuarial funding method is presented in the Required Supplementary Information on page 43.

Total (Memorandum Only) columns on the accompanying financial statements captioned "Total (Memorandum Only)" do not present consolidated financial information and are not necessary for a fair presentation of the financial statements, but are presented only to facilitate financial analysis.

### (B) INVESTMENTS

All of the investment assets of the various Systems are pooled and invested in the common Pension Investment Trust Fund (Investment Fund). Each of the Systems has equity in the Investment Fund based on funds contributed and earnings allocated. Earnings of the Investment Fund are allocated based on the average month-end balances of each of the respective Systems. Individual investments in the Investment Fund are not specifically identified to the various Systems (see note 3). For financial statement presentation, the Investment Fund assets, liabilities, revenues and expenses have been allocated to and presented in each respective system in the general purpose financial statements.

Investments are presented at fair value. The fair value of investments is based on published market prices and quotations from major investment brokers at current exchange rates, as available. Many factors are considered in arriving at that value. Corporate bonds are valued based on yields currently available on comparable securities of issuers with similar credit ratings.

Mortgages have been valued on an amortized cost basis which approximates market or fair value. The fair value of real estate investments has been esti-

mated based on independent appraisals. Short-term investments are reported at market value when published market prices and quotations are available, or at cost plus accrued interest, which approximates market or fair value. For investments where no readily ascertainable market value exists, management, in consultation with their investment advisors, have determined the fair values for the individual investments.

Approximately 9% of the net assets held in trust for pension benefits are invested in bonds of the U.S. Government and its instrumentalities. The Systems and Plans have no investments of any commercial or industrial organization whose market value equals 5% or more of the Systems' net assets available for benefits.

### (C) PROPERTY AND EQUIPMENT

Property and equipment are recorded at cost (see note 4) and are included in the assets of the Investment Fund. The schedule below summarizes the depreciation method and the estimated useful life by class.

### (D) ADMINISTRATIVE EXPENSES

Expenses for the administration of the Systems and Plans are budgeted and approved by the Board and are paid from investment earnings.

### METHOD OF DEPRECIATION

	Method of Depreciation	Estimated Useful Life
Buildings	Straight-line	40 years
Building improvements	Straight-line	10 years
Furniture and equipment	Straight-line	4-10 years

## General Purpose Financial Statements

## Notes to General Purpose Financial Statements

(Continued)

December 31, 1998

**(3) Deposits and Investments**

Investing is governed by the prudent person rule in accordance with statutes of the State of Utah. All investments of the Systems are considered to have been made in accordance with these governing statutes.

**(A) DEPOSITS**

All deposits of the Systems and Plans are carried at cost plus accrued interest which approximates fair value. At December 31, 1998 the carrying amount of deposits totaled approximately \$(31,852,000) and the corresponding bank balance was \$368,000. The deposits are held in one financial institution with an insured balance of \$100,000. The deposits in the bank in excess of \$100,000 are Category 3 which is uncollateralized. Deposits are not collateralized nor are they required to be by state statute. Deposits are presented in the general purpose financial statements at cost plus accrued interest which is also the market or fair value.

**CASH DEPOSITS**

(IN THOUSANDS)	
Cash	\$ 3,464
Disbursements in excess of cash balances	(35,316)
<b>Total</b>	<b>\$(31,852)</b>

**(B) INVESTMENTS**

The table to the right provides information about the custodial credit risks associated with the Systems' and Plans' investments. Category 1 includes investments that are insured or registered, or for which the securities are held by the Systems or its agent in the Systems' name. Category 2 includes uninsured and unregistered investments for which the securities are held by the counterparty's trust department or agent in the Systems' name.

Category 3 includes uninsured and unregistered investments for which the securities are held by the counterparty or by its trust department or agent but not in the Systems' name.

**(C) SECURITIES LENDING**

The Systems and Plans participate in a security lending program as authorized by Board policy, whereby securities are transferred to an independent broker or dealer in exchange for collateral in the form of cash, government securities and irrevocable bank letter of

credits equal to approximately 102% of the market value of the domestic securities on loan and 105% of the market value of the international securities on loan, with a simultaneous agreement to return the collateral for the same securities in the future. The custodial bank is the agent for the securities lending program. Securities under loan are maintained in the financial records and are classified in the preceding summary of custodial risk. A corresponding liability is recorded for the market value of the collateral received.

**INVESTMENTS BY CATEGORY OF CUSTODIAL RISK**

(IN THOUSANDS)	Fair Value
<b>Category 1 Investments:</b>	
Bonds, domestic	\$ 1,552,994
Bonds, international	905,827
Equity securities, domestic	4,148,496
Equity securities, international	1,610,923
<b>Total Category 1 Investments:</b>	<b>8,218,240</b>
<b>Investments not categorized:</b>	
Short-term securities pools	548,002
Mortgage loans:	
Collateralized loans	150
Real estate notes	3,525
Real estate	94,365
Real estate joint ventures	490,665
Title holding companies	564,071
Venture capital	737,754
Equity securities, domestic (pooled)	16,974
Guaranteed investment contracts	79,331
Mutual fund, international	61,128
Mutual fund, balanced	240,801
Investments held by broker-dealers under securities lending program:	
U.S. Government and agency securities	542,725
Corporate bonds, domestic	65,195
Bonds, international	223,573
Equities, domestic	487,688
Equities, international	85,690
<b>Total investments not categorized</b>	<b>4,241,637</b>
<b>Total investments</b>	<b>\$12,459,877</b>
Securities lending collateral pool (not categorized)	\$ 1,443,121



**General Purpose Financial Statements**

# Notes to General Purpose Financial Statements

(Continued)  
December 31, 1998

At year end there was no credit risk exposure to borrowers because the collateral exceeded the amount borrowed. The securities on loan at year end were \$1,404,871,000, and the collateral received for those securities on loan was \$1,443,121,000. Under the terms of the lending agreement, the Systems are indemnified against loss should the lending agent be unable to recover borrowed securities and distributions due to borrower insolvency or failure of the lending agent to properly evaluate the creditworthiness of the borrower. In addition, the Systems are indemnified against loss should the lending agent fail to demand adequate and appropriate collateral on a timely basis.

All securities loaned can be terminated on demand by either the Systems or the borrower. Cash collateral is invested in the lending agent's short-term investment pool. The short-term investment pool guidelines specify that a minimum of 20% of the invested cash collateral is to be available each business day and the dollar weighted average maturity of holdings should not exceed 60 days. The relationship between the maturities of the short-term investment pool and the Systems' loans is affected by the maturities of the securities loans made by other entities that use the agent's pool, which the Systems cannot determine. Since the securities lending collateral is in a pool maintained by the

custodial bank, it was not necessary to report the total income and expenses of securities lending.

**(D) DERIVATIVE FINANCIAL INSTRUMENTS**

The Systems invest in derivative financial investments as authorized by Board policy. As of December 31, 1998 the Systems had two types of derivative financial instruments; futures and currency forwards.

Futures represent commitments to purchase (asset) or sell (liability) securities or money market instruments at a future date and at a specific price. Futures contracts are traded on organized exchanges (exchange traded) and are exchange guaranteed, thereby minimizing the Systems' credit risk. The net change in the futures contract value is settled daily in cash with the exchanges. Net gains or losses resulting from the daily settlements are included with trading account securities gains (losses) in the Statement of Changes in Plan Net Assets. At December 31, 1998 the Systems' investments had the following futures balances:

	<b>Value Covered by Contract</b>
Long-equity futures.....	\$ 35,993,282
Short-equity futures.....	(23,596,647)
Long- fixed income futures.....	228,099,573
Short- fixed income futures .....	(2,971,799)

Currency forwards represent forward foreign exchange contracts that are entered into in order to hedge the exposure to changes in foreign currency exchange rates on the foreign currency dominated portfolio holdings. A forward foreign exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. The gain or loss arising from the difference between the original contracts and the closing of such contracts is included in net realized gains or losses on foreign currency related transactions. At December 31, 1998 the Systems' investments included the following currency forwards balances:

Currency forwards (pending foreign exchange purchases).....	\$ 555,282,678
Currency forwards pending foreign exchange sales).....	(372,164,512)

**(E) INVESTMENT PAYABLES**

The investment accounts payable are comprised of investment advisor fees payable of \$6,524,000, administrative expenses payable of \$2,456,000, investment purchases payable of \$241,727,000 and real estate liabilities of \$1,968,000.

**(4) Property and Equipment**

Property and equipment consists of the amounts shown in the following table as of December 31, 1998 and 1997. There were no significant leases as of December 31, 1998 or 1997.

<b>PROPERTY AND EQUIPMENT</b>	<i>(IN THOUSANDS)</i>	
	<b>1998</b>	<b>1997</b>
Land	\$1,000	1,000
Building and building improvements	4,272	3,864
Furniture and equipment	4,150	4,101
Total property and equipment	9,422	8,965
Less accumulated depreciation	4,774	4,142
Less operating reserves	3,003	2,450
Net property and equipment	\$1,645	2,373

**General Purpose Financial Statements**

**Notes to General Purpose Financial Statements**

(Continued)  
December 31, 1998

**(5) Funding Status and Progress**

**(A) ACTUARIAL ASSET VALUATION**

The actuarial value of assets is used in determining the funding progress of the Retirement Systems. The actuarial value of assets is based on a smoothed expected investment income rate. Investment income in excess or shortfall of the expected 8% rate on fair value is smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year. This smoothed actuarial value of assets utilized by the actuary in determining the actuarial funding status of the retirement systems is also used in establishing the contribution rates necessary to accumulate needed assets to pay benefits when due.

The following calculation was utilized in determining the actuarial value of assets as of January 1, 1998, and the next table shows the smoothed actuarial value of assets for each System.

**(B) ACTUARIAL ACCRUED LIABILITY**

The actuarial accrued liability for the Systems is presented in the Required Supplementary Information Schedule of Funding Progress on page 43 of this report.

**CALCULATION OF ACTUARIAL VALUE OF ASSETS**

January 1, 1998 (DOLLARS IN THOUSANDS)

1. Fair value of assets				\$10,124,729
2. Deferral to smooth asset values based on (excess)/shortfall of expected investment income for:				
	<b>Year</b>	<b>Total (Excess)/ Shortfall</b>	<b>Percent Deferred</b>	<b>Amount Deferred</b>
a.	1997	\$(675,272)	80%	\$(540,218)
b.	1996	(506,151)	60%	(303,691)
c.	1995	(829,598)	40%	(331,839)
d.	1994	475,053	20%	95,010
e. Total				(1,080,738)
3. Actuarial value of assets available for benefits				\$9,043,991

**ACTUARIAL VALUE OF ASSETS BY SYSTEM**

January 1, 1998 (IN THOUSANDS)

	<b>Contributory System</b>	<b>Noncontributory System</b>	<b>Public Safety System</b>	<b>Fire-fighters System</b>	<b>Judges System</b>	<b>Governors and Legislative</b>	<b>Total All Systems</b>
1. Net assets available for benefits at fair value	\$916,532	7,739,326	970,857	421,184	66,299	10,531	10,124,729
2. Deferral to smooth asset values based on (excess)/shortfall of expected investment income on fair value	(107,144)	(816,743)	(103,706)	(45,006)	(6,926)	(1,213)	(1,080,738)
3. Actuarial value of assets available for benefits	\$809,388	6,922,583	867,151	376,178	59,373	9,318	9,043,991

**(C) ACTUARIAL COST METHOD AND ASSUMPTIONS**

The Board engages an independent firm of actuaries to estimate the present value of actuarial accrued liability for the purpose of determining required reserves for active and terminated members, retired individuals and beneficiaries, and for the determination

of contribution rates (note 6).

Actuarial accrued liabilities are future periodic payments including lump-sum distributions that are attributable to the service employees have rendered to date and the plan provisions of the various systems. The present value of actuarial accrued liabilities are calculated based on the

entry age actuarial cost method with benefits based on projected salary increases.

A schedule of the actuarial assumptions used in the actuarial report dated January 1, 1998 is presented in Notes to Required Supplementary Information on page 44.



**General Purpose Financial Statements**

# Notes to General Purpose Financial Statements

(Continued)  
December 31, 1998

**(6) Actuarially Determined Contribution Requirements and Contributions Made**

Employer contribution rates consist of (1) an amount for normal cost (the estimated amount necessary to finance benefits earned by the members during the current service year) and (2) an amount for amortization of the unfunded actuarial accrued liability over a period representing the remainder of the original 30 year amortization period. These rates are determined using the entry age actuarial cost method with a supplemental present value, and the same actuarial assumptions that were used to calculate the actuarial accrued liability in the Schedules of Funding Progress on page 43.

The following schedule summarizes contribution rates in effect as of December 31, 1998.

Contributions made by employers and members were in accordance with actuarially computed funding requirements. Fire insurance premium taxes

**CONTRIBUTION RATES**

System	Contribution Rates as a Percent of Covered Payroll		
	Member	Employer	Other
Contributory	6.00%	6.73 - 9.67%	—
Noncontributory	—	10.74 - 14.16	—
Public Safety:			
Contributory	10.50-13.74	5.87-21.82	—
Noncontributory	—	17.07 - 33.68	—
Firefighters:			
Division A	13.31	0.00	8.48%
Division B	16.71	4.74	8.48
Judges:			
Contributory	8.00	19.00	22.86
Noncontributory	—	19.00	22.86
Governors and Legislative	—	—	—

and court fees are considered as part of employer contributions in the schedule below for the Firefighters and Judges Systems, respectively. These contribution rates also include rates for a 3% benefit enhancement which is funded by the State. For contribution rate purposes the actuary evaluates the assets of the Systems based on a five-year

smoothed expected return wherein 20% of a year's excess or shortfall of expected return is recognized each year for five years.

The actuary recommended some increases and some decreases in contribution rates which became effective July 1, 1998.

**REQUIRED CONTRIBUTIONS**

(DOLLARS IN THOUSANDS)

System	Contribution Requirements				Total Contributions	Total Required Contributions	Contributions Made				
	Normal Cost		Unfunded Cost				Member		Employer		
	Amount	Percent of Covered Payroll	Amount	Percent of Covered Payroll			Actual Amount	Percent of Covered Payroll	Actual Amount	Percent of Covered Payroll	Percent of Covered Payroll
Contributory	\$ 13,698	10.00%	\$ 5,430	3.96%	\$ 19,128	\$ 19,128	\$ 8,399	6.13%	\$ 10,729	7.83%	\$ 137,042
Noncontributory	282,173	11.93	44,160	1.87	326,333	326,333	7,698	0.33	318,635	13.47	2,365,650
Public Safety	37,543	17.67	7,019	3.30	44,562	44,562	4,463	2.10	40,099	18.88	212,414
Firefighters	8,726	16.06	2,591	4.77	11,317	11,317	8,771	16.15	2,546	4.69	54,326
Judges	1,115	11.88	692	7.37	1,807	1,807	15	0.16	1,792	19.09	9,388
Governors and Legislative	—	0.00	—	0.00	—	—	—	0.00	—	0.00	468
<b>Total</b>	<b>\$343,255</b>		<b>\$59,092</b>		<b>\$403,147</b>	<b>\$403,147</b>	<b>\$29,346</b>		<b>\$373,801</b>		<b>\$2,779,288</b>

Information with regard to contributions to the Retirement Systems for the year ended December 31, 1998 is indicated in the schedule above.

Member contributions in the 401(k) and 457 Plans total \$119,246,000, which in combination with the member contributions made in the Retirement Systems total \$148,592,000.

There are no funding requirements in the 401(k) and 457 Plans other than deposit of employee contributions or contributions for the employee by the employer.

## General Purpose Financial Statements

# Notes to General Purpose Financial Statements

(Continued)

December 31, 1998

### (7) Supplemental Benefits

In the past, the Utah State Legislature appropriated funds as supplemental retirement benefits to be paid to qualified participants who have previously retired under the Contributory System. These benefits, already granted, are now and will continue to be funded through contribution rates unless otherwise provided by the legislature.

### (8) Due To Other Funds and Entities

The amounts due to other funds are comprised of \$42,521,000 due to the insurance reserve and \$739,000 due to other systems.

### (9) Litigation

The Systems are involved in various claims and legal actions arising in the ordinary course of business. In the opinion of management and legal counsel, the ultimate disposition of these matters will not have a material adverse effect on the Systems' financial position as a whole.

### (10) Commitments

At December 31, 1998, the Investment Fund had committed to fund certain venture capital partnerships and real estate projects for an amount of \$1,402,980,275. Funding of \$851,962,431 had been provided by December 31, 1998, leaving an unfunded commitment as of December 31, 1998 of \$551,017,844.

### (11) Termination and Post Employment Benefits

This reserve was established to pay out termination and post employment benefits and compensated absences for Utah State Retirement Office employees as explained below. As set forth in section 67-19-14(2) of the Utah Code Annotated, 1953 as amended, upon retirement, all employees will receive up to five years health and life insurance, and may be paid for 25% of unused accumulated sick leave at the employee's current rate of pay. Retired employees may use accrued sick leave (after the 25% cashout) for coverage of health insurance benefits at the rate of one month's coverage for each eight hours of unused sick leave to age 65. This reserve is fully funded. As of December 31, 1998, there were five retired individuals on the insurance program. For the year ended December 31, 1998, the System payout was \$12,926 in insurance premiums.

### (12) Required Supplementary Information

The historical trend information designed to provide information about the Utah Retirement Systems' progress made in accumulating sufficient assets to pay benefits when due is required supplementary information. Required supplementary information is included immediately following the notes to the financial statements on pages 43 through 45. Other supplementary information presented in succeeding

sections of this report is for the benefit of statement users and is not a required part of the general purpose financial statements.

### (13) Risk Management

Most risks of loss to which the Systems, Plans and Investment Fund are exposed other than routine investment losses are covered under commercial insurance policies. Risks for large deductibles and otherwise uninsured losses are retained by the Systems, Plans or Investment Fund. There have been no reductions of insurance coverage from coverages of the previous year in any of the categories of risk. Coverages were increased commensurate with real estate acquisitions. During the past three calendar years, no loss settlements exceeded insurance coverages beyond immaterial deductible amounts. Experience and contingency losses of the Systems or Plans may be paid out of the experience and insurance reserve established by the board from investment earnings as authorized by statute.

### (14) Administrative Reserves

These are reserves set aside for the administration of the plans in which they are established. Participation in these plans is optional at the choice of the participants and administrative reserves are maintained to cover investment options administrative costs. The reserves are fully funded.



**Required Supplementary Information**

**Schedules of Funding Progress**

(DOLLARS IN THOUSANDS)

System	Date	(1) Actuarial Value of Assets	(2) Actuarial Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) (2)-(1)	(4) Funding Ratios (1)/(2)	(5) Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3)/(5)
<b>Contributory Retirement System</b>	1/01/90	\$ 954,900	1,235,925	281,025	77.3%	\$ 449,350	62.5%
	1/01/91	837,797	1,060,808	223,011	79.0	414,917	53.7
	1/01/92	822,863	1,016,027	193,164	81.0	305,400	63.2
	1/01/93	835,299	1,054,163	218,864	79.2	286,183	76.5
	1/01/94	911,717	1,099,162	187,445	82.9	293,833	63.8
	1/01/95	964,218	1,176,222	212,004	82.0	287,743	73.7
	1/01/96	852,034	992,374	140,340	85.9	261,685	53.6
	1/01/97	772,977	868,723	95,746	89.0	141,974	67.4
	1/01/98	809,388	880,499	71,111	91.9	138,231	51.4
	12/31/98	864,665	894,429	29,764	96.7	137,042	21.7
<b>Noncontributory Retirement System</b>	1/01/90	\$2,096,939	2,733,130	636,191	76.7%	\$ 945,917	67.3%
	1/01/91	2,594,245	3,227,549	633,304	80.4	1,004,462	63.0
	1/01/92	3,041,640	3,799,605	757,965	80.1	1,277,671	59.3
	1/01/93	3,480,582	4,186,743	706,161	83.1	1,381,842	51.1
	1/01/94	4,039,120	4,624,515	585,395	87.3	1,477,220	39.6
	1/01/95	4,372,190	5,205,873	833,683	84.0	1,642,123	50.8
	1/01/96	5,136,582	6,032,412	895,830	85.1	1,801,948	49.7
	1/01/97	5,969,813	6,917,958	948,145	86.3	2,054,879	46.1
	1/01/98	6,922,583	7,654,335	731,752	90.4	2,200,988	33.2
	12/31/98	7,906,743	8,300,310	393,567	95.3	2,365,650	16.6
<b>Public Safety Retirement System</b>	1/01/90	\$ 330,407	437,674	107,267	75.5%	\$ 101,902	105.3%
	1/01/91	381,501	464,633	83,132	82.1	110,363	75.3
	1/01/92	433,651	506,576	72,925	85.6	123,595	59.0
	1/01/93	485,861	557,664	71,803	87.1	120,904	59.4
	1/01/94	555,514	627,358	71,844	88.5	138,954	51.7
	1/01/95	596,892	691,107	94,215	86.4	148,791	63.3
	1/01/96	670,610	771,150	100,540	87.0	159,943	62.9
	1/01/97	755,106	866,504	111,398	87.1	176,979	62.9
	1/01/98	867,151	952,100	84,949	91.1	195,464	43.5
	12/31/98	988,800	1,032,971	44,171	95.7	212,414	20.8
<b>Firefighters Retirement System</b>	1/01/90	\$ 149,672	191,863	42,191	78.0%	\$ 29,407	143.5%
	1/01/91	171,739	209,397	37,658	82.0	30,912	121.8
	1/01/92	192,866	227,915	35,049	84.6	33,227	105.5
	1/01/93	213,159	237,752	24,593	89.7	36,517	67.3
	1/01/94	243,228	279,084	35,856	87.2	37,879	94.7
	1/01/95	261,523	307,459	45,936	85.1	40,157	114.4
	1/01/96	293,816	333,432	39,616	88.1	43,027	92.1
	1/01/97	329,475	362,411	32,936	90.9	45,969	71.6
	1/01/98	376,178	384,975	8,797	97.7	51,287	17.2
	12/31/98	423,405	412,688	(10,717)	102.6	54,326	(19.7)
<b>Judges Retirement System</b>	1/01/90	\$ 19,127	25,400	6,273	75.3%	\$ 5,625	111.5%
	1/01/91	22,242	30,388	8,146	73.2	6,450	126.3
	1/01/92	26,167	38,970	12,803	67.1	6,975	183.6
	1/01/93	30,254	40,594	10,340	74.5	6,538	158.2
	1/01/94	35,479	45,631	10,152	77.8	7,013	144.8
	1/01/95	38,726	49,830	11,104	77.7	6,955	159.7
	1/01/96	44,304	55,952	11,648	79.2	7,903	147.4
	1/01/97	50,721	60,055	9,334	84.5	8,981	103.9
	1/01/98	59,373	62,406	3,033	95.1	9,286	32.7
	12/31/98	67,998	67,838	(160)	100.2	9,388	(1.7)
<b>Governors and Legislative Pension Plan</b>	1/01/90	\$ 6,007	4,724	(1,283)	127.2%	\$ 279	(459.9)%
	1/01/91	6,355	5,157	(1,198)	123.2	288	(416.0)
	1/01/92	6,790	5,717	(1,073)	118.8	238	(450.8)
	1/01/93	7,122	6,150	(972)	115.8	254	(382.7)
	1/01/94	7,683	6,116	(1,567)	125.6	246	(637.0)
	1/01/95	7,804	6,606	(1,198)	118.1	398	(301.0)
	1/01/96	8,185	6,853	(1,332)	119.4	398	(334.7)
	1/01/97	8,636	7,020	(1,616)	123.0	482	(335.3)
	1/01/98	9,318	6,998	(2,320)	133.2	468	(495.7)
	12/31/98	9,988	7,017	(2,971)	142.3	468	(634.8)

## Required Supplementary Information

### Schedules of Employer Contributions

(DOLLARS IN THOUSANDS)

#### Employer Contributions

System	Year Ended	Annual Required Contributions	Percentage Contributed
<b>Contributory Retirement System</b>	1989	\$ 26,308	100%
	1990	20,716	100
	1991	18,558	100
	1992	19,142	100
	1993	17,938	100
	1994	18,719	100
	1995	17,723	100
	1996	10,224	100
	1997	10,651	100
	1998	10,729	100
<b>Noncontributory Retirement System</b>	1989	\$100,914	100%
	1990	119,814	100
	1991	157,014	100
	1992	171,505	100
	1993	174,227	100
	1994	194,202	100
	1995	220,955	100
	1996	260,068	100
	1997	294,937	100
	1998	318,635	100
<b>Public Safety Retirement System</b>	1989	\$ 9,640	100%
	1990	15,468	100
	1991	19,479	100
	1992	19,441	100
	1993	16,960	100
	1994	18,895	100
	1995	24,732	100
	1996	29,271	100
	1997	34,217	100
	1998	40,099	100
<b>Firefighters Retirement System</b>	1989	\$ 5,064	100%
	1990	4,902	100
	1991	4,508	100
	1992	4,409	100
	1993	4,960	100
	1994	5,498	100
	1995	6,547	100
	1996	6,335	100
	1997	7,388	100
	1998	6,937	100
<b>Judges Retirement System</b>	1989	\$ 1,050	100%
	1990	1,159	100
	1991	1,752	100
	1992	2,045	100
	1993	2,260	100
	1994	2,213	100
	1995	2,352	100
	1996	2,731	100
	1997	3,206	100
	1998	3,704	100
<b>Governors and Legislative Pension Plan</b>	1989	\$ 0	100%
	1990	0	100
	1991	0	100
	1992	0	100
	1993	0	100
	1994	0	100
	1995	0	100
	1996	0	100
	1997	0	100
	1998	0	100

### Notes to Required Supplementary Information

December 31, 1998

#### (1) Schedules of Funding Progress

The information contained in the schedule of funding progress is based on the actuarial study dated January 1, 1998. The actuarial accrued liability is presented based on the report generated by that study conducted by Watson Wyatt & Company. The actuarial value of assets for that date is based on a smoothed expected investment income rate. Investment income in excess or shortfall of the expected 8% return on fair value is smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year. The calculations for this smoothing process are disclosed in note 5 of the notes to the general purpose financial statements on page 40.

#### (2) Schedules of Employer Contributions

The required employer contributions and percent of those contributions actually made are presented in the schedule.

#### (3) Actuarial Assumptions

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

**Required Supplementary Information**

**Notes to Required Supplementary Information**

(Continued)  
December 31, 1998

<b>ADDITIONAL ACTUARIAL INFORMATION</b>						
	<b>Contributory</b>	<b>Noncontributory</b>	<b>Public Safety</b>	<b>Firefighters</b>	<b>Judges</b>	<b>Governors and Legislative</b>
Valuation date	1/1/98	1/1/98	1/1/98	1/1/98	1/1/98	1/1/98
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Amortization method	Level Percent of Payroll	Level Percent of Payroll	Level Percent of Payroll	Level Percent of Payroll	Level Percent of Payroll	Level Dollar Amount
Remaining amortization period	Open Group 22 Years	Open Group 22 Years	Open Group 22 Years	Open Group 22 Years	Open Group 22 Years	Open Group 22 Years
	Closed Period	Closed Period	Closed Period	Closed Period	Closed Period	Closed Period
Actuarial asset valuation method (All Systems under same method.)	Based on the total fair value income of investments with the excess/shortfall of actual investment income over or under the expected investment return spread over five years. One-fifth of the excess/shortfall is recognized each year for five years.					
Actuarial assumptions:						
Investment rate of return	8%	8%	8%	8%	8%	8%
Projected salary increases	4.50-15.20%	4.50-15.25%	4.50-10.75%	4.50-11.50%	5.50%	None
Inflation rate	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Post retirement cost-of-living adjustment	4.00%	4.00%	2.50%	4.00%	4.00%	4.00%

NOTE: All post retirement cost-of-living adjustments are noncompounding and are based on the original benefit except for Judges which is a compounding benefit. The cost-of-living adjustments are also limited to the actual CPI increase for the year although unused CPI increases not met may be carried forward to subsequent years.

**(4) Year 2000—Unaudited**

The year 2000 issue is the result of shortcomings in many electronic data processing systems and other electronic equipment that may adversely affect the Utah Retirement Systems' operations as early as fiscal year 1999.

The Systems' key business processes rely upon vendor and internal electronic information systems. Assessments of these were made and a plan developed in 1993 to remediate internal information systems year 2000 issues. Staff remediated internal information systems databases and programs to be year 2000 compliant. These systems have been running in production since July 1996. The systems and databases have been validated and tested for year 2000 compliance.

Mainframe and AS/400 systems software have been upgraded to year 2000

compliant versions. The Systems' AS/400 and mainframe hardware have been certified as year 2000 compliant as well. All PCs used in the Systems have been tested for year 2000 readiness and have passed the compliance tests. All mission critical vendor PC applications have been validated for year 2000 readiness. During the first half of 1999, all networked PCs will be converted to the Windows NT operation environment, ensuring that the PC operating system will be year 2000 ready.

In fourth quarter 1998 the financial reporting system used by the Systems was replaced with a year 2000 compliant package. Other individual software components have been tested for year 2000 compliance. In July 1999 an enterprise-wide system test will be conducted for overall systems and hardware compliance.

In January 1998 an assessment was made and a plan was developed to determine and insure remediation of year 2000 concerns in vendor information systems. Management will continue to monitor and validate services delivered by our depository banks, custodial bank, those systems used for electronic transfer of funds, and any other critical service providers.

Due to the complexity of the year 2000 problem, its effects and the success of related remediation efforts will not be fully determinable until the year 2000 and thereafter. Management cannot assure that the Retirement Systems are or will be year 2000 ready, that the Systems' remediation efforts will be successful in whole or in part, or that parties with whom the Systems do business will be year 2000 ready.



**Contributory Retirement System****Schedules of Plan Net Assets by Division**

December 31, 1998

With Comparative Totals for December 31, 1997

(IN THOUSANDS)

	Local Governmental	State and School	Total All Divisions	
			1998	1997
<b>Assets:</b>				
Cash	\$ 1	1	2	2
<b>Receivables:</b>				
Member contributions	152	242	394	437
Employer contributions	169	389	558	623
Investments	4,631	13,105	17,736	7,426
Total receivables	4,952	13,736	18,688	8,486
<b>Investments at fair value:</b>				
Short-term securities, domestic	5,800	16,414	22,214	10,315
Short-term securities, international	6,460	18,283	24,743	5,959
Bonds, domestic	40,849	115,605	156,454	197,326
Bonds, international	25,268	71,508	96,776	27,197
Equity investments, domestic	92,878	262,847	355,725	400,203
Equity investments international	37,958	107,422	145,380	160,426
Venture capital	16,506	46,711	63,217	46,089
Real estate	25,709	72,756	98,465	98,528
Mortgage loans	82	233	315	370
Total investments	251,510	711,779	963,289	946,413
Invested securities lending collateral	31,600	89,428	121,028	114,131
Property and equipment at cost, net of accumulated depreciation	37	104	141	221
Total assets	288,100	815,048	1,103,148	1,069,253
<b>Liabilities:</b>				
Securities lending liability	31,600	89,428	121,028	114,131
Disbursements in excess of cash balance	784	2,220	3,004	1,471
Termination and post employment benefits	32	91	123	113
Due to other funds and entities	951	2,692	3,643	7,817
Investment accounts payable	5,536	15,667	21,203	2,227
Total liabilities	38,903	110,098	149,001	125,759
Net assets held in trust for pension benefits	\$249,197	704,950	954,147	943,494

**Contributory Retirement System****Schedules of Changes in Plan Net Assets by Division**

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

	(IN THOUSANDS)			
	Local Governmental	State and School	Total All Divisions	
			1998	1997
Additions:				
Contributions:				
Member	\$ 3,264	5,135	8,399	8,537
Employer	3,393	7,336	10,729	10,651
Total contributions	6,657	12,471	19,128	19,188
Investment income:				
Net appreciation in fair value of investments	14,260	40,964	55,224	104,169
Short-term interest, domestic	448	1,288	1,736	1,994
Short-term interest, international	158	453	611	428
Bonds interest, domestic	2,959	8,500	11,459	12,554
Bonds interest, international	981	2,818	3,799	1,432
Equity dividends, domestic	1,258	3,614	4,872	5,473
Equity dividends, international	380	1,091	1,471	1,890
Venture capital	151	433	584	188
Real estate net income	1,634	4,694	6,328	6,314
Mortgage loans	8	24	32	36
Securities lending	78	223	301	258
Total investment income	22,315	64,102	86,417	134,736
Less investment advisor fees	371	1,067	1,438	1,266
Less securities lending expense	3	9	12	—
Less investment administrative expenses	71	204	275	184
Net investment income	21,870	62,822	84,692	133,286
Total additions	28,527	75,293	103,820	152,474
Deductions:				
Retirement benefits	7,865	30,411	38,276	39,784
Cost of living benefits	3,724	16,695	20,419	20,085
Supplemental retirement benefits	484	3,070	3,554	4,015
Refunds	1,706	2,462	4,168	4,735
Administrative expenses	191	552	743	794
Total deductions	13,970	53,190	67,160	69,413
Increase from operations	14,557	22,103	36,660	83,061
Transfers between systems and affiliated funds	(3,596)	(22,411)	(26,007)	(51,957)
Net increase (decrease)	10,961	(308)	10,653	31,104
Net assets held in trust for pension benefits beginning of year	238,236	705,258	943,494	912,390
Net assets held in trust for pension benefits end of year	\$249,197	704,950	954,147	943,494

**Contributory Retirement System**

**Schedules of Funding Progress by Division**

(DOLLARS IN THOUSANDS)

Division	Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) (2)-(1)	(4) Funding Ratios (1)/(2)	(5) Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3)/(5)
<b>Contributory</b>	1/01/90	\$253,060	286,592	33,532	88.3%	\$152,779	21.9%
<b>Local Governmental</b>	1/01/91	223,607	247,581	23,974	90.3	141,072	17.0
	1/01/92	210,268	241,285	31,017	87.1	103,836	29.9
	1/01/93	209,020	254,884	45,864	82.0	97,317	47.1
	1/01/94	232,690	271,413	38,723	85.7	99,903	38.8
	1/01/95	247,291	298,280	50,989	82.9	97,715	52.2
	1/01/96	215,418	254,449	39,031	84.7	91,446	42.7
	1/01/97	191,393	218,534	27,141	87.6	54,829	49.5
	1/01/98	207,641	226,233	18,592	91.8	52,444	35.5
	12/31/98	226,465	235,108	8,643	96.3	52,448	16.5
<b>Contributory</b>	1/01/90	\$701,840	949,333	247,493	73.9%	\$296,571	83.5%
<b>State and School</b>	1/01/91	614,190	813,227	199,037	75.5	273,845	72.7
	1/01/92	612,595	774,742	162,147	79.1	201,564	80.4
	1/01/93	626,279	799,279	173,000	78.4	188,866	91.6
	1/01/94	679,027	827,749	148,722	82.0	193,930	76.7
	1/01/95	716,927	877,942	161,015	81.7	190,028	84.7
	1/01/96	636,616	737,925	101,309	86.3	170,239	59.5
	1/01/97	581,584	650,189	68,605	89.4	87,145	78.7
	1/01/98	601,747	654,266	52,519	92.0	85,787	61.2
	12/31/98	638,200	659,321	21,121	96.8	84,594	25.0
<b>Total</b>	1/01/90	\$954,900	1,235,925	281,025	77.3%	\$449,350	62.5%
<b>Contributory</b>	1/01/91	837,797	1,060,808	223,011	79.0	414,917	53.7
<b>Retirement</b>	1/01/92	822,863	1,016,027	193,164	81.0	305,400	63.2
<b>System</b>	1/01/93	835,299	1,054,163	218,864	79.2	286,183	76.5
	1/01/94	911,717	1,099,162	187,445	82.9	293,833	63.8
	1/01/95	964,218	1,176,222	212,004	82.0	287,743	73.7
	1/01/96	852,034	992,374	140,340	85.9	261,685	53.6
	1/01/97	772,977	868,723	95,746	89.0	141,974	67.4
	1/01/98	809,388	880,499	71,111	91.9	138,231	51.4
	12/31/98	864,665	894,429	29,764	96.7	137,042	21.7



**Contributory Retirement System****Schedules of Employer Contributions by Division**

(DOLLARS IN THOUSANDS)

Division	Year Ended	Employer Contributions	
		Annual Required Contributions	Percentage Contributed
<b>Contributory Local Governmental</b>	1989	\$ 3,584	100%
	1990	2,579	100
	1991	3,017	100
	1992	3,612	100
	1993	3,427	100
	1994	4,200	100
	1995	4,329	100
	1996	3,009	100
	1997	3,332	100
	1998	3,393	100
<b>Contributory State and School</b>	1989	\$22,724	100%
	1990	18,137	100
	1991	15,541	100
	1992	15,530	100
	1993	14,511	100
	1994	14,519	100
	1995	13,394	100
	1996	7,215	100
	1997	7,319	100
	1998	7,336	100
<b>Total</b>	1989	\$26,308	100%
<b>Contributory Retirement System</b>	1990	20,716	100
	1991	18,558	100
	1992	19,142	100
	1993	17,938	100
	1994	18,719	100
	1995	17,723	100
	1996	10,224	100
	1997	10,651	100
	1998	10,729	100

**Noncontributory Retirement System****Schedules of Plan Net Assets by Division**

December 31, 1998

With Comparative Totals for December 31, 1997

(IN THOUSANDS)

	Local Governmental	State and School	Total All Divisions	
			1998	1997
<b>Assets:</b>				
Cash	\$ 1	522	523	36
Receivables:				
Employer contributions	2,324	15,818	18,142	18,114
Investments	25,069	134,165	159,234	60,628
Total receivables	27,393	149,983	177,376	78,742
Investments at fair value:				
Short-term securities, domestic	31,398	168,038	199,436	84,213
Short-term securities, international	34,974	187,177	222,151	48,650
Bonds, domestic	221,141	1,179,888	1,401,029	1,611,017
Bonds, international	136,789	732,072	868,861	222,040
Equity investments, domestic	502,802	2,690,916	3,193,718	3,267,356
Equity investments, international	205,488	1,099,737	1,305,225	1,309,757
Venture capital	89,354	478,210	567,564	376,285
Real estate	139,175	744,843	884,018	804,406
Mortgage loans	445	2,383	2,828	3,023
Total investments	1,361,566	7,283,264	8,644,830	7,726,747
Invested securities lending collateral	171,068	915,525	1,086,593	931,793
Property and equipment at cost, net of accumulated depreciation	199	1,066	1,265	1,808
Total assets	1,560,227	8,350,360	9,910,587	8,739,126
<b>Liabilities:</b>				
Securities lending liability	171,068	915,525	1,086,593	931,793
Disbursements in excess of cash balance	4,246	22,723	26,969	12,006
Termination and post employment benefits	175	935	1,110	921
Due to other funds and entities	5,151	28,300	33,451	63,859
Investment accounts payable	29,970	160,393	190,363	18,183
Total liabilities	210,610	1,127,876	1,338,486	1,026,762
Net assets held in trust for pension benefits	\$1,349,617	7,222,484	8,572,101	7,712,364

**Noncontributory Retirement System****Schedules of Changes in Plan Net Assets by Division**

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

	(IN THOUSANDS)			
	Local Governmental	State and School	Total All Divisions	
			1998	1997
<b>Additions:</b>				
Contributions:				
Member	\$ 1,567	6,131	7,698	7,301
Employer	50,947	267,688	318,635	294,937
Total contributions	52,514	273,819	326,333	302,238
Investment income:				
Net appreciation in fair value of investments	75,332	402,969	478,301	818,013
Short-term interest, domestic	2,369	12,723	15,092	15,687
Short-term interest, international	833	4,474	5,307	3,372
Bonds interest, domestic	15,632	83,961	99,593	98,818
Bonds interest, international	5,183	27,839	33,022	11,275
Equity dividends, domestic	6,646	35,696	42,342	43,081
Equity dividends, international	2,006	10,777	12,783	14,878
Venture capital	796	4,274	5,070	1,481
Real estate net income	8,632	46,362	54,994	49,700
Mortgage loans	44	234	278	284
Securities lending	410	2,204	2,614	2,033
Total investment income	117,883	631,513	749,396	1,058,622
Less investment advisor fees	1,962	10,537	12,499	9,967
Less securities lending expense	17	94	111	—
Less investment administrative expenses	375	2,012	2,387	1,448
Net investment income	115,529	618,870	734,399	1,047,207
Total additions	168,043	892,689	1,060,732	1,349,445
<b>Deductions:</b>				
Retirement benefits	24,581	157,432	182,013	159,169
Cost of living benefits	3,880	27,859	31,739	27,093
Refunds	1,305	3,195	4,500	4,995
Administrative expenses	930	5,530	6,460	6,323
Total deductions	30,696	194,016	224,712	197,580
Increase from operations	137,347	698,673	836,020	1,151,865
Transfers between systems and affiliated funds	4,582	19,135	23,717	50,029
Net increase	141,929	717,808	859,737	1,201,894
Net assets held in trust for pension benefits beginning of year	1,207,688	6,504,676	7,712,364	6,510,470
Net assets held in trust for pension benefits end of year	\$1,349,617	7,222,484	8,572,101	7,712,364



**Noncontributory Retirement System**

**Schedules of Funding Progress by Division**

(DOLLARS IN THOUSANDS)

Division	Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) (2)-(1)	(4) Funding Ratios (1)/(2)	(5) Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3)/(5)
<b>Noncontributory</b>	1/01/90	\$ 276,786	294,639	17,853	93.9%	\$ 170,267	10.5%
<b>Local Governmental</b>	1/01/91	363,006	352,819	(10,187)	102.9	180,812	(5.6)
	1/01/92	442,072	465,625	23,553	94.9	229,978	10.2
	1/01/93	513,514	526,878	13,364	97.5	243,372	5.5
	1/01/94	591,167	587,087	(4,080)	100.7	265,872	(1.5)
	1/01/95	642,303	640,310	(1,993)	100.3	286,648	(0.7)
	1/01/96	779,728	812,952	33,224	95.9	324,541	10.2
	1/01/97	930,817	987,043	56,226	94.3	394,828	14.2
	1/01/98	1,083,991	1,101,505	17,514	98.4	443,169	4.0
	12/31/98	1,245,899	1,211,225	(34,674)	102.9	478,195	(7.3)
<b>Noncontributory</b>	1/01/90	\$1,820,153	2,438,491	618,338	74.6%	\$ 775,650	79.7%
<b>State and School</b>	1/01/91	2,231,239	2,874,730	643,491	77.6	823,650	78.1
	1/01/92	2,599,568	3,333,980	734,412	78.0	1,047,693	70.1
	1/01/93	2,967,068	3,659,865	692,797	81.1	1,138,470	60.9
	1/01/94	3,447,953	4,037,428	589,475	85.4	1,211,348	48.7
	1/01/95	3,729,887	4,565,563	835,676	81.7	1,355,475	61.7
	1/01/96	4,356,854	5,219,460	862,606	83.5	1,477,407	58.4
	1/01/97	5,038,996	5,930,915	891,919	85.0	1,660,051	53.7
	1/01/98	5,838,592	6,552,830	714,238	89.1	1,757,819	40.6
	12/31/98	6,660,844	7,089,085	428,241	94.0	1,887,455	22.7
<b>Total</b>	1/01/90	\$2,096,939	2,733,130	636,191	76.7%	\$ 945,917	67.3%
<b>Noncontributory</b>	1/01/91	2,594,245	3,227,549	633,304	80.4	1,004,462	63.0
<b>Retirement</b>	1/01/92	3,041,640	3,799,605	757,965	80.1	1,277,671	59.3
<b>System</b>	1/01/93	3,480,582	4,186,743	706,161	83.1	1,381,842	51.1
	1/01/94	4,039,120	4,624,515	585,395	87.3	1,477,220	39.6
	1/01/95	4,372,190	5,205,873	833,683	84.0	1,642,123	50.8
	1/01/96	5,136,582	6,032,412	895,830	85.1	1,801,948	49.7
	1/01/97	5,969,813	6,917,958	948,145	86.3	2,054,879	46.1
	1/01/98	6,922,583	7,654,335	731,752	90.4	2,200,988	33.2
	12/31/98	7,906,743	8,300,310	393,567	95.3	2,365,650	16.6

**Noncontributory Retirement System****Schedules of Employer Contributions by Division**

(DOLLARS IN THOUSANDS)

Division	Year Ended	Employer Contributions	
		Annual Required Contributions	Percentage Contributed
<b>Noncontributory Local Governmental</b>	1989	\$ 9,636	100%
	1990	10,715	100
	1991	15,209	100
	1992	17,715	100
	1993	18,983	100
	1994	23,214	100
	1995	28,014	100
	1996	37,215	100
	1997	46,053	100
	1998	50,947	100
<b>Noncontributory State and School</b>	1989	\$ 91,278	100%
	1990	109,099	100
	1991	141,805	100
	1992	153,790	100
	1993	155,244	100
	1994	170,988	100
	1995	192,941	100
	1996	222,853	100
	1997	248,884	100
	1998	267,688	100
<b>Total Noncontributory Retirement System</b>	1989	\$100,914	100%
	1990	119,814	100
	1991	157,014	100
	1992	171,505	100
	1993	174,227	100
	1994	194,202	100
	1995	220,955	100
	1996	260,068	100
	1997	294,937	100
	1998	318,635	100

**Public Safety Retirement System****Schedules of Plan Net Assets by Division**

December 31, 1998

With Comparative Totals for December 31, 1997

	(IN THOUSANDS)		
	State of Utah Public Safety	Other Division A (with Social Security)	Salt Lake City
<b>Assets:</b>			
Cash	\$ 2	2	2
<b>Receivables:</b>			
Member contributions	6	93	1
Employer contributions	650	616	213
Investments	7,325	8,118	2,049
Total receivables	7,981	8,827	2,263
<b>Investments at fair value:</b>			
Short-term securities, domestic	9,174	10,167	2,566
Short-term securities, international	10,219	11,325	2,859
Bonds, domestic	64,616	71,610	18,077
Bonds, international	39,969	44,295	11,182
Equity investments, domestic	146,915	162,816	41,101
Equity investments, international	60,042	66,541	16,797
Venture capital	26,109	28,934	7,304
Real estate	40,666	45,067	11,377
Mortgage loans	130	144	36
Total investments	397,840	440,899	111,299
Invested securities lending collateral	49,985	55,395	13,984
Property and equipment at cost, net of accumulated depreciation	58	64	16
Total assets	455,866	505,187	127,564
<b>Liabilities:</b>			
Securities lending liability	49,985	55,395	13,984
Disbursements in excess of cash balance	1,241	1,375	347
Termination and post employment benefits	52	58	14
Due to other funds and entities	1,505	1,668	421
Investment accounts payable	8,757	9,705	2,449
Total liabilities	61,540	68,201	17,215
Net assets held in trust for pension benefits	\$394,326	436,986	110,349



Ogden	Provo	Logan	Bountiful	Other Division B (without Social Security)	Total All Divisions	
					1998	1997
2	1	1	2	2	14	14
—	21	8	—	63	192	196
41	20	6	12	154	1,712	1,664
629	341	193	165	1,125	19,945	7,635
670	382	207	177	1,342	21,849	9,495
787	427	241	207	1,408	24,977	10,605
877	476	269	230	1,569	27,824	6,127
5,546	3,007	1,700	1,456	9,923	175,935	202,885
3,430	1,860	1,051	901	6,138	108,826	27,963
12,609	6,837	3,865	3,310	22,561	400,014	411,478
5,153	2,794	1,580	1,353	9,220	163,480	164,946
2,241	1,215	687	588	4,009	71,087	47,388
3,490	1,892	1,070	916	6,245	110,723	101,304
11	6	3	3	20	353	381
34,144	18,514	10,466	8,964	61,093	1,083,219	973,077
4,290	2,326	1,315	1,126	7,676	136,097	117,346
5	3	2	1	9	158	228
39,111	21,226	11,991	10,270	70,122	1,241,337	1,100,160
4,290	2,326	1,315	1,126	7,676	136,097	117,346
106	58	33	28	191	3,379	1,512
4	2	2	1	8	141	116
129	70	40	34	231	4,098	8,039
752	407	230	197	1,344	23,841	2,290
5,281	2,863	1,620	1,386	9,450	167,556	129,303
33,830	18,363	10,371	8,884	60,672	1,073,781	970,857

**Public Safety Retirement System****Schedules of Changes in Plan Net Assets by Division**

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

	(IN THOUSANDS)		
	State of Utah Public Safety	Other Division A (with Social Security)	Salt Lake City
<b>PS</b>			
<b>Additions:</b>			
<b>Contributions:</b>			
Member	\$ 305	2,273	36
Employer	16,515	13,448	5,482
<b>Total contributions</b>	<b>16,820</b>	<b>15,721</b>	<b>5,518</b>
<b>Investment income:</b>			
Net appreciation in fair value of investments	22,110	24,478	6,241
Short-term interest, domestic	695	770	196
Short-term interest, international	244	271	69
Bonds interest, domestic	4,588	5,079	1,295
Bonds interest, international	1,521	1,684	429
Equity dividends, domestic	1,951	2,159	551
Equity dividends, international	589	652	166
Venture capital	234	259	66
Real estate net income	2,533	2,805	715
Mortgage loans	13	14	4
Securities lending	120	133	34
<b>Total investment income</b>	<b>34,598</b>	<b>38,304</b>	<b>9,766</b>
Less investment advisor fees	576	637	163
Less securities lending expenses	5	6	1
Less investment administrative expenses	110	122	31
<b>Net investment income</b>	<b>33,907</b>	<b>37,539</b>	<b>9,571</b>
<b>Total additions</b>	<b>50,727</b>	<b>53,260</b>	<b>15,089</b>
<b>Deductions:</b>			
Retirement benefits	11,426	8,984	5,317
Cost of living benefits	1,954	1,395	1,109
Supplemental retirement benefits	454	243	102
Refunds	67	441	—
Administrative expenses	307	291	110
<b>Total deductions</b>	<b>14,208</b>	<b>11,354</b>	<b>6,638</b>
<b>Increase from operations</b>	<b>36,519</b>	<b>41,906</b>	<b>8,451</b>
Transfers between systems and affiliated funds	926	469	197
<b>Net increase</b>	<b>37,445</b>	<b>42,375</b>	<b>8,648</b>
Net assets held in trust for pension benefits beginning of year	356,881	394,611	101,701
Net assets held in trust for pension benefits end of year	\$394,326	436,986	110,349

Ogden	Provo	Logan	Bountiful	Other Division B (without Social Security)	Total All Divisions	
					1998	1997
62	506	200	2	1,079	4,463	4,345
1,003	479	131	277	2,764	40,099	34,217
1,065	985	331	279	3,843	44,562	38,562
1,917	1,032	582	506	3,312	60,178	103,548
60	32	18	16	104	1,891	1,981
21	11	6	6	37	665	426
398	214	121	105	687	12,487	12,478
132	71	40	35	228	4,140	1,424
169	91	51	45	292	5,309	5,440
51	27	15	13	88	1,601	1,879
20	11	6	5	35	636	187
220	118	67	58	379	6,895	6,276
1	1	—	—	2	35	36
10	6	3	3	18	327	257
2,999	1,614	909	792	5,182	94,164	133,932
50	27	15	13	86	1,567	1,259
—	—	—	—	1	13	—
10	5	3	3	16	300	183
2,939	1,582	891	776	5,079	92,284	132,490
4,004	2,567	1,222	1,055	8,922	136,846	171,052
1,202	668	225	272	506	28,600	25,741
214	152	38	34	27	4,923	4,347
30	16	1	5	—	851	884
4	58	—	—	69	639	611
27	15	7	7	39	803	792
1,477	909	271	318	641	35,816	32,375
2,527	1,658	951	737	8,281	101,030	138,677
41	24	8	(152)	381	1,894	918
2,568	1,682	959	585	8,662	102,924	139,595
31,262	16,681	9,412	8,299	52,010	970,857	831,262
33,830	18,363	10,371	8,884	60,672	1,073,781	970,857



**Public Safety Retirement System**

**Schedules of Funding Progress by Division**

(DOLLARS IN THOUSANDS)

Division	Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) (2)-(1)	(4) Funding Ratios (1)/(2)	(5) Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3)/(5)
<b>Public Safety State of Utah</b>	1/01/90	\$119,065	162,008	42,943	73.5%	\$38,723	110.9%
	1/01/91	139,975	178,773	38,798	78.3	41,938	92.5
	1/01/92	159,186	192,533	33,347	82.7	46,965	71.0
	1/01/93	178,409	214,757	36,348	83.1	43,715	83.1
	1/01/94	204,170	245,379	41,209	83.2	52,803	78.0
	1/01/95	219,963	268,672	48,709	81.9	56,174	86.7
	1/01/96	246,859	296,811	49,952	83.2	57,193	87.3
	1/01/97	278,328	334,751	56,423	83.1	64,857	87.0
	1/01/98	318,711	363,551	44,840	87.7	69,652	64.4
	12/31/98	363,057	393,087	30,030	92.4	74,094	40.5
<b>Public Safety Other Division A (with Social Security)</b>	1/01/90	\$136,143	149,755	13,612	90.9%	\$39,742	34.3%
	1/01/91	155,096	155,438	342	99.8	43,042	0.8
	1/01/92	176,403	171,522	(4,881)	102.8	48,202	(10.1)
	1/01/93	197,574	187,752	(9,822)	105.2	45,614	(21.5)
	1/01/94	225,842	213,216	(12,626)	105.9	54,192	(23.3)
	1/01/95	242,135	239,066	(3,069)	101.3	57,909	(5.3)
	1/01/96	272,119	272,849	730	99.7	64,802	1.1
	1/01/97	306,419	311,406	4,987	98.4	71,915	6.9
	1/01/98	352,448	344,437	(8,011)	102.3	79,944	(10.0)
	12/31/98	402,408	377,048	(25,360)	106.7	89,257	(28.4)
<b>Public Safety Salt Lake City</b>	1/01/90	\$ 42,050	79,413	37,363	53.0%	\$ 8,152	458.3%
	1/01/91	47,389	82,124	34,735	57.7	8,829	393.4
	1/01/92	52,163	88,340	36,177	59.0	9,888	365.9
	1/01/93	56,930	94,811	37,881	60.0	11,565	327.5
	1/01/94	63,359	100,095	36,736	63.3	11,116	330.5
	1/01/95	66,034	106,419	40,385	62.1	12,387	326.0
	1/01/96	72,889	114,732	41,843	63.5	13,787	303.5
	1/01/97	80,299	120,767	40,468	66.5	13,804	293.2
	1/01/98	90,670	130,903	40,233	69.3	16,069	250.4
	12/31/98	101,349	137,752	36,403	73.6	16,355	222.6
<b>Public Safety Ogden</b>	1/01/90	\$ 11,630	17,905	6,275	65.0%	\$2,513	249.7%
	1/01/91	13,230	18,521	5,291	71.4	2,682	197.3
	1/01/92	15,013	20,009	4,996	75.0	2,947	169.5
	1/01/93	16,767	21,781	5,014	77.0	3,844	130.4
	1/01/94	19,148	24,542	5,394	78.0	3,254	165.8
	1/01/95	20,375	26,990	6,615	75.5	3,464	191.0
	1/01/96	22,461	27,287	4,826	82.3	3,442	140.2
	1/01/97	24,767	30,598	5,831	80.9	3,629	160.7
	1/01/98	27,838	31,691	3,853	87.8	3,899	98.8
	12/31/98	31,038	33,517	2,479	92.6	4,126	60.1
<b>Public Safety Provo</b>	1/01/90	\$ 6,218	9,518	3,300	65.3%	\$1,563	211.1%
	1/01/91	7,133	10,212	3,079	69.8	1,732	177.8
	1/01/92	7,926	11,485	3,559	69.0	1,997	178.2
	1/01/93	8,777	12,486	3,709	70.3	2,092	177.3
	1/01/94	9,837	13,339	3,502	73.7	2,304	152.0
	1/01/95	10,416	14,397	3,981	72.3	2,608	152.6
	1/01/96	11,597	15,800	4,203	73.4	2,750	152.8
	1/01/97	12,955	17,344	4,389	74.7	3,160	138.9
	1/01/98	14,904	18,311	3,407	81.4	3,532	96.5
	12/31/98	16,906	19,593	2,687	86.3	3,740	71.8

**Public Safety Retirement System**

**Schedules of Funding Progress by Division**


(Continued)

Division	Date	(DOLLARS IN THOUSANDS)					
		(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) (2)-(1)	(4) Funding Ratios (1)/(2)	(5) Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3)/(5)
<b>Public Safety Logan</b>	1/01/90	\$ 3,346	4,452	1,106	75.2%	\$ 1,223	90.4%
	1/01/91	3,754	4,795	1,041	78.3	1,324	78.6
	1/01/92	4,266	5,216	950	81.8	1,483	64.1
	1/01/93	4,783	5,475	692	87.4	1,064	65.0
	1/01/94	5,489	5,585	96	98.3	1,667	5.8
	1/01/95	5,912	5,929	17	99.7	1,213	1.4
	1/01/96	6,590	6,639	49	99.3	1,354	3.6
	1/01/97	7,352	7,749	397	94.9	1,500	26.5
	1/01/98	8,397	8,358	(39)	100.5	1,671	(2.3)
	12/31/98	9,542	9,087	(455)	105.0	1,800	(25.3)
<b>Public Safety Bountiful</b>	1/01/90	\$ 3,147	3,165	18	99.4%	\$ 815	2.2%
	1/01/91	3,558	3,761	203	94.6	883	23.0
	1/01/92	3,963	4,155	192	95.4	989	19.4
	1/01/93	4,358	4,601	243	94.7	990	24.5
	1/01/94	4,925	5,346	421	92.1	1,112	37.9
	1/01/95	5,250	5,717	467	91.8	1,109	42.1
	1/01/96	5,847	6,524	677	89.6	1,100	61.5
	1/01/97	6,500	7,607	1,107	85.4	1,167	94.9
	1/01/98	7,402	8,310	908	89.1	1,246	72.9
	12/31/98	8,157	8,723	566	93.5	1,327	42.7
<b>Public Safety Division B (without Social Security)</b>	1/01/90	\$ 8,808	11,458	2,650	76.9%	\$ 9,171	28.9%
	1/01/91	11,366	11,009	(357)	103.2	9,933	(3.6)
	1/01/92	14,731	13,316	(1,415)	110.6	11,124	(12.7)
	1/01/93	18,263	16,001	(2,262)	114.1	12,020	(18.8)
	1/01/94	22,744	19,856	(2,888)	114.5	12,506	(23.1)
	1/01/95	26,807	23,917	(2,890)	112.1	13,927	(20.8)
	1/01/96	32,248	30,508	(1,740)	105.7	15,515	(11.2)
	1/01/97	38,486	36,282	(2,204)	106.1	16,947	(13.0)
	1/01/98	46,781	46,539	(242)	100.5	19,451	(1.2)
	12/31/98	56,343	54,164	(2,179)	104.0	21,715	(10.0)
<b>Total Public Safety Retirement System</b>	1/01/90	\$330,407	437,674	107,267	75.5%	\$101,902	105.3%
	1/01/91	381,501	464,633	83,132	82.1	110,363	75.3
	1/01/92	433,651	506,576	72,925	85.6	123,595	59.0
	1/01/93	485,861	557,664	71,803	87.1	120,904	59.4
	1/01/94	555,514	627,358	71,844	88.5	138,954	51.7
	1/01/95	596,892	691,107	94,215	86.4	148,791	63.3
	1/01/96	670,610	771,150	100,540	87.0	159,943	62.9
	1/01/97	755,106	866,504	111,398	87.1	176,979	62.9
	1/01/98	867,151	952,100	84,949	91.1	195,464	43.5
	12/31/98	988,800	1,032,971	44,171	95.7	212,414	20.8

**Public Safety Retirement System**

**Schedules of Employer Contributions by Division**

(DOLLARS IN THOUSANDS)

 Division	Year Ended	Employer Contributions	
		Annual Required Contributions	Percentage Contributed
<b>Public Safety State of Utah</b>	1989	\$ 4,330	100%
	1990	7,661	100
	1991	8,995	100
	1992	8,855	100
	1993	8,205	100
	1994	8,907	100
	1995	10,670	100
	1996	12,938	100
	1997	14,310	100
	1998	16,515	100
<b>Public Safety Other Division A (with Social Security)</b>	1989	\$ 2,622	100%
	1990	3,576	100
	1991	5,147	100
	1992	4,984	100
	1993	3,809	100
	1994	4,503	100
	1995	7,101	100
	1996	8,860	100
	1997	10,755	100
	1998	13,448	100
<b>Public Safety Salt Lake City</b>	1989	\$ 1,444	100%
	1990	2,562	100
	1991	3,314	100
	1992	3,582	100
	1993	3,307	100
	1994	3,755	100
	1995	4,363	100
	1996	4,359	100
	1997	5,222	100
	1998	5,482	100
<b>Public Safety Ogden</b>	1989	\$ 303	100%
	1990	314	100
	1991	397	100
	1992	423	100
	1993	369	100
	1994	352	100
	1995	689	100
	1996	792	100
	1997	899	100
	1998	1,003	100
<b>Public Safety Provo</b>	1989	\$ 219	100%
	1990	251	100
	1991	257	100
	1992	319	100
	1993	240	100
	1994	273	100
	1995	303	100
	1996	341	100
	1997	423	100
	1998	479	100



**Public Safety Retirement System****Schedules of Employer Contributions by Division**

(Continued)

Division	Year Ended	Employer Contributions	
		Annual Required Contributions	Percentage Contributed
<b>Public Safety Logan</b>	1989	\$ 72	100%
	1990	77	100
	1991	106	100
	1992	121	100
	1993	100	100
	1994	94	100
	1995	82	100
	1996	72	100
	1997	96	100
	1998	131	100
<b>Public Safety Bountiful</b>	1989	\$ 49	100%
	1990	130	100
	1991	157	100
	1992	127	100
	1993	130	100
	1994	149	100
	1995	179	100
	1996	203	100
	1997	230	100
	1998	277	100
<b>Public Safety Other Division B (without Social Security)</b>	1989	\$ 601	100%
	1990	897	100
	1991	1,106	100
	1992	1,030	100
	1993	800	100
	1994	862	100
	1995	1,345	100
	1996	1,706	100
	1997	2,282	100
	1998	2,764	100
<b>Total Public Safety Retirement System</b>	1989	\$ 9,640	100%
	1990	15,468	100
	1991	19,479	100
	1992	19,441	100
	1993	16,960	100
	1994	18,895	100
	1995	24,732	100
	1996	29,271	100
	1997	34,217	100
	1998	40,099	100

**Firefighters Retirement System****Schedules of Plan Net Assets by Division**

December 31, 1998

With Comparative Totals for December 31, 1997

(IN THOUSANDS)

	Division A (with Social Security)	Division B (without Social Security)	Total All Divisions	
			1998	1997
<b>Assets:</b>				
Cash	\$ 1	1	2	2
<b>Receivables:</b>				
Member contributions	78	322	400	364
Employer contributions	—	91	91	113
Fire insurance premium tax	370	1,773	2,143	1,766
Investments	976	7,538	8,514	3,301
Total receivables	1,424	9,724	11,148	5,544
<b>Investments at fair value:</b>				
Short-term securities, domestic	1,222	9,441	10,663	4,585
Short-term securities, international	1,361	10,517	11,878	2,649
Bonds, domestic	8,606	66,497	75,103	87,717
Bonds, international	5,323	41,132	46,455	12,090
Equity investments, domestic	19,567	151,190	170,757	177,902
Equity investments, international	7,997	61,789	69,786	71,314
Venture capital	3,477	26,868	30,345	20,488
Real estate	5,416	41,849	47,265	43,799
Mortgage loans	17	134	151	165
Total investments	52,986	409,417	462,403	420,709
Invested securities lending collateral	6,657	51,439	58,096	50,735
Property and equipment at cost, net of accumulated depreciation	8	60	68	98
Total assets	61,076	470,641	531,717	477,088
<b>Liabilities:</b>				
Securities lending liability	6,657	51,439	58,096	50,735
Disbursements in excess of cash balance	165	1,277	1,442	654
Termination and post employment benefits	7	53	60	50
Due to other funds and entities	200	1,549	1,749	3,475
Investment accounts payable	1,167	9,013	10,180	990
Total liabilities	8,196	63,331	71,527	55,904
Net assets held in trust for pension benefits	\$52,880	407,310	460,190	421,184

**Firefighters Retirement System****Schedules of Changes in Plan Net Assets by Division**

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

	(IN THOUSANDS)			
	Division A (with Social Security)	Division B (without Social Security)	Total All Divisions	
			1998	1997
<b>Additions:</b>				
<b>Contributions:</b>				
Member	\$ 1,250	7,521	8,771	8,358
Employer	—	2,546	2,546	2,836
Fire insurance premium tax	758	3,633	4,391	4,552
<b>Total contributions</b>	<b>2,008</b>	<b>13,700</b>	<b>15,708</b>	<b>15,746</b>
<b>Investment income:</b>				
Net appreciation in fair value of investments	2,927	22,960	25,887	44,971
Short-term interest, domestic	92	722	814	860
Short-term interest, international	32	254	286	185
Bonds interest, domestic	607	4,764	5,371	5,420
Bonds interest, international	201	1,580	1,781	618
Equity dividends, domestic	258	2,026	2,284	2,363
Equity dividends, international	78	612	690	816
Venture capital	31	242	273	81
Real estate net income	335	2,631	2,966	2,726
Mortgage loans	2	13	15	16
Securities lending	16	125	141	111
<b>Total investment income</b>	<b>4,579</b>	<b>35,929</b>	<b>40,508</b>	<b>58,167</b>
Less investment advisor fees	76	598	674	547
Less securities lending expense	1	5	6	—
Less investment administrative expenses	15	114	129	79
<b>Net investment income</b>	<b>4,487</b>	<b>35,212</b>	<b>39,699</b>	<b>57,541</b>
<b>Total additions</b>	<b>6,495</b>	<b>48,912</b>	<b>55,407</b>	<b>73,287</b>
<b>Deductions:</b>				
Retirement benefits	691	11,296	11,987	10,836
Cost of living benefits	151	2,670	2,821	2,510
Supplemental retirement benefits	48	885	933	975
Refunds	22	252	274	298
Administrative expenses	32	293	325	331
<b>Total deductions</b>	<b>944</b>	<b>15,396</b>	<b>16,340</b>	<b>14,950</b>
<b>Increase from operations</b>	<b>5,551</b>	<b>33,516</b>	<b>39,067</b>	<b>58,337</b>
Transfers between systems and affiliated funds	(139)	78	(61)	292
<b>Net increase</b>	<b>5,412</b>	<b>33,594</b>	<b>39,006</b>	<b>58,629</b>
Net assets held in trust for pension benefits beginning of year	47,468	373,716	421,184	362,555
Net assets held in trust for pension benefits end of year	\$52,880	407,310	460,190	421,184



**Firefighters Retirement System**

**Schedules of Funding Progress by Division**

(DOLLARS IN THOUSANDS)

Division	Date	( 1 ) Actuarial Value of Assets	( 2 ) Actuarial Accrued Liability (AAL) Entry Age	( 3 ) Unfunded AAL (UAAL) ( 2 )-( 1 )	( 4 ) Funding Ratios ( 1 )/( 2 )	( 5 ) Annual Covered Payroll	( 6 ) UAAL as a % of Covered Payroll ( 3 )/( 5 )
<b>Firefighters</b>	1/01/90	\$ 14,463	12,984	(1,479)	111.4%	\$ 4,117	(35.9)%
<b>Division A</b>	1/01/91	16,780	14,748	(2,032)	113.8	4,637	(43.8)
<b>(with Social Security)</b>	1/01/92	19,234	16,513	(2,721)	116.5	4,984	(54.6)
	1/01/93	21,570	17,367	(4,203)	124.2	5,327	(78.9)
	1/01/94	25,213	20,326	(4,887)	124.0	5,682	(86.0)
	1/01/95	27,804	24,708	(3,096)	112.5	5,768	(53.7)
	1/01/96	31,807	28,026	(3,781)	113.5	6,299	(60.0)
	1/01/97	36,473	32,138	(4,335)	113.5	7,032	(61.6)
	1/01/98	42,528	37,464	(5,064)	113.5	7,968	(63.6)
	12/31/98	48,851	41,751	(7,100)	117.0	9,375	(75.7)
<b>Firefighters</b>	1/01/90	135,209	178,879	43,670	75.6%	\$25,290	172.7%
<b>Division B</b>	1/01/91	154,959	194,649	39,690	79.6	26,275	151.1
<b>(without Social Security)</b>	1/01/92	173,632	211,402	37,770	82.1	28,243	133.7
	1/01/93	191,589	220,385	28,796	86.9	31,190	92.3
	1/01/94	218,015	258,758	40,743	84.3	32,197	126.5
	1/01/95	233,719	282,751	49,032	82.7	34,389	142.6
	1/01/96	262,009	305,406	43,397	85.8	36,728	118.2
	1/01/97	293,002	330,273	37,271	88.7	38,937	95.7
	1/01/98	333,650	347,511	13,861	96.0	43,319	32.0
	12/31/98	374,554	370,937	(3,617)	101.0	44,951	(8.0)
<b>Total</b>	1/01/90	\$149,672	191,863	42,191	78.0%	\$29,407	143.5%
<b>Firefighters</b>	1/01/91	171,739	209,397	37,658	82.0	30,912	121.8
<b>Retirement</b>	1/01/92	192,866	227,915	35,049	84.6	33,227	105.5
<b>System</b>	1/01/93	213,159	237,752	24,593	89.7	36,517	67.3
	1/01/94	243,228	279,084	35,856	87.2	37,879	94.7
	1/01/95	261,523	307,459	45,936	85.1	40,157	114.4
	1/01/96	293,816	333,432	39,616	88.1	43,027	92.1
	1/01/97	329,475	362,411	32,936	90.9	45,969	71.6
	1/01/98	376,178	384,975	8,797	97.7	51,287	17.2
	12/31/98	423,405	412,688	(10,717)	102.6	54,326	(19.7)

**Firefighters Retirement System****Schedules of Employer Contributions by Division**

(DOLLARS IN THOUSANDS)

Division	Year Ended	Employer Contributions	
		Annual Required Contributions	Percentage Contributed
<b>Firefighters</b>	1989	\$ 373	100%
<b>Division A</b>	1990	365	100
<b>(with Social Security)</b>	1991	275	100
	1992	204	100
	1993	394	100
	1994	499	100
	1995	697	100
	1996	651	100
	1997	691	100
	1998	758	100
<b>Firefighters</b>	1989	\$4,691	100%
<b>Division B</b>	1990	4,537	100
<b>(without Social Security)</b>	1991	4,233	100
	1992	4,205	100
	1993	4,566	100
	1994	4,999	100
	1995	5,850	100
	1996	5,684	100
	1997	6,697	100
	1998	6,179	100
<b>Total</b>	1989	\$5,064	100%
<b>Firefighters</b>	1990	4,902	100
<b>Retirement</b>	1991	4,508	100
<b>System</b>	1992	4,409	100
	1993	4,960	100
	1994	5,498	100
	1995	6,547	100
	1996	6,335	100
	1997	7,388	100
	1998	6,937	100

**Judges Retirement System****Schedules of Plan Net Assets**

December 31, 1998

With Comparative Totals for December 31, 1997

(IN THOUSANDS)

	1998	1997
<b>J</b>		
<b>Assets:</b>		
Cash	\$ 1	1
<b>Receivables:</b>		
Member contributions	1	1
Employer contributions	71	72
Court fees	1,008	334
Investments	1,350	519
Total receivables	2,430	926
<b>Investments at fair value:</b>		
Short-term securities, domestic	1,691	721
Short-term securities, international	1,884	417
Bonds, domestic	11,911	13,796
Bonds, international	7,368	1,901
Equity investments, domestic	27,082	27,981
Equity investments, international	11,068	11,216
Venture capital	4,813	3,222
Real estate	7,496	6,889
Mortgage loans	24	27
Total investments	73,337	66,170
Invested securities lending collateral	9,214	7,980
Property and equipment at cost, net of accumulated depreciation	11	15
Total assets	84,993	75,092
<b>Liabilities:</b>		
Securities lending liability	9,214	7,980
Disbursements in excess of cash balance	229	103
Termination and post employment benefits	9	8
Due to other funds and entities	277	546
Investment accounts payable	1,614	156
Total liabilities	11,343	8,793
Net assets held in trust for pension benefits	\$73,650	66,299



**Governors and Legislative Pension Plan****Schedules of Plan Net Assets**

December 31, 1998

With Comparative Totals for December 31, 1997

(IN THOUSANDS)

	1998	1997
<b>Assets:</b>		
Cash	\$ 1	1
<b>Receivables:</b>		
Investments	204	83
Total receivables	204	83
<b>Investments at fair value:</b>		
Short-term securities, domestic	256	115
Short-term securities, international	285	67
Bonds, domestic	1,801	2,205
Bonds, international	1,114	304
Equity investments, domestic	4,096	4,472
Equity investments, international	1,674	1,792
Venture capital	728	515
Real estate	1,134	1,101
Mortgage loans	4	4
Total investments	11,092	10,575
Invested securities lending collateral	1,393	1,275
Property and equipment at cost, net of accumulated depreciation	2	2
Total assets	12,692	11,936
<b>Liabilities:</b>		
Securities lending liability	1,393	1,275
Disbursements in excess of cash balance	35	16
Termination and post employment benefits	1	1
Due to other funds and entities	42	88
Investment accounts payable	245	25
Total liabilities	1,716	1,405
Net assets held in trust for pension benefits	\$10,976	10,531

**401(k) Plan****Balance Sheets by Investment Fund**

December 31, 1998

With Comparative Totals for December 31, 1997

	(IN THOUSANDS)				
	Income Fund	Group Annuity Fund	Member Loan Fund	Bond Fund	Balanced Fund
<b>Assets:</b>					
Cash	\$ 2,359	—	—	40	132
Receivables	—	—	3,581	—	—
<b>Investments at fair value:</b>					
Short-term securities	—	—	—	—	—
Bonds	265,717	—	—	11,945	—
Equity investments, domestic	—	—	—	—	206,662
Equity investments, international	—	—	—	—	—
Investment contracts	—	42,694	—	—	—
<b>Total investments</b>	<b>265,717</b>	<b>42,694</b>	<b>—</b>	<b>11,945</b>	<b>206,662</b>
Invested securities lending collateral	—	—	—	—	—
<b>Total assets</b>	<b>\$268,076</b>	<b>42,694</b>	<b>3,581</b>	<b>11,985</b>	<b>206,794</b>
<b>Liabilities and fund balance:</b>					
<b>Liabilities:</b>					
Securities lending liability	\$ —	—	—	—	—
Disbursements in excess of cash balance	—	1	—	—	—
Administrative expenses payable	439	102	—	14	485
Investment advisor fees payable	1,995	285	—	4	—
<b>Total liabilities</b>	<b>2,434</b>	<b>388</b>	<b>—</b>	<b>18</b>	<b>485</b>
<b>Fund balance:</b>					
Employee deferred compensation	265,642	42,306	3,581	11,967	206,309
Administrative reserve	—	—	—	—	—
<b>Total fund balance</b>	<b>265,642</b>	<b>42,306</b>	<b>3,581</b>	<b>11,967</b>	<b>206,309</b>
<b>Total liabilities and fund balance</b>	<b>\$268,076</b>	<b>42,694</b>	<b>3,581</b>	<b>11,985</b>	<b>206,794</b>

Large Cap Stock Index Fund	Large Cap Stock Growth Fund	Small Cap Stock Fund	International Fund	Short Horizon Fund	Medium Horizon Fund	Long Horizon Fund	Total	
							1998	1997
—	9	13	50	9	—	65	2,677	4,662
—	—	—	—	—	—	—	3,581	1,955
—	—	—	—	—	—	—	—	876
—	—	—	—	5,425	5,556	5,069	293,712	246,244
358,126	25,523	10,179	—	1,703	5,454	12,237	619,884	503,993
—	—	—	46,557	798	1,891	4,128	53,374	—
—	—	—	—	—	—	—	42,694	47,276
358,126	25,523	10,179	46,557	7,926	12,901	21,434	1,009,664	798,389
22,963	1,381	—	—	81	256	560	25,241	—
381,089	26,913	10,192	46,607	8,016	13,157	22,059	1,041,163	805,006
22,963	1,381	—	—	81	256	560	25,241	—
35	—	—	—	—	12	—	48	745
733	40	17	106	12	23	37	2,008	—
88	33	—	—	5	9	12	2,431	1,270
23,819	1,454	17	106	98	300	609	29,728	2,015
357,270	25,459	10,175	46,501	7,918	12,857	21,450	1,011,435	802,129
—	—	—	—	—	—	—	—	862
357,270	25,459	10,175	46,501	7,918	12,857	21,450	1,011,435	802,991
381,089	26,913	10,192	46,607	8,016	13,157	22,059	1,041,163	805,006

**401(k) Plan****Schedules of Revenues, Expenditures and  
Changes in Fund Balance by Investment Fund**

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

(IN THOUSANDS)

	Income Fund	Group Annuity Fund	Member Loan Fund	Bond Fund	Balanced Fund
<b>Revenues:</b>					
Member contributions	\$ 26,799	8	3	1,018	27,206
<b>Investment income:</b>					
Net appreciation (depreciation) in fair value of investments	16,286	10	10	451	21,465
Investment contracts	—	3,164	290	—	—
Total investment income	16,286	3,174	300	451	21,465
Less investment advisor fees	397	285	—	4	—
Net investment income	15,889	2,889	300	447	21,465
Total revenues	42,688	2,897	303	1,465	48,671
<b>Expenditures:</b>					
Member refunds	11,082	2,060	146	270	7,404
Administrative expenses	440	102	94	14	462
Total expenditures	11,522	2,162	240	284	7,866
Revenues in excess of expenditures	31,166	735	63	1,181	40,805
Transfers between systems and affiliated funds	(11,111)	(5,705)	2,018	10,786	(24,633)
Net increase (decrease) in plan assets	20,055	(4,970)	2,081	11,967	16,172
Fund balance beginning of year	245,587	47,276	1,500	—	190,137
Fund balance end of year	\$265,642	42,306	3,581	11,967	206,309



Large Cap Stock Index Fund	Large Cap Stock Growth Fund	Small Cap Stock Fund	International Fund	Short Horizon Fund	Medium Horizon Fund	Long Horizon Fund	Total	
							1998	1997
36,697	3,468	1,838	9,333	719	2,049	4,284	113,422	98,509
76,904	4,651	(430)	5,549	539	1,166	2,247	128,848	115,393
—	—	—	—	—	—	—	3,454	3,253
76,904	4,651	(430)	5,549	539	1,166	2,247	132,302	118,646
88	33	—	—	5	8	12	832	1,446
76,816	4,618	(430)	5,549	534	1,158	2,235	131,470	117,200
113,513	8,086	1,408	14,882	1,253	3,207	6,519	244,892	215,709
10,704	300	164	1,668	121	171	293	34,383	27,678
733	40	17	105	12	23	37	2,079	412
11,437	340	181	1,773	133	194	330	36,462	28,090
102,076	7,746	1,227	13,109	1,120	3,013	6,189	208,430	187,619
(19,862)	17,713	8,948	(10,043)	6,798	9,844	15,261	14	29
82,214	25,459	10,175	3,066	7,918	12,857	21,450	208,444	187,648
275,056	—	—	43,435	—	—	—	802,991	615,343
357,270	25,459	10,175	46,501	7,918	12,857	21,450	1,011,435	802,991

**457 Plan****Balance Sheets by Investment Fund**

December 31, 1998

With Comparative Totals for December 31, 1997

	(IN THOUSANDS)				
	Income Fund	Group Annuity Fund	Bond Fund	Balanced Fund	Large Cap Stock Index Fund
<b>Assets:</b>					
Cash	\$ 232	—	—	—	—
Receivables	—	—	—	—	—
<b>Investments at fair value:</b>					
Short-term securities	—	—	—	—	—
Bonds	38,704	—	3,035	—	—
Equity investments, domestic	—	—	—	34,139	79,519
Equity investments, international	—	—	—	—	—
Investment contracts	—	36,637	—	—	—
<b>Total investments</b>	<b>38,704</b>	<b>36,637</b>	<b>3,035</b>	<b>34,139</b>	<b>79,519</b>
Invested securities lending collateral	—	—	—	—	5,098
<b>Total assets</b>	<b>\$38,936</b>	<b>36,637</b>	<b>3,035</b>	<b>34,139</b>	<b>84,617</b>
<b>Liabilities and fund balance:</b>					
<b>Liabilities:</b>					
Securities lending liability	\$ —	—	—	—	5,098
Disbursements in excess of cash balance	—	—	29	21	142
Administrative expenses payable	63	89	4	85	170
Investment advisor fees payable	59	250	1	—	21
<b>Total liabilities</b>	<b>122</b>	<b>339</b>	<b>34</b>	<b>106</b>	<b>5,431</b>
<b>Fund balance:</b>					
Employee deferred compensation	38,814	36,298	3,001	34,033	79,186
Administrative reserve	—	—	—	—	—
<b>Total fund balance</b>	<b>38,814</b>	<b>36,298</b>	<b>3,001</b>	<b>34,033</b>	<b>79,186</b>
<b>Total liabilities and fund balance</b>	<b>\$38,936</b>	<b>36,637</b>	<b>3,035</b>	<b>34,139</b>	<b>84,617</b>

Large Cap Stock Growth Fund	Small Cap Stock Fund	International Fund	Short Horizon Fund	Medium Horizon Fund	Long Horizon Fund	Total	
						1998	1997
—	—	—	1	3	8	244	876
—	—	—	—	—	—	—	193
—	—	—	—	—	—	—	302
—	—	—	1,412	1,268	550	44,969	35,343
4,077	1,930	—	443	1,244	1,330	122,682	109,595
—	—	6,667	208	432	448	7,755	—
—	—	—	—	—	—	36,637	48,480
4,077	1,930	6,667	2,063	2,944	2,328	212,043	193,720
221	—	—	21	58	61	5,459	—
4,298	1,930	6,667	2,085	3,005	2,397	217,746	194,789
221	—	—	21	58	61	5,459	—
10	8	—	—	—	—	210	100
6	3	16	3	5	4	448	—
5	—	—	2	2	2	342	147
242	11	16	26	65	67	6,459	247
4,056	1,919	6,651	2,059	2,940	2,330	211,287	193,778
—	—	—	—	—	—	—	764
4,056	1,919	6,651	2,059	2,940	2,330	211,287	194,542
4,298	1,930	6,667	2,085	3,005	2,397	217,746	194,789

**457 Plan**

## Schedules of Revenues, Expenditures and Changes in Fund Balance by Investment Fund

Year Ended December 31, 1998

With Comparative Totals for Year Ended December 31, 1997

	(IN THOUSANDS)				
	Income Fund	Group Annuity Fund	Bond Fund	Balanced Fund	Large Cap Stock Index Fund
<b>Revenues:</b>					
Member contributions	\$ 1,400	—	43	1,325	1,975
<b>Investment income:</b>					
Net appreciation (depreciation) in fair value of investments	2,020	8	130	3,773	17,728
Investment contracts	—	2,811	—	—	—
Total investment income	2,020	2,819	130	3,773	17,728
Less investment advisor fees	57	250	1	—	20
Net investment income	1,963	2,569	129	3,773	17,708
Total revenues	3,363	2,569	172	5,098	19,683
<b>Expenditures:</b>					
Member refunds	2,663	10,088	32	1,637	2,031
Administrative expenses	64	89	3	81	171
Total expenditures	2,727	10,177	35	1,718	2,202
Revenues in excess of expenditures	636	(7,608)	137	3,380	17,481
Transfers between systems and affiliated funds	2,327	(4,574)	2,864	(4,595)	(5,666)
Net increase (decrease) in plan assets	2,963	(12,182)	3,001	(1,215)	11,815
Fund balance beginning of year	35,851	48,480	—	35,248	67,371
Fund balance end of year	\$38,814	36,298	3,001	34,033	79,186



Large Cap Stock Growth Fund	Small Cap Stock Fund	International Fund	Short Horizon Fund	Medium Horizon Fund	Long Horizon Fund	Total	
						1998	1997
157	96	401	115	134	178	5,824	7,002
803	(114)	720	136	284	225	25,713	25,610
—	—	—	—	—	—	2,811	2,945
803	(114)	720	136	284	225	28,524	28,555
5	—	—	1	3	1	338	61
798	(114)	720	135	281	224	28,186	28,494
955	(18)	1,121	250	415	402	34,010	35,496
36	4	154	125	32	17	16,819	12,101
7	4	16	3	4	4	446	355
43	8	170	128	36	21	17,265	12,456
912	(26)	951	122	379	381	16,745	23,040
3,144	1,945	(1,892)	1,937	2,561	1,949	—	—
4,056	1,919	(941)	2,059	2,940	2,330	16,745	23,040
—	—	7,592	—	—	—	194,542	171,502
4,056	1,919	6,651	2,059	2,940	2,330	211,287	194,542

## Schedules of Administrative and Investment Expenses

Year Ended  
December 31, 1998

	(IN THOUSANDS)			
	Defined Benefit Pension Plans	Pension Investment Trust Fund	401(k) and 457 Plans	Total
Personal services:				
Salaries and wages	\$3,548	706	1,212	5,466
Employee benefits	1,346	210	494	2,050
Total personal services	4,894	916	1,706	7,516
Professional services:				
Audit	42	—	11	53
Actuarial services	129	—	—	129
General counsel	272	29	17	318
Banking services	—	40	—	40
Security handling expense	—	2,020	99	2,119
Investment advisor fees	—	16,301	1,170	17,471
Other consulting services	53	—	29	82
Total professional services	496	18,390	1,326	20,212
Communications:				
Telephone	501	—	—	501
Postage	208	—	159	367
Other	14	—	—	14
Total communications	723	—	159	882
Rentals:				
Office space	416	82	32	530
Office equipment rental	34	—	—	34
Data processing equipment	160	—	—	160
Total rentals	610	82	32	724
Miscellaneous:				
Data processing	281	—	328	609
Travel	84	21	2	107
Contractual services	369	2	131	502
Supplies and maintenance	94	4	—	98
Insurance and bonding premiums	308	—	11	319
Subscription expense	15	—	—	15
Office supplies	118	—	—	118
Depreciation expense	565	—	—	565
Total miscellaneous	1,834	27	472	2,333
Total administrative expenses	\$8,557	19,415	3,695	31,667
Allocation of administrative expenses:				
Contributory Retirement System	\$ 743	—	—	743
Noncontributory Retirement System	6,460	—	—	6,460
Public Safety Retirement System	803	—	—	803
Firefighters Retirement System	325	—	—	325
Judges Retirement System	53	—	—	53
Governors and Legislative Pension Plan	6	—	—	6
401(k) Plan	—	—	2,079	2,079
457 Plan	—	—	446	446
Total administrative expenses	8,390	—	2,525	10,915
Other affiliated funds	167	—	—	167
Investment administrative expense	—	3,114	—	3,114
Investment advisor fees:				
Investment Fund	—	16,301	—	16,301
401(k) Plan	—	—	832	832
457 Plan	—	—	338	338
Total investment advisor fees	—	16,301	1,170	17,471
Total administrative expense allocations	\$8,557	19,415	3,695	31,667

Utah Retirement Systems  
1998 Comprehensive  
Annual Financial Report



# INVESTMENT SECTION

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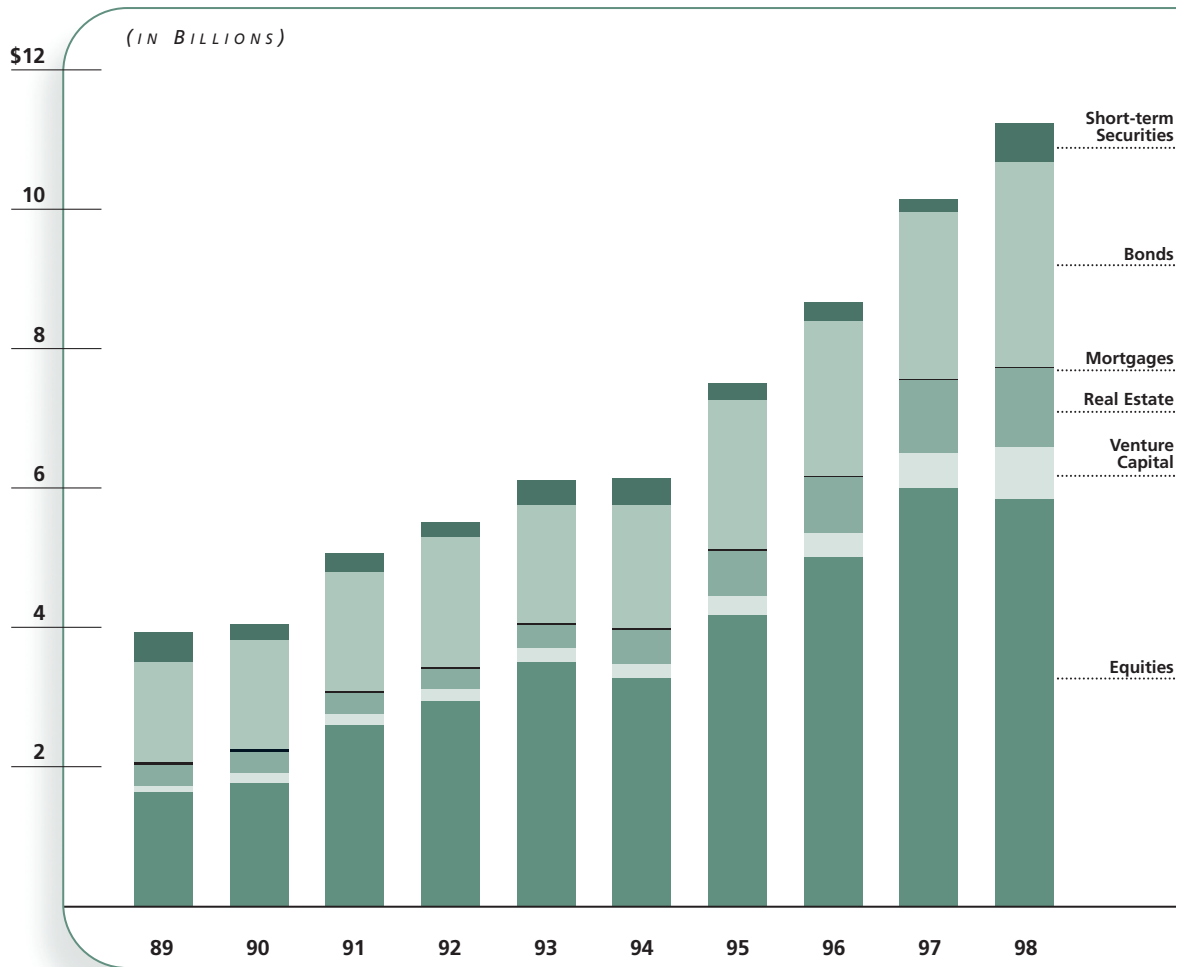
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All Retirement Systems

# Ten-Year Investment Comparison



(IN MILLIONS)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Short-term Securities</b>	\$ 435	229	274	206	348	380	231	269	174	548
<b>Bonds</b>	1,429	1,587	1,711	1,879	1,712	1,763	2,143	2,225	2,406	2,951
<b>Mortgages</b>	33	17	15	13	15	12	11	4	4	4
<b>Real Estate</b>	306	309	308	300	339	502	662	805	1,057	1,149
<b>Venture Capital</b>	95	138	149	160	193	209	271	344	494	738
<b>Equities</b>	1,638	1,777	2,611	2,951	3,510	3,274	4,186	5,022	6,009	5,848
<b>Totals</b>	<b>\$3,936</b>	<b>4,057</b>	<b>5,068</b>	<b>5,509</b>	<b>6,117</b>	<b>6,140</b>	<b>7,504</b>	<b>8,669</b>	<b>10,144</b>	<b>11,238</b>



## Pension Investment Trust Fund

## Report on Investment Activity

UTAH STATE RETIREMENT BOARD

**UTAH RETIREMENT SYSTEMS**

540 East 200 South  
 Salt Lake City, Utah 84102-2099  
 (801) 366-7700  
 (800) 365-8772 TOLL FREE  
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M. DEE WILLIAMS  
 EXECUTIVE DIRECTOR

February 26, 1999

Dear Members of the Utah Retirement Systems:

Economic conditions in the United States continued to be favorable in 1998. Gross Domestic Product increased at an above trend rate of 3.9% for the year, while inflation as measured by the Consumer Price Index increased only 1.6%. This combination of strong growth coupled with low inflation created a positive environment for large stocks in the United States. The Standard & Poors 500 Index, a popular benchmark for large stock returns, produced a 28.58% return. This raises the five-year return for this index to 24.06%, a rate well in excess of its seventy-two year average of 10.90%. Smaller stocks, as represented by the Russell 2000 Index, had negative returns in 1998. The index declined by 2.55%. Emerging markets were also poor performers in 1998, declining by 25.34%. Fixed income returns, as measured by the Lehman Aggregate Index, were a respectable 8.70%.

During 1998 Utah Retirement Systems' portfolio experienced a 9.61% rate of return on fair value. This return increased the portfolio's value by approximately \$1 billion to a market value in excess of \$11.2 billion, a new high. The five-year average return for the Fund was 12.23%.

Returns for 1998 helped the Fund to accomplish its stated goal of providing promised benefits at the lowest possible cost to the employees and the employers. The basic investment objective of the Fund is a total return which exceeds the actuarial assumption (8%) over rolling five-year periods. Over the long term, the portfolio is expected to produce returns comparable to those of other public and private pension funds.

Correct asset allocation is the main determinant of the Fund's success in meeting long-term objectives. Adherence to a disciplined investment policy requires the Fund to reduce asset classes that have appreciated in value beyond established targets and reinvest the proceeds in to asset classes that have underperformed and fallen to levels below their established targets. This disciplined process automatically forces the Fund to sell relatively high priced assets and buy relatively low priced assets. Currently, the portfolio mix which has a high probability of achieving the Fund's basic investment objective is: 55% equity investments, 27% fixed income investments, 11% real estate investments and 7% alternative investments.

Given recent high returns for domestic equity markets, it may be prudent to note that long-term returns from this asset class have averaged just slightly in excess of 10% for the last seventy-two years. Historically, returns from all asset classes regress to the average return over time. It is possible that U.S. equities may experience a period of under performance in the not-too-distant future.

Sincerely,



Richard L. Cherry  
 Chief Investment Officer

## Pension Investment Trust Fund

## Outline of Investment Policies

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The governing body of the Utah Retirement Systems (Systems) is a seven member board. The Board is comprised of six trustees appointed by the Governor and the Utah State Treasurer who serves as an ex-officio member. Four Board members are appointed for their investment expertise, and two members are appointed to represent employee and employer interests.

The Retirement Board has statutory authority to pool pension assets in the Utah Retirement Investment Fund (Fund). Statutes also establish that this Fund shall be invested in accordance with the “prudent person rule”. The prudent person rule requires all members of the Board and investment staff to discharge their duties solely in the interest of Systems’ participants and beneficiaries and with the care, skill, prudence and diligence which they would exercise in the conduct of their own affairs. To this end a Statement of Investment Policy and Performance Objectives has been created for the Fund and adopted by the Board. The purpose of this Statement is to:

- Outline the expected return and risk profile for the Fund;
- Establish the target asset allocation mix and acceptable rebalancing ranges;
- Describe plan and manager policies and objectives for performance evaluation;
- Communicate investment performance standards to investment managers.

The primary investment objectives are to preserve Fund assets and generate an appropriate level of risk adjusted return to meet future pension obligations. The Systems periodically complete an asset allocation and liability study to determine the optimal portfolio diversification expected to generate a risk-adjusted return sufficient to meet the Fund’s actuarial investment requirements.

The Systems’ investment portfolio includes strategic, long-term commitments in the following asset classes: Domestic Equities, Domestic Fixed Income, International Equities, International Fixed Income, Real Estate, and Alternative Investments. Asset allocation is reviewed in conjunction with the plan liabilities at least every five years.

The Board’s policy is to establish a long-term strategic asset allocation that mitigates overall expected portfolio risk (volatility) and maximizes expected return without unduly constraining the discretionary, tactical decision-making process of the investment managers.

To implement the asset allocation plan, the Executive Director, supported by the Board, Staff and Consultant, selects appropriate money management experts to invest the Fund assets. This selection process includes the creation of specific search criteria, completion and documentation of analysis and due diligence on potential candidates, and interviews completed by the Staff and/or Board. It is not the Staff or Board’s intention to be involved with the day-to-day decisions made by external investment managers. Internal investment staff also manages segments of the portfolio.

All managers must act within the restrictions established by the investment guidelines put forth in the Statement of Investment Policy. All managers must acknowledge a co-fiduciary status to the Fund. All managers are expected to communicate with the Staff at least quarterly.

Managers’ portfolios shall be evaluated both against appropriate market indices and similar manager style groups. The Investment Policy outlines appropriate benchmarks.

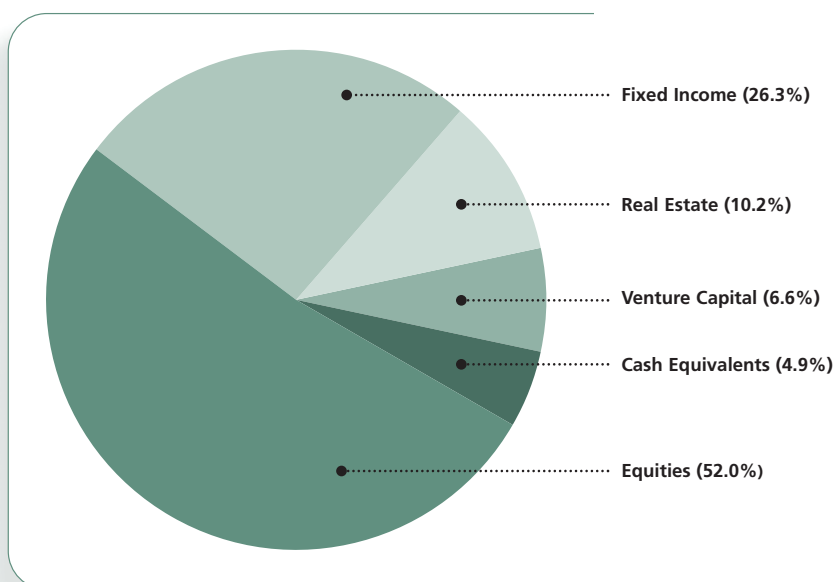
Investment return calculations are prepared using a time-weighted rate of return based on Performance Presentation Standards of the Association for Investment Management and Research (AIMR).

Pension Investment Trust Fund

# Investment Highlights

## Asset Allocation at Fair Value

December 31, 1998



### ASSET ALLOCATION AT FAIR VALUE

	December 31,				
	1994	1995	1996	1997	1998
<b>Fixed Income</b>	28.9%	28.7%	25.7%	23.8%	26.3%
<b>Equities</b>	53.3	55.8	57.9	59.2	52.0
<b>Venture Capital</b>	3.4	3.6	4.0	4.9	6.6
<b>Real Estate</b>	8.2	8.8	9.3	10.4	10.2
<b>Cash Equivalents</b>	6.2	3.1	3.1	1.7	4.9
<b>Total Portfolio</b>	100.0%	100.0%	100.0%	100.0%	100.0%

## 1998 Investment Summary

(DOLLARS IN THOUSANDS)

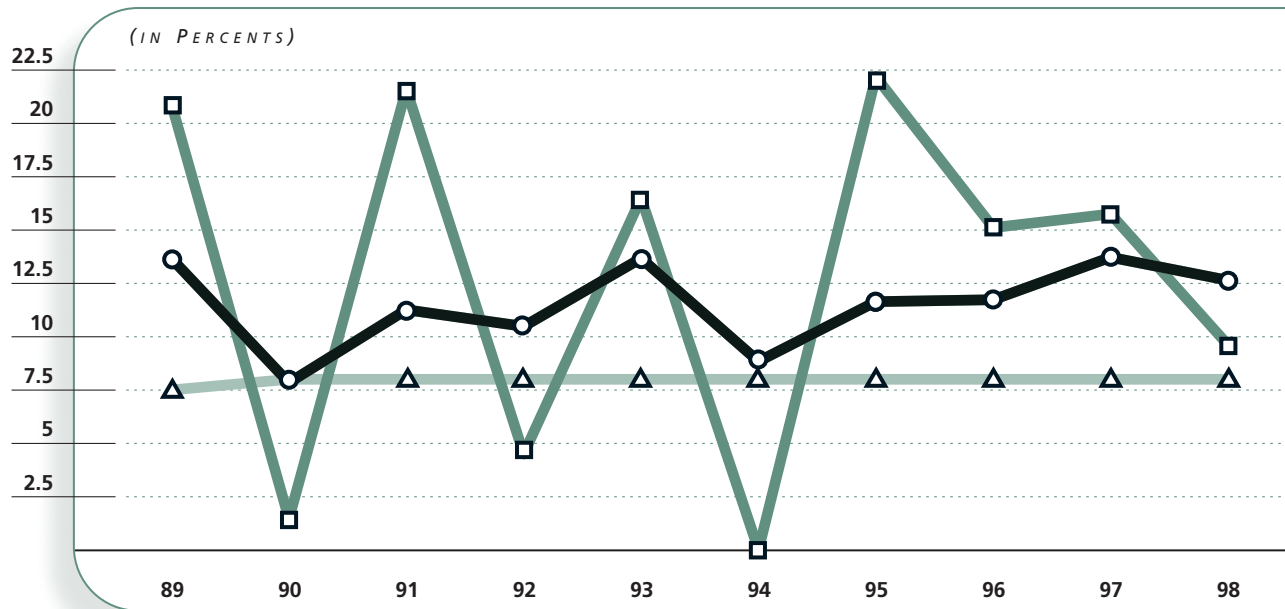
	1998 Beginning Fair Value	Purchases	Sales and Redemptions	Increase (Decrease) in Fair Value	1998 Ending Fair Value	Percentage of Total Fair Value
Short-term securities, domestic	\$ 110,554	7,896,686	7,748,003	—	259,237	2.31%
Short-term securities, international	63,868	16,712,116	16,515,838	28,619	288,765	2.57
Bonds, domestic	2,114,946	829,400	1,124,527	2,414	1,822,233	16.21
Bonds, international	291,495	3,139,376	2,363,953	62,482	1,129,400	10.05
Equities, domestic	4,289,391	1,613,544	2,169,911	418,368	4,151,392	36.94
Equities, international	1,719,452	1,162,388	1,219,417	34,190	1,696,613	15.10
Venture capital	493,988	330,282	131,441	44,925	737,754	6.56
Real estate	1,056,026	196,469	139,179	35,785	1,149,101	10.22
Mortgage loans	3,969	—	294	—	3,675	0.04
<b>Totals</b>	<b>\$10,143,689</b>	<b>31,880,261</b>	<b>31,412,563</b>	<b>626,783</b>	<b>11,238,170</b>	<b>100.00%</b>

Pension Investment Trust Fund

# Investment Highlights

(Continued)

## Ten Year Total Pension Investment Rates of Return



### COMPARATIVE INVESTMENT RESULTS (1)(2)(4) Year Ended December 31, 1998

Investment Category Comparative Index	1 Year	3 Year	5 Year
Domestic Equity <i>Domestic Equity Database</i>	11.62%	21.01%	19.39%
International Equity <i>Non-U.S. Equity Database</i>	4.84	6.27	4.64
Domestic Fixed-Income <i>Domestic Fixed Database</i>	7.26	6.74	7.07
International Global Fixed Income <i>Non-U.S. Fixed Database</i>	23.54	8.77	9.43
Real Estate <i>CAI Real Estate Funds</i>	14.63	17.57	19.47
Venture Capital <i>% Assumption</i>	11.31	19.18	18.24
Utah Retirement Systems in Total <i>Callan Median Public Fund (3)</i>	9.61	13.50	12.20
Inflation	1.60	2.20	2.40

- (1) Source: Callan Associates, Inc.
- (2) Total rates of return include cash income plus gains and losses due to changes in market value, whether realized or unrealized.
- (3) Callan Median Public Funds Database.
- (4) Investment return calculations were prepared using a time-weighted return in accordance with the Performance Presentation Standards of the Association for Investment Management and Research (AIMR).

### TEN-YEAR TOTAL PENSION INVESTMENT RATES OF RETURN

	(DOLLARS IN MILLIONS)			
	Total Investment Portfolio Fair Value	(1) Smoothed Expected Investment Income Rate	(2) Rate of Return on Fair Value	(3) Actuarial Assumed Interest Rate
1989	\$ 3,936	13.66%	20.50%	7.50%
1990	4,057	7.84	1.70	8.00
1991	5,068	11.26	21.60	8.00
1992	5,308	10.48	4.50	8.00
1993	6,117	13.67	16.50	8.00
1994	6,140	8.84	0.00	8.00
1995	7,504	11.64	22.18	8.00
1996	8,669	11.73	15.11	8.00
1997	10,144	13.72	15.75	8.00
1998	11,238	12.64	9.61	8.00

- (1) Rate of Return on Smoothed Expected Investment Income—consists of investment income in excess or shortfall of the expected 8% on fair value smoothed over a five-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.
- (2) Rate of Return on Fair Value—consists of cash income plus gains and losses due to changes in market value, whether realized or unrealized.
- (3) Actuarial Assumed Interest Rate—is the assumed rate of return on the fair value of assets, and is used in establishing retirement contribution rates and in determining current benefit reserve requirements.



## Pension Investment Trust Fund

## List of Largest Assets Held

December 31, 1998

**LARGEST STOCK HOLDINGS** (By Fair Value)

Description	Shares	Fair Value
America Online Inc.	405,800	\$62,949,725
Microsoft Corp.	307,300	42,618,669
Exxon Corp.	569,510	41,645,419
General Electric Co.	396,500	40,443,000
AT & T Corp.	409,870	31,047,653
Intel Corp.	253,300	30,031,881
MCI WorldCom Inc.	403,869	28,977,601
International Business Machines Corp.	154,440	28,474,875
Cisco Systems Inc.	303,000	28,122,188
Pfizer Inc.	223,200	27,900,000

**LARGEST BOND HOLDINGS** (By Fair Value)

Description	Par Value	Fair Value
U.S. Treasury Note 3.656% due 7-15-2002 Rating AAA	\$ 97,642,201	\$99,592,551
U.S. Treasury Bond 6.75% due 8-15-2026 Rating AAA	61,257,693	71,895,000
U.S. Treasury Bond 7.875% due 2-15-2021 Rating AAA	48,299,856	52,637,200
Germany (Fed Rep) Bonds 6% due 4-7-2007	39,180,569	44,704,366
U.S. Treasury Note 6.5% due 10-15-2006 Rating AAA	43,150,391	44,390,000
Government of Canada Note 5.5% due 01-02-2000 Rating AAA	45,244,634	42,373,708
Nationwide CSN TR 9.875% due 02-15-2025 Rating A+	31,924,500	36,533,700
U.S. Treasury Note 6.5% due 05-31-2001 Rating AAA	35,524,283	36,478,400
U.S. Treasury Note 6.375% due 03-31-2001 Rating AAA	35,604,688	36,293,600
U.S. Treasury Note 7.75% due 11-30-99 Rating AAA	37,035,655	35,951,650

A complete list of portfolio holdings is available upon request.

## Pension Investment Trust Fund

## Schedules of Fees and Commissions

**BROKER COMMISSION FEES**

Year Ended December 31, 1998

Broker	Total Commission Fees
Alex Brown	\$ 133,328
Barrington Research	98,201
Bear Stearns & Company	24,684
Cantor Fitzgerald Inc	20,560
Citation Group	49,795
Davis Mendel & Regenstein	53,296
Donaldson Lufkin & Jenrette	195,212
Dresdner Securities	1,180
D.E. Shaw Securities	9,000
Friedman Billing	11,493
Goldman Sachs & Company	565,275
Herzog Heine Geduld	175,848
Instinet	386,272
ISI	52,015
ITG Inc	445,520
Jefferies & Co	552,439
Lehman Brothers	46,408
Merrill Lynch	6,300
Montgomery Securities	7,421
Morgan Stanley	169,439
Paine Webber	139,660
Private Placement	5,416
Prudential Securities	125,819
Robert Baird	1,800
Robertson Stevens & Co.	1,772
S & P Securities	500
Salomon Smith Barney	245,219
Security Capital Group	50,000
The Northern Trust	836,493
Toronto Dominion Securities	59,855
Troster Singer	210,012
Weeden Inc	10,305
William O'Neil	90,882
Wilshire Associates	11,500
Wood Gundy	4,500
<b>Total</b>	<b>\$4,797,419</b>

**SCHEDULE OF INVESTMENT  
FEES AND COMMISSIONS**

Year Ended December 31, 1998

	(IN THOUSANDS)
Investment advisor fees:	
Equity securities, domestic	\$ 6,764
Equity securities, international	7,053
Bonds, international	2,302
Portfolio consultants	182
<b>Total investment advisor fees</b>	<b>16,301</b>
Investment brokerage fees	4,797
<b>Total fees and commissions</b>	<b>\$21,098</b>

## Pension Investment Trust Fund

## Investment Professionals

## Investment Advisors

**DEFINED BENEFIT PLAN—  
EQUITIES**

Abbott Capital Management, LLC  
1330 Avenue of the Americas  
New York, NY 10019

Atlanta Capital  
Two Midtown Plaza, Suite 1600  
1360 Peachtree Street  
Atlanta, GA 30309

Baring International  
155 Bishopsgate  
London, EC2M 3XY England

Capital International  
333 South Hope Street  
Los Angeles, CA 90071

Cohen & Steers Capital Management  
757 Third Avenue  
New York, NY 10017

Dimensional Fund Advisors, Inc.  
1299 Ocean Avenue  
Santa Monica, CA 90401

Donaldson Lufkin & Jenrette  
277 Park Avenue  
New York, NY 10172

Dresdner RCM  
Global Investors  
Four Embarcadero Center  
San Francisco, CA 94111

Goldman Sachs Asset Management  
One New York Plaza  
New York, NY 10004

Invesco Global (N.A.), Inc.  
1355 Peachtree Street NE, Suite 250  
Atlanta, GA 30309

LSV Asset Management  
200 West Madison  
Chicago, IL 60606

Schneider Capital Management  
460 East Swedesford Road  
Wayne, PA 19087

Schroder International  
33 Guter Lane  
London, EC2V 8AS England

**DEFINED BENEFIT PLAN—  
FIXED INCOME**

Capital Guardian Trust Co.  
135 South State College Blvd.  
Brea, CA 92821

Fisher Francis Tree & Watts, Inc.  
200 Park Avenue  
New York, NY 10166

Rogge Global Partners  
5-6 St. Andrews Hill  
London, ECAV 5BY England

**DEFINED BENEFIT PLAN—  
REAL ESTATE**

BNA Realty Advisors  
Barlow Nielsen Associates  
77 West 200 South, Suite 200  
Salt Lake City, UT 84101

CB Richard Ellis  
865 South Figueroa Street  
Los Angeles, CA 90071

Cottonwood Partners  
2855 East Cottonwood Parkway,  
Suite 560  
Salt Lake City, UT 84121

CS First Boston  
55 East 52nd Street  
New York, NY 10055

Goldman, Sachs & Company  
85 Broad Street  
New York, NY 10004

Hancock Timber Resources Group  
P. O. Box 111  
Boston, MA 02117

Heitman/JMB Realty Corp.  
180 North LaSalle Street  
Chicago, IL 60602

Lazard Feres & Co., LLC  
30 Rockefeller Plaza  
New York, NY 10020

Lend Lease Investment  
Management, Inc.  
1150 Lake Hearn Drive N.E.  
Atlanta, GA 30326

OPUS U.S. Corp.  
P.O. Box 59110  
Minneapolis, MN 55459

Phoenix Realty Advisors  
38 Prospect St.  
Hartford, CT 06115

SSR Realty Advisors  
1 California Street  
San Francisco, CA 94111

Security Capital Group, Inc.  
125 Lincoln Avenue  
Santa Fe, NM 87501

Sentinel Real Estate Corp.  
666 Fifth Avenue  
New York, NY 10103

**Utah Retirement Systems  
Consultants**

Callan Associates, Inc.  
6 Concourse Parkway  
Atlanta, GA 30328

The Northern Trust Company  
50 South LaSalle Street  
Chicago, IL 60675

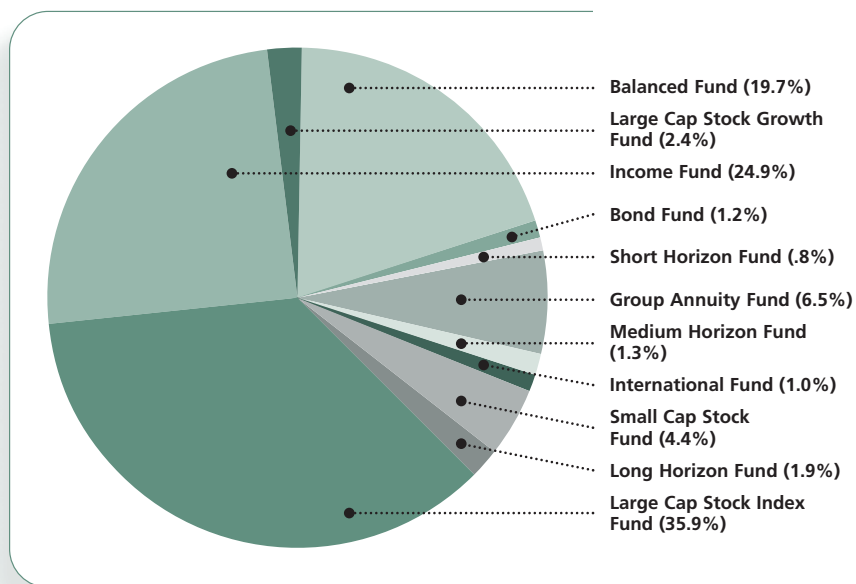
Watson Wyatt Investment Consulting  
345 California Street, Suite 1400  
San Francisco, CA 94104

401(k) and 457 Plans

# Investment Highlights

## 401(k) and 457 Investments

December 31, 1998



### 401(k) AND 457 PLAN INVESTMENTS

(IN THOUSANDS)

Investment Options	Total
Income Fund	\$304,420
Bond Fund	14,980
Balanced Fund	240,801
Large Cap Stock Index Fund	437,645
Large Cap Stock Growth Fund	29,601
International Fund	53,225
Small Cap Stock Fund	12,109
Short Horizon Fund	9,988
Medium Horizon Fund	15,846
Long Horizon Fund	23,760
Group Annuity Fund (closed to contributions)	79,332
<b>Total</b>	<b>\$1,221,707</b>

### Introduction

Utah Retirement Systems' 401(k) and 457 Plans are voluntary tax-deferred retirement savings programs authorized under sections 401(k) and 457 of the Internal Revenue Code. These plans are available to employees of the state, local governmental, and public education employers throughout Utah.

The participants of the plans have a choice of ten investment funds in which their monies may be invested. Each participant may choose one or a combination of these funds. In addition, there is a Group Annuity Fund that is closed to contributions, but where current balances still exist. The table above shows the total assets in the various investment options. The asset graph shows the asset distribution at December 31, 1998.

### Investment and Administrative Expenses

There are no front-end load, redemption, or other hidden fees associated with these plans; although, Beneficial Life Insurance Company may impose a penalty on transfers from the Group Annuity Fund. All costs reflected in the table below are deducted from earnings prior to posting to participant accounts and do not appear on participant statements.

By administering the defined contri-

bution plans internally rather than through a third party, expenses are kept at very low levels to maximize earnings to each participant. The table below shows these expenses to be nominal when compared to fees as high as 10% on some annuities, mutual funds, and insurance contracts.

### Rates of Return

Rates of return shown on the accompanying chart on page 87 are net rates, after all costs and fees have been deducted.

### 401(k) AND 457 PLAN INVESTMENT AND ADMINISTRATIVE EXPENSES

	Investment Fees	Administrative Costs	Total Costs
Income Fund	.16%	.25%	.41%
Bond Fund	.41	.25	.66
Balanced Fund	.45	.25	.70
Large Cap Stock Index Fund	.03	.25	.28
Large Cap Stock Growth Fund	.30	.25	.55
International Fund	.72	.25	.97
Small Cap Stock Fund	.20	.25	.45
Short Horizon Fund	.27	.25	.52
Medium Horizon Fund	.30	.25	.55
Long Horizon Fund	.32	.25	.57
Group Annuity Fund (closed to contributions)	.70	.25	.95



## 401(k) and 457 Plans

## Investment Highlights

(Continued)

**401(k) AND 457 PLANS  
COMPARATIVE ANNUALIZED RATES OF RETURN AS OF DECEMBER 31, 1998**

Investment Option <i>Comparative Index</i>	1 Year	3 Year	5 Year	10 Year
Income Fund	6.25%	6.30%	6.50%	7.18%
<i>Treasury Bills Index</i>	4.82	4.98	4.94	5.21
Bond Fund	7.08	6.87	7.34	N/A*
<i>Lehman Aggregate Bond Index</i>	8.69	7.29	7.27	9.25
Balanced Fund	11.86	16.16	14.64	14.29
<i>Balanced Index (1)</i>	21.04	19.82	17.31	15.33
Large Cap Stock Index Fund	28.33	28.02	23.84	19.08
<i>S&amp;P 500 Index</i>	28.68	28.26	24.06	19.19
Large Cap Stock Growth Fund	28.84	26.95	23.58	N/A*
<i>S&amp;P 500 Index</i>	28.68	28.26	24.06	19.19
International Fund	13.67	12.34	11.28	N/A*
<i>MSCI EAFE Index</i>	19.99	9.00	9.19	5.54
Small Cap Stock Fund	(5.77)	12.14	12.69	N/A*
<i>Russell 2000 Index</i>	(2.54)	11.58	11.87	12.92
Short Horizon Fund	9.83	10.54	10.12	N/A*
<i>Short Horizon Index (2)</i>	10.79	9.88	9.26	8.94
Medium Horizon Fund	12.78	14.24	13.20	N/A*
<i>Medium Horizon Index (3)</i>	14.60	13.80	12.59	11.31
Long Horizon Fund	14.65	16.94	15.44	N/A*
<i>Long Horizon Index (4)</i>	17.04	16.52	14.94	12.92
Group Annuity Fund (5)	6.71	6.26	6.00	6.67
<i>Treasury Bill Index</i>	4.82	4.98	4.94	5.21

Past performance does not guarantee future results.

All fund returns are reported net of fees including investment management fees and administrative fees. All returns for periods greater than one year are annualized.

(1) Balanced Index: 60% S&P 500 Index, 40% Lehman Brothers Aggregate Bond Index.

(2) Short Horizon Index: 45% Treasury Bills, 25% LB Aggregate Bond, 15% S&P 500, 10% MSCI EAFE, 5% Russell 2000

(3) Medium Horizon Index: 25% Treasury

Bills, 20% LB Aggregate Bond, 30% S&P 500, 15% MSCI EAFE, 10% Russell 2000

(4) Long Horizon Index: 10% Treasury Bills, 15% LB Aggregate Bond, 40% S&P 500, 20% MSCI EAFE, 15% Russell 2000

(5) The Group Annuity Fund is closed to future contributions. Returns prior to 1998 represent performance of the 401(k) Group Annuity Fund.

\*This fund has existed less than 10 years.

**401(k) and 457 Plans  
Investment  
Professionals**

American Express Asset Management  
125 Summer Street,  
Suite 1420  
Boston, MA 02110

American Express Trust Co.  
1200 Northstar West  
Minneapolis, MN 55440

Beneficial Life Insurance Co.  
Beneficial Life Tower  
36 South State Street  
Salt Lake City, UT 84136

Capital Guardian Trust Co.  
333 South Hope Street  
Los Angeles, CA 90071

Dimensional Fund Advisors, Inc.  
1299 Ocean Avenue  
Santa Monica, CA 90401

Dodge & Cox  
One Sansome Street  
San Francisco, CA 94104

Fidelity Investments  
6312 South Fiddler's  
Green Circle  
Englewood, CO 80111

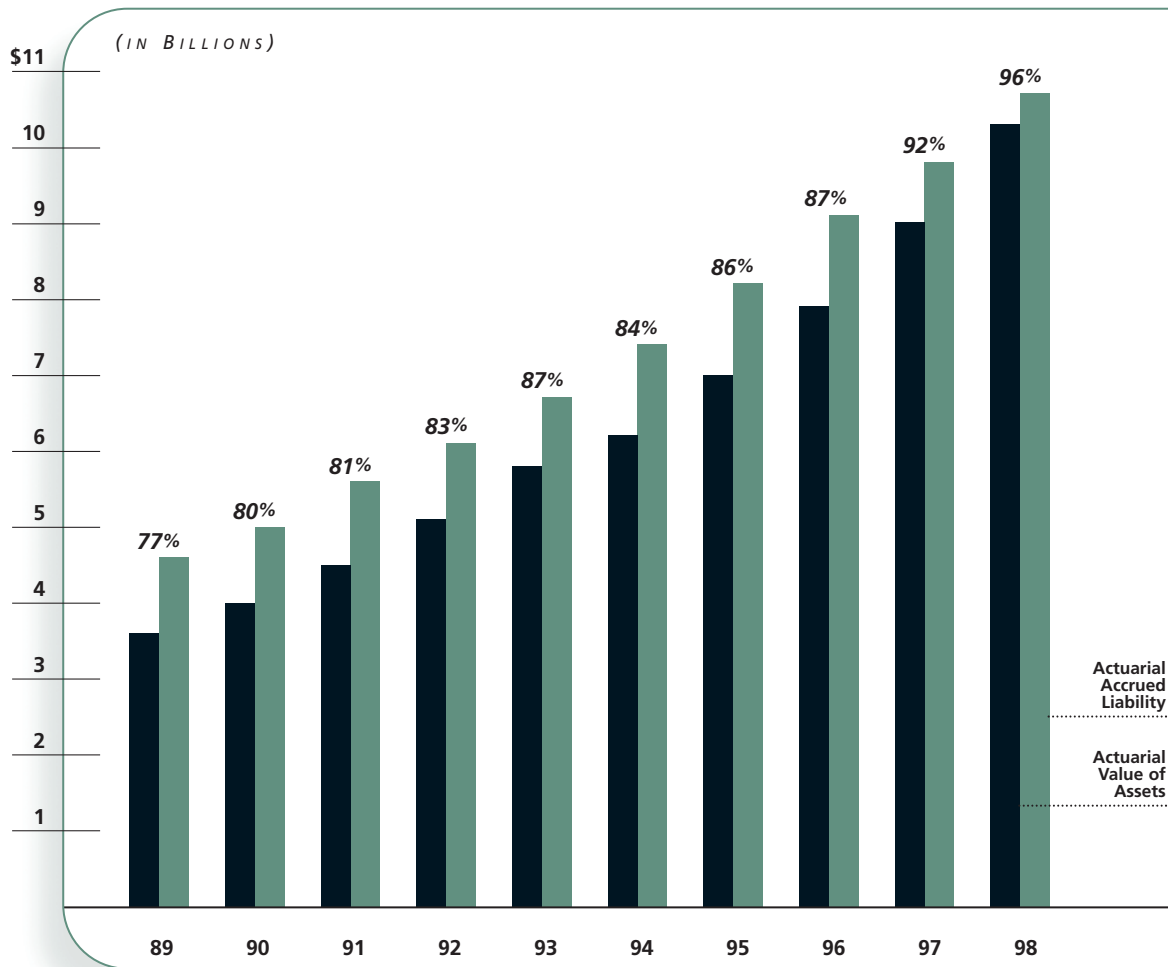
**401(k) AND 457 PLANS 1998 INVESTMENT SUMMARY**

(DOLLARS IN THOUSANDS)

	1998 Beginning Fair Value	Purchases	Sales & Redemptions	Increase (Decrease) in Fair Value	1998 Ending Fair Value	Percentage of Total Fair Value
Short-term securities	\$ 1,178	—	1,178	—	—	—
Bonds	281,587	74,396	36,368	19,066	338,681	27.72%
Equities, domestic	613,588	113,915	59,475	125,517	793,545	64.95
Equities, international	—	15,557	11,732	6,325	10,150	0.83
Investment contracts	95,756	52	22,026	5,549	79,331	6.49
Totals	\$992,109	203,920	130,779	156,457	1,221,707	100.00%

All Retirement Systems

# Funding Progress with Funding Ratios



(DOLLARS IN BILLIONS)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Actuarial Value of Assets</b>	\$ 3.6	4.0	4.5	5.1	5.8	6.2	7.0	7.9	9.0	10.3
<b>Actuarial Accrued Liability</b>	4.6	5.0	5.6	6.1	6.7	7.4	8.2	9.1	9.8	10.7
<b>Funding Ratios</b>	<b>77%</b>	<b>80%</b>	<b>81%</b>	<b>83%</b>	<b>87%</b>	<b>84%</b>	<b>86%</b>	<b>87%</b>	<b>92%</b>	<b>96%</b>

Utah Retirement Systems  
1998 Comprehensive  
Annual Financial Report



# ACTUARIAL SECTION

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# Actuary's Certification Letter



October 8, 1998

Utah State Retirement Board  
540 East 200 South  
Salt Lake City, UT 84102

Dear Members of the Board:

## Certification of 1998 Actuarial Valuation

The actuarial valuation report describes the current actuarial condition of the Utah Retirement Systems (URS), determines the recommended employer contribution rates, and analyzes changes in these contribution rates. Valuations are prepared annually, as of January 1, the first day of the URS plan year.

Under URS statutes, employer contribution rates are certified annually by the Board of Trustees. These rates are determined actuarially, based on the Board's funding policy. Contribution rates determined by a given actuarial valuation become effective eighteen months after the valuation date. For example, the rates determined by this January 1, 1998 actuarial valuation will be used by the Board when certifying the employer contribution rates for the year beginning July 1, 1999 and ending June 30, 2000. If new legislation is enacted between the valuation date and the date the contribution rates become effective, the Board may adjust the recommended rates before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

### ***Financing objectives and new funding policy***

In setting contribution rates, the Board's principal objectives have been:

- ◆ to set rates so that the unfunded actuarial accrued liability (UAAL) will be amortized over a 30-year period beginning January 1, 1990—i.e., over a 22-year period from the current valuation date
- ◆ to set rates so that they remain relatively level over time.

To accomplish this, the Board adopted a funding policy in 1990 which required that the employer contribution rate be equal to the sum of the employer normal cost rate (which pays the current year's cost) and an amortization rate which results in the amortization of the UAAL by January 1, 2020 (i.e., in 30 years) in installments which increase at the assumed rate of growth in payroll for URS. The current assumed rate of growth in payroll for URS is 4.75%, and it is composed of an assumed 3.50% inflation rate and a 1.25% rate of growth in the number of members. The resulting contribution rate is the Board's "old policy rate."

In 1996, the Board modified this policy so that the rate certified to the employers is a function of the old policy rate and three other rates: (i) the rate paid by the employer in the prior year, adjusted for new legislation, (ii) the minimum Annual Required Contribution (ARC) under Governmental Accounting Standards Board Statement No. 25 (GASB 25), and (iii) a new "target rate," computed like the old policy rate, but using an inflation-only payroll growth assumption. Under the new policy, the Board certifies the rate, which is the largest of the rate actually paid in the prior year, the minimum GASB 25 ARC and the old policy rate, but not more than the new target rate.

This method is used to determine each fund's contribution rate until the fund is contributing at the new "target rate". When a fund's contribution rate reaches the new "target rate" then the comparison of rates is discontinued and the new "target rate" will be the rate for that fund from that point forward. As of the January 1, 1998 valuation all of the URS funds have reached their new "target rates", and therefore the rate comparison described above is no longer required.

The Board's funding policy can now be stated as follows: the employer contribution rate is equal to the sum of the employer normal cost rate (which pays the current year's cost) and an amortization rate which results in the amortization of the UAAL by January 1, 2020 (i.e., in 22 years) in installments which increase at the newly recommended inflation-only payroll growth assumption for URS of 3.50%. Using an inflation-only payroll growth rate is consistent with GASB 25, which prohibits anticipating future membership growth in determining the minimum ARC. Under this policy, the objectives of amortizing the UAAL by 2020 and maintaining relatively level contribution rates over time are achieved.

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### ***Progress toward realization of financing objectives***

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100%. For most of the funds in URS, the funded ratio increased since the last valuation, although a few decreased slightly. The only funds to decrease were the Public Safety Other Division B funds. The decreases were due mainly to liability losses and the impact of the new assumptions on the public safety funds. For all systems combined, the funded ratio increased from 86.8% to 91.0%. In 1990, the funded ratio for all systems combined was 76.9%, so significant progress has been made over the last eight years, even though a number of benefit increases have been granted during that time, and even though the 3% substantial substitute was added as a URS liability. Without the 3% substantial substitute, the overall funded ratio would have been 93.6%.

### ***Benefit provisions***

The benefit provisions reflected in this valuation are those which were in effect on January 1, 1998, or which were adopted by the end of the 1998 legislative session and are effective on or before July 1, 1999.

Two material changes were made to the provisions since the preceding valuation:

- ◆ The death benefit for active members of Division A of the Noncontributory Public Safety System with 20 or more years of service was modified. Prior to this amendment, it was possible for a surviving spouse of a member with at least 20 years of service to receive a smaller survivor benefit if the member died in service, than the surviving spouse would have received if the member had retired the day before the member's actual date of death. The statutes were modified to correct this situation. Now a surviving spouse of an active member with 20 or more years of service cannot receive a benefit smaller than the surviving spouse would have received, had the member retired the day before the member's date of death.
- ◆ A window was opened to allow active members of the Contributory Public Safety System to transfer to the Non-contributory Public Safety Retirement System between July 1, 1998 and December 31, 1998. This window has no impact on this valuation, but may have an impact on the January 1, 1999 valuation.

### ***Assumptions and methods***

Actuarial assumptions and methods used in the valuation are set by the Board, based upon the recommendations of the actuary. The actuary reviews actual plan experience before making these recommendations. A complete review of actuarial assumptions was carried out in connection with this actuarial valuation, and a number of changes are being recommended. Please see our report for a complete description of the changes to the actuarial assumptions. The new assumptions are described later in this section. It is our opinion that the assumptions are internally consistent and are reasonably based on past and anticipated future experience of the System.

### ***Data***

Member data for retired, active and inactive members was supplied as of December 31, 1997 by the System's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. Asset information as of December 31, 1997 was supplied by the auditors and by the Systems' staff.


### ***Certification***

We certify that the information presented herein is accurate and fairly portrays the actuarial position of URS as of January 1, 1998. We prepared the accompanying Summary of Actuarial Assumptions and Methods, but the URS staff prepared the other supporting schedules in this section and the trend tables in the financial section, based on information supplied in our report. The staff rolls forward to December 31 the actuarial liabilities supplied in our report as of January 1, and the staff computes the actuarial value of assets as of December 31. These procedures have been reviewed by us and found reasonable. Information shown for years prior to 1991 is based on the work of the prior actuaries.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Utah state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. Both are Enrolled Actuaries and Members of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems.

Sincerely,

  
J. Christian Conradi, ASA, EA, MAAA  
Actuary

  
W. Michael Carter, FSA, EA, MAAA  
Actuary

# Summary of Actuarial Assumptions and Methods

As of January 1, 1998

**a)** The employer contribution rates recommended as a result of the January 1, 1998 actuarial valuations are as follows:

**Systems**

<b>Noncontributory Retirement System</b>	
State and Schools	*14.23%
Local Governmental	10.67
<b>Contributory Retirement System</b>	
State and Schools	*9.74%
Local Governmental	6.66
<b>Firefighters Retirement System</b>	
Division A (with Social Security)	0.00%
Division B (without Social Security)	0.54
<b>Judges Retirement System</b>	*15.39%
<b>Public Safety Retirement System</b>	
<b>CONTRIBUTORY</b>	
State	*14.12%
Other Division A	
(with Social Security)	6.84
Bountiful	12.23
Salt Lake City	24.00
Ogden	12.83
Provo	13.52
Logan	8.28
Other Division B	
(without Social Security)	9.97
<b>NONCONTRIBUTORY</b>	
State	*24.98%
Other Division A	
(with Social Security)	18.43
Bountiful	23.99
Salt Lake City	36.14
Ogden	25.80
Other Division B	
(without Social Security)	19.85

\*Includes 3% benefit enhancement contribution

b.) The actuarial valuation was prepared using the entry age actuarial cost method. As described in the certification letter, actual contribution rates are set as a function of several other calculated rates. However, the contribution rate will not be less than the amount needed to amortize the unfunded actuarial accrued liability of each System over a 30-year period from January 1, 1990 (22 years from January 1, 1998). In calculating this minimum, amortization payments are designed to remain level as a percent of payroll, and payroll is assumed to increase 4.75% per year (3.50% from inflation and 1.25% from

membership growth). Under this method, actuarial gains and losses are identified and amortized as part of the unfunded actuarial accrued liability over the remainder of the original 30-year period.

c.) The future investment earnings of the assets of the Systems are assumed to accrue at an annual rate of 8%, compounded annually. This rate is made up of a 3.5% assumed inflation rate and a 4.5% assumed real rate of return. This assumption was adopted January 1, 1998.

d.) The total rates of assumed annual salary increase are shown on the actuarial schedule on page 95. The rates include increases due to promotion and longevity and a 4.50-4.75% (depending on group) per annum rate of increase in the general wage level of the membership. Salaries of judges are assumed to increase at 5.25%.

e.) Post retirement benefit increases are based on the Consumer Price Index, limited by the provisions of each System. For members of the Public Safety Retirement System, annual increases are assumed to be 2.5%. All other Systems' annual increases are assumed to be 3.5%. Increases are based on the member's original retirement allowance except in the Judges Retirement System, where increases are compounded.

f.) Tables of mortality rates for members retired for service and beneficiaries were developed from standard mortality tables. The mortality basis is dependent upon the member's class and gender as shown below. These rates

**Retired Member Mortality**

**CLASS OF MEMBER**

<b>Educators</b>	
Men	UP94 (-4)
Women	GAM (-1)
<b>Public Safety and Firefighters</b>	
Men	GAM (-2)
Women	GAM (-1)
<b>Local Governmental, Public Employees and All Beneficiaries</b>	
Men	GAM (-2)
Women	GAM (-1)

GAM (xx) = 1983 Group Annuity Mortality Table adjusted xx years, and UP94 (xx) = 1994 Unisex Pensioners Mortality Table adjusted xx years.

were adopted January 1, 1998. Mortality rates for active members were developed from actual experience of that group.

g.) Mortality among disabled members is based on a special 1981 Disability Table developed by a previous actuary from the Systems' experience. These rates were adopted January 1, 1990.

h.) Other demographic assumptions regarding retirement, mortality, disablement and termination from employment are illustrated in the following actuarial schedules.

The retirement assumptions illustrated are for members of the Systems who are eligible to retire. The rates vary by age and service groupings.

Rates of assumed termination from employment at any age are assumed to vary during the first five years of employment. The rates of termination illustrated are for members in their first or in their sixth or subsequent year of service; rates at intermediate points fall between the two sets illustrated. All terminating members who are not eligible for vested benefits are assumed to withdraw their contributions immediately. Vested members are assumed to withdraw their contributions and forfeit the right to further benefits at the rates illustrated.

i.) The Retirement Board uses the expected rate of return method for calculating the actuarial value of assets. This method is based on the total earnings of the commingled Fund and spreads the excess/shortfall of actual investment returns over or under the expected return over five years. One-fifth of the excess/shortfall is recognized each year. The actuarial values of assets under this method were calculated and reported to us by the Systems' staff.

j.) All of the actuarial assumptions were adopted by the Retirement Board in 1998. The assumptions adopted were recommended by the actuary following the last complete analysis of plan experience.

# Summary of Actuarial Assumptions and Methods

(Continued)  
As of January 1, 1998

Percent Retiring Within Next Year Among Active Members								
Eligible for Retirement With 30 or More Years of Service								
Retirement Age	Male			Female			Governors and Legislative Pension Plan	
	State and School Division		Local Governmental Division	State and School Division		Local Governmental Division		
	Educators	Public Employees		Educators	Public Employees			
<b>Contributory and Noncontributory Retirement Systems</b> <i>Adopted January 1, 1998</i>	55	17.00%	10.00%	16.00%	13.00%	15.00%	12.00%	0.00%
	56	18.00	12.00	17.00	13.00	16.00	12.00	0.00
	57	19.00	14.00	18.00	14.00	17.00	12.00	0.00
	58	20.00	16.00	19.00	14.00	18.00	12.00	0.00
	59	25.00	18.00	20.00	15.00	19.00	12.00	0.00
	60	35.00	25.00	15.00	40.00	35.00	12.00	0.00
	61	40.00	35.00	35.00	35.00	30.00	25.00	0.00
	62	50.00	40.00	45.00	45.00	40.00	30.00	100.00
	63	35.00	30.00	25.00	35.00	30.00	25.00	100.00
	64	40.00	40.00	35.00	40.00	40.00	35.00	100.00
	65	45.00	50.00	50.00	50.00	50.00	40.00	100.00
	66	35.00	20.00	25.00	35.00	25.00	20.00	100.00
	67	35.00	20.00	25.00	35.00	25.00	20.00	100.00
	68	35.00	20.00	25.00	35.00	25.00	20.00	100.00
	69	35.00	20.00	25.00	35.00	25.00	20.00	100.00
	70	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Percent Retiring Within Next Year Among Active Members Eligible for Retirement						
Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age
<b>Public Safety Retirement System</b> <i>Adopted January 1, 1993</i>	45	16.00%	52	17.00%	59	27.00%
	46	16.00	53	18.00	60	30.00
	47	16.00	54	19.00	61	35.00
	48	16.00	55	20.00	62	40.00
	49	16.00	56	21.00	63	45.00
	50	16.00	57	22.00	64	50.00
	51	17.00	58	24.00	65	100.00

Percent Retiring Within Next Year Among Active Members Eligible for Retirement						
Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age
<b>Firefighters Retirement System</b> <i>Adopted January 1, 1993</i>	45	3.60%	52	15.70%	59	24.50%
	46	5.40	53	16.60	60	27.30
	47	7.40	54	17.30	61	30.20
	48	9.40	55	18.00	62	33.30
	49	11.20	56	19.00	63	36.40
	50	13.00	57	20.30	64	39.30
	51	14.50	58	22.20	65	100.00

Percent Retiring Within Next Year Among Active Members Eligible for Retirement						
Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age
<b>Judges Retirement System</b> <i>Adopted January 1, 1990</i>	60	5.00%	64	30.00%	68	50.00%
	61	5.00	65	50.00	69	50.00
	62	10.00	66	50.00	70	100.00
	63	20.00	67	50.00		

# Summary of Actuarial Assumptions and Methods

(Continued)

As of January 1, 1998

Other Termination of Employment Percent of Active Members Separating Within Next Year								
Retirement Age	Male			Female			Governors and Legislative Pension Plan	
	State and School Division			State and School Division				
	Educators	Public Employees	Local Governmental Division	Educators	Public Employees	Local Governmental Division		
<b>During the First Year of Service</b>								
<b>Contributory and Noncontributory Retirement Systems</b>	25	14.98%	29.86%	18.84%	18.71%	25.69%	27.66%	10.00%
<i>Adopted January 1, 1996</i>	30	12.68	24.51	15.88	13.15	23.12	25.72	10.00
	35	11.95	21.32	13.73	10.18	20.35	23.52	10.00
	40	11.30	19.24	12.35	9.84	17.62	21.25	10.00
	45	11.52	17.45	11.84	9.41	15.26	19.22	10.00
	50	13.43	15.55	12.28	8.49	13.59	17.99	10.00
	55	17.64	13.43	13.83	6.92	12.86	18.25	10.00
	60	18.53	11.16	14.52	7.27	13.33	20.66	10.00
<b>During the Sixth and Subsequent Years of Service</b>								
<b>Contributory and Noncontributory Retirement Systems</b>	25	6.29%	10.01%	8.15%	10.81%	15.78%	13.16%	10.00%
<i>Adopted January 1, 1996</i>	30	4.30	7.02	6.05	6.94	10.02	8.95	10.00
	35	2.90	4.88	4.63	4.32	6.38	6.18	10.00
	40	2.08	3.47	3.81	2.87	4.44	4.73	10.00
	45	1.62	2.57	3.34	2.27	3.42	4.22	10.00
	50	1.25	2.05	3.11	2.03	2.89	4.21	10.00
	55	0.93	2.04	3.36	2.02	2.82	4.32	10.00
	60	0.98	2.74	3.52	2.12	3.17	4.43	10.00
<b>Public Safety Retirement System</b>								
<i>Adopted January 1, 1996</i>	25	11.95%		7.70%				
	30	11.40		5.21				
	35	12.53		3.42				
	40	15.22		2.28				
	45	19.28		1.69				
	50	24.51		1.44				
	55	30.71		1.43				
	60	37.77		1.56				
<b>Firefighters Retirement System</b>								
<i>Adopted January 1, 1996</i>	25	12.43%		1.50%				
	30	9.98		1.40				
	35	7.52		1.30				
	40	5.21		0.70				
	45	7.22		0.49				
	50	11.01		0.27				
	55	16.84		0.09				
	60	24.71		0.13				
<b>Judges Retirement System</b>								
		None assumed.						



# Summary of Actuarial Assumptions and Methods

(Continued)  
As of January 1, 1998

	Years of Service	Total Annual Increase in Salary (Male and Female)				
		State and School Division		Local Governmental Division	Public Safety Retirement System	Firefighters Retirement System
		Educators	Public Employees			
<b>All Retirement Systems</b>	0	15.25%	13.00%	11.25%	10.75%	11.50%
<i>Adopted January 1, 1998</i>	1	13.25	11.00	9.50	10.25	10.25
	2	10.00	8.50	8.75	7.50	9.25
	3	9.25	7.50	8.25	6.75	8.50
	4	8.50	7.00	7.75	6.50	8.00
	5	8.25	6.75	7.50	6.50	7.75
	6	8.00	6.50	7.00	6.25	7.50
	7	7.50	6.00	6.50	6.25	7.25
	8	7.25	5.75	6.25	6.25	7.25
	9	7.00	5.50	6.25	6.25	7.00
	10	6.75	5.50	6.25	5.50	6.75
	11	6.50	5.25	6.00	5.50	6.50
	12	6.25	5.25	6.00	5.50	6.00
	13	5.75	5.00	5.75	5.00	5.50
	14	5.25	4.75	5.75	5.00	5.00
	15	4.75	4.50	4.75	4.50	4.50

	Age	Probability Mortality Within the Next Year for Active Members			
		Male		Female	
		Educators	Local Governmental and Public Employees	Educators	Local Governmental and Public Employees
<b>Contributory and Noncontributory Retirement Systems</b>	20	0.0249%	0.0919%	0.0674%	0.0529%
<i>Adopted January 1, 1991</i>	25	0.0228	0.0682	0.0273	0.0481
	30	0.0251	0.0824	0.0122	0.0509
	35	0.0323	0.1205	0.0263	0.0619
	40	0.0598	0.1542	0.0632	0.0841
	45	0.1022	0.1891	0.1157	0.1234
	50	0.1974	0.2766	0.1787	0.1864
	55	0.3584	0.4670	0.2463	0.2787
	60	0.5674	0.7627	0.3411	0.4021
	65	0.7234	1.1600	0.4741	0.5543
	70	0.8027	1.6626	0.6505	0.7333

	Years of Service	Percent Electing a Refund of Contributions Upon Termination While Vested					
		Male			Female		
		Educators	Public Employees	Local Governmental Division	Educators	Public Employees	Local Governmental Division
<b>Contributory and Noncontributory Retirement Systems</b>	0-3	100%	100%	100%	100%	100%	100%
<i>Adopted January 1, 1993</i>	4	75	86	75	65	80	77
	5	73	83	73	64	79	75
	10	54	73	61	53	64	61
	15	33	63	49	32	52	40
	19	9	29	23	8	22	13
	20	0	0	0	0	0	0

	Probability Mortality Within the Next Year for Active Members				Percent Electing a Refund of Contributions Upon Termination While Vested		
	Public Safety and Firefighters Employees		Public Safety and Firefighters Employees		Years of Service	Public Safety and Firefighters Retirement Employees	
	Age	Age					
<b>Public Safety Retirement System and Firefighters Retirement System</b>	20	0.0807%	50	0.3233%	<b>Public Safety Retirement System and Firefighters Retirement System</b>	0-3	100%
<i>Adopted January 1, 1991</i>	25	0.0768	55	0.4966	<i>Adopted January 1, 1993</i>	4	76
	30	0.0762	60	0.6830		5	74
	35	0.0800	65	0.8625		10	57
	40	0.1109	70	1.0327		15	35
	45	0.1899				19	15
						20	0

## Reconciliation of Changes in Unfunded Actuarial Liabilities

(IN THOUSANDS)

System	January 1, 1997 Actuarial Accrued Liability (AAL)	Amortization Payments	Liability (Gain) Loss	Change in Asset (Gain) Loss	Actuarial Assumptions	Benefit Provisions	Asset Transfers	January 1, 1998 AAL
<b>Contributory</b>	\$ 95,746	2,533	1,896	(48,652)	(4,212)	—	23,800	71,111
<b>Noncontributory</b>	948,145	8,448	141,778	(339,021)	(3,826)	28	(23,800)	731,752
<b>Public Safety</b>	111,398	3,182	(7,317)	(43,462)	20,230	918	—	84,949
<b>Firefighters</b>	32,936	(1,160)	4,521	(18,881)	(8,619)	—	—	8,797
<b>Judges</b>	9,334	386	(748)	(2,891)	(3,048)	—	—	3,033
<b>Governors and Legislators</b>	(1,616)	(32)	65	(517)	(220)	—	—	(2,320)

## Member and Employer Contribution Rates

As of December 31

System	Year	Contributory			Noncontributory	
		Member	Employer	Employer	Employer	Employer
<b>Contributory and Noncontributory Retirement System</b>			<i>State and School</i>	<i>Local Governmental</i>	<i>State and School</i>	<i>Local Governmental</i>
	1989	6.00%	6.37%	2.20%	11.35%	6.80%
	1990	6.00	6.91	2.25	11.89	6.85
	1991	6.00	8.95	4.27	13.51	8.26
	1992	6.00	7.88	3.44	12.20	7.16
	1993	6.00	7.92	3.98	12.24	7.80
	1994	6.00	8.68	4.81	13.00	8.63
	1995	6.00	8.65	4.86	12.97	8.68
	1996	6.00	9.67	6.42	13.99	10.24
	1997	6.00	9.67	6.50	14.16	10.51
1998	6.00	9.67	6.73	14.16	10.74	

System	Year	Division A (with Social Security)		Division B (without Social Security)		All Divisions Fire Insurance Premium Tax
		Member	Employer	Member	Employer	
<b>Firefighters Retirement System</b>	1989	13.31%	5.56%	14.81%	11.15%	6.25%
	1990	13.31	5.56	14.81	11.15	6.25
	1991	13.31	0.02	14.81	7.50	6.25
	1992	13.31	—	14.81	7.38	5.18
	1993	13.31	—	14.81	5.73	6.09
	1994	13.31	—	16.71	5.68	6.14
	1995	13.31	—	16.71	3.50	7.31
	1996	13.31	—	16.71	6.64	7.98
	1997	13.31	—	16.71	6.43	8.19
	1998	13.31	—	16.71	4.74	8.48

(DOLLARS IN THOUSANDS)

System	Year	Contributory		Noncontributory		Judges		Governors and Legislative Appropriation
		Member	Employer	Employer	Employer	Court Fees		
<b>Judges Retirement System</b>	1989	8.00%	1.32%	—	—	17.50%	\$100	
	1990	8.00	1.32	—	—	17.50	100	
	1991	8.00	4.38	—	—	21.00	76	
	1992	8.00	5.88	—	—	24.57	—	
	1993	8.00	6.44	—	—	27.22	—	
<b>Governors and Legislative Pension Plan</b>	1994	8.00	8.87	—	—	26.02	—	
	1995	8.00	9.31	—	—	26.11	—	
	1996	8.00	10.70	—	—	25.62	—	
	1997	8.00	12.21	20.21%	—	24.11	—	
	1998	8.00	11.00	19.00	—	22.86	—	

# Member and Employer Contribution Rates

(Continued)  
As of December 31

System	Year	*State of Utah		Other Division A (with Social Security)		Corrections		Bountiful			
		Member	Employer	Member	Employer	Member	Employer	Member	Employer		
<b>Public Safety Retirement System Contributory Division A</b>	1989	14.44%	12.91%	12.29%	5.43%	12.09%	5.36%	11.94%	5.59%		
	1990	12.09	10.49	12.29	5.43	—	—	11.94	5.59		
	1991	12.09	10.49	12.29	7.00	—	—	11.94	5.61		
	1992	12.29	8.07	12.29	3.11	—	—	11.94	4.27		
	1993	12.29	6.75	12.29	1.70	—	—	11.94	3.21		
	1994	12.29	7.53	12.29	1.48	—	—	11.94	0.94		
	1995	12.29	10.77	12.29	3.82	—	—	11.94	10.54		
	1996	12.29	10.82	12.29	3.72	—	—	11.94	5.77		
	1997	12.29	12.26	12.29	5.62	—	—	11.94	8.98		
1998	12.29	12.26	12.29	5.87	—	—	11.94	10.36			
<b>Public Safety Retirement System Noncontributory Division A</b>	1989	—	19.21%	—	16.11%	—	—	—	16.59%		
	1990	—	19.21	—	16.11	—	—	—	16.59		
	1991	—	21.60	—	18.28	—	—	—	16.83		
	1992	—	16.54	—	11.95	—	—	—	13.13		
	1993	—	15.76	—	11.40	—	—	—	12.81		
	1994	—	17.96	—	12.68	—	—	—	14.80		
	1995	—	21.19	—	15.22	—	—	—	18.36		
	1996	—	20.60	—	14.47	—	—	—	16.97		
	1997	—	22.94	—	17.09	—	—	—	20.65		
1998	—	23.14	—	17.42	—	—	—	22.05			
<b>Public Safety Retirement System Contributory Division B</b>	1989	Salt Lake City		Ogden		Logan		Provo		Other Division B (without Soc Sec)	
		Member	Employer	Member	Employer	Member	Employer	Member	Employer	Member	Employer
	1990	13.74%	16.14%	13.18%	10.24%	11.13%	8.27%	13.54%	13.46%	10.50%	7.59%
	1991	13.74	17.43	13.18	10.24	11.13	8.27	13.54	13.46	10.50	7.59
	1992	13.74	21.29	13.18	14.65	11.13	12.98	13.54	14.80	10.50	10.04
	1993	13.74	19.40	13.18	10.91	11.13	9.72	13.54	10.92	10.50	5.43
	1994	13.74	18.57	13.18	9.60	11.13	8.38	13.54	10.23	10.50	4.27
	1995	13.74	0.00	13.18	9.68	11.13	7.22	13.54	10.68	10.50	4.27
	1996	13.74	0.00	13.18	10.52	11.13	4.90	13.54	10.37	10.50	4.48
	1997	13.74	20.38	13.18	12.65	11.13	4.65	13.54	11.03	10.50	5.27
	1998	13.74	21.82	13.18	12.65	11.13	6.72	13.54	12.81	10.50	7.55
	1998	13.74	21.82	13.18	12.90	11.13	7.76	13.54	12.81	10.50	7.11
<b>Public Safety Retirement System Noncontributory Division B</b>	1989	—	28.77%	—	—	—	—	—	—	—	16.72%
	1990	—	30.06	—	—	—	—	—	—	—	16.72
	1991	—	34.20	—	—	—	—	—	—	—	19.53
	1992	—	28.44	—	—	—	—	—	—	—	14.25
	1993	—	29.01	—	—	—	—	—	—	—	13.71
	1994	—	31.97	—	22.13%	—	—	—	—	—	15.01
	1995	—	31.70	—	22.62	—	—	—	—	—	15.15
	1996	—	31.51	—	24.03	—	—	—	—	—	15.94
	1997	—	33.68	—	24.77	—	—	—	—	—	17.29
1998	—	33.68	—	25.49	—	—	—	—	—	17.07	

\*Effective in 1989 all State public safety divisions were combined into one division. Prior to 1989 Highway Patrol and Division of Corrections were separate divisions with separate contribution rates.

# Solvency Tests

Year Ended December 31, 1998

(DOLLARS IN THOUSANDS)

System	Date	(1) Active Members Contributions	(2) Retired and Beneficiaries
<b>Contributory Retirement System</b>	1/01/90	\$346,759	608,992
	1/01/91	260,955	571,914
	1/01/92	230,415	570,001
	1/01/93	252,922	572,403
	1/01/94	284,672	561,683
	1/01/95	316,556	564,284
	1/01/96	247,639	543,628
	1/01/97	183,996	523,025
	1/01/98	197,833	499,390
	12/31/98	216,477	483,537
<b>Noncontributory Retirement System</b>	1/01/90	\$518,321	848,953
	1/01/91	649,425	881,401
	1/01/92	729,541	1,028,026
	1/01/93	754,440	1,193,366
	1/01/94	769,814	1,387,085
	1/01/95	783,653	1,619,632
	1/01/96	888,824	1,965,816
	1/01/97	980,171	2,273,016
	1/01/98	977,799	2,547,911
	12/31/98	995,314	2,863,894
<b>Public Safety Retirement System</b>	1/01/90	\$ 78,126	176,230
	1/01/91	77,095	181,654
	1/01/92	77,963	201,066
	1/01/93	78,669	221,777
	1/01/94	86,114	253,776
	1/01/95	87,197	283,273
	1/01/96	85,516	323,064
	1/01/97	85,985	355,291
	1/01/98	86,500	394,325
	12/31/98	89,232	441,615
<b>Firefighters Retirement System</b>	1/01/90	\$ 30,074	85,017
	1/01/91	33,257	95,581
	1/01/92	36,999	101,003
	1/01/93	40,767	108,190
	1/01/94	45,219	123,902
	1/01/95	49,567	140,965
	1/01/96	53,247	155,538
	1/01/97	57,579	169,852
	1/01/98	60,314	189,904
	12/31/98	66,850	203,971
<b>Judges Retirement System</b>	1/01/90	\$ 4,104	8,758
	1/01/91	4,897	9,254
	1/01/92	5,373	12,818
	1/01/93	5,067	20,766
	1/01/94	5,274	24,938
	1/01/95	5,439	29,339
	1/01/96	6,189	30,573
	1/01/97	7,348	31,108
	1/01/98	7,419	34,607
	12/31/98	7,819	36,529
<b>Governors and Legislative Pension Plan</b>	1/01/90	\$ 262	2,533
	1/01/91	336	2,565
	1/01/92	266	3,189
	1/01/93	262	3,505
	1/01/94	263	3,475
	1/01/95	254	3,958
	1/01/96	250	4,111
	1/01/97	224	4,429
	1/01/98	224	4,467
	12/31/98	221	4,558



Actuarial Accrued Liabilities				Portion of Actuarial Accrued Liabilities Covered by Assets			
(3)	(4)	Actuarial Value of Assets	Portion of Actuarial Accrued Liabilities Covered by Assets				
Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities		(1)	(2)	(3)	(4)	
280,174	1,235,925	954,900	100%	100%	0%	77%	
227,939	1,060,808	837,797	100	100	2	79	
215,611	1,016,027	822,863	100	100	10	81	
228,838	1,054,163	835,299	100	100	4	79	
252,807	1,099,162	911,717	100	100	26	83	
295,382	1,176,222	964,218	100	100	28	82	
201,107	992,374	852,340	100	100	30	86	
161,702	868,723	772,977	100	100	41	89	
183,276	880,499	809,388	100	100	61	92	
194,415	894,429	864,665	100	100	85	97	
1,365,856	2,733,130	2,096,939	100%	100%	53%	77%	
1,696,723	3,227,549	2,594,245	100	100	63	80	
2,042,038	3,799,605	3,041,640	100	100	63	80	
2,238,937	4,186,743	3,480,582	100	100	68	83	
2,467,616	4,624,515	4,039,120	100	100	76	87	
2,802,588	5,205,873	4,372,190	100	100	70	84	
3,177,772	6,032,412	5,136,582	100	100	72	85	
3,664,771	6,917,958	5,969,813	100	100	74	86	
4,128,625	7,654,335	6,922,583	100	100	82	90	
4,441,102	8,300,310	7,906,743	100	100	91	95	
183,318	437,674	330,407	100%	100%	41%	75%	
205,884	464,633	381,501	100	100	60	82	
227,547	506,576	433,651	100	100	68	86	
257,218	557,664	485,861	100	100	72	87	
287,468	627,358	555,514	100	100	75	89	
320,637	691,107	596,892	100	100	71	86	
362,570	771,150	670,610	100	100	72	87	
425,228	866,504	755,106	100	100	74	87	
471,275	952,100	867,151	100	100	82	91	
502,124	1,032,971	988,800	100	100	91	96	
76,772	191,863	149,672	100%	100%	45%	78%	
80,559	209,397	171,739	100	100	53	82	
89,913	227,915	192,866	100	100	61	85	
88,795	237,752	213,159	100	100	72	90	
109,963	279,084	243,228	100	100	67	87	
116,927	307,459	261,523	100	100	61	85	
124,647	333,432	293,816	100	100	68	88	
134,980	362,411	329,475	100	100	76	91	
134,757	384,975	376,178	100	100	93	98	
141,867	412,688	423,405	100	100	108	103	
12,538	25,400	19,127	100%	100%	50%	75%	
16,237	30,388	22,242	100	100	50	73	
20,779	38,970	26,167	100	100	38	67	
14,761	40,594	30,254	100	100	30	75	
15,419	45,631	35,479	100	100	34	78	
15,052	49,830	38,726	100	100	26	78	
19,190	55,952	44,304	100	100	39	79	
21,599	60,055	50,721	100	100	57	84	
20,380	62,406	59,373	100	100	85	95	
23,490	67,838	67,998	100	100	101	100	
1,929	4,724	6,007	100%	100%	167%	127%	
2,256	5,157	6,355	100	100	153	123	
2,262	5,717	6,790	100	100	147	119	
2,383	6,150	7,122	100	100	141	116	
2,378	6,116	7,683	100	100	166	126	
2,394	6,606	7,804	100	100	150	118	
2,492	6,853	8,185	100	100	153	119	
2,367	7,020	8,636	100	100	168	123	
2,307	6,998	9,318	100	100	201	133	
2,238	7,017	9,988	100	100	233	142	

## Schedules of Active Member Valuation Data

Year Ended December 31

System	Year	Number of Participating Employers	Active Members	Active Members			Inflation Increase (CPI)
				Annual Payroll	Average Pay	Percent Increase	
<b>Contributory Retirement System</b>	1989	302	21,980	\$ 449,350,000	20,525	5.42%	4.60%
	1990	304	14,477	414,917,000	21,668	5.57	6.10
	1991	304	12,809	305,400,000	23,172	6.94	3.10
	1992	299	11,952	286,183,000	24,636	6.32	2.90
	1993	299	11,423	293,833,000	25,629	4.03	2.70
	1994	245	10,622	287,743,000	27,347	6.70	2.70
	1995	231	7,419	261,685,000	28,013	2.44	2.50
	1996	225	4,830	141,974,000	29,081	3.81	3.30
	1997	209	4,522	138,231,000	30,860	10.16	1.70
1998	167	4,287	137,042,000	32,296	11.06	1.60	
<b>Noncontributory Retirement System</b>	1989	254	49,034	\$ 945,917,000	20,753	1.63%	4.60%
	1990	295	58,922	1,004,462,000	21,456	3.39	6.10
	1991	303	63,000	1,277,671,000	22,501	4.87	3.10
	1992	307	65,777	1,381,842,000	23,737	5.49	2.90
	1993	314	66,479	1,477,220,000	24,682	3.98	2.70
	1994	322	67,181	1,642,123,000	25,627	3.83	2.70
	1995	331	70,838	1,801,948,000	26,951	5.17	2.50
	1996	336	73,652	2,054,879,000	28,580	6.04	3.30
	1997	344	75,599	2,200,988,000	30,013	11.36	1.70
1998	349	77,512	2,365,650,000	31,063	8.69	1.60	
<b>Public Safety Retirement System</b>	1989	104	4,276	\$ 101,902,000	24,977	1.01%	4.60%
	1990	106	4,606	110,363,000	25,360	1.53	6.10
	1991	109	4,819	123,595,000	26,149	3.11	3.10
	1992	112	5,010	120,904,000	28,059	7.30	2.90
	1993	115	5,120	138,954,000	28,760	2.50	2.70
	1994	116	5,132	148,791,000	29,462	2.44	2.70
	1995	117	5,471	159,943,000	29,824	1.23	2.50
	1996	115	5,736	176,979,000	31,429	5.38	3.30
	1997	115	6,041	195,464,000	32,885	10.26	1.70
1998	115	6,380	212,414,000	33,842	7.68	1.60	
<b>Firefighters Retirement System</b>	1989	26	1,006	\$ 29,407,000	28,626	0.86%	4.60%
	1990	27	1,038	30,912,000	29,762	3.97	6.10
	1991	27	1,053	33,227,000	31,595	6.16	3.10
	1992	28	1,092	36,517,000	32,905	4.15	2.90
	1993	29	1,104	37,879,000	34,215	3.98	2.70
	1994	27	1,099	40,157,000	36,454	6.54	2.70
	1995	28	1,173	43,027,000	37,258	2.21	2.50
	1996	28	1,224	45,969,000	38,062	2.16	3.30
	1997	33	1,281	51,287,000	39,695	6.54	1.70
1998	35	1,349	54,326,000	40,419	6.19	1.60	
<b>Judges Retirement System</b>	1989	1	91	\$ 5,625,000	59,009	9.23%	4.60%
	1990	1	87	6,450,000	67,437	14.28	6.10
	1991	1	89	6,975,000	70,417	4.42	3.10
	1992	1	81	6,538,000	74,515	5.82	2.90
	1993	1	86	7,013,000	82,123	10.21	2.70
	1994	1	85	6,955,000	85,572	4.20	2.70
	1995	1	99	7,903,000	88,201	3.07	2.50
	1996	1	100	8,981,000	90,350	2.44	3.30
	1997	1	102	9,286,000	92,532	4.91	1.70
1998	1	104	9,388,000	95,531	5.73	1.60	
<b>Governors and Legislative Pension Plan</b>	1989	1	75	\$ 279,000	3,720	1.63%	4.60%
	1990	1	76	288,000	3,789	1.87	6.10
	1991	1	76	238,000	3,132	(17.36)	3.10
	1992	1	87	254,000	2,920	(6.77)	2.90
	1993	1	84	246,000	2,929	0.31	2.70
	1994	1	84	398,000	3,825	30.61	2.70
	1995	1	95	398,000	3,825	0.00	2.50
	1996	1	95	482,000	4,667	22.01	3.30
	1997	1	90	468,000	5,419	41.67	1.70
1998	1	91	468,000	5,440	16.56	1.60	

## Schedules of Retirants and Beneficiaries

Year Ended December 31

System	Year	Number Added	Number Removed	Total Retirants and Beneficiaries	Annual Allowances	% Increase in Annual Allowances	Average Annual Allowances
<b>Contributory Retirement System</b>	1989	189	574	13,560	\$ 65,299,000	5.47%	\$ 3,962
	1990	109	520	13,149	66,305,000	1.54	4,137
	1991	65	701	12,513	66,246,000	(0.09)	4,764
	1992	75	540	12,048	66,068,000	(0.27)	4,980
	1993	101	593	11,556	65,956,000	(0.17)	5,196
	1994	130	525	11,161	65,824,000	(0.20)	5,316
	1995	161	630	10,692	72,722,000	10.48	5,436
	1996	160	623	10,229	64,494,000	(11.31)	5,652
	1997	159	635	9,753	63,884,000	(12.15)	5,916
1998	166	681	9,238	62,249,000	(3.48)	6,168	
<b>Noncontributory Retirement System</b>	1989	400	42	4,424	\$ 56,460,000	13.28%	\$12,454
	1990	874	43	5,255	63,304,000	12.12	11,630
	1991	1,054	62	6,247	74,439,000	17.59	12,684
	1992	943	67	7,123	86,442,000	16.12	12,732
	1993	1,070	112	8,081	101,551,000	17.48	13,020
	1994	1,155	98	9,138	118,240,000	16.43	12,540
	1995	1,418	82	10,474	146,343,000	23.77	12,756
	1996	1,635	237	11,872	161,036,000	10.04	13,164
	1997	1,527	176	13,223	186,262,000	27.28	13,668
1998	1,612	236	14,599	213,752,000	32.74	14,184	
<b>Public Safety Retirement System</b>	1989	85	32	1,289	\$ 14,197,000	16.93%	\$12,949
	1990	87	23	1,353	15,669,000	10.37	11,630
	1991	91	26	1,418	17,136,000	9.36	14,292
	1992	73	28	1,463	18,745,000	9.39	15,000
	1993	104	31	1,536	20,560,000	9.68	16,224
	1994	99	35	1,600	22,634,000	10.09	13,368
	1995	171	52	1,719	25,271,000	11.65	13,476
	1996	148	50	1,817	28,223,000	11.68	14,328
	1997	146	31	1,932	30,972,000	22.56	14,868
1998	192	38	2,086	34,374,000	21.79	15,360	
<b>Firefighters Retirement System</b>	1989	21	14	557	\$ 7,935,000	20.19%	\$13,343
	1990	26	9	574	8,525,000	7.44	13,980
	1991	19	12	581	9,051,000	6.17	14,496
	1992	25	15	591	9,494,000	4.89	15,204
	1993	17	9	599	9,978,000	5.10	18,672
	1994	36	15	620	10,734,000	7.58	15,192
	1995	52	26	646	11,769,000	9.64	14,856
	1996	49	19	676	12,888,000	9.51	15,744
	1997	55	21	710	14,321,000	21.68	16,896
1998	41	15	736	15,741,000	22.14	18,180	
<b>Judges Retirement System</b>	1989	4	—	56	\$ 860,000	22.86%	\$18,081
	1990	—	3	53	920,000	6.98	19,766
	1991	4	—	57	1,042,000	13.26	21,768
	1992	15	3	69	1,359,000	30.42	28,848
	1993	2	2	69	1,958,000	44.08	30,540
	1994	8	7	70	2,193,000	12.00	30,108
	1995	3	2	71	2,355,000	7.39	32,208
	1996	4	6	69	2,472,000	4.97	34,776
	1997	6	2	73	2,690,000	14.23	35,796
1998	5	5	73	3,002,000	21.44	39,912	
<b>Governors and Legislative Pension Plan</b>	1989	11	8	173	\$ 330,000	(5.98)%	\$ 2,055
	1990	10	8	175	349,000	5.76	3,841
	1991	12	10	177	367,000	5.16	2,883
	1992	12	6	183	387,000	5.45	2,078
	1993	12	7	188	419,000	8.27	1,956
	1994	13	4	197	445,000	6.21	2,184
	1995	12	9	200	487,000	9.44	2,364
	1996	12	12	200	504,000	3.49	2,448
	1997	17	7	210	519,000	6.57	2,400
1998	9	6	213	538,000	6.75	2,460	

**Contributory Retirement System**

**Summary of Plan Provisions**



Description	Requirement															
<b>Membership Eligibility</b> . . . . .	The Public Employees Contributory Retirement System includes eligible public employees of the State of Utah and its political subdivisions including public education employees of those entities covered by the System. An employee is qualified for membership in the Contributory System if their employer participates in the System and the employee works at least 20 hours per week and receives benefits normally provided by their employer as approved by the Retirement Board, and teachers who teach half-time.															
<b>Vesting</b> . . . . .	Retirement benefit becomes vested upon the member's completion of 4 years of qualifying service. Eligible member contributions and interest thereon vest immediately.															
<b>Service Retirement</b> . . . . .	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Age</th> <th style="text-align: left;">Years of Service</th> <th style="text-align: left;">Allowance Reduction†</th> </tr> </thead> <tbody> <tr> <td>Any age</td> <td>30</td> <td>None</td> </tr> <tr> <td>60-61</td> <td>20</td> <td>3% each year before age 65</td> </tr> <tr> <td>62-64</td> <td>10</td> <td>3% each year before age 65</td> </tr> <tr> <td>65</td> <td>4</td> <td>None</td> </tr> </tbody> </table> <p>†With fewer than 30 years of service from any combination of Utah Retirement Systems, retiring before age 65 will reduce the monthly benefit approximately 7% for every year under age 60 and 3% for each year between ages 60 and 65.</p>	Age	Years of Service	Allowance Reduction†	Any age	30	None	60-61	20	3% each year before age 65	62-64	10	3% each year before age 65	65	4	None
Age	Years of Service	Allowance Reduction†														
Any age	30	None														
60-61	20	3% each year before age 65														
62-64	10	3% each year before age 65														
65	4	None														
<b>Service Benefit Formula</b> . . . . .	<ol style="list-style-type: none"> <li>1. Number of years of service before 7-1-67 x 1.10%** x FAS*.</li> <li>2. Number of years of service between 7-1-67 and 6-30-75 x 1.25% x FAS*.</li> <li>3. Number of years of service after 7-1-75 x 2.0% x FAS*.</li> <li>4. Plan 1 allowance = total of 1, 2 and 3.</li> </ol> <p>*FAS (Final Average Salary) = highest five years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI. **If FAS is \$500 or less, the formula is 1.15% for each year of service before 7-1-67.</p>															
<b>Cost of Living Allowance</b> . . . . .	Up to 4% annually on the original retirement benefit. Eligible after one year.															
<b>Death Benefits</b> . . . . .	<p>An active member's death benefit consists of an insurance payment equal to 60% of the highest annual salary with a minimum of \$1,000 and a refund of contributions plus interest. The spouse of a deceased member is eligible for a monthly benefit if they have been married for at least six months and the member meets age and service qualifications, or has 25 years of service.</p> <p>An inactive member's death benefit for someone with fewer than ten years of service consists of a refund of contributions plus interest. For those with ten or more years of service credited to their account prior to July 1, 1987 and who have not withdrawn their contributions, the benefit is the same as for active members.</p> <p>A retired member's death benefit depends on the retirement plan that was selected at retirement. No death benefit is available without a reduced retirement benefit.</p>															
<b>Refunds</b> . . . . .	A terminated member is eligible for a 100% refund of member contributions plus interest. There is a 60-day refund processing period after the last day of paid employment.															
<b>Redeposits</b> . . . . .	A redeposit with interest may be made in monthly installments, by a lump-sum payment, or by direct transfer from a qualified plan. A redeposit must be completed prior to retirement. Service credit is restored when the redeposit is completed.															
<b>Contribution Rates</b> . . . . . <i>(as of 12-31-98)</i>	<p>Member contribution rate is 6.00%*** of covered salary. Employer rate for State and School (Level A) is 9.67% of covered salary and 6.73% for Local Governmental (Level B).</p> <p>***Employers have the option of paying all or part of member contributions on behalf of their employees.</p>															
<b>Interest</b> . . . . .	8% on member contributions.															



**Noncontributory Retirement System**

**Summary of Plan Provisions**



Description	Requirement																		
<b>Membership Eligibility</b> . . . . .	The Public Employees Noncontributory Retirement System was established on July 1, 1986. All eligible employees of the State and School entities hired subsequent to that date are automatically members of the Noncontributory System. Local governmental entities had the option of adopting the new System or remaining with the Contributory System. An employee is qualified for membership in the Noncontributory System if their employer participates in the System and the employee works at least 20 hours per week and receives benefits normally provided by their employer as approved by the Retirement Board, and teachers who teach half-time.																		
<b>Vesting</b> . . . . .	Retirement benefit becomes vested upon the member's completion of 4 years of qualifying service.																		
<b>Service Retirement</b> . . . . .	<table border="1"> <thead> <tr> <th>Age</th> <th>Years of Service</th> <th>Allowance Reduction†</th> </tr> </thead> <tbody> <tr> <td>Any age</td> <td>30</td> <td>None</td> </tr> <tr> <td>Any age</td> <td>25</td> <td>Full actuarial before age 60</td> </tr> <tr> <td>60-61</td> <td>20</td> <td>3% each year before age 65</td> </tr> <tr> <td>62-64</td> <td>10</td> <td>3% each year before age 65</td> </tr> <tr> <td>65</td> <td>4</td> <td>None</td> </tr> </tbody> </table> <p>†With fewer than 30 years of service from any combination of Utah Retirement Systems, retiring before age 65 will reduce the monthly benefit approximately 7% for every year under age 60 and 3% for each year between ages 60 and 65.</p>	Age	Years of Service	Allowance Reduction†	Any age	30	None	Any age	25	Full actuarial before age 60	60-61	20	3% each year before age 65	62-64	10	3% each year before age 65	65	4	None
Age	Years of Service	Allowance Reduction†																	
Any age	30	None																	
Any age	25	Full actuarial before age 60																	
60-61	20	3% each year before age 65																	
62-64	10	3% each year before age 65																	
65	4	None																	
<b>Service Benefit Formula</b> . . . . .	<p>Number of years of service x 2.0% x FAS*.</p> <p>*FAS (Final Average Salary) = highest three years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.</p>																		
<b>Cost of Living Allowance</b> . . . . .	Up to 4% annually on the original retirement benefit. Eligible after one year.																		
<b>Death Benefits</b> . . . . .	<p>An active member's death benefit consists of an insurance payment equal to 60% of the highest annual salary with a minimum of \$1,000 and a refund of transferred contributions plus interest. The spouse of a deceased member is eligible for a monthly benefit if they have been married for at least six months and the member has 15 or more years of service credit.</p> <p>An inactive member's death benefit for someone with fewer than ten years of service consists of a refund of transferred contributions plus interest. For those with ten or more years of service credited to their account prior to July 1, 1987 and who have not withdrawn their contributions, the benefit is the same as for active members.</p> <p>A retired member's death benefit depends on which retirement plan was selected at retirement. No death benefit is available without a reduced retirement benefit.</p>																		
<b>Refunds</b> . . . . .	A terminated member who transferred from the Contributory Retirement System is eligible for a 100% refund of transferred contributions plus interest. Members hired after July 1, 1986 are ineligible for refunds. There is a 60-day refund processing period after the last day of paid employment.																		
<b>Redeposits</b> . . . . .	A redeposit with interest may be made in monthly installments, by a lump-sum payment, or by direct transfer from a qualified plan. A redeposit must be completed prior to retirement. Service credit is restored when the redeposit is completed.																		
<b>Contribution Rates</b> . . . . . (as of 12-31-98)	Employer rate for State & School (Level A) is 14.16% of covered salary and 10.74% for Local Governmental (Level B).																		
<b>Interest</b> . . . . .	8% on member contributions transferred from the Contributory Retirement System.																		



**Public Safety Retirement System**

**Summary of Plan Provisions**

Description	Requirement												
<b>Membership Eligibility</b> . . . . .	The Public Safety Retirement System includes eligible state and local governmental employees directly involved in law enforcement. The Public Safety System consists of the Contributory and Noncontributory divisions. Employees are qualified for membership in the Public Safety System if: (1) they are employed 2,080 hours a year in a recognized public safety department; (2) they have completed a certified training program; and (3) their primary duty is as a peace officer, correctional officer or special function officer.												
<b>Vesting</b> . . . . .	Retirement benefit becomes vested upon the member's completion of 4 years of service credit. Eligible member contributions vest immediately.												
<b>Service Retirement</b> . . . . .	<table border="1"> <thead> <tr> <th>Age</th> <th>Years of Service</th> <th>Allowance Reduction</th> </tr> </thead> <tbody> <tr> <td>Any age</td> <td>20</td> <td>None</td> </tr> <tr> <td>60</td> <td>10</td> <td>None</td> </tr> <tr> <td>65</td> <td>4</td> <td>None</td> </tr> </tbody> </table>	Age	Years of Service	Allowance Reduction	Any age	20	None	60	10	None	65	4	None
Age	Years of Service	Allowance Reduction											
Any age	20	None											
60	10	None											
65	4	None											
<b>Service Benefit Formula</b> . . . . .	<ol style="list-style-type: none"> <li>1. 2.5% x FAS* x years of service up to 20 years.</li> <li>2. 2.0% x FAS* x years of service over 20 years.</li> <li>3. Monthly benefit = total of 1 and 2.**</li> </ol> <p>*FAS (Final Average Salary) = highest three years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI. **Benefits paid cannot exceed 70% of FAS.</p>												
<b>Cost of Living Allowance</b> . . . . .	Up to 2.5% annually on original retirement benefit. Eligible after one year.												
<b>Death Benefits</b> . . . . .	<p><b>DIVISION A (WITH SOCIAL SECURITY)</b></p> <p>If death is in the line of duty, the benefit to the surviving spouse is \$1,000 plus a monthly benefit of 30% of the final average salary. In the noncontributory system only, if death is in the line of duty, and the member has 20 years of service credit, the spouse's benefit is the same as for a retired member. If death is not in the line of duty, the benefit is \$1,000 or a refund of contributions for members with fewer than 10 years of service. For more than 10 years of service, the benefit to the surviving spouse is \$500 plus a monthly benefit of 2% of the final average salary for each year of service to a maximum of 30% of the final average salary. If there is no spouse, the settlement is a 100% refund of vested contributions payable to the beneficiary, or \$500, whichever is greater. Dependent children receive no additional benefits. A retired member's death benefit to the surviving spouse is 65% of the monthly benefit.</p> <p><b>DIVISION B (WITHOUT SOCIAL SECURITY)</b></p> <p>If death is in the line of duty, the benefit to the surviving spouse is \$1,500 plus a monthly benefit of 37.5% of the final average salary. Each unmarried child under 18 receives \$50 per month if the member had two or more years of service. If death is not in the line of duty, the benefit is a refund of contributions plus 50% of the last 12 months of salary for members with fewer than two years of service. For members with more than two years of service, the benefit is the same as that for death in the line of duty. If there is no spouse, the settlement is a 100% refund of vested contributions payable to the beneficiary, or \$500, whichever is greater. A retired member's death benefit to a surviving spouse is 65% of the monthly benefit. An unmarried child under 18 receives \$50 per month.</p>												
<b>Refunds</b> . . . . .	A terminated member is eligible for a 100% refund of member contributions. There is a 60-day refund processing period after the last day of paid employment.												
<b>Redeposits</b> . . . . .	A redeposit with interest may be made in monthly installments, by a lump-sum payment, or by direct transfer from a qualified plan. A redeposit must be completed prior to retirement. Service credit is restored when the redeposit is completed.												
<b>Contribution Rates</b> . . . . . <i>(as of 12-31-98)</i>	<p><b>CONTRIBUTORY OPTION</b></p> <p>Member rates in Division A are: State units 12.29%; Bountiful 11.94%; and all other units 12.29% of covered salary. Member rates in Division B are: Salt Lake City 13.74%; Ogden 13.18%; Logan 11.13%; Provo 13.54%; and other units 10.50% of covered salary.*</p> <p>Employer rates for Division A are: State units 12.26%; Bountiful 10.36%; and other law enforcement units 5.87% of covered salary. Employer rates for Division B are: Salt Lake City 21.82%; Ogden 12.90%; Logan 7.76%; Provo 12.81%; and other units 7.11% of covered salary.</p> <p>*Employers have the option of paying all or part of member contributions on behalf of their employees.</p> <p><b>NONCONTRIBUTORY OPTION</b></p> <p>Employer rates for Division A are: State units 23.14%; Bountiful 22.05%; and other units 17.42% of covered salary. Employer rates for Division B are: Salt Lake City 33.68%; Ogden 25.49% and all other units 17.07% of covered salary.</p>												
<b>Interest</b> . . . . .	8% on member contributions in the Contributory System.												

**Firefighters Retirement System**

**Summary of Plan Provisions**



Description	Requirement												
<b>Membership Eligibility</b> . . . . .	The Firefighters Retirement System includes eligible state and local governmental employees directly involved in fire fighting and whose duties are classified as hazardous. If an employer does not classify the duties as hazardous, the employee will be enrolled in either the Public Employees Contributory or Noncontributory Retirement System. Employees are qualified for membership in the Firefighters Retirement System if they are employed 2,080 hours a year in a regular constituted fire department and are regularly assigned to hazardous duty. Although volunteer firefighters do not contribute to the System and are not eligible for service retirement benefits, they or their beneficiaries receive benefits based on the salary of the lowest paid firefighters in a first-class city if they are disabled or killed in the line of duty.												
<b>Vesting</b> . . . . .	Retirement benefit becomes vested upon the member's completion of 4 years of service credit. Eligible member contributions vest immediately.												
<b>Service Retirement</b> . . . . .	<table border="1"> <thead> <tr> <th>Age</th> <th>Years of Service</th> <th>Allowance Reduction</th> </tr> </thead> <tbody> <tr> <td>Any age</td> <td>20</td> <td>None</td> </tr> <tr> <td>60</td> <td>10</td> <td>None</td> </tr> <tr> <td>65</td> <td>4</td> <td>None</td> </tr> </tbody> </table>	Age	Years of Service	Allowance Reduction	Any age	20	None	60	10	None	65	4	None
Age	Years of Service	Allowance Reduction											
Any age	20	None											
60	10	None											
65	4	None											
<b>Service Benefit Formula</b> . . . . .	<ol style="list-style-type: none"> <li>2.5% x FAS* x years of service up to 20 years.</li> <li>2.0% x FAS* x years of service over 20 years.</li> <li>Monthly benefit = total of 1 and 2.**</li> </ol> <p>*FAS (Final Average Salary) = highest three years' earnings converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.                      **Benefits paid cannot exceed 70% of FAS, but cannot be less than \$500.</p>												
<b>Cost of Living Allowance</b> . . . . .	Up to 4% annually on original retirement benefit. Eligible after one year.												
<b>Disability Benefits</b> . . . . .	If disability is in the line of duty, the benefit is 50% of the final average salary with no minimum age or service requirements. If disability is not in the line of duty, the benefit is a refund of contributions for members with fewer than five years of service. For members with more than five years of service, the benefit is the same as that for disability incurred in the line of duty. Benefits are suspended while receiving Workers Compensation.												
<b>Death Benefits</b> . . . . .	<p><b>DIVISION A (WITH SOCIAL SECURITY)</b>                      If death is in the line of duty, the benefit to the surviving spouse is \$1,500 plus a monthly benefit of 30% of final average salary.                      If death is not in the line of duty, the benefit is \$1,000 or a refund of contributions for members with fewer than 10 years of service. For members with more than 10 years of service, the benefit to the surviving spouse consists of \$500 plus a monthly benefit of 2% of the final average salary for each year of service to a maximum of 30% of the final average salary.</p> <p><b>DIVISION B (WITHOUT SOCIAL SECURITY)</b>                      If death is in the line of duty, the benefit to the surviving spouse is \$1,500 plus a monthly benefit of 37.5% of the final average salary. Each unmarried child under 21 receives \$75 per month if the member had five or more years of service. Total benefits cannot exceed 75% of the final average salary. If death is in the line of duty, and the member has 20 or more years of service credit, the spouse's benefit is the same as for a retired member.                      If death is not in the line of duty, the benefit is a refund of contributions plus 50% of the last 12 months of salary for members with fewer than five years of service. For members with more than five years of service, the benefit is the same as that for death in the line of duty. If there is no spouse, the settlement is a 100% refund of vested contributions payable to the beneficiary, or \$500, whichever is greater.                      A retired member's death benefit to a surviving spouse is 75% of the monthly benefit with a minimum monthly payment of \$350. An unmarried child under 21 receives \$75 per month.</p>												
<b>Refunds</b> . . . . .	A terminated member is eligible for a 100% refund of member contributions. There is a 60-day refund processing period after the last day of paid employment.												
<b>Redeposits</b> . . . . .	A redeposit with interest may be made in monthly installments, by a lump-sum payment, or by direct transfer from a qualified plan. A redeposit must be completed prior to retirement. Service credit is restored when the redeposit is completed.												
<b>Contribution Rates</b> . . . . . <i>(as of 12-31-98)</i>	Member rate in Division A is 13.31% of covered salary. Member rate in Division B is 16.71% of covered salary.* Employer rate in Division A is 0.00% and in Division B is 4.74% of covered salary. A fire insurance premium tax equal to 8.48% of salaries is also an additional part of the employer contribution rates. Fire insurance premium taxes are collected by the Utah State Treasurer for the Firefighters Retirement System to help fund retirement benefits. *Employers have the option of paying all or part of member contributions on behalf of their employees.												
<b>Interest</b> . . . . .	Member contributions receive no interest.												

**Judges Retirement System**

# Summary of Plan Provisions



Description	Requirement															
<b>Membership Eligibility</b> . . . . .	The Judges Retirement System includes justices and judges of the Supreme Court, appellate, district and juvenile courts.															
<b>Vesting</b> . . . . .	Retirement benefit becomes vested upon the member's completion of 6 years of service credit. Eligible member contributions and interest thereon vest immediately.															
<b>Service Retirement</b> . . . . .	<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Age</th> <th style="text-align: left;">Years of Service</th> <th style="text-align: left;">Allowance Reduction</th> </tr> </thead> <tbody> <tr> <td>Any age . . . . .</td> <td>25 . . . . .</td> <td>None</td> </tr> <tr> <td>55 . . . . .</td> <td>20 . . . . .</td> <td>Full actuarial reduction</td> </tr> <tr> <td>62 . . . . .</td> <td>10 . . . . .</td> <td>None</td> </tr> <tr> <td>70 . . . . .</td> <td>6 . . . . .</td> <td>None</td> </tr> </tbody> </table>	Age	Years of Service	Allowance Reduction	Any age . . . . .	25 . . . . .	None	55 . . . . .	20 . . . . .	Full actuarial reduction	62 . . . . .	10 . . . . .	None	70 . . . . .	6 . . . . .	None
Age	Years of Service	Allowance Reduction														
Any age . . . . .	25 . . . . .	None														
55 . . . . .	20 . . . . .	Full actuarial reduction														
62 . . . . .	10 . . . . .	None														
70 . . . . .	6 . . . . .	None														
<b>Service Benefit Formula</b> . . . . .	<ol style="list-style-type: none"> <li>1. 5.00% x FAS* x years of service up to 10 years.</li> <li>2. 2.25% x FAS* x years of service between 10 and 20 years.</li> <li>3. 1.00% x FAS* x years of service over 20 years.</li> <li>4. Monthly benefit = total of 1, 2, and 3.**</li> </ol> <p>*FAS (Final Average Salary) = highest two years' earnings in judicial service converted to a monthly average. Yearly salary increases are limited to 10% plus a COLA determined by the CPI.                      **Benefits paid cannot exceed 75% of FAS.</p>															
<b>Cost of Living Allowance</b> . . . . .	Up to 4% annually compounded, beginning one year after retirement.															
<b>Death Benefits</b> . . . . .	<p>An active or inactive member's death benefit to the surviving spouse consists of a refund of member contributions and interest plus 65% of the final average salary on a yearly rate, or a monthly allowance equal to 65% of the amount computed for a service retirement with no early retirement reduction.</p> <p>A retired member's death benefit to the surviving spouse is 65% of the member's monthly benefit at the time of death. If the member elected a reduced monthly benefit, the surviving spouse will receive a death benefit of 75% of the member's monthly benefit.</p>															
<b>Refunds</b> . . . . .	A terminated member is eligible for a 100% refund of member contributions plus interest. There is a 60-day refund processing period after the last day of paid employment.															
<b>Redeposits</b> . . . . .	A redeposit with interest may be made in monthly installments, by a lump-sum payment, or by direct transfer from a qualified plan. A redeposit must be completed prior to retirement. Service credit is restored when the redeposit is completed.															
<b>Contribution Rates</b> . . . . .	<p><b>NONCONTRIBUTORY OPTION</b>                      (as of 12-31-98) Employer rate is 19.00% of covered salary.</p> <p><b>CONTRIBUTORY OPTION</b>                      Member rate is 8.00% of covered salary.* Employer rate includes 11.00% of covered salary and 22.86% from court fees.                      *State picks up 6.00% of member contributions.</p>															
<b>Interest</b> . . . . .	8% on member contributions.															



**Governors and Legislative Pension Plan**

**Summary of Plan Provisions**



Description	Requirement									
<b>Membership Eligibility</b> . . . . .	The Governors and Legislative Pension Plan includes only governors and legislators of the State of Utah.									
<b>Vesting</b> . . . . .	Retirement benefit becomes vested upon the member's completion of 4 years of qualifying service credit.									
<b>Service Retirement</b> . . . . .	<table border="1"> <thead> <tr> <th>Age</th> <th>Years of Service</th> <th>Allowance Reduction</th> </tr> </thead> <tbody> <tr> <td>65.....</td> <td>4.....</td> <td>None</td> </tr> <tr> <td>62.....</td> <td>10.....</td> <td>3% each year before age 65</td> </tr> </tbody> </table>	Age	Years of Service	Allowance Reduction	65.....	4.....	None	62.....	10.....	3% each year before age 65
Age	Years of Service	Allowance Reduction								
65.....	4.....	None								
62.....	10.....	3% each year before age 65								
<b>Service Benefit Formula</b> . . . . .	<p><b>GOVERNORS</b> \$500 per month for one term; \$1,000 per month for two or more terms. Increased semi-annually up to 2% based on the CPI. The amount as of 12-31-98 is \$1,000 for one term and \$2,000 for two or more terms.</p> <p><b>LEGISLATORS</b> \$10 per month per each year of service as a legislator, increased semi-annually up to 2% based on the CPI. The amount as of 12-31-98 is \$22.40.</p>									
<b>Cost of Living Allowance</b> . . . . .	Up to 4% annually on the original retirement benefit. Eligible after one year.									
<b>Death Benefits</b> . . . . .	An active or retired member's death benefit to a spouse consists of a monthly pension equal to 50% of the retirement allowance paid, or to which the member would have been entitled to upon reaching age 65, if the member has four or more years of service as a governor or legislator. The deceased member and surviving spouse must have been married at least six months.									
<b>Contribution Rates</b> . . . . .	There are currently no required contributions to the Governors and Legislative Pension Plan.									

**Summaries of Plan Provisions**

**Changes in Plan Provisions**

**General**

**SENATE BILL 138**  
 S Modifies the applications of unused sick leave in relation to early retirement programs. Permits a state employee to roll payment for accrued, unused sick leave to a 401(k) account; to receive it as paid-up health or Medicare supplemental insurance for self and spouse; or as a cash payment under certain circumstances.

**SENATE BILL 201**  
 Directs the Retirement Board to study and report on the feasibility of consolidating the retirement systems.

**HOUSE BILL 196**  
 Clarifies duties and responsibilities of the Retirement Board and Office and makes technical corrections:

- Establishes uniform retirement ages in the Judges Contributory and Noncontributory Systems.
- Authorizes the Retirement Office to pool certain investment funds for greater efficiencies.
- Conforms the application procedure for continuing spousal death benefits to that when applying for retirement.
- Establishes benefit accrual procedures to protect the tax-qualified status of the Retirement Systems.
- Creates a means for forwarding medical records required by the Board for disability consideration.
- Clarifies the scope and calculation of certain disability benefits.
- Ensures that URS honor only the beneficiary designation on file at the time of the member's death.

**Noncontributory Retirement System**  
**HOUSE BILL 156**  
 Allows executive staff of the Governor's office to be excluded from the Utah Retirement System.

**Public Safety Retirement System**  
**HOUSE BILL 198**  
 Provides a window of conversion to the Public Safety Noncontributory Retirement System.

**HOUSE BILL 308**  
 Modifies and clarifies peace officer classifications, training, and certification.

**HOUSE BILL 319**  
 Amends Public Safety Noncontributory Retirement System death benefits such that if a peace officer with 20 or more years of service dies, his or her beneficiary will receive a settlement equal to what would have been paid had the officer retired.

**401(k) and 457 Plans****Summary of Plan Provisions**

Utah Retirement Systems' 401(k) and 457 Plans are voluntary tax-deferred retirement savings programs authorized under sections 401(k) and 457 of the Internal Revenue Code. These plans are available to state, local governmental, and public education employees throughout Utah whose employers who have adopted the Plans.

**Goals and Objectives**

The purpose of these plans is to allow public employees throughout Utah to adequately prepare themselves for retirement by investing a portion of their income (before taxes) in one or both of these supplemental retirement plans.

It has long been recognized that in order for people to experience the comfortable and rewarding retirement they desire, they cannot rely entirely upon Social Security and their employer provided retirement. In providing the third leg of a three-legged stool (Social Security and their retirement system being the other two legs), employees must take the initiative to personally put aside a portion of their salary into some type of long-term savings plan. These tax-deferred defined contribution plans provide exceptional vehicles to accomplish these goals, and to provide the third leg of the three-legged stool; enhancing an employee's well balanced retirement plan. Employees who begin participating in these plans early in their careers can accumulate sizeable nest-eggs by the time they retire.

**Employer Contributions**

In addition to accepting employee salary deferrals, these plans also accept employer contributions on behalf of their employees. All state and public education employees participating in

the Noncontributory Retirement System receive an employer contribution equal to 1.5% of their salary in the 401(k) Plan. All local governmental employers also have the option of contributing to the 401(k) Plan on behalf of their employees. Many contribute amounts in excess of the 1.5% the State contributes. All employers have the option of matching employee contributions.

**Social Security Substitute**

Local governments that have exempted themselves from Social Security coverage and have part-time, temporary, or seasonal employees who are not participating in a qualifying retirement system, must now cover these employees with Social Security.

Employers may use the 401(k) and/ or 457 Plan as a qualifying retirement system for these employees, but must contribute a minimum of 7.5% of salary to the Plan(s) in their behalf for it to be considered a "qualifying system". The employer may contribute the 7.5% themselves, or they may require their employees to pay a portion of it.

**Summary of Plan Provisions****DEFERRAL LIMITS**

401(k)—Limited in 1998 to an annual maximum of \$10,000 (indexed). Deferrals to 401(k) and all other qualified pension plans are limited to 25% of includable compensation.

457—Limited to an annual maximum of \$8,000 or 33.3% of includable compensation.

**COORDINATION OF DEFERRALS**

Deferrals to the 401(k), 457, and 403(b) plans must be coordinated. The limits in one plan are reduced dollar for dollar by deferrals in another. If participating in the 457 Plan, the maximum in all plans combined is \$8,000.

**CATCH-UP PROVISIONS**

401(k)—None.

457—Allowable only during the last three years before the year of retirement. Participants may contribute the difference between actual and maximum deferrals for prior years up to an additional \$7,000 each year with a maximum of \$15,000.

**WITHDRAWALS**

401(k)—Allowable upon termination of employment, age 59½, retirement, disability, death, or hardship caused by immediate and heavy financial needs.

457—Allowable upon termination of employment, retirement, disability, death, or severe unforeseeable financial emergencies.

**ROLLOVERS**

401(k)—Allowable to or from another qualified plan or to an IRA upon termination or other qualifying circumstance. May be either a direct rollover by the Plan or by the participant within 60 days after distribution.

457—Direct transfers to or from another 457 Plan are permitted.

**VESTING**

401(k)—Fully vested.

457—Fully vested.

**Investment Transfer Options**

Although changes in deferral amounts and in the investment options for current contributions may be made at any time, accumulated balances may be transferred from one investment option to another only one time per calendar month. Furthermore, Beneficial Life Insurance Company restricts transfers of account balances in excess of \$1,000 from the Group Annuity Fund to 25% of the highest account balance of the past four years without a market value adjustment, when applicable. The

**401(k) and 457 Plans****Summary of Plan Provisions***(Continued)*

Internal Revenue Code does not allow transfers between the 401(k) and 457 plans.

**1998 Investment Options****INCOME FUND**

The *Income Fund* invests in a diversified portfolio consisting of U.S. government securities, mortgages, corporate bonds, guaranteed investment contracts, and short-term funds. This fund is the most conservative of the investment options and offers the most stable return.

**BOND FUND**

The *Bond Fund* invests in a diversified portfolio consisting of U.S. government securities, mortgages, corporate bonds, and short-term funds. This fund's return is affected by changes in the interest rates.

**BALANCED FUND**

The *Balanced Fund* invests in a portfolio consisting of approximately 60% stocks, 35% bonds and 5% short-term funds. This fund is considered less risky than most stock investments but has higher risk than most fixed income investments.

**LARGE CAP STOCK INDEX FUND**

The *Large Cap Stock Index Fund* invests in the Standard & Poor's 500 Index, carrying approximately three-fourths of the companies included in that index. This fund has the potential for higher returns than fixed income investments over long periods of time, although participants should be aware of the possibility of loss in a declining market.

**LARGE CAP STOCK GROWTH FUND**

The *Large Cap Stock Growth Fund* seeks to invest in 25 to 80 stocks from the S&P 500 Index which are under-

valued or have greater potential for long-term capital growth. The fund's objective is to achieve greater earnings than the S&P 500 Index. This fund may have greater volatility and risk than the Large Cap Stock Index Fund.

**INTERNATIONAL FUND**

The *International Fund* invests primarily in stocks of companies outside of the United States. This fund offers international diversification, but adds currency risk and country risk not found in a U.S. fund. Accordingly, the risk and return potential of this fund is considered greater than a large cap U.S. fund.

**SMALL CAP STOCK FUND**

The *Small Cap Stock Fund* invests in U.S. small companies listed on the New York Stock Exchange, the American Stock Exchange, and the NASDAQ national market system. Small company stocks have the potential for greater returns than large company stocks, and conversely have a greater risk of loss. Significant price fluctuations are more likely than in the other investment options.

**HORIZON FUNDS**

A *Horizon Fund* asset allocation is designed to help those who want to diversify their investment. If you select one of the three Horizon Funds,

your contributions will be allocated to the investment options according to the following table. The Horizon Funds will automatically rebalance each quarter when target ranges are exceeded. Utah Retirement Systems reserves the right to change these percentages as needed.

The *Short Horizon Fund* is designed for investors expecting to withdraw their funds within five years. This fund provides a relatively conservative investment with a more stable rate of return. However, with reduced market risk there is usually a lower rate of return.

The *Medium Horizon Fund* is designed for investors planning to withdraw their funds in five to ten years. This fund emphasizes moderate risk and moderate earnings potential. It has more risk than the Short Horizon Fund, but less than the Long Horizon Fund.

The *Long Horizon Fund* is designed for investors with ten or more years to invest before withdrawing their funds. The fund offers the potential for higher returns over a long period of time. There is higher market risk with this horizon fund, along with higher potential returns.

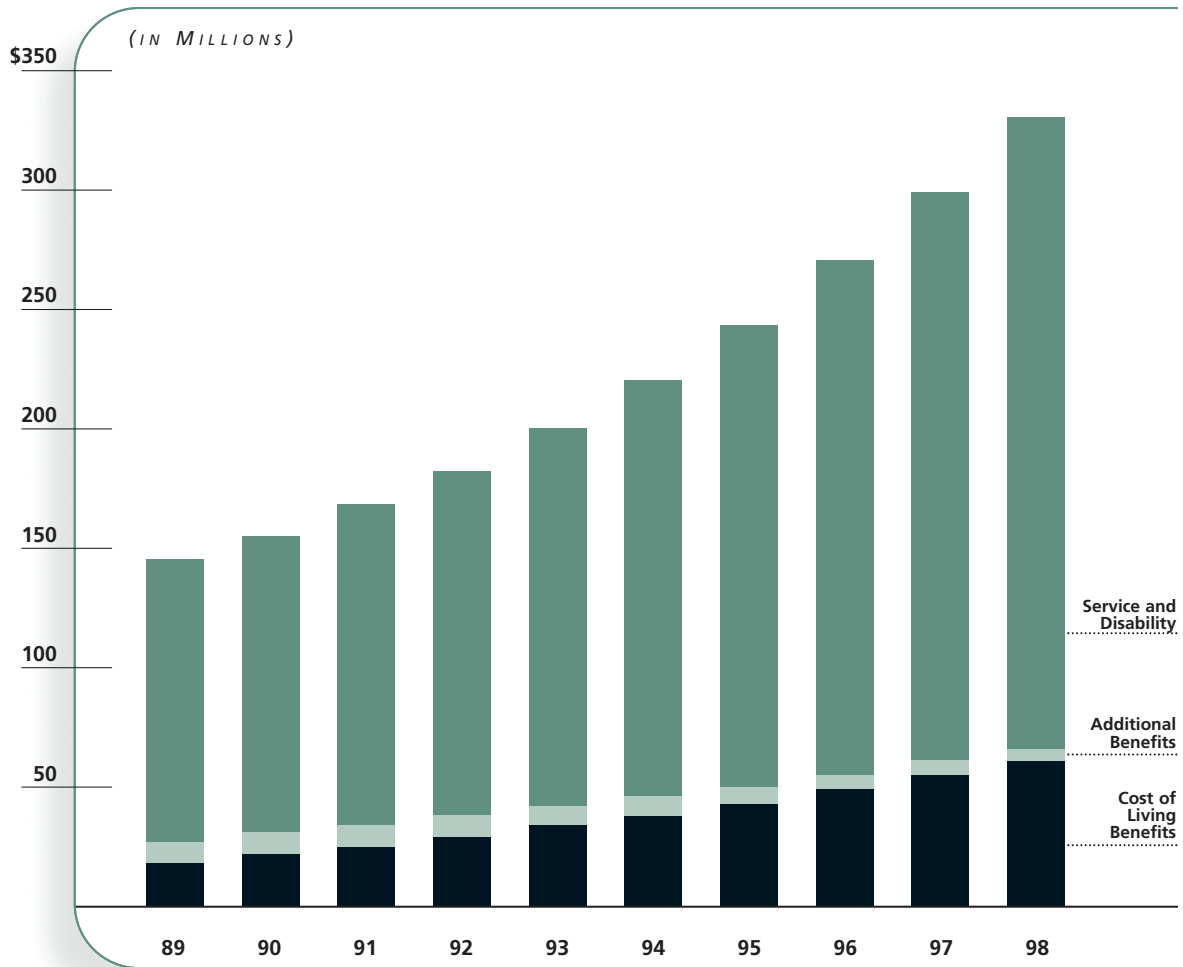
The historical rates of returns for each investment fund are found on page 87.

**HORIZON FUNDS ASSET ALLOCATIONS**

	Short Horizon Fund	Medium Horizon Fund	Long Horizon Fund
Income Fund	45%	25%	10%
Bond Fund	25	20	15
Large Cap Stock Index Fund	10	15	20
Large Cap Stock Growth Fund	5	15	20
International Fund	10	15	20
Small Cap Stock Fund	5	10	15
Total	100%	100%	100%

All Retirement Systems

# Benefits by Type

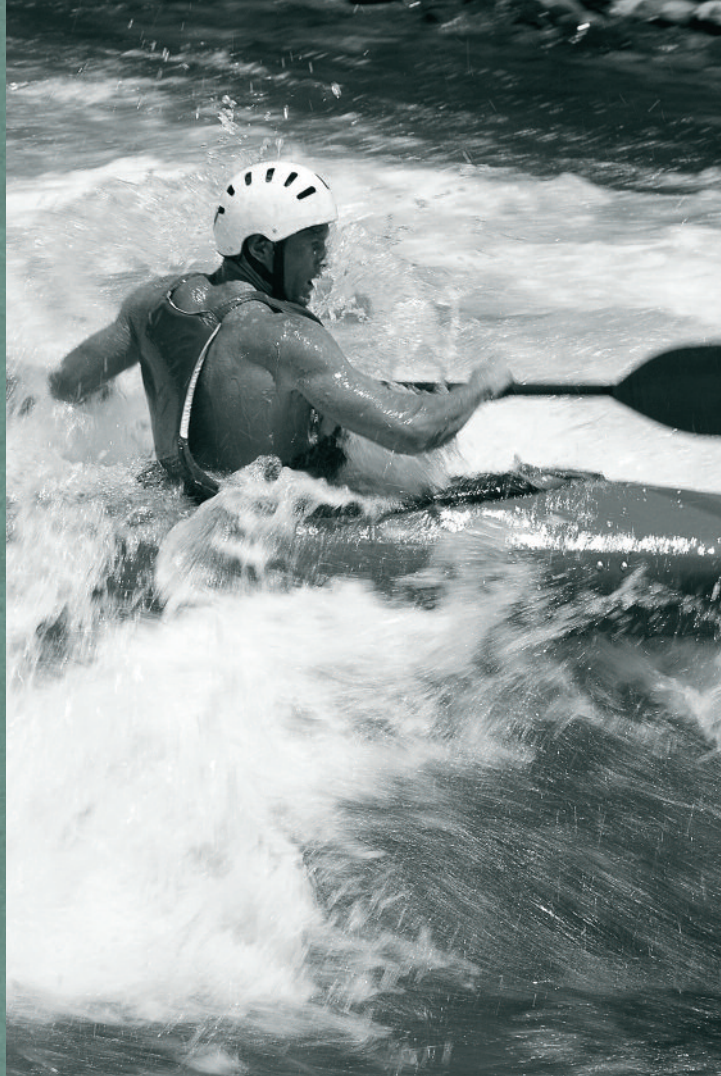


(IN MILLIONS)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Cost of Living Benefits</b>	\$ 18	22	25	29	34	38	43	49	55	61
<b>Additional Benefits</b>	9	9	9	9	8	8	7	6	6	5
<b>Service and Disability</b>	118	124	134	144	158	174	193	215	238	264
<b>Totals</b>	<b>\$145</b>	<b>155</b>	<b>168</b>	<b>182</b>	<b>200</b>	<b>220</b>	<b>243</b>	<b>270</b>	<b>299</b>	<b>330</b>



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STATISTICAL  
SECTION

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## Schedules of Additions by Source

Year Ended December 31, 1998

System	Year	(DOLLARS IN THOUSANDS)			Employer Contributions as a Percent of Covered Payroll	Net Investment Income	Total Additions
		Member Contributions	Employer Contributions	Court Fees and Premium Tax			
<b>Contributory Retirement System</b>	1989	\$26,961	26,308	—	5.85%	\$ 100,169	153,438
	1990	24,895	20,716	—	4.99	57,313	102,924
	1991	18,324	18,558	—	6.08	65,852	102,734
	1992	17,171	19,142	—	6.69	65,920	102,233
	1993	17,630	17,938	—	6.10	123,303*	158,871
	1994	17,646	18,719	—	6.51	2,193	38,558
	1995	16,362	17,723	—	6.77	193,708	227,793
	1996	8,765	10,224	—	7.20	123,006	141,995
	1997	8,537	10,651	—	7.71	133,286	152,474
1998	8,399	10,729	—	7.83	84,692	103,820	
<b>Noncontributory Retirement System</b>	1989	\$ 826	100,914	—	10.67%	\$ 205,981	307,721
	1990	3,139	119,814	—	11.93	134,397	257,350
	1991	2,798	157,014	—	12.29	243,929	403,741
	1992	2,643	171,505	—	12.41	254,565	428,713
	1993	2,410	174,227	—	11.79	1,066,354*	1,242,991
	1994	2,937	194,202	—	11.83	9,886	207,025
	1995	5,614	220,955	—	12.26	943,721	1,170,290
	1996	6,679	260,068	—	12.66	832,473	1,099,220
	1997	7,301	294,937	—	13.40	1,047,207	1,349,445
1998	7,698	318,635	—	13.47	734,399	1,060,732	
<b>Public Safety Retirement System</b>	1989	\$10,811	9,640	—	9.46%	\$ 33,332	53,783
	1990	6,134	15,468	—	14.02	20,956	42,558
	1991	5,596	19,479	—	15.76	34,650	59,725
	1992	5,707	19,441	—	16.08	36,090	61,238
	1993	5,897	16,960	—	12.21	80,052*	102,909
	1994	5,777	18,895	—	12.70	1,345	26,017
	1995	4,318	24,732	—	15.46	127,222	156,272
	1996	4,151	29,271	—	16.54	107,070	140,492
	1997	4,345	34,217	—	17.51	132,490	171,052
1998	4,463	40,099	—	18.88	92,284	136,846	
<b>Firefighters Retirement System</b>	1989	\$ 4,302	3,042	2,022	17.22%	\$ 15,248	24,614
	1990	4,521	3,232	1,670	15.86	9,567	18,990
	1991	4,859	2,833	1,675	13.57	16,810	26,177
	1992	5,337	2,344	2,065	12.07	15,914	25,660
	1993	5,530	2,121	2,839	13.09	35,008*	45,498
	1994	6,199	1,961	3,537	13.69	589	12,286
	1995	6,976	1,685	4,862	15.22	55,580	69,103
	1996	7,461	2,002	4,333	13.78	46,626	60,422
	1997	8,358	2,836	4,552	14.41	57,541	73,287
1998	8,771	2,546	4,391	12.77	39,699	55,407	
<b>Judges Retirement System</b>	1989	\$ 450	70	980	18.67%	\$ 1,877	3,377
	1990	516	77	1,082	17.97	1,202	2,877
	1991	558	191	1,561	25.12	2,040	4,350
	1992	523	304	1,741	31.28	2,206	4,774
	1993	561	405	1,855	32.23	6,664*	9,485
	1994	572	504	1,709	31.82	86	2,871
	1995	654	680	1,670	29.74	8,333	11,337
	1996	734	833	1,898	30.41	7,114	10,579
	1997	482	1,305	1,901	34.53	8,933	12,621
1998	15	1,792	1,912	39.45	6,260	9,979	
<b>Governors and Legislative Pension Plan</b>	1989	\$ 2	100	—	25.00%	\$ 611	713
	1990	1	—	—	0.00	363	364
	1991	—	—	—	0.00	569	569
	1992	—	—	—	0.00	552	552
	1993	—	—	—	0.00	1,315*	1,315
	1994	—	—	—	0.00	19	19
	1995	—	—	—	0.00	1,604	1,604
	1996	—	—	—	0.00	1,270	1,270
	1997	—	—	—	0.00	1,481	1,481
1998	—	—	—	0.00	973	973	

\*Reflects the change in accounting method to record unrealized gains and losses on the fair value of investments

## Schedules of Deductions by Type

Year Ended December 31, 1998

(IN THOUSANDS)

System	Year	Benefit Payments	Refunds	Administrative & Actuarial Expense	Total Deductions
<b>Contributory Retirement System</b>	1989	\$ 65,299	14,798	1,705	81,802
	1990	66,305	13,820	1,963	82,088
	1991	66,246	7,031	1,348	74,625
	1992	66,068	7,111	1,322	74,501
	1993	65,956	4,057	1,213	71,226
	1994	65,824	5,606	1,178	72,608
	1995	65,588	5,342	1,214	72,144
	1996	64,494	4,833	985	70,312
	1997	63,884	4,735	794	69,413
	1998	62,249	4,168	743	67,160
<b>Noncontributory Retirement System</b>	1989	\$ 56,460	3,111	2,519	62,090
	1990	63,304	3,213	3,266	69,783
	1991	74,439	5,711	3,883	84,033
	1992	86,442	4,976	4,208	95,626
	1993	101,551	3,819	4,418	109,788
	1994	118,240	3,521	4,616	126,377
	1995	137,928	3,571	5,138	146,637
	1996	161,036	4,774	5,721	171,531
	1997	186,262	4,995	6,323	197,580
	1998	213,752	4,500	6,460	224,712
<b>Public Safety Retirement System</b>	1989	\$ 14,197	1,728	431	16,356
	1990	15,669	1,808	456	17,933
	1991	17,136	1,480	615	19,231
	1992	18,745	1,236	649	20,630
	1993	20,560	946	642	22,148
	1994	22,634	936	664	24,234
	1995	25,271	737	714	26,722
	1996	28,223	895	766	29,884
	1997	30,972	611	792	32,375
	1998	34,374	639	803	35,816
<b>Firefighters Retirement System</b>	1989	\$ 7,935	257	181	8,373
	1990	8,525	181	163	8,869
	1991	9,051	240	286	9,577
	1992	9,494	270	312	10,076
	1993	9,978	68	308	10,354
	1994	10,734	60	300	11,094
	1995	11,769	181	320	12,270
	1996	12,888	84	331	13,303
	1997	14,321	298	331	14,950
	1998	15,741	274	325	16,340
<b>Judges Retirement System</b>	1989	\$ 860	—	30	890
	1990	920	47	20	987
	1991	1,042	—	39	1,081
	1992	1,359	—	56	1,415
	1993	1,958	—	62	2,020
	1994	2,193	73	61	2,327
	1995	2,355	—	53	2,408
	1996	2,472	—	55	2,527
	1997	2,690	8	55	2,753
	1998	3,002	—	53	3,055
<b>Governors and Legislative Pension Plan</b>	1989	\$ 330	2	15	347
	1990	349	1	18	368
	1991	367	4	7	378
	1992	387	1	5	393
	1993	419	2	7	428
	1994	445	—	7	452
	1995	485	6	7	498
	1996	504	1	7	512
	1997	519	1	6	526
	1998	538	—	6	544

## Schedules of Benefit Deductions by Type

Year Ended December 31, 1998

(IN THOUSANDS)

System	Year	Service and Disability Benefits	Cost of Living Benefits	Supplemental Benefits	Total Benefits
<b>Contributory Retirement System</b>	1989	\$ 45,822	12,381	7,096	65,299
	1990	45,438	13,638	7,229	66,305
	1991	44,556	14,809	6,881	66,246
	1992	43,781	15,941	6,346	66,068
	1993	43,137	16,995	5,824	65,956
	1994	42,512	17,895	5,417	65,824
	1995	41,815	18,789	4,984	65,588
	1996	40,580	19,445	4,469	64,494
	1997	39,784	20,085	4,015	63,884
1998	38,276	20,419	3,554	62,249	
<b>Noncontributory Retirement System</b>	1989	\$ 53,734	2,726	—	56,460
	1990	58,516	4,788	—	63,304
	1991	67,426	7,013	—	74,439
	1992	76,867	9,575	—	86,442
	1993	89,142	12,409	—	101,551
	1994	102,729	15,511	—	118,240
	1995	118,986	18,942	—	137,928
	1996	138,373	22,663	—	161,036
	1997	159,169	27,093	—	186,262
1998	182,013	31,739	—	213,752	
<b>Public Safety Retirement System</b>	1989	\$ 12,003	1,282	912	14,197
	1990	13,172	1,545	952	15,669
	1991	14,319	1,843	974	17,136
	1992	15,640	2,156	949	18,745
	1993	17,130	2,503	927	20,560
	1994	18,871	2,862	901	22,634
	1995	21,048	3,317	906	25,271
	1996	23,499	3,817	907	28,223
	1997	25,741	4,347	884	30,972
1998	28,600	4,923	851	34,374	
<b>Firefighters Retirement System</b>	1989	\$ 5,595	1,034	1,306	7,935
	1990	6,073	1,157	1,295	8,525
	1991	6,493	1,276	1,282	9,051
	1992	6,852	1,407	1,235	9,494
	1993	7,250	1,541	1,187	9,978
	1994	7,890	1,708	1,136	10,734
	1995	8,728	1,973	1,068	11,769
	1996	9,638	2,224	1,026	12,888
	1997	10,836	2,510	975	14,321
1998	11,987	2,821	933	15,741	
<b>Judges Retirement System</b>	1989	\$ 719	141	—	860
	1990	712	208	—	920
	1991	821	221	—	1,042
	1992	1,104	255	—	1,359
	1993	1,641	317	—	1,958
	1994	1,833	360	—	2,193
	1995	1,976	379	—	2,355
	1996	2,045	427	—	2,472
	1997	2,216	474	—	2,690
1998	2,464	538	—	3,002	
<b>Governors and Legislative Pension Plan</b>	1989	\$ 246	84	—	330
	1990	257	92	—	349
	1991	279	88	—	367
	1992	291	96	—	387
	1993	316	103	—	419
	1994	336	109	—	445
	1995	365	120	—	485
	1996	383	121	—	504
	1997	399	120	—	519
1998	411	127	—	538	



## Schedules of Retired Members by Type of Benefit Option

December 31, 1998

System	Amount of Monthly Benefit	Number of Retirees by Benefit Option								
		1	2	3	4	5	6	7	8	9
<b>Contributory Retirement System</b>	\$1-1,000	3,252	2,079	1,184	335	812	345	—	—	—
	1,001-2,000	406	172	269	75	139	92	—	—	—
	2,001-3,000	28	8	18	3	7	8	—	—	—
	3,001-4,000	4	1	—	1	—	—	—	—	—
	4,001-5,000	—	—	—	—	—	—	—	—	—
	over-5,000	—	—	—	—	—	—	—	—	—
<b>Noncontributory Retirement System</b>	\$1-1,000	3,168	543	1,010	178	1,291	611	—	—	—
	1,001-2,000	1,586	200	1,110	180	1,111	553	—	—	—
	2,001-3,000	772	58	694	178	536	305	—	—	—
	3,001-4,000	104	10	125	66	64	60	—	—	—
	4,001-5,000	22	—	24	5	6	7	—	—	—
	over-5,000	7	—	8	4	1	2	—	—	—
<b>Public Safety Retirement System</b>	\$1-1,000	—	—	—	—	—	—	729	—	—
	1,001-2,000	—	—	—	—	—	—	893	—	—
	2,001-3,000	—	—	—	—	—	—	385	—	—
	3,001-4,000	—	—	—	—	—	—	64	—	—
	4,001-5,000	—	—	—	—	—	—	10	—	—
	over-5,000	—	—	—	—	—	—	5	—	—
<b>Firefighters Retirement System</b>	\$1-1,000	—	—	—	—	—	—	—	181	—
	1,001-2,000	—	—	—	—	—	—	—	273	—
	2,001-3,000	—	—	—	—	—	—	—	223	—
	3,001-4,000	—	—	—	—	—	—	—	55	—
	4,001-5,000	—	—	—	—	—	—	—	3	—
	over-5,000	—	—	—	—	—	—	—	1	—
<b>Judges Retirement System</b>	\$1-1,000	—	—	—	—	—	—	9	—	—
	1,001-2,000	—	—	—	—	—	—	9	—	4
	2,001-3,000	—	—	—	—	—	—	13	—	2
	3,001-4,000	—	—	—	—	—	—	2	—	2
	4,001-5,000	—	—	—	—	—	—	5	—	7
	over-5,000	—	—	—	—	—	—	13	—	7
<b>Governors and Legislative Pension Plan*</b>	\$1-1,000	—	—	—	213	—	—	—	—	—
	1,001-2,000	—	—	—	—	—	—	—	—	—
	2,001-3,000	—	—	—	—	—	—	—	—	—
	3,001-4,000	—	—	—	—	—	—	—	—	—
	4,001-5,000	—	—	—	—	—	—	—	—	—
	over-5,000	—	—	—	—	—	—	—	—	—

1- A maximum monthly benefit for the retiree's life. No benefit to a beneficiary.

2- A reduced lifetime benefit to the retiree. A beneficiary receives the balance in retiree's account after the monthly annuity payments are deducted.

3- A reduced lifetime benefit to a retiree and a lifetime benefit equal to the retiree's benefit payable to the retiree's lawful spouse at the time of retirement.

4- A reduced lifetime benefit to the retiree and a lifetime benefit equal to half of the retiree's benefit to the retiree's law-

ful spouse at the time of retirement.

5- Approximately 95% of the benefit in type 3 and the same lifetime benefit for retiree's lawful spouse at the time of retirement.

6- Approximately 98% of the benefit in type 4 and a lifetime benefit for equal to half of the retiree's for retiree's lawful spouse at the time of the retirement.

7- Normal retirement for age and service and a lifetime benefit of 65% of the retiree's benefit to the retiree's lawful spouse at the time of the retiree's death.

8- Normal retirement for age and service and a lifetime benefit of 75% of the retiree's benefit to the retiree's lawful spouse at the time of the retiree's death.

9- Normal retirement for age and service and a lifetime benefit of 75% of the retiree's benefit to the retiree's lawful spouse at the time of the retirement.

\* Governors & Legislative Pension Plan provides a normal lifetime pension to the retiree and 50% of the retiree's benefit to the retiree's lawful spouse at the time of death if the retiree had four or more years of service.

## Schedules of Average Benefit Payments

Year Ended December 31, 1998

System		Years of Credited Service						
		4-10	10-15	15-20	20-25	25-30	30+	
<b>Contributory Retirement System</b>	1995	Average Monthly Benefit	\$ 211	370	677	812	1,670	—
		Average Final Average Salary	1,281	1,474	1,933	1,983	3,301	—
		Number of Active Retired	27	12	27	7	3	—
	1996	Average Monthly Benefit	\$ 218	402	535	657	1,112	1,676
		Average Final Average Salary	1,394	1,605	1,569	1,596	2,299	2,820
		Number of Active Retired	13	17	18	8	4	1
	1997	Average Monthly Benefit	\$ 228	485	547	822	1,714	2,180
		Average Final Average Salary	1,478	1,775	1,571	2,120	3,442	4,066
		Number of Active Retired	8	22	25	11	2	1
	1998	Average Monthly Benefit	\$ 225	546	659	872	818	1,754
		Average Final Average Salary	1,478	2,085	1,953	2,029	1,584	3,025
		Number of Active Retired	10	21	25	8	5	1
<b>Noncontributory Retirement System</b>	1995	Average Monthly Benefit	\$ 213	473	720	1,020	1,758	2,256
		Average Final Average Salary	1,482	1,833	2,077	2,398	3,057	3,404
		Number of Active Retired	198	172	206	208	325	239
	1996	Average Monthly Benefit	\$ 225	473	768	1,074	1,799	2,306
		Average Final Average Salary	1,597	1,902	2,234	2,538	3,201	3,614
		Number of Active Retired	256	194	209	194	350	245
	1997	Average Monthly Benefit	\$ 255	497	828	1,141	1,865	2,441
		Average Final Average Salary	1,749	2,024	2,409	2,727	3,320	3,767
		Number of Active Retired	218	214	197	186	362	252
	1998	Average Monthly Benefit	\$ 264	572	895	1,109	1,920	2,449
		Average Final Average Salary	1,816	2,259	2,541	2,546	3,359	3,909
		Number of Active Retired	249	192	204	186	386	265
<b>Public Safety Retirement System</b>	1995	Average Monthly Benefit	\$ 524	1,037	1,485	1,988	2,465	2,704
		Average Final Average Salary	2,998	2,914	2,897	3,350	3,496	3,595
		Number of Active Retired	30	11	49	37	14	5
	1996	Average Monthly Benefit	\$ 532	985	768	1,074	1,799	2,306
		Average Final Average Salary	1,597	1,902	2,234	2,538	3,201	3,614
		Number of Active Retired	19	8	34	24	27	5
	1997	Average Monthly Benefit	\$ 549	928	1,573	2,166	2,762	2,783
		Average Final Average Salary	3,446	2,901	3,228	3,713	4,072	3,885
		Number of Active Retired	22	13	44	29	10	5
	1998	Average Monthly Benefit	\$ 456	982	1,537	2,560	2,829	2,862
		Average Final Average Salary	3,205	3,021	3,154	3,868	4,205	3,986
		Number of Active Retired	30	19	57	35	21	8

Information prior to 1995 is not available.

## Schedules of Average Benefit Payments

(Continued)

Year Ended December 31, 1998

System			Years of Credited Service					
			4-10	10-15	15-20	20-25	25-30	30+
<b>Firefighters Retirement System</b>	1995	Average Monthly Benefit	\$ 949	1,594	1,852	2,023	2,749	2,673
		Average Final Average Salary	2,633	3,661	3,487	3,358	3,770	3,610
		Number of Active Retired	3	2	5	15	15	2
	1996	Average Monthly Benefit	\$ 726	1,301	1,824	2,267	2,991	2,990
		Average Final Average Salary	2,639	2,978	3,502	3,817	4,174	4,146
		Number of Active Retired	4	4	3	13	10	1
	1997	Average Monthly Benefit	\$ 992	1,108	2,084	2,180	2,898	2,839
		Average Final Average Salary	2,621	2,972	4,123	3,678	4,186	4,056
		Number of Active Retired	3	1	11	11	16	1
	1998	Average Monthly Benefit	\$1,239	—	2,111	2,280	2,492	3,031
		Average Final Average Salary	2,707	—	3,843	3,916	3,706	4,278
		Number of Active Retired	3	—	7	12	7	3
<b>Judges Retirement System</b>	1995	Average Monthly Benefit	\$ —	—	—	5,569	—	6,835
		Average Final Average Salary	—	—	—	6,874	—	6,793
		Number of Active Retired	—	—	—	1	—	1
	1996	Average Monthly Benefit	\$ —	4,445	—	—	—	—
		Average Final Average Salary	—	6,973	—	—	—	—
		Number of Active Retired	—	1	—	—	—	—
	1997	Average Monthly Benefit	\$ —	—	4,846	5,697	5,942	6,254
		Average Final Average Salary	—	—	7,236	7,215	7,323	7,392
		Number of Active Retired	—	—	1	1	1	2
	1998	Average Monthly Benefit	\$ —	4,620	4,923	5,718	—	—
		Average Final Average Salary	—	7,500	7,454	7,543	—	—
		Number of Active Retired	—	1	1	1	—	—
<b>Governors and Legislative Pension Plan</b>	1995	Average Monthly Benefit	\$ 143	244	327	—	—	—
		Average Final Average Salary	204	274	244	—	—	—
		Number of Active Retired	10	1	1	—	—	—
	1996	Average Monthly Benefit	\$ 420	—	—	—	—	—
		Average Final Average Salary	249	—	—	—	—	—
		Number of Active Retired	8	—	—	—	—	—
	1997	Average Monthly Benefit	\$ 136	—	—	—	—	—
		Average Final Average Salary	240	—	—	—	—	—
		Number of Active Retired	12	—	—	—	—	—
	1998	Average Monthly Benefit	\$ 174	271	326	—	—	—
		Average Final Average Salary	102	213	283	—	—	—
		Number of Active Retired	4	2	1	—	—	—

Information prior to 1995 is not available.

# Schedule of Participating Employers

C = Public Employees Retirement System  
—Contributory  
N = Public Employees Retirement System  
—Noncontributory  
PS= Public Safety Retirement System  
F = Firefighters Retirement System  
D = 457 Plan  
K = 401(k) Plan

**Employers Name**      **C N PS F D K**

## School Districts and Education Employers

Alpine School District .....	C	N			D	K
Beaver School District .....		N				K
Box Elder School District ...	C	N			D	K
Cache School District .....	C	N			D	K
Carbon School District.....	C	N			D	K
College of Eastern Utah.....	C	N			D	K
Daggett School District .....	C	N			D	K
Davis School District .....	C	N			D	K
Duchesne School District...	C	N			D	K
Dixie College .....	C	N	PS			K
Emery School District .....	C	N			D	K
Garfield School District.....	C	N				K
Grand School District.....	C	N				K
Granite School District.....	C	N			D	K
Iron School District .....	C	N			D	K
Jordan School District .....	C	N			D	K
Juab School District .....	C	N			D	K
Kane School District.....	C	N			D	K
Logan School District .....	C	N			D	K
Millard School District .....	C	N				K
Morgan School District .....		N			D	K
Murray School District .....	C	N			D	K
Nebo School District .....	C	N			D	K
North Sanpete School District .....	C	N			D	K
North Summit School District .....	C	N			D	K
Ogden School District .....	C	N			D	K
Park City School District...	C	N			D	K
Piute School District.....	C	N				K
Provo School District.....	C	N			D	K
Rich School District.....	C	N				K
Salt Lake Community College .....	C	N			D	K
Salt Lake School District.....	C	N			D	K
San Juan School District.....	C	N			D	K
Sevier School District.....	C	N			D	K
Snow College .....	C	N			D	K
South Sanpete School District .....	C	N			D	K
South Summit School District .....		N				K
Southern Utah University ...	C	N	PS			K
Tintic School District.....	C	N				K
Tooele School District.....	C	N			D	K
Uintah School District.....	C	N			D	K
University of Utah.....	C	N	PS			K
Utah State University.....	C	N	PS		D	K
Utah Valley State College....	C	N			D	K

<b>Employers Name</b>	<b>C</b>	<b>N</b>	<b>PS</b>	<b>F</b>	<b>D</b>	<b>K</b>
Wasatch School District.....	C	N			D	K
Washington School District .....	C	N			D	K
Wayne School District .....		N			D	K
Weber County School District .....	C	N			D	K
Weber State University.....	C	N				K
Academic Achievement .....		N				K
Active Re Entry Incorporated.....		N				K
Bridgerland Applied Technology Center .....		N				K
Davis Applied Technology Center.....		N				K
Educators Mutual—LTD....	C	N	PS			
Educators Mutual Insurance .....	C	N			D	K
High School Activity Association.....	C	N				K
Ogden-Weber Applied Technology Center.....	C	N				K
Sevier Valley Applied Technology Center .....	C	N			D	K
Space Dynamics Lab .....	C	N				K
Summit Employment .....		N				K
Uintah Basin Applied Technology Center .....	C	N			D	K
Utah Education Association.....	C	N			D	K
Utah School Boards Association.....		N				K
Utah School Boards Risk Man Mut Ins Assn.....		N				K
Utah School Employee Association.....		N			D	K
Utah Uniserv .....	C	N			D	K
Utah Valley Care and Training Center .....		N				K

## State and Other Employers

State of Utah (including Judges Retirement System and Governors and Legislative Pension Plan) .....	C	N	PS	F	D	K
Utah Dairy Commission/ Dairy Council of Utah/Nevada.....		N				
Utah Dept. of Employment Security .....	C	N			D	K
Utah Employees' Group Ins.—LTD .....	C	N	PS			
Utah Housing Finance Agency.....	C	N				K
Utah Industries for the Blind .....		N				K
Utah Retirement Systems ...		N			D	K
Utah Safety Council.....		N				K
Utah Technology Finance Corp. ....		N				K
Utah Workers Compensation Fund....	C	N			D	K

**Employers Name**      **C N PS F D K**

## Counties and County Organizations

Beaver County .....		N	PS		D	K
Box Elder County.....	C	N	PS		D	K
Cache County.....	C	N	PS	F	D	K
Carbon County .....	C	N	PS		D	K
Daggett County.....		N	PS			K
Davis County.....		N	PS		D	K
Duchesne County .....	C		PS		D	K
Emery County .....	C	N	PS		D	K
Garfield County .....	C	N	PS		D	K
Grand County .....	C	N	PS			K
Iron County.....	C	N	PS		D	K
Juab County.....	C	N	PS			
Kane County.....		N	PS			
Millard County.....	C	N	PS		D	K
Morgan County.....		N	PS			K
Piute County .....		N	PS			K
Rich County.....	C		PS			
Salt Lake County .....	C	N	PS	F	D	K
San Juan County .....	C	N	PS		D	K
Sanpete County.....	C	N	PS			K
Sevier County.....	C	N	PS		D	
Summit County.....	C	N	PS			
Tooele County .....	C	N	PS		D	K
Uintah County .....	C		PS		D	K
Utah County.....	C	N	PS		D	
Wasatch County.....		N	PS			K
Washington County.....		N	PS		D	K
Wayne County.....		N	PS			
Weber County .....	C	N	PS		D	K
Weber County Fire.....	C			F	D	K

## Cities and Towns

Alpine City.....		N				K
Alpine/Highland PS Dist. ...		N	PS	F		K
American Fork City .....		N	PS			
Aurora City .....		N				
Beaver City.....		N				K
Blanding City.....		N	PS			K
Bluffdale City.....	C				D	K
Bountiful City.....	C	N	PS	F	D	K
Brian Head Town .....	C		PS			K
Brigham City.....	C	N	PS		D	K
Castle Dale City.....		N				
Cedar City.....		N	PS	F		K
Cedar Hills Town .....		N				
Centerville.....	C	N	PS		D	K
Clearfield City .....		N	PS	F	D	K
Clinton City .....	C	N	PS	F	D	K
Coalville City .....		N				K
Corinne City.....	C					
Delta City.....	C	N				K
Draper City.....		N				K
Duchesne City.....		N				
Eagle Mountain .....		N				
East Carbon City.....		N	PS		D	K
Elk Ridge Town .....		N				K
Enoch City.....		N				K
Enterprise City .....		N				
Ephraim City .....		N	PS			K
Escalante Town.....		N	PS			
Eureka City .....		N				



# Schedule of Participating Employers

(Continued)

Employers Name	C	N	PS	F	D	K	Employers Name	C	N	PS	F	D	K	Employers Name	C	N	PS	F	D	K	
Fairview City .....		N				K	Payson City .....		N	PS			K	Beaver County Special							
Farmington City.....		N	PS	F			Perry City.....		N	PS			K	Service District .....		N					K
Farr West City.....		N			D		Plain City .....		N				K	Beaver Valley Hospital .....		N					K
Ferron City.....		N				K	Pleasant Grove City.....		N	PS				Bona Vista Water							
Fillmore City.....		N		D	K		Pleasant View City.....		C	N	PS	D	K	Improvement.....		N				D	K
Fountain Green City .....		N	PS				Price City .....		C	N	PS	F	K	Bountiful Water District.....		N				D	K
Fruit Heights City .....		N				K	Providence .....		C	N			K	Box Elder Co. Mosquito							
Garland City .....		C		PS		K	Provo City.....		C	N	PS	F	D	District .....		N					K
Goshen Town.....		N					Redmond .....		N					Cache Metro Planning							
Grantsville City .....		N	PS		D	K	Richfield City.....		C	N	PS	D		Organization.....		N					
Green River City.....		N				K	Richmond City.....		N				K	Castle Valley Spec.							
Gunnison City.....		N	PS		D	K	Riverdale City .....		C	N	PS	F	K	Serv. District .....		C	N				K
Harrisville City.....		C		N	PS	K	Riverton City .....		C	N		F	D	K	Cedar City Library .....		C	N			K
Heber City .....		N	PS		D	K	Roosevelt City.....		N	PS	F	D	K	Central Davis Sewer.....		N				D	K
Helper City .....		N	PS			K	Roy City .....		C	N	PS	F	D	Central Utah							
Highland City.....		N			D	K	Salem City.....		N	PS		D	K	Water District .....		N				D	K
Hinckley Town .....		N				K	Salina City.....		N	PS				Central Weber							
Huntington City.....		N			D	K	Salt Lake City Corp. ....		C	N	PS	F	K	Sewer District .....		C	N			D	K
Hurricane City.....		N	PS	F		K	Sandy City.....		C	N	PS	F	D	Children's Aid Society—							
Hyde Park .....		N					Santa Clara City .....		N				K	Utah.....		N					K
Hyrum City .....		N				K	Santaquin City.....		N	PS			K	Cottonwood Improvement							
Ivins Town .....		N				K	Smithfield City .....		N				K	District .....		N				D	K
Kamas City.....		N	PS		D	K	South Jordan City .....		C		PS	F	K	Davis & Weber County							
Kanab City .....		N	PS		D	K	South Ogden City .....		N	PS			K	Canal .....		C					K
Kanosh Town.....		N					South Salt Lake City.....		N	PS	F	D	K	Davis Co. Mental Health ....		N				D	K
Kaysville City .....		C		N	PS		South Weber City.....		N				K	Davis Co. Mosquito Abate..		N					K
La Verkin City.....		C				K	Spanish Fork City.....		N	PS				Davis County Housing .....		C					K
Layton City .....		C		N	PS	F	Spring City.....		C					Davis Co. Solid							
Lehi City.....		C		N	PS	F	Springdale Town .....		N				K	Waste Management.....		N				D	K
Levan Town .....		N					Springville City.....		C	N	PS	F		DDI Advantage.....		C					K
Lewiston City.....		N				K	St. George City.....		C	N	PS	D	K	Dixie Center Special							
Lindon City.....		N				K	Sunnyside City.....		N			D	K	Service District .....		N					K
Logan City .....		C		N	PS	F	Sunset City.....		C	N	PS	D	K	Duchesne Co. Mosquito							
Manila Town.....		C					Syracuse City .....		N	PS		D	K	District .....		C					
Manti City.....		N				K	Taylorsville.....		N				K	Duchesne County Water							
Mantua City.....		N	PS				Tooele City.....		C	N	PS	D		Conservancy District ....		N					
Mapleton City.....		N	PS			K	Tremonton City.....		C	N	PS	D	K	Emery County							
Meadow Town.....		N					Vernal City.....		C	N	PS		K	Nursing Home.....		C				D	K
Midvale City .....		C		N	PS	F	Washington City.....		N				K	Emery Water							
Midway City .....		C		N		K	Washington Terrace .....		N	PS		D	K	Conservancy Dist. ....		N					K
Milford City.....		N	PS			K	Wellington City .....		N	PS			K	Farmington Area							
Millville City.....		N			D	K	Wellsville City.....		N				K	Pressurized							
Minersville .....		N				K	Wendover City.....		N	PS		D	K	Irrigation District.....		N					K
Moab City.....		C		N	PS	D	West Bountiful City .....		C		PS		K	Five-Co. Association							
Monroe City .....		N					West Haven .....		N					of Govt. ....		C	N			D	K
Monticello City.....		N	PS				West Jordan City .....		C	N	PS	F	D	Four Corners Mental							
Morgan City .....		N					West Valley City.....		C	N	PS	F		Health.....		C	N			D	K
Moroni City .....		N					West Point.....		N					Grand County Solid							
Mt Pleasant City.....		C		N	PS	K	Willard City .....		N	PS				Waste Management.....		N					K
Murray City .....		C		N	PS	F	Woods Cross City.....		C	N	PS	D	K	Grand County Water							
Naples City.....		C			PS	K								Conservancy District ....		N					
Nephi City.....		N	PS			D								Granger-Hunter Imp. Dist.		N				D	
Nibley City.....		N					<b>Other Governmental Entities</b>							Gunnison Valley Hospital..		C	N				K
North Logan City.....		C		PS		K	Ashley Valley Sewer							Heber Light & Power .....		N				D	K
North Ogden City.....		C		N	PS	F	Management Board. ....		N					Heber Valley Historic							
North Salt Lake City .....		N	PS		D	K	Ashley Valley Water							Railroad Authority .....		N					K
Ogden City.....		C		N	PS	F	& Sewer .....		N					Heber Valley Special							
Orangeville City .....		N				K	Bear Lake Special							Service District .....		N					
Orderville Town .....		N					Service District .....		N					Service District .....		N					
Orem City.....		C		N	PS	F	Bear River Assn. of Govts..		N		D	K		Hooper Water							
Panguitch City .....		N				K	Bear River Health District..		C	N		D	K	Improv. District.....		N					
Park City .....		C		N	PS		Bear River Mental Health...		N		D	K		Housing Authority							
Parowan City .....		C		N	PS	K	Bear River Water							of Carbon.....		N					
							Conservancy .....		N					Housing Auth. of SLC.....		C	N				K

# Schedule of Participating Employers

(Continued)

Employers Name	C	N	PS	F	D	K	Employers Name	C	N	PS	F	D	K	Employers Name	C	N	PS	F	D	K	
Housing Auth. of SL County.....		N					Southwest Utah District Health.....	C	N			D	K	Weber River Water Users.....	C						K
Kearns Improvement District.....	C	N				K	South Utah Valley Solid Waste.....		N				K	Western Kane County Special Service District #1		N					K
Maesar Water District.....		N					St. George Housing Authority.....		N				K	White City Water Improvement District...		N					K
Magna Mosquito Abatement.....		N				K	Taylorsville-Bennion Imp. District.....		N			D	K	<b>Total Participating Employers</b>							
Metro Water District—SLC.....		N			D	K	Timpanogos Special Service District.....	C	N					Participating Employers.....							373
Midway Sanitation District.....		N				K	Tri-City Golf Course.....		N				K	Contributory.....							167
Moab Valley Fire Dist.....		N		F		K	Tridell-Lapoint Water District.....		N				K	Noncontributory.....							349
Mountain America Credit Union.....	C	N				D	Uintah Basin Assistance Council.....		N					Public Safety.....							115
Mountainland Assn. of Govt.....	C	N				D	Uintah Basin Assn. of Govt.....		N					Firefighters.....							35
Nebo Credit Union.....		N				K	Uintah Basin Medical Center.....	C	N				K	Judges.....							1
North Davis County Sewer	C	N					Uintah Basin Tri-County Mental Health.....		N					Governors and Legislative.....							1
No. Emery Water Users Assn.....		N					Uintah Co. Mosquito Abatement.....		N				K	401(k) Plan.....							287
North Fork Special Service District.....		N					Uintah Special Service District.....		N					457 Plan.....							152
Park City Fire Service District.....		N		F		K	Uintah Water Conservancy District.....		N					<b>Inactive Units with Retirees</b>							
Price River Water Improve.		N			D	K	Upper Country Water District.....		N					American Fork Hospital							
Provo Housing Authority...		N					Utah Assn. of Counties.....		N				K	Bay Area Refuse Disposal							
Provo Reser. Water Users....		N					Utah Co. Housing Authority.....	C	N			D		Bingham City							
Provo River Water Users.....		N			D	K	Utah Co. Solid Waste Spec. District.....		N				K	Box Elder Co. Nursing Home							
Roy Water Conservancy District.....		N				K	Utah Lake Distributing Co.		N					Carbon County Hospital							
SLC Employees Credit Union.....		N				K	Utah League of Cities & Towns.....	C						Carbon Nursing Home							
SLC Mosquito Abatement..		N				K	Utah Local Governments Trust.....		N					Coalville Health Center							
SLC School Credit Union...		N				K	Utah Municipal Power Agency.....		N					Dixie Hospital							
SLC Sub. Sanitation #1.....		N				K	Utah Public Employees Assn.....	C	N				K	Emery Medical Center							
SLC Sub. Sanitation #2.....		N				K	Utah State Fair Corporation.....		N					Four Corners Regional Hospital							
SL County Service Area #1.		N				K	Utah Zoological Society.....	C	N				K	Genola							
SL County Service Area #2.		N			D	K	Valley Emergency Communication Center.....		N			D	K	Grand County Road Special Service District							
SL County Service Area #3.		N			D	K	Valley Mental Health.....	C	N			D	K	Hiawatha Town							
SL County Sewer Imp. District #1.....	C	N				D	Wasatch Front Regional Council.....		C				D	Honeyville Town							
SL Co. Water Conservancy District.....	C	N				D	Wasatch Mental Health.....	C	N			D	K	I W Allen Hospital							
San Juan Mental Health/ Substance Abuse Dist....		N				K	Washington Co. Assn. for Retarded Citizens....		N				K	Juab County Hospital							
Sandy Sub. Imp. District.....		N				K	Washington Co. Solid Waste #1.....		N				K	Marysville Town							
Six-Co. Assoc of Governments.....	C	N				D	Washington Co. Water District.....	C						Metro Water District—Provo							
Snyderville Basin.....	C	N				D	Weber Basin Water Conservancy.....		N			D	K	Midvale Wastewater Treatment							
Solitude Improve. Dist.....		N				K	Weber Co. Mosquito Abatement.....		N			D	K	Morgan County Library							
So. Davis Co. Sewer Imp. District.....	C	N				D	Weber Human Services.....		N			D	K	Oakley Town							
So. Davis Co. Water Imp. District.....		N				K								Paragonah							
So. Davis Co. Fire Protection.....		N		F		D								Payson City Hospital							
Southeastern Utah A.O.G....	C	N				D								Pioneer Care Center							
Southeastern Utah Health...	C	N				K								Reg 2 Law Enf Plan Agency							
So. Ogden Conservancy District.....		N				D								Salt Lake County Fair							
So. SL County Mosquito Abatement.....		N				K								San Juan County Hospital							







**Utah Retirement Systems**

**540 East 200 South**

**Salt Lake City, Utah 84102-2099**