

# UTAH RETIREMENT SYSTEMS

A Component Unit of the State of Utah

## 2017 Comprehensive Annual Financial Report

for the Year Ended December 31, 2017

Noncontributory Retirement System  
Contributory Retirement System  
Public Safety Retirement System  
Firefighters Retirement System  
Judges Retirement System  
Utah Governors and Legislators  
Retirement Plan

Tier 2 Public Employees  
Contributory Retirement System  
Tier 2 Public Safety and Firefighter  
Contributory Retirement System  
401(k) and 457 Plans  
Roth and Traditional IRAs





Government Finance Officers Association

**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, 2016**

Executive Director/CEO



Public Pension Coordinating Council

**Public Pension Standards Award  
For Funding and Administration  
2017**

Presented to

**Utah Retirement Systems**

In recognition of meeting professional standards for plan funding  
and administration as set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

Alan H. Winkle  
Program Administrator

# UTAH RETIREMENT SYSTEMS

A Component Unit of the State of Utah



## 2017 Comprehensive Annual Financial Report

for the Year Ended December 31, 2017

Noncontributory Retirement System • Contributory Retirement System • Public Safety Retirement System  
Firefighters Retirement System • Judges Retirement System • Utah Governors and Legislators Retirement Plan  
Tier 2 Public Employees Contributory Retirement System  
Tier 2 Public Safety and Firefighter Contributory Retirement System  
401(k) and 457 Plans • Roth and Traditional IRAs



Prepared by: Finance Department • Utah Retirement Systems  
560 East 200 South • Salt Lake City, Utah 84102-2044 • [www.urs.org](http://www.urs.org)  
Daniel D. Andersen, Executive Director • Robert K. Kellersberger, Finance Director

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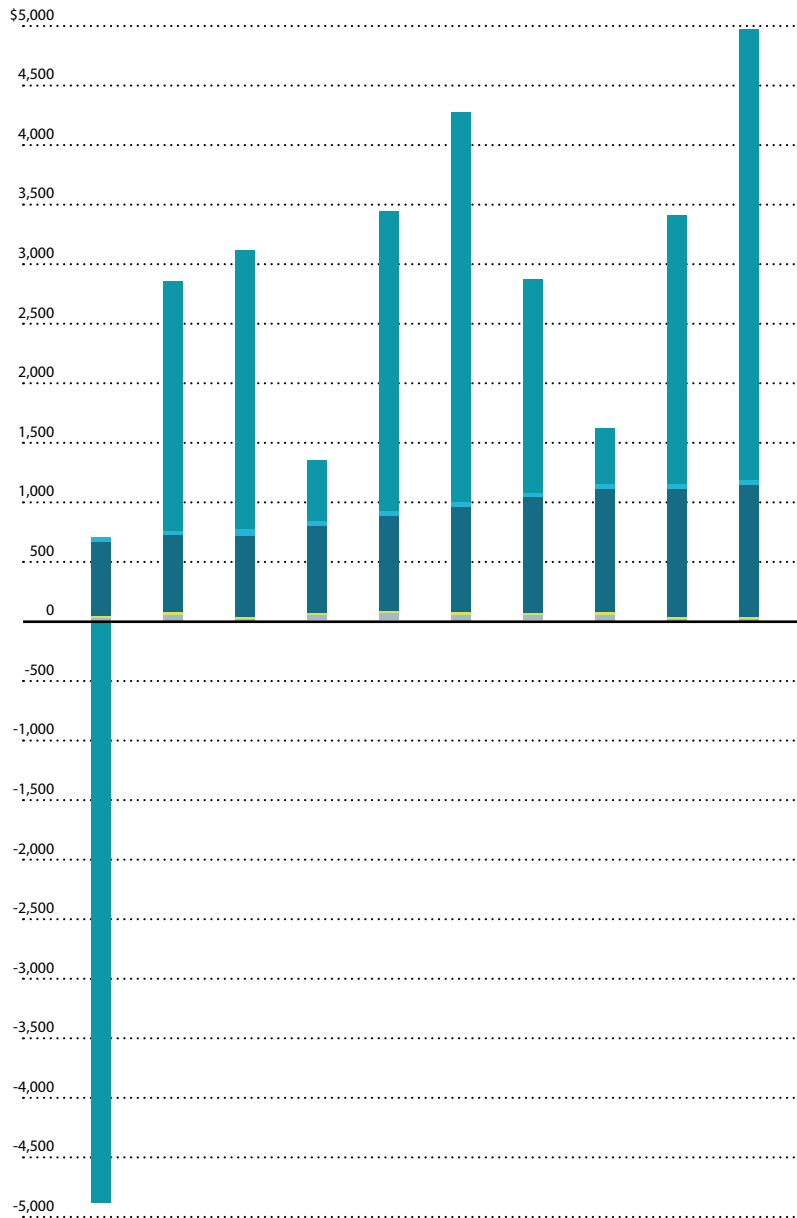
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# ADDITIONS BY SOURCE

(in millions)



(in millions)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Net investment income (loss)	\$ (4,862)	2,088	2,328	502	2,513	3,261	1,786	462	2,249	3,774
Employee contributions	36	36	60	39	40	40	39	41	39	39
Employer contributions	629	647	682	739	796	889	974	1,036	1,073	1,113
Court fees and fire insurance tax	12	18	13	15	18	13	16	19	12	3
Transfers from systems	15	44	7	37	55	42	38	42	10	11
<b>Totals</b>	<b>\$ (4,170)</b>	<b>2,833</b>	<b>3,090</b>	<b>1,332</b>	<b>3,422</b>	<b>4,245</b>	<b>2,853</b>	<b>1,600</b>	<b>3,383</b>	<b>4,940</b>

2017

# INTRODUCTORY SECTION

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# LETTER OF TRANSMITTAL

UTAH STATE RETIREMENT BOARD  
**UTAH RETIREMENT SYSTEMS**  
560 East 200 South  
Salt Lake City, Utah 84102-2044  
801-366-7700  
800-365-8772  
801-366-7734 FAX

DANIEL D. ANDERSEN  
EXECUTIVE DIRECTOR

April 26, 2018

Utah State Retirement Board  
560 East 200 South  
Salt Lake City, UT 84102-2044

Dear Board Members:

We are pleased to present the 2017 Comprehensive Annual Financial Report of the Utah Retirement Systems (Systems), including the 401(k), 457, and Roth and Traditional IRAs (Plans). Together, the Systems and Plans constitute a component unit of the State of Utah, administered by the Utah State Retirement Board (Board) for calendar year 2017.

The financial reporting entity of the Systems and Plans include the Public Employees Noncontributory and Contributory Retirement Systems, for both government and public education employees, the Public Safety, Firefighters, and Judges Retirement Systems, the Utah Governors and Legislators Retirement Plan, the Tier 2 Public Employees Contributory, and Tier 2 Public Safety and Firefighter Contributory Retirement Systems, and the 401(k), 457, and Roth and traditional IRA Savings 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 and Plans. 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.

For financial reporting purposes, the Systems and Plans adhere to accounting principles generally accepted in the United States of America. The Systems and Plans apply all applicable pronouncements of the Governmental Accounting Standards Board (GASB). Investments of the Systems and Plans are presented at fair value.

The Utah Retirement Systems and 401(k), 457, Roth and traditional IRAs were established by legislation and authorized as indicated in the notes to the basic financial statements on page 58. The Summaries of Plan Provisions are presented on pages 178 through 193. The number of active and retired members and beneficiaries for each system is presented in the Systems' Highlights on pages 14 through 30. The purpose of the Systems and Plans is to provide benefits for all eligible State, local government, and most public education employees whose employers have elected to participate. Services provided by the staff are performed to meet that objective.

## Management's Discussion and Analysis

The Management's Discussion and Analysis (MD&A) beginning on page 36 provides an overview and analysis of the Systems and Plans Basic Financial Statements. This letter of transmittal is intended to complement the MD&A and should be read in conjunction with it.

## Financial Information

Management is responsible for maintaining a system of adequate internal accounting controls designed to provide reasonable assurance 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. The concept of reasonable assurance recognizes the cost of a control should not exceed the benefits likely to be derived. This system includes written policies and procedures and an internal audit department that reports to the Board. Discussion and analysis of net position and related additions and deductions are presented in the MD&A beginning on page 36.



## Actuarial

The 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 basic 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 investment earnings on a long-term basis will continue to meet or exceed the actuarially assumed earning rate. We expect all systems to continue towards fully funded positions in accordance with actuarial assumptions.

An actuarial valuation of the Systems is performed annually. An assumption experience study is performed at least every third year. The actuarial firm Gabriel, Roeder, Smith & 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.

In conjunction with the 2017 annual experience study, the actuary recommended some changes to the assumptions that were adopted by the Board. Some of the changes were to decrease the earnings assumptions from 7.2% to 6.95%, decrease the inflation assumption from 2.6% to 2.5%, and decrease the payroll growth assumption and wage inflation each by 0.10%.

## Investments

The economic condition of the Systems is based primarily upon investment earnings. For 2017, the Systems experienced a 13.57% rate of return. 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 144 of this report.

The investment portfolio mix at fair value as of the end of 2017 was 14% debt securities, 38% equities, 11% private equity, 15% real assets, 8% short-term, and 14% absolute return. See MD&A and Investment Section for more detailed analysis and information. 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, debt securities, real assets, absolute return, and private equity with additional diversification achieved through domestic and international investing.

The 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 approximately \$37.8 billion in both the Defined Benefit and Defined Contribution investments at fair value as of December 31, 2017, none of the investments were in the category of highest custodial credit risk as defined by GASB.

## Funding

In setting contribution rates, the Board's principal objectives are to set rates so the unfunded actuarial accrued liability (UAAL) will be amortized over a reasonable period of time from the most recent valuation date and set rates so they remain relatively level over time. The Board's funding policy requires the employer contribution rate be at least equal to the sum of the employer normal cost rate (which pays the current year's cost) and an amortization rate that results in the amortization of the UAAL. Under this policy, the objective of maintaining a relatively level contribution rate over time is achieved in normal conditions such as consistent financial markets.

In determining the contribution rates, the actuary uses an actuarial value of assets that is based on a 5-year smoothed expected rate of return, wherein the excess or shortfall of investment income over or under the actuarial assumed income rate (currently 6.95%) is recognized over a 5-year period.

Funds are derived from the excess of additions, which include contributions and investment earnings, over deductions that are comprised of benefits and administrative expenses. Funds are accumulated to meet future benefit obligations to retirees and beneficiaries. This accumulated balance is referred to as the “net position restricted for pensions” in the Combined Statements of Fiduciary Net Position in the Financial Section of the report. The total pension liability is not reported in the basic financial statements, but is disclosed in Note 5 to the basic financial statements and in the required supplementary information. The total pension liability is determined by the actuary and 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 net pension liability is measured as the total pension liability less the amount of the pension plan’s fiduciary net position. The net pension liability is an accounting measurement for financial statement purposes.

### 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 basic financial statements is included in the Financial Section 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, 2016. 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 33 years. We believe our current report continues to conform to the Certificate of Achievement Program requirements, and we are submitting it to the GFOA.

In addition, the Utah Retirement Systems was awarded the Public Pension Coordinating Council Public Pension Standards 2017 Award. This award is in recognition of meeting professional standards for plan design and administration as set forth in the Public Pension Standards.

### Acknowledgments

The compilation of this report reflects the combined efforts of the staff under the leadership of the Utah State Retirement Board. The report 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 K. Kellersberger, CGFM  
Finance Director



Daniel D. Andersen  
Executive Director

# BOARD PRESIDENT'S LETTER

UTAH STATE RETIREMENT BOARD  
**UTAH RETIREMENT SYSTEMS**  
560 East 200 South  
Salt Lake City, Utah 84102-2044  
801-366-7700  
800-365-8772  
801-366-7734 FAX

DANIEL D. ANDERSEN  
EXECUTIVE DIRECTOR

April 26, 2018

Utah State Retirement Board  
560 East 200 South  
Salt Lake City, UT 84102-2044

Dear Members of the Retirement Systems:

If you like numbers, you're in for a treat with the URS Comprehensive Annual Financial Report in your hands or on your screen.

It's our yearly motherlode of URS data, containing detailed financial and statistical information. I invite you to explore the following pages to help understand the financial innerworkings of URS.

Numbers are important, but I want to talk about the story they tell. It's a story of a conservatively run, well-funded pension fund built to withstand market volatility and provide a stable return for the security of Utah public employees and retirees.

Thanks in part to strong equity markets, I'm pleased to report favorable numbers related to the performance of the pension fund in 2017. But we take these figures with a grain of salt. We don't expect, nor do we need, such returns, year after year. Our fund is built to maximize long-term returns over market cycles, with an emphasis on downside protection.

- » The fund earned a 13.6% return in 2017, growing by \$3.33 billion to \$31.9 billion, an all-time high.
- » At year's end, the Plans Fiduciary Net Position, as a percentage of Total Pension Liability, increased to 90% (from 86% in 2016). Experts consider a funding ratio of about 80% or better to be sound for government pensions, and ours remains among the most well-funded statewide plans in the country.
- » Retirement savings plans contributions exceeded \$367.5 million in 2017, with total assets reaching almost \$5.8 billion.
- » URS reduced its assumed investment rate of return from 7.2% to 6.95% in 2017.

A 6.95% rate of return is considered conservative and is among the lowest when compared to similar statewide pensions. As board members and trustees of URS, it's our solemn duty to safeguard retirement benefits for current and future retirees from Utah's public sector. A safe, prudent, well-researched assumed rate of return is a product of this commitment.

To summarize, the numbers in 2017 are once again solid. But, ultimately, the story of URS isn't about numbers. It's about the members we serve. We're committed to making sure the numbers always add up to peace of mind and retirement security for you.

Sincerely,



Roger G. Donohoe  
President, Utah State Retirement Board

UTAH RETIREMENT SYSTEMS

RETIREMENT BOARD

As of December 31, 2017



*Pictured Left to Right*

**Ryan G. Hessenthaler**  
Appointed August 19, 2015  
Term Expires July 1, 2019  
Represents Investment Community

*Vice President*

**Laura O. Houston**  
Appointed July 2, 2014  
Term Expires July 1, 2018  
Represents Investment Community

*President*

**Roger G. Donohoe**  
Appointed December 17, 2014  
Term Expires July 1, 2020  
Represents Education Employees

**Sheri K. Nelson**  
Appointed September 15, 2010  
Term Expires July 1, 2019  
Represents Public Employees

**Edward T. Alter**  
Appointed February 2, 2012  
Term Expires July 1, 2019  
Represents Investment Community

**David C. Damschen**  
State Treasurer  
Member Since December 10, 2015  
Ex-officio Member

**William W. Wallace**  
Appointed September 18, 2013  
Term Expires July 1, 2017  
Represents Investment Community

## EXECUTIVE DIRECTOR



Daniel D. Andersen

## MEMBERSHIP COUNCIL

Executive Committee Members:

*Chairperson*

**Mr. Marty Peterson** ..... Represents Professional Firefighters of Utah

*Vice Chairperson*

**Mr. Richard Petersen** ..... Represents Utah Public Employees' Association

**Mr. Stuart Bailey** ..... Represents Utah Education Association

**Ms. Amy Ehresman** ..... Represents Utah School Employees' Association

**Ms. Brandy Grace** ..... Represents Utah Association of Counties

Council Members:

**Mr. Fred Ash** ..... Represents Utah Retired School Employees' Association

**Mr. Scott Bond** ..... Represents Utah League of Cities and Towns

**Mr. Larry Evans** ..... Represents Utah Public Employees' Association

**Honorable David Mortensen** ..... Represents Utah Judicial Council

**Ms. Debra McBride** ..... Represents Utah Association of Retired Public Employees

**Ms. Susan McFarland** ..... Represents Utah Education Association

**Senior Trooper Arlow Hancock** ..... Represents Utah Peace Officers' Association

**Mr. Michael Harman** ..... Represents Utah Education Association


# ORGANIZATION CHART

As of December 31, 2017

*Membership Council*

## ADMINISTRATIVE STAFF

- Daniel D. Andersen**  
*Executive Director*
- Todd W Rupp**  
*Deputy Executive Director*
- Steven M. West**  
*Director, Internal Audit*
- Dee S Larsen**  
*General Counsel*
- Bruce H. Cundick**  
*Chief Investment Officer*
- Jeff J. Allen**  
*Shared Services Director*
- Jayne R. Knecht**  
*Director, Human Resources*
- W. Kendall Rima**  
*Chief Information Officer*
- Robert K. Kellersberger**  
*Director, Finance*
- Matthew K. Judd**  
*Director, Employer Services*
- Craig D. Stone**  
*Director, Defined Contribution Savings Plans*
- Mark M. Cain**  
*Director, Retirement*
- David J. Bjarnason**  
*Chief Compliance Officer — Investments*
- Ryan C. Ashcraft**  
*Director, Retirement Planning*




**General Counsel**  
.....  
*Dee S Larsen*

- Legal Services
- Member Appeals and Litigation
- Investment Transactions
- Government Relations and Legislation
- Outside Counsel



**Chief Investment Officer**  
.....  
*Bruce H. Cundick*

- Equity Investments
- Debt Securities
- Real Assets
- Private Equity
- Absolute Return




**Shared Services Director**  
.....  
*Jeff J. Allen*

- IT Functions
- Internal Audit
- General Services
- Purchasing



**Director Human Resources**  
.....  
*Jayne R. Knecht*

- Human Resources
- Safety/Security



**Chief Information Officer**  
.....  
*W. Kendall Rima*

- Server Hardware and Software
- Applications Development
- Helpdesk/ Workstation Support
- Process Automation Workflow
- Networking and Telecommunications
- Web Service
- Information Security

## PROFESSIONAL SERVICE PROVIDERS

### Actuary

**Gabriel, Roeder, Smith & Company**  
5605 N. MacArthur Blvd., Suite 870  
Irving, TX 75038-2631

### Auditor

**Deloitte & Touche LLP**  
Certified Public Accountants  
111 South Main Street, Suite 1500  
Salt Lake City, UT 84111

**Utah State Retirement Board**



**Executive Director**  
.....  
*Daniel D. Andersen*



**Deputy Executive Director**  
.....  
*Todd W Rupp*

**Professional Services**


Actuary · Auditor  
Legal Consultants  
Investment Consultants  
Proxy Voting

*Detail for professional service providers is shown to the left.*

*Investment professionals are presented on pages 146 and 152.*



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



**Director Finance**  
.....  
*Robert K. Kellersberger*

- Financial Reporting and Accounting
- Budgets
- Tax Reporting
- Cash Management and Disbursements
- Accounts Payable
- Payroll
- Risk Management



**Director Employer Services**  
.....  
*Matthew K. Judd*

- Records Management
- Employer Contributions Reporting
- Member Account Management
- Defined Contribution Daily Trade Reconciliation
- Employer Compliance and Auditing



**Director Defined Contribution Savings Plans**  
.....  
*Craig D. Stone*

- 401(k) Plan
- 457 Plan
- Traditional IRA
- Roth IRA



**Director Retirement**  
.....  
*Mark M. Cain*

- Retirement Benefits
- Death Benefits
- Redeposits and Purchases
- Refunds
- Branch Office



**Chief Compliance Officer Investments**  
.....  
*David J. Bjarnason*

- Investment Compliance
- Proxy Voting



**Director Retirement Planning**  
.....  
*Ryan C. Ashcraft*

- Member Education
- Retirement Planning
- Seminars
- Stakeholder Relations

# NONCONTRIBUTORY SYSTEM HIGHLIGHTS



The **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.

*Pictured: Michaela Talman-Clarín, Program Manager, Salt Lake County Animal Services*



The Public Employees

# NONCONTRIBUTORY

RETIREMENT SYSTEM HIGHLIGHTS (Concluded)

## Composite Picture

**Total Membership** ..... **160,768**  
 Active ..... 59,578  
 Terminated Vested ..... 47,292  
 Retired ..... 53,898

**2017 Active Members** ..... **59,578**  
 Average Age ..... 49.7  
 Average Years of Service ..... 16.1  
 Average Annual Salary ..... \$54,845

**2017 Retirees Number** ..... **3,340**  
 Average Age ..... 64.1  
 Average Years of Service ..... 21.7  
 Final Average Salary ..... \$50,983  
 Average Annual Benefit ..... \$22,223  
 Average Annual Benefit — All Retirees ..... \$22,576

## 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

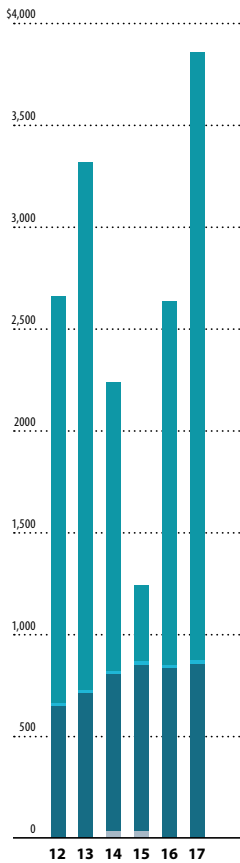
Up to 4% annually on original retirement benefit.

## Contribution Rates (as of 12-31-2017)

Employer rate for the State and School Division (Level A) is 22.19% of covered salary and 18.47% for the Local Government Division (Level B).

For more detail see Summary of Plan Provisions on page 178.

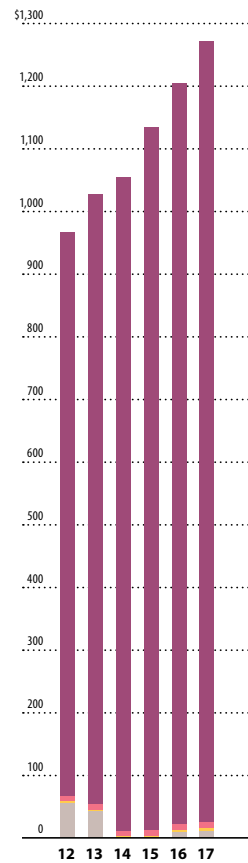
**Additions by Source**  
(in millions)



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 2,001.0	2,589.0	1,419.1	366.7	1,783.9	2,987.3
Member contributions	15.0	14.2	13.6	17.0	16.3	17.3
Employer contributions	644.9	710.9	772.4	813.5	831.6	854.3
Transfers from systems	—	—	30.5	33.7	—	—
<b>Totals</b>	<b>\$ 2,660.9</b>	<b>3,314.1</b>	<b>2,235.6</b>	<b>1,230.9</b>	<b>2,631.8</b>	<b>3,858.9</b>

**Deductions by Type**  
(in millions)



(in millions)

**Deductions by Type**

	2012	2013	2014	2015	2016	2017
Benefit payments	\$ 900.1	974.7	1,043.8	1,123.6	1,184.3	1,248.0
Administrative expense	8.4	8.3	8.8	8.8	8.9	9.6
Refunds	2.9	2.5	2.2	2.5	4.4	4.6
Transfers to systems	55.6	42.3	—	—	8.0	10.2
<b>Totals</b>	<b>\$ 967.0</b>	<b>1,027.8</b>	<b>1,054.8</b>	<b>1,134.9</b>	<b>1,205.6</b>	<b>1,272.4</b>

(in millions)

**Schedule of Employers Net Pension Liability\***

	2013	2014	2015	2016	2017
Total pension liability	\$ 23,344.3	24,043.3	24,899.5	26,501.8	28,088.6
Statement of plan net position	19,915.8	21,096.5	21,192.4	22,618.7	25,205.1
<b>Net pension liability</b>	<b>\$ 3,428.5</b>	<b>2,946.8</b>	<b>3,707.1</b>	<b>3,883.1</b>	<b>2,883.5</b>

\*Additional years will be added as they become available.

# CONTRIBUTORY SYSTEM HIGHLIGHTS



The **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.

*Pictured: Greta Ericsson, Teacher, DDI Vantage*

The Public Employees

# CONTRIBUTORY

RETIREMENT SYSTEM HIGHLIGHTS (Concluded)

## Composite Picture

<b>Total Membership</b> .....	<b>5,957</b>
Active .....	.621
Terminated Vested .....	1,294
Retired .....	4,042

<b>2017 Active Members</b> .....	<b>621</b>
Average Age .....	57.7
Average Years of Service .....	29.8
Average Annual Salary .....	\$62,264

<b>2017 Retirees Number</b> .....	<b>123</b>
Average Age .....	62.9
Average Years of Service .....	29.5
Average Annual Salary .....	\$56,336
Average Annual Benefit .....	\$33,141
Average Annual Benefit — All Retirees .....	\$19,831

## 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 7-1-75 x 1.25% x FAS.\*
- Number of years of service after 6-30-75 x 2.00% x FAS.\*
- Plan 1 allowance = total of 1 and 2.

\*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.

## Cost-of-Living Allowance

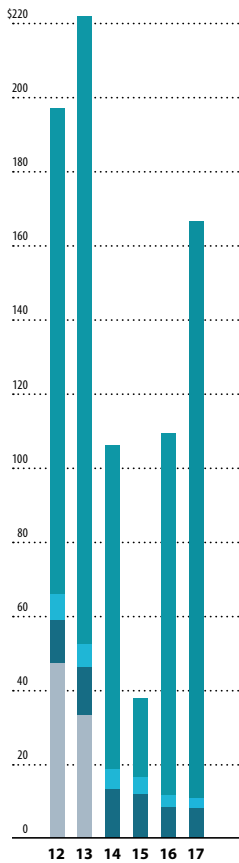
Up to 4% annually on original retirement benefit.

## Contribution Rates (as of 12-31-2017)

Member rate is 6% of covered salary. Employer rate for State and School Division (Level A) is 17.70% of covered salary and 14.46% for the Local Government Division (Level B).

For more detail see Summary of Plan Provisions on page 179.

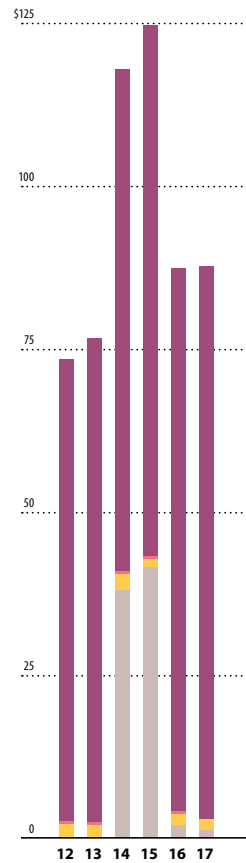
**Additions by Source**  
(in millions)



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 131.2	169.5	87.6	21.2	97.7	155.9
Member contributions	7.0	6.4	5.4	4.8	3.4	2.7
Employer contributions	11.7	12.9	13.0	11.7	8.2	7.9
Transfers from systems	47.1	33.1	—	—	—	—
<b>Totals</b>	<b>\$ 197.0</b>	<b>221.9</b>	<b>106.0</b>	<b>37.7</b>	<b>109.3</b>	<b>166.5</b>

**Deductions by Type**  
(in millions)



**Deductions by Type**

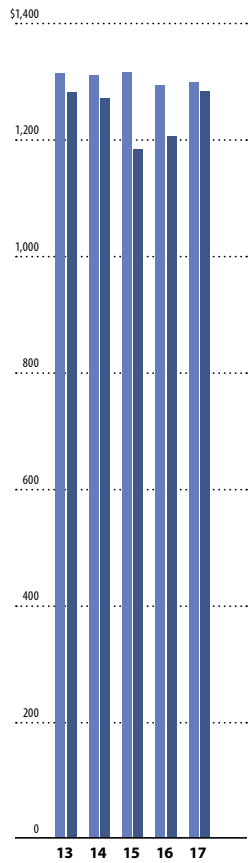
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ 70.9	74.2	77.0	81.4	83.4	84.8
Administrative expense	0.5	0.5	0.5	0.5	0.4	0.5
Refunds	2.0	1.9	2.4	1.2	1.7	1.6
Transfers to systems	—	—	38.0	41.5	1.9	1.2
<b>Totals</b>	<b>\$ 73.4</b>	<b>76.6</b>	<b>117.9</b>	<b>124.6</b>	<b>87.4</b>	<b>88.1</b>

**Schedule of Employers Net Pension Liability\***

	2013	2014	2015	2016	2017
Total pension liability	\$ 1,312.9	1,309.8	1,316.0	1,292.5	1,298.2
Statement of plan net position	1,281.9	1,270.0	1,183.1	1,204.9	1,283.5
<b>Net pension liability</b>	<b>\$ 31.0</b>	<b>39.8</b>	<b>132.9</b>	<b>87.6</b>	<b>14.7</b>

\*Additional years will be added as they become available.

**Schedule of Employers Net Pension Liability**  
(in millions)



# PUBLIC SAFETY SYSTEM HIGHLIGHTS



## The PUBLIC SAFETY Retirement System

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

*Pictured: Shawn Bias, Sergeant, West Valley City Police Department*

## PUBLIC SAFETY

### RETIREMENT SYSTEM HIGHLIGHTS (Concluded)

#### Composite Picture

<b>Total Membership</b> .....	<b>16,166</b>
Active .....	5,704
Terminated Vested .....	4,824
Retired .....	5,638

<b>2017 Active Members</b> .....	<b>5,704</b>
Average Age .....	43.3
Average Years of Service .....	15.8
Average Annual Salary .....	\$59,841

<b>2017 Retirees Number</b> .....	<b>266</b>
Average Age .....	52.8
Average Years of Service .....	21.8
Average Annual Salary .....	\$60,163
Average Annual Benefit .....	\$31,749
Average Annual Benefit — All Retirees .....	\$29,504

#### 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.

#### Cost-of-Living Allowance

Up to 2.5% or 4% (depending on employer) annually on original retirement benefit.

#### Contribution Rates (as of 12-31-2017)

##### Noncontributory

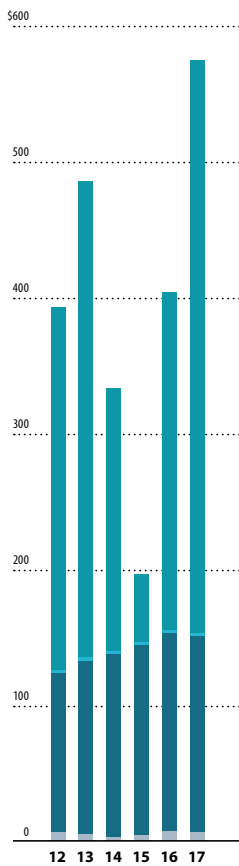
Employer rates range from 32.20% to 49.58% of covered salary.

##### Contributory

Member rates range from 10.50% to 12.29% of covered salary. Employer rates range from 22.29% to 29.70% of covered salary.

For more detail see Summary of Plan Provisions on page 180.

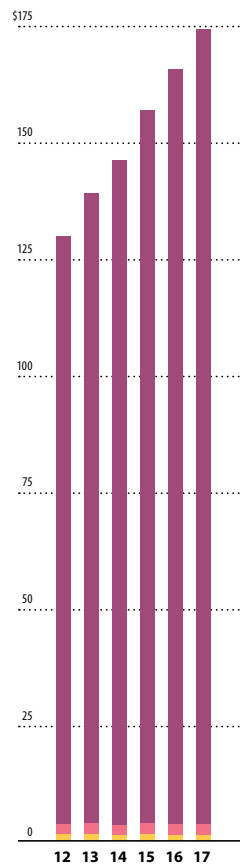
**Additions by Source**  
(in millions)



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 266.8	350.6	194.2	50.7	249.0	421.9
Member contributions	1.2	1.3	0.8	0.9	0.8	0.8
Employer contributions	118.0	128.7	135.6	141.0	147.1	145.8
Transfers from systems	6.4	4.7	2.7	4.0	6.7	5.9
<b>Totals</b>	<b>\$ 392.4</b>	<b>485.3</b>	<b>333.3</b>	<b>196.6</b>	<b>403.6</b>	<b>574.4</b>

**Deductions by Type**  
(in millions)



(in millions)

**Deductions by Type**

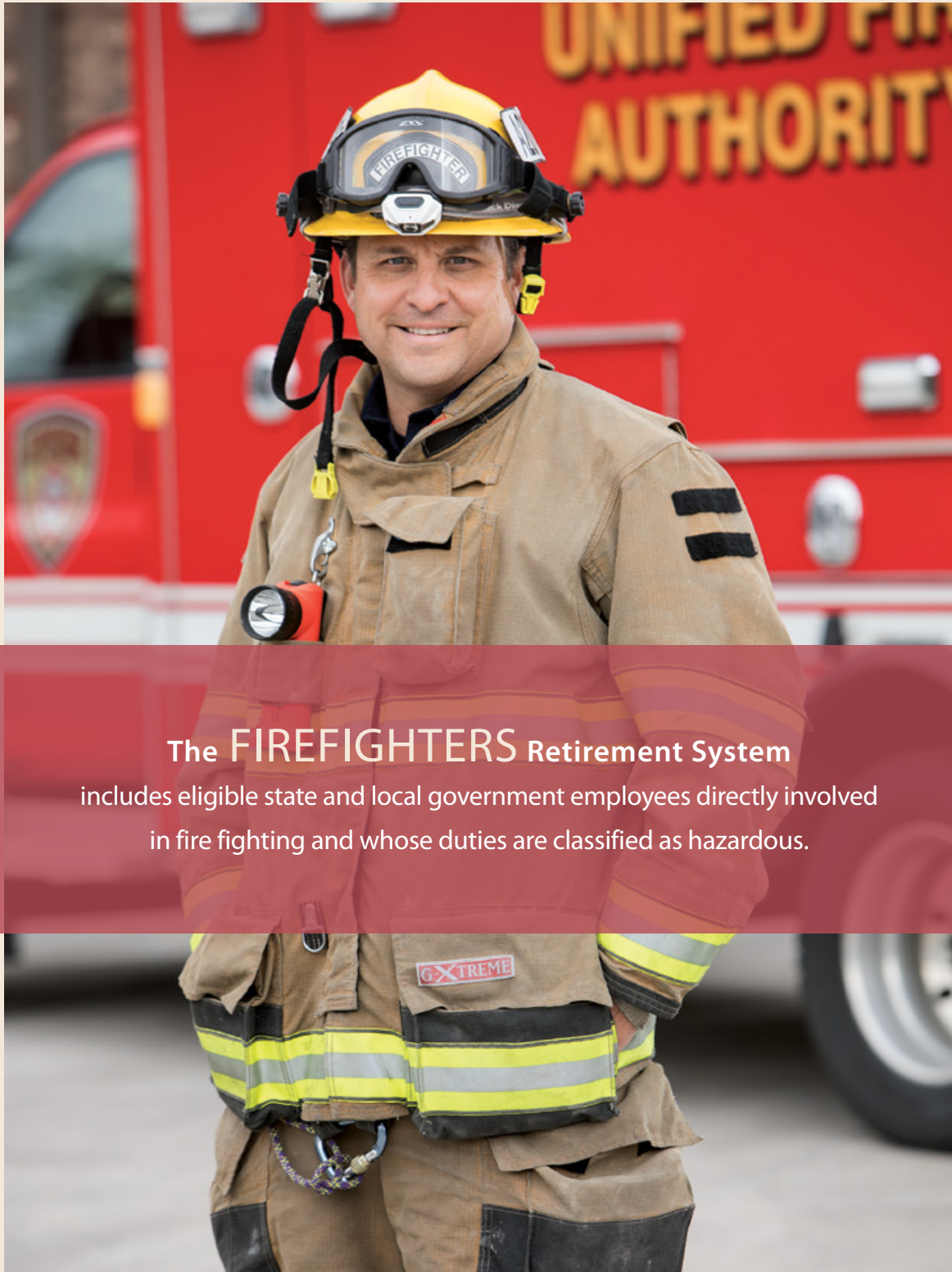
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ 128.5	137.5	144.8	155.4	164.5	172.9
Administrative expense	1.2	1.2	1.2	1.2	1.3	1.4
Refunds	0.3	0.5	0.2	0.5	0.2	0.2
<b>Totals</b>	<b>\$ 130.0</b>	<b>139.2</b>	<b>146.2</b>	<b>157.1</b>	<b>166.0</b>	<b>174.5</b>

**Schedule of Employers Net Pension Liability\***

	2013	2014	2015	2016	2017
Total pension liability	\$ 3,269.1	3,360.0	3,511.2	3,794.9	4,085.2
Statement of plan net position	2,712.2	2,899.4	2,938.8	3,176.5	3,576.5
<b>Net pension liability</b>	<b>\$ 556.9</b>	<b>460.6</b>	<b>572.4</b>	<b>618.4</b>	<b>508.7</b>

\*Additional years will be added as they become available.

# FIREFIGHTERS SYSTEM HIGHLIGHTS



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

*Pictured: Eric Holmes, Public Information Officer, Unified Fire Authority*

# FIREFIGHTERS

## RETIREMENT SYSTEM HIGHLIGHTS *(Concluded)*

### Composite Picture

<b>Total Membership</b> .....	<b>3,460</b>
Active .....	1,602
Terminated Vested .....	435
Retired .....	1,423
<b>2017 Active Members</b> .....	<b>1,602</b>
Average Age .....	43.5
Average Years of Service .....	15.7
Average Annual Salary .....	\$69,242
<b>2017 Retirees Number</b> .....	<b>62</b>
Average Age .....	51.9
Average Years of Service .....	23.6
Average Annual Salary .....	\$76,882
Average Annual Benefit .....	\$41,010
Average Annual Benefit — All Retirees .....	\$37,191

### 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.

### Cost-of-Living Allowance

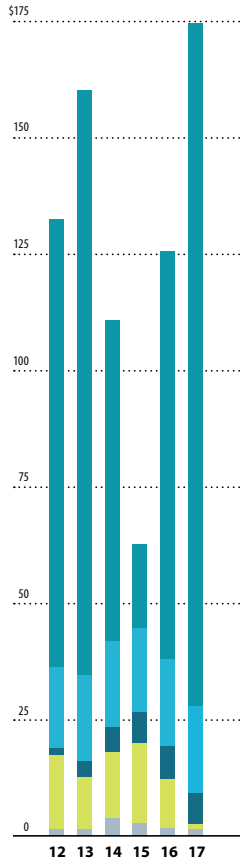
Up to 4% (depending on employer) on original retirement benefit.

### Contribution Rates *(as of 12-31-2017)*

Member rate for Division A (with Social Security) is 15.05% of covered salary and for Division B (without Social Security) is 16.71% of covered salary. Employer rate for Division A is 3.93% of covered salary and 6.70% for Division B.

For more detail see Summary of Plan Provisions on page 182.

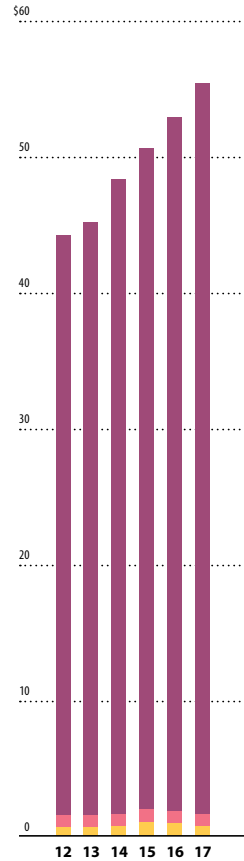
**Additions by Source**  
*(in millions)*



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 96.3	125.7	69.1	17.9	87.7	146.7
Member contributions	17.5	18.3	18.3	18.2	18.7	18.5
Employer contributions	1.3	3.5	5.5	6.7	7.0	6.7
Fire insurance tax	16.1	11.3	14.2	17.2	10.6	1.2
Transfers from systems	1.3	1.3	3.7	2.6	1.6	1.3
<b>Totals</b>	<b>\$ 132.5</b>	<b>160.1</b>	<b>110.8</b>	<b>62.6</b>	<b>125.6</b>	<b>174.4</b>

**Deductions by Type**  
*(in millions)*



**Deductions by Type**

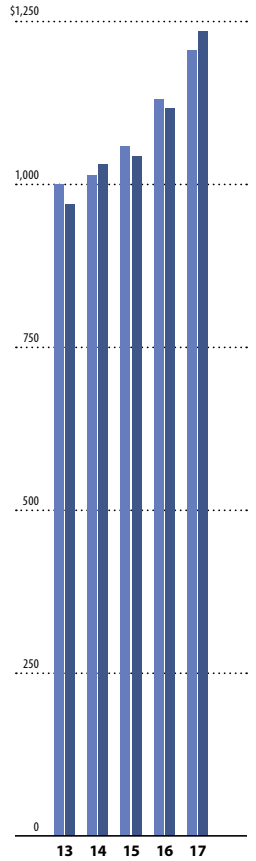
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ 43.7	44.7	47.7	49.7	52.1	54.8
Administrative expense	0.4	0.4	0.4	0.4	0.4	0.4
Refunds	0.1	0.1	0.2	0.5	0.4	0.2
<b>Totals</b>	<b>\$ 44.2</b>	<b>45.2</b>	<b>48.3</b>	<b>50.6</b>	<b>52.9</b>	<b>55.4</b>

**Schedule of Employers Net Pension Liability\***

	2013	2014	2015	2016	2017
Total pension liability	\$ 999.0	1,014.3	1,058.2	1,129.7	1,205.7
Statement of plan net position	968.7	1,031.0	1,043.0	1,115.7	1,234.4
<b>Net pension liability (asset)</b>	<b>\$ 30.3</b>	<b>(16.7)</b>	<b>15.2</b>	<b>14.0</b>	<b>(28.7)</b>

\*Additional years will be added as they become available.

**Schedule of Employers Net Pension Liability**  
*(in millions)*



# JUDGES SYSTEM HIGHLIGHTS



The **JUDGES** Retirement System  
includes justices and judges of the courts of record as authorized in state statutes.

*Pictured: Judge Diana Hagen, Utah Court of Appeals*



# JUDGES

## RETIREMENT SYSTEM HIGHLIGHTS *(Concluded)*

### Composite Picture

<b>Total Membership</b> .....	<b>273</b>
Active .....	114
Terminated Vested .....	11
Retired .....	148
<b>2017 Active Members</b> .....	<b>114</b>
Average Age .....	55.4
Average Years of Service .....	15.8
Average Annual Salary .....	\$162,345
<b>2017 Retirees Number</b> .....	<b>10</b>
Average Age .....	63.7
Average Years of Service .....	27.4
Average Annual Salary .....	\$155,269
Average Annual Benefit .....	\$115,756
Average Annual Benefit — All Retirees .....	\$87,512

### 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.

### Cost-of-Living Allowance

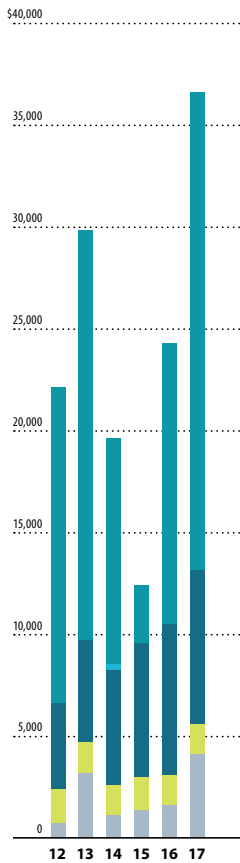
Up to 4% compounded annually.

### Contribution Rates *(as of 12-31-2017)*

Employer rate is 42.69% of covered salary.

For more detail see Summary of Plan Provisions on page 183.

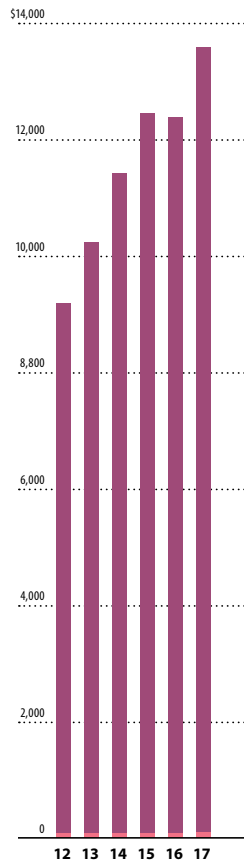
**Additions by Source**  
*(in thousands)*



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 15,485	20,130	11,068	2,842	13,820	23,435
Member contributions	—	—	317	—	—	—
Employer contributions	4,232	4,990	5,627	6,555	7,382	7,563
Court fees	1,666	1,498	1,486	1,653	1,470	1,477
Transfers from systems	710	3,186	1,092	1,334	1,600	4,090
<b>Totals</b>	<b>\$ 22,093</b>	<b>29,804</b>	<b>19,590</b>	<b>12,384</b>	<b>24,272</b>	<b>36,565</b>

**Deductions by Type**  
*(in thousands)*



**Deductions by Type** *(in thousands)*

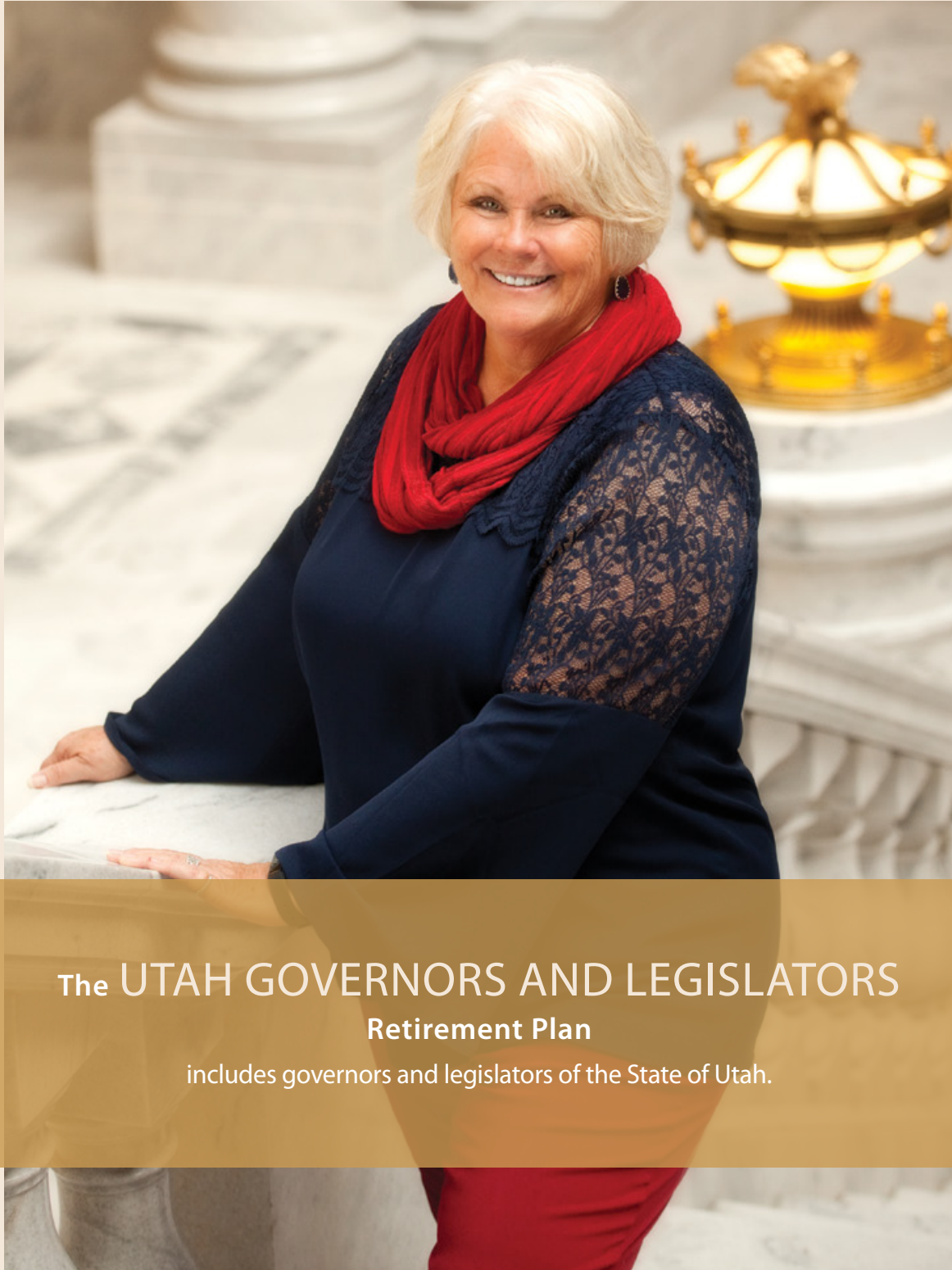
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ 9,135	10,189	11,361	12,400	12,330	13,621
Administrative expense	66	66	71	71	71	79
<b>Totals</b>	<b>\$ 9,201</b>	<b>10,255</b>	<b>11,432</b>	<b>12,471</b>	<b>12,401</b>	<b>13,700</b>

**Schedule of Employers Net Pension Liability\*** *(in thousands)*

	2013	2014	2015	2016	2017
Total pension liability	\$ 182,638	192,285	198,986	210,623	231,069
Statement of plan net position	155,676	163,834	163,747	175,618	198,483
<b>Net pension liability</b>	<b>\$ 26,962</b>	<b>28,451</b>	<b>35,239</b>	<b>35,005</b>	<b>32,586</b>

\*Additional years will be added as they become available.

UTAH GOVERNORS AND LEGISLATORS  
PLAN HIGHLIGHTS



The UTAH GOVERNORS AND LEGISLATORS  
Retirement Plan

includes governors and legislators of the State of Utah.

*Pictured: Representative Sue Duckworth, Utah House of Representatives, District 22*

# UTAH GOVERNORS AND LEGISLATORS

## RETIREMENT PLAN HIGHLIGHTS *(Concluded)*

### Composite Picture

<b>Total Membership</b> .....	<b>400</b>
Active .....	52
Terminated Vested .....	95
Retired .....	253
<b>2017 Active Members</b> .....	<b>52</b>
Average Age .....	57.1
Average Years of Service .....	12.2
Average Annual Salary .....	N/A
<b>2017 Retirees Number</b> .....	<b>11</b>
Average Age .....	65.6
Average Years of Service .....	10.8
Average Annual Salary .....	N/A
Average Annual Benefit .....	\$3,973
Average Annual Benefit — All Retirees .....	\$3,883

### Service Retirement

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

### Service Benefit Formula

#### Governors

\$500\*per month per term.

\*Increased semi annually up to 2% based on the CPI.  
The amount as of 12-31-17 is \$1,380.

#### Legislators

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

\*\*Increased semi annually up to 2% based on the CPI. The amount as of 12-31-17 is \$30.00.

### Cost-of-Living Allowance

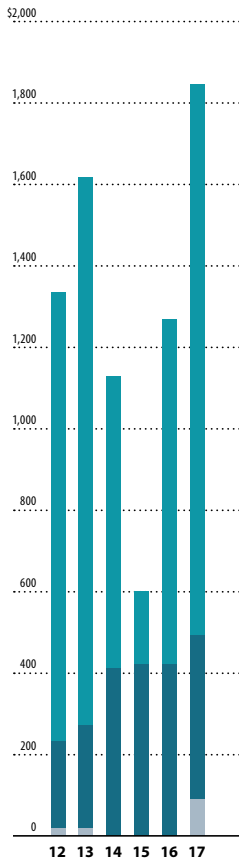
Up to 4% annually on original retirement benefit.

### Contribution Rates *(as of 12-31-2017)*

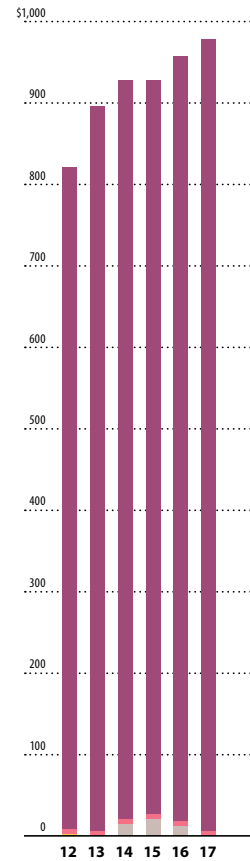
There was a 2017-18 appropriation payable by June 30, 2018, to the Utah Governors and Legislators Retirement Plan of \$391,883.

For more detail see Summary of Plan Provisions on page 184.

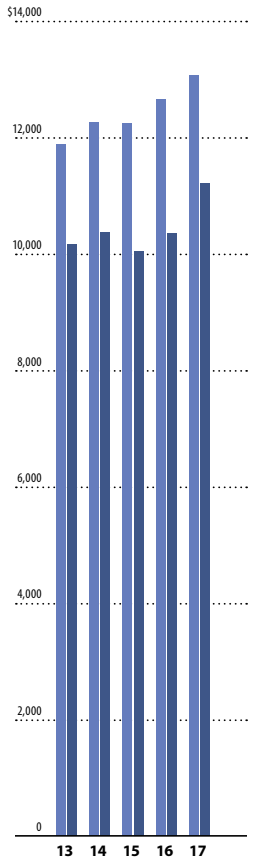
**Additions by Source**  
*(in thousands)*



**Deductions by Type**  
*(in thousands)*



**Schedule of Employers Net Pension Liability**  
*(in thousands)*



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 1,100	1,346	717	181	849	1,353
Employer contributions	214	252	411	421	421	404
Transfers from systems	19	19	—	—	—	89
<b>Totals</b>	<b>\$ 1,333</b>	<b>1,617</b>	<b>1,128</b>	<b>602</b>	<b>1,270</b>	<b>1,846</b>

**Deductions by Type**

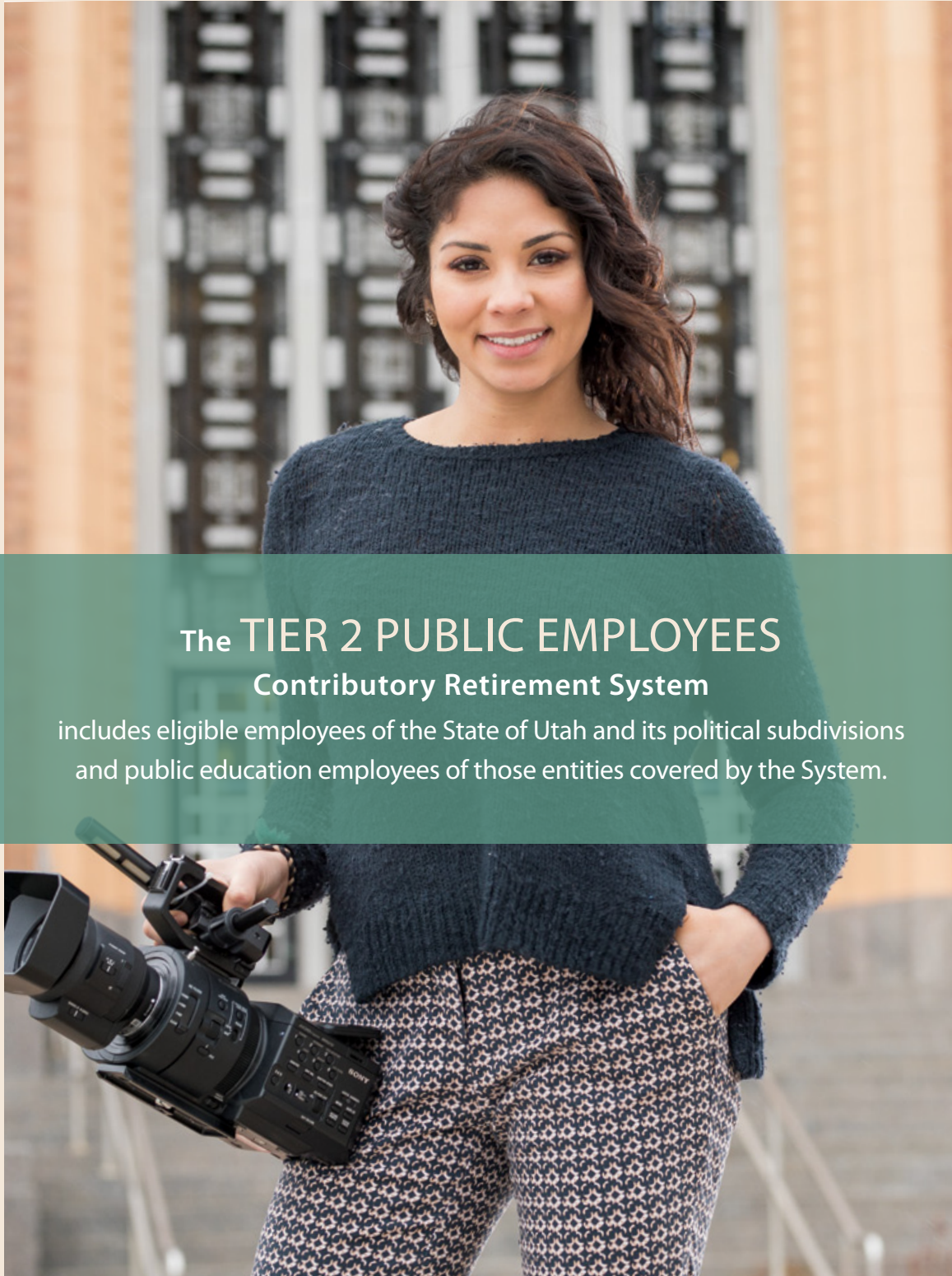
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ 815	892	909	904	941	973
Administrative expense	5	4	5	5	4	5
Refunds	1	—	—	—	—	—
Transfers to systems	—	—	14	20	12	—
<b>Totals</b>	<b>\$ 821</b>	<b>896</b>	<b>928</b>	<b>929</b>	<b>957</b>	<b>978</b>

**Schedule of Employers Net Pension Liability\***

	2013	2014	2015	2016	2017
Total pension liability	\$ 11,879	12,267	12,247	12,654	13,074
Statement of plan net position	10,166	10,366	10,039	10,352	11,220
<b>Net pension liability</b>	<b>\$ 1,713</b>	<b>1,901</b>	<b>2,208</b>	<b>2,302</b>	<b>1,854</b>

\*Additional years will be added as they become available.

# TIER 2 PUBLIC EMPLOYEES SYSTEM HIGHLIGHTS



## The TIER 2 PUBLIC EMPLOYEES Contributory Retirement System

includes eligible employees of the State of Utah and its political subdivisions  
and public education employees of those entities covered by the System.

*Pictured: Alexia Martinez, Digital Media Specialist, Ogden City*

## TIER 2 PUBLIC EMPLOYEES

### CONTRIBUTORY RETIREMENT SYSTEM HIGHLIGHTS *(Concluded)*

#### Composite Picture

<b>Total Membership</b> .....	<b>28,353</b>
Active .....	27,152
Terminated Vested .....	1,175
Retired .....	26
<b>2017 Active Members</b> .....	<b>27,152</b>
Average Age .....	36.5
Average Years of Service .....	2.6
Average Annual Salary .....	\$39,229
<b>2017 Retirees Number</b> .....	<b>17</b>
Average Age .....	67.5
Average Years of Service .....	4.7
Average Annual Salary .....	\$32,516
Average Annual Benefit .....	\$2,116
Average Annual Benefit — All Retirees .....	\$1,932

#### Service Retirement

Age	Years of Service	Allowance Reduction
Any age	35	None
60-61	20	Full actuarial before age 65
62-64	10	Full actuarial before age 65
65	4	None

#### Service Benefit Formula

Number of years of service x 1.50% x FAS.\*

\*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.

#### Cost-of-Living Allowance

Up to 2.5% compounded annually on original retirement benefit.

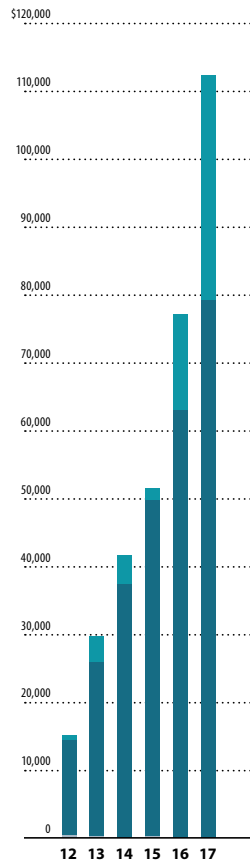
#### Contribution Rates *(as of 12-31-2017)*

Employer rates range from 15.11% to 18.44% of covered salary.

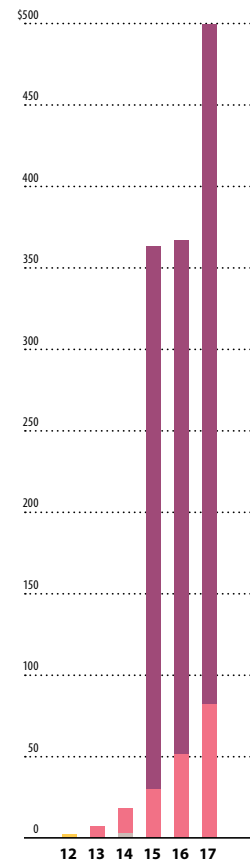
*(Includes active member death benefit and Tier 1 amortization rate.)*

For more detail see Summary of Plan Provisions on page 185.

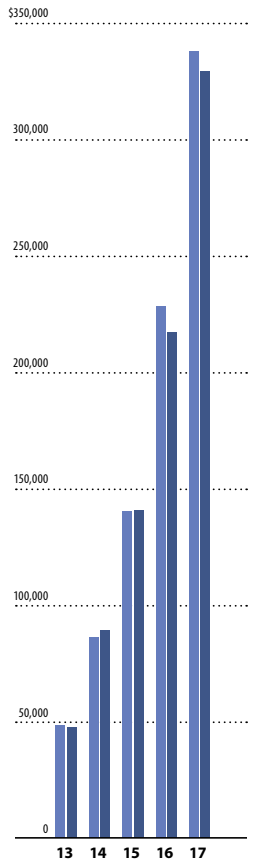
**Additions by Source**  
*(in thousands)*



**Deductions by Type**  
*(in thousands)*



**Schedule of Employers Net Pension Liability**  
*(in thousands)*



**Additions by Source**  
*(in thousands)*

	2012	2013	2014	2015	2016	2017
Investment income	\$ 922	4,017	4,320	1,963	14,059	33,249
Employer contributions	14,208	25,743	37,299	49,645	63,062	79,175
Transfers from systems	5	3	—	3	—	—
<b>Totals</b>	<b>\$ 15,135</b>	<b>29,763</b>	<b>41,619</b>	<b>51,611</b>	<b>77,121</b>	<b>112,424</b>

**Deductions by Type**  
*(in thousands)*

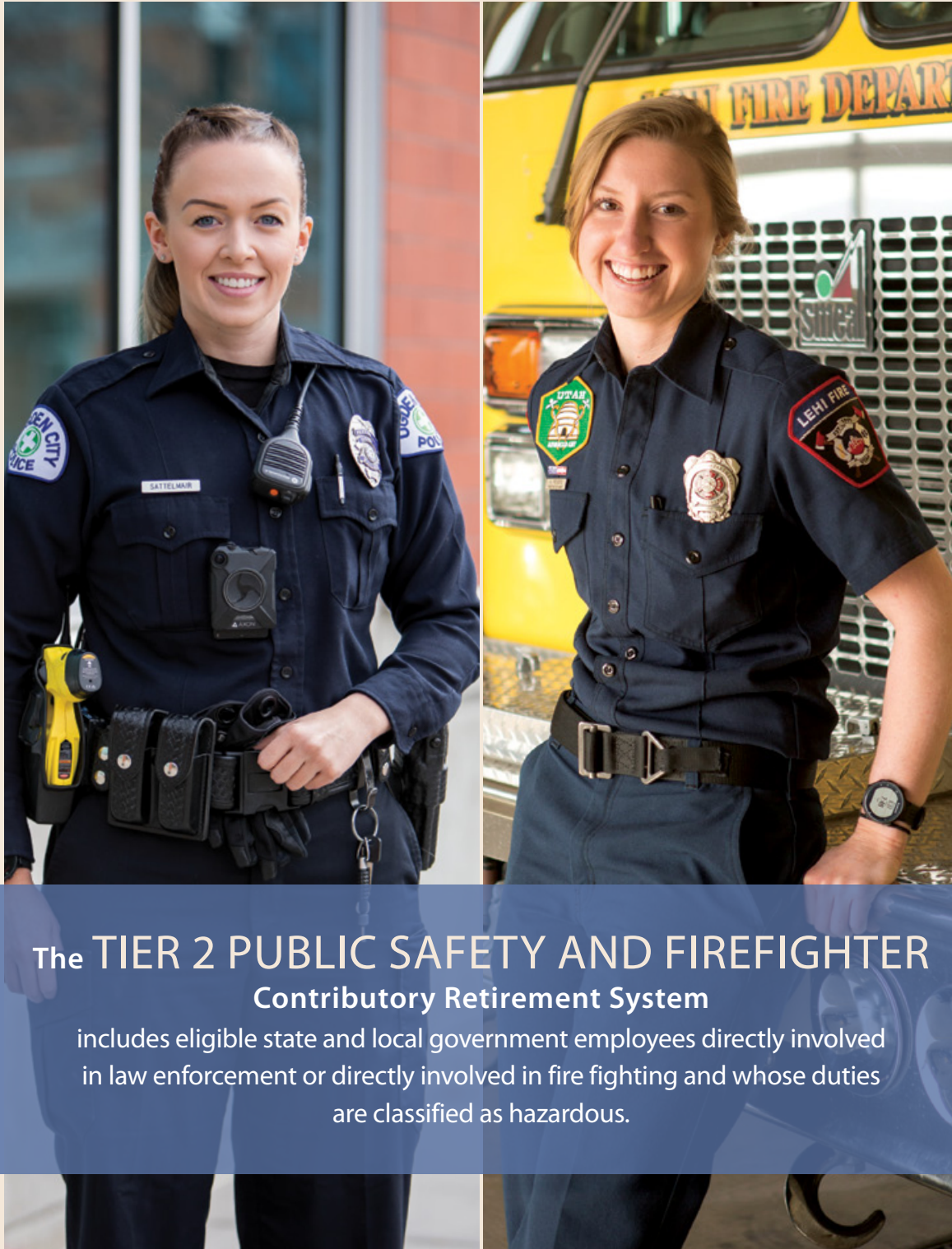
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ —	—	—	333	316	417
Administrative expense	1	6	16	30	51	82
Transfers to systems	—	—	2	—	—	—
<b>Totals</b>	<b>\$ 1</b>	<b>6</b>	<b>18</b>	<b>363</b>	<b>367</b>	<b>499</b>

**Schedule of Employers Net Pension Liability\***  
*(in thousands)*

	2013	2014	2015	2016	2017
Total pension liability	\$ 48,292	86,261	140,321	228,450	338,035
Statement of plan net position	47,690	89,291	140,539	217,293	329,218
<b>Net pension liability (asset)</b>	<b>\$ 602</b>	<b>(3,030)</b>	<b>(218)</b>	<b>11,157</b>	<b>8,817</b>

\*Additional years will be added as they become available.

# TIER 2 PUBLIC SAFETY AND FIREFIGHTER SYSTEM HIGHLIGHTS



## The TIER 2 PUBLIC SAFETY AND FIREFIGHTER Contributory Retirement System

includes eligible state and local government employees directly involved in law enforcement or directly involved in fire fighting and whose duties are classified as hazardous.

*Pictured Left: Logan Sattelmair, Police Officer, Ogden City Police Department*

*Right: Aubrey Freiberg, Firefighter, Lehi City Fire Department*

## TIER 2 PUBLIC SAFETY AND FIREFIGHTER CONTRIBUTORY RETIREMENT SYSTEM HIGHLIGHTS *(Concluded)*

### Composite Picture

<b>Total Membership</b> .....	<b>2,774</b>
Active .....	2,699
Terminated Vested .....	75
Retired .....	—

<b>2017 Active Members</b> .....	<b>2,699</b>
Average Age .....	30.5
Average Years of Service .....	2.7
Average Annual Salary .....	\$41,946

<b>2017 Retirees Number</b> .....	—
Average Age .....	—
Average Years of Service .....	—
Average Annual Salary .....	\$—
Average Annual Benefit .....	\$—
Average Annual Benefit — All Retirees .....	\$—

### Service Retirement

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

### Service Benefit Formula

Number of years of service x 1.50% x FAS.\*

\*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.

### Cost-of-Living Allowance

Up to 2.5% compounded annually on original retirement benefit.

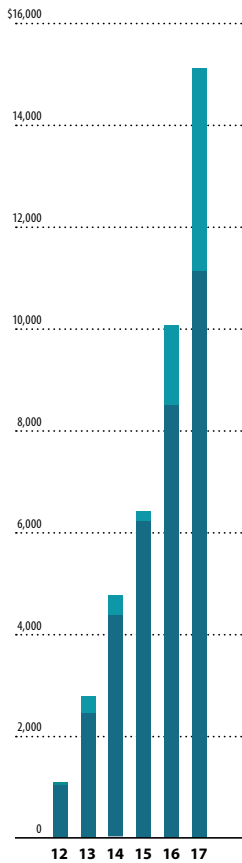
### Contribution Rates *(as of 12-31-2017)*

Employer rates range from 10.82% to 37.71% of covered salary.

*(Includes active member death benefit and Tier 1 amortization rate.)*

For more detail see Summary of Plan Provisions on page 187.

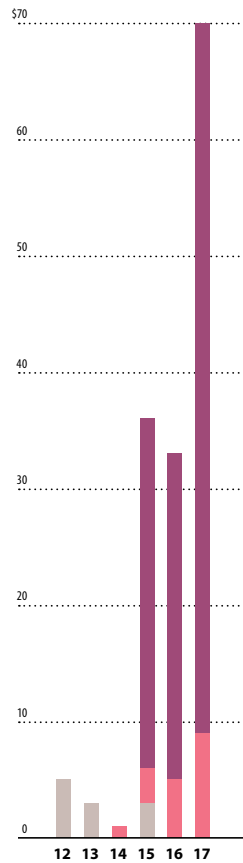
**Additions by Source**  
*(in thousands)*



**Additions by Source**

	2012	2013	2014	2015	2016	2017
Investment income	\$ 56	316	404	199	1,591	3,989
Employer contributions	1,031	2,451	4,365	6,221	8,488	11,126
Transfers from systems	—	—	2	—	—	—
<b>Totals</b>	<b>\$ 1,087</b>	<b>2,767</b>	<b>4,771</b>	<b>6,420</b>	<b>10,079</b>	<b>15,115</b>

**Deductions by Type**  
*(in thousands)*



**Deductions by Type**

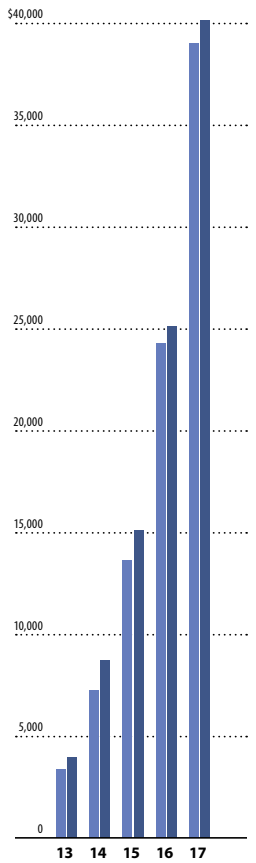
	2012	2013	2014	2015	2016	2017
Benefit payments	\$ —	—	—	30	28	61
Administrative expense	—	—	1	3	5	9
Transfers to systems	5	3	—	3	—	—
<b>Totals</b>	<b>\$ 5</b>	<b>3</b>	<b>1</b>	<b>36</b>	<b>33</b>	<b>70</b>

**Schedule of Employers Net Pension Liability\***

	2013	2014	2015	2016	2017
Total pension liability	\$ 3,345	7,226	13,628	24,266	39,023
Statement of plan net position	3,935	8,705	15,089	25,135	40,180
<b>Net pension liability (asset)</b>	<b>\$ (590)</b>	<b>(1,479)</b>	<b>(1,461)</b>	<b>(869)</b>	<b>(1,157)</b>

\*Additional years will be added as they become available.

**Schedule of Employers Net Pension Liability**  
*(in thousands)*



# DEFINED CONTRIBUTION SAVINGS PLANS HIGHLIGHTS

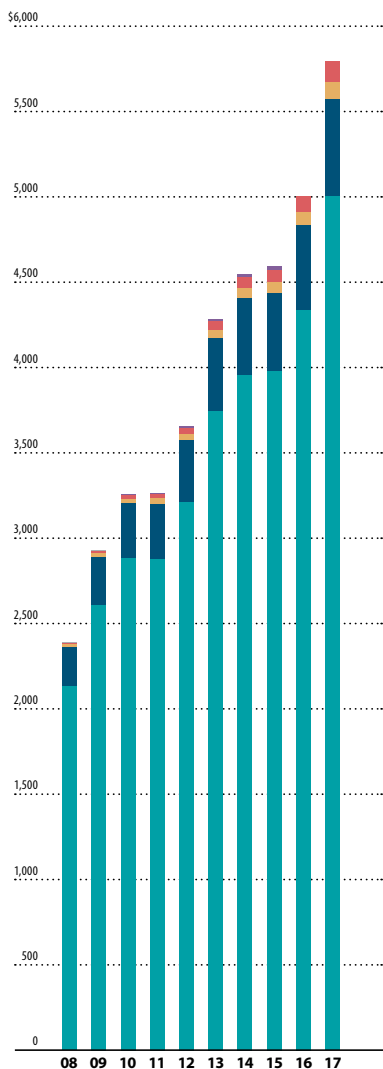
## Membership Information

at December 31, 2017

	401(k)	457	Roth IRA	Traditional IRA
Number of active employees eligible to participate	106,137	102,180	224,216	224,216
Employee contributions (excluding employer contributions):				
Number of employees contributing	39,423	8,403	7,507	548
Percent of eligible employees contributing	37.1%	8.2%	3.3%	0.2%
Average % of salary deferred by employees	5.6%	6.1%	3.7%	2.5%
Total participants	171,966	17,903	10,383	2,042
Average participant account balance	\$ 29,092	\$ 31,804	\$ 11,490	\$ 50,151

## Defined Contributions Member Balances

(in millions)



The purpose of the Defined Contribution Savings Plans (401(k), 457, Roth and traditional IRAs) is to allow public employees throughout Utah to adequately prepare themselves for retirement by investing a portion of their income in one or more of these retirement plans.

It has long been recognized that for employees to experience the comfortable and rewarding retirement they desire, they cannot rely entirely upon Social Security and their employer-provided retirement. Employees should take the initiative to personally put aside a portion of their salary into some type of long-term savings plan.

Each year the number of employees participating in these plans increases. Individuals may participate in more than one plan. As of December 31, 2017, the number of participants by investment plan was as shown in the table above.

Annualized rates of returns for the Investment Funds are shown on pages 149 and 150.

The Plans provided the following benefits:

- » Convenient, automatic payroll deduction
- » 20 investment options
- » Brokerage window option
- » Tax-deferred and/or tax-free savings
- » Increase or decrease contributions as often as every pay period
- » Flexible payout options when eligible
- » Upon death, funds transfer to beneficiaries
- » No sales commissions
- » Low investment and administrative fees
- » Plan loans (401(k) and 457)
- » Hardship and emergency withdrawals
- » Local customer service and counseling.

## Defined Contributions Member Balances

at December 31, 2017

	(in millions)									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
HRA*	\$ 2	3	6	9	11	16	20	23	—	—
Roth IRA	7	12	21	24	34	48	59	70	89	119
Traditional IRA	19	22	26	30	39	50	60	69	82	102
457	229	284	317	321	360	425	451	454	494	569
401(k)	2,132	2,608	2,887	2,881	3,213	3,746	3,956	3,980	4,339	5,003
Totals	\$ 2,389	2,929	3,257	3,265	3,657	4,285	4,546	4,596	5,004	5,793

\*Administration of the HRA was transferred to PEHP in October 2016.



2017

# FINANCIAL SECTION

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# INDEPENDENT AUDITORS' REPORT



## INDEPENDENT AUDITORS' REPORT

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Utah State Retirement Board:

### REPORT ON THE FINANCIAL STATEMENTS

We have audited the accompanying financial statements of each of the defined benefit pension plans and of the total combined defined contribution plans of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, which comprise the statements of fiduciary net position of the pension (and other employee benefit) trust funds as of December 31, 2017, and the related statements of changes in fiduciary net position of the pension (and other employee benefit) trust funds for the year then ended, and the related notes to the financial statements, which collectively comprise Utah Retirement Systems' basic financial statements as listed in the foregoing table of contents.

#### *Management's Responsibility for the Financial Statements*

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

#### *Auditors' Responsibility*

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

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

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

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the pension (and other employee benefit) trust funds of each of the defined benefit pension plans and of the total combined defined contribution plans of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, at December 31, 2017, and the changes in fiduciary net position of the pension (and other employee benefit) trust funds for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Emphasis of Matter**

As discussed in Note 3 to the financial statements, the financial statements include investments that are not listed on national exchanges or for which quoted market prices are not available. These investments include private equities, absolute returns, and investments in real assets. Such investments totaled \$12.9 billion (32.2% of total assets) at December 31, 2017. Where a publicly listed price is not available, the management of Utah Retirement Systems uses alternative sources of information including audited financial statements, unaudited interim reports, independent appraisals, and similar evidence to determine the fair value of the investments. Our opinion is not modified with respect to this matter.

**Report on Summarized Comparative Information**

We have previously audited Utah Retirement Systems' 2016 basic financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated April 26, 2017, which included an emphasis-of-matter paragraph regarding the fair value of investments where a publicly listed price is not available. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2016 is consistent, in all material respects, with the audited financial statements from which it has been derived.

**Other Matters****Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the Schedules of Changes in the Employers' Net Pension Liability, of Employers' Net Pension Liability, of Employer Contributions, and of Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

**Other Information**

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise Utah Retirement Systems' basic financial statements. The additional combining information for the total combined defined contribution plans is presented for purposes of additional analysis of the financial statements rather than to present the fiduciary net position and the changes in fiduciary net position of the individual plans, and is not a required part of the basic financial statements. The supplementary 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 basic financial statements.

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

The Introductory Section, Investment Section, Actuarial Section, and Statistical Section listed in the foregoing table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

#### **Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated April 26, 2018 on our consideration of Utah Retirement Systems' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Utah Retirement Systems' internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Utah Retirement Systems' internal control over financial reporting and compliance.



April 26, 2018



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

Utah State Retirement Board:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of each of the defined benefit pension plans and of the total combined defined contribution plans of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, which comprise the statements of fiduciary net position of the pension (and other employee benefit) trust funds as of December 31, 2017, and the related statements of changes in fiduciary net position of the pension (and other employee benefit) trust funds for the year then ended, and the related notes to the financial statements, which collectively comprise Utah Retirement Systems' basic financial statements, and have issued our report thereon dated April 26, 2018, which included an emphasis-of-matter paragraph regarding the fair value of investments where a publicly listed price is not available.

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER  
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS *(Concluded)*

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### **Internal Control Over Financial Reporting**

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

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

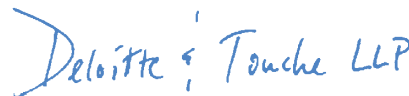
Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### **Compliance and Other Matters**

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

### **Purpose of this Report**

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



April 26, 2018

# MANAGEMENT'S DISCUSSION AND ANALYSIS

## Introduction

This section presents management's discussion and analysis of the Utah Retirement Systems' (URS) financial position and performance for the year ended December 31, 2017. It is presented as a narrative overview and analysis. Please read it in conjunction with the Letter of Transmittal included in the Introductory Section, the financial statements and other information that are presented in the Financial Section of this Comprehensive Annual Financial Report. URS is responsible for administering retirement and defined contribution benefits for state, local government, and public education employees in the State of Utah.

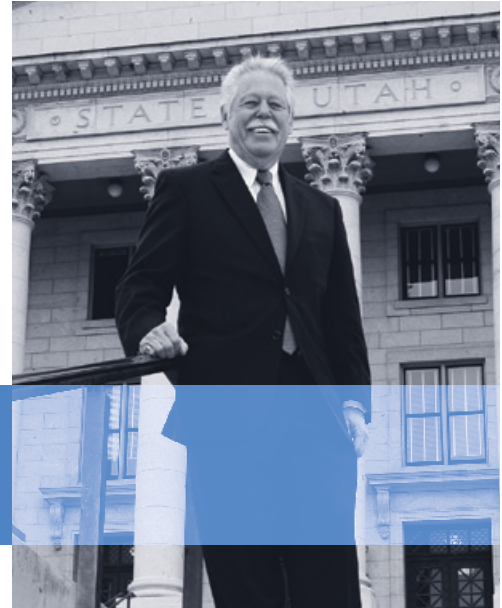
URS is composed of eight defined benefit pension systems (Systems) and four defined contribution plans (Plans). The eight defined benefit pension systems are the Public Employees Noncontributory Retirement System (Noncontributory System), the Public Employees Contributory Retirement System (Contributory System), the Public Safety Retirement System (Public Safety System), the Firefighters Retirement System (Firefighters System), the Judges Retirement System (Judges System), the Utah Governors and Legislators Retirement Plan (Governors and Legislators Plan), Tier 2 Public Employees Contributory Retirement System (Tier 2 Public Employees System), and the Tier 2 Public Safety and Firefighter Contributory Retirement System (Tier 2 Public Safety and Firefighter System). The four defined contribution plans (Plans) are the 401(k), 457, and Roth and traditional IRAs. All of these Systems and Plans are defined as pension (and other employee benefit) trust funds, which are fiduciary funds. Throughout this discussion and analysis units of measure



(i.e., billions, millions, thousands) are approximate, being rounded up or down to the nearest tenth of the respective unit value.

## FINANCIAL HIGHLIGHTS

- » The URS Defined Benefit Pension Systems' combined total net position increased by \$3.3 billion, or 11.7% during calendar year 2017. The increase was primarily due to the increase in the markets.
- » The URS Defined Benefit Pension Systems' rate of return on investments during calendar year 2017 was 13.57% compared with the calendar year 2016 rate of return of 8.79%. The increase in rate of return was due primarily to the increase in market performance in 2017.
- » The URS Defined Benefit Pension Systems had a Net Pension Liability of \$3.4 billion and the Net Pension Liability as a percentage of covered payroll was 68.4% as of December 31, 2017.
- » The Defined Contribution Plans' combined total net position increased \$790 million during calendar year 2017 primarily due to investment gains.
- » The Defined Contribution Plans' rates of return for investment options ranged from a high of 33.2% to a low of 1.7% compared to prior year investment option returns of a high of 23.3% and a low of 1.2%.



## Overview of the Financial Statements

The URS 2017 financial statements, notes to the financial statements, and required supplementary information were prepared in conformity with GASB Statement No. 67, *Financial Reporting for Pension Plans*. This discussion and analysis is intended to serve as an introduction to the URS financial reporting, which is comprised of the following components:

- 1) basic financial statements,
- 2) notes to the basic financial statements,
- 3) required supplementary information, and
- 4) other supplementary schedules.

Collectively, this information presents the combined net position held in trust for pension benefits for each of the funds administered by URS as of December 31, 2017. This financial information also summarizes the combined changes in net position held in trust for pension benefits for the year then ended. The information in each of these components is briefly summarized as follows:

### 1) BASIC FINANCIAL STATEMENTS

For the calendar year ended December 31, 2017, basic financial statements are presented for the fiduciary funds administered by URS. Fiduciary funds are used to account for resources held for the benefit of the participants outside of URS. The fiduciary funds are comprised of 12 pension (and other employee benefit) trust funds that consist of eight defined benefit systems and four defined contribution plans.

- » The Statements of Fiduciary Net Position are presented for the pension trust funds at December 31, 2017, with combined total comparative information at December 31, 2016. These financial statements reflect the resources available to pay benefits to members, including retirees and beneficiaries, at the end of the years reported.
- » The Statements of Changes in Fiduciary Net Position are presented for the pension trust funds for the year ended December 31, 2017, with combined total comparative information for the year ended December 31, 2016. These financial statements reflect the changes in the resources available to pay benefits to members, including retirees and beneficiaries, for calendar years 2017 and 2016.

### 2) NOTES TO THE BASIC FINANCIAL STATEMENTS

The Notes to the Basic Financial Statements provide additional information that is essential to a full understanding of the data provided in the basic financial statements. Information in the Notes to the Basic Financial Statements is described as follows:

- » Note 1 provides a general description of URS, as well as a description of each of the Systems and Plans administered by URS and a summary of benefits. Information regarding employer and member participation in the Systems and Plans administered by URS is also provided.

- » Note 2 provides a summary of significant accounting policies including the basis of accounting, investment accounting policies, management's use of estimates, information regarding the implementation of new accounting pronouncements, and other significant accounting policies.
- » Note 3 describes deposits, investment risk disclosures, fair value measurements and related disclosures, and additional information about cash, securities lending, and derivatives.
- » Note 4 explains property and equipment of URS including depreciation and net carrying amounts.
- » Note 5 provides information about net pension liability of employers.
- » Note 6 provides information about contributions to the defined benefit systems administered by URS.
- » Note 7 explains transfers to or from affiliated systems.
- » Note 8 describes supplemental benefits.
- » Note 9 provides information about litigation.
- » Note 10 describes commitments for investment funding.
- » Note 11 provides information about pension plan participation.
- » Note 12 provides information about URS post-employment benefits.
- » Note 13 describes compensated absences and insurance reserves.
- » Note 14 describes required supplementary information.



- » Note 15 provides information about risk management of URS.
- » Note 16 provides information about real estate liabilities.

### 3) REQUIRED SUPPLEMENTARY INFORMATION

The required supplementary information consists of four schedules of changes in employers' net pension liability, employers' net pension liability, employer contributions, and the money-weighted rate of investment returns of the defined benefit pension systems administered by URS.

### 4) OTHER SUPPLEMENTARY SCHEDULES

Other schedules include more detailed information pertaining to the Systems and Plans as well as schedules of administrative expenses.



## Financial Analysis of the Systems — Defined Benefit Plan



### INVESTMENTS

Investments of the URS Defined Benefit Systems are combined in a commingled investment pool as authorized by state statute. Each system owns an equity position in the pool and receives proportionate investment income from the pool in accordance with each respective ownership percentage.

Each system's allocated share of each type of investment in the pool is shown in the Statements of Net Position. Investment gains or losses are reported in the Statements of Changes in Fiduciary Net Position. The rate of return on investments is therefore approximately the same for each of the systems.

#### Systems' Total Investments

As of December 31, 2017, URS Defined Benefit Systems had total net position of \$31.9 billion, an increase of \$3.3 billion from calendar year 2016 investment totals. The combined investment portfolio experienced a return of 13.57% compared with the URS investment benchmark return of 14.05%. Investment results over time compared with URS benchmarks are presented on page 144 in the Investment Section.

Because the investment gain in all of the retirement systems was 13.57% of net position, further investment performance will not be evaluated in each respective system.

#### Equity Securities

As of December 31, 2017, URS Defined Benefit Systems held \$12.2 billion in U.S. and international equity securities, an increase of \$2.0 billion from year 2016. Equity securities had a return of 21.41% for calendar year 2017 compared with the URS benchmark return of 23.89%.

#### Debt Securities

As of December 31, 2017, URS Defined Benefit Systems held \$4.6 billion in U.S. debt and international debt securities, an increase of \$200.7 million from year 2016. Debt securities returned 3.88% in calendar year 2017 compared with the URS benchmark return of 3.93%.

#### Real Assets

As of December 31, 2017, URS Defined Benefit Systems held \$4.7 billion in real assets investments, an increase of \$475.5 million from year 2016. Real assets investments returned 11.74% in calendar year 2017 compared with the URS benchmark return of 7.18%.

#### Private Equity

As of December 31, 2017, URS Defined Benefit Systems held \$3.5 billion in private equity investments, an increase of \$160.1 million from year 2016. Private equity investments returned 19.12% in calendar year 2017. The URS benchmark for private equity investments was 23.63%.



### Short Term

As of December 31, 2017, URS Defined Benefit Systems held \$2.8 billion in short-term investments, an increase of \$366.6 million from year 2016. Short-term investments returned 0.42% in calendar year 2017 compared with the URS benchmark return of 0.86%.

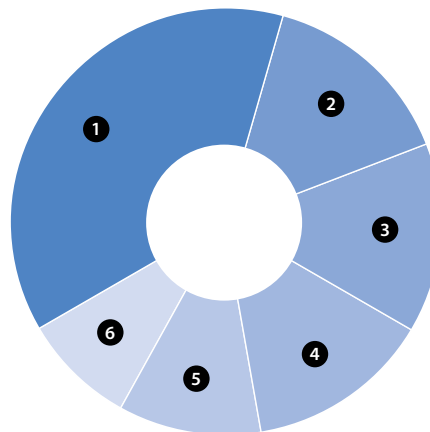
### Absolute Return

As of December 31, 2017, URS Defined Benefit Systems held \$4.5 billion in absolute return investments, a decrease of \$49.5 million from year 2016. Absolute return investments returned 5.47% in calendar year 2017 compared with the URS benchmark return of 5.86%.

### Securities Lending

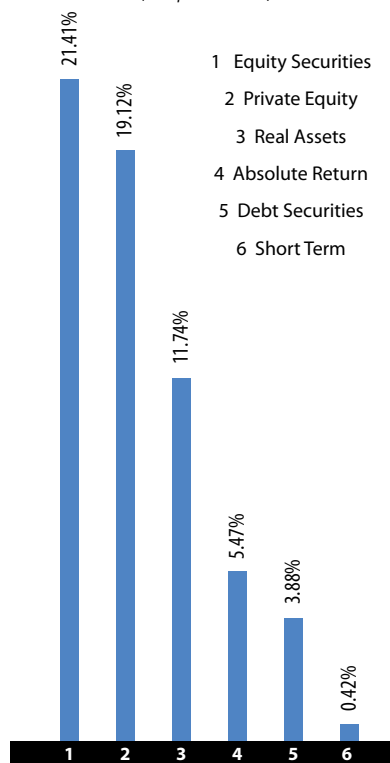
The Systems earn additional investment income by lending investment securities to brokers. This is done on a pooled basis by URS' custodial bank, The Northern Trust Company (TNT). The brokers provide collateral to TNT and generally use the borrowed securities to cover short sales and failed trades. TNT invests the cash collateral received from the brokers in order to earn interest. As of December 31, 2017, the Systems had \$1.3 billion on loan secured by collateral of \$1.3 billion. For calendar year 2017, net securities lending income to the Systems amounted to \$6.0 million, a decrease of \$2.0 million over calendar year 2016. In order to mitigate risk, security lending was restricted to high yield low risk lending which resulted in lower revenue for 2017.

### Defined Benefit Systems Investments at Fair Value



- 1 Equity Securities (37.8%)
- 2 Real Assets (14.8%)
- 3 Debt Securities (14.2%)
- 4 Absolute Return (13.9%)
- 5 Private Equity (10.7%)
- 6 Short Term (8.6%)

### Defined Benefit Systems Investment Rates of Return by Investment Type for 2017 (in percents)





## Analysis of the Defined Benefit Systems

### NONCONTRIBUTORY SYSTEM

The Noncontributory System provides retirement benefits to covered State of Utah, local government, and public education employees. Benefits of the system are funded by employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$25.2 billion, an increase of \$2.6 billion (11.4%) from \$22.6 billion as of December 31, 2016. Additions to the Noncontributory System net position include employer contributions, investment income, and transfers. For the calendar year 2017, member and employer contributions increased from \$847.9 million for calendar year 2016 to \$871.5 million, an increase of \$23.6 million (2.8%). Contributions increased because salaries increased. The system recognized a net investment gain of \$3.0 billion for calendar year 2017 compared with net investment gain of \$1.78 billion for calendar year 2016. The increase in investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Noncontributory System net position include retirement benefits, administrative expenses, and transfers. For the calendar year 2017, benefits amounted to \$1.3 billion, an increase of \$64.0 million (5.4%) over calendar year 2016. The increase in benefit payments was due to an increased number of benefit recipients and benefit increases.

For the calendar year 2017, the costs of administering the system totaled \$9.6 million, an increase of \$723 thousand (8.2%) from calendar year 2016.

At December 31, 2017, the Noncontributory Retirement System total pension liability was \$28.1 billion. The Plan's fiduciary net position was \$25.2 billion leaving a net pension liability of \$2.9 billion. The Plan fiduciary net position as a percentage of the total pension liability was 89.7%.

### CONTRIBUTORY SYSTEM

The Contributory System provides retirement benefits to covered State of Utah, local government, and public education employees. Benefits of the system are funded by member and employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$1.3 billion, an increase of \$78.5 million (6.5%) from \$1.2 billion as of December 31, 2016.

Additions to the Contributory System net position include employer and member contributions, investment income, and transfers. For calendar year 2017, member and employer contributions decreased from \$11.6 million for calendar year 2016 to \$10.6 million, a decrease of \$987 thousand (8.5%). Contributions decreased because of the number of active members. For the most part, the Contributory System is a closed system. For this reason both the numbers of active members and retired individuals are declining. The system recognized a net

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

**Statements of Fiduciary Net Position — Defined Benefit Pension Plans**

December 31

(dollars in thousands)

	Noncontributory System			Contributory System			Public Safety System		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Assets:</b>									
Cash and receivables	\$ 582,456	394,604	264,655	27,814	19,301	13,175	82,840	55,097	33,339
Investments at fair value	25,403,896	22,995,043	21,506,695	1,295,483	1,226,675	1,202,149	3,604,502	3,229,586	2,985,545
Invested securities									
lending collateral	1,058,631	554,319	1,602,253	53,985	29,570	89,560	150,205	77,853	222,424
Property and equipment	3,472	3,875	2,488	177	207	139	492	544	345
Total assets	27,048,455	23,947,841	23,376,091	1,377,459	1,275,753	1,305,023	3,838,039	3,363,080	3,241,653
<b>Liabilities:</b>									
Securities lending liability	1,058,631	554,319	1,602,253	53,985	29,570	89,560	150,205	77,853	222,424
Investment accounts and other payables	784,697	774,779	581,401	40,008	41,279	32,372	111,317	108,682	80,390
Total liabilities	1,843,328	1,329,098	2,183,654	93,993	70,849	121,932	261,522	186,535	302,814
Net position restricted for pensions	\$ 25,205,127	22,618,743	21,192,437	1,283,466	1,204,904	1,183,091	3,576,517	3,176,545	2,938,839

(dollars in thousands)

	Tier 2 Public Employees System			Tier 2 Public Safety and Firefighter System			Total Defined Benefit Pension Plans			2017 Percent Change	2016 Percent Change
	2017	2016	2015	2017	2016	2015	2017	2016	2015		
<b>Assets:</b>											
Cash and receivables	\$ 11,918	7,015	3,973	1,361	754	271	741,034	499,760	329,458	48.3%	51.7%
Investments at fair value	327,365	217,563	140,329	40,050	25,226	15,226	32,125,473	29,017,100	27,086,314	10.7	7.1
Invested securities											
lending collateral	13,642	5,245	10,454	1,669	608	1,134	1,338,730	699,487	2,017,935	91.4	(65.3)
Property and equipment	45	37	16	5	4	2	4,390	4,890	3,133	(10.2)	56.1
Total assets	352,970	229,860	154,772	43,085	26,592	16,633	34,209,627	30,221,237	29,436,840	13.2	2.7
<b>Liabilities:</b>											
Securities lending liability	13,642	5,245	10,454	1,669	608	1,134	1,338,730	699,487	2,017,935	91.4	(65.3)
Investment accounts and other payables	10,110	7,322	3,779	1,236	849	410	992,279	977,434	732,065	1.5	33.5
Total liabilities	23,752	12,567	14,233	2,905	1,457	1,544	2,331,009	1,676,921	2,750,000	39.0	(39.0)
Total position restricted for pensions	\$ 329,218	217,293	140,539	40,180	25,135	15,089	31,878,618	28,544,316	26,686,840	11.7%	7.0%

MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

Firefighters System			Judges System			Utah Governors and Legislators Retirement Plan		
2017	2016	2015	2017	2016	2015	2017	2016	2015
29,792	19,654	11,916	4,613	3,172	1,904	240	163	225
1,242,827	1,134,044	1,059,550	200,022	178,422	166,303	11,328	10,541	10,517
51,791	27,337	78,936	8,335	4,301	12,390	472	254	784
170	191	123	27	30	19	2	2	1
1,324,580	1,181,226	1,150,525	212,997	185,925	180,616	12,042	10,960	11,527
51,791	27,337	78,936	8,335	4,301	12,390	472	254	784
38,382	38,163	28,530	6,179	6,006	4,479	350	354	704
90,173	65,500	107,466	14,514	10,307	16,869	822	608	1,488
1,234,407	1,115,726	1,043,059	198,483	175,618	163,747	11,220	10,352	10,039

investment gain of \$155.9 million for calendar year 2017 compared with net investment gain of \$97.7 million for the calendar year 2016. The increase in investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Contributory System net position include retirement benefits, administrative expenses, and transfers. For calendar year 2017, benefits amounted to \$86.4 million, an increase of \$1.2 million (1.4%) from calendar year 2016. The increase in benefit payments was due to the increase in the number of retired members in the system. For calendar year 2017, the costs of administering the system totaled \$457 thousand, an increase of \$11 thousand (2.5%) from calendar year 2016.

At December 31, 2017, the Contributory Retirement System total pension liability was \$1.298 billion. The Plan's fiduciary net position was \$1.283 billion leaving a net pension liability of \$14.7 million. The Plan fiduciary net position as a percentage of the total pension liability was 98.9%.

**PUBLIC SAFETY SYSTEM**

The Public Safety System provides retirement benefits to eligible public safety employees of the State of Utah, local governments, and higher education. Benefits of the system are funded by member and employer contributions and by earnings on investments. The system net position as of December 31, 2017, amounted to \$3.6 billion, an increase of \$400.0 million (12.6%) from \$3.2 billion as of December 31, 2016.

Additions to the Public Safety System net position include employer contributions, investment income, and transfers. For calendar year 2017, member and employer contributions decreased from \$147.9 million for calendar year 2016 to \$146.6 million, a decrease of \$1.3 million (0.9%). Contributions decreased because of the number of active members. For the most part, the Public Safety System is a closed system. For this reason both the numbers of active members and retired individuals are declining. The system recognized a net investment gain of \$421.9 million for calendar year 2017 compared with net investment gain of \$249.0 million for calendar year 2016. The increase in the investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

**Statements of Changes in Fiduciary Net Position — Defined Benefit Pension Plans**

Year Ended December 31

(dollars in thousands)

	Noncontributory System			Contributory System			Public Safety System		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Additions:</b>									
Contributions	\$ 871,540	847,939	830,469	10,621	11,608	16,490	146,607	147,929	141,929
Investment income	2,987,282	1,783,911	366,748	155,949	97,693	21,251	421,917	249,027	50,654
Transfers from affiliated systems	—	—	33,648	—	—	—	5,926	6,701	4,023
Total additions	3,858,822	2,631,850	1,230,865	166,570	109,301	37,741	574,450	403,657	196,606
<b>Deductions:</b>									
Pension benefits	1,248,037	1,184,317	1,123,647	84,761	83,447	81,390	172,870	164,508	155,387
Refunds	4,635	4,366	2,496	1,613	1,700	1,215	226	183	533
Administrative expenses	9,579	8,856	8,797	457	446	478	1,382	1,260	1,233
Transfers to affiliated systems	10,187	8,005	—	1,177	1,895	41,558	—	—	—
Total deductions	1,272,438	1,205,544	1,134,940	88,008	87,488	124,641	174,478	165,951	157,153
Increase (decrease) in net position restricted for pensions	\$ 2,586,384	1,426,306	95,925	78,562	21,813	(86,900)	399,972	237,706	39,453

(dollars in thousands)

	Tier 2 Public Employees System			Tier 2 Public Safety and Firefighter System			Total Defined Benefit Pension Plans			2017 Percent Change	2016 Percent Change
	2017	2016	2015	2017	2016	2015	2017	2016	2015		
<b>Additions:</b>											
Contributions	\$ 79,175	63,062	49,645	11,126	8,488	6,221	1,154,911	1,124,551	1,095,466	2.7%	2.7%
Investment income	33,249	14,059	1,963	3,989	1,591	199	3,773,910	2,248,696	461,772	67.8	387.0
Transfers from affiliated systems	—	—	3	—	—	—	11,364	9,912	41,581	14.6	(76.2)
Total additions	112,424	77,121	51,611	15,115	10,079	6,420	4,940,185	3,383,159	1,598,819	46.0	111.6
<b>Deductions:</b>											
Retirement benefits	417	316	333	61	28	30	1,575,533	1,497,989	1,423,762	5.2	5.2
Refunds	—	—	—	—	—	—	6,985	6,715	4,772	4.0	40.7
Administrative expense	82	51	30	9	5	3	12,001	11,067	10,988	8.4	0.7
Transfers to affiliated systems	—	—	—	—	—	3	11,364	9,912	41,581	14.6	(76.2)
Total deductions	499	367	363	70	33	36	1,605,883	1,525,683	1,481,103	5.3	3.0
Increase in net position restricted for pensions	\$ 111,925	76,754	51,248	15,045	10,046	6,384	3,334,302	1,857,476	117,716	79.5%	1,477.9%

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

Firefighters System			Judges System			Utah Governors and Legislators Retirement Plan		
2017	2016	2015	2017	2016	2015	2017	2016	2015
26,398	36,252	42,083	9,040	8,852	8,208	404	421	421
146,736	87,746	17,934	23,435	13,820	2,842	1,353	849	181
1,259	1,611	2,573	4,090	1,600	1,334	89	—	—
174,393	125,609	62,590	36,565	24,272	12,384	1,846	1,270	602
54,793	52,102	49,671	13,621	12,330	12,400	973	941	904
511	466	528	—	—	—	—	—	—
408	374	371	79	71	71	5	4	5
—	—	—	—	—	—	—	12	20
55,712	52,942	50,570	13,700	12,401	12,471	978	957	929
118,681	72,667	12,020	22,865	11,871	(87)	868	313	(327)

Deductions from the Public Safety System net position include retirement benefits and administrative expenses. For calendar year 2017, benefits amounted to \$173.1 million, an increase of \$8.4 million (5.1%) over calendar year 2016. The increase in benefit payments was due to an increased number of benefit recipients and benefit increases. For calendar year 2017, the costs of administering the system totaled \$1.4 million, an increase of \$122 thousand (9.7%) from calendar year 2016.

At December 31, 2017, the Public Safety Retirement System total pension liability was \$4.1 billion. The Plan's fiduciary net position was \$3.6 billion leaving a net pension liability of \$509 million. The Plan fiduciary net position as a percentage of the total pension liability was 87.5%.

## FIREFIGHTERS SYSTEM

The Firefighters System provides retirement benefits to covered firefighters of the State of Utah and local governments. Benefits of the system are funded by member and employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$1.2 billion, an increase of \$118.7 million (10.6%) from \$1.1 billion as of December 31, 2016.

Additions to the Firefighters System net position consist of employer contributions, including insurance premium taxes, investment income, and transfers. For calendar year 2017, member and employer contributions decreased from \$36.3 million for calendar year 2016 to \$26.4 million, a decrease of \$9.9 million (27.2%). Contributions decreased because insurance premium taxes decreased from \$10.6 million in 2016 to \$1.2 million (88.4%) in calendar year 2017. Contributions also decreased because of the number of active members. For the most part the Firefighters System is a closed system. For this reason both the number of active members and retired

individuals are declining. The system recognized a net investment gain of \$146.7 million for calendar year 2017 compared with net investment gain of \$87.7 million for calendar year 2016. The increase in investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Firefighters System net position include retirement benefits and administrative expenses. For calendar year 2017, benefits amounted to \$55.3 million, an increase of \$2.7 million (5.2%) over calendar year 2016. The increase in benefit payments was due to an increased number of benefit recipients and benefit increases. For calendar year 2017, the costs of administering the system totaled \$408 thousand, an increase of \$34 thousand (9.1%) from calendar year 2016.

At December 31, 2017, the Firefighters Retirement System total pension liability was \$1.206 billion. The Plan's fiduciary net position was \$1.234 billion leaving a net pension asset of \$28.7 million. The Plan fiduciary net position as a percentage of the total pension liability was 102.4%.

## JUDGES SYSTEM

The Judges System provides retirement benefits to judges in the State of Utah who are eligible to participate in the system. Benefits of the system are funded by employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$198.5 million, an increase of \$22.9 thousand (13.0%) from \$175.6 million as of December 31, 2016.

Additions to the Judges System net position consist of employer contributions, including court fees, investment income, and transfers. For calendar year 2017, employer contributions increased from \$8.9 million for calendar year 2016 to \$9.0 million, an increase of \$188 thousand (2.1%). Contributions increased because court fees increased. The system recognized a net investment gain of \$23.4 million for the calendar year 2017 compared with net investment gain of \$13.8 million for calendar year 2016. The increase in investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Judges System net position held in trust for benefits include retirement benefits and administrative expenses. For calendar year 2017, benefits amounted to \$13.6 million, an increase of \$1.3 million (10.5%) over calendar year 2016. The increase in benefit payments was due to an increase in the current year retirees. For calendar year 2017, the costs of administering the system totaled \$79 thousand, an increase of 11.3% over the preceding year.

At December 31, 2017, the Judges System total pension liability was \$231.1 million. The Plan's fiduciary net position was \$198.5 million leaving a net pension liability of \$32.6 million. The Plan fiduciary net position as a percentage of the total pension liability was 85.9%.

## UTAH GOVERNORS AND LEGISLATORS RETIREMENT PLAN

The Governors and Legislators Retirement Plan provides retirement benefits to governors and legislators of the State of Utah. Benefits of the system are funded by employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$11.2 million, an increase of \$868 thousand (8.4%) from \$10.4 million as of December 31, 2016.

Additions to the Governors and Legislators Retirement Plan net position include investment income and transfers. For calendar year 2017 employer contributions amounted to \$404 thousand. The Plan recognized a net investment gain of \$1.4 million for calendar year 2017 compared with net investment gain of \$849 thousand for calendar year 2016. The increase in investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Governors and Legislators Retirement Plan net position include retirement benefits and administrative expenses. For calendar year 2017, retirement benefits amounted to \$973 thousand, an increase of \$32 thousand (3.4%) from calendar year 2016. The increase in benefit payments was due to a increase in the number of benefit recipients. For calendar year 2017, the costs of administering the system totaled \$5 thousand, a slight increase over the preceding year.



At December 31, 2017, the Governors and Legislators Retirement Plan total pension liability was \$13.1 million. The Plan's fiduciary net position was \$11.2 million leaving a net pension liability of \$1.9 million. The Plan fiduciary net position as a percentage of the total pension liability was 85.8%.

### TIER 2 PUBLIC EMPLOYEES SYSTEM

The Tier 2 Public Employees System provides retirement benefits to eligible State of Utah, local governments, and public education employees who started employment July 1, 2011, or after. Benefits of the system are funded by member and employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$329.2 million, an increase of \$111.9 million (51.5%) from \$217.3 million as of December 31, 2016.

Additions to the Tier 2 Public Employees System net position consist of employer contributions, investment income, and transfers. For calendar year 2017, member and employer contributions increased from \$63.1 million for calendar year 2016, to \$79.2 million, an increase of \$16.1 million (25.6%). Contributions increased because membership increased. The system recognized a net investment gain of \$33.2 million for calendar year 2017 compared with an investment gain of \$14.1 million for calendar year 2016. The increase in the investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Tier 2 Public Employees System net position for benefits include retirement benefits and administrative expenses. For calendar year 2017 the system paid \$417 thousand in retirement benefits and \$316 thousand in 2016. The costs of administering the system totaled \$82 thousand, an increase of \$31 thousand (60.8%) from calendar year 2016.

At December 31, 2017, the Tier 2 Public Employees Retirement System total pension liability was \$338.0 million. The Plan's fiduciary net position was \$329.2 million leaving a net pension liability of \$8.8 million. The Plan's fiduciary net position as a percentage of the total pension liability was 97.4%.

### TIER 2 PUBLIC SAFETY AND FIREFIGHTER SYSTEM

The Tier 2 Public Safety and Firefighter System provides retirement benefits to eligible state and local government employees directly involved in law enforcement or fire fighting and are in a position of hazardous duty who started employment July 1, 2011, or after. Benefits of the system are funded by member and employer contributions and by earnings on investments. The system net position as of December 31, 2017, totaled \$40.2 million, an increase of \$15.0 million (59.9%) from \$25.1 million as of December 31, 2016.

Additions to the Tier 2 Public Safety and Firefighter System net position consist of employer contributions, investment income, and transfers. For calendar year 2017, member and employer contributions increased from \$8.5 million for calendar year 2016, to \$11.1 million in 2017, an increase of \$2.6 million (31.1%). Contributions increased because membership increased. The system recognized a net investment gain of \$4.0 million for calendar year 2017 compared with net investment gain of \$1.6 million for calendar year 2016. The increase in the investment gain for 2017 compared to 2016 was due to the higher rate of return realized in 2017.

Deductions from the Tier 2 Public Safety and Firefighter System net position include retirement benefits and administrative expenses. For calendar year 2017 the system paid \$61 thousand in retirement benefits and \$28 thousand in 2016. The costs of administering the system totaled \$9 thousand.

At December 31, 2017, the Tier 2 Public Safety and Firefighter Retirement System total pension liability was \$39.0 million. The Plan's fiduciary net position was \$40.2 million leaving a net pension asset of \$1.2 million. The Plan's fiduciary net position as a percentage of the total pension liability was 103.0%.

## Actuarial Valuations and Funding Progress

Actuarial valuation of each defined benefit system is performed annually. As of January 1, 2017, the date of the most recent actuarial valuation, the average funded ratio of the Systems using the actuarial value of assets was 85.2%. This was unchanged from the Systems' January 1, 2016 valuation average funded ratio of 85.2%. The funded ratio remained unchanged due to the investment gains and the current contribution effort to finance the unfunded actuarial accrued liability which was offset by the impact of the decreasing the investment return assumption from 7.20% to 6.95%. Absent of unfavorable actuarial experience, the Systems funded ratio will gradually increase in future years.

In determining contribution rates an actuarial value of assets is used rather than a market value of assets. The actuarial value of assets is based on a smoothed expected income investment rate. Investment income in excess or shortfall of the expected rate on fair value is smoothed over a 5-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.

As of January 1, 2017, the Systems' underfunded actuarial accrued liability was \$5.0 billion. This was a net increase in the unfunded position of \$299 million compared to January 1, 2016. As of January 1, 2017, the difference between the actuarial value of assets and market value of assets was \$372 million in actuarially deferred losses. These actuarially deferred losses will be recognized by the actuary over the next four years.



Every three years in conjunction with the actuarial valuation the actuary performs an experience study. Based upon the 2017 experience study, the actuary recommended some changes in the actuarial assumptions that were adopted by the Board. Some of the changes were to decrease the earnings assumptions from 7.2% to 6.95%, decrease the inflation assumptions from 2.6% to 2.5%, and construct a new post-retirement mortality table based on actual experience (increases life expectancy for most groups). Additional changes by the Board were a decrease to the wage inflation assumption from 3.35% to 3.25% and a decrease to the payroll growth assumption from 3.1% to 3.0%.

In accordance with GASB Statement 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table on page 49 presents the net pension liability/(asset) of the participating employers calculated using the discount rate of 6.95%, as well as what the employers' net pension liability/(asset) would be if it were calculated using a discount rate that is 1.00% lower (5.95%) or 1.00% higher (7.95%) than the current rate.

### Sensitivity of the Net Pension Liability to Changes in the Discount Rate

(dollars in thousands)

System	1.00% Decrease (5.95%)	Current Discount Rate (6.95%)	1.00% Increase (7.95%)
Noncontributory Retirement System	\$ 6,524,169	2,883,492	(156,134)
Contributory Retirement System	141,894	14,717	(92,965)
Public Safety Retirement System	1,090,853	508,686	33,689
Firefighters Retirement System	141,720	(28,680)	(168,271)
Judges Retirement System	58,168	32,586	10,782
Governors and Legislative Retirement System	3,134	1,854	766
Tier 2 Public Employees System	103,813	8,817	(64,439)
Tier 2 Public Safety and Firefighter System	10,247	(1,157)	(9,870)
<b>Total</b>	<b>\$ 8,073,998</b>	<b>3,420,315</b>	<b>(446,442)</b>

Some URS stakeholders may also be interested in the measure of the net pension liability if the liability was calculated using an interest rate based on the current yields of high-quality fixed income investments. For instance, if a 4.00% discount rate was used to calculate the Total Pension Liability, then the net pension liability would be \$20.237 billion. Note, although the disclosure of a net pension liability using a 4.00% discount rate may be useful for comparison purposes, it is not an appropriate basis for developing contribution requirements for participating employers in the retirement system.



## Analysis of the Defined Contribution Savings Plans

### 401(k) DEFINED CONTRIBUTION PLAN

The 401(k) Plan was established under section 401(k) of the Internal Revenue Code. This plan provides supplemental and primary retirement benefits for plan participants. The plan is funded by contributions and by investment earnings. The plan net position as of December 31, 2017, amounted to \$5.0 billion, an increase of \$664 million (15.3%) over net position as of December 31, 2016. Contributions increased because of increased participation. The plan recognized a net investment gain of \$630.5 million for calendar year 2017 compared with a net investment gain of \$332.7 million for the calendar year 2016.

Additions to the 401(k) Plan net position include contributions and investment income. For calendar year 2017, contributions increased from those of calendar year 2016 from \$290.6 million to \$295.8 million or an increase of \$5.2 million (1.8%).

Deductions from the 401(k) Plan net position include participant and beneficiary refunds (including rollovers) and administrative expenses. For calendar year 2017, refunds amounted to \$254.7 million, a decrease of \$3.0 million (1.2%) over calendar year 2016. The decrease in

**Statements of Fiduciary Net Position — Defined Contribution Savings Plans**

December 31

(dollars in thousands)

	401(k) Plan			457 Plan			Roth IRA Plan		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Assets:</b>									
Cash and receivables	\$ 95,126	95,409	96,857	10,349	10,187	10,247	246	224	238
Investments at fair value	4,917,565	4,253,489	3,896,025	559,308	484,552	444,668	119,087	88,971	69,664
<b>Total assets</b>	<b>5,012,691</b>	<b>4,348,898</b>	<b>3,992,882</b>	<b>569,657</b>	<b>494,739</b>	<b>454,915</b>	<b>119,333</b>	<b>89,195</b>	<b>69,902</b>
<b>Liabilities:</b>									
Investment accounts and other payables	9,783	9,925	12,477	267	320	558	36	30	188
<b>Total liabilities</b>	<b>9,783</b>	<b>9,925</b>	<b>12,477</b>	<b>267</b>	<b>320</b>	<b>558</b>	<b>36</b>	<b>30</b>	<b>188</b>
<b>Net position restricted for pensions</b>	<b>\$ 5,002,908</b>	<b>4,338,973</b>	<b>3,980,405</b>	<b>569,390</b>	<b>494,419</b>	<b>454,357</b>	<b>119,297</b>	<b>89,165</b>	<b>69,714</b>

**Statements of Changes in Fiduciary Net Position — Defined Contribution Savings Plans**

Year Ended December 31

(dollars in thousands)

	401(k) Plan			457 Plan			Roth IRA Plan		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Additions:</b>									
Contributions	\$ 295,804	290,632	271,097	31,475	27,326	26,968	19,669	16,585	14,073
Investment income (loss)	630,516	332,672	10,658	72,210	39,252	259	15,389	7,200	(308)
<b>Total additions</b>	<b>926,320</b>	<b>623,304</b>	<b>281,755</b>	<b>103,685</b>	<b>66,578</b>	<b>27,227</b>	<b>35,058</b>	<b>23,785</b>	<b>13,765</b>
<b>Deductions:</b>									
Refunds	254,672	257,651	251,436	27,827	25,706	23,082	4,752	4,192	2,781
Administrative expenses	7,713	7,085	6,665	887	810	762	174	142	112
<b>Total deductions</b>	<b>262,385</b>	<b>264,736</b>	<b>258,101</b>	<b>28,714</b>	<b>26,516</b>	<b>23,844</b>	<b>4,926</b>	<b>4,334</b>	<b>2,893</b>
<b>Increase (decrease) in net position restricted for pensions</b>	<b>\$ 663,935</b>	<b>358,568</b>	<b>23,654</b>	<b>74,971</b>	<b>40,062</b>	<b>3,383</b>	<b>30,132</b>	<b>19,451</b>	<b>10,872</b>

refunds was due to a decrease in withdrawals for calendar year 2017. For calendar year 2017, the costs of administering the plan amounted to \$7.7 million, an increase of \$628 thousand over calendar year 2016.

Benefit obligations of the 401(k) Defined Contribution Plan are equal to the member account balances, which are equal to net position of the plan.

**457 DEFINED CONTRIBUTION PLAN**

The 457 Plan was established under Section 457(b) of the Internal Revenue Code. This plan provides supplemental retirement benefits for plan participants. The plan is funded by contributions and by investment earnings.

The plan net position as of December 31, 2017, totaled \$569.4 million, an increase of \$75.0 million (15.2%) over net position as of December 31, 2016.

MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

Traditional IRA Plan			Health Reimbursement Arrangement (HRA)*			Total Defined Contribution Plans			2017 Percent Change	2016 Percent Change
2017	2016	2015	2017	2016	2015	2017	2016	2015		
32	72	121	—	—	255	105,753	105,892	107,718	(0.1)%	(1.7)%
102,422	81,484	69,108	—	—	23,156	5,698,382	4,908,496	4,502,621	16.1	9.0
102,454	81,556	69,229	—	—	23,411	5,804,135	5,014,388	4,610,339	15.7	8.8
45	23	243	—	—	137	10,131	10,298	13,603	(1.6)	(24.3)
45	23	243	—	—	137	10,131	10,298	13,603	(1.6)	(24.3)
102,409	81,533	68,986	—	—	23,274	5,794,004	5,004,090	4,596,736	15.8%	8.9%

\*Administration of the HRA was transferred to PEHP in October 2016.

Traditional IRA Plan			Health Reimbursement Arrangement (HRA)*			Total Defined Contribution Plans			2017 Percent Change	2016 Percent Change
2017	2016	2015	2017	2016	2015	2017	2016	2015		
20,593	16,182	17,206	—	6,796	6,318	367,541	357,521	335,662	2.8%	6.5%
9,465	4,825	211	—	36	35	727,580	383,985	10,855	89.5	3,437.4
30,058	21,007	17,417	—	6,832	6,353	1,095,121	741,506	346,517	47.7	114.0
9,035	8,332	8,148	—	30,075	2,924	296,286	325,956	288,371	(9.1)	13.0
147	128	105	—	31	35	8,921	8,196	7,679	8.8	6.7
9,182	8,460	8,253	—	30,106	2,959	305,207	334,152	296,050	(8.7)	12.9
20,876	12,547	9,164	—	(23,274)	3,394	789,914	407,354	50,467	93.9%	707.2%

Additions to the 457 Plan net position include contributions and investment income. For calendar year 2017, contributions increased from those of calendar year 2016 from \$27.3 million to \$31.5 million or an increase of \$4.2 million (15.2%). Contributions increased because of increased participation. The plan recognized a net investment gain of \$72.2 million for calendar year 2017 compared with a net investment gain of \$39.3 million for the calendar year 2016.

Deductions from the 457 Plan net position include participant and beneficiary refunds (including rollovers) and administrative expenses. For calendar year 2017, refunds amounted to \$27.8 million, an increase of \$2.1 million (8.3%) over calendar year 2016. The increase in refunds was due to an increase in withdrawals for calendar year 2017. For calendar year 2017, the costs of administering the plan amounted to \$887 thousand, an increase of \$77 thousand over calendar year 2016.

**Defined Contribution  
Comparative  
Annualized Rates of Return**

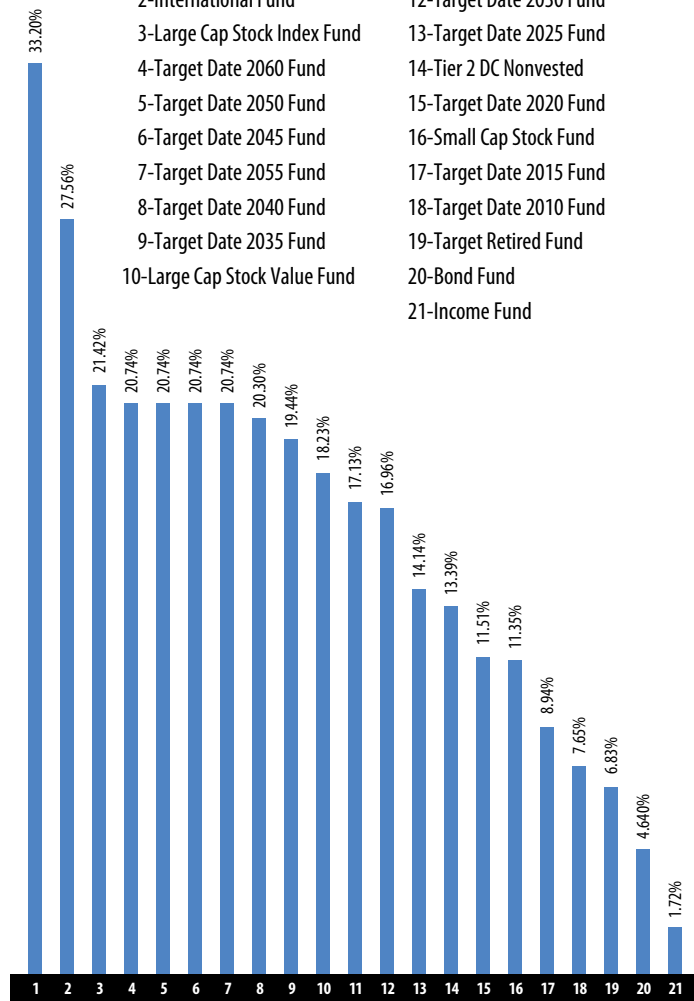
Year ended December 31

Investment Option Comparative Index	2017	2016
Income Fund	1.7%	1.6%
Bond Fund	4.6	5.9
Balanced Fund	17.1	9.3
Large Cap Value Stock Fund	18.2	21.2
Large Cap Stock Index Fund	21.4	11.8
Large Cap Stock Growth Fund	33.2	1.2
Small Cap Stock Fund	11.4	23.3
International Fund	27.6	4.4
Target Retired	6.8	6.1
Target Date 2010	7.7	6.1
Target Date 2015	8.9	6.8
Target Date 2020	11.5	7.7
Target Date 2025	14.1	8.7
Target Date 2030	17.0	9.3
Target Date 2035	19.4	9.7
Target Date 2040	20.3	9.9
Target Date 2045	20.7	10.0
Target Date 2050	20.7	10.0
Target Date 2055	20.7	10.0
Target Date 2060	20.7	10.0
Tier 2 DC Nonvested	13.4	8.3

**Defined Contribution Savings Plans  
Investment Option Rates  
of Return for 2017**

(in percents)

- 1-Large Cap Stock Growth Fund
- 2-International Fund
- 3-Large Cap Stock Index Fund
- 4-Target Date 2060 Fund
- 5-Target Date 2050 Fund
- 6-Target Date 2045 Fund
- 7-Target Date 2055 Fund
- 8-Target Date 2040 Fund
- 9-Target Date 2035 Fund
- 10-Large Cap Stock Value Fund
- 11-Balanced Fund
- 12-Target Date 2030 Fund
- 13-Target Date 2025 Fund
- 14-Tier 2 DC Nonvested
- 15-Target Date 2020 Fund
- 16-Small Cap Stock Fund
- 17-Target Date 2015 Fund
- 18-Target Date 2010 Fund
- 19-Target Retired Fund
- 20-Bond Fund
- 21-Income Fund



Benefit obligations of the 457 Defined Contribution Plan are equal to the member account balances, which are equal to net position of the plan.

### ROTH IRA PLAN

The Roth IRA is a "deemed IRA" authorized by section 408(q) of the Internal Revenue Code, and governed by section 408A of the code. This plan allows participants to make after-tax contributions, while the earnings may be withdrawn tax free (for qualified distributions). The plan net position as of December 31, 2017, totaled \$119.3 million, an increase of \$30.1 million (33.8%) over net position as of December 31, 2016.

Additions to the Roth IRA Plan include contributions, transfers from other Roth IRAs, conversions from traditional IRAs, rollovers from other retirement plans, and investment earnings. For calendar year 2017, contributions increased from those of calendar year 2016 from \$16.6 million to \$19.7 million (18.6%). Contributions increased because of increased participation. The plan recognized a net investment gain of \$15.4 million for calendar year 2017 compared with a net investment gain of \$7.2 million for calendar year 2016.

Deductions from the Roth IRA Plan net position include participant and beneficiary refunds, transfers and rollovers, and administrative expenses. For calendar year 2017, refunds amounted to \$4.8 million, an increase of \$560 thousand (13.4%) over calendar year 2016. For calendar year 2017, the costs of administering the plan amounted to \$174 thousand, an increase of \$32 thousand over calendar year 2016.

### TRADITIONAL IRA PLAN

The traditional IRA is a "deemed IRA" authorized by section 408(q) of the Internal Revenue Code, and governed by section 408 of the code. This plan allows participants to make after-tax contributions and possibly deduct all or a portion of the contributions from their current taxable income. This plan also allows participants to consolidate many other eligible plan assets when they become eligible for roll over (such as 401(k), 457, and other IRAs). Participants may also convert traditional IRA funds into a Roth IRA. The plan net position as of December 31, 2017, totaled \$102.4 million, an increase of \$20.9 million (25.6%) over net position as of December 31, 2016.



Additions to the traditional IRA Plan include contributions, rollovers, and investment earnings. For calendar year 2017, contributions increased from those of calendar year 2016 from \$16.2 million to \$20.6 million (27.3%). The plan recognized a net investment gain of \$9.5 million for calendar year 2017 compared with a net investment gain of \$4.8 million for calendar year 2016.

Deductions from the traditional IRA Plan net position include participant and beneficiary refunds, rollovers and transfers, and administrative expenses. For calendar year 2017, refunds amounted to \$9.0 million, an increase of \$703 thousand (8.4%) over calendar year 2016. For calendar year 2017, the costs of administering the plan amounted to \$147 thousand, an increase of \$19 thousand over calendar year 2016.

### GASB 68 EMPLOYER ALLOCATIONS AND PENSION REPORTING

URS has included information regarding employer's proportion share of the net pension liability, deferred outflows of resources, deferred inflows of resources, and pension expense. This section is where employers and auditors are able to get information regarding their pension disclosures for financial statement purposes.

# BASIC FINANCIAL STATEMENTS

## Statements of Fiduciary Net Position — Pension (and Other Employee Benefit) Trust Funds

December 31, 2017  
With Comparative Totals  
for December 31, 2016

(in thousands)

	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Utah Governors and Legislators Retirement Plan
<b>Assets:</b>						
Cash	\$ 3	2	20	2	1	1
Receivables:						
Member contributions	—	115	12	634	—	—
Employer contributions	45,689	325	6,646	—	293	—
Court fees and fire insurance tax	—	—	—	2,896	93	—
Investments	536,764	27,372	76,162	26,260	4,226	239
Total receivables	582,453	27,812	82,820	29,790	4,612	239
Investments at fair value:						
Short-term securities	2,181,530	111,248	309,533	106,727	17,177	973
Debt securities	3,603,652	183,770	511,315	176,300	28,374	1,607
Equity investments	9,611,772	490,156	1,363,791	470,234	75,679	4,286
Absolute return	3,526,238	179,822	500,330	172,512	27,765	1,572
Private equity	2,728,872	139,160	387,194	133,504	21,486	1,217
Real assets	3,751,832	191,327	532,339	183,550	29,541	1,673
Total investments	25,403,896	1,295,483	3,604,502	1,242,827	200,022	11,328
Invested securities lending collateral	1,058,631	53,985	150,205	51,791	8,335	472
Property and equipment at cost, net of accumulated depreciation	3,472	177	492	170	27	2
Total assets	27,048,455	1,377,459	3,838,039	1,324,580	212,997	12,042
<b>Liabilities:</b>						
Securities lending liability	1,058,631	53,985	150,205	51,791	8,335	472
Disbursements in excess of cash balance	28,974	1,374	3,822	1,318	212	12
Compensated absences, post-employment benefits and insurance reserve	17,339	884	2,460	848	137	8
Investment accounts payable	643,491	32,911	91,572	31,574	5,082	288
Real estate liabilities	94,893	4,839	13,463	4,642	748	42
Total liabilities	1,843,328	93,993	261,522	90,173	14,514	822
Net position restricted for pensions	\$ 25,205,127	1,283,466	3,576,517	1,234,407	198,483	11,220

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



	Defined Benefit Pension Plans			Defined Contribution Plans					Total Pension Trust Funds	
	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System	Total Defined Benefit Pension Plans	Additional Combining Information					2017	2016
				401(k) Plan	457 Plan	Roth IRA Plan	Traditional IRA Plan	Total Defined Contribution Plans		
	2	2	33	11,817	474	246	32	12,569	12,602	14,095
	—	—	761	—	—	—	—	—	761	792
	4,999	513	58,465	—	—	—	—	—	58,465	51,224
	—	—	2,989	—	—	—	—	—	2,989	1,749
	6,917	846	678,786	83,309	9,875	—	—	93,184	771,970	537,792
	11,916	1,359	741,001	83,309	9,875	—	—	93,184	834,185	591,557
	28,112	3,439	2,758,739	—	—	—	—	—	2,758,739	2,392,184
	46,438	5,681	4,557,137	1,583,007	167,750	28,935	49,606	1,829,298	6,386,435	6,096,098
	123,861	15,154	12,154,933	3,148,625	370,639	84,057	49,179	3,652,500	15,807,433	13,200,315
	45,441	5,559	4,459,239	—	—	—	—	—	4,459,239	4,508,784
	35,165	4,302	3,450,900	—	—	—	—	—	3,450,900	3,290,800
	48,348	5,915	4,744,525	185,933	20,919	6,095	3,637	216,584	4,961,109	4,437,415
	327,365	40,050	32,125,473	4,917,565	559,308	119,087	102,422	5,698,382	37,823,855	33,925,596
	13,642	1,669	1,338,730	—	—	—	—	—	1,338,730	699,487
	45	5	4,390	—	—	—	—	—	4,390	4,890
	352,970	43,085	34,209,627	5,012,691	569,657	119,333	102,454	5,804,135	40,013,762	35,235,625
	13,642	1,669	1,338,730	—	—	—	—	—	1,338,730	699,487
	347	42	36,101	1,791	107	1	13	1,912	38,013	41,508
	223	27	21,926	—	—	—	—	—	21,926	20,667
	8,317	1,017	814,252	7,992	160	35	32	8,219	822,471	720,557
	1,223	150	120,000	—	—	—	—	—	120,000	205,000
	23,752	2,905	2,331,009	9,783	267	36	45	10,131	2,341,140	1,687,219
	329,218	40,180	31,878,618	5,002,908	569,390	119,297	102,409	5,794,004	37,672,622	33,548,406

## Utah Retirement Systems

BASIC FINANCIAL STATEMENTS (Continued)

Statements of Changes in Fiduciary Net Position —  
Pension (and Other Employee Benefit) Trust Funds

Year Ended December 31, 2017

With Comparative Totals for

Year Ended December 31, 2016

(in thousands)

	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Utah Governors and Legislators Retirement Plan
<b>Additions:</b>						
Contributions:						
Member	\$ 17,285	2,675	793	18,460	—	—
Employer	854,255	7,946	145,814	6,715	7,563	404
Court fees and fire insurance tax	—	—	—	1,223	1,477	—
Total contributions	871,540	10,621	146,607	26,398	9,040	404
Investment income:						
Net appreciation in fair value of investments	2,564,293	133,867	362,177	125,958	20,117	1,161
Interest, dividends and other investment income	463,263	24,185	65,430	22,756	3,634	210
Total income from investment activity	3,027,556	158,052	427,607	148,714	23,751	1,371
Less investment expenses	45,007	2,350	6,357	2,211	353	20
Net income from investment activity	2,982,549	155,702	421,250	146,503	23,398	1,351
Income from security lending activity	5,361	280	756	263	42	2
Less security lending expense	628	33	89	30	5	—
Net income from security lending activity	4,733	247	667	233	37	2
Net investment income	2,987,282	155,949	421,917	146,736	23,435	1,353
Transfers from affiliated systems	—	—	5,926	1,259	4,090	89
Total additions	3,858,822	166,570	574,450	174,393	36,565	1,846
<b>Deductions:</b>						
Retirement benefits	1,063,894	72,073	143,774	44,331	11,405	808
Cost-of-living benefits	184,143	12,624	28,854	10,258	2,216	165
Supplemental retirement benefits	—	64	242	204	—	—
Refunds	4,635	1,613	226	511	—	—
Administrative expenses	9,579	457	1,382	408	79	5
Transfers to affiliated systems	10,187	1,177	—	—	—	—
Total deductions	1,272,438	88,008	174,478	55,712	13,700	978
Increase from operations	2,586,384	78,562	399,972	118,681	22,865	868
Net position restricted for pensions benefits beginning of year	22,618,743	1,204,904	3,176,545	1,115,726	175,618	10,352
Net position restricted for pensions benefits end of year	\$ 25,205,127	1,283,466	3,576,517	1,234,407	198,483	11,220

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

	Defined Benefit Pension Plans		Defined Contribution Plans					Total Pension Trust Funds		
	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System	Total Defined Benefit Pension Plans	Additional Combining Information			Total Defined Contribution Plans	2017	2016	
				401(k) Plan	457 Plan	Roth IRA Plan				Traditional IRA Plan
	—	—	39,213	295,804	31,475	19,669	20,593	367,541	406,754	390,012
	79,175	11,126	1,112,998	—	—	—	—	—	1,112,998	1,080,021
	—	—	2,700	—	—	—	—	—	2,700	12,039
	79,175	11,126	1,154,911	295,804	31,475	19,669	20,593	367,541	1,522,452	1,482,072
	28,507	3,421	3,239,501	630,227	72,152	15,461	9,537	727,377	3,966,878	2,183,967
	5,194	622	585,294	3,573	421	—	—	3,994	589,288	493,404
	33,701	4,043	3,824,795	633,800	72,573	15,461	9,537	731,371	4,556,166	2,677,371
	505	60	56,863	3,284	363	72	72	3,791	60,654	52,672
	33,196	3,983	3,767,932	630,516	72,210	15,389	9,465	727,580	4,495,512	2,624,699
	60	7	6,771	—	—	—	—	—	6,771	9,174
	7	1	793	—	—	—	—	—	793	1,192
	53	6	5,978	—	—	—	—	—	5,978	7,982
	33,249	3,989	3,773,910	630,516	72,210	15,389	9,465	727,580	4,501,490	2,632,681
	—	—	11,364	—	—	—	—	—	11,364	9,912
	112,424	15,115	4,940,185	926,320	103,685	35,058	30,058	1,095,121	6,035,306	4,124,665
	417	61	1,336,763	—	—	—	—	—	1,336,763	1,260,159
	—	—	238,260	—	—	—	—	—	238,260	237,268
	—	—	510	—	—	—	—	—	510	562
	—	—	6,985	254,672	27,827	4,752	9,035	296,286	303,271	332,671
	82	9	12,001	7,713	887	174	147	8,921	20,922	19,263
	—	—	11,364	—	—	—	—	—	11,364	9,912
	499	70	1,605,883	262,385	28,714	4,926	9,182	305,207	1,911,090	1,859,835
	111,925	15,045	3,334,302	663,935	74,971	30,132	20,876	789,914	4,124,216	2,264,830
	217,293	25,135	28,544,316	4,338,973	494,419	89,165	81,533	5,004,090	33,548,406	31,283,576
	329,218	40,180	31,878,618	5,002,908	569,390	119,297	102,409	5,794,004	37,672,622	33,548,406

# NOTES TO BASIC FINANCIAL STATEMENTS

December 31, 2017



## Note 1 / Description of Systems and Plans

A brief description of the Utah Retirement Systems (Systems), 401(k), 457, Roth and traditional IRAs (Plans) follows. For a more complete description of plan provisions, membership and benefit statistics, see the Systems Highlights on pages 14 through 30 and Summaries of Plan Provisions on pages 178 through 193.

### A) GENERAL INFORMATION AND REPORTING ENTITY

**General** — The Utah Retirement Systems are comprised of the following pension trust funds:

- i) the **Public Employees Noncontributory Retirement System (Noncontributory System)**; the **Public Employees Contributory Retirement System (Contributory System)**; and the **Firefighters Retirement System** are multiple-employer, cost-sharing, public employee retirement systems;
- ii) the **Public Safety Retirement System** is a mixed agent and cost-sharing, multiple-employer retirement system;
- iii) the **Judges Retirement System** and the **Utah Governors and Legislators Retirement Plan** are single-employer service-employee retirement systems;
- iv) the **Tier 2 Public Employees Contributory Retirement System** and the **Tier 2 Public Safety and Firefighter Contributory Retirement System** are multiple-employer, cost-sharing public employee retirement systems; and

- v) four defined contribution plans comprised of the **401(k) Plan, 457 Plan, and Roth and traditional IRAs**.

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

**Reporting Entity** — These basic 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 Title 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 Title 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), 457, 408, and 408A of the Internal Revenue Code. The Plans may be amended by the Board within the parameters of the Internal Revenue Code. The Systems and Plans are fiduciary funds defined as pension (and other employee benefit) trust funds. Utah Retirement Systems is a component unit of the State of Utah.

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Summary of Benefits by System**

	Noncontributory System	Contributory System	Public Safety System	Fire-fighters System	Judges System	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System
Final average salary is	Highest 3 years	Highest 5 years	Highest 3 years		Highest 2 years	Highest 5 years	Highest 5 years
Years of service required and/or age eligible for benefit	30 years any age 25 years any age* 20 years age 60* 10 years age 62* 4 years age 65	30 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	35 years any age 20 years age 60* 10 years age 62* 4 years age 65	25 years any age 20 years age 60* 10 years age 62* 4 years age 65
Benefit percent per year of service**	2.0% per year all years	1.25% per year to June 1975 2.0% per year July 1975 to present	2.5% per year up to 20 years 2.0% per year over 20 years		5.0% first 10 years 2.25% second 10 years 1.0% over 20 years	1.5% per year all years	1.5% per year all years

Note: The Utah Governors and Legislators Retirement Plan benefits are explained in the second paragraph of section B) below.

\*With actuarial reductions.

\*\*For members and retirees in the systems, prior to January 1, 1989, there may be a 3% benefit enhancement.

**B) RETIREMENT AND DEATH BENEFITS**

The Systems’ benefits are specified by the statute listed in Note 1(A). The 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 table above.

The Utah Governors and Legislators Retirement Plan provides the following benefits. Former governors at age 65 receive \$1,380 per month per term. Legislators receive a benefit at age 65 with four or more years of service at the rate of \$30 per month per year of service. Retirement at age 62 with 10 or more years of service will receive an actuarial reduction. 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) DEFINED CONTRIBUTION PLANS**

The 401(k), 457, and Roth and traditional IRAs administered by the Board are defined contribution plans. These Plans are available as supplemental plans to the basic retirement benefits of the Retirement Systems and as a primary retirement plan for some Tier 2 participants. Contributions may be made into the Plans subject to plan and Internal Revenue Code limitations by employees of employers sponsoring the Plans. Employer contributions may be made into the 401(k) and 457 Plans at rates determined by the employers and according to Utah Title 49. There are 451 employers participating in the 401(k) Plan and 267 employers participating in the 457 Plan. There are 171,966 plan participants in the 401(k) Plan, 17,903

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Defined Contribution Plans**

	401(k)	457	Roth IRA	Traditional IRA
Number of participating employers	451	267	N/A	N/A
Total participants	171,966	17,903	10,383	2,042

participants in the 457 Plan, 10,383 participants in the Roth IRA, and 2,042 participants in the traditional IRA.

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 and plan provisions. The Defined Contribution Plans account balances are fully vested to the participants at the time of deposit except for Tier 2 required employer contributions and associated earnings during the first four years of employment.

Investments in the vested portion of the Defined Contribution 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 frequently than every seven days. There is also a 2% trading fee for investment transfers between core fund options more frequently than every 30 days. Investments of the Plans are reported at fair value.

**D) CONTRIBUTIONS**

As a condition of participation in the Defined Benefit 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.

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 his or her account balance including interest that has been credited. Upon withdrawal a member forfeits the service credit that corresponds to the member contributions withdrawn. The noncontributory retirement systems have no required member contributions flowing into them. 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 that may be withdrawn upon the termination of employment.

In the 401(k) and 457 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 on 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. The employee may also contribute to the Roth and traditional deemed IRAs where earnings may grow tax deferred and possibly tax free.

**E) COVERED EMPLOYEES**

The **Public Employees Noncontributory Retirement System (Noncontributory System)** was established on July 1, 1986, and is comprised of two divisions, the State and School division and the Local Government division. These divisions are not separate plans. All eligible employees of the State and School entities hired subsequent to that date are automatically members of the Noncontributory System until July 1, 2011, when Tier 2 came into effect. Local government entities had the option of adopting the new System or remaining

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Participating Membership by System**

	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Utah Governors and Legislators Retirement Plan	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System
Number of participating:								
Employers	457	158	133	62	1	1	470	151
Members:								
Active	59,578	621	5,704	1,602	114	52	27,152	2,699
Terminated vested	47,292	1,294	4,824	435	11	95	1,175	75
Retirees and beneficiaries:								
Service benefits	49,287	3,388	4,900	1,196	115	176	26	—
Beneficiary benefits	4,611	654	738	227	33	77	—	—

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 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. The System is comprised of two divisions, the State and School division and the Local Government division. These divisions are not separate plans. 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 Safety Retirement System** includes eligible State and local government employees directly involved in law enforcement (e.g., game wardens, prison guards, police officers, and highway patrol officers) and is comprised of eight divisions, the State of Utah, Division A with Social Security, Salt Lake City, Ogden, Provo, Logan, Bountiful, and Division B without Social Security. These divisions are not separate plans. 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 government employees directly involved in fire fighting and is comprised of two divisions, Division A with Social Security and Division B without Social Security. These divisions are not separate plans.

The **Judges Retirement System** includes justices and judges of the court as authorized by state statutes.

The **Utah Governors and Legislators Retirement Plan** includes only governors and legislators of the State.

The **Tier 2 Public Employees Contributory Retirement System** includes eligible public employees entering into the Utah Retirement Systems on or after July 1, 2011, when Tier 2 came into effect.

The **Tier 2 Public Safety and Firefighter Contributory Retirement System** includes eligible public safety and firefighters entering into the Utah Retirement Systems on or after July 1, 2011, when Tier 2 came into effect.

The **Defined Contribution Plans** may be utilized by employers adopting the Plans and by their employees.

As of December 31, 2017, participating members by System are included in the table above.

## Note 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 and Plans maintain records and accounts, and prepare financial statements using fund accounting principles and the accrual basis of accounting, under which benefits and expenses are recognized when due and payable and revenues are recorded in the accounting period in which they are earned and become measurable in accordance with the terms of each System and Plan.

For financial reporting purposes, Utah Retirement Systems adheres to accounting principles generally accepted in the United States of America (GAAP). The Systems and Plans apply all applicable pronouncements of the Governmental Accounting Standards Board (GASB).

GASB Statement No. 67, Financial Reporting for Pensions, addresses accounting and financial reporting requirements for pension plans. Significant requirements include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The total pension liability, determined in accordance with GASB Statement No. 67, is presented in Note 5 and in the Required Supplementary Information on page 92.

GASB Statement No. 72, Fair Value Measurement and Application, addresses accounting and reporting issues related to fair value measurements. This Statement requires

disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Comprehensive footnote disclosure regarding this Statement is found in Note 3 beginning on page 64.

The financial statements include certain prior year summarized comparative information in total, but not by system or plan. Such information does not include sufficient detail to constitute a presentation in conformity with GAAP. Accordingly, such information should be read in conjunction with the Systems' financial statements for the year ended December 31, 2016, from which the summarized information was derived.

### B) INVESTMENTS

By state statute all of the investment assets of the various Systems are pooled and invested in the common Utah State Retirement Investment 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 respective 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 basic financial statements as required for investment pools.





NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

Investments are presented at fair value. The defined contribution investments are classified by investment manager classification. 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 debt securities are valued based on yields currently available on comparable securities of issuers with similar credit ratings.

The fair value of real estate investments has been estimated based on independent appraisals and/or property cash flow. Short-term securities 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 alternative investments (private equity, absolute return, and real assets) where no readily ascertainable market value exists, management, in consultation with their investment advisors, value these investments in good faith based upon audited financials, cash-flow analysis, purchase and sales of similar investments, other practices used within the industry, or other information provided by the underlying investment advisors. The estimated fair value of these investments may differ significantly from values that would have been used had a ready market existed.

Approximately 10.2% of the investments held in trust for pension benefits are invested in debt securities of the U.S. Government and its instrumentalities. Of the 10.2%, approximately 2.6% are U.S. Government debt securities and approximately 7.6% are debt securities of the U.S. Government instrumentalities. The Systems and Plans have no investments of any commercial or industrial organization whose market value equals 5.0% or more of the Systems' or Plans' fiduciary net positions for pension benefits.

**Investment policy.** The pension plan's policy in regard to the allocation of invested assets is established and may be amended by the URS Board. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan. The following was the URS Board's adopted asset allocation policy as of December 31, 2017:

Asset Class	Target Allocation
Debt securities	20%
Equities	40
Real assets	15
Private equity	9
Absolute return	16
Cash and cash equivalents	—
Total	100%

**Rate of return.** For the year ended December 31, 2017, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 13.38%. The money weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**C) PROPERTY AND EQUIPMENT**

Property and equipment are recorded at cost (see Note 4), are depreciated utilizing the straight-line method, and are included in the assets of the Investment Fund. The schedule below summarizes the estimated useful life by class. The Systems' policy is to capitalize all acquisitions of furniture and equipment with a unit cost of \$10,000 and computer software of \$1,000,000 or more.

Buildings	40 years
Building improvements	10 years
Furniture and equipment	3-10 years
Computer software	5 years

**D) ADMINISTRATIVE EXPENSES**

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

**E) FEDERAL TAX STATUS**

The Systems and Plans are exempt from Federal income taxes under the Internal Revenue Code.

**F) USE OF ESTIMATES**

Management of the Systems and Plans have made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these financial statements in conformity with GAAP. Actual results could differ from these estimates.

**G) SUBSEQUENT EVENTS**

The Systems and Plans have performed an evaluation of subsequent events through April 26, 2018, the date the basic financial statements were available to be issued. No material events were identified by the Systems and Plans.



**Note 3 / Deposits and Investment Risk Disclosures**

**A) DEPOSITS**

Custodial Credit Risk for Deposits is the risk that in the event of a bank failure, the Systems' and Plans' deposits may not be returned to them. The deposits are held in one financial institution with an insured balance of \$250,000. Deposits in the bank in excess of \$250,000 are uninsured and uncollateralized, because they are not required to be by state statute.

<b>Cash Deposits</b>	
<i>(in thousands)</i>	
Cash	\$ 12,602
Disbursements in excess of cash balances	(38,013)
<b>Total</b>	<b>\$ (25,411)</b>

The Systems and Plans do not have a deposit policy for custodial credit risk. Deposits are presented in the basic financial

statements at cost plus accrued interest that is also the market or fair value. As of December 31, 2017, the carrying amount of deposits totaled approximately \$(25,411,000) and the corresponding bank balance was \$17,058 of which \$0 was exposed to custodial credit risk.

**B) INVESTMENTS**

The table on the on the top of page 67 shows the Systems' and Plans' investments by type.

The investments listed to the right are not listed on national exchanges, over-the-counter markets, nor do they have quoted market prices available.	<i>(in thousands)</i>	12/31/2017
Private equity		\$ 3,450,900
Absolute return		4,459,239
Real assets		4,961,109
		<b>\$ 12,871,248</b>

The Systems and Plans value these investments in good faith at the Systems' and Plans' pro-rata interest in the net assets of these investments based upon audited financial statements or other information provided to the Systems and Plans by the underlying investment managers. The estimated fair value of these investments may differ significantly from values that would have been used had a ready market existed.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Investments**

at December 31, 2017

	<i>(in thousands)</i>		Fair Value
	Defined Benefit	Defined Contribution	Total All Systems and Plans
Short-term securities pools	\$ 2,758,739	—	2,758,739
Debt securities	3,983,667	1,829,298	5,812,965
Equity securities	11,477,604	3,652,500	15,130,104
Absolute return	4,459,239	—	4,459,239
Private equity	3,450,900	—	3,450,900
Real assets	4,744,525	216,584	4,961,109
Investments held by broker-dealers under securities lending program:			
Equities	677,329	—	677,329
Debt	573,470	—	573,470
<b>Total investments</b>	<b>\$ 32,125,473</b>	<b>5,698,382</b>	<b>37,823,855</b>
Securities lending collateral pool (not categorized)	\$ 1,338,730	—	1,338,730

**C) FAIR VALUE MEASUREMENTS**

The Systems and Plans categorize its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

- Level 1 Unadjusted quoted prices for identical instruments in active markets.
- Level 2 Quoted prices for similar instruments in active markets; quoted priced for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
- Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation.

The Systems and Plans assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The tables on pages 66-67 show the fair value leveling of the investments for the Systems and Plans. Debt, equity and derivative securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt and debt derivative securities classified in Level 2 and Level 3 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields,

maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Index linked debt securities are valued by multiplying the external market price feed by the applicable day's Index Ratio. Level 2 debt securities have non-proprietary information that was readily available to market participants, from multiple independent sources which are known to be actively involved in the market. Level 3 debt securities use proprietary information or single source pricing. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities. Equity securities classified in Level 3 are valued with last trade data having limited trading volume.

Real assets classified in Level 1 are valued using prices quoted in active markets for those securities. Real assets classified in Level 3 are real estate investment generally valued using the income approach by internal manager reviews or independent external appraisers. The Systems and Plans policy is to obtain an external appraisal a minimum of every three years for properties or portfolios that the Systems and Plans have some degree of control or discretion. In practice, some investments are appraised annually. Appraisals are performed by an independent appraiser with preference for Member Appraisal Institute (MAI) designated appraisers. The appraisals are performed using generally accepted valuation approaches applicable to the property type.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

### Investments and Derivative Instruments Measured at Fair Value

(in thousands)

	Defined Benefit				Defined Contribution			
	Fair Value Measures Using				Fair Value Measures Using			
	12/31/17	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs	12/31/17	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
<b>Investments by fair value level</b>								
Short-term securities	\$ 2,662,439	—	2,662,439	—	\$ —	—	—	—
Debt securities								
Asset backed	229,580	—	211,769	17,811	14,753	—	9,775	4,978
Commercial mortgage-backed	113,712	—	112,951	761	2,318	—	2,318	—
Corporate bonds	875,461	—	875,353	108	257,038	—	256,913	125
Funds – other fixed income	787	—	787	—	67,586	—	67,586	—
Government agencies	89,846	—	89,042	804	34,475	—	34,475	—
Government bonds	1,187,366	—	1,187,366	—	201,606	—	201,606	—
Government mortgage backed securities	761,906	—	761,906	—	221,720	—	220,692	1,028
Index linked government bonds	1,260,789	—	1,260,789	—	123,788	—	123,788	—
Non-government backed C.M.O.s	36,487	—	36,487	—	752	—	752	—
Total debt securities	4,555,934	—	4,536,450	19,484	924,036	—	917,905	6,131
Equity investments								
Consumer goods	2,330,646	2,330,574	—	72	340,196	340,196	—	—
Energy	773,772	771,275	2,319	178	81,650	81,650	—	—
Equity other	35	35	—	—	256,590	256,590	—	—
Financials	1,938,625	1,938,573	—	52	201,828	201,828	—	—
Health care	1,129,871	1,129,575	233	63	209,866	209,866	—	—
Industrials	1,489,346	1,487,991	1,069	286	170,145	170,145	—	—
Information technology	1,751,325	1,750,427	—	898	525,125	525,125	—	—
Materials	641,416	640,922	—	494	39,625	39,625	—	—
Real estate investment trusts	439,969	421,821	18,121	27	89,263	89,263	—	—
Telecommunication services	226,486	226,486	—	—	21,145	21,145	—	—
Utilities	278,114	278,105	—	9	31,265	31,265	—	—
Total equity investments	10,999,605	10,975,784	21,742	2,079	1,966,698	1,966,698	—	—
Real assets								
Agriculture	126,537	—	—	126,537	—	—	—	—
Commodities	38,275	38,275	—	—	—	—	—	—
Real estate	1,754,015	—	—	1,754,015	—	—	—	—
Total real assets	1,918,827	38,275	—	1,880,552	—	—	—	—
<b>Total investments by fair value level</b>	<b>\$ 20,136,805</b>	<b>11,014,059</b>	<b>7,220,631</b>	<b>1,902,115</b>	<b>\$ 2,890,734</b>	<b>1,966,698</b>	<b>917,905</b>	<b>6,131</b>

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

## Investments and Derivative Instruments Measured at Fair Value (Continued)

	(in thousands)				Defined Benefit				Defined Contribution			
	12/31/17	Fair Value Measures Using			12/31/17	Fair Value Measures Using						
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs				
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3			
<b>Investments measured at the net asset value (NAV)</b>												
Short-term securities	\$ 95,306											
Equity investments												
Co-mingled international equity fund	807,402				\$ 648,549							
Co-mingled U.S. small cap equity fund	347,018				440,689							
Co-mingled large cap equity fund	—				565,266							
Co-mingled Russell 1000 Growth equity fund	—				31,298							
Total equity investments measured at the NAV	1,154,420				1,685,802							
Absolute return												
Directional	1,149,835				—							
Equity long/short	209,981				—							
Event driven	1,060,582				—							
Multistrategy	893,291				—							
Relative value	1,145,550				—							
Total absolute return measured at the NAV	4,459,239				—							
Private equity – private equity partnerships	3,450,900				—							
Real assets												
Co-mingled commodities fund	—				73,758							
Co-mingled real estate equity fund	—				142,826							
Agriculture	34,615				—							
Energy	1,107,690				—							
Minerals	275,592				—							
Real estate	1,136,695				—							
Royalty	9,571				—							
Timber	272,462				—							
Total real assets measured at the NAV	2,836,625				216,584							
Total investments measured at the NAV	11,996,490				1,902,386							
Total investments measured at fair value	\$ 32,133,295				\$ 4,793,120							
Synthetic guaranteed investments contracts measured at contract value	\$ —				\$ 904,997							
<b>Investments derivative instruments</b>												
Short-term securities – options	\$ 994	—	994	—	—	—	—	—	—	—		
Debt securities												
Options	103	—	103	—	\$ 217	—	217	—	—	—		
Swaptions	1,703	—	1,703	—	119	—	119	—	—	—		
Swap liabilities	(2,403)	—	(2,403)	—	(170)	—	(170)	—	—	—		
Swap assets	1,800	—	1,800	—	99	—	99	—	—	—		
Total debt security derivatives	1,203	—	1,203	—	265	—	265	—	—	—		
Equity investments – options	908	908	—	—	—	—	—	—	—	—		
Real assets – swap liabilities	(10,927)	—	(10,927)	—	—	—	—	—	—	—		
Total investment derivative instruments	\$ (7,822)	908	(8,730)	—	\$ 265	—	265	—	—	—		
<b>Invested securities lending collateral</b>												
Short-term securities	\$ 161,200	—	161,200	—	—	—	—	—	—	—		
Debt securities	960,988	—	960,988	—	—	—	—	—	—	—		
Equity investments	216,542	216,542	—	—	—	—	—	—	—	—		
Total invested securities lending collateral	\$ 1,338,730	216,542	1,122,188	—	—	—	—	—	—	—		

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on page 69.

Synthetic guaranteed investment contracts that are fully benefit-responsive are measured at contract value and do not participate in fair value changes.

### Defined Benefit

1. **Short-term Beta/Overlays.** This type consists of one pooled investment fund that invests in exchange traded short-term options and futures referencing equity indexes used for portfolio rebalancing. The fair values have been determined using the NAV per share of the investments.
2. **Co-mingled International Equity Fund and Co-mingled Small Cap Fund.** This type consists of three institutional investment funds that invest in international equities diversified across all sectors and one fund that invests in U.S. small cap equities. The fair values of the investments in these types have been determined using the NAV per share of the investments.
3. **Absolute Return Funds.** The fair values of the investments in this type have been determined using the NAV per share of the investments. *Directional funds* include investments in eight funds whose investments are more directional in nature although they can shift opportunistically between having a directional bias and a non-directional bias. *Equity long/short funds* includes investments in five funds in which the equity securities maintain some level of market exposure (either net long or net short); however the level of market exposure may vary through time. *Event driven funds* includes investments in fifteen funds whose investments focus on identifying and analyzing securities that can benefit from the occurrence of an extraordinary corporate transaction or event (e.g.: restructurings, takeovers, mergers, spin-offs, bankruptcy, etc). One fund is in the process of redemption totaling \$1.3 million over the next 2 to 10 years. *Multi-strategy funds* include investments in ten funds. Investments in these funds represent a mix of the other absolute return strategies. Five funds are in the process of redemption totaling \$6.6 million over the next 1-5 years. *Relative value funds* include investments in fourteen funds. These funds seek returns by capitalizing on the mispricing of related securities or financial instruments. One new fund with a value of \$50.3 million has a redemption restriction of 2 years. All other funds currently have no redemption restrictions.
4. **Private Equity Partnerships.** This type includes investments in limited partnerships. Generally speaking, the types of partnership strategies included in this portfolio: venture capital, growth equity, buyouts, special situations, mezzanine, and distressed debt. These investments have an approximate life of 10 years and are considered illiquid. Redemptions are restricted over the life of the partnership. During the life of the partnerships distributions are received as underlying partnership investments are realized. The majority of the private equity partnership investments are managed by two gatekeepers. Both gatekeepers manage discretionary accounts for URS. The gatekeepers are required to manage the private equity portfolio in accordance with guidelines established by the URS. The Systems have no plans to liquidate the total portfolio. As of December 31, 2017, it is probable that all the investments in this type will be sold at an amount different from the NAV per share (or its equivalent) of the Systems ownership interest in partners' capital.
5. **Energy, Mineral, and Royalty Funds.** Investments in *Energy* consist of nineteen private equity partnerships which invest primarily in oil and gas related investments. *Mineral funds* include five private equity partnerships which invest in mineral mining equity securities, commodities and other mining investments. *Royalty funds* include one private equity partnership which invests primarily in drug royalties. These investments have an approximate life of 10 years and are considered illiquid. Redemption restrictions are in place over the life of the partnership. During the life of the partnerships distributions are received as underlying partnership investments are realized. As of December 31, 2017, it is probable that all the investments in this type will be sold at an amount different from the NAV per share (or its equivalent) of the Systems ownership interest in partners' capital. The fair values of these investments have been determined using estimates provided by the underlying partnerships using recent observable transactions information for similar investments.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Investments Measured at the NAV — Defined Benefit**

(in thousands)

	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Short-term securities - beta/overlays	\$ 95,306	—	Daily	None
Equity investments				
Co-mingled international equity fund	807,402	—	Daily	None
Co-mingled U.S. small cap equity fund	347,018	—	Daily	None
Total equity investments	1,154,420	—		
Absolute return				
Directional	1,149,835	81,902	Monthly, Quarterly	3-60 days
Equity long/short	209,981	—	Monthly, Quarterly, Annually	30-60 days
Event driven	1,060,582	60,700	Monthly, Quarterly, Semi-annually, Annually, Bi-annually	45-120 days
Multistrategy	893,291	—	Monthly, Quarterly, Semi-annually, Annually	45-90 days
Relative value	1,145,550	—	Weekly, Monthly, Quarterly	30-90 days
Total absolute return	4,459,239	142,602		
Private equity – partnerships	3,450,900	1,587,972	Not eligible	N/A
Real assets				
Agriculture	34,615	27,732	Not eligible	N/A
Energy	1,107,690	382,847	Not eligible	N/A
Minerals	275,592	179,057	Not eligible	N/A
Real estate*	1,136,695	108,123	Not eligible	N/A
Royalty	9,571	70,206	Not eligible	N/A
Timber*	272,462	33,529	Not eligible	N/A
Total real assets	2,836,625	801,494		
Total investments measured at the NAV	\$11,996,490	2,532,068		

\*See redemption descriptions for these investment types on page 70.

**Investments Measured at the NAV — Defined Contribution**

(in thousands)

	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Equity securities				
Co-mingled international equity fund	\$ 648,549	—	Daily	None
Co-mingled U.S. small cap equity fund	440,689	—	Daily	None
Co-mingled large cap equity fund	565,266	—	Daily	None
Co-mingled Russell 1000 growth equity fund	31,298	—	Daily	None
Total equity securities	1,685,802	—		
Real assets				
Co-mingled commodities fund	73,758	—	Daily	None
Co-mingled real estate equity fund	142,826	—	Quarterly	None
Total real assets	216,584	—		
Total investments measured at the NAV	\$ 1,902,386	—		

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Debt Securities Investments**

at December 31, 2017 (dollars in thousands)

Investment	Defined Benefit Plans		Defined Contribution Plans		Total All Systems and Plans
	Fair Value	Effective Weighted Duration	Fair Value	Effective Weighted Duration	
Asset backed securities	\$ 229,580	1.18	\$ 14,753	1.62	\$ 244,333
Commercial mortgage-backed	113,712	3.76	2,318	0.67	116,030
Corporate bonds	875,461	6.23	257,038	6.62	1,132,499
Fixed income other	1,990	—	67,851	—	69,841
Government agencies	89,846	4.86	34,475	8.14	124,321
Government bonds	1,187,366	7.47	201,606	5.63	1,388,972
Government mortgage backed securities	761,906	5.60	221,720	3.71	983,626
Index linked bonds	1,260,789	12.34	123,788	5.17	1,384,577
Non-government backed C.M.O.s	36,487	2.92	752	3.53	37,239
Total measured at fair value	4,557,137	7.83	\$924,301	5.39	5,481,438
Synthetic guaranteed investment contracts measured at contract value	—	—	904,997	—	904,997
Total	\$ 4,557,137		\$ 1,829,298		\$ 6,386,435

6. **Real Estate and Timber Funds.** This type includes twenty investments which are invested primarily in apartments and retail space in the United States. *Timber* includes two funds which invest in timber related resources. *Agriculture* includes three investments which operate in the production, processing, and distribution of high value foods. Investments in these types can never be redeemed with the funds. Instead, the nature of these investments are that distributions from each investment will be received as the underlying investments are liquidated. Because it is probable that any individual investment will be sold, the fair value of each individual investment has been determined using the NAV per share (or its equivalent) of the Systems ownership interest in partners' capital.

**Defined Contribution**

**Co-Mingled Funds.** The fair values of the investments in this type have been determined using the NAV per share of the investments. The *co-mingled real estate fund* is comprised of institutional quality commercial real estate across a broad range of real estate asset types. The *co-mingled commodities* fund invests mainly in bulk goods and raw materials. The other funds invest in securities indicative of their name.

**D) CREDIT RISK DEBT SECURITIES**

The Systems and Plans expect their domestic debt securities investment managers to maintain diversified portfolios by sector and by issuer by using the following guidelines:

- » U.S. Government and Agency Securities — no restriction.
- » Total portfolio quality will maintain a minimum overall rating of "A".
- » Securities with a quality rating of below BBB- are considered below investment grade. No more than 5% of an investment manager's assets can be below investment grade. No more than 1% of an investment manager's assets can be with a single below investment grade issuer.
- » Upon approval, a domestic debt securities investment manager may invest up to 10% of the portfolio in non-U.S. dollar denominated bonds.

The international debt securities investment managers may hold up to 25% of the fair value of their portfolios in securities rated below investment grade (below BBB-/Baa3). The remaining assets will have an investment grade rating.



NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Credit Risk Debt Securities at Fair Value**

at December 31, 2017

(in thousands)

Quality Rating	Total	Asset Backed	Commercial Mortgage Backed	Corporate Bonds	Fixed Income Other	Government Agencies	Government Bonds	Government Mortgage Backed	Defined Benefit Plans	
									Index Linked Bonds	Non-Government Backed C.M.O.s
AAA	\$ 236,559	118,933	35,474	16,005	—	21,738	8,193	1,050	32,352	2,814
AA+	79,269	7,020	3,868	9,618	—	10,872	—	4,238	42,675	978
AA	22,093	2,965	—	10,234	—	1,608	7,286	—	—	—
AA-	31,983	—	2,936	27,102	—	1,945	—	—	—	—
A+	63,638	10,630	—	48,357	—	515	3,608	—	—	528
A	92,677	3,415	3,118	85,014	—	912	—	—	—	218
A-	175,167	1,138	2,797	166,202	—	—	4,824	—	—	206
BBB+	208,641	450	—	193,795	—	7,539	6,724	—	—	133
BBB	132,614	2,940	—	115,565	—	—	12,832	—	—	1,277
BBB-	109,745	—	—	99,761	—	—	7,798	—	—	2,186
BB+	29,764	51	—	10,498	—	—	18,955	—	—	260
BB	13,095	—	88	8,930	—	—	2,867	—	—	1,210
B+	20,383	—	—	3,500	—	2,165	12,707	—	2,011	—
B	2,563	774	—	803	—	—	964	—	—	22
B-	11,242	—	456	4,618	—	—	6,058	—	—	110
BB-	12,191	251	2,450	9,490	—	—	—	—	—	—
CCC+	2,502	—	—	2,502	—	—	—	—	—	—
CCC	2,209	940	—	—	—	—	—	—	—	1,269
CCC-	922	922	—	—	—	—	—	—	—	—
D	204	204	—	—	—	—	—	—	—	—
NR	2,207,774	78,947	62,525	63,467	1,990	42,552	189,956	559,310	1,183,751	25,276
<b>Subtotal</b>	<b>3,455,235</b>	<b>229,580</b>	<b>113,712</b>	<b>875,461</b>	<b>1,990</b>	<b>89,846</b>	<b>282,772</b>	<b>564,598</b>	<b>1,260,789</b>	<b>36,487</b>
U.S. Treasuries	904,594									
Explicit U.S. Government Agencies	197,308									
<b>Total debt securities investments</b>	<b>\$ 4,557,137</b>									

Quality Rating	Total	Asset Backed	Commercial Mortgage Backed	Corporate Bonds	Fixed Income Other	Government Agencies	Government Bonds	Government Mortgage Backed	Defined Contribution Plans	
									Index Linked Bonds	Non-Government Backed C.M.O.s
AAA	\$ 29,931	—	—	—	—	3,005	20,301	—	6,625	—
AA+	68,549	—	—	—	1,388	—	—	—	67,161	—
AA	33,302	—	—	565	—	—	14,152	—	18,585	—
AA-	258	—	—	258	—	—	—	—	—	—
A	27,299	127	—	25,380	—	—	1,792	—	—	—
A+	144,555	—	—	5,795	—	—	11,985	111,030	15,745	—
A-	102,414	—	—	20,695	—	11,964	—	69,755	—	—
BBB+	33,590	—	—	22,320	—	—	8,687	—	2,583	—
BBB	59,337	—	—	38,050	—	4,861	5,262	—	11,164	—
BBB-	28,964	—	—	27,088	—	—	1,876	—	—	—
BB+	7,013	—	—	3,283	—	—	3,730	—	—	—
BB	2,063	—	—	707	—	—	783	—	573	—
BB-	14,252	—	—	14,252	—	—	—	—	—	—
B+	2,566	—	—	269	—	895	1,402	—	—	—
B	1,730	—	—	280	—	—	1,092	—	358	—
B-	1,382	—	—	298	—	—	1,084	—	—	—
NR	246,454	14,626	2,318	97,798	66,463	13,750	8,818	40,935	994	752
<b>Subtotal</b>	<b>803,659</b>	<b>14,753</b>	<b>2,318</b>	<b>257,038</b>	<b>67,851</b>	<b>34,475</b>	<b>80,964</b>	<b>221,720</b>	<b>123,788</b>	<b>752</b>
U.S. Treasuries	120,642									
Synthetic Guaranteed Investment Contracts	904,997									
<b>Total debt securities investments</b>	<b>\$ 1,829,298</b>									

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

The Systems and Plans' weighted quality rating average of the global debt securities, excluding pooled investments, as of December 31, 2017, was A-, and the fair value of below grade investments was \$124,081,000 or 1.94%.

The government mortgage backed securities in both the Systems and Plans that are not rated include \$179,733,000 Federal Home Loan Mortgage Corporation and \$419,547,000 of Federal National Mortgage Association securities which are implicitly guaranteed by the U.S. government.

**E) CUSTODIAL CREDIT RISK**

Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty, the Systems and Plans will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. The Systems and Plans do not have an investment policy regarding custodial credit risk. As of December 31, 2017, the table below represents the investments that have custodial credit risk. The \$314,894,000 frictional cash and cash equivalents subject to custodial credit risk are in foreign banks in the Systems' and Plans' name. Because it is in foreign banks, it is subject to custodial credit risk. URS does not have an investment policy regarding custodial credit risk for frictional cash in foreign banks.

**Custodial Credit Risk**

**Exposed to Custodial Credit Risk**

Type of Investment	(in thousands) Fair Value
Cash and cash equivalents	\$ 314,894

**Exposure to Custodial Credit Risk Not Determined**

Investment	(in thousands) Fair Value
Other assets	\$ 461,658

**F) CONCENTRATIONS CREDIT RISK**

The Systems and Plans expect investment managers to maintain diversified portfolios by sector and by issuer using the following guidelines:

- » AAA/Aaa Debt Securities — no more than 5% of an investment manager's assets at market with a single issuer.
- » AA-/Aa3 Debt Securities or higher — no more than 4% of an investment manager's assets at market with a single issuer.
- » A-/A3 Debt Securities or higher — no more than 3% of an investment manager's assets at market with a single issuer.
- » BBB-/Baa3 Debt Securities or higher — no more than 2% of an investment manager's assets at market with a single issuer.
- » For Debt Securities — no individual holding will constitute more than 10% of the fair value of outstanding debt of a single issuer with the exception of the U.S. Government or its agencies, or collateralized mortgage obligations.
- » For Domestic Equity Securities — no individual holdings will constitute more than 4% of the securities of any single issuer. Also, no more than 8% of an investment manager's assets will be invested in the equity or Real Estate Investment Trust (REIT) securities of any single issuer at market; or if specifically authorized in the manager's contract, the exposure of the portfolio to any single issuer will not exceed the greater of 5% of the portfolio value or 2% of the portfolio value plus the benchmark weight measured at the time of purchase.
- » For International Equity Securities — no more than 8% of an investment manager's assets will be invested in the equity or REIT securities of any single issuer at market; or if specifically authorized in the manager's contract, the exposure of the portfolio to any single issuer will not exceed the greater of 5% of the portfolio value or 2% of the portfolio value plus the benchmark weight measured at the time of purchase.

As of December 31, 2017, there were no single issuer investments that exceeded the above guidelines.

December 31, 2017

## G) INTEREST RATE RISK

The Systems and Plans manage their exposure to fair value loss arising from increasing interest rates by complying with the following policy:

- » For domestic debt securities managers, an individual debt securities investment manager's portfolio will have an effective duration between 75-125% of the effective duration of the appropriate index.
- » The international debt securities investment managers will maintain an effective duration of their portfolio between 80 -120% of the appropriate index.
- » The global debt securities investment managers will maintain an effective duration of their portfolio between 75-125% of the appropriate index.
- » The global debt inflation-linked debt securities invest managers will maintain an effective duration of their portfolio between 80-120% of the appropriate index.

Duration is a measure of a debt investment's exposure to fair value changes arising from changes in interest rates. It uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price.

The Systems compare an investment's effective duration against the Bloomberg Barclays US Aggregate Bond Index for domestic debt securities, the Bloomberg Barclays Global Aggregate Index (USD hedged) for global debt securities and the Bloomberg Barclays World Government Inflation-Linked Investment Bond Index (USD hedged) for inflation-linked debt securities. The index duration range as of December 31, 2017, was 4.49-7.48 for domestic debt securities, 5.24-8.74 for global debt securities, and 10.02-15.04 for inflation-linked debt securities.

The Plans compare an investment's effective duration against the Bloomberg Barclays US Intermediate Aggregate Bond Index for domestic debt securities, the Bloomberg Barclays Global Aggregate Index ex-U.S. (USD hedged) for international debt securities and the Bloomberg Barclays Global Inflation Linked Bond Index 1-10 Year (USD hedged) for inflation-linked debt securities. The index duration range as of December 31, 2017, was 3.01-5.01 for domestic debt securities, 6.27-9.41 for international debt securities and 4.03-6.05 for inflation-linked debt securities.



As of December 31, 2017, no individual debt security investment manager's portfolio was outside of the policy guidelines. As of December 31, 2017, the table on page 70 shows the investments by investment type, amount, and the effective weighted duration.

## H) FOREIGN CURRENCY RISK

The Systems and Plans expect the International Securities Investment Managers to maintain diversified portfolios by sector and by issuer using the following guidelines:

- » International investment managers invest in fixed income instruments and equity instruments of corporations headquartered outside of the United States unless specifically authorized within the investment managers' contract.
- » Domestic investment managers are allowed to invest in international corporations traded in American Depository Receipts (ADR).
- » Portfolios should be adequately diversified to limit foreign currency and security risk.

Risk of loss arises from changes in currency exchange rates. The Systems' and Plans' exposure to foreign currency risk is shown on page 74.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Foreign Currency Risk**

International Investment Securities at Fair Value at December 31, 2017

Currency	<i>(in thousands)</i>						Defined Contribution Plans			Total All Systems and Plans
	Short-Term	Debt	Equity	Absolute Return	Private Equity	Total	Debt	Equity	Total	
Argentine peso	\$ 246	5,950	—	—	—	6,196	1,051	—	1,051	7,247
Australian dollar	2,270	28,832	189,793	—	8,135	229,030	9,524	30,592	40,116	269,146
Bermudian dollar	—	—	—	—	—	—	—	13	13	13
Brazilian real	664	—	100,696	—	—	101,360	—	10,768	10,768	112,128
British pound sterling	3,101	323,471	797,910	—	51,660	1,176,142	15,714	79,022	94,736	1,270,878
Canadian dollar	2,048	51,729	346,452	—	—	400,229	9,227	42,855	52,082	452,311
Cayman Islands dollar	—	—	—	—	—	—	—	77	77	77
Chilean peso	37	3,745	14,922	—	—	18,704	617	1,957	2,574	21,278
Chinese yuan	—	—	—	—	—	—	—	43,447	43,447	43,447
Colombian peso	34	3,630	6,264	—	—	9,928	569	639	1,208	11,136
Czech koruna	14	—	1,369	—	—	1,383	—	262	262	1,645
Danish krone	427	2,281	61,499	—	—	64,207	294	7,970	8,264	72,471
Egyptian pound	—	—	—	—	—	—	—	248	248	248
Euro	146,314	284,720	1,207,115	465,031	178,150	2,281,330	48,161	140,045	188,206	2,469,536
Hong Kong dollar	1,834	—	413,410	—	—	415,244	—	15,267	15,267	430,511
Hungarian forint	17	—	7,102	—	—	7,119	—	465	465	7,584
Indian rupee	556	1,272	92,483	—	—	94,311	215	14,971	15,186	109,497
Indonesian rupiah	72	—	20,475	—	—	20,547	—	3,499	3,499	24,046
Japanese yen	148,390	182,923	1,031,999	8,766	—	1,372,078	42,345	111,308	153,653	1,525,731
Malaysian ringgit	201	—	30,607	—	—	30,808	—	3,893	3,893	34,701
Mexican peso	625	9,762	55,161	11,721	—	77,269	1,792	4,463	6,255	83,524
Moroccan dirham	18	—	—	—	—	18	—	—	0	18
New Israeli shekel	282	1,043	9,777	—	—	11,102	289	2,748	3,037	14,139
New Taiwan dollar	133	—	126,088	—	—	126,221	—	18,745	18,745	144,966
New Zealand dollar	860	54,019	7,590	—	—	62,469	7,084	1,320	8,404	70,873
Norwegian krone	810	4,348	20,530	—	—	25,688	629	3,568	4,197	29,885
Pakistani rupee	—	—	—	—	—	—	—	259	259	259
Peruvian nuevo sol	34	—	258	—	—	292	—	550	550	842
Philippine peso	150	—	15,760	—	—	15,910	—	1,725	1,725	17,635
Polish zloty	685	—	11,172	—	—	11,857	—	2,030	2,030	13,887
Qatar riyal	—	—	—	—	—	—	—	868	868	868
Russian ruble	266	7,057	19,971	—	—	27,294	1,308	4,693	6,001	33,295
Singapore dollar	946	2,699	61,935	—	—	65,580	—	6,154	6,154	71,734
South African rand	571	18,955	66,454	—	—	85,980	3,730	10,755	14,485	100,465
South Korean won	89	—	193,681	—	—	193,770	—	24,231	24,231	218,001
Swedish krona	665	10,644	109,485	—	—	120,794	3,263	13,444	16,707	137,501
Swiss franc	1,489	—	315,810	—	—	317,299	—	33,596	33,596	350,895
Thai baht	79	1,964	47,619	—	—	49,662	578	3,855	4,433	54,095
Turkish lira	93	6,791	17,665	—	—	24,549	1,123	1,696	2,819	27,368
United Arab Emirates dirham	91	—	8,543	—	—	8,634	—	1,149	1,149	9,783
Uruguayan peso	—	3,904	—	—	—	3,904	674	—	674	4,578
<b>Total securities subject to foreign currency risk</b>	<b>\$ 314,111</b>	<b>1,009,739</b>	<b>5,409,595</b>	<b>485,518</b>	<b>237,945</b>	<b>7,456,908</b>	<b>148,187</b>	<b>643,147</b>	<b>791,334</b>	<b>8,248,242</b>

NOTES TO THE BASIC FINANCIAL STATEMENTS *(Continued)*

December 31, 2017

**I) SECURITIES LENDING**

The Systems and Plans participate in a securities 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 letters of credit, equal to approximately 103% of the fair value of the domestic securities on loan and 105% of the fair 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 corresponding liabilities are recorded for the fair value of the collateral received.

At December 31, 2017, there was no credit risk exposure to borrowers because the collateral exceeded the amount borrowed. The securities on loan at year end were \$1,250,799,000 and the collateral received for those securities on loan was \$1,338,730,000. Under the terms of the lending agreement, the Systems and Plans 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 credit worthiness of the borrower. In addition, the Systems and Plans 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 and Plans 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' and Plans' loans is affected by the maturities of the securities loans made by other entities that use the agent's pool, which the Systems and Plans cannot determine. Because the securities lending collateral is in a pool maintained by the custodial bank, the Systems and Plans do not have the ability to pledge or sell the securities, and it is not necessary to report the total income and expenses of securities lending.

**J) DERIVATIVE FINANCIAL INSTRUMENTS**

The Systems and Plans invest in derivative financial investments as authorized by Board policy. Derivatives are financial arrangements between two parties whose payments are based on, or "derived" from, the performance of some agreed-upon benchmark. All derivatives are considered investments. The fair value of all derivative financial instruments is reported in the Statements of Fiduciary Net Position. Within the investment asset class, swaptions are recorded in debt securities. By policy, portfolio liabilities associated with investments will be backed by cash equivalents or deliverable securities. URS does not have a policy regarding master netting arrangements. As of December 31, 2017, the Systems and Plans had five types of derivative financial instruments: futures, currency forwards, options, swaps, and Synthetic Guaranteed Investment Contracts (SGIC).

**Futures**

Futures represent commitments to purchase (asset) or sell (liability) securities at a future date and at a specified price. Futures contracts are traded on organized exchanges (exchange traded) thereby minimizing the Systems' and Plans' credit risk. The net change in the futures contracts 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 in the Statements of Changes in Fiduciary Net Position. As of December 31, 2017, the Systems' and Plans' investments had the notional future balances as shown below.

		Notional Value	
		Defined Benefit Plans 2017	Defined Contribution Plans 2017
<i>(in thousands)</i>			
Cash & Cash Equivalents	Long	\$ 451,122	14,678
	Short	(510,980)	(14,651)
Equity	Long	372,866	65,002
	Short	(106,736)	—
Fixed Income	Long	758,391	64,437
	Short	(531,747)	(34,812)
<b>Total Futures</b>		<b>\$ 432,916</b>	<b>94,654</b>

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

### Currency Forwards

(in thousands)

Currency	Defined Benefit Plans			
	Notional Cost	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Fair Value 2017
Argentine peso	\$ 3,613	8,720	(5,096)	3,624
Australian dollar	(32,915)	2,179	(36,070)	(33,891)
British pound sterling	(315,741)	17,086	(333,607)	(316,521)
Canadian dollar	(58,348)	903	(60,730)	(59,827)
Chilean peso	(3,408)	—	(3,541)	(3,541)
Colombian peso	(152)	—	(155)	(155)
Czech koruna	7,010	7,210	—	7,210
Danish krone	(2,626)	—	(2,656)	(2,656)
Euro	(480,770)	21,412	(507,347)	(485,935)
Hong Kong dollar	(953)	—	(951)	(951)
Hungarian forint	38	7,093	(7,093)	—
Indian rupee	(1,604)	—	(1,637)	(1,637)
Indonesian rupiah	13,364	13,437	—	13,437
Japanese yen	(328,300)	4,323	(332,511)	(328,188)
Mexican peso	8,879	38,276	(28,960)	9,316
New Israeli shekel	(920)	—	(929)	(929)
New Taiwan dollar	(13,861)	—	(14,120)	(14,120)
New Zealand dollar	(52,164)	—	(53,789)	(53,789)
Norwegian krone	9,351	9,521	—	9,521
Peruvian nuevo sol	(25)	5,676	(5,676)	—
Philippine peso	(5,068)	—	(5,236)	(5,236)
Polish zloty	(72)	7,320	(7,320)	—
Singapore dollar	4,583	5,139	(456)	4,683
South African rand	(22,494)	—	(25,582)	(25,582)
South Korean won	(17,621)	213	(18,295)	(18,082)
Swedish krona	9,317	27,240	(17,560)	9,680
Swiss franc	(749)	531	(1,292)	(761)
Thai baht	(1,867)	—	(1,897)	(1,897)
Turkish lira	(6,802)	—	(6,964)	(6,964)
United States dollar	1,290,305	1,447,201	(156,897)	1,290,304
Total forwards subject to foreign currency risk	\$ —	1,623,480	(1,636,367)	(12,887)

Currency	Defined Contribution Plans			
	Notional Cost	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Fair Value 2017
Argentine peso	\$ 699	1,871	(1,162)	709
Australian dollar	(9,210)	—	(9,481)	(9,481)
British pound sterling	(13,279)	3,844	(17,213)	(13,369)
Canadian dollar	(10,751)	—	(11,005)	(11,005)
Chilean peso	(618)	—	(642)	(642)
Colombian peso	16	17	—	17
Czech koruna	1,259	1,295	—	1,295
Danish krone	(270)	—	(273)	(273)
Euro	(59,102)	983	(60,847)	(59,864)
Hungarian forint	7	1,243	(1,243)	—
Indian rupee	(361)	—	(368)	(368)
Indonesian rupiah	2,389	2,402	—	2,402
Japanese yen	(28,752)	323	(29,134)	(28,811)
Mexican peso	(1,968)	452	(2,365)	(1,913)
New Israeli shekel	(266)	—	(268)	(268)
New Taiwan dollar	(2,439)	—	(2,485)	(2,485)
New Zealand dollar	(6,704)	—	(6,895)	(6,895)
Norwegian krone	1,785	1,818	—	1,818
Peruvian nuevo sol	(4)	1,003	(1,003)	—
Philippine peso	(890)	—	(920)	(920)
Polish zloty	(13)	1,292	(1,292)	—
Singapore dollar	865	883	—	883
South African rand	(4,211)	—	(4,792)	(4,792)
South Korean won	(1,304)	—	(1,357)	(1,357)
Swedish krona	(82)	1,395	(1,476)	(81)
Thai baht	(549)	—	(557)	(557)
Turkish lira	(1,083)	—	(1,109)	(1,109)
United States dollar	134,836	151,996	(17,158)	134,838
Total forwards subject to foreign currency risk	\$ —	170,817	(173,045)	(2,228)

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

### Currency Forwards

Currency forwards represent forward foreign exchange contracts that are entered into in order to hedge the exposure to changes in foreign currency exchange rate on the foreign currency denominated 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 the net realized gains or losses on foreign currency related transactions in the Statements of Changes in Fiduciary Net Position. As of December 31, 2017, the Systems' and Plans' investments included the currency forwards balances at left.

### Options

Options represent or give buyers the right, but not the obligation, to buy (call) or sell (put) an asset at a preset price over a specified period. The option's price is usually a small percentage of the underlying asset's value. As a writer of financial options, the Systems and Plans receive a premium at the outset of the agreement and bear the risk of an unfavorable change in the price of the financial instrument underlying the option. As a purchaser of financial options, the Systems and Plans pay a premium at the outset of the agreement and the counter-party bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As of December 31, 2017, the Systems' and Plans' investments had the option balances shown below.

		Fair Value	
		Defined Benefit Plans 2017	Defined Contribution Plans 2017
<b>Options</b>			
<i>(in thousands)</i>			
Cash & Cash Equivalents	Call	\$ 354	—
	Put	640	—
Equity	Call	(323)	—
	Put	1,231	—
Fixed Income	Call	—	83
	Put	103	134
Swaptions	Call	87	16
	Put	1,616	103
<b>Total Options</b>		<b>\$ 3,708</b>	<b>336</b>



### Swaps

The Systems and Plans have entered into various inflation, credit default and interest rate swap agreements in an attempt to manage their exposure to inflation, credit and interest rate risk. Interest rate and inflation risk represents the exposure to fair value losses arising from inflation and the future changes in prevailing market interest rates. Credit risk is an investor's risk of loss arising from a borrower who does not make payments as promised. Swaps represent an agreement between two or more parties to exchange sequences of cash flows over a period in the future. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty, who in turn agrees to make return interest payments that float with some reference rate. The real estate interest rate swaps allowed the Systems to effectively convert most of their long-term variable interest rate credit facility loans into fixed interest rate loans, thereby mitigating some of their interest rate risk. All swap instruments contain collateral clauses. Gains and losses on swaps are determined based on fair values and are recorded in the Statements of Changes in Fiduciary Net Position. Swap fair values are determined by an independent third party. As of December 31, 2017, the Systems' and Plans' investments had the swap fair value balances as shown in the tables on pages 78-80.

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Fixed Income Portfolio Swaps**  
 (in thousands)

Counterparty	Notational Amount	Utah Rate	Counterparty Rate	Maturity Date	Credit Rating	Defined Benefit
						Fair Value 2017
Barclays	\$ 19,240	2.066%	US CPI	3/10/18	BBB	\$ (534)
Barclays	20,879	1.585%	CPURN	9/13/18	BBB	148
Goldman Sachs Bank	30,170	1.75%	3M LIBOR	4/12/19	A+	162
Goldman Sachs Bank	1,240	101.75%	3M LIBOR	5/21/20	A+	11
Goldman Sachs Bank	5,650	2.11%	3M LIBOR	9/3/20	A+	3
Goldman Sachs Bank	39,540	1.95%	3M LIBOR	11/16/20	A+	257
Goldman Sachs Bank	11,500	2.274%	3M LIBOR	12/14/20	A+	4
Bank of America	11,880	1.88%	1 day fed funds	5/31/22	A-	50
Goldman Sachs Bank	14,690	1.88%	1 day fed funds	5/31/22	A+	62
Goldman Sachs Bank	16,310	6M Eurolibor	0.15%	6/12/22	A+	(59)
Bank of America	16,160	UK RPI	3.37%	6/15/22	A-	24
Goldman Sachs Bank	58,100	0.43%	3M STBOR	7/18/22	A+	(32)
Bank of America	174,300	0.46%	3M STBOR	7/19/22	A-	(115)
Bank of America	58,100	0.42%	3M STBOR	7/20/22	A-	(26)
Bank of America	9,570	1.25625%	EUR CPI	8/15/22	A-	98
Bank of America	15,595	UK RPI	3.395%	8/15/22	A-	65
Bank of America	9,465	1.299%	EUR CPI	9/29/22	A-	77
Bank of America	15,570	UK RPI	3.30%	10/15/22	A-	101
Bank of America	1,512,925	6M LIBOR	0.92%	11/8/22	A-	1
Bank of America	1,512,925	6M LIBOR	0.921%	11/8/22	A-	1
Goldman Sachs Bank	1,870	0.37%	6M Eurolibor	11/12/22	A+	(10)
Bank of America	23,100	1.075%	6M LIBOR	12/12/22	A-	(76)
Bank of America	16,200	UK RPI	3.35%	12/15/22	A-	66
Goldman Sachs Bank	11,060	3M LIBOR	2.72%	6/12/26	A+	108
Deutsche Bank	2,145	1.47%	EUR CPI	3/15/27	A-	12
Goldman Sachs Bank	850	2.42%	3M LIBOR	6/12/27	A+	(3)
Bank of America	1,600	2.147%	3M LIBOR	8/25/27	A-	24
Bank of America	9,929	3.055%	3M BBR	9/8/27	A-	(15)
Bank of America	4,940	3.07%	3M BBR	9/8/27	A-	(12)
Bank of America	4,890	3.067%	3M BBR	9/8/27	A-	(11)
Bank of America	723,570	0.272%	6M LIBOR	11/8/27	A-	(14)
Bank of America	11,335	3.455%	UK RPI	11/15/27	A-	(134)
Goldman Sachs Bank	4,400	2.344%	3M LIBOR	11/30/27	A+	15
Goldman Sachs Bank	4,350	3M LIBOR	2.397%	12/1/27	A+	6
Goldman Sachs Bank	3,250	2.421%	3M LIBOR	12/12/27	A+	(10)
Goldman Sachs Bank	1,900	2.453%	3M LIBOR	12/29/27	A+	(10)
Bank of America	11,335	UK RPI	3.5475%	11/15/32	A-	185
Bank of America	6,825	UK RPI	3.6%	11/15/42	A-	191
Goldman Sachs Bank	6,910	2.602%	3M LIBOR	11/15/43	A+	(69)
Goldman Sachs Bank	2,220	3M LIBOR	2.606%	11/15/43	A+	24
Bank of America	3,150	2.602%	3M LIBOR	11/15/43	A-	(31)
Goldman Sachs Bank	2,391	3M LIBOR	2.594%	11/16/43	A+	20
Bank of America	1,240	3M LIBOR	1.73%	8/31/46	A-	(208)
Deutsche Bank	2,145	EUR CPI	1.97%	3/15/47	A-	14
Bank of America	3,210	EUR CPI	1.832%	5/15/47	A-	(162)
Bank of America	3,145	EUR CPI	1.75%	6/15/47	A-	(274)
Bank of America	3,145	EUR CPI	1.88%	7/15/47	A-	(110)
Bank of America	1,625	3.48625%	UK RPI	8/15/47	A-	35
Bank of America	1,675	3.465%	UK RPI	10/15/47	A-	36
Bank of America	256,750	0.921%	6M LIBOR	11/8/47	A-	(50)
Bank of America	1,435	Euro P CPTFE	1.942%	11/15/47	A-	(22)
Bank of America	3,030	EUR CPI	1.913%	11/15/47	A-	(83)
Bank of America	2,990	Euro P CPTFE	1.92%	11/15/47	A-	(74)
Bank of America	6,825	3.55%	UK RPI	11/15/47	A-	(246)
Bank of America	660	3.360%	R RPI	1/12/67	A-	(13)
Total interest rate and credit default swaps	\$ 4,699,904					\$ (603)



## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

## Fixed Income Portfolio Swaps (Concluded)

Counterparty	Notational Amount	Utah Rate	Counterparty Rate	Maturity Date	Defined Contribution	
					Credit Rating	Fair Value 2017
Bank of America	\$ 1,020	2.066%	US CPI	3/10/18	A-	\$ (33)
Barclays	1,531	1.585%	CPURN	9/13/18	BBB	14
Credit Suisse First Boston	890	1.88%	1 day fed funds	5/31/22	BBB+	4
Credit Suisse First Boston	1,150	UK RPI	3.37%	6/15/22	BBB+	3
Bank of America	10,200	0.43%	3M STBOR	7/18/22	A-	(1)
Bank of America	30,700	0.46%	3M STBOR	7/19/22	A-	(7)
Bank of America	10,200	0.42%	3M STBOR	7/20/22	A-	0.5
Credit Suisse First Boston	1,280	UK RPI	3.395%	8/15/22	BBB+	6
Credit Suisse First Boston	780	1.25625%	EUR CPI	8/15/22	BBB+	8
Credit Suisse First Boston	625	1.299%	EUR CPI	9/29/22	BBB+	5
Bank of America	1,280	UK RPI	3.30%	10/15/22	BBB+	1
Credit Suisse First Boston	123,570	6M LIBOR	0.09%	11/8/22	BBB+	(1)
Credit Suisse First Boston	123,570	6M LIBOR	0.09%	11/8/22	BBB+	(1)
Bank of America	2,450	1.88%	6M LIBOR	12/12/22	A-	(7)
Credit Suisse First Boston	1,350	UK RPI	3.35%	12/15/22	BBB+	6
Deutsche Bank	165	1.47%	EUR CPI	3/15/27	A-	1
Credit Suisse First Boston	809	3.06%	3M BBR	8/9/27	BBB+	3
Credit Suisse First Boston	100	2.17%	3M LIBOR	8/27/27	BBB+	2
Credit Suisse First Boston	398	3.07%	3M BBR	9/8/27		1
Credit Suisse First Boston	403	3.07%	3M BBR	9/8/27	BBB+	1
Credit Suisse First Boston	150	3.38%	UK RPI	9/15/27	BBB+	(1)
Credit Suisse First Boston	59,100	0.27%	6M LIBOR	11/8/27	BBB+	2
Credit Suisse First Boston	925	3.455%	UK RPI	11/15/27	BBB+	(10)
Credit Suisse First Boston	925	UK RPI	3.5475%	11/15/32	BBB+	14
Credit Suisse First Boston	555	UK RPI	3.60%	11/15/42	BBB+	14
Credit Suisse First Boston	300	2.6%	3M LIBOR	11/15/43	BBB+	(1)
Credit Suisse First Boston	50	3M LIBOR	1.73%	8/31/46	BBB+	(9)
Deutsche Bank	165	EUR CPI	1.97%	3/15/47	A-	2
Credit Suisse First Boston	230	EUR CPI	1.83%	5/15/17	BBB+	(11)
Credit Suisse First Boston	225	EUR CPI	1.75%	6/15/47	BBB+	(19)
Credit Suisse First Boston	260	EUR CPI	1.88%	7/15/47	BBB+	(8)
Credit Suisse First Boston	190	UK RPI	3.46%	7/26/47	BBB+	(9)
Credit Suisse First Boston	425	1.55%	6M LIBOR	7/26/47	BBB+	(17)
Credit Suisse First Boston	135	3.48625%	UK RPI	8/15/47	BBB+	3
Credit Suisse First Boston	35	3.47%	UK RPI	9/15/47	BBB+	1
Credit Suisse First Boston	140	3.465%	UK RPI	10/15/17	BBB+	4
Credit Suisse First Boston	30,970	0.92%	6M LIBOR	11/8/47	BBB+	2
Credit Suisse First Boston	245	EUR CPI	1.92%	11/15/47	BBB+	(5)
Credit Suisse First Boston	250	EUR CPI	1.913%	11/15/47	BBB+	(6)
Credit Suisse First Boston	555	3.55%	UK RPI	11/15/47	BBB+	(20)
Credit Suisse First Boston	120	EUR CPI	1.94%	11/15/47	BBB+	(2)
Credit Suisse First Boston	135	UK RPI	3.515%	11/15/47	BBB+	1
Credit Suisse First Boston	55	3.36%	UK RPI	12/1/67	BBB+	(1)
<b>Total interest rate and credit default swaps</b>	<b>\$ 408,611</b>					<b>\$ (71)</b>

US CPI – United States Consumer Price Index  
 CPURN – Consumer Price Index Urban Consumers  
 EUR CPI – European Consumer Price Index

UK RPI – United Kingdom Retail Price Index  
 EURO LIBOR – European LIBOR  
 STBOR – Stockholm Interbank Offered Rate

BBR – New Zealand Base Bank Rate

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Real Estate Portfolio Interest Swaps**

(in thousands)

Counterparty	Notional Amount	Utah Rate	Counterparty Rate	Maturity Date	Defined Benefit	
					Credit Rating	Fair Value 2017
Morgan Stanley	\$ 4,486	4.69%	1M LIBOR	3/1/18	BBB+	\$ (36)
Morgan Stanley	71,700	4.72%	1M LIBOR	10/1/20	BBB+	(5,481)
Morgan Stanley	43,660	5.294%	1M LIBOR	11/1/21	BBB+	(5,410)
Total interest rate and credit default swaps	\$ 119,846					\$ (10,927)

**Synthetic Guaranteed Investment Contracts Underlying Investments**

## Underlying Investments

Asset-backed securities
Agencies
Corporates
Government mortgage-backed securities
United States treasuries
Commercial mortgage-backed securities
Cash

Total

**Derivative Credit Risk**

Derivatives that are exchange traded are not subject to credit risk. No derivatives held are subject to custodial credit risk. The maximum loss that would be recognized as of December 31, 2017, if all counterparties fail to perform as contracted was \$8,672,563. Derivative credit risk at fair value is shown in the table below. This maximum exposure is reduced by \$5,270,590 of liabilities, resulting in \$3,401,973 exposure to credit risk. Credit ratings for the wrap contracts associated with the SGICs are noted in the bottom right table below. As of December 31, 2017, the counterparties' credit ratings for currency forwards, options, and swaps are subject to credit risk.

**Derivative Credit Risk at Fair Value**

(in thousands)

Quality Rating	Forwards	Options	Swaps	Total
AA-	\$ (749)	—	—	(749)
A+	(608)	644	—	36
A	(5,455)	—	—	(5,455)
A-	(2,957)	3,350	(210)	183
BBB+	(4,690)	(1,360)	(10,952)	(6,086)
BBB	(139)	380	(407)	(166)
BBB-	(517)	—	—	(517)
NA	—	1,030	—	1,030
Total subject to credit risk	\$ (15,115)	4,044	(11,569)	(11,724)

**Synthetic Guaranteed Investment Contracts**

In the Utah Retirement Systems Defined Contribution Plans, members are able to participate in Synthetic Guaranteed Investment Contracts (SGICs). The SGICs are fully benefit responsive, which means that Utah Retirement Systems is prohibited from assigning and selling the contract or its proceeds to a third party without the consent of the issuer. Prospective interest crediting rate adjustments are provided to plan participants. The SGICs provide assurance that the probability of future rate adjustments resulting in an interest crediting rate less than zero is remote. The underlying investments are high credit quality averaging A+ and therefore credit loss is remote.

**Wrap Contracts**

(in thousands)

Contract Issuer	Fair Value	Market Value	Rate	Duration	Quality Rating
American General	\$ 61,799	61,791	2.03%	2.45	A+
Lincoln National Life	116,032	115,862	1.99	2.45	AA-
MetLife	190,481	194,396	1.71	1.68	AA-
Transamerica	57,909	57,922	2.12	2.45	AA-
Transamerica	126,752	129,211	2.72	3.80	AA-
Pacific Life	201,686	201,365	2.03	2.45	AA-
Royal Bank of Canada	150,338	153,297	2.37	3.80	AA-
Subtotal wrap contracts	904,997	913,844			
Merrill Lynch repurchase	47,079	47,079			
Total	\$ 952,076	960,923			

## NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

(in thousands)

1-5 Yr. Government/Credit Bond				Intermediate Government/Credit Bond				MetLife Separate Account				Total Underlying Investments	
Fair Value	Market Value	Duration	Credit Rating	Fair Value	Market Value	Duration	Credit Rating	Fair Value	Market Value	Duration	Credit Rating	Fair Value	Market Value
\$ 75,106	75,023	0.96	AAA	\$ 33,251	33,901	1.07	AAA	\$ 37,868	38,646	1.08	AAA	\$ 146,225	147,570
48,029	47,976	3.14	AA+	27,515	28,053	2.87	AA+	17,105	17,457	2.27	AA+	92,649	93,486
148,069	147,904	3.57	A-	96,704	98,595	4.64	A-	68,135	69,535	1.7	A-	312,908	316,034
56,690	56,627	3.32	AA+	23,719	24,183	3.23	AA+	5,486	5,599	2.47	AA+	85,895	86,409
48,073	48,020	2.52	AAA	55,390	56,473	7.41	AA+	24,763	25,271	2.57	AA+	128,226	129,764
50,523	50,467	1.35	AA+	35,468	36,161	1.43	AAA	33,163	33,844	1.30	AA+	119,154	120,472
10,936	10,923	—	—	5,043	5,142	—	—	3,961	4,044	—	—	19,940	20,109
\$ 437,426	436,940			\$ 277,090	282,508			\$ 190,481	194,396			\$ 904,997	913,844

The terms of the SGICs require all plan participants to initiate transactions within the fund at contract value. The contract value is the fair value (cost plus accrued interest). The fair value of these contracts as of December 31, 2017, was \$904,997,000 and the market value was \$913,844,000.

#### K) INVESTMENT PAYABLES

The investment accounts payable are comprised of investment advisor fees payable of \$9,714,000, administrative expenses payable of \$5,345,000, and investment purchases payable of \$807,412,000.

#### L) INVESTMENT COMPLIANCE OFFICER

The Systems and Plans have an investment compliance officer on staff who reports his/her findings directly to the Board. The investment compliance officer monitors all of the investments made by the investment managers to determine the investments were made in accordance with the investment policies that were approved by the Board.

## Note 4 / Property and Equipment

Property and equipment consist of the amounts shown in the following table as of December 31, 2017. There were no significant leases as of December 31, 2017.

### Property and Equipment

(in thousands)

	2017
Land	\$ 1,780
Buildings and building improvements	19,312
Furniture and equipment	2,579
Computer software	5,543
<b>Total property and equipment</b>	<b>29,214</b>
Less accumulated depreciation:	
Buildings and building improvements	10,098
Furniture and equipment	1,820
Computer software	2,271
<b>Total accumulated depreciation</b>	<b>14,189</b>
Less operating reserves	10,635
<b>Net property and equipment</b>	<b>\$ 4,390</b>

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017



## Note 5 / Net Pension Liability of Employers

The net pension liability (i.e., the retirement system's liability determined in accordance with GASB Statement No. 67 less the fiduciary net position) as of December 31, 2017, is as shown below.

Actuarial valuation of the ongoing Systems involves estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The most recent experience study was conducted for the year ended December 31, 2016. The Schedule of Employers' Net Pension Liability presents multi-year trend information about whether the plan fiduciary net positions

are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the Required Supplementary Information section. The Total Pension Liability as of December 31, 2017, is based on the results of an actuarial valuation date of January 1, 2017, and rolled-forward using generally accepted actuarial procedures.

A summary of the actuarial assumptions as of the latest actuarial valuation is shown on page 83 and are based on the results of the most recent experience study. The board decreased the assumed investment return from 7.20% to 6.95%, and the decrease in the assumed inflation rate from 2.60% to 2.50%. With the decrease

### Net Pension Liability of Employers

(dollars in thousands)

System	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers' Net Pension Liability/(Asset) (1) - (2)	(4) Plan Fiduciary Net Position as a % of the Total Pension Liability (2) / (1)	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a % of Covered Employee Payroll (3) / (5)
Noncontributory Retirement System	\$ 28,088,619	\$ 25,205,127	\$ 2,883,492	89.7%	\$ 3,375,321	85.4 %
Contributory Retirement System	1,298,183	1,283,466	14,717	98.9	45,177	32.6
Public Safety Retirement System	4,085,203	3,576,517	508,686	87.5	350,782	145.0
Firefighters Retirement System	1,205,727	1,234,407	(28,680)	102.4	112,953	(25.4)
Judges Retirement System	231,069	198,483	32,586	85.9	18,661	174.6
Utah Governors and Legislative Retirement Plan	13,074	11,220	1,854	85.8	722	256.8
Tier 2 Public Employees System	338,035	329,218	8,817	97.4	996,965	0.9
Tier 2 Public Safety and Firefighters System	39,023	40,180	(1,157)	103.0	98,113	(1.2)
<b>Total</b>	<b>\$ 35,298,933</b>	<b>\$ 31,878,618</b>	<b>\$ 3,420,315</b>	<b>90.3%</b>	<b>\$ 4,998,694</b>	<b>68.4%</b>

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Summary of Actuarial Assumptions**

	Noncontributory	Contributory	Public Safety	Firefighters	Judges	Governors and Legislators	Tier 2 Public Employees	Tier 2 Public Safety and Firefighter
Valuation date	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Actuarial assumptions:								
Investment rate of return	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%
Projected salary increases	3.25-9.75%	3.25-9.75%	3.25-7.25%	3.25-8.75%	3.25%	None	3.25-9.75%	3.25-8.75%
Inflation rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Post-retirement cost-of-living adjustment	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Mortality: (Non-educators)	Male: 110% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for males, projected with Scale AA from the year 2017. Female: 110% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for females, projected with Scale AA from the year 2017.							
Mortality: (Educators)	Male: 90% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for males, projected with Scale AA from the year 2017. Female: 90% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for females, projected with Scale AA from the year 2017.							

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.

**Target Allocations**

Asset Class	Target Asset Allocation	Expected Return Arithmetic Basis	
		Real Return Arithmetic Basis	Long-term Expected Portfolio Real Rate of Return*
Equity securities	40%	6.15%	2.46%
Debt securities	20	0.40	0.08
Real assets	15	5.75	0.86
Private equity	9	9.95	0.89
Absolute return	16	2.85	0.46
Cash and cash equivalents	0	0.00	0.00
Totals	100%		4.75%
Inflation			2.50
Expected arithmetic nominal return			7.25%

\*The total URS Defined Benefit long-term expected rate of return is 6.95%, which is comprised of a 2.50% inflation assumption and a 4.45% net real rate of return.

in the assumed rate of inflation, both the payroll growth and wage inflation assumptions were each decreased by 0.10% from the prior year's assumption.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Systems target asset allocation as of December 31, 2017, are summarized in table to the left.

The discount rate used to measure the total pension liability was 6.95%. The projection of cash flows used to determine the discount rate assumed contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates under Utah State Code. Based on those assumptions, the Systems' fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

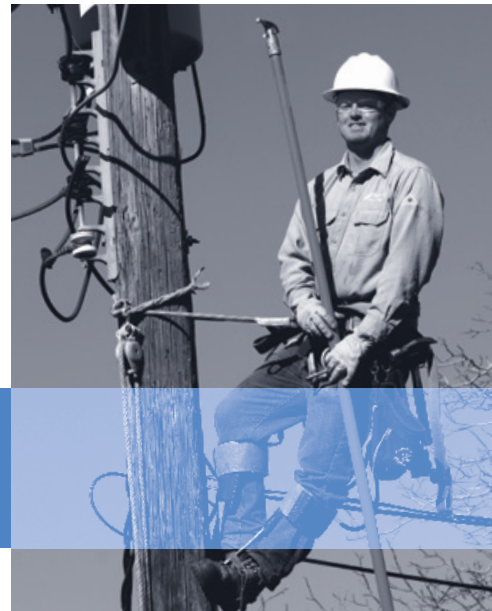
NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Changes in Discount Rate**  
(dollars in thousands)

System	Net Pension Liability/(Asset) 1% Decrease (5.95%)	Net Pension Liability/(Asset) Current Discount Rate (6.95%)	Net Pension Liability/(Asset) 1% Increase (7.95%)
Noncontributory Retirement System	\$ 6,524,169	\$ 2,883,492	\$ (156,134)
Contributory Retirement System	141,894	14,717	(92,965)
Public Safety Retirement System	1,090,853	508,686	33,689
Firefighters Retirement System	141,720	(28,680)	(168,271)
Judges Retirement System	58,168	32,586	10,782
Utah Governors and Legislative Retirement Plan	3,134	1,854	766
Tier 2 Public Employees System	103,813	8,817	(64,439)
Tier 2 Public Safety and Firefighters System	10,247	(1,157)	(9,870)
<b>Total</b>	<b>\$ 8,073,998</b>	<b>\$ 3,420,315</b>	<b>\$ (446,442)</b>

In accordance with GASB Statement No. 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table above presents the net pension liability/(asset) of the participating employers calculated using the discount rate of 6.95%, as well as what the employers' net pension liability/(asset) would be if it were calculated using a discount rate that is 1.00% lower (5.95%) or 1.00% higher (7.95%) than the current rate.



**Note 6 / Employer Contribution Requirements**

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 year, and (2) an amount for amortization of the unfunded or excess funded actuarial accrued liability over an open 20-year amortization period. The rates are determined using the entry age actuarial cost method.

The top schedule on page 85 summarizes contribution rates in effect as of December 31, 2017. Contributions made by employers and members were in accordance with actuarially computed funding requirements. Fire insurance

premium taxes and court fees are considered as part of employer contributions in the schedule shown on page 85 for the Firefighters and Judges Systems, respectively. These contribution rates also include rates for a 3% benefit enhancement that is funded by the State. For contribution rate purposes the actuary evaluates the assets of the Systems based on a 5-year smoothed expected return wherein 20% of a year's excess or shortfall of expected return is recognized each year for five years.

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

The actual contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

Information with regard to contributions to the Systems, for the year ended December 31, 2017, is indicated in the schedules shown below.

Member contributions in the 401(k), 457, Roth and traditional IRAs, total \$367,541,000, that in combination with the member contributions made in the Retirement Systems total \$406,754,000.

### Note 7 / Transfer to and from Affiliated Systems

Asset transfers to or from affiliated systems are for the purpose of spreading employer contribution costs across same employer and same class of employee group and to record transfers of benefits and corresponding assets where employees transfer from one system to another. Benefit transfers usually are between contributory and noncontributory systems as allowed during authorized transfer windows established by statute or as otherwise authorized.

### Contribution Rates

December 31, 2017

System	Contribution Rates as a Percent of Covered Payroll		
	Member	Employer	Other
Noncontributory	—	18.47-22.19%	—
Contributory	6.00%	14.46-17.70	—
Public Safety: Noncontributory	—	32.20-49.58	—
Contributory	10.50-12.29	22.19-29.70	—
Firefighters: Division A	15.05	3.93	11.60%
Division B	16.71	6.70	11.60
Judges: Noncontributory	—	42.69	9.22
Governors and Legislators	—	\$ 391,883	—
Tier 2 Public Employees	—	15.11-18.44%	—
Tier 2 Public Safety and Firefighter	—	10.82-37.71	—

### Note 8 / 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.

### Required Contributions

(dollars in thousands)

	Contribution Requirements					
	Normal Cost	Unfunded Cost	Total Required Contributions	Total Actual Contributions	Member Contributions Made	Employer Contributions Made
Noncontributory Retirement System	\$ 559,276	\$ 312,264	\$ 871,540	\$ 871,540	\$ 17,285	\$ 854,255
Contributory	6,268	4,353	\$10,621	10,621	2,675	7,946
Public Safety	93,058	53,549	\$146,607	146,607	793	145,814
Firefighters	26,398	—	\$26,398	26,398	18,460	7,938
Judges	7,074	1,966	\$9,040	9,040	—	9,040
Governors & Legislators	404	—	\$404	404	—	404
Tier 2 Public Employees	79,175	—	\$79,175	79,175	—	79,175
Tier 2 Public Safety and Firefighters	11,126	—	\$11,126	11,126	—	11,126
<b>Total</b>	<b>\$ 782,779</b>	<b>\$ 372,132</b>	<b>\$ 1,154,911</b>	<b>\$ 1,154,911</b>	<b>\$ 39,213</b>	<b>\$ 1,115,698</b>

NOTES TO THE BASIC FINANCIAL STATEMENTS *(Continued)*

December 31, 2017

## Note 9 / Litigation

The Systems and Plans 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' and Plans' financial position as a whole.

## Note 10 / Commitments

As of December 31, 2017, the Systems had committed to fund certain private equity partnerships, absolute return, and real asset funds projects for an amount of \$12,529,065,070. Funding of \$9,621,981,517 had been provided by December 31, 2017, leaving an unfunded commitment of \$2,907,083,553 as of December 31, 2017.

## Note 11 / Pension Plan Participation

### DEFINED BENEFIT PLANS

Utah Retirement Systems (URS) contributes to the State and School Noncontributory Retirement System, a cost-sharing multiple-employer defined benefit pension plan administered by Utah Retirement Systems (Systems). The Systems provide refunds, retirement benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries in accordance with retirement statutes.

The Systems are established and governed by the respective sections of Chapter 49 of the Utah Code Annotated 1953 as amended. The Utah State Retirement Act in Chapter 49 provides for the administration of the Utah Retirement Systems and Plans under the direction of



the Utah State Retirement Board (Board) whose members are appointed by the governor. The Systems issue a publicly available financial report that includes financial statements and required supplementary information for the State and School Noncontributory Retirement System. A copy of the report may be obtained by writing to the Utah Retirement Systems, 560 East 200 South, Salt Lake City, UT 84102-2044 or by calling 1-800-365-8772.

**Funding Policy:** In the State and School Noncontributory Retirement System and the Tier 2 Public Employees



NOTES TO THE BASIC FINANCIAL STATEMENTS *(Continued)*

December 31, 2017

Retirement System, Utah Retirement Systems is required to contribute 22.19% and 20.02% of its annual covered salary, respectively. The contribution rates are the actuarially determined rates. The contributions were equal to the requirements of the Systems, are authorized by statute, and specified by the Board.

The Utah Retirement Systems' contributions to the State and School Noncontributory Retirement System for the years ended December 31, 2017, 2016, and 2015, were \$3,008,977, \$2,941,508, and \$2,681,089, respectively.

The contributions were equal to the required contributions for each year.

Employees hired beginning July 1, 2011, are automatically enrolled in the Tier 2 Public Employees Retirement System. The Utah Retirement Systems' contributions to the Tier 2 Public Employees Retirement Systems for years ended December 31, 2017, 2016, and 2014, were \$596,455, \$487,794, and \$399,721, respectively. The contributions were equal to the required contributions for each year.

## DEFINED CONTRIBUTION PLANS

Utah Retirement Systems also participates in four defined contribution plans, the 401(k), 457, Roth and traditional IRAs.

### 401(k) Plan

The Utah Retirement Systems offers its employees a 401(k) Plan to supplement retirement benefits accrued by participants in the Systems and may also be used as a primary retirement benefit. Employees covered by the State and School Noncontributory Retirement System have a contribution of 1.5% of covered salaries automatically made by Utah Retirement Systems. In addition, URS will match up to 2% and \$26 of employee contributions each pay period. Employees participating in the Systems can make additional contributions through payroll deduction to the 401(k) Plan up to specified limits. Contributions and earnings may be withdrawn by the employee upon termination or may be used as supplemental income during retirement. The employer 401(k) contributions for the years ended December 31, 2017, 2016, and 2015, were \$1,145,630, \$946,818, and \$764,166, respectively; the employee contributions for the years ended December 31, 2017, 2016, and 2015, were \$902,966, \$755,806, and



\$638,355, respectively. The 401(k) Plan funds are fully vested to the participants at the time of deposit except for employer required contributions and earnings for Tier 2. Plan assets are administered and held by Utah Retirement Systems.

### 457 Plan

The Utah Retirement Systems also offers its employees a deferred compensation plan created in accordance with Internal Revenue Code Section 457. The plan, available to all employees, permits them to defer a portion of their salary until future years. Employees are eligible to voluntarily participate from the date of employment and are vested immediately upon participating. Employee contributions to the Section 457 Plan for the years ended December 31, 2017, 2016, and 2015, were \$507,529, \$460,828, and \$422,398, respectively.

### Roth and Traditional IRAs

Utah Retirement Systems offers its employees two payroll deducted IRAs authorized by section 408 of the Internal Revenue Code. Employees are eligible to participate from the date of employment and are vested immediately upon participating. For the years ended December 31, 2017, 2016, and 2015, the Roth IRA employee contributions were \$192,786, \$186,088, and \$152,088, respectively. For the years ended December 31, 2017, 2016, and 2015, the traditional IRA employee contributions were \$11,185, \$8,985, and \$2,235, respectively.



## Note 12 / Post-Employment Healthcare Plan

### PLAN DESCRIPTION

The Utah Retirement Office contributes to a noncontributory defined benefit post-employment healthcare plan to provide post-employment insurance benefits for retired employees of the Utah Retirement Office. This plan was established in 2005. The Utah Retirement Employees Post-Employment Healthcare Plan, (UREPEHP), is an agent multiple-employer post-employment healthcare plan administered by the Utah Retirement Office.

Assets and liabilities of the plan are identified separately for each employer. Plan assets may be used only for the payment of benefits to the members of that system, in accordance with the terms of the plan. UREPEHP issues a publicly available financial report that includes financial statements and required supplementary information for UREPEHP. A copy of the report may be obtained by writing the Utah Retirement Office, 560 East 200 South, Salt Lake City, UT 84102-2044 or by calling 1-800-365-8772.

### FUNDING POLICY

The contribution requirements of Utah Retirement Employees Post-Employment Healthcare Plan are determined by the Plan and approved by the Board. Utah Retirement Office is required to contribute the annual required contribution (ARC), an actuarially determined rate in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an

ongoing basis, is projected to cover normal costs each year and amortize any unfunded actuarial liabilities (or funding excess) over an open 20-year period using the level dollar amount. The current dollar amount is \$0. Since the funded ratio exceeds 105% and the plan is closed to new entrants, there are no actuarial required contributions.

### ANNUAL COSTS

For the year ended December 31, 2017, the annual cost (expense) of \$0 for UREPEHP was equal to the ARC. The net Other Post-Employment Benefits (OPEB) obligation for 2017 was as follows:

Year Ended	Annual Required Contributions	Percentage Contributed	Net OPEB Obligation
12/31/08	\$ 219,000	100%	\$ —
12/31/09	220,000	100	—
12/31/10	313,000	100	—
12/31/11	285,000	100	—
12/31/12	285,000	100	—
12/31/13	285,000	100	—
12/31/14	285,000	100	—
12/31/15	0	100	—
12/31/16	0	100	—
12/31/17	0	100	—

NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017

**Schedule of Funding Progress**

(dollars in thousands)

Division	Date	Based on fair value of assets		(3)	(4)	(5)	(6)				
		(1)	(2)	Unfunded (Overfunded) AAL (UAAL) (2) - (1)	Funding Ratios (1) / (2)	Annual Covered Payroll	UAAL as a % of Covered Payroll (3)/(5)	Year Ended*	Annual Required Contributions	Percentage Contributed	Net OPEB Obligation
URS Employees	12/31/08	\$4,206	7,008	2,802	60.0%	8,673	32.3%	12/31/08	\$219	100	\$—
	12/31/09	4,654	7,539	2,885	61.7	8,678	33.2	12/31/09	220	100	—
	12/31/10	4,811	7,382	2,571	65.2	8,366	30.7	12/31/10	313	100	—
	12/31/11	4,838	7,615	2,777	63.5	7,835	35.4	12/31/11	285	100	—
	12/31/12	4,886	7,838	2,952	62.3	7,538	39.2	12/31/12	285	100	—
	12/31/13	5,325	5,660	335	94.1	7,189	4.7	12/31/13	285	100	—
	12/31/14	5,794	5,750	(44)	100.8	6,955	(0.6)	12/31/14	285	100	—
	12/31/15	5,942	5,308	(634)	111.9	7,841	(8.1)	12/31/15	0	100	—
	12/31/16	6,094	5,739	(355)	106.2	7,647	(4.6)	12/31/16	0	100	—
	12/31/17	6,221	5,951	(270)	104.5	7,897	(3.4)	12/31/17	0	100	—

**Schedule of Required Contributions**

January 1, 2017

(dollars in thousands)

Year Ended*	Annual Required Contributions	Percentage Contributed	Net OPEB Obligation
12/31/08	\$219	100	\$—
12/31/09	220	100	—
12/31/10	313	100	—
12/31/11	285	100	—
12/31/12	285	100	—
12/31/13	285	100	—
12/31/14	285	100	—
12/31/15	0	100	—
12/31/16	0	100	—
12/31/17	0	100	—

**FUNDED STATUS AND FUNDING PROGRESS**

The funded status of the plan as of January 1, 2017, the date of the most recent actuarial valuation, was as follows:

Actuarial accrued liability (AAL)	\$ 5,822,743
Actuarial value of plan assets	6,094,000
Unfunded (overfunded) actuarial accrued liability (UAAL)	(271,257)
Funded ratio (actuarial value of plan assets/AAL)	105%
Covered salaries and wages (active) (plan members)	\$ 7,897,200
UAAL as a percentage of covered salaries and wages	(3)%

Actuarial valuations of the ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status and the annual required contributions are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress shown above, presented as required supplementary information, shows the actuarial value of plan assets compared to the actuarial accrued liabilities for benefits.

**ACTUARIAL METHODS AND ASSUMPTIONS**

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities consistent with the long-term perspective of the calculations.

In the January 1, 2017, actuarial valuation, the entry age actuarial cost method was used. The actuarial assumptions included a 6.95% investment rate of return (net of administrative expenses) and an annual healthcare cost trend rate of 7.5%, reduced by decrements to an ultimate rate of 4.5% after 15 years. Both rates include a 2.50% inflation assumption. The actuarial value of UREPEHP assets is based on smoothed expected income investment rate. Investment income in excess or shortfall of the expected rate on fair value is smoothed over a 5-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year. The actuarial accrued liability was computed using likely health benefits to be paid to retirees and to be paid active employees after their service that was discounted using the investment return, health cost increase, and various mortality assumptions.

## Note 13 / Compensated Absences and Insurance Reserve

The compensated absences liability for Utah Retirement Office employees as of December 31, 2017, was \$6,429,709. This represents the amount of unused leave to be paid to employees upon termination. As of December 31, 2017, the insurance reserve was \$5,000,000. The insurance reserve coverage is explained in Note 15, Risk Management.

## Note 14 / Required Supplementary Information

Required supplementary information is included immediately following the notes to the financial statements on pages 92 through 101. 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 basic financial statements.

## Note 15 / 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 in excess of coverage limits or large deductible, and otherwise uninsured losses, are retained by the Systems, Plans or Investment Fund through the insurance reserve. There have been no reductions of insurance coverage from coverages of the previous year in any of the categories of risk. Coverages are increased

or decreased commensurate with real estate acquisitions or dispositions. During the past three calendar years, no loss settlements exceeded insurance coverages beyond immaterial deductible amounts. The insurance reserve was established by the Board from investment earnings as authorized by statute.



NOTES TO THE BASIC FINANCIAL STATEMENTS (Continued)

December 31, 2017



## Note 16 / Real Estate Liabilities

The real estate liability consists of one line of credit. This note bears interest and is scheduled to be repaid over the next year. The rest of the liabilities are unsecured. As mentioned in Note 3, page 77, the Systems and Plans entered into various interest rate swap agreements that effectively changed credit facility liabilities from variable interest rates to fixed interest rates. As of December 31, 2017, there is \$120 million in credit facility debt. Using interest rates as of December 31, 2017, principal and interest requirements of the debt and net swap payments for the terms of the debt and swaps are shown below.

### Real Estate Liabilities

<i>(in thousands)</i>			
	Initial Affected Balance	Maturity Date	Annual Payment
The Northern Trust	\$120,000	8/1/2018	\$120,000
<b>Total</b>	<b>\$ 120,000</b>		
Year Ending December 31,	Total Principal Payments	Total Interest Payments	Total Swap Payments
2018	\$120,000	1,215	3,911
2019	—	—	3,888
2020	—	—	3,348
2021	—	—	1,378

Loan and swap interest payments are calculated using the One Month LIBOR rate at December 31, 2017.

# REQUIRED SUPPLEMENTARY INFORMATION

## Schedule of Changes in the Employers' Net Pension Liability

Year Ended December 31

	(in thousands)				
	2017	2016	2015	Noncontributory System	
	2014	2013			
<b>Total pension liability</b>					
Service cost	\$ 403,981	407,690	394,798	407,992	441,320
Interest	1,877,576	1,764,653	1,775,819	1,699,693	1,646,213
Benefit changes	—	48,400	—	—	23,123
Difference between actual and expected experience	(84,234)	6,408	(188,166)	(204,823)	(208,501)
Assumption changes	642,187	563,741	—	(157,921)	—
Benefit payments	(1,248,037)	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
Refunds	(4,635)	(4,366)	(2,496)	(2,204)	(2,454)
<b>Net change in total pension liability</b>	<b>1,586,838</b>	<b>1,602,209</b>	<b>856,308</b>	<b>698,939</b>	<b>925,017</b>
<b>Total pension liability — beginning</b>	<b>26,501,781</b>	<b>24,899,572</b>	<b>24,043,264</b>	<b>23,344,325</b>	<b>22,419,308</b>
<b>Total pension liability — ending (a)</b>	<b>28,088,619</b>	<b>26,501,781</b>	<b>24,899,572</b>	<b>24,043,264</b>	<b>23,344,325</b>
<b>Plan fiduciary net position</b>					
Contributions — member	17,285	16,308	17,020	13,587	14,208
Contributions — employer	854,255	831,631	813,449	772,420	710,933
Court fees and fire insurance tax	—	—	—	—	—
Net investment income	2,987,282	1,783,911	366,748	1,419,053	2,588,981
Benefit payments	(1,248,037)	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
Refunds	(4,635)	(4,366)	(2,496)	(2,204)	(2,454)
Administrative expense	(9,579)	(8,856)	(8,797)	(8,828)	(8,329)
Net transfers with affiliated systems	(10,187)	(8,005)	33,648	30,467	(42,277)
<b>Net change in plan fiduciary net position</b>	<b>2,586,384</b>	<b>1,426,306</b>	<b>95,925</b>	<b>1,180,697</b>	<b>2,286,378</b>
<b>Plan fiduciary net position — beginning</b>	<b>22,618,743</b>	<b>21,192,437</b>	<b>21,096,512</b>	<b>19,915,815</b>	<b>17,629,437</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>25,205,127</b>	<b>22,618,743</b>	<b>21,192,437</b>	<b>21,096,512</b>	<b>19,915,815</b>
<b>Net pension liability/(asset) — ending (a-b)</b>	<b>\$ 2,883,492</b>	<b>3,883,038</b>	<b>3,707,135</b>	<b>2,946,752</b>	<b>3,428,510</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>89.7%</b>	<b>85.3%</b>	<b>85.1%</b>	<b>87.7%</b>	<b>85.3%</b>
<b>Projected covered employee payroll</b>	<b>\$ 3,375,321</b>	<b>3,406,567</b>	<b>3,458,286</b>	<b>3,570,912</b>	<b>3,705,771</b>
<b>Net pension liability/(asset) as a percentage of covered employee payroll</b>	<b>85.4%</b>	<b>114.0%</b>	<b>107.2%</b>	<b>82.5%</b>	<b>92.5%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Contributory System					Public Safety System				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
4,801	5,673	8,672	9,580	10,997	78,272	78,843	75,352	76,681	81,736
90,124	91,894	95,463	93,819	93,750	269,818	249,722	248,980	236,803	229,965
—	(45,057)	—	—	721	—	—	—	—	—
(24,988)	(13,801)	(15,289)	(22,839)	(20,520)	(3,041)	9,358	(17,164)	(25,225)	(29,228)
22,108	22,909	—	(4,233)	—	118,370	110,373	—	(52,410)	—
(84,761)	(83,447)	(81,390)	(77,015)	(74,158)	(172,870)	(164,508)	(155,387)	(144,763)	(137,486)
(1,613)	(1,700)	(1,215)	(2,433)	(1,922)	(226)	(183)	(533)	(199)	(467)
5,671	(23,529)	6,241	(3,121)	8,868	290,323	283,605	151,248	90,887	144,520
1,292,512	1,316,041	1,309,800	1,312,921	1,304,053	3,794,880	3,511,275	3,360,027	3,269,140	3,124,620
1,298,183	1,292,512	1,316,041	1,309,800	1,312,921	4,085,203	3,794,880	3,511,275	3,360,027	3,269,140
2,675	3,420	4,771	5,461	6,376	793	830	905	835	1,258
7,946	8,188	11,719	12,954	12,874	145,814	147,099	141,024	135,588	128,744
—	—	—	—	—	—	—	—	—	—
155,949	97,693	21,251	87,577	169,510	421,917	249,027	50,654	194,222	350,563
(84,761)	(83,447)	(81,390)	(77,015)	(74,158)	(172,870)	(164,508)	(155,387)	(144,763)	(137,486)
(1,613)	(1,700)	(1,215)	(2,433)	(1,922)	(226)	(183)	(533)	(199)	(467)
(457)	(446)	(478)	(494)	(480)	(1,382)	(1,260)	(1,233)	(1,227)	(1,161)
(1,177)	(1,895)	(41,558)	(38,004)	33,094	5,926	6,701	4,023	2,746	4,676
78,562	21,813	(86,900)	(11,954)	145,294	399,972	237,706	39,453	187,202	346,127
1,204,904	1,183,091	1,269,991	1,281,945	1,136,651	3,176,545	2,938,839	2,899,386	2,712,184	2,366,057
1,283,466	1,204,904	1,183,091	1,269,991	1,281,945	3,576,517	3,176,545	2,938,839	2,899,386	2,712,184
14,717	87,608	132,950	39,809	30,976	508,686	618,335	572,436	460,641	556,956
98.9%	93.2%	89.9%	97.0%	97.6%	87.5%	83.7%	83.7%	86.3%	83.0%
45,177	53,615	82,426	90,623	98,023	350,782	352,407	355,171	360,750	365,998
32.6%	163.4%	161.3%	43.9%	31.6%	145.0%	175.5%	161.2%	127.7%	152.2%

Continued on page 94.

## Utah Retirement Systems

## REQUIRED SUPPLEMENTARY INFORMATION (Continued)

## Schedules of Changes in the Employers' Net Pension Liability (Continued)

Year Ended December 31

	(in thousands)				
	2017	2016	2015	2014	Firefighter 2013
Total pension liability					
Service cost	\$ 28,775	28,652	27,182	27,266	29,577
Interest	80,386	75,334	75,212	71,490	70,259
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	(9,216)	(5,525)	(8,259)	(15,077)	(13,083)
Assumption changes	31,357	25,572	—	(20,372)	—
Benefit payments	(54,793)	(52,102)	(49,671)	(47,710)	(44,747)
Refunds	(511)	(466)	(528)	(293)	(106)
Net change in total pension liability	75,998	71,465	43,936	15,304	41,900
Total pension liability — beginning	1,129,729	1,058,264	1,014,328	999,024	957,124
Total pension liability — ending (a)	1,205,727	1,129,729	1,058,264	1,014,328	999,024
Plan fiduciary net position					
Contributions — member	18,460	18,729	18,175	18,300	18,325
Contributions — employer	6,715	6,954	6,690	5,514	3,494
Court fees and fire insurance tax	1,223	10,569	17,218	14,154	11,285
Net investment income	146,736	87,746	17,934	69,070	125,685
Benefit payments	(54,793)	(52,102)	(49,671)	(47,710)	(44,747)
Refunds	(511)	(466)	(528)	(293)	(106)
Administrative expense	(408)	(374)	(371)	(370)	(355)
Net transfers with affiliated systems	1,259	1,611	2,573	3,713	1,302
Net change in plan fiduciary net position	118,681	72,667	12,020	62,378	114,883
Plan fiduciary net position — beginning	1,115,726	1,043,059	1,031,039	968,661	853,778
Plan fiduciary net position — ending (b)	1,234,407	1,115,726	1,043,059	1,031,039	968,661
Net pension liability/(asset) — ending (a-b)	\$ (28,680)	14,003	15,205	(16,711)	30,363
Plan fiduciary net position as a percentage of the total pension liability	102.4%	98.8%	98.6%	101.6%	97.0%
Projected covered employee payroll	\$ 112,953	112,322	111,133	111,305	110,741
Net pension liability/(asset) as a percentage of covered employee payroll	(25.4)%	12.5%	13.7%	(15.0)%	27.4%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.



Judges System					Utah Governors and Legislators Plan				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
5,325	5,023	4,794	4,895	4,537	68	89	99	106	100
14,866	14,064	14,136	13,641	12,924	879	851	890	884	860
	—	—	—	—	—	—	—	—	—
809	1,995	171	2,602	(569)	182	167	(105)	307	(233)
13,067	2,885	—	(130)	—	264	241	—	—	—
(13,621)	(12,330)	(12,400)	(11,361)	(10,189)	(973)	(941)	(904)	(909)	(892)
—	—	—	—	—	—	—	—	—	—
20,446	11,637	6,701	9,647	6,703	420	407	(20)	388	(165)
210,623	198,986	192,285	182,638	175,935	12,654	12,247	12,267	11,879	12,044
231,069	210,623	198,986	192,285	182,638	13,074	12,654	12,247	12,267	11,879
—	—	—	317	—	—	—	—	—	—
7,563	7,382	6,555	5,627	4,990	404	421	421	411	252
1,477	1,470	1,653	1,486	1,498	—	—	—	—	—
23,435	13,820	2,842	11,068	20,130	1,353	849	181	717	1,346
(13,621)	(12,330)	(12,400)	(11,361)	(10,189)	(973)	(941)	(904)	(909)	(892)
—	—	—	—	—	—	—	—	—	—
(79)	(71)	(71)	(71)	(66)	(5)	(4)	(5)	(5)	(4)
4,090	1,600	1,334	1,092	3,186	89	(12)	(20)	(14)	19
22,865	11,871	(87)	8,158	19,549	868	313	(327)	200	721
175,618	163,747	163,834	155,676	136,127	10,352	10,039	10,366	10,166	9,445
198,483	175,618	163,747	163,834	155,676	11,220	10,352	10,039	10,366	10,166
32,586	35,005	35,239	28,451	26,962	1,854	2,302	2,208	1,901	1,713
85.9%	83.4%	82.3%	85.2%	85.2%	85.8%	81.8%	82.0%	84.5%	85.6%
18,661	16,755	15,832	16,072	15,195	722	799	943	928	390
174.6%	208.9%	222.6%	177.0%	177.4%	256.6%	288.1%	234.1%	204.8%	439.2%

Continued on page 96.

## Utah Retirement Systems

REQUIRED SUPPLEMENTARY INFORMATION (Continued)

## Schedules of Changes in the Employers' Net Pension Liability (Concluded)

Year Ended December 31

	(in thousands)				
	Tier 2 Public Employees System				
	2017	2016	2015	2014	2013
<b>Total pension liability</b>					
Service cost	\$ 84,388	69,887	51,005	39,283	29,318
Interest	19,471	12,608	8,370	4,648	2,351
Benefit changes	—	—	—	—	(119)
Difference between actual and expected experience	357	(1,917)	(4,982)	(4,577)	(4,459)
Assumption changes	5,786	7,867	—	(1,385)	—
Benefit payments	(417)	(316)	(333)	—	—
Refunds	—	—	—	—	—
<b>Net change in total pension liability</b>	<b>109,585</b>	<b>88,129</b>	<b>54,060</b>	<b>37,969</b>	<b>27,091</b>
<b>Total pension liability — beginning</b>	<b>228,450</b>	<b>140,321</b>	<b>86,261</b>	<b>48,292</b>	<b>21,201</b>
<b>Total pension liability — ending (a)</b>	<b>338,035</b>	<b>228,450</b>	<b>140,321</b>	<b>86,261</b>	<b>48,292</b>
<b>Plan fiduciary net position</b>					
Contributions — member	—	—	—	—	—
Contributions — employer	79,175	63,062	49,645	37,299	25,743
Court fees and fire insurance tax	—	—	—	—	—
Net investment income	33,249	14,059	1,963	4,320	4,017
Benefit payments	(417)	(316)	(333)	—	—
Refunds	—	—	—	—	—
Administrative expense	(82)	(51)	(30)	(16)	(6)
Net transfers with affiliated systems	—	—	3	(2)	3
<b>Net change in plan fiduciary net position</b>	<b>111,925</b>	<b>76,754</b>	<b>51,248</b>	<b>41,601</b>	<b>29,757</b>
<b>Plan fiduciary net position — beginning</b>	<b>217,293</b>	<b>140,539</b>	<b>89,291</b>	<b>47,690</b>	<b>17,933</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>329,218</b>	<b>217,293</b>	<b>140,539</b>	<b>89,291</b>	<b>47,690</b>
<b>Net pension liability/(asset) — ending (a-b)</b>	<b>\$ 8,817</b>	<b>11,157</b>	<b>(218)</b>	<b>(3,030)</b>	<b>602</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>97.4%</b>	<b>95.1%</b>	<b>100.2%</b>	<b>103.5%</b>	<b>98.8%</b>
<b>Projected covered employee payroll</b>	<b>\$ 996,965</b>	<b>822,196</b>	<b>637,560</b>	<b>492,882</b>	<b>353,227</b>
<b>Net pension liability/(asset) as a percentage of covered employee payroll</b>	<b>0.9%</b>	<b>1.4%</b>	<b>(0.0)%</b>	<b>(0.6)%</b>	<b>0.2%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Tier 2 Public Safety and Firefighter System					Total All Retirement Systems				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
10,763	8,164	5,466	3,579	2,151	616,373	604,021	567,368	569,382	599,736
2,133	1,274	746	379	159	2,355,253	2,210,400	2,219,616	2,121,357	2,056,481
—	—	—	—	(7)	—	3,343	—	—	23,718
(2)	425	220	50	106	(120,133)	(2,890)	(233,574)	(269,582)	(276,487)
1,924	803	—	(127)	—	835,063	734,391	—	(236,578)	—
(61)	(28)	(30)	—	—	(1,575,533)	(1,497,989)	(1,423,762)	(1,325,556)	(1,242,156)
—	—	—	—	—	(6,985)	(6,715)	(4,772)	(5,129)	(4,949)
14,757	10,638	6,402	3,881	2,409	2,104,038	2,044,561	1,124,876	853,894	1,156,343
24,266	13,628	7,226	3,345	936	33,194,895	31,150,334	30,025,458	29,171,564	28,015,221
39,023	24,266	13,628	7,226	3,345	35,298,933	33,194,895	31,150,334	30,025,458	29,171,564
—	—	—	—	—	39,213	39,287	40,871	38,500	40,167
11,126	8,488	6,221	4,365	2,451	1,112,998	1,073,225	1,035,724	974,178	889,481
—	—	—	—	—	2,700	12,039	18,871	15,640	12,783
3,989	1,591	199	404	316	3,773,910	2,248,696	461,772	1,786,431	3,260,548
(61)	(28)	(30)	—	—	(1,575,533)	(1,497,989)	(1,423,762)	(1,325,556)	(1,242,156)
—	—	—	—	—	(6,985)	(6,715)	(4,772)	(5,129)	(4,949)
(9)	(5)	(3)	(1)	—	(12,001)	(11,067)	(10,988)	(11,012)	(10,401)
—	—	(3)	2	(3)	—	—	—	—	—
15,045	10,046	6,384	4,770	2,764	3,334,302	1,857,476	117,716	1,473,052	2,945,473
25,135	15,089	8,705	3,935	1,171	28,544,316	26,686,840	26,569,124	25,096,072	22,150,599
40,180	25,135	15,089	8,705	3,935	31,878,618	28,544,316	26,686,840	26,569,124	25,096,072
(1,157)	(869)	(1,461)	(1,479)	(590)	3,420,315	4,650,579	4,463,494	3,456,334	4,075,492
103.0%	103.6%	110.7%	120.5%	117.6%	90.3%	86.0%	85.7%	88.5%	86.0%
98,113	74,834	53,276	35,019	20,215	4,998,694	4,839,495	4,714,627	4,678,491	4,669,560
(1.2)%	(1.2)%	(2.7)%	(4.2)%	(2.9)%	68.4%	96.1%	94.7%	73.9%	87.3%

## Utah Retirement Systems

REQUIRED SUPPLEMENTARY INFORMATION (Continued)

## Schedules of Employers' Net Pension Liability

(dollars in thousands)

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Noncontributory Retirement System</b>	12/31/13	\$ 23,344,325	19,915,815	3,428,510	85.3%	\$ 3,705,771	92.5%
	12/31/14	24,043,264	21,096,512	2,946,752	87.7	3,570,912	82.5
	12/31/15	24,899,572	21,192,437	3,707,135	85.1	3,458,286	107.2
	12/31/16	26,501,781	22,618,743	3,883,038	85.3	3,406,567	114.0
	12/31/17	28,088,619	25,205,127	2,883,492	89.7	3,375,321	85.4
<b>Contributory Retirement System</b>	12/31/13	\$ 1,312,921	1,281,945	30,976	97.6%	\$ 98,023	31.6%
	12/31/14	1,309,800	1,269,991	39,809	97.0	90,623	43.9
	12/31/15	1,316,041	1,183,091	132,950	89.9	82,426	161.3
	12/31/16	1,292,512	1,204,904	87,608	93.2	53,615	163.4
	12/31/17	1,298,183	1,283,466	14,717	98.9	45,177	32.6
<b>Public Safety Retirement System</b>	12/31/13	\$ 3,269,140	2,712,184	556,956	83.0%	\$ 365,998	152.2%
	12/31/14	3,360,027	2,899,386	460,641	86.3	360,750	127.7
	12/31/15	3,511,275	2,938,839	572,436	83.7	355,171	161.2
	12/31/16	3,794,880	3,176,545	618,335	83.7	352,407	175.5
	12/31/17	4,085,203	3,576,517	508,686	87.5	350,782	145.0
<b>Firefighters Retirement System</b>	12/31/13	\$ 999,024	968,661	30,363	97.0%	\$ 110,741	27.4%
	12/31/14	1,014,328	1,031,039	(16,711)	101.6	111,305	(15.0)
	12/31/15	1,058,264	1,043,059	15,205	98.6	111,133	13.7
	12/31/16	1,129,729	1,115,726	14,003	98.8	112,322	12.5
	12/31/17	1,205,727	1,234,407	(28,680)	102.4	112,953	(25.4)
<b>Judges Retirement System</b>	12/31/13	\$ 182,638	155,676	26,962	85.2%	\$ 15,195	177.4%
	12/31/14	192,285	163,834	28,451	85.2	16,072	177.0
	12/31/15	198,986	163,747	35,239	82.3	15,832	222.6
	12/31/16	210,623	175,618	35,005	83.4	16,755	208.9
	12/31/17	231,069	198,483	32,586	85.9	18,661	174.6

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

**Utah Retirement Systems**

REQUIRED SUPPLEMENTARY INFORMATION *(Continued)*

**Schedules of Employers' Net Pension Liability** *(Concluded)*

*(dollars in thousands)*

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Utah Governors and Legislative Retirement Plan</b>	12/31/13	\$ 11,879	10,166	1,713	85.6%	\$ 390	439.2%
	12/31/14	12,267	10,366	1,901	84.5	928	204.8
	12/31/15	12,247	10,039	2,208	82.0	943	234.1
	12/31/16	12,654	10,352	2,302	81.8	799	288.1
	12/31/17	13,074	11,220	1,854	85.8	722	256.6
<b>Tier 2 Public Employees Retirement System</b>	12/31/13	\$ 48,292	47,690	602	98.8%	\$ 353,227	0.2%
	12/31/14	86,261	89,291	(3,030)	103.5	492,882	(0.6)
	12/31/15	140,321	140,539	(218)	100.2	637,560	(0.0)
	12/31/16	228,450	217,293	11,157	95.1	822,196	1.4
	12/31/17	338,035	329,218	8,817	97.4	996,965	0.9
<b>Tier 2 Public Safety and Firefighter Retirement System</b>	12/31/13	\$ 3,345	3,935	(590)	117.6%	\$ 20,215	(2.9)%
	12/31/14	7,226	8,705	(1,479)	120.5	35,019	(4.2)
	12/31/15	13,628	15,089	(1,461)	110.7	53,276	(2.7)
	12/31/16	24,266	25,135	(869)	103.6	74,834	(1.2)
	12/31/17	39,023	40,180	(1,157)	103.0	98,113	(1.2)
<b>All Retirement Systems</b>	12/31/13	\$ 29,171,564	25,096,072	4,075,492	86.0%	\$ 4,669,560	87.3%
	12/31/14	30,025,458	26,569,124	3,456,334	88.5	4,679,491	73.9
	12/31/15	31,150,334	26,686,840	4,463,494	85.7	4,714,627	94.7
	12/31/16	33,194,895	28,544,316	4,650,579	86.0	4,839,495	96.1
	12/31/17	35,298,933	31,878,618	3,420,315	90.3	4,998,694	68.4

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## Utah Retirement Systems

REQUIRED SUPPLEMENTARY INFORMATION (Continued)

## Schedules of Employer Contributions

(dollars in thousands)

System	Year Ended December 31	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Noncontributory Retirement System</b>	2008	\$ 522,733	522,733	—	3,871,636	13.50%
	2009	535,298	535,298	—	3,955,040	13.53
	2010	564,154	564,154	—	3,888,179	14.51
	2011	610,270	610,270	—	3,900,106	15.65
	2012	644,907	644,907	—	3,794,929	16.99
	2013	710,933	710,933	—	3,705,771	19.18
	2014	772,420	772,420	—	3,570,912	21.63
	2015	813,449	813,449	—	3,458,286	23.52
	2016	831,631	831,631	—	3,406,567	24.41
2017	854,255	854,255	—	3,375,321	25.31	
<b>Contributory Retirement System</b>	2008	\$ 11,037	11,037	—	133,110	8.29%
	2009	10,865	10,865	—	127,804	8.50
	2010	11,851	11,851	—	116,395	10.18
	2011	11,125	11,125	—	110,103	10.10
	2012	11,705	11,705	—	103,074	11.36
	2013	12,874	12,874	—	98,023	13.13
	2014	12,954	12,954	—	90,623	14.29
	2015	11,719	11,719	—	82,426	14.22
	2016	8,188	8,188	—	53,615	15.27
2017	7,946	7,946	—	45,177	17.59	
<b>Public Safety Retirement System</b>	2008	\$ 93,899	93,899	—	365,043	25.72%
	2009	98,729	98,729	—	373,959	26.40
	2010	103,586	103,586	—	363,037	28.53
	2011	110,829	110,829	—	374,293	29.61
	2012	117,975	117,975	—	366,471	32.19
	2013	128,744	128,744	—	365,998	35.18
	2014	135,588	135,588	—	360,750	37.59
	2015	141,024	141,024	—	355,171	39.71
	2016	147,099	147,099	—	352,407	41.74
2017	145,814	145,814	—	350,783	41.57	
<b>Firefighters Retirement System</b>	2008	\$ 10,219	10,219	—	102,252	9.99%
	2009	16,159	16,159	—	107,625	15.01
	2010	10,915	10,915	—	105,275	10.37
	2011	13,005	13,005	—	110,751	11.74
	2012	17,321	17,321	—	110,608	15.66
	2013	14,779	14,779	—	110,741	13.35
	2014	19,668	19,668	—	111,305	17.67
	2015	23,908	23,908	—	111,133	21.51
	2016	17,523	17,523	—	112,322	15.60
2017	7,938	7,938	—	112,953	7.03	
<b>Judges Retirement System</b>	2008	\$ 3,802	3,802	—	14,404	26.40%
	2009	4,184	4,184	—	14,434	28.99
	2010	4,715	4,715	—	14,234	33.12
	2011	5,403	5,403	—	14,981	36.07
	2012	5,898	5,898	—	14,885	39.62
	2013	6,488	6,488	—	15,195	42.70
	2014	7,113	7,113	—	16,072	44.26
	2015	8,208	8,208	—	15,832	51.84
	2016	8,852	8,852	—	16,755	52.83
2017	9,040	9,040	—	18,661	48.44	

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

**Utah Retirement Systems**

REQUIRED SUPPLEMENTARY INFORMATION (Concluded)

**Schedules of Employer Contributions** (Concluded)

(dollars in thousands)

System	Year Ended December 31	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Utah Governors and Legislative Retirement Plan</b>	2008	\$ —	—	—	910	0.00%
	2010	—	—	—	910	0.00
	2011	153	153	—	910	16.81
	2012	214	214	—	910	23.52
	2013	252	252	—	390	64.62
	2014	411	411	—	928	44.29
	2015	421	421	—	943	44.64
	2016	421	421	—	799	52.69
	2017	404	404	—	722	55.96
<b>Tier 2 Public Employees Retirement System<sup>†</sup></b>	2011	\$ 2,790	2,790	—	36,821	7.58%
	2012	14,208	14,208	—	203,779	6.97
	2013	25,743	25,743	—	353,227	7.29
	2014	37,299	37,299	—	492,882	7.57
	2015	49,645	49,645	—	637,560	7.79
	2016	63,062	63,062	—	822,196	7.67
	2017	79,175	79,175	—	996,965	7.94
<b>Tier 2 Public Safety and Firefighter Retirement System<sup>†</sup></b>	2011	\$ 89	89	—	855	10.41%
	2012	1,031	1,031	—	10,237	10.07
	2013	2,451	2,451	—	20,215	12.12
	2014	4,365	4,365	—	35,019	12.46
	2015	6,221	6,221	—	53,276	11.68
	2016	8,488	8,488	—	74,834	11.34
	2017	11,126	11,126	—	98,113	11.34
<b>All Retirement Systems</b>	2008	\$ 641,690	641,690	—	4,487,355	14.30%
	2009	665,235	665,235	—	4,579,772	14.53
	2010	695,221	695,221	—	4,488,030	15.49
	2011	753,664	753,664	—	4,548,820	16.57
	2012	813,259	813,259	—	4,604,893	17.66
	2013	902,264	902,264	—	4,669,560	19.32
	2014	989,818	989,818	—	4,678,491	21.16
	2015	1,054,595	1,054,595	—	4,714,628	22.37
	2016	1,085,264	1,085,264	—	4,839,495	22.43
2017	1,115,698	1,115,698	—	4,998,694	22.32	

<sup>†</sup>Additional years will be displayed as they become available.

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

**Schedule of Investment Returns**

Year Ended December 31

	2017	2016	2015	2014
Annual money weighted rate of return, net of investment expense	13.38%	8.73%	2.02%	7.94%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# NOTES TO REQUIRED SUPPLEMENTARY INFORMATION



## Note 1 / Schedules of Changes in the Employer Net Pension Liability

The total pension liability contained in this schedule was provided by the Systems actuary, Gabriel, Roeder, Smith & Company. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Retirement Systems.

## Note 2 / Schedules of Employer Contributions

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

The actuarially determined contribution rates determined by an actuarial valuation are effective for the fiscal year beginning 18 months after the valuation date. For example, the actuarially determined contribution rate determined by the January 1, 2017 valuation is effective for the fiscal year beginning July 1, 2019.

The Board certifies the contribution rates that employers are contractually required to contribute to the retirement system. Per 49-11-301(5) of the Utah Code, if the funded ratio of the plan is less than 110%, then the Board is permitted to maintain the prior year's contribution rate if the actuarially determined contribution is lower. The Board has historically followed this policy. The projected covered payroll is an estimated payroll figure based upon the January 1, 2017, census data.

The actual contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems. Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

## Note 3 / Actuarial Assumptions

The information presented in the required supplementary schedules was used in the actuarial valuation for purposes of determining the actuarially determined contribution rate. The assumptions and methods used for this actuarial valuation were recommended by the actuary and adopted by the Board. Additional information as of the latest actuarial valuation follows.



NOTES TO REQUIRED SUPPLEMENTARY INFORMATION (Continued)

December 31, 2017

**Summary of Actuarial Assumptions**

	Noncontributory	Contributory	Public Safety	Firefighters	Judges	Governors and Legislators	Tier 2 Public Employees	Tier 2 Public Safety and Firefighter
Valuation date	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17
Actuarial cost method	Entry Age	Entry Age	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	Level Percent of Payroll	Level Percent of Payroll
Amortization period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Closed Group 17-Year Closed Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period
Actuarial asset valuation method (All Systems under same method)	Based on the total fair value income of investments with the excess or shortfall of actual investment income over or under the expected investment return smoothed over five years. One-fifth of the excess or shortfall is recognized each year for five years.							
Actuarial assumptions:								
Investment rate of return	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%
Projected salary increases*	3.25-9.75%	3.25-9.75%	3.25-7.25%	3.25-8.75%	3.25%	None	3.25-9.75%	3.25-8.75%
Inflation rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Post-retirement cost-of-living adjustment	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Mortality: (Non-educators)	Male: 110% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for males, projected with Scale AA from the year 2017. Female: 110% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for females, projected with Scale AA from the year 2017.							
Mortality: (Educators)	Male: 90% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for males, projected with Scale AA from the year 2017. Female: 90% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for females, projected with Scale AA from the year 2017.							

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.

\*Composed of 2.50% inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service.

## Noncontributory Retirement System

Schedules of Fiduciary Net Position —  
Pension Trust Fund by Division

December 31, 2017

With Comparative Totals for December 31, 2016

*(in thousands)*

	Local Government	State and School	Total All Divisions	
			2017	2016
<b>Assets:</b>				
Cash	\$ 1	2	3	827
Receivables:				
Employer contributions	7,841	37,848	45,689	41,021
Investments	105,947	430,817	536,764	352,756
Total receivables	113,788	468,665	582,453	393,777
Investments at fair value:				
Short-term securities	430,591	1,750,939	2,181,530	1,895,723
Debt securities	711,290	2,892,362	3,603,652	3,452,309
Equity investments	1,897,175	7,714,597	9,611,772	8,083,041
Absolute return	696,010	2,830,228	3,526,238	3,573,055
Private equity	538,626	2,190,246	2,728,872	2,607,844
Real assets	740,538	3,011,294	3,751,832	3,383,071
Total investments	5,014,230	20,389,666	25,403,896	22,995,043
Invested securities lending collateral	208,953	849,678	1,058,631	554,319
Property and equipment at cost, net of accumulated depreciation	685	2,787	3,472	3,875
Total assets	5,337,657	21,710,798	27,048,455	23,947,841
<b>Liabilities:</b>				
Securities lending liability	208,953	849,678	1,058,631	554,319
Disbursements in excess of cash balance	5,320	23,654	28,974	31,136
Compensated absences, post-employment benefits and insurance reserve	3,422	13,917	17,339	16,377
Investment accounts payable	127,386	516,105	643,491	564,811
Real estate liabilities	18,730	76,163	94,893	162,455
Total liabilities	363,811	1,479,517	1,843,328	1,329,098
Net position restricted for pensions	\$ 4,973,846	20,231,281	25,205,127	22,618,743

**Noncontributory Retirement System****Schedules of Changes in Fiduciary Net Position —  
Pension Trust Fund by Division**

Year Ended December 31, 2017

With Comparative Totals for Year Ended December 31, 2016

*(in thousands)*

	Local Government	State and School	Total All Divisions	
			2017	2016
<b>Additions:</b>				
Contributions:				
Member	\$ 3,928	13,357	17,285	16,308
Employer	174,037	680,218	854,255	831,631
Total contributions	177,965	693,575	871,540	847,939
Investment income:				
Net appreciation in fair value of investments	503,705	2,060,588	2,564,293	1,428,287
Interest, dividends, and other investment income	90,999	372,264	463,263	388,277
Total income from investment activity	594,704	2,432,852	3,027,556	1,816,564
Less investment expenses	8,841	36,166	45,007	38,987
Net income from investment activity	585,863	2,396,686	2,982,549	1,777,577
Income from security lending activity	1,053	4,308	5,361	7,279
Less security lending expense	123	505	628	945
Net income from security lending activity	930	3,803	4,733	6,334
Net investment income	586,793	2,400,489	2,987,282	1,783,911
Transfers from affiliated systems	—	—	—	—
Total additions	764,758	3,094,064	3,858,822	2,631,850
<b>Deductions:</b>				
Retirement benefits	176,137	887,757	1,063,894	1,001,451
Cost-of-living benefits	26,187	157,956	184,143	182,866
Refunds	814	3,821	4,635	4,366
Administrative expenses	1,828	7,751	9,579	8,856
Transfers to affiliated systems	(1,647)	11,834	10,187	8,005
Total deductions	203,319	1,069,119	1,272,438	1,205,544
Increase from operations	561,439	2,024,945	2,586,384	1,426,306
Net position restricted for pensions beginning of year	4,412,407	18,206,336	22,618,743	21,192,437
Net position restricted for pensions end of year	\$ 4,973,846	20,231,281	25,205,127	22,618,743

## Noncontributory Retirement System

Schedules of Changes in the Employers'  
Net Pension Liability by Division

Year Ended December 31

(in thousands)

	Local Government				
	2017	2016	2015	2014	2013
Total pension liability					
Service cost	\$ 93,774	96,049	91,304	93,436	100,789
Interest	359,989	330,648	328,120	310,587	297,617
Benefit changes	—	48,400	—	—	6,063
Difference between actual and expected experience	(22,546)	18,123	(19,610)	(16,109)	(39,370)
Assumption changes	129,368	112,696	—	(52,889)	—
Benefit payments	(202,324)	(191,011)	(177,915)	(159,967)	(149,891)
Refunds	(814)	(392)	(248)	(235)	(620)
Net change in total pension liability	357,447	414,513	221,651	174,823	214,588
Total pension liability — beginning	5,054,529	4,640,016	4,418,365	4,243,542	4,028,954
Total pension liability — ending (a)	5,411,976	5,054,529	4,640,016	4,418,365	4,243,542
Plan fiduciary net position					
Contributions — member	3,928	5,023	5,481	3,859	2,637
Contributions — employer	174,037	171,967	167,015	157,930	147,105
Net investment income	586,793	346,001	69,895	266,210	478,461
Benefit payments	(202,324)	(191,011)	(177,915)	(159,967)	(149,891)
Refunds	(814)	(392)	(248)	(235)	(620)
Administrative expense	(1,828)	(1,671)	(1,622)	(1,604)	(1,497)
Net transfers with affiliated systems	1,647	8,323	27,420	14,058	(5,302)
Net change in plan fiduciary net position	561,439	338,240	90,026	280,251	470,893
Plan fiduciary net position — beginning	4,412,407	4,074,167	3,984,141	3,703,890	3,232,997
Plan fiduciary net position — ending (b)	4,973,846	4,412,407	4,074,167	3,984,141	3,703,890
Net pension liability — ending (a-b)	\$ 438,130	642,122	565,849	434,224	539,652
Plan fiduciary net position as a percentage of the total pension liability	91.9%	87.3%	87.8%	90.2%	87.3%
Projected covered employee payroll	\$ 811,404	830,406	826,998	845,364	864,838
Net pension liability as a percentage of covered employee payroll	54.0%	77.3%	68.4%	51.4%	62.4%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

State and School					Total All Divisions				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
310,207	311,641	303,494	314,556	340,531	403,981	407,690	394,798	407,992	441,320
1,517,587	1,434,005	1,447,699	1,389,106	1,348,596	1,877,576	1,764,653	1,775,819	1,699,693	1,646,213
—	—	—	—	17,060	—	48,400	—	—	23,123
(61,688)	(11,715)	(168,556)	(188,714)	(169,131)	(84,234)	6,408	(188,166)	(204,823)	(208,501)
512,819	451,045	—	(105,032)	—	642,187	563,741	—	(157,921)	—
(1,045,713)	(993,306)	(945,732)	(883,831)	(824,793)	(1,248,037)	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
(3,821)	(3,974)	(2,248)	(1,969)	(1,834)	(4,635)	(4,366)	(2,496)	(2,204)	(2,454)
1,229,391	1,187,696	634,657	524,116	710,429	1,586,838	1,602,209	856,308	698,939	925,017
21,447,252	20,259,556	19,624,899	19,100,783	18,390,354	26,501,781	24,899,572	24,043,264	23,344,325	22,419,308
22,676,643	21,447,252	20,259,556	19,624,899	19,100,783	28,088,619	26,501,781	24,899,572	24,043,264	23,344,325
13,357	11,285	11,539	9,728	11,571	17,285	16,308	17,020	13,587	14,208
680,218	659,664	646,434	614,490	563,828	854,255	831,631	813,449	772,420	710,933
2,400,489	1,437,910	296,853	1,152,843	2,110,520	2,987,282	1,783,911	366,748	1,419,053	2,588,981
(1,045,713)	(993,306)	(945,732)	(883,831)	(824,793)	(1,248,037)	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
(3,821)	(3,974)	(2,248)	(1,969)	(1,834)	(4,635)	(4,366)	(2,496)	(2,204)	(2,454)
(7,751)	(7,185)	(7,175)	(7,224)	(6,832)	(9,579)	(8,856)	(8,797)	(8,828)	(8,329)
(11,834)	(16,328)	6,228	16,409	(36,975)	(10,187)	(8,005)	33,648	30,467	(42,277)
2,024,945	1,088,066	5,899	900,446	1,815,485	2,586,384	1,426,306	95,925	1,180,697	2,286,378
18,206,336	17,118,270	17,112,371	16,211,925	14,396,440	22,618,743	21,192,437	21,096,512	19,915,815	17,629,437
20,231,281	18,206,336	17,118,270	17,112,371	16,211,925	25,205,127	22,618,743	21,192,437	21,096,512	19,915,815
2,445,362	3,240,916	3,141,286	2,512,528	2,888,858	2,883,492	3,883,038	3,707,135	2,946,752	3,428,510
89.2%	84.9%	84.5%	87.2%	84.9%	89.7%	85.3%	85.1%	87.7%	85.3%
2,563,917	2,576,161	2,631,288	2,725,548	2,840,933	3,375,321	3,406,567	3,458,286	3,570,912	3,705,771
95.4%	125.8%	119.4%	92.2%	101.7%	85.4%	114.0%	107.2%	82.5%	92.5%

**Noncontributory Retirement System**
**Schedules of Net Pension Liability by Division**
*(dollars in thousands)*

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Noncontributory Local Government</b>	12/31/13	\$ 4,243,542	3,703,890	539,652	87.3%	\$ 864,838	62.4%
	12/31/14	4,418,365	3,984,141	434,224	90.2	845,364	51.4
	12/31/15	4,640,016	4,074,167	565,849	87.8	826,998	68.4
	12/31/16	5,054,529	4,412,407	642,122	87.3	830,406	77.3
	12/31/17	5,411,976	4,973,846	438,130	91.9	811,404	54.0
<b>Noncontributory State and School</b>	12/31/13	\$ 19,100,783	16,211,925	2,888,858	84.9%	\$ 2,840,933	101.7%
	12/31/14	19,624,899	17,112,371	2,512,528	87.2	2,725,548	92.2
	12/31/15	20,259,556	17,118,270	3,141,286	84.5	2,631,288	119.4
	12/31/16	21,447,252	18,206,336	3,240,916	84.9	2,576,161	125.8
	12/31/17	22,676,643	20,231,281	2,445,362	89.2	2,563,917	95.4
<b>Total Noncontributory Retirement System</b>	12/31/13	\$ 23,344,325	19,915,815	3,428,510	85.3%	\$ 3,705,771	92.5%
	12/31/14	24,043,264	21,096,512	2,946,752	87.7	3,570,912	82.5
	12/31/15	24,899,572	21,192,437	3,707,135	85.1	3,458,286	107.2
	12/31/16	26,501,781	22,618,743	3,883,038	85.3	3,406,567	114.0
	12/31/17	28,088,619	25,205,127	2,883,492	89.7	3,375,321	85.4

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

**Noncontributory Retirement System**

**Schedules of Employer Contributions by Division**

(dollars in thousands)

System	Year Ended	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Noncontributory Local Government</b>	2013	\$ 147,105	147,105	—	864,838	17.01%
	2014	157,930	157,930	—	845,364	18.68
	2015	167,015	167,015	—	826,998	20.20
	2016	171,967	171,967	—	830,406	20.71
	2017	174,037	174,037	—	811,404	21.45
<b>Noncontributory State and School</b>	2013	\$ 563,828	563,828	—	2,840,933	19.85%
	2014	614,490	614,490	—	2,725,548	22.55
	2015	646,490	646,434	—	2,631,288	24.57
	2016	659,664	659,664	—	2,576,161	25.61
	2017	680,218	680,218	—	2,563,917	26.53
<b>Total Noncontributory Retirement System</b>	2013	\$ 710,933	710,933	—	3,705,771	19.18%
	2014	772,420	772,420	—	3,570,912	21.63
	2015	813,449	813,449	—	3,458,286	23.52
	2016	831,631	831,631	—	3,406,567	24.41
	2017	854,255	854,255	—	3,375,321	25.31

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

## Contributory Retirement System

Schedules of Fiduciary Net Position —  
Pension Trust Fund by Division

December 31, 2017

With Comparative Totals for December 31, 2016

*(in thousands)*

	Local Government	State and School	Total All Divisions	
			2017	2016
<b>Assets:</b>				
Cash	\$ 1	1	2	2
Receivables:				
Member contributions	59	56	115	126
Employer contributions	160	165	325	355
Investments	9,697	17,675	27,372	18,818
Total receivables	9,916	17,896	27,812	19,299
Investments at fair value:				
Short-term securities	39,411	71,837	111,248	101,128
Debt securities	65,103	118,667	183,770	184,164
Equity investments	173,643	316,513	490,156	431,192
Absolute return	63,704	116,118	179,822	190,605
Private equity	49,299	89,861	139,160	139,116
Real assets	67,780	123,547	191,327	180,470
Total investments	458,940	836,543	1,295,483	1,226,675
Invested securities lending collateral	19,125	34,860	53,985	29,570
Property and equipment at cost, net of accumulated depreciation	63	114	177	207
Total assets	488,045	889,414	1,377,459	1,275,753
<b>Liabilities:</b>				
Securities lending collateral liability	19,125	34,860	53,985	29,570
Disbursements in excess of cash balance	487	887	1,374	1,660
Compensated absences, post-employment benefits and insurance reserve	313	571	884	874
Investment accounts payable	11,659	21,252	32,911	30,079
Real estate liabilities	1,714	3,125	4,839	8,666
Total liabilities	33,298	60,695	93,993	70,849
Net position restricted for pensions	\$ 454,747	828,719	1,283,466	1,204,904



**Contributory Retirement System****Schedules of Changes in Fiduciary Net Position —  
Pension Trust Fund by Division**

Year Ended December 31, 2017

With Comparative Totals for Year Ended December 31, 2016

*(in thousands)*

	Local Government	State and School	Total All Divisions	
			2017	2016
<b>Additions:</b>				
Contributions:				
Member	\$ 1,289	1,386	2,675	3,420
Employer	2,969	4,977	7,946	8,188
Total contributions	4,258	6,363	10,621	11,608
Investment income:				
Net appreciation in fair value of investments	47,269	86,598	133,867	78,218
Interest, dividends, and other investment income	8,540	15,645	24,185	21,264
Total income from investment activity	55,809	102,243	158,052	99,482
Less investment expenses	830	1,520	2,350	2,135
Net income from investment activity	54,979	100,723	155,702	97,347
Income from securities lending activity	99	181	280	398
Less security lending expense	12	21	33	52
Net income from security lending activity	87	160	247	346
Net investment income	55,066	100,883	155,949	97,693
Total additions	59,324	107,246	166,570	109,301
<b>Deductions:</b>				
Retirement benefits	24,005	48,068	72,073	70,137
Cost-of-living benefits	3,452	9,172	12,624	13,232
Supplemental retirement benefits	11	53	64	78
Refunds	703	910	1,613	1,700
Administrative expenses	162	295	457	446
Transfers to affiliated systems	2,482	(1,305)	1,177	1,895
Total deductions	30,815	57,193	88,008	87,488
Decrease from operations	28,509	50,053	78,562	21,813
Net position restricted for pensions beginning of year	426,238	778,666	1,204,904	1,183,091
Net position restricted for pensions end of year	\$ 454,747	828,719	1,283,466	1,204,904

## Contributory Retirement System

Schedules of Changes in the Employers'  
Net Pension Liability by Division

Year Ended December 31

*(in thousands)*

	Local Government				
	2017	2016	2015	2014	2013
Total pension liability					
Service cost	\$ 2,301	2,659	5,360	5,679	6,352
Interest	32,120	34,422	35,298	34,255	33,840
Benefit changes	—	(45,057)	—	—	415
Difference between actual and expected experience	(11,176)	(4,618)	(4,833)	(8,465)	(8,020)
Assumption changes	8,760	8,285	—	(2,914)	—
Benefit payments	(27,468)	(26,126)	(26,652)	(23,177)	(21,607)
Refunds	(703)	(655)	(623)	(1,294)	(855)
Net change in total pension liability	3,836	(31,090)	8,550	4,084	10,125
Total pension liability — beginning	459,050	490,140	481,590	477,506	467,381
Total pension liability — ending (a)	462,884	459,050	490,140	481,590	477,506
Plan fiduciary net position					
Contributions — member	1,289	1,759	2,572	3,103	3,418
Contributions — employer	2,969	3,730	6,384	7,410	6,963
Net investment income	55,066	34,351	7,597	30,871	58,533
Benefit payments	(27,468)	(26,126)	(26,652)	(23,177)	(21,607)
Refunds	(703)	(655)	(623)	(1,294)	(855)
Administrative expense	(162)	(157)	(176)	(179)	(172)
Net transfers with affiliated systems	(2,482)	(6,519)	(21,993)	(10,140)	5,790
Net change in plan fiduciary net position	28,509	6,383	(32,891)	6,594	52,070
Plan fiduciary net position — beginning	426,238	419,855	452,746	446,152	394,082
Plan fiduciary net position — ending (b)	454,747	426,238	419,855	452,746	446,152
Net pension liability — ending (a-b)	\$ 8,137	32,812	70,285	28,844	31,354
Plan fiduciary net position as a percentage of the total pension liability	98.2%	92.9%	85.7%	94.0%	93.4%
Projected covered employee payroll	\$ 20,724	23,959	48,590	51,420	54,445
Net pension liability as a percentage of covered employee payroll	39.3%	137.0%	144.6%	56.1%	57.6%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

State and School					Total All Divisions				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
2,500	3,014	3,312	3,901	4,645	4,801	5,673	8,672	9,580	10,997
58,004	57,472	60,165	59,564	59,910	90,124	91,894	95,463	93,819	93,750
—	—	—	—	306	—	(45,057)	—	—	721
(13,814)	(9,183)	(10,456)	(14,374)	(12,500)	(24,988)	(13,801)	(15,289)	(22,839)	(20,520)
13,348	14,624	—	(1,319)	—	22,108	22,909	—	(4,233)	—
(57,293)	(57,321)	(54,738)	(53,838)	(52,551)	(84,761)	(83,447)	(81,390)	(77,015)	(74,158)
(910)	(1,045)	(592)	(1,139)	(1,067)	(1,613)	(1,700)	(1,215)	(2,433)	(1,922)
1,837	7,561	(2,309)	(7,205)	(1,257)	5,671	(23,529)	6,241	(3,121)	8,868
833,462	825,901	828,210	835,415	836,672	1,292,512	1,316,041	1,309,800	1,312,921	1,304,053
835,299	833,462	825,901	828,210	835,415	1,298,183	1,292,512	1,316,041	1,309,800	1,312,921
1,386	1,661	2,199	2,358	2,958	2,675	3,420	4,771	5,461	6,376
4,977	4,458	5,335	5,544	5,911	7,946	8,188	11,719	12,954	12,874
100,883	63,342	13,654	56,706	110,977	155,949	97,693	21,251	87,577	169,510
(57,293)	(57,321)	(54,738)	(53,838)	(52,551)	(84,761)	(83,447)	(81,390)	(77,015)	(74,158)
(910)	(1,045)	(592)	(1,139)	(1,067)	(1,613)	(1,700)	(1,215)	(2,433)	(1,922)
(295)	(289)	(302)	(315)	(308)	(457)	(446)	(478)	(494)	(480)
1,305	4,624	(19,565)	(27,864)	27,304	(1,177)	(1,895)	(41,558)	(38,004)	33,094
50,053	15,430	(54,009)	(18,548)	93,224	78,562	21,813	(86,900)	(11,954)	145,294
778,666	763,236	817,245	835,793	742,569	1,204,904	1,183,091	1,269,991	1,281,945	1,136,651
828,719	778,666	763,236	817,245	835,793	1,283,466	1,204,904	1,183,091	1,269,991	1,281,945
6,580	54,796	62,665	10,965	(378)	14,717	87,608	132,950	39,809	30,976
99.2%	93.4%	92.4%	98.7%	100.0%	98.9%	93.2%	89.9%	97.0%	97.6%
24,453	29,656	33,836	39,203	43,578	45,177	53,615	82,426	90,623	98,023
26.9%	184.8%	185.2%	28.0%	(0.9)%	32.6%	163.4%	161.3%	43.9%	31.6%

**Contributory Retirement System**
**Schedules of Net Pension Liability by Division**

(dollars in thousands)

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Contributory Local Government</b>	12/31/13	\$ 477,506	446,152	31,354	93.4%	\$ 54,445	57.6%
	12/31/14	481,590	452,746	28,844	94.0	51,420	56.1
	12/31/15	490,140	419,855	70,285	85.7	48,590	144.6
	12/31/16	459,050	426,238	32,812	92.9	23,959	137.0
	12/31/17	462,884	454,747	8,137	98.2	20,724	39.3
<b>Contributory State and School</b>	12/31/13	\$ 835,415	835,793	(378)	100.0%	\$ 43,578	(0.9)%
	12/31/14	828,210	817,245	10,965	98.7	39,203	28.0
	12/31/15	825,901	763,236	62,665	92.4	33,836	185.2
	12/31/16	833,462	778,666	54,796	93.4	29,656	184.8
	12/31/17	835,299	828,719	6,580	99.2	24,453	26.9
<b>Total</b>	12/31/13	\$ 1,312,921	1,281,945	30,976	97.6%	\$ 98,023	31.6%
<b>Contributory Retirement System</b>	12/31/14	1,309,800	1,269,991	39,809	97.0	90,623	43.9
	12/31/15	1,316,041	1,183,091	132,950	89.9	82,426	161.3
	12/31/16	1,292,512	1,204,904	87,608	93.2	53,615	163.4
	12/31/17	1,298,183	1,283,466	14,717	98.9	45,177	32.6

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Contributory Retirement System

## Schedules of Employer Contributions by Division

*(dollars in thousands)*

System	Year Ended	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Contributory Local Government</b>	2013	\$ 6,963	6,963	—	54,445	12.79%
	2014	7,410	7,410	—	51,420	14.41
	2015	6,384	6,384	—	48,590	13.14
	2016	3,730	3,730	—	23,959	15.57
	2017	2,969	2,969	—	20,724	14.33
<b>Contributory State and School</b>	2013	\$ 5,911	5,911	—	43,578	13.56%
	2014	5,544	5,544	—	39,203	14.14
	2015	5,335	5,335	—	33,836	15.77
	2016	4,458	4,458	—	29,656	15.03
	2017	4,977	4,977	—	24,453	20.35
<b>Total Contributory Retirement System</b>	2013	\$ 12,874	12,874	—	98,023	13.13%
	2014	12,954	12,954	—	90,623	14.29
	2015	11,719	11,719	—	82,426	14.22
	2016	8,188	8,188	—	53,615	15.27
	2017	7,946	7,946	—	45,177	17.59

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

## Public Safety Retirement System

Schedules of Fiduciary Net Position —  
Pension Trust Fund by Division

December 31, 2017

With Comparative Totals for December 31, 2016

(in thousands)

	State of Utah Public Safety	Other Division A (with Social Security)	Salt Lake City
<b>Assets:</b>			
Cash	\$ 2	4	2
Receivables:			
Member contributions	—	10	—
Employer contributions	1,971	2,234	565
Investments	25,700	30,907	6,238
Total receivables	27,671	33,151	6,803
Investments at fair value:			
Short-term securities	104,449	125,611	25,351
Debt securities	172,539	207,496	41,878
Equity investments	460,200	553,440	111,697
Absolute return	168,832	203,039	40,978
Private equity	130,655	157,127	31,712
Real assets	179,633	216,028	43,600
Total investments	1,216,308	1,462,741	295,216
Invested securities lending collateral	50,686	60,955	12,302
Property and equipment at cost, net of accumulated depreciation	166	200	40
Total assets	1,294,833	1,557,051	314,363
<b>Liabilities:</b>			
Securities lending liability	50,686	60,955	12,302
Disbursements in excess of cash balance	1,290	1,552	313
Compensated absences, post-employment benefits and insurance reserve	830	998	202
Investment accounts payable	30,900	37,161	7,500
Real estate liabilities	4,543	5,464	1,103
Total liabilities	88,249	106,130	21,420
Net position restricted for pensions	\$ 1,206,584	1,450,921	292,943

UTAH RETIREMENT SYSTEMS

Ogden	Provo	Logan	Bountiful	Other Division B (without Social Security)	Total All Divisions	
					2017	2016
2	2	2	2	4	20	20
—	—	—	—	2	12	14
117	87	40	73	1,559	6,646	5,520
1,404	1,105	621	448	9,739	76,162	49,543
1,521	1,192	661	521	11,300	82,820	55,077
5,705	4,491	2,523	1,820	39,583	309,533	266,248
9,423	7,419	4,167	3,006	65,387	511,315	484,867
25,134	19,787	11,115	8,017	174,401	1,363,791	1,135,241
9,221	7,259	4,078	2,941	63,982	500,330	501,825
7,136	5,618	3,156	2,276	49,514	387,194	366,264
9,811	7,724	4,339	3,129	68,075	532,339	475,141
66,430	52,298	29,378	21,189	460,942	3,604,502	3,229,586
2,768	2,179	1,224	883	19,208	150,205	77,853
9	7	4	3	63	492	544
70,730	55,678	31,269	22,598	491,517	3,838,039	3,363,080
2,768	2,179	1,224	883	19,208	150,205	77,853
70	55	31	22	489	3,822	4,373
45	36	20	14	315	2,460	2,301
1,688	1,329	746	538	11,710	91,572	79,192
248	195	110	79	1,721	13,463	22,816
4,819	3,794	2,131	1,536	33,443	261,522	186,535
65,911	51,884	29,138	21,062	458,074	3,576,517	3,176,545

## Public Safety Retirement System

Schedules of Changes in Fiduciary Net Position —  
Pension Trust Fund by Division

Year Ended December 31, 2017

With Comparative Totals for Year Ended December 31, 2016

*(in thousands)*

	State of Utah Public Safety	Other Division A (with Social Security)	Salt Lake City
<b>Additions:</b>			
Contributions:			
Member	\$ 221	366	—
Employer	49,386	53,112	14,899
Total contributions	49,607	53,478	14,899
Investment income:			
Net appreciation in fair value of investments	122,491	147,479	29,703
Interest, dividends, and other investment income	22,129	26,643	5,366
Total income from investment activity	144,620	174,122	35,069
Less investment expenses	2,150	2,588	521
Net income from investment activity	142,470	171,534	34,548
Income from security lending activity	256	308	62
Less security lending expense	30	36	7
Net income from security lending activity	226	272	55
Net investment income	142,696	171,806	34,603
Transfers from (to) affiliated systems	233	(11,797)	1,642
Total additions	192,536	213,487	51,144
<b>Deductions:</b>			
Retirement benefits	53,258	49,985	14,779
Cost-of-living benefits	11,079	10,061	3,930
Supplemental retirement benefits	114	82	36
Refunds	66	158	2
Administrative expenses	470	542	129
Total deductions	64,987	60,828	18,876
Increase (decrease) from operations	127,549	152,659	32,268
Net position restricted for pensions beginning of year	1,079,035	1,298,262	260,675
Net position restricted for pensions end of year	\$ 1,206,584	1,450,921	292,943



UTAH RETIREMENT SYSTEMS

Ogden	Provo	Logan	Bountiful	Other Division B (without Social Security)	Total All Divisions	
					2017	2016
—	—	—	—	206	793	830
3,072	2,258	1,034	911	21,142	145,814	147,099
3,072	2,258	1,034	911	21,348	146,607	147,929
6,733	5,272	2,967	2,145	45,387	362,177	199,385
1,216	952	536	388	8,200	65,430	54,203
7,949	6,224	3,503	2,533	53,587	427,607	253,588
118	93	52	38	797	6,357	5,444
7,831	6,131	3,451	2,495	52,790	421,250	248,144
14	11	6	4	95	756	1,015
2	1	1	1	11	89	132
12	10	5	3	84	667	883
7,843	6,141	3,456	2,498	52,874	421,917	249,027
(128)	16	36	323	15,601	5,926	6,701
10,787	8,415	4,526	3,732	89,823	574,450	403,657
3,372	2,523	1,265	1,268	17,324	143,774	135,697
910	561	282	245	1,786	28,854	28,547
4	5	—	1	—	242	264
—	—	—	—	—	226	183
29	22	12	9	169	1,382	1,260
4,315	3,111	1,559	1,523	19,279	174,478	165,951
6,472	5,304	2,967	2,209	70,544	399,972	237,706
59,439	46,580	26,171	18,853	387,530	3,176,545	2,938,839
65,911	51,884	29,138	21,062	458,074	3,576,517	3,176,545

## Public Safety Retirement System

Schedules of Changes in the Employers'  
Net Pension Liability by Division

Year Ended December 31

(in thousands)

	State of Utah				
	2017	2016	2015	2014	2013
<b>Total pension liability</b>					
Service cost	\$ 24,057	24,327	23,270	24,190	26,013
Interest	91,628	86,361	87,273	83,519	81,713
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	3,619	(3,139)	(14,298)	(12,067)	(2,099)
Assumption changes	32,840	29,315	—	(17,596)	—
Benefit payments	(64,451)	(62,622)	(59,271)	(55,075)	(52,432)
Refunds	(66)	(8)	(18)	(12)	(2)
<b>Net change in total pension liability</b>	<b>87,627</b>	<b>74,234</b>	<b>36,956</b>	<b>22,959</b>	<b>53,193</b>
<b>Total pension liability — beginning</b>	<b>1,292,844</b>	<b>1,218,610</b>	<b>1,181,654</b>	<b>1,158,695</b>	<b>1,105,502</b>
<b>Total pension liability — ending (a)</b>	<b>1,380,471</b>	<b>1,292,844</b>	<b>1,218,610</b>	<b>1,181,654</b>	<b>1,158,695</b>
<b>Plan fiduciary net position</b>					
Contributions — member	221	112	115	152	103
Contributions — employer	49,386	50,554	47,449	45,810	43,393
Net investment income	142,696	84,744	17,349	66,949	121,520
Benefit payments	(64,451)	(62,622)	(59,271)	(55,075)	(52,432)
Refunds	(66)	(8)	(18)	(12)	(2)
Administrative expense	(470)	(432)	(431)	(434)	(413)
Net transfers with affiliated systems	233	3,363	2,301	1,124	757
<b>Net change in plan fiduciary net position</b>	<b>127,549</b>	<b>75,711</b>	<b>7,494</b>	<b>58,514</b>	<b>112,926</b>
<b>Plan fiduciary net position — beginning</b>	<b>1,079,035</b>	<b>1,003,324</b>	<b>995,830</b>	<b>937,316</b>	<b>824,390</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>1,206,584</b>	<b>1,079,035</b>	<b>1,003,324</b>	<b>995,830</b>	<b>937,316</b>
<b>Net pension liability — ending (a-b)</b>	<b>\$ 173,887</b>	<b>213,809</b>	<b>215,286</b>	<b>185,824</b>	<b>221,379</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>87.4%</b>	<b>83.5%</b>	<b>82.3%</b>	<b>84.3%</b>	<b>80.9%</b>
<b>Projected covered employee payroll</b>	<b>\$ 107,557</b>	<b>108,759</b>	<b>108,967</b>	<b>113,111</b>	<b>115,960</b>
<b>Net pension liability as a percentage of covered employee payroll</b>	<b>161.7%</b>	<b>196.6%</b>	<b>197.6%</b>	<b>164.3%</b>	<b>190.9%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Other Division A (with Social Security)					Salt Lake City				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
30,590	31,202	29,942	30,473	32,564	6,704	6,316	5,963	5,878	6,209
107,017	98,935	98,538	93,276	90,791	24,937	23,099	23,023	22,171	21,719
—	—	—	—	—	—	—	—	—	—
(21,479)	(6,830)	(12,388)	(16,141)	(25,616)	2,143	2,815	2,063	(1,430)	(3,743)
50,755	48,303	—	(21,812)	—	11,737	11,313	—	(4,551)	—
(60,128)	(57,652)	(54,909)	(51,394)	(48,824)	(18,745)	(17,681)	(17,076)	(16,398)	(15,737)
(158)	(175)	(208)	(115)	(97)	(2)	—	—	—	(15)
106,597	113,783	60,975	34,287	48,818	26,774	25,862	13,973	5,670	8,433
1,501,190	1,387,407	1,326,432	1,292,145	1,243,327	352,364	326,502	312,529	306,859	298,426
1,607,787	1,501,190	1,387,407	1,326,432	1,292,145	379,138	352,364	326,502	312,529	306,859
366	515	701	597	714	—	8	—	4	13
53,112	52,359	51,677	49,156	46,421	14,899	15,260	14,100	13,519	12,426
171,806	102,156	20,899	80,565	146,201	34,603	20,441	4,178	16,113	29,378
(60,128)	(57,652)	(54,909)	(51,394)	(48,824)	(18,745)	(17,681)	(17,076)	(16,398)	(15,737)
(158)	(175)	(208)	(115)	(97)	(2)	—	—	—	(15)
(542)	(496)	(485)	(482)	(458)	(129)	(118)	(116)	(116)	(110)
(11,797)	(6,727)	(10,067)	(6,061)	(3,111)	1,642	1,369	657	620	447
152,659	89,980	7,608	72,266	140,846	32,268	19,279	1,743	13,742	26,402
1,298,262	1,208,282	1,200,674	1,128,408	987,562	260,675	241,396	239,653	225,911	199,509
1,450,921	1,298,262	1,208,282	1,200,674	1,128,408	292,943	260,675	241,396	239,653	225,911
156,866	202,928	179,125	125,758	163,737	86,195	91,689	85,106	72,876	80,948
90.2%	86.5%	87.1%	90.5%	87.3%	77.3%	74.0%	73.9%	76.7%	73.6%
137,270	139,677	141,681	143,924	146,190	30,142	28,331	28,275	27,821	28,016
114.3%	145.3%	126.4%	87.4%	112.0%	286.0%	323.6%	301.0%	261.9%	288.9%

Continued on page 122.

**Public Safety Retirement System****Schedules of Changes in the Employers'  
Net Pension Liability by Division** *(Continued)*

Year Ended December 31

*(in thousands)*

	2017	2016	2015	2014	Ogden 2013
<b>Total pension liability</b>					
Service cost	\$ 1,200	1,139	1,164	1,170	1,304
Interest	5,549	5,232	5,359	5,185	5,028
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	2,044	(288)	(1,153)	559	(713)
Assumption changes	2,724	2,544	—	(822)	—
Benefit payments	(4,286)	(4,208)	(4,090)	(3,956)	(3,864)
Refunds	—	—	—	—	—
<b>Net change in total pension liability</b>	<b>7,231</b>	<b>4,419</b>	<b>1,280</b>	<b>2,136</b>	<b>1,755</b>
<b>Total pension liability — beginning</b>	<b>78,619</b>	<b>74,200</b>	<b>72,920</b>	<b>70,784</b>	<b>69,029</b>
<b>Total pension liability — ending (a)</b>	<b>85,850</b>	<b>78,619</b>	<b>74,200</b>	<b>72,920</b>	<b>70,784</b>
<b>Plan fiduciary net position</b>					
Contributions — member	—	—	56	—	—
Contributions — employer	3,072	3,147	2,729	2,791	2,525
Net investment income	7,843	4,696	976	3,803	6,973
Benefit payments	(4,286)	(4,208)	(4,090)	(3,956)	(3,864)
Refunds	—	—	—	—	—
Administrative expense	(29)	(27)	(26)	(27)	(26)
Net transfers with affiliated systems	(128)	(74)	(66)	107	535
<b>Net change in plan fiduciary net position</b>	<b>6,472</b>	<b>3,534</b>	<b>(421)</b>	<b>2,718</b>	<b>6,143</b>
<b>Plan fiduciary net position — beginning</b>	<b>59,439</b>	<b>55,905</b>	<b>56,326</b>	<b>53,608</b>	<b>47,465</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>65,911</b>	<b>59,439</b>	<b>55,905</b>	<b>56,326</b>	<b>53,608</b>
<b>Net pension liability — ending (a-b)</b>	<b>\$ 19,939</b>	<b>19,180</b>	<b>18,295</b>	<b>16,594</b>	<b>17,176</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>76.8%</b>	<b>75.6%</b>	<b>75.3%</b>	<b>77.2%</b>	<b>75.7%</b>
<b>Projected covered employee payroll</b>	<b>\$ 5,372</b>	<b>5,082</b>	<b>5,517</b>	<b>5,518</b>	<b>5,831</b>
<b>Net pension liability as a percentage of covered employee payroll</b>	<b>371.2%</b>	<b>377.4%</b>	<b>331.6%</b>	<b>300.7%</b>	<b>294.6%</b>

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

					Provo						Logan
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013		
1,122	1,134	1,099	1,141	1,181	465	488	485	524	580		
4,282	3,972	3,916	3,748	3,680	2,364	2,220	2,201	2,110	2,029		
—	—	—	—	—	—	—	—	—	—		
(1,391)	147	636	(638)	561	(766)	(264)	278	232	(701)		
1,895	1,960	—	(859)	—	1,056	1,103	—	(420)	—		
(3,089)	(2,701)	(2,739)	(2,503)	(2,281)	(1,547)	(1,516)	(1,442)	(1,366)	(1,320)		
—	—	—	(11)	(204)	—	—	—	—	—		
2,819	4,512	2,912	878	2,937	1,572	2,031	1,522	1,080	588		
60,455	55,943	53,031	52,153	49,216	33,375	31,344	29,822	28,742	28,154		
63,274	60,455	55,943	53,031	52,153	34,947	33,375	31,344	29,822	28,742		
—	—	—	—	—	—	—	—	35	49		
2,258	2,403	2,314	2,255	2,158	1,034	1,052	1,044	989	944		
6,141	3,660	749	2,877	5,204	3,456	2,068	432	1,671	3,047		
(3,089)	(2,701)	(2,739)	(2,503)	(2,281)	(1,547)	(1,516)	(1,442)	(1,366)	(1,320)		
—	—	—	(11)	(204)	—	—	—	—	—		
(22)	(20)	(20)	(19)	(19)	(12)	(11)	(11)	(11)	(10)		
16	(39)	66	145	16	36	(52)	(247)	100	88		
5,304	3,303	370	2,744	4,874	2,967	1,541	(224)	1,418	2,798		
46,580	43,277	42,907	40,163	35,289	26,171	24,630	24,854	23,436	20,638		
51,884	46,580	43,277	42,907	40,163	29,138	26,171	24,630	24,854	23,436		
11,390	13,875	12,666	10,124	11,990	5,809	7,204	6,714	4,968	5,306		
82.0%	77.0%	77.4%	80.9%	77.0%	83.4%	78.4%	78.6%	83.3%	81.5%		
5,023	5,065	5,213	5,424	5,295	2,088	2,183	2,306	2,459	2,584		
226.8%	273.9%	243.0%	186.7%	226.4%	278.2%	330.0%	291.2%	202.0%	205.3%		

Continued on page 124.

**Public Safety Retirement System****Schedules of Changes in the Employers'  
Net Pension Liability by Division** *(Concluded)*

Year Ended December 31

*(in thousands)*

					Bountiful
	2017	2016	2015	2014	2013
<b>Total pension liability</b>					
Service cost	\$ 411	409	380	383	390
Interest	1,845	1,711	1,682	1,635	1,580
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	(453)	383	652	297	(147)
Assumption changes	880	830	—	(229)	—
Benefit payments	(1,514)	(1,435)	(1,358)	(1,419)	(1,369)
Refunds	—	—	—	—	—
<b>Net change in total pension liability</b>	<b>1,169</b>	<b>1,898</b>	<b>1,356</b>	<b>667</b>	<b>454</b>
<b>Total pension liability — beginning</b>	<b>26,173</b>	<b>24,275</b>	<b>22,919</b>	<b>22,252</b>	<b>21,798</b>
<b>Total pension liability — ending (a)</b>	<b>27,342</b>	<b>26,173</b>	<b>24,275</b>	<b>22,919</b>	<b>22,252</b>
<b>Plan fiduciary net position</b>					
Contributions — member	—	—	—	—	—
Contributions — employer	911	943	883	822	716
Net investment income	2,498	1,493	310	1,220	2,271
Benefit payments	(1,514)	(1,435)	(1,358)	(1,419)	(1,369)
Refunds	—	—	—	—	—
Administrative expense	(9)	(9)	(9)	(9)	(8)
Net transfers with affiliated systems	323	35	35	14	99
<b>Net change in plan fiduciary net position</b>	<b>2,209</b>	<b>1,027</b>	<b>(139)</b>	<b>628</b>	<b>1,709</b>
<b>Plan fiduciary net position — beginning</b>	<b>18,853</b>	<b>17,826</b>	<b>17,965</b>	<b>17,337</b>	<b>15,628</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>21,062</b>	<b>18,853</b>	<b>17,826</b>	<b>17,965</b>	<b>17,337</b>
<b>Net pension liability — ending (a-b)</b>	<b>\$ 6,280</b>	<b>7,320</b>	<b>6,449</b>	<b>4,954</b>	<b>4,915</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>77.0%</b>	<b>72.0%</b>	<b>73.4%</b>	<b>78.4%</b>	<b>77.9%</b>
<b>Projected covered employee payroll</b>	<b>\$ 1,814</b>	<b>1,810</b>	<b>1,776</b>	<b>1,795</b>	<b>1,749</b>
<b>Net pension liability as a percentage of covered employee payroll</b>	<b>346.2%</b>	<b>404.4%</b>	<b>363.1%</b>	<b>276.0%</b>	<b>281.0%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Other Division B (with Social Security)					Total All Divisions				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
13,723	13,828	13,049	12,922	13,495	78,272	78,843	75,352	76,681	81,736
32,196	28,192	26,988	25,159	23,425	269,818	249,722	248,980	236,803	229,965
—	—	—	—	—	—	—	—	—	—
13,242	16,534	7,046	3,963	3,230	(3,041)	9,358	(17,164)	(25,225)	(29,228)
16,483	15,005	—	(6,121)	—	118,370	110,373	—	(52,410)	—
(19,110)	(16,693)	(14,502)	(12,652)	(11,659)	(172,870)	(164,508)	(155,387)	(144,763)	(137,486)
—	—	(307)	(61)	(149)	(226)	(183)	(533)	(199)	(467)
56,534	56,866	32,274	23,210	28,342	290,323	283,605	151,248	90,887	144,520
449,860	392,994	360,720	337,510	309,168	3,794,880	3,511,275	3,360,027	3,269,140	3,124,620
506,394	449,860	392,994	360,720	337,510	4,085,203	3,794,880	3,511,275	3,360,027	3,269,140
206	195	33	47	379	793	830	905	835	1,258
21,142	21,381	20,828	20,246	20,161	145,814	147,099	141,024	135,588	128,744
52,874	29,769	5,761	21,024	35,969	421,917	249,027	50,654	194,222	350,563
(19,110)	(16,693)	(14,502)	(12,652)	(11,659)	(172,870)	(164,508)	(155,387)	(144,763)	(137,486)
—	—	(307)	(61)	(149)	(226)	(183)	(533)	(199)	(467)
(169)	(147)	(135)	(129)	(117)	(1,382)	(1,260)	(1,233)	(1,227)	(1,161)
15,601	8,826	11,344	6,697	5,845	5,926	6,701	4,023	2,746	4,676
70,544	43,331	23,022	35,172	50,429	399,972	237,706	39,453	187,202	346,127
387,530	344,199	321,177	286,005	235,576	3,176,545	2,938,839	2,899,386	2,712,184	2,366,057
458,074	387,530	344,199	321,177	286,005	3,576,517	3,176,545	2,938,839	2,899,386	2,712,184
48,320	62,330	48,795	39,543	51,505	508,686	618,335	572,436	460,641	556,956
90.5%	86.1%	87.6%	89.0%	84.7%	87.5%	83.7%	83.7%	86.3%	83.0%
61,516	61,501	61,436	60,698	60,373	350,782	352,408	355,171	360,750	365,998
78.5%	101.3%	79.4%	65.1%	85.3%	145.0%	175.5%	161.2%	127.7%	152.2%

## Public Safety Retirement System

## Schedules of Net Pension Liability by Division

*(dollars in thousands)*

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Public Safety</b>	12/31/13	\$ 1,158,695	937,316	221,379	80.9%	\$ 115,960	190.9%
<b>State of Utah</b>	12/31/14	1,181,654	995,830	185,824	84.3	113,111	164.3
	12/31/15	1,218,610	1,003,324	215,286	82.3	108,967	197.6
	12/31/16	1,292,844	1,079,035	213,809	83.5	108,759	196.6
	12/31/17	1,380,471	1,206,584	173,887	87.4	107,557	161.7
<b>Public Safety</b>	12/31/13	\$ 1,292,145	1,128,408	163,737	87.3%	\$ 146,190	112.0%
<b>Other Division A</b>	12/31/14	1,326,432	1,200,674	125,758	90.5	143,924	87.4
(with Social Security)	12/31/15	1,387,407	1,208,282	179,125	87.1	141,681	126.4
	12/31/16	1,501,190	1,298,262	202,928	86.5	139,677	145.3
	12/31/17	1,607,787	1,450,921	156,866	90.2	137,270	114.3
<b>Public Safety</b>	12/31/13	\$ 306,859	225,911	80,948	73.6%	\$ 28,016	288.9%
<b>Salt Lake City</b>	12/31/14	312,529	239,653	72,876	76.7	27,821	261.9
	12/31/15	326,502	241,396	85,106	73.9	28,275	301.0
	12/31/16	352,364	260,675	91,689	74.0	28,331	323.6
	12/31/17	379,138	292,943	86,195	77.3	30,142	286.0
<b>Public Safety</b>	12/31/13	\$ 70,784	53,608	17,176	75.7%	\$ 5,831	294.6%
<b>Ogden</b>	12/31/14	72,920	56,326	16,594	77.2	5,518	300.8
	12/31/15	74,200	55,905	18,295	75.3	5,517	331.6
	12/31/16	78,619	59,439	19,180	75.6	5,082	377.4
	12/31/17	85,850	65,911	19,939	76.8	5,372	371.2
<b>Public Safety</b>	12/31/13	\$ 52,153	40,163	11,990	77.0%	\$ 5,295	226.4%
<b>Provo</b>	12/31/14	53,031	42,907	10,124	80.9	5,424	186.7
	12/31/15	55,943	43,277	12,666	77.4	5,213	243.0
	12/31/16	60,455	46,580	13,875	77.0	5,065	273.9
	12/31/17	63,274	51,884	11,390	82.0	5,023	226.8

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.



**Public Safety Retirement System**

Schedules of Net Pension Liability by Division *(Concluded)*

*(dollars in thousands)*

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Public Safety Logan</b>	12/31/13	\$ 28,742	23,436	5,306	81.5%	\$ 2,584	205.3%
	12/31/14	29,822	24,854	4,968	83.3	2,459	202.0
	12/31/15	31,344	24,630	6,714	78.6	2,306	291.2
	12/31/16	33,375	26,171	7,204	78.4	2,183	330.0
	12/31/17	34,947	29,138	5,808	83.4	2,088	278.4
<b>Public Safety Bountiful</b>	12/31/13	\$ 22,252	17,337	4,915	77.9%	\$ 1,749	281.0%
	12/31/14	22,919	17,965	4,954	78.4	1,795	275.9
	12/31/15	24,275	17,826	6,449	73.4	1,776	363.1
	12/31/16	26,173	18,853	7,320	72.0	1,810	404.4
	12/31/17	27,342	21,062	6,280	77.0	1,814	346.2
<b>Public Safety Other Division B (without Social Security)</b>	12/31/13	\$ 337,510	286,005	51,505	84.7%	\$ 60,373	85.3%
	12/31/14	360,720	321,177	39,543	89.0	60,698	65.1
	12/31/15	392,994	344,199	48,795	87.6	61,436	79.4
	12/31/16	449,860	387,530	62,330	86.1	61,501	101.3
	12/31/17	506,394	458,074	48,320	90.5	61,516	78.5
<b>Total Public Safety Retirement System</b>	12/31/13	\$ 3,269,140	2,712,184	556,956	83.0%	\$ 365,998	152.2%
	12/31/14	3,360,027	2,899,386	460,641	86.3	360,750	127.7
	12/31/15	3,511,275	2,938,839	572,436	83.7	355,171	161.2
	12/31/16	3,794,880	3,176,545	618,335	83.7	352,408	175.5
	12/31/17	4,085,203	3,576,517	508,686	87.5	350,782	145.0

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## Public Safety Retirement System

## Schedules of Employer Contributions by Division

*(dollars in thousands)*

System	Year Ended	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Public Safety State of Utah</b>	2013	\$ 43,393	43,393	—	115,960	37.42%
	2014	45,810	45,810	—	113,111	40.50
	2015	47,449	47,449	—	108,967	43.54
	2016	50,554	50,554	—	108,759	46.48
	2017	49,386	49,386	—	107,557	45.92
<b>Public Safety Other Division A (with Social Security)</b>	2013	\$ 46,421	46,421	—	146,190	31.75%
	2014	49,156	49,156	—	143,924	34.15
	2015	51,677	51,677	—	141,681	36.47
	2016	52,359	52,359	—	139,677	37.49
	2017	53,112	53,112	—	137,270	38.69
<b>Public Safety Salt Lake City</b>	2013	\$ 12,426	12,426	—	28,016	44.35%
	2014	13,519	13,519	—	27,821	48.59
	2015	14,100	14,100	—	28,276	49.87
	2016	15,260	15,260	—	28,331	53.86
	2017	14,899	14,899	—	30,142	49.43
<b>Public Safety Ogden</b>	2013	\$ 2,525	2,525	—	5,831	43.30%
	2014	2,791	2,791	—	5,518	50.58
	2015	2,729	2,729	—	5,517	49.47
	2016	3,147	3,147	—	5,082	61.92
	2017	3,072	3,072	—	5,372	57.19
<b>Public Safety Provo</b>	2013	\$ 2,158	2,158	—	5,295	40.76%
	2014	2,255	2,255	—	5,424	41.57
	2015	2,314	2,314	—	5,213	44.39
	2016	2,403	2,403	—	5,065	47.44
	2017	2,258	2,258	—	5,023	44.95

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

**Public Safety Retirement System**

Schedules of Employer Contributions by Division *(Concluded)*

*(dollars in thousands)*

System	Year Ended	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Public Safety Logan</b>	2013	\$ 944	944	—	2,584	36.53%
	2014	989	989	—	2,459	40.42
	2015	1,044	1,044	—	2,306	45.27
	2016	1,052	1,052	—	2,183	48.19
	2017	1,034	1,034	—	2,088	49.52
<b>Public Safety Bountiful</b>	2013	\$ 716	716	—	1,749	40.94%
	2014	822	822	—	1,795	45.79
	2015	883	883	—	1,776	49.72
	2016	943	943	—	1,810	52.10
	2017	911	911	—	1,814	50.22
<b>Public Safety Other Division B (without Social Security)</b>	2013	\$ 20,161	20,161	—	60,373	33.39%
	2014	20,246	20,246	—	60,698	33.36
	2015	20,828	20,828	—	61,436	33.90
	2016	21,381	21,381	—	61,501	34.77
	2017	21,142	21,142	—	61,516	34.37
<b>Total Public Safety Retirement System</b>	2013	\$ 128,744	128,744	—	365,998	35.18%
	2014	135,588	135,588	—	360,750	37.59
	2015	141,024	141,024	—	355,172	39.71
	2016	147,099	147,099	—	352,408	41.74
	2017	145,814	145,814	—	350,783	41.57

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

## Firefighters Retirement System

Schedules of Fiduciary Net Position —  
Pension Trust Fund by Division

December 31, 2017

With Comparative Totals for December 31, 2016

*(in thousands)*

	Division A (with Social Security)	Division B (without Social Security)	Total All Divisions	
			2017	2016
<b>Assets:</b>				
Cash	\$ 1	1	2	2
Receivables:				
Member contributions	134	500	634	652
Fire insurance tax	727	2,169	2,896	1,603
Investments	4,627	21,633	26,260	17,397
Total receivables	5,488	24,302	29,790	19,652
Investments at fair value:				
Short-term securities	18,805	87,922	106,727	93,491
Debt securities	31,063	145,237	176,300	170,258
Equity investments	82,853	387,381	470,234	398,630
Absolute return	30,395	142,117	172,512	176,211
Private equity	23,523	109,981	133,504	128,611
Real assets	32,341	151,209	183,550	166,843
Total investments	218,980	1,023,847	1,242,827	1,134,044
Invested securities lending collateral	9,125	42,666	51,791	27,337
Property and equipment at cost, net of accumulated depreciation	30	140	170	191
Total assets	233,624	1,090,956	1,324,580	1,181,226
<b>Liabilities:</b>				
Securities lending collateral liability	9,125	42,666	51,791	27,337
Disbursements in excess of cash balance	232	1,086	1,318	1,536
Compensated absences, post-employment benefits and insurance reserve	149	699	848	807
Investment accounts payable	5,563	26,011	31,574	27,808
Real estate liabilities	818	3,824	4,642	8,012
Total liabilities	15,887	74,286	90,173	65,500
Net position restricted for pensions benefits	\$ 217,737	1,016,670	1,234,407	1,115,726

## Firefighters Retirement System

Schedules of Changes in Fiduciary Net Position —  
Pension Trust Fund by Division

Year Ended December 31, 2017

With Comparative Totals for Year Ended December 31, 2016

(in thousands)

	Division A (with Social Security)	Division B (without Social Security)	Total All Divisions	
			2017	2016
<b>Additions:</b>				
Contributions:				
Member	\$ 4,457	14,003	18,460	18,729
Employer	1,147	5,568	6,715	6,954
Fire insurance tax	262	961	1,223	10,569
Total contributions	5,866	20,532	26,398	36,252
Investment income:				
Net appreciation in fair value of investments	22,041	103,917	125,958	70,254
Interest, dividends, and other investment income	3,982	18,774	22,756	19,099
Total income from investment activity	26,023	122,691	148,714	89,353
Less investment expenses	387	1,824	2,211	1,918
Net income from investment activity	25,636	120,867	146,503	87,435
Income from securities lending activity	46	217	263	358
Less security lending expense	5	25	30	47
Net income from security lending activity	41	192	233	311
Net investment income	25,677	121,059	146,736	87,746
Transfers from affiliated systems	(706)	1,965	1,259	1,611
Total additions	30,837	143,556	174,393	125,609
<b>Deductions:</b>				
Retirement benefits	5,744	38,587	44,331	41,687
Cost-of-living benefits	912	9,346	10,258	10,195
Supplemental retirement benefits	14	190	204	220
Refunds	124	387	511	466
Administrative expenses	70	338	408	374
Total deductions	6,864	48,848	55,712	52,942
Increase from operations	23,973	94,708	118,681	72,667
Net position restricted for pensions beginning of year	193,764	921,962	1,115,726	1,043,059
Net position restricted for pensions end of year	\$ 217,737	1,016,670	1,234,407	1,115,726

## Firefighters Retirement System

Schedules of Changes in the Employers'  
Net Pension Liability by Division

Year Ended December 31

*(in thousands)*

	Other Division A (with Social Security)				
	2017	2016	2015	2014	2013
Total pension liability					
Service cost	\$ 7,085	7,020	6,584	6,636	7,158
Interest	13,905	12,644	12,290	11,387	10,840
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	(1,851)	(271)	(985)	(1,199)	(1,812)
Assumption changes	6,170	4,636	—	(4,028)	—
Benefit payments	(6,670)	(6,121)	(6,243)	(5,432)	(4,889)
Refunds	(124)	(174)	(190)	(72)	—
Net change in total pension liability	18,515	17,734	11,456	7,292	11,297
Total pension liability — beginning	192,976	175,242	163,786	156,494	145,197
Total pension liability — ending (a)	211,491	192,976	175,242	163,786	156,494
Plan fiduciary net position					
Contributions — member	4,457	4,214	4,063	3,983	3,977
Contributions — employer	1,147	1,124	1,055	888	745
Fire insurance tax	262	2,581	4,170	3,398	2,748
Net investment income	25,677	15,014	2,982	11,118	19,648
Benefit payments	(6,670)	(6,121)	(6,243)	(5,432)	(4,889)
Refunds	(124)	(174)	(190)	(72)	—
Administrative expense	(70)	(62)	(60)	(58)	(54)
Net transfers with affiliated systems	(706)	135	1,784	664	796
Net change in plan fiduciary net position	23,973	16,711	7,561	14,489	22,971
Plan fiduciary net position — beginning	193,764	177,053	169,492	155,003	132,032
Plan fiduciary net position — ending (b)	217,737	193,764	177,053	169,492	155,003
Net pension liability/(asset) — ending (a-b)	\$ (6,246)	(788)	(1,811)	(5,706)	1,491
Plan fiduciary net position as a percentage of the total pension liability	103.0%	100.4%	101.0%	103.5%	99.0%
Projected covered employee payroll	\$ 27,603	27,266	26,672	26,873	26,521
Net pension liability as a percentage of covered employee payroll	(22.6)%	(2.9)%	(6.8)%	(21.2)%	5.6%

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Other Division B (without Social Security)					Total All Divisions				
2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
21,690	21,632	20,598	20,630	22,419	28,775	28,652	27,182	27,266	29,577
66,481	62,690	62,922	60,103	59,419	80,386	75,334	75,212	71,490	70,259
—	—	—	—	—	—	—	—	—	—
(7,365)	(5,254)	(7,274)	(13,878)	(11,271)	(9,216)	(5,525)	(8,259)	(15,077)	(13,083)
25,187	20,936	—	(16,344)	—	31,357	25,572	—	(20,372)	—
(48,123)	(45,981)	(43,428)	(42,278)	(39,858)	(54,793)	(52,102)	(49,671)	(47,710)	(44,747)
(387)	(292)	(338)	(221)	(106)	(511)	(466)	(528)	(293)	(106)
57,483	53,731	32,480	8,012	30,603	75,998	71,465	43,936	15,304	41,900
936,753	883,022	850,542	842,530	811,927	1,129,729	1,058,264	1,014,328	999,024	957,124
994,236	936,753	883,022	850,542	842,530	1,205,727	1,129,729	1,058,264	1,014,328	999,024
14,003	14,515	14,112	14,317	14,348	18,460	18,729	18,175	18,300	18,325
5,568	5,830	5,635	4,626	2,749	6,715	6,954	6,690	5,514	3,494
961	7,988	13,048	10,756	8,537	1,223	10,569	17,218	14,154	11,285
121,059	72,732	14,952	57,952	106,037	146,736	87,746	17,934	69,070	125,685
(48,123)	(45,981)	(43,428)	(42,278)	(39,858)	(54,793)	(52,102)	(49,671)	(47,710)	(44,747)
(387)	(292)	(338)	(221)	(106)	(511)	(466)	(528)	(293)	(106)
(338)	(312)	(311)	(312)	(301)	(408)	(374)	(371)	(370)	(355)
1,965	1,476	789	3,049	506	1,259	1,611	2,573	3,713	1,302
94,708	55,956	4,459	47,889	91,912	118,681	72,667	12,020	62,378	114,883
921,962	866,006	861,547	813,658	721,746	1,115,726	1,043,059	1,031,039	968,661	853,778
1,016,670	921,962	866,006	861,547	813,658	1,234,407	1,115,726	1,043,059	1,031,039	968,661
(22,434)	14,791	17,016	(11,005)	28,872	(28,680)	14,003	15,205	(16,711)	30,363
102.3%	98.4%	98.1%	101.3%	96.6%	102.4%	98.8%	98.6%	101.6%	97.0%
85,350	85,056	84,461	84,432	84,220	112,953	112,322	111,133	111,305	110,741
(26.3)%	17.4%	20.1%	(13.0)%	34.3%	(25.4)%	12.5%	13.7%	(15.0)%	27.4%

**Firefighters Retirement System**

**Schedules of Net Pension Liability by Division**

*(dollars in thousands)*

System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a Percentage of Covered Employee Payroll
<b>Firefighters</b>	12/31/13	\$ 156,494	155,003	1,491	99.0%	\$ 26,521	5.6%
<b>Division A</b>	12/31/14	163,786	169,492	(5,706)	103.5	26,873	(21.2)
(with Social Security)	12/31/15	175,242	177,053	(1,811)	101.0	26,672	(6.8)
	12/31/16	192,976	193,764	(788)	100.4	27,266	(2.9)
	12/31/17	211,491	217,737	(6,246)	103.0	27,603	(22.6)
<b>Firefighters</b>	12/31/13	\$ 842,530	813,658	28,872	96.6%	\$ 84,220	34.3%
<b>Division B</b>	12/31/14	850,542	861,547	(11,005)	101.3	84,432	(13.0)
(without Social Security)	12/31/15	883,022	866,006	17,016	98.1	84,461	20.1
	12/31/16	936,753	921,962	14,791	98.4	85,056	17.4
	12/31/17	994,236	1,016,670	(22,434)	102.3	85,350	(26.3)
<b>Total</b>	12/31/13	\$ 999,024	968,661	30,363	97.0%	\$ 110,741	27.4%
<b>Firefighters</b>	12/31/14	1,014,328	1,031,039	(16,711)	101.6	111,305	(15.0)
<b>Retirement System</b>	12/31/15	1,058,264	1,043,059	15,205	98.6	111,133	13.7
	12/31/16	1,129,729	1,115,726	14,003	98.8	112,322	12.5
	12/31/17	1,205,727	1,234,407	(28,680)	102.4	112,953	(25.4)

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.



**Firefighters Retirement System**

**Schedules of Employer Contributions by Division**

(dollars in thousands)

System	Year Ended	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Employee Payroll	Contributions as a Percentage of Covered Payroll**
<b>Firefighters Division A</b> (with Social Security)	2013	\$ 3,493	3,493	—	26,521	13.17%
	2014	5,514	5,514	—	26,873	20.52
	2015	5,225	5,225	—	26,672	19.59
	2016	3,705	3,705	—	27,266	13.59
	2017	1,409	1,409	—	27,603	5.10
<b>Firefighters Division B</b> (without Social Security)	2013	\$ 11,286	11,286	—	84,220	13.40%
	2014	14,154	14,154	—	84,432	16.76
	2015	18,683	18,683	—	84,461	22.12
	2016	13,818	13,818	—	85,056	16.25
	2017	6,529	6,529	—	85,350	7.65
<b>Total Firefighters Retirement System</b>	2013	\$ 14,779	14,779	—	110,741	13.35%
	2014	19,668	19,668	—	111,305	17.67
	2015	23,908	23,908	—	111,133	21.51
	2016	17,523	17,523	—	112,322	15.60
	2017	7,938	7,938	—	112,953	7.03

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

\*Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

\*\*Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

## All Retirement Systems

Schedules of  
Administrative  
and Investment  
Expenses

Year Ended

December 31, 2017

(in thousands)

	Total
Personal services:	
Salaries and wages	\$ 14,300
Employee benefits	7,085
Total personal services	21,385
Professional services:	
Audit	729
Actuarial services	308
General counsel	739
Banking services	75
Security handling expense	924
Investment advisor fees	48,979
Other consulting services	2,895
Total professional services	54,649
Communications:	
Telephone	179
Postage	352
Total communications	531
Rentals:	
Office space	1,022
Office equipment rental	41
Total rentals	1,063
Miscellaneous:	
Data processing	990
Professional development	424
Contractual services	152
Supplies and maintenance	166
Insurance and bonding premiums	610
Office supplies	78
Other	445
Depreciation expense	1,083
Total miscellaneous	3,948
Total administrative and investment expenses	\$ 81,576
Allocation of administrative expenses:	
Noncontributory Retirement System	\$ 9,579
Contributory Retirement System	457
Public Safety Retirement System	1,382
Firefighters Retirement System	408
Judges Retirement System	79
Utah Governors and Legislators Retirement Plan	5
Tier 2 Public Employees Retirement System	82
Tier 2 Public Safety and Firefighter Retirement System	9
401(k) Plan	7,713
457 Plan	887
Roth IRA Plan	174
Traditional IRA Plan	147
Total administrative expenses	20,922
Investment administrative expense	11,676
Investment advisor fees:	
Investment Fund	45,187
401(k) Plan	3,284
457 Plan	363
Roth IRA Plan	72
Traditional IRA Plan	72
Total investment expenses	60,654
Total administrative and investment expense allocations	\$ 81,576

2017

# INVESTMENT SECTION

## **DEFINED BENEFIT INVESTMENTS**

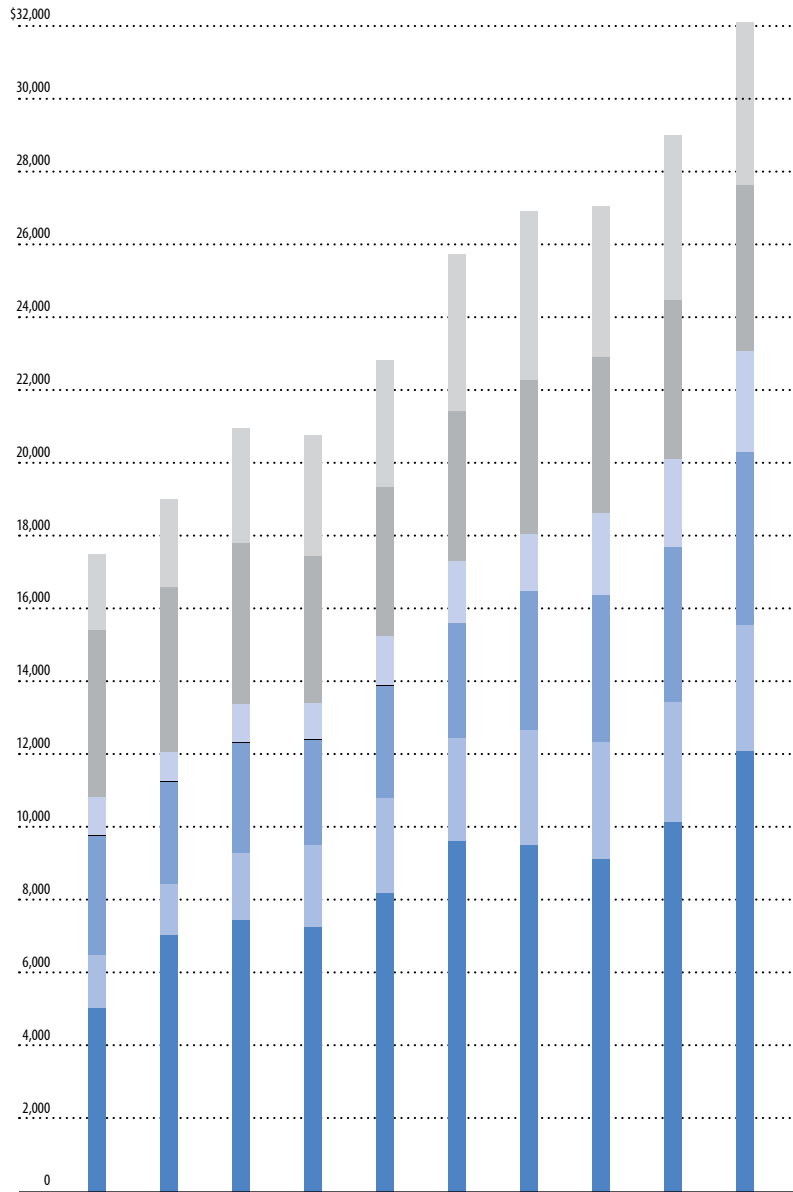
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# 10-YEAR INVESTMENT COMPARISON

(in millions)



(in millions)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
■ Absolute return	\$ 2,097	2,411	3,138	3,287	3,474	4,298	4,643	4,141	4,509	4,459
■ Debt securities	4,578	4,521	4,406	4,022	4,093	4,094	4,213	4,282	4,356	4,557
■ Short-term securities	1,041	804	1,056	1,017	1,337	1,711	1,572	2,230	2,392	2,759
■ Mortgages	7	7	7	7	7	—	—	—	—	—
■ Real assets	3,280	2,799	3,024	2,886	3,094	3,147	3,780	4,025	4,269	4,745
■ Private equity	1,442	1,411	1,840	2,255	2,594	2,840	3,170	3,215	3,291	3,451
■ Equities	5,120	7,104	7,521	7,323	8,272	9,675	9,577	9,193	10,200	12,155
<b>Totals</b>	<b>\$ 17,565</b>	<b>19,057</b>	<b>20,992</b>	<b>20,797</b>	<b>22,871</b>	<b>25,765</b>	<b>26,955</b>	<b>27,086</b>	<b>29,017</b>	<b>32,126</b>

## UTAH RETIREMENT SYSTEMS

# DEFINED BENEFIT INVESTMENTS

## Report on Investment Activity

UTAH STATE RETIREMENT BOARD  
**UTAH RETIREMENT SYSTEMS**  
560 East 200 South  
Salt Lake City, Utah 84102-2044  
801-366-7700  
800-365-8772  
801-366-7734 FAX

DANIEL D. ANDERSEN  
EXECUTIVE DIRECTOR

April 26, 2018

Utah State Retirement Board  
560 East 200 South  
Salt Lake City, UT 84102-2044

Dear Members of Utah Retirement Systems:

In 2017, we saw the ninth year of a global economic recovery. The market correction that many had predicted did not happen. The S&P 500 posted another stellar year, with a 21.8% gain. On the heels of a nearly 12% return in 2016, the S&P 500 now has posted positive returns for nine consecutive years since the Great Recession. U.S. markets benefited from the passage of tax reform legislation, regulatory relief, and strong corporate earnings. However, within the overall equity market return, there was an enormous divergence between value-style and growth-style investing. Unlike in 2016, when value outperformed growth, this year growth dwarfed value in both U.S. and global equity markets. In the U.S., growth stocks returned more than twice that of value stocks for both small and

large capitalization (cap) equities. Global equities displayed the same growth bias across capitalization size, with one exception in emerging markets, where small cap value returned slightly more than small cap growth.

Large cap versus small cap also reversed trend from 2016, when small outperformed large. In 2017, large cap stocks outperformed both in the U.S. as well as internationally.

Although the Treasury curve continued to flatten, with near-term rates rising and long-term rates remaining subdued, the bond market, as measured by the Bloomberg Barclays Aggregate, returned 3.5%, compared to 2.7% the previous year. That was remarkable, considering the Federal Reserve (Fed) raised short-term interest rates three times in 2017 and began reducing its balance sheet. The Fed indicated that it expects to continue these activities in the coming years. Other central banks have begun to tighten as well, thus keeping the U.S. in a relatively balanced position with other developed economies.

The unemployment rate dropped to 4.1%, putting the labor market effectively in full employment. Consumer sentiment was high, which helped trigger greater spending and less saving. Other macroeconomic measures pointed toward continued growth: higher existing home sales, increased industrial production and durable goods orders, and relatively modest levels of inflation.



DEFINED BENEFIT INVESTMENTS *(Continued)*

Although the dollar weakened in 2017, global growth was higher, and commodity prices continued to strengthen from the previous year. Global markets also experienced strong employment, weak inflation, easy monetary policies, and strong corporate profits. European consumer confidence was also high, similar to the U.S. The strong U.S. and developed international markets provided a catalyst to growth in export-driven emerging markets as well. Analysts predict emerging markets should be strong in the future.

URS had an excellent investment year, returning nearly 14%. Our equity portfolio has meaningful exposure to value style and small cap stocks, which, as noted above, underperformed large cap growth equities during 2017. We believe that a well-diversified asset allocation is the best means of preserving capital in down markets and ensuring long-term growth. As a product of this philosophy, URS' investment portfolio holds bonds, absolute return funds, real estate, and private energy and private equity investments in addition to public equities. As mentioned, bonds only added low-single-digit returns last year. Absolute return funds are also used to further diversify the portfolio, as they are designed to carry only a modest relationship to public equity. These funds have performed in line with our expectations. We need other sources of return when equity markets are negative, and these active strategies have contributed to downside protection when equity markets have underperformed. In 2017, other asset classes contributed to plan-level returns as follows: Real Estate +13%, Private Energy +12%, and Private Equity +19%. By diversifying our portfolio across additional asset classes, we lower our risk, helping meet our long-term actuarial assumed rate of return of 6.95%. Of course, our ultimate goal and mission is to fulfill our obligations to our members; we believe that URS' portfolio is well-positioned for this purpose. In fact, we increased our funded status at the end of 2017 to 90%.



We don't take peer group comparisons too seriously, because we believe our strategy of preserving capital in down markets will create greater compounding of wealth over the long term. Many public plan peers add much more equity risk into their portfolios to achieve outsized returns in good equity markets. But they also hope for quick recoveries when equity markets lose large sums. History has demonstrated that it takes a long time to recover from bear equity markets, making it hard to catch up after periods of significant losses. Thus, in bull markets, we underperform our peers, and in bear markets we outperform. This strategy has produced favorable results in volatile markets, and our funded status has continued to grow. We also position ourselves to buy undervalued assets in down markets because of the extra liquidity we hold.

Equity markets had another strong performance in 2017, and so did our portfolio. We won't see such strong returns every year, and that's acceptable. We recognize that markets are volatile, and feel we have a solid strategy to deal with that volatility through the years to produce the best possible outcome for our members. The Systems' investments reported in the investment section are presented in the same basis of accounting as described in Note 2 of the financial statements.

Bruce H. Cundick  
Chief Investment Officer  
Utah Retirement Systems



## Outline of Investment Policies

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

The Board has statutory authority to pool pension assets in the Utah Retirement Investment Fund (Fund). Statutes also establish that this Fund will 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 that 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.

## 2017 Investment Summary

(dollars in thousands)

	2017 Beginning Fair Value	Purchases	Sales and Redemptions	Increase (Decrease) in Fair Value	2017 Ending Fair Value Balance	Percent of Total Fair Value
Short-term securities	\$ 2,392,184	110,628,919	110,242,367	(19,997)	2,758,739	8.59%
Debt securities	4,356,418	41,209,009	41,120,785	112,495	4,557,137	14.19
Equities	10,199,869	4,144,033	3,852,044	1,663,075	12,154,933	37.84
Absolute return	4,508,784	2,406,442	2,496,470	40,483	4,459,239	13.88
Private equity	3,290,800	488,114	404,688	76,674	3,450,900	10.74
Real assets	4,269,045	1,688,138	1,407,612	194,954	4,744,525	14.77
<b>Totals</b>	<b>\$ 29,017,100</b>	<b>160,564,655</b>	<b>159,523,966</b>	<b>2,067,684</b>	<b>32,125,473</b>	<b>100.00%</b>

DEFINED BENEFIT INVESTMENTS (Continued)

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 to meet those obligations.

The Systems' investment portfolio includes strategic, long-term commitments in the following asset classes: Equities, Debt Securities, Real Assets, Private Equity, and Absolute Return. 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 manages overall expected portfolio risk (volatility) and maximizes expected return without unduly constraining the discretionary, tactical decision-making process of the investment managers.

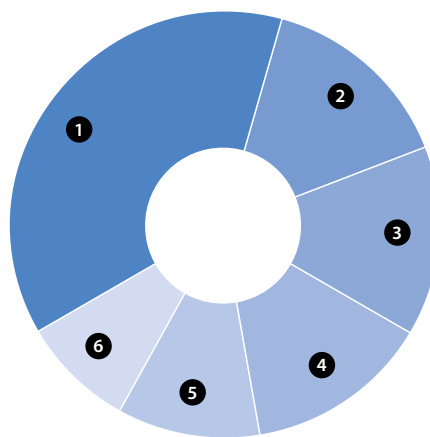
To implement the asset allocation plan, the Executive Director, supported by the Board, staff, and consultant, selects appropriate money management experts to invest the Fund assets. This selection process includes the creation of specific search criteria, completion and documentation of analysis, and 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 are expected to communicate with the staff at least quarterly.

Managers' portfolios are 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.

**Year-end Asset Allocation at Fair Value**  
December 31, 2017



- 1 Equity Securities (37.8%)
- 2 Real Assets (14.8%)
- 3 Debt Securities (14.2%)
- 4 Absolute Return (13.9%)
- 5 Private Equity (10.7%)
- 6 Short Term (8.6%)

	December 31, 2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Equities securities	29.2%	37.3	35.8	35.2	36.2	37.5	35.5	33.9	35.2	37.8
Debt securities	26.1	23.7	21.0	19.4	17.9	16.0	15.7	15.8	15.0	14.2
Private equity	8.2	7.4	8.8	10.8	11.3	11.0	11.8	11.9	11.3	10.7
Real assets	18.7	14.7	14.4	13.9	13.5	12.2	14.0	14.9	14.7	14.8
Short-term securities	5.9	4.2	5.0	4.9	5.9	6.6	5.8	8.2	8.2	8.6
Absolute return	11.9	12.7	15.0	15.8	15.2	16.7	17.2	15.3	15.6	13.9
<b>Total portfolio</b>	<b>100.0%</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

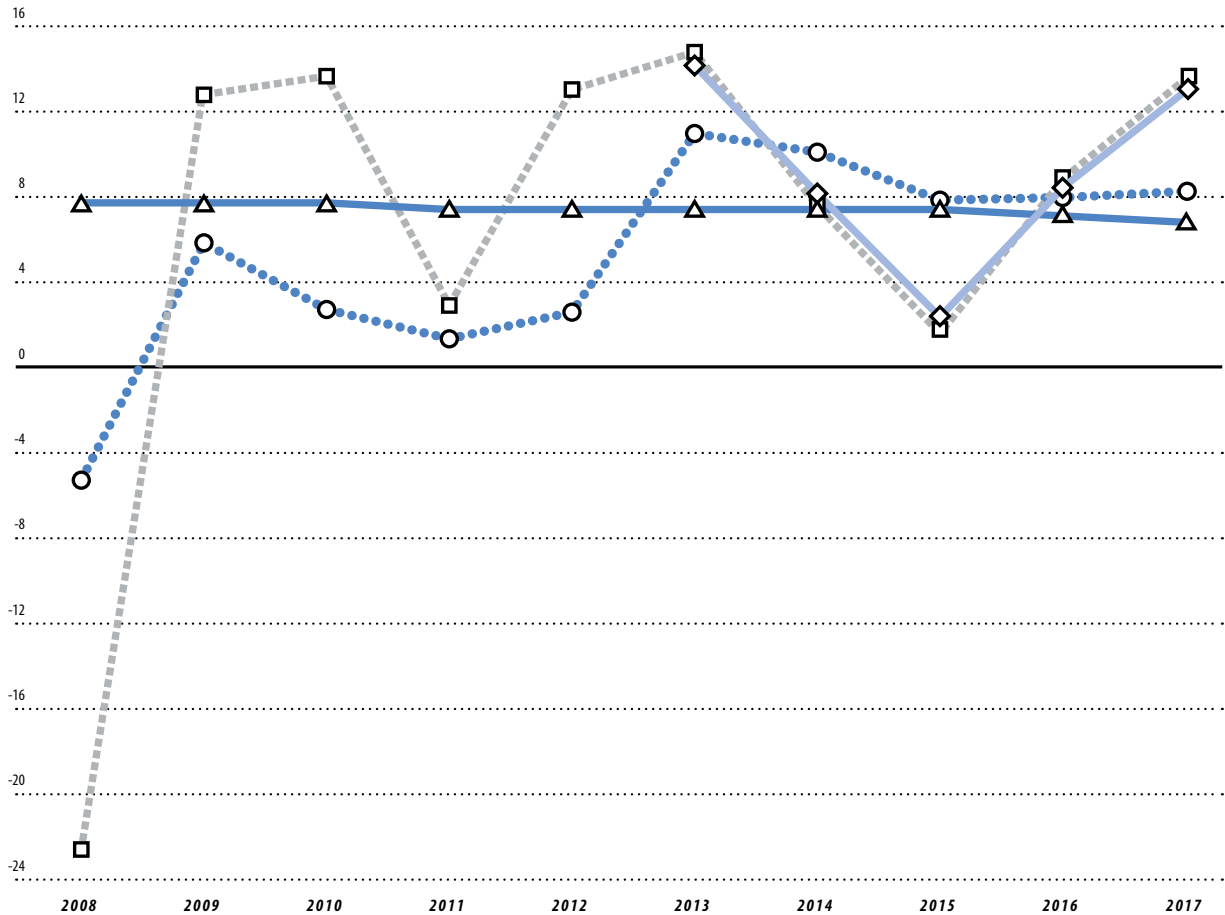
The allocation of assets as reported to the board are as follows: Equity securities 41.0%, Debt securities 19.8%, Absolute return 14.0%, Private equity 10.8% and Real assets 14.4%. These allocation percentages differ from investment asset percentages presented in the MD&A and Statement of Fiduciary Net Position as a result of different methodologies used to categorize investment assets and the impact of derivatives for investment purposes versus financial statement presentation purposes. For investment purposes the impact of derivatives used to rebalance the defined portfolio are expressed using the notional value of those derivatives.



DEFINED BENEFIT INVESTMENTS (Continued)

## 10-Year Total Pension Investment Rates of Return

(in percents)



(dollars in millions)

	Total Investment Portfolio Fair Value	(1) Smooth Expected Rate of Return	(2) Fair Value Rate of Return	(3) Actuarial Assumed Interest Rate	(4) Money Weighted Rate of Return
2008	\$17,565	(5.03)	(22.30)	7.75%	—
2009	19,058	6.11	12.88	7.75	—
2010	20,992	2.87	13.73	7.75	—
2011	20,796	1.34	2.89	7.50	—
2012	22,871	2.66	13.10	7.50	—
2013	25,765	11.03	14.89	7.50	14.55%
2014	26,955	10.20	7.52	7.50	7.94
2015	27,086	7.84	1.92	7.50	2.02
2016	29,017	8.06	8.79	7.20	8.73
2017	32,125	8.32	13.57	6.95	13.38

- (1) **Smoothed Expected Rate of Return** consists of investment income in excess or shortfall of the expected 6.95% on fair value smoothed over a 5-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.
- (2) **Fair Value Rate of Return** consists of cash income plus gains and losses due to changes in fair value, whether realized or unrealized (before deduction of investment fees). (For 2017, 13.38% net of fees.)
- (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.
- (4) **Money Weighted Rate of Return** is calculated as the internal rate of return on pension plan investments, net of investment expenses.

DEFINED BENEFIT INVESTMENTS (Continued)

## Comparative Investment Results <sup>(1)(2)(3)</sup>

Year Ended December 31, 2017

Investment Option Comparative Index	1 Year	3 Year	5 Year	10 Year
<b>Global Equity</b> .....	<b>21.41%</b>	<b>9.90%</b>	<b>11.71%</b>	<b>6.56%</b>
Russell Global Equity Index .....	23.89	9.51	11.05	4.88
<b>Global Debt Securities</b> .....	<b>3.88</b>	<b>3.04</b>	<b>2.81</b>	<b>4.86</b>
Fund Benchmark .....	3.93	2.96	2.64	4.38
<i>Benchmark consisting of:</i>				
60% Bloomberg Barclays U.S. Aggregate Bond Index				
15% Bloomberg Barclays Global Aggregate Bond Hedged				
25% Bloomberg Barclays World Government Inflation-Linked Bond Index				
<b>Real Assets*</b> .....	<b>11.74</b>	<b>10.17</b>	<b>11.01</b>	<b>3.55</b>
U.S. Consumer Price Index + 5.0% .....	7.18	6.52	6.27	6.58
<b>Private Equity**</b> .....	<b>19.12</b>	<b>13.40</b>	<b>15.93</b>	<b>10.97</b>
Private Equity Benchmark .....	23.63	13.65	18.11	11.27
<i>Benchmark consisting of:</i>				
Russell 3000 + 2.5%				
<b>Absolute Return</b> .....	<b>5.47</b>	<b>3.71</b>	<b>5.24</b>	<b>4.47</b>
3-Month Treasury Bills + 5.0% .....	5.86	5.41	5.27	5.39
<b>Short Term</b> .....	<b>0.42</b>	<b>0.39</b>	<b>0.26</b>	<b>1.01</b>
3-Month Treasury Bills .....	0.86	0.41	0.27	0.39
<b>Total Fund</b> .....	<b>13.57</b>	<b>7.96</b>	<b>9.20</b>	<b>6.08</b>
Fund Benchmark .....	14.05	7.53	8.40	5.91
<i>Benchmark consisting of:</i>				
40% Russell Global Equity Index				
16% 3-Month Treasury Bill + 5%				
15% CPI-W+5%				
12% Bloomberg Barclays U.S. Aggregate Bond Index				
8% Russell 3000 Index + 2.5%				
5% Bloomberg Barclays World Government Inflation-Linked Bond Index				
3% Bloomberg Barclays Global Aggregate Bond Hedged				
0.4% Credit Suisse Leveraged Loan Index				
0.4% Bloomberg Corporate High Yield Index				
0.2% Russel 2000 Index				
CAI Public Fund—Very Large Database Median .....	16.37	8.19	9.31	6.00
<b>Inflation</b> .....	<b>2.18</b>	<b>1.52</b>	<b>1.26</b>	<b>1.57</b>

(1) Investment measurement services provided by Callan Associates Inc.

(2) Total rates of return include cash income plus gains and losses due to changes in fair value, where realized or unrealized.

(3) Investment return calculations were prepared using a time-weighted return except private equity which is prepared using a dollar weighted return.

\* The non real estate portion of Real Assets only reflects returns for years 1 and 3. Years 5 and 10 are for real estate only using a NCREIF Total Index Benchmark.

## DEFINED BENEFIT INVESTMENTS (Continued)

## List of Largest Assets Held

December 31, 2017

### Largest Equity Holdings\*

(By Fair Value)

Description	Shares	Fair Value
Apple Inc.	740,795	\$ 125,364,738
Microsoft Corp.	1,081,392	92,502,272
Alphabet Inc.	86,721	91,351,901
Citigroup	1,033,688	76,916,724
Amazon Inc.	65,138	76,176,937
Facebook Inc.	410,225	72,393,597
Wells Fargo & Co.	1,163,401	70,583,539
Nestle SA	803,520	69,096,948
Berkshire Hathway	303,256	60,111,404
MLP Apollo	1,653,612	55,346,394

### Largest Debt Securities Holdings

(By Fair Value)

Description	Par Value	Fair Value
US Treasury Notes .125% Due 4-15-2020	\$ 72,180,000	\$ 75,871,281
GNMA II Jumbos 3.5% 30 year	68,104,103	70,402,616
US Treasury Notes 1.875% Due 12-15-2020	62,260,000	62,080,006
US Treasury Bonds 2.25% Due 8-15-2027	62,175,000	61,833,102
FNMA Pool 4% 8-1-2047	56,318,714	58,947,503
US Treasury Notes 1.125% Due 6-30-2021	52,365,000	50,712,256
US Treasury Notes 1.5% Due 10-31-2019	49,465,000	49,124,298
Government of Japan .1% Index Linked 9-2024	5,178,200,000	48,709,636
US Treasury Notes 2.0% Due 11-30-2022	48,585,000	48,142,779
GNMA II Jumbos 3% 30 year	45,146,000	45,555,158

\*As required by SEC Rule 13F, a list of publicly traded equity securities held by Utah Retirement Systems is available online through the SEC Electronic Data Gathering, Analysis, and Retrieval (EDGAR) website. This list is also available upon request.

## Schedules of Fees and Commissions

Year Ended December 31, 2017

### Broker Commission Fees

Broker	Total Commission Fees
Merrill Lynch	\$ 278,268
Instinet	222,337
Frank Russell	201,555
The Citation Group	123,023
Barclays	116,540
Jefferies	113,684
RBC	99,438
Convergex	90,047
Goldman Sachs	79,931
Liquidnet	77,055
Citigroup	56,042
All Others	1,043,035
<b>Total</b>	<b>\$ 2,500,955</b>

### Schedule of Investment Fees and Commissions

Investment advisor fees:*	
Equity securities	\$ 28,086,076
Debt securities	5,233,367
Private equity	4,076,853
Absolute return	4,702,243
Short-term	1,144,378
Real assets	1,944,083
<b>Total investment advisor fees</b>	<b>45,187,000</b>
Investment brokerage fees	2,500,955
<b>Total fees and commissions</b>	<b>\$ 47,687,955</b>

\*Represents fees that are invoiced and paid directly by URS. These numbers do not represent all management, performance, carried interest, or other fees charged directly by investment advisors. These and other investment related fees are netted from returns.

Utah Retirement Systems uses a commission recapture program as part of its trading strategies. During the year ending December 31, 2017, Utah Retirement Systems recaptured approximately \$190,431 from the gross commission charges. This recaptured sum was used to cover or offset the \$250,666 in investment expenses that otherwise would have been paid for with investment funds.



## Utah Retirement Investment Consultants

Albourne America LLC  
655 Montgomery Street  
San Francisco, CA 94111

Callan Associates, Inc.  
101 California Street  
Suite 3500  
San Francisco, CA 94111

Glass Lewis & Company  
One Sansome Street  
Suite 3300  
San Francisco, CA 94104

Russell Implementation  
Services, Inc.  
1301 Second Avenue  
18th Floor  
Seattle, WA 98101

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



# DEFINED CONTRIBUTION SAVINGS PLANS INVESTMENTS

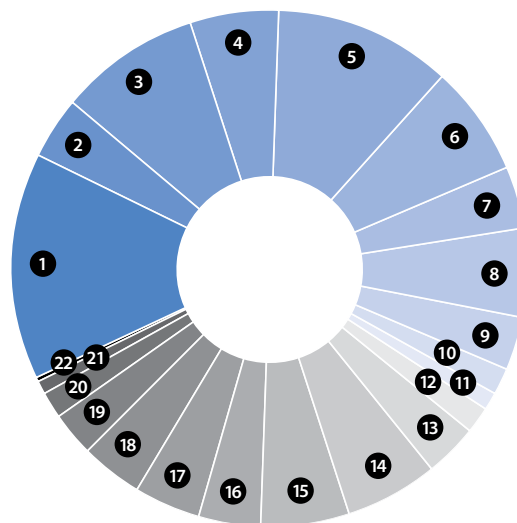
## Defined Contribution Savings Plans Investments

December 31, 2017

### Investment Highlights

Utah Retirement Systems' 401(k), 457, Roth and traditional IRAs are tax-advantaged retirement savings plans authorized under sections 401(k), 457(b), and 408 of the Internal Revenue Code. These plans are available to employees of the state, local government, and public education employers throughout Utah.

The participants of the plans have a choice of 20 core investment funds and a brokerage window in which their monies may be invested. Each participant may choose one or a combination of the core funds. The table to the right shows the total assets in the various investment options. The graph above the table shows the asset distribution as of December 31, 2017.



1	Income Fund	14.44%
2	Bond Fund	3.85%
3	Balanced Fund	8.88%
4	Large Cap Stock Value Fund	5.59%
5	Large Cap Stock Index Fund	11.17%
6	Large Cap Stock Growth Fund	6.69%
7	International Fund	4.04%
8	Small Cap Stock Fund	5.61%
9	Brokerage Window	3.15%
10	Tier 2 DC Nonvested	1.75%
11	Target Retired Fund	1.12%
12	Target Date 2010 Fund	1.73%
13	Target Date 2015 Fund	3.40%
14	Target Date 2020 Fund	5.68%
15	Target Date 2025 Fund	5.54%
16	Target Date 2030 Fund	4.11%
17	Target Date 2035 Fund	4.05%
18	Target Date 2040 Fund	3.77%
19	Target Date 2045 Fund	2.98%
20	Target Date 2050 Fund	1.71%
21	Target Date 2055 Fund	0.61%
22	Target Date 2060 Fund	0.16%

(in thousands)

Investment Options	Total
Income Fund	\$ 822,758
Bond Fund	219,220
Balanced Fund	505,758
Large Cap Stock Value Fund	318,526
Large Cap Stock Index Fund	636,315
Large Cap Stock Growth Fund	381,348
International Fund	230,130
Small Cap Stock Fund	319,648
Brokerage Window	179,557
Tier 2 Nonvested	99,940
Target Retired Fund	63,688
Target Date 2010 Fund	98,431
Target Date 2015 Fund	193,774
Target Date 2020 Fund	323,541
Target Date 2025 Fund	315,662
Target Date 2030 Fund	234,217
Target Date 2035 Fund	230,576
Target Date 2040 Fund	214,593
Target Date 2045 Fund	169,578
Target Date 2050 Fund	97,339
Target Date 2055 Fund	34,531
Target Date 2060 Fund	9,252
<b>Totals</b>	<b>\$ 5,698,382</b>

### INVESTMENT AND ADMINISTRATIVE EXPENSES

There are no front-end load, redemption, or other hidden fees associated with these plans. All costs reflected in the table on page 148 are deducted from earnings prior to posting to participant accounts and do not appear as separate items on participant statements.

The administrative fee for the brokerage window account is a flat rate of \$25 per quarter. Investment fees and broker commissions are paid by the participant according to the trading and securities selected within the brokerage window.

## DEFINED CONTRIBUTION INVESTMENT PLANS (Continued)

 2017 Investment Summary and Investment and Administrative Fees

(dollars in thousands)

Fund	2017 Beginning Fair Value	Purchases	Sales and Redemptions	Increase (Decrease) in Fair Value	2017 Ending Fair Value	Percent of Total Fair Value	Invest- ment Fees	Admin- istrative Fees	Total Fees
Income Fund	\$ 867,887	43,186	87,141	(1,174)	822,758	14.44%	0.29%	0.16%	0.45%
Bond Fund	222,041	17,795	24,972	4,356	219,220	3.85	0.12	0.16	0.28
Balanced Fund	446,809	22,550	23,937	60,336	505,758	8.88	0.27	0.16	0.43
Large Cap Stock Value Fund	292,499	17,144	23,895	32,778	318,526	5.59	0.42	0.16	0.58
Large Cap Stock Index Fund	550,396	14,699	35,788	107,008	636,315	11.17	0.03	0.16	0.19
Large Cap Stock Growth Fund	264,632	48,784	15,618	83,550	381,348	6.69	0.31	0.16	0.47
International Fund	170,413	25,371	10,740	45,086	230,130	4.04	0.06	0.16	0.22
Small Cap Stock Fund	310,949	15,703	20,747	13,743	319,648	5.61	0.37	0.16	0.53
Brokerage Window	152,320	25,303	9,256	11,190	179,557	3.15	N/A	N/A	N/A
Tier 2 Non Vested	82,050	28,207	19,350	9,033	99,940	1.75	0.18	0.16	0.34
Retired Fund	55,241	15,662	9,942	2,727	63,688	1.12	0.20	0.16	0.36
2010 Fund	86,394	16,930	9,403	4,510	98,431	1.73	0.19	0.16	0.35
2015 Fund	173,367	28,541	19,767	11,633	193,774	3.40	0.21	0.16	0.37
2020 Fund	271,503	42,639	17,127	26,526	323,541	5.68	0.22	0.16	0.38
2025 Fund	244,676	46,016	4,353	29,323	315,662	5.54	0.22	0.16	0.38
2030 Fund	179,468	31,969	4,421	27,201	234,217	4.11	0.23	0.16	0.39
2035 Fund	171,099	29,155	415	30,737	230,576	4.05	0.22	0.16	0.38
2040 Fund	158,199	24,514	(488)	31,392	214,593	3.77	0.22	0.16	0.38
2045 Fund	121,808	22,770	1,932	26,932	169,578	2.98	0.22	0.16	0.38
2050 Fund	63,374	20,008	842	14,799	97,339	1.71	0.22	0.16	0.38
2055 Fund	17,993	12,185	407	4,760	34,531	0.61	0.22	0.16	0.38
2060 Fund	5,378	4,970	2,196	1,100	9,252	0.16	0.22	0.16	0.38
<b>Total</b>	<b>\$ 4,908,496</b>	<b>554,101</b>	<b>341,761</b>	<b>577,546</b>	<b>5,698,382</b>	<b>100.00%</b>			

By administering the defined contribution plans internally rather than through a third party, expenses are kept at very low levels to maximize earnings to each participant. The table above shows these expenses to be nominal when compared to much higher fees on most annuities, mutual funds, and insurance contracts.

An annual account maintenance fee of \$15 is assessed to inactive accounts with combined 401(k), 457, Roth and traditional IRA balances of less than \$5,000. (Inactive accounts are defined as accounts that have had no contribution or withdrawal activity for a period of at least

12 months and the participant is no longer employed with a URS participating employer.) There is a \$60 one-time service fee for loans, and a 2% fee for short-term trading (more frequently than 30 days).

The investments described are not FDIC insured; not deposits or obligations of, or guaranteed by, any financial institution; and not guaranteed by the Utah Retirement Systems or any government agency.

The past performance of any of these funds does not guarantee future results.

DEFINED CONTRIBUTION INVESTMENT PLANS (Continued)

## Defined Contribution Plans Comparative Annualized Rates of Return

Year Ended December 31, 2017

Investment Option Comparative Index	Annualized			
	1-Year	3-Year	5-Year	10-Year
<b>Income Fund</b> .....	<b>1.72%</b>	<b>1.64%</b>	<b>1.67%</b>	<b>2.14%</b>
Treasury Bills Index.....	0.86	0.41	0.27	0.39
<b>Bond Fund</b> .....	<b>4.64</b>	<b>3.38</b>	<b>3.30</b>	<b>5.24</b>
Bloomberg Barclays Capital Aggregate Bond Index .....	3.54	2.24	2.10	4.01
<b>Balanced Fund</b> .....	<b>17.13</b>	<b>9.05</b>	<b>11.74</b>	<b>7.85</b>
Balanced Index <sup>(1)</sup> .....	14.13	7.70	10.21	7.05
<b>Large Cap Stock Value Fund</b> .....	<b>18.23</b>	<b>11.02</b>	<b>16.22</b>	<b>7.61</b>
*Russell 1000 Value Index .....	13.66	8.65	14.04	7.10
<b>Large Cap Stock Index Fund</b> .....	<b>21.42</b>	<b>11.03</b>	<b>15.45</b>	<b>8.18</b>
Large Cap Stock Blended Index <sup>(2)</sup> .....	21.69	11.23	15.71	8.40
<b>Large Cap Stock Growth Fund</b> .....	<b>33.20</b>	<b>13.65</b>	<b>17.44</b>	<b>9.70</b>
*Russell 1000 Growth Index .....	30.21	13.79	17.33	10.00
<b>International Fund</b> .....	<b>27.56</b>	<b>8.33</b>	<b>7.19</b>	<b>1.72</b>
International Blended Index <sup>(3)</sup> .....	27.81	8.38	7.22	1.36
<b>Small Cap Stock Fund</b> .....	<b>11.35</b>	<b>9.86</b>	<b>14.44</b>	<b>9.74</b>
*Russell 2000 Index.....	14.65	9.96	14.12	8.71
<b>Target Retired Fund</b> .....	<b>6.83</b>	<b>4.36</b>	<b>N/A</b>	<b>N/A</b>
Target Retired Index <sup>(4)</sup> .....	5.91	3.47	—	—
<b>Target Date 2010 Fund</b> .....	<b>7.65</b>	<b>4.54</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2010 Index <sup>(5)</sup> .....	6.64	3.96	—	—
<b>Target Date 2015 Fund</b> .....	<b>8.94</b>	<b>5.27</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2015 Index <sup>(6)</sup> .....	8.03	4.83	—	—
<b>Target Date 2020 Fund</b> .....	<b>11.51</b>	<b>6.34</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2020 Index <sup>(7)</sup> .....	10.44	5.82	—	—

Continued on page 150.

Past performance does not guarantee future results.

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

Investment return calculations were prepared using a time-weighted return. Comparative indexes below reflect current asset allocation targets.

(1) **Balanced Index:** 60% S&P 500, 40% Bloomberg Barclays US Aggregate Bond through 12/31/2014, 60% Russell 1000\*, 40% Bloomberg Barclays US Aggregate Bond thereafter

(2) **Large Cap Stock Blended Index:** S&P 500 through 6/30/2011, Russell 1000 Index\* thereafter

(3) **International Blended Index:** MSCI EAFE through 3/31/2011, MSCI ACWI ex US IMI thereafter

(4) **Target Date Retired Index:** 25% 90 Day T-Bills, 20% Bloomberg Barclays US Aggregate Bond, 14% Russell 1000 Index\*, 4% MSCI ACWI ex. US IMI, 1% Russell 2000 Index\*, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 3% Bloomberg Commodity Index, 20% Bloomberg Barclays Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 3% NFI-ODCE (Value Weighted)

(5) **Target Date 2010 Index:** 22% 90 Day T-Bills, 21% Bloomberg Barclays US Aggregate Bond, 17% Russell 1000 Index\*, 4% MSCI ACWI ex. US IMI, 1% Russell 2000 Index\*, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 3% Bloomberg Commodity Index, 19% Bloomberg Barclays Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 3% NFI-ODCE (Value Weighted)

(6) **Target Date 2015 Index:** 17% 90 Day T-Bills, 21% Bloomberg Barclays US Aggregate Bond, 19% Russell 1000 Index\*, 6% MSCI ACWI ex. US IMI, 2% Russell 2000 Index\*, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 3% Bloomberg Commodity Index, 14% Bloomberg Barclays Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 8% NFI-ODCE (Value Weighted)

(7) **Target Date 2020 Index:** 12% 90 Day T-Bills, 18% Bloomberg Barclays US Aggregate Bond, 0.5% Russell 1000 Value Index\*, 23% Russell 1000 Index\*, 0.5% Russell 1000 Growth Index\*, 11% MSCI ACWI ex. US IMI, 3% Russell 2000 Index, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 3% Bloomberg Commodity Index, 9% Bloomberg Barclays Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 10% NFI-ODCE (Value Weighted)

\*Russell Investment Group is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Russell is a trademark of Russell Investment Group.

DEFINED CONTRIBUTION INVESTMENT PLANS (Continued)

Defined Contribution Plans  
Comparative Annualized Rates of Return (Concluded)

Year Ended December 31, 2017

Investment Option Comparative Index	Annualized			
	1-Year	3-Year	5-Year	10-Year
<b>Target Date 2025 Fund</b> .....	<b>14.14%</b>	<b>7.35%</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2025 Index <sup>(8)</sup> .....	13.13	6.89	—	—
<b>Target Date 2030 Fund</b> .....	<b>16.96</b>	<b>8.30</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2030 Index <sup>(9)</sup> .....	16.08	7.87	—	—
<b>Target Date 2035 Fund</b> .....	<b>19.44</b>	<b>9.01</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2035 Index <sup>(10)</sup> .....	18.50	8.58	—	—
<b>Target Date 2040 Fund</b> .....	<b>20.30</b>	<b>9.28</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2040 Index <sup>(11)</sup> .....	19.55	8.83	—	—
<b>Target Date 2045 Fund</b> .....	<b>20.74</b>	<b>9.41</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2045 Index <sup>(12)</sup> .....	19.84	8.93	—	—
<b>Target Date 2050 Fund</b> .....	<b>20.74</b>	<b>9.41</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2050 Index <sup>(13)</sup> .....	19.83	8.93	—	—
<b>Target Date 2055 Fund</b> .....	<b>20.74</b>	<b>9.40</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2055 Index <sup>(14)</sup> .....	19.83	8.93	—	—
<b>Target Date 2060 Fund</b> .....	<b>20.74</b>	<b>9.41</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2060 Index <sup>(15)</sup> .....	19.83	8.93	—	—
<b>Tier 2 Nonvested Fund</b> .....	<b>13.39</b>	<b>6.53</b>	<b>7.33%</b>	<b>N/A</b>
Tier 2 Nonvested Index <sup>(16)</sup> .....	12.15	5.84	6.84	—

Past performance does not guarantee future results.

(8) **Target Date 2025 Index:** 7% 90 Day T-Bills, 15% Bloomberg Barclays US Aggregate Bond, 2.5% Russell 1000 Value Index\*, 24% Russell 1000 Index\*, 2.5% Russell 1000 Growth Index\*, 17% MSCI ACWI ex. US IMI, 4% Russell 2000 Index\*, 9% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 2% Russell Fundamental US Select Real Estate Index\*\*, 3% Bloomberg Commodity Index, 4% Bloomberg Barclays Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 10% NFI-ODCE (Value Weighted)

(9) **Target Date 2030 Index:** 2% 90 Day T-Bills, 10% Bloomberg Barclays US Aggregate Bond, 4% Russell 1000 Value Index\*, 24% Russell 1000 Index\*, 4% Russell 1000 Growth Index\*, 24% MSCI ACWI ex. US IMI, 7% Russell 2000 Index, 7% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 10% NFI-ODCE (Value Weighted)

(10) **Target Date 2035 Index:** 6% Bloomberg Barclays US Aggregate Bond, 6.5% Russell 1000 Value Index\*, 23% Russell 1000 Index\*, 6.5% Russell 1000 Growth Index\*, 30% MSCI ACWI ex. US IMI, 9% Russell 2000 Index, 3% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 8% NFI-ODCE (Value Weighted)

(11) **Target Date 2040 Index:** 4% Bloomberg Barclays US Aggregate Bond, 9% Russell 1000 Value Index\*, 21% Russell 1000 Index\*, 9% Russell 1000 Growth Index\*, 32% MSCI ACWI ex. US IMI, 10% Russell 2000 Index\*, 2% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 5% NFI-ODCE (Value Weighted)

(12) **Target Date 2045 Index:** 3% Bloomberg Barclays US Aggregate Bond, 10% Russell 1000 Value Index\*, 20% Russell 1000 Index\*, 10% Russell 1000 Growth Index\*, 33% MSCI ACWI ex. US IMI, 10% Russell 2000 Index\*, 2% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 4% NFI-ODCE (Value Weighted)

(13) **Target Date 2050 Index:** 3% Bloomberg Barclays US Aggregate Bond, 10% Russell 1000 Value Index\*, 20% Russell 1000 Index\*, 10% Russell 1000 Growth Index\*, 33% MSCI ACWI ex. US IMI, 10% Russell 2000 Index\*, 2% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 4% NFI-ODCE (Value Weighted)

(14) **Target Date 2055 Index:** 3% Bloomberg Barclays US Aggregate Bond, 10% Russell 1000 Value Index\*, 20% Russell 1000 Index\*, 10% Russell 1000 Growth Index\*, 33% MSCI ACWI ex. US IMI, 10% Russell 2000 Index\*, 2% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 4% NFI-ODCE (Value Weighted)

(15) **Target Date 2060 Index:** 3% Bloomberg Barclays US Aggregate Bond, 10% Russell 1000 Value Index\*, 20% Russell 1000 Index\*, 10% Russell 1000 Growth Index\*, 33% MSCI ACWI ex. US IMI, 10% Russell 2000 Index\*, 2% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 4% NFI-ODCE (Value Weighted)

(16) **Tier 2 Nonvested Index:** 30% Bloomberg Barclays US Aggregate Bond, 23% Russell 1000 Index\*, 18% MSCI ACWI ex. US IMI, 5% Russell 2000 Index\*, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 4% Russell Fundamental US Select Real Estate Index\*\*, 5% Bloomberg Commodity Index, 5% Bloomberg Barclays Global Inflation-Linked Bond Index 1-10 Year (USD Hedged)

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## DEFINED CONTRIBUTION INVESTMENT PLANS (Continued)

## List of Largest Assets Held

December 31, 2017

## Largest Equity Holdings\*

(By Fair Value)

Description	Shares	Fair Value
Apple Inc	368,208	\$ 62,311,840
Alphabet Inc.	55,514	58,279,879
Microsoft Corp.	596,987	51,040,606
Amazon Inc.	39,227	45,874,800
Facebook Inc.	238,852	42,147,824
Visa Inc.	267,133	30,458,505
Home Depot	156,736	29,706,174
Mastercard Inc.	191,047	28,916,874
Adobe Systems Inc.	123,051	21,563,457
Salesforce Inc.	195,515	20,396,418

## Largest Debt Securities Holdings

(By Fair Value)

Description	Par Value	Fair Value
US Treasury Notes 1% Due 5-31-2018	\$ 25,000,000	\$ 24,969,943
US Treasury Notes 1.75% Due 5-31-2022	23,000,000	22,632,650
Federal Home Loan Mortgage Corp. 4.5% Due 7-1-2047	16,165,853	17,239,902
US Treasury Notes 1.875% Due 1-31-2022	15,135,000	15,094,946
US Treasury Notes .125% Due 4-15-2020	13,554,000	14,250,777
Federal Home Loan Mortgage Corp. 4.5% Due 6-1-2047	10,701,523	11,412,670
US Treasury Notes 1.875% Due 8-31-2024	11,500,000	11,261,387
US Treasury Notes .75% Due 1-31-2018	10,845,000	10,874,464
Federal Home Loan Mortgage Corp. 4.5% Due 9-1-2046	9,350,270	9,970,071
US Treasury Notes 1.875% Due 8-28-2022	9,505,000	9,461,726

\*As required by SEC Rule 13F, a list of publicly traded equity securities held by Utah Retirement Systems is available online through the SEC Electronic Data Gathering, Analysis, and Retrieval (EDGAR) website. This list is also available upon request.

## Schedules of Fees and Commissions

Year Ended December 31, 2017

## Broker Commission Fees

Broker	Total Commission Fees
Frank Russell	\$ 67,629
Instinet	11,295
Jefferies	9,458
Deutsche Bank	7,045
Morgan Stanley	5,751
Bear Sterns	5,187
JP Morgan	4,440
Barclays	3,145
All others	30,778
<b>Total</b>	<b>\$ 144,728</b>

## Schedule of Investment Fees and Commissions

Investment advisor fees:*	
Debt securities	\$ 1,217,040
Equity securities	2,430,423
Real assets	144,143
<b>Total investment advisor fees</b>	<b>3,791,606</b>
Investment brokerage fees	144,728
<b>Total fees and commissions</b>	<b>\$3,936,334</b>

\*Represents fees that are invoiced and paid directly by URS. These numbers do not represent all management, wrap, or other fees charged directly by the investment advisors. These and other investment related fees are netted from returns.

Utah Retirement Systems uses a commission recapture program as part of its trading strategies. During the year ending December 31, 2017, Utah Retirement Systems recaptured \$48,317 from the gross commission charges. This recaptured sum was used to cover or offset the \$59,922 in investment expenses that otherwise would have been paid for with investment funds.



## Investment Professionals

### DEFINED CONTRIBUTION PLANS INVESTMENT PROFESSIONALS

Ameriprise Trust Company  
940 Ameriprise Financial Center  
Minneapolis, MN 55474

AQR  
2 Greenwich Plaza  
3rd Floor  
Greenwich, CT 06830

BlackRock Asset Management  
40 East 52nd Street  
New York, NY 10019

Charles Schwab  
101 Montgomery Street  
San Francisco, CA 94104

Dimensional Fund  
Advisors, Inc.  
6300 Bee Cave Road  
Austin, TX 78746

Dodge & Cox  
Investment Managers  
555 California Street  
40th Floor  
San Francisco, CA 94104

Ivy Investments  
6300 Lamar Avenue  
Shawnee Mission, KS 66201

Jennison Associates, LLC  
466 Lexington Avenue  
New York, NY 10017

Standish  
201 Washington Street  
Suite 2900  
Boston, MA 02108

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

The Prudential Insurance  
Company of America  
751 Broad Street  
Newark, NJ 07102

Utah Retirement Systems  
560 East 200 South  
Salt Lake City, UT 84102



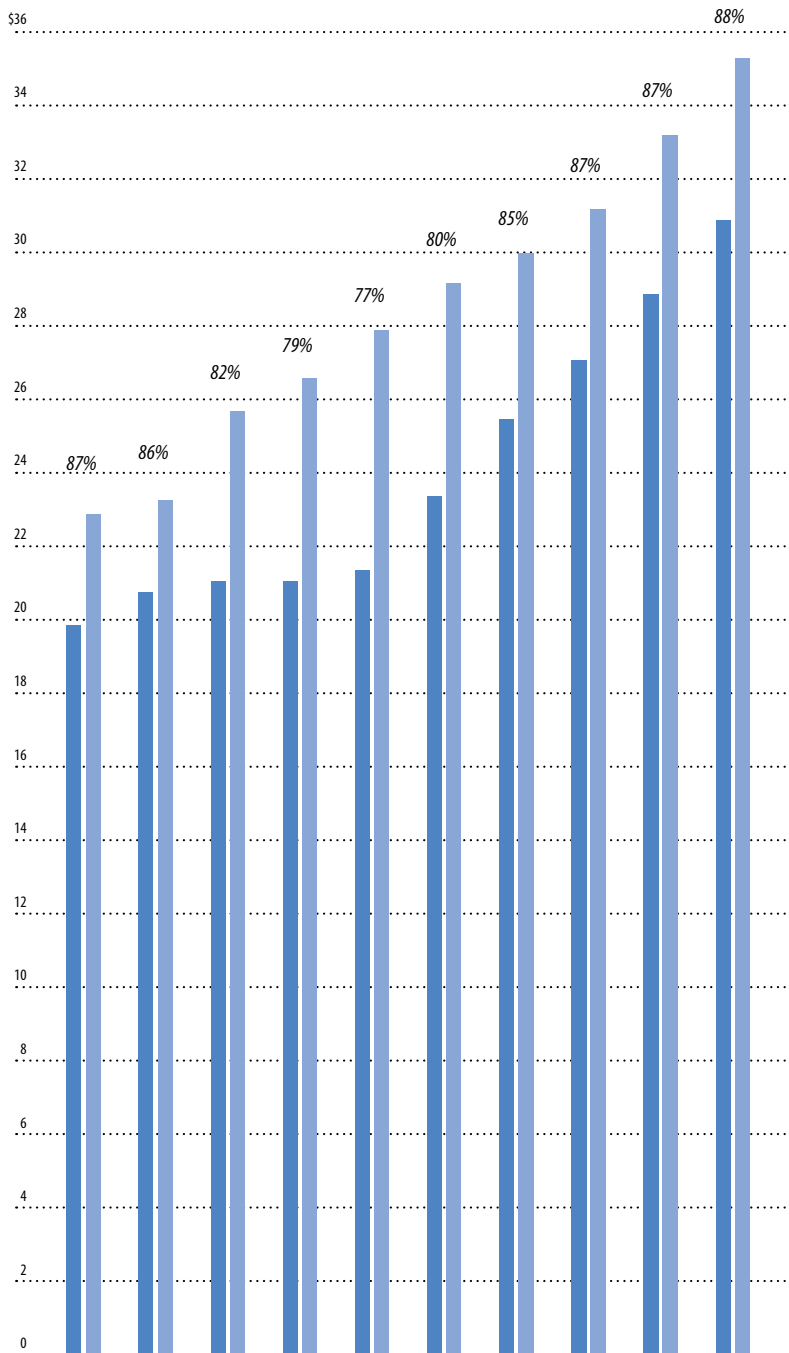
2017

# ACTUARIAL SECTION

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# FUNDING PROGRESS WITH FUNDING RATIOS

(dollars in billions)



(dollars in billions)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actuarial value of assets	\$ 19.9	20.8	21.1	21.1	21.4	23.4	25.5	27.1	28.9	30.9
Accrued actuarial liability	22.9	24.3	25.7	26.6	27.9	29.2	30.0	31.2	33.2	35.3
Funding Ratios	87%	86%	82%	79%	77%	80%	85%	87%	87%	88%

# ACTUARY'S CERTIFICATION LETTER



P: 469.524.0000 | F: 469.524.0003 | [www.grsconsulting.com](http://www.grsconsulting.com)

August 17, 2017

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

Dear Members of the Board:

## **SUBJECT: ACTUARIAL VALUATION AS OF JANUARY 1, 2017**

This report describes the current actuarial condition of the Utah Retirement Systems (URS), determines the calculated employer contribution rates, and analyzes changes in these contribution rates. In addition, the report provides various summaries of the data. A separate report is issued with regard to valuation results determined in accordance with Governmental Accounting Standards Board (GASB) Statements 67 and 68. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of January 1, the first day of the URS plan year. This report was prepared at the request of the Board and is intended for use by the URS staff and those designated or approved by the Board. This report may be provided to parties other than URS staff only in its entirety and only with the permission of the Board.

Under URS statutes, the Board of Trustees must certify employer contribution rates annually. These rates are determined actuarially, based on the Board's funding policy, although, as discussed below, under certain circumstances the Board may choose not to reduce the current rate if it is greater than the actuarially calculated rate. Contribution rates determined by a given actuarial valuation become effective eighteen months after the valuation date. In other words, the rates determined by this January 1, 2017

actuarial valuation will be used by the Board when certifying the employer contribution rates for the year beginning July 1, 2018 and ending June 30, 2019. If new legislation is enacted between the valuation date and the date the contribution rates become effective, the Board may adjust the calculated rates before certifying them in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

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

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

- » To set rates so that the unfunded actuarial accrued liability (UAAL) will be amortized over a reasonable period from the current valuation date.
- » To set rates so that they remain relatively level over time.

To accomplish this, the Board's funding policy requires that the employer contribution rate be at least 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 over 20 years in installments that increase at the assumed rate of growth in payroll for URS.

Under this policy, the objective of maintaining a relatively level contribution rate over time is achieved in normal conditions such as consistent financial markets.

Section 49-11-301(5) of the Utah Code allows the Board to set the employer contribution rate at the prior year's rate, if the rate otherwise would decrease and if the funded ratio is less than 110%. In such a case, the rate set by the Board would be higher than the actuarially determined contribution rate. The purpose of this legislation is to enhance the Board's ability to maintain more level contribution rates while targeting a 100% - 110% funded level. The Board has historically followed this policy, so the recommended contribution rate may be greater than the actuarially determined rate.

### 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 at least 100%.

The funded ratio on a combined basis remains unchanged from the prior year at 85.2%. The improvement in the funded ratio due to investment gains and the current contribution effort to finance the unfunded actuarial accrued liability were offset by the impact of the new actuarial assumptions. Absent unfavorable actuarial experience, we expect the funded ratio to gradually increase in future years.

If market value had been used in the calculation instead of actuarial value, the aggregate funded ratio for all funds combined would have been 84.1% compared to 83.8% in the prior year. The increase in the funded ratio on a market value basis is attributable to the 8.4% return on the market value of assets during the prior year and the current contribution effort to finance the unfunded actuarial accrued liability.

### Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2017. There were no legislative changes enacted since the previous valuation that had a measurable effect on the current valuation.

### Assumptions and methods

The Board, in consultation with its actuary, sets the actuarial assumptions and methods used in the valuation. Current Board policy is to have the actuary perform an experience study every three years. In connection with the appropriate valuation, the actuary conducts a thorough review of plan experience for the preceding five years, and then makes recommendations to the Board.

An experience analysis was carried out in connection with this valuation, and as a result, we recommended, and the Board adopted a number of changes to the actuarial assumptions (except as noted). Our recommendations included:

- » Decrease the investment return assumption from 7.20% to at least 7.00%, with 6.95% or 6.90% as other possible assumptions. (7.00% reflects 0.1% decrease in inflation assumption and 0.1% decrease in real rate of return assumption). The Board elected to use a 6.95% assumption.
- » Decrease the payroll growth assumption from 3.10% to 3.00%.
- » Decrease in the rates of salary increase for individuals (reflects a 0.1% decrease in inflation assumption and small decreases in service based rates for most groups).
- » Constructed new post-retirement mortality table based on URS experience (increases life expectancy for most groups).
- » Pre-retirement mortality assumptions based on RP-2014 white collar mortality table for employees, with adjustments for different employee types.
- » Modify the retirement rates for most groups. The changes varied by group and gender with some rates increasing and some decreasing.



ACTUARY'S CERTIFICATION LETTER *(Concluded)*

- » Modify the termination rates for most groups.  
The changes varied by group and gender with some rates increasing and some decreasing.
- » Modify the disability rates for most groups.  
The rates of disability incidence were generally decreased for those groups (rates for firefighters were increased slightly).

In addition to these assumption changes, several university and college entities (referred to as Higher Ed in the remainder of the report) were moved into their own risk group to reflect their decision to classify new employees such that they do not participate in URS.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and calculated contribution rates.

It is our opinion that the assumptions used to perform this valuation are internally consistent and are reasonable based on past and anticipated future experience of the System. Also, these assumptions and methods used for funding purposes satisfy the parameters set by the Actuarial Standards of Practice.

### Data

Member data for retired, active and inactive members was supplied as of December 31, 2016 by the URS staff. The staff also supplied asset information as of December 31, 2016. We did not audit this data, but we did apply a number of tests to the data and concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by URS.

GRS prepared the following schedules in the actuarial section: *Summary of Actuarial Assumptions and Methods, Analysis of Financial Experience, and the Member and Employer Contribution Rates*. In addition, GRS prepared the following schedules in the financial section in accordance with GASB Statement No. 67: *Net Pension*

*Liability of Employers, Changes in Discount Rate, Schedule of Changes in the Employers' Net Pension Liability, Schedule of Employers' Net Pension Liability, and the Schedules of Employer Contributions.*

URS relied upon the data prepared by GRS to prepare the following schedules: Calculation of Actuarial Value of Assets, Actuarial Value of Assets by System, Schedules of Funding Progress, Solvency Tests, Schedules of Active Member Valuation Data, and the Schedules of Retirants and Beneficiaries.

### Certification

We certify that the information presented herein is accurate and fairly portrays the actuarial position of URS as of January 1, 2017.

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 and consultants. Mr. White is an Enrolled Actuary and a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. Both consultants below are experienced in performing valuations for large public retirement systems.

Sincerely,



Daniel J. White, FSA, EA, MAAA  
Senior Consultant



Lewis Ward  
Consultant



# SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

as of January 1, 2017

## Actuarial Assumptions and Methods



**a)** The actuarial valuation was prepared using the entry age actuarial cost method. As described in the certification letter, the contribution rates are set based on the board's funding policy, which states the contribution rate will not be less than the amount needed to amortize the unfunded actuarial accrued liability of each System over a 20-year period from the valuation date (January 1, 2017).

In calculating this minimum, amortization payments are designed to remain level as a percent of payroll, and payroll is assumed to increase 3.00% per year. Under this method, actuarial gains and losses are identified and amortized as part of the unfunded actuarial accrued liability over a period that does not exceed 20 years.

**b)** The future investment earnings of the assets of the Systems are assumed to accrue at an annual rate of 6.95%, compounded annually. This rate is made up of a 2.50% assumed inflation rate and a 4.45% assumed real rate of return. This assumption was adopted January 1, 2017.

**c)** The total rates of assumed annual salary increase are shown on the actuarial schedule on page 163. The rates include increases due to promotion and longevity and a 3.25% per annum rate of increase in the general wage level of the membership. Salaries of judges are assumed to increase at 3.25%. All of these assumptions were adopted January 1, 2017.

**d)** Post-retirement benefit increases are based on the consumer price index (CPI), limited by the provisions of each System. The increases are assumed to be 2.5% for all Systems. Increases are based on the member's original retirement allowance except in the Judges Retirement System where increases are compounded. For current retirees who have received cumulative COLAs less than the total of annual CPI increases since retirement, higher COLAs are assumed, subject to the annual maximum (2.5% or 4% for Public Safety and 4% for all other Systems), as long as the member has "banked" CPI increases left.



SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS *(Continued)*

as of January 1, 2017

**Retired Member Mortality**

Class of Member

**Educators and Judges**

Men	2017URSM (90%)
Women	2017URSF (90%)

**Public Safety and Firefighters**

Men	2017URSM (110%)
Women	2017URSF (110%)

**Local Government, Public Employees**

Men	2017URSM (110%)
Women	2017URSF (110%)

*2017URSM = Constructed mortality table based on actual experience of male URS retirees multiplied by given percentage*

*2017URSF = Constructed mortality table based on actual experience of female URS retirees multiplied by given percentage*

e) Tables of mortality rates for male members retired for service and beneficiaries were developed from actual experience of URS retirees. Mortality rates for female members retired for service and beneficiaries were developed from actual experience of the URS retirees. The mortality basis is adjusted based upon the member’s class and gender as shown above. These base rates are adjusted for future improvement in mortality using published Scale AA projected from the year 2017. All of these rates were adopted January 1, 2017. Mortality rates for active members use the RP2014 employees mortality tables with white collar adjustment as the underlying assumption with scaling factors applied based on employee group and gender. The assumptions were adopted effective January 1, 2017.

- f) Mortality among disabled members is based on 110% of the RP2014 disabled mortality table for males, and 120% of the RP2014 disabled mortality table for females. The rates for males and females are also adjusted for future improvement in mortality using published Scale AA projected from the year 2006.
- g) 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 with 30 years of service (35 years of service for Tier 2). For public employees the rates vary by age and eligibility for reduced or unreduced retirement. For Public Safety, Firefighters, and Judges the rates vary by age and service groupings.

Rates of assumed termination from employment are assumed to vary by years of service. 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.

- h) 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 investments 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.
- i) All of the actuarial assumptions were renewed or adopted by the Retirement Board in 2017, as recommended by the actuary. The assumptions for Tier 2 members are the same as the Tier 1 members, except for retirement rates.

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

as of January 1, 2017

	Retirement Age	Percent Retiring Within Next Year Among Active Members Eligible for Retirement							Governors and Legislators Retirement Plan
		Male				Female			
		State and School Division		Local Government Division	State and School Division		Local Government Division		
		Educators	Public Employees		Educators	Public Employees			
<b>Tier 1 Noncontributory and Contributory Retirement Systems</b> <i>Adopted January 1, 2017</i>	50	20.00%	15.00%	15.00%	30.00%	17.00%	20.00%	0.00%	
	51	20.00	15.00	15.00	30.00	16.00	20.00	0.00	
	52	20.00	15.00	15.00	30.00	16.00	20.00	0.00	
	53	20.00	15.00	15.00	14.00	16.00	20.00	0.00	
	54	15.00	15.00	15.00	14.00	16.00	20.00	0.00	
	55	15.00	16.00	15.00	14.00	16.00	25.00	0.00	
	56	15.00	16.00	15.00	18.00	16.00	25.00	0.00	
	57	15.00	16.00	15.00	18.00	16.00	25.00	0.00	
	58	15.00	16.00	15.00	18.00	20.00	25.00	0.00	
	59	15.00	16.00	15.00	18.00	20.00	25.00	0.00	
	60	23.00	20.00	20.00	30.00	25.00	30.00	0.00	
	61	23.00	20.00	20.00	30.00	25.00	30.00	0.00	
	62	33.00	30.00	23.00	35.00	33.00	30.00	100.00	
	63	33.00	30.00	23.00	35.00	33.00	30.00	100.00	
	64	33.00	30.00	23.00	35.00	33.00	30.00	100.00	
	65	33.00	22.00	23.00	35.00	28.00	25.00	100.00	
	66	33.00	22.00	30.00	35.00	28.00	25.00	100.00	
	67	30.00	22.00	22.00	35.00	28.00	25.00	100.00	
	68	30.00	22.00	22.00	23.00	22.00	25.00	100.00	
	69	25.00	22.00	22.00	23.00	22.00	25.00	100.00	
	70	20.00	22.00	22.00	23.00	22.00	20.00	100.00	
	71	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	72	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	73	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	74	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	75	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	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age
<b>Tier 1 Public Safety Retirement System</b> <i>Adopted January 1, 2017</i>	45	15.00%	50	15.00%	55	15.00%	59	20.00%	63	35.00%	67	50.00%
	46	15.00	51	15.00	56	15.00	60	20.00	64	35.00	68	50.00
	47	15.00	52	15.00	57	15.00	61	20.00	65	50.00	69	50.00
	48	15.00	53	15.00	58	15.00	62	35.00	66	50.00	70	100.00
	49	15.00	54	15.00								

	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	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age
<b>Tier 1 Firefighters Retirement System</b> <i>Adopted January 1, 2017</i>	45	15.00%	50	15.00%	55	15.00%	59	20.00%	63	25.00%	67	50.00%
	46	15.00	51	15.00	56	15.00	60	20.00	64	25.00	68	50.00
	47	15.00	52	15.00	57	15.00	61	20.00	65	50.00	69	50.00
	48	15.00	53	15.00	58	20.00	62	25.00	66	50.00	70	100.00
	49	15.00	54	15.00								

	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	Retirement Age	Retirement Age	Retirement Age	Retirement Age	Retirement Age
<b>Judges Retirement System</b> <i>Adopted January 1, 2017</i>	45	10.00%	50	10.00%	55	10.00%	59	10.00%	63	20.00%	67	20.00%
	46	10.00	51	10.00	56	10.00	60	10.00	64	20.00	68	20.00
	47	10.00	52	10.00	57	10.00	61	10.00	65	20.00	69	20.00
	48	10.00	53	10.00	58	10.00	62	20.00	66	20.00	70	100.00
	49	10.00	54	10.00								

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

as of January 1, 2017

		Percent Retiring Within Next Year Among Active Members Eligible for Retirement							Governors and Legislators Retirement Plan
		Male			Female				
Retirement Age	State and School Division		Local Government Division	State and School Division		Local Government Division			
	Educators	Public Employees		Educators	Public Employees				
<b>Tier 2</b>	50	20.00%	15.00%	15.00%	30.00%	17.00%	20.00%	0.00%	
<b>Public Employees Retirement System</b>	51	20.00	15.00	15.00	30.00	16.00	20.00	0.00	
<i>Adopted January 1, 2014</i>	52	20.00	15.00	15.00	30.00	16.00	20.00	0.00	
	53	20.00	15.00	15.00	14.00	16.00	20.00	0.00	
	54	12.00	15.00	15.00	14.00	16.00	20.00	0.00	
	55	12.00	16.00	15.00	14.00	16.00	25.00	0.00	
	56	12.00	16.00	15.00	18.00	16.00	25.00	0.00	
	57	12.00	16.00	15.00	18.00	16.00	25.00	0.00	
	58	12.00	16.00	15.00	18.00	20.00	25.00	0.00	
	59	12.00	16.00	15.00	18.00	20.00	25.00	0.00	
	60	23.00	20.00	20.00	30.00	30.00	30.00	0.00	
	61	23.00	20.00	20.00	30.00	30.00	30.00	0.00	
	62	30.00	33.00	23.00	35.00	30.00	30.00	100.00	
	63	30.00	33.00	23.00	35.00	30.00	30.00	100.00	
	64	30.00	30.00	23.00	30.00	30.00	30.00	100.00	
	65	30.00	22.00	23.00	30.00	26.00	25.00	100.00	
	66	30.00	22.00	30.00	30.00	26.00	25.00	100.00	
	67	30.00	22.00	22.00	30.00	22.00	25.00	100.00	
	68	30.00	22.00	22.00	23.00	22.00	25.00	100.00	
	69	25.00	22.00	22.00	23.00	22.00	25.00	100.00	
	70	20.00	22.00	22.00	23.00	22.00	20.00	100.00	
	71	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	72	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	73	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	74	20.00	22.00	18.00	23.00	22.00	15.00	100.00	
	75	100.00	100.00	100.00	100.00	100.00	100.00	100.00	

Retirement rates at the age the member is first eligible for an unreduced retirement benefit prior to age 65 is increased by 30%.

		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	Retirement Age	Retirement Age	Retirement Age	
<b>Tier 2</b>	45	12.00%	50	12.00%	55	12.00%	59	12.00%	63	35.00%	67	50.00%
<b>Public Safety and Firefighter Retirement System</b>	46	12.00	51	12.00	56	12.00	60	25.00	64	35.00	68	50.00
<b>Public Safety</b>	47	12.00	52	12.00	57	12.00	61	30.00	65	50.00	69	50.00
<i>Adopted January 1, 2014</i>	48	12.00	53	12.00	58	12.00	62	35.00	66	50.00	70	100.00
	49	12.00	54	12.00								

		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	Retirement Age	Retirement Age	Retirement Age	
<b>Firefighters</b>	45	9.00%	50	9.00%	55	12.00%	59	12.00%	63	40.00%	67	60.00%
<i>Adopted January 1, 2014</i>	46	9.00	51	9.00	56	12.00	60	40.00	64	40.00	68	60.00
	47	9.00	52	9.00	57	12.00	61	40.00	65	60.00	69	60.00
	48	9.00	53	9.00	58	12.00	62	40.00	66	60.00	70	100.00
	49	9.00	54	9.00								

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

as of January 1, 2017

	Other Termination of Employment Percent of Active Members Separating Within Next Year							
	Years of Service	Male			Female			Governors and Legislators Retirement Plan
		State and School Division		Local Government Division	State and School Division		Local Government Division	
	Educators	Public Employees		Educators	Public Employees			
<b>Noncontributory and Contributory Retirement Systems</b>	0	14.00%	25.00%	17.00%	16.00%	28.00%	22.00%	10.00%
<i>Adopted January 1, 2017</i>	1	11.00	20.00	13.00	15.00	23.00	18.00	10.00
	2	8.00	14.00	9.00	12.00	17.00	13.00	10.00
	3	7.00	10.00	8.00	10.00	13.00	11.00	10.00
	4	6.50	10.00	7.50	9.00	12.50	10.50	10.00
	5	6.00	10.00	7.00	8.00	11.00	10.00	10.00
	6	5.50	9.00	6.50	7.50	10.00	9.50	10.00
	7	4.00	7.50	6.00	6.00	7.50	9.00	10.00
	8	3.50	6.00	5.50	5.00	6.50	7.50	10.00
	9	3.00	5.50	4.75	4.50	6.00	7.00	10.00
	10	2.75	5.00	4.50	4.00	5.50	6.00	10.00
	11	2.50	4.50	4.00	3.50	4.75	5.50	10.00
	12	2.50	4.00	3.50	3.25	4.50	5.25	10.00
	13	2.25	3.75	3.00	3.00	4.25	5.00	10.00
	14	2.00	3.50	3.00	2.50	3.75	4.50	10.00
	15	2.00	3.00	2.75	2.25	3.50	4.00	10.00
	16	1.75	2.75	2.75	2.00	3.00	3.75	10.00
	17	1.75	2.50	2.75	1.75	2.75	3.50	10.00
	18	1.75	2.00	2.50	1.50	2.75	3.00	10.00
	19	1.50	2.00	2.50	1.25	2.75	3.00	10.00
	20	1.00	2.00	2.00	1.25	2.75	2.50	10.00
	21	1.00	2.00	2.00	1.25	2.50	2.50	10.00
	22	1.00	2.00	1.75	1.25	2.25	2.25	10.00
	23	1.00	1.50	1.50	1.25	2.00	2.00	10.00
	24	1.00	1.50	1.25	1.25	2.00	2.00	10.00
	25+	1.00	1.00	1.00	1.00	1.00	1.00	10.00

	Other Termination of Employment of Active Members Separating Within Next Year									
	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service
<b>Public Safety Retirement System</b>	0	12.00%	5	4.50%	9	3.25%	13	2.25%	17	1.50%
<i>Adopted January 1, 2010</i>	1	8.00	6	4.25	10	3.00	14	1.50	18	1.50
	2	6.50	7	4.00	11	2.75	15	1.50	19	1.50
	3	6.00	8	3.50	12	2.50	16	1.50	20+	1.00
	4	5.00								

	Other Termination of Employment of Active Members Separating Within Next Year									
	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service	Years of Service
<b>Firefighters Retirement System</b>	0	6.00%	5	2.50%	9	1.50%	13	0.50%	17	0.50%
<i>Adopted January 1, 2010</i>	1	5.00	6	2.25	10	1.50	14	0.50	18	0.50
	2	4.00	7	2.00	11	1.50	15	0.50	19	0.50
	3	3.50	8	1.75	12	0.50	16	0.50	20+	0.50
	4	3.00								

Other Termination of Employment of Active Members Separating Within Next Year	
<b>Judges Retirement System</b>	None assumed.
<i>Adopted January 1, 1993</i>	

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (Concluded)

as of January 1, 2017

	Years of Service	Total Annual Increase in Salary (Male and Female)										
		State and School Division					Public Safety and Firefighters Retirement System					
		State and School Division	Public Employees	Local Government Division	Public Safety Retirement System	Firefighters Retirement System	State and School Division	Public Employees	Local Government Division	Public Safety Retirement System	Firefighters Retirement System	
<b>All Retirement Systems</b> <i>Adopted January 1, 2017</i>	0	9.75%	8.50%	8.75%	7.25%	8.75%	13	4.75%	4.25%	4.00%	4.50%	4.50%
	1	9.00	7.75	7.25	6.25	8.25	14	4.00	4.00	4.00	4.25	4.50
	2	8.00	6.75	6.50	6.00	8.00	15	4.00	3.75	4.00	4.25	4.50
	3	7.50	6.00	6.00	5.75	7.75	16	4.00	3.75	3.75	4.25	4.50
	4	7.25	5.75	5.50	5.75	7.50	17	3.75	3.75	3.75	4.00	4.25
	5	7.00	5.25	5.25	5.75	7.25	18	3.75	3.75	3.75	4.00	4.00
	6	7.00	5.00	5.00	5.75	7.25	19	3.75	3.75	3.75	4.00	4.00
	7	6.75	4.75	4.75	5.50	6.75	20	3.75	3.50	3.50	4.00	4.00
	8	6.75	4.75	4.50	5.25	6.50	21	3.75	3.50	3.50	3.75	3.75
	9	6.50	4.50	4.50	5.25	6.25	22	3.75	3.50	3.50	3.75	3.50
	10	6.00	4.50	4.25	5.00	5.75	23	3.75	3.50	3.25	3.50	3.50
	11	5.50	4.25	4.05	4.75	5.00	24	3.50	3.25	3.25	3.50	3.50
	12	5.25	4.25	4.05	4.50	5.00	25+	3.25	3.25	3.25	3.25	3.25

	Age	Probability of Mortality Within the Next Year for Active Members								
		Male				Female				
		Local Government and Public Employees	Local Government and Public Employees	Local Government and Public Employees	Local Government and Public Employees	Local Government and Public Employees	Local Government and Public Employees	Local Government and Public Employees	Local Government and Public Employees	
<b>Noncontributory and Contributory Retirement Systems</b> <i>Adopted January 1, 2017</i>	20	0.0228%	0.0285%	0.0069%	0.0110%	50	0.0946%	0.1182%	0.0465%	0.0744%
	25	0.0271	0.0339	0.0073	0.0117	55	0.1564	0.1955	0.0706	0.1230
	30	0.0254	0.0317	0.0092	0.0147	60	0.2630	0.3288	0.1030	0.1648
	35	0.0294	0.0367	0.0121	0.0193	65	0.4644	0.5805	0.1560	0.2495
	40	0.0352	0.0440	0.0167	0.0267	70	0.8223	1.0279	0.2717	0.4346
	45	0.0546	0.0682	0.0277	0.0443					

	Years of Service	Percent Electing a Refund of Contributions Upon Termination While Vested					
		Male			Female		
		Local Government Division	Public Employees	Local Government Division	Public Employees	Local Government Division	Public Employees
<b>Noncontributory and Contributory Retirement Systems</b> <i>Adopted January 1, 1993</i>	0-3	100%	100%	100%	100%	100%	100%
	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	

	Age	Probability of Mortality Within the Next Year for Active Members						
		Public Safety and Firefighters Retirement System						
		Age	Age	Age	Age	Age	Age	
<b>Public Safety Retirement System and Firefighters Retirement System</b> <i>Adopted January 1, 2008</i>	20	0.0276%	35	0.0618%	50	0.1710%	65	0.6058%
	25	0.0301	40	0.0863	55	0.2423	70	0.7938
	30	0.0355	45	0.1206	60	0.3902		

	Years of Service	Percent Electing a Refund of Contributions Upon Termination While Vested			
		Public Safety and Firefighters Retirement System			
		Years of Service	Years of Service	Years of Service	Years of Service
<b>Public Safety Retirement System and Firefighters Retirement System</b> <i>Adopted January 1, 1993</i>	0-3	100%	15	35%	
	4	76	19	15	
	5	74	20	0	
	10	57			

## Calculation of Actuarial Value of Assets

January 1, 2017				December 31, 2017			
<i>(dollars in thousands)</i>				<i>(dollars in thousands)</i>			
1. Fair value of assets				1. Fair value of assets			
\$ 28,544,316				\$ 31,878,618			
2. Deferral to smooth asset values based on (excess)/shortfall of expected investment income for:				2. Deferral to smooth asset values based on (excess)/shortfall of expected investment income for:			
Year	Total Excess/ (Shortfall)	% Deferred	Amount Deferred	Year	Total Excess/ (Shortfall)	% Deferred	Amount Deferred
a. 2016	\$ 329,863	80%	\$ 263,890	a. 2017	\$ 1,792,941	80%	\$ 1,434,354
b. 2015	(1,529,412)	60%	(917,647)	b. 2016	329,863	60%	197,920
c. 2014	(95,447)	40%	(38,180)	c. 2015	(1,529,412)	40%	(611,763)
d. 2013	1,600,276	20%	320,053	d. 2014	(95,447)	20%	(19,087)
e. 2012	1,017,197	0%	—	e. 2013	1,600,276	0%	—
f. Total deferred gains (losses)				f. Total deferred gains (losses)			
(371,884)				1,001,424			
g. Total deferred losses				g. Total deferred gains			
371,884				(1,001,424)			
3. Actuarial value of assets available for benefits*				3. Actuarial value of assets available for benefits*			
\$ 28,916,200				\$ 30,877,194			

\*Actuarial value of assets cannot exceed 125% of the fair value of assets or below 75% of the fair value of assets.

## Actuarial Value of Assets by System

January 1, 2017

	<i>(in thousands)</i>								
	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Governors and Legislators	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System	Total All Systems
1. Net assets available for benefits at fair value	\$ 22,618,743	1,204,904	3,176,545	1,115,726	175,618	10,352	217,293	25,135	28,544,316
2. Adjustments to smooth asset values based on (excess)/shortfall of expected investment income on fair value for:	289,441	22,168	40,676	14,472	2,164	118	2,592	253	371,884
3. Actuarial value of assets available for benefits (1-2)	\$ 22,908,184	1,227,072	3,217,221	1,130,198	177,782	10,470	219,885	25,388	28,916,200

## Analysis of Financial Experience

(in thousands)

System	January 1, 2016 Unfunded Actuarial Accrued Liability	Amortization Payments	Liability (Gain) Loss	Asset (Gain) Loss	Changes in Actuarial Assumptions	Change in Benefit Provisions	Asset Transfers	January 1, 2017 Unfunded Actuarial Accrued Liability
<b>Noncontributory</b>	\$ 3,947,842	(171,883)	(87,363)	(185,712)	666,171	—	1,196	4,170,251
<b>Contributory</b>	73,441	(861)	(4,597)	(13,719)	12,714	—	(1,196)	65,782
<b>Public Safety</b>	634,538	(25,891)	(9,526)	(24,292)	116,742	—	—	691,571
<b>Firefighters</b>	16,651	(6,673)	(10,207)	(8,835)	31,468	—	—	22,404
<b>Judges</b>	37,242	(1,286)	(845)	(1,513)	12,591	—	—	46,189
<b>Utah Governors and Legislators</b>	2,511	(170)	130	(117)	320	—	—	2,674
<b>Tier 2 Public Employees</b>	353	1,600	(1,321)	1,114	9,574	—	—	11,320
<b>Tier 2 Public Safety and Firefighter</b>	(844)	69	(470)	120	1,546	—	—	421

# Member and Employer Contribution Rates

As of December 31

System	Year	Contributory			Noncontributory	
		Member	Employer	Employer	Employer	Employer
			State and School	Local Government	State and School	Local Government
<b>Noncontributory and Contributory Retirement Systems</b>	2008	6.00%	9.73%	7.61%	14.22%	11.62%
	2009	6.00	9.73	7.65	14.22	11.66
	2010	6.00	11.83	9.36	16.32	13.37
	2011	6.00	12.37	9.76	16.86	13.77
	2012	6.00	14.27	12.03	18.76	16.04
	2013	6.00	15.97	13.28	20.46	17.29
	2014	6.00	17.70	14.46	22.19	18.47
	2015	6.00	17.70	14.46	22.19	18.47
	2016	6.00	17.70	14.46	22.19	18.47
	2017	6.00	17.70	14.46	22.19	18.47
		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>	2008	13.14%	—	9.68%	—	11.12%
	2009	13.49	—	9.68	—	12.34
	2010	15.05	—	16.18	—	11.87
	2011	15.05	0.50%	16.18	—	12.29
	2012	15.05	2.66	16.71	2.08%	11.84
	2013	15.05	2.96	16.71	4.46	11.75
	2014	15.05	3.82	16.71	6.59	11.71
	2015	15.05	3.99	16.71	6.76	11.54
	2016	15.05	3.89	16.71	6.66	11.64
	2017	15.05	3.93	16.71	6.70	11.60
		Judges			Governors and Legislators Appropriation	
		Contributory		Noncontributory		
		Member	Employer	Employer	Court Fees	
<b>Judges Retirement System</b>	2008	2.00%	11.51%	12.38%	14.32%	\$ —
	2009	2.00	15.09	17.09	13.83	—
	2010	—	—	23.72	14.08	—
<b>Utah Governors and Legislators Retirement Plan</b>	2011	—	—	25.82	14.26	153,000
	2012	—	—	32.87	14.02	214,000
	2013	—	—	35.66	12.74	252,000
	2014	—	—	40.01	11.90	411,489
	2015	—	—	41.58	10.33	421,009
	2016	—	—	42.12	9.79	404,409
	2017	—	—	42.39	9.22	391,883



Member and Employer Contribution Rates (Continued)

As of December 31

System	Year	State of Utah		2.5% COLA Other Division A (with Social Security)		4.0% COLA Other Division A (with Social Security)		Bountiful						
		Member	Employer	Member	Employer	Member	Employer	Member	Employer					
<b>Public Safety Retirement System Noncontributory Division A</b>	2008	—	26.75%	—	22.61%	—	—	—	22.47%					
	2009	—	30.18	—	23.34	—	25.90%	—	23.07					
	2010	—	32.75	—	26.13	—	28.82	—	27.73					
	2011	—	34.12	—	27.07	—	28.82	—	29.19					
	2012	—	37.29	—	30.45	—	33.65	—	37.16					
	2013	—	39.31	—	32.14	—	34.17	—	42.79					
	2014	—	41.35	—	34.04	—	35.71	—	47.33					
	2015	—	41.35	—	34.04	—	35.71	—	47.33					
2016	—	41.35	—	34.04	—	35.71	—	47.33						
2017	—	41.35	—	34.04	—	35.71	—	49.58						
<b>Public Safety Retirement System Contributory Division A</b>	2008	12.29%	15.46%	12.29%	11.22%	—	—	—	—					
	2009	12.29	19.01	12.29	12.47	12.29%	15.01%	—	—					
	2010	12.29	21.68	12.29	14.86	12.29	18.34	—	—					
	2011	12.29	22.88	12.29	15.78	12.29	18.34	—	—					
	2012	12.29	25.52	12.29	19.08	12.29	22.34	—	—					
	2013	12.29	27.63	12.29	20.83	12.29	22.75	—	—					
	2014	12.29	29.70	12.29	22.75	12.29	24.33	—	—					
	2015	12.29	29.70	12.29	22.75	12.29	24.33	—	—					
2016	12.29	29.70	12.29	22.75	12.29	24.33	—	—						
2017	12.29	29.70	12.29	22.75	12.29	24.33	—	—						
<b>Public Safety Retirement System Noncontributory Division B</b>	2008	—	35.71%	—	31.47%	—	29.84%	—	25.49%	—	—			
	2009	—	35.71	—	33.11	—	30.91	—	26.21	—	28.73%			
	2010	—	36.31	—	34.93	—	32.98	—	28.24	—	32.70			
	2011	—	36.71	—	36.13	—	33.05	—	28.64	—	32.70			
	2012	—	41.95	—	42.21	—	38.54	—	32.20	—	36.97			
	2013	—	44.83	—	44.98	—	39.97	—	32.20	—	37.45			
	2014	—	46.67	—	48.68	—	41.92	—	34.04	—	38.94			
	2015	—	46.67	—	48.68	—	41.92	—	34.04	—	38.94			
	2016	—	46.67	—	48.68	—	41.92	—	34.04	—	38.94			
	2017	—	46.67	—	48.68	—	41.92	—	34.04	—	38.94			
	<b>Public Safety Retirement System Contributory Division B</b>	2008	13.74%	22.99%	—	—	11.13%	14.61%	—	—	10.50%	15.69%	10.50%	—
		2009	—	—	—	—	11.13	17.81	—	—	10.50	16.67	10.50	19.17%
		2010	—	—	—	—	11.13	20.95	—	—	10.50	18.98	10.50	23.22
		2011	—	—	—	—	11.13	21.36	—	—	10.50	19.48	10.50	23.22
		2012	—	—	—	—	11.13	27.95	—	—	10.50	22.29	10.50	27.29
2013		—	—	—	—	11.13	29.76	—	—	10.50	22.29	10.50	27.49	
2014		—	—	—	—	11.13	31.80	—	—	10.50	22.29	10.50	28.95	
2015		—	—	—	—	11.13	31.80	—	—	10.50	22.29	10.50	28.95	
2016	—	—	—	—	11.13	31.80	—	—	10.50	22.29	10.50	28.95		
2017	—	—	—	—	11.13	31.80	—	—	10.50	22.29	10.50	28.95		

Member and Employer Contribution Rates (Continued)

As of December 31

System	Year	Contributory	Noncontributory			
		Employer	Employer	Employer		
<b>Tier 2 Public Employees Contributory Retirement System*</b>		Local Government	State and School	Local Government		
	2011	12.40%	12.74%	10.33%		
	2012	14.51	15.06	12.74		
	2013	15.75	16.75	13.99		
	2014	16.70	18.27	14.94		
	2015	16.67	18.24	14.91		
	2016	16.67	18.24	14.91		
	2017	16.67	18.44	15.11		
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>		State of Utah	Bountiful	2.5% COLA Other Division A (with Soc Sec)	4% COLA Other Division A (with Soc Sec)	
		Employer	Employer	Employer	Employer	
	<b>Public Safety Noncontributory Division A</b>	2011	22.06%	18.15%	16.27%	17.18%
		2012	25.46	25.89	19.25	21.94
		2013	27.40	31.38	20.85	22.37
		2014	29.26	35.68	22.55	23.71
		2015	29.21	35.63	22.50	23.66
		2016	29.21	35.63	22.50	23.66
		2017	29.28	37.71	22.57	23.73
	<b>Public Safety Contributory Division A</b>	2011	—	—	16.27%	17.47%
		2012	—	—	19.25	21.94
		2013	—	—	20.85	22.37
		2014	—	—	20.66	23.71
		2015	—	—	20.61	23.66
		2016	—	—	20.61	23.66
	2017	—	—	20.61	23.73	

\*Includes active member death benefit and Tier 1 amortization rate.  
Does not include the 401(k) component of the contribution rate.

Member and Employer Contribution Rates (Concluded)

As of December 31

**Tier 2 Public Safety and Firefighter Contributory Retirement System**  
(Continued)\*

	Year	Salt Lake City	Ogden	Logan	Provo	2.5% COLA Other Division B (without Soc Sec)	4% COLA Other Division B (without Soc Sec)
		Employer	Employer	Employer	Employer	Employer	Employer
<b>Public Safety Noncontributory Division B</b>	2011	25.82%	25.21%	21.15%	22.01%	17.72%	20.89%
	2012	30.47	30.78	26.59	27.08	20.71	25.05
	2013	33.27	33.47	28.19	28.19	20.77	25.38
	2014	34.97	37.07	30.13	30.36	20.55	26.72
	2015	34.92	37.02	30.08	30.31	20.39	26.67
	2016	34.92	37.02	30.08	30.31	20.39	26.67
	2017	34.99	37.09	30.38	30.38	20.50	26.74
<b>Public Safety Contributory Division B</b>	2011	—	—	—	—	17.72%	20.89%
	2012	—	—	—	—	20.71	25.05
	2013	—	—	—	—	20.77	25.38
	2014	—	—	—	—	20.55	26.72
	2015	—	—	—	—	20.50	26.67
	2016	—	—	—	—	20.50	26.67
	2017	—	—	—	—	20.57	26.74
<b>Firefighters</b>			Other Division A (with Social Security)	Other Division B (with Social Security)			
	Year		Employer	Employer			
	2011		10.64%	10.64%			
	2012		11.10	11.10			
	2013		11.02	11.02			
	2014		10.80	10.80			
	2015		10.75	10.75			
	2016		10.75	10.75			
	2017		10.82	10.82			

\*Includes active member death benefit and Tier 1 amortization rate. Does not include the 401(k) component of the contribution rate.

## Schedules of Funding Progress

*(dollars in thousands)*

Based on Actuarial Value of Assets

System	Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) Actuarial Value of Assets (2) - (1)	(4) Funded Ratios Based on Actuarial Value of Assets (1) / (2)	(5) Projected Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3) / (5)
<b>Noncontributory Retirement System</b>	1/01/09	\$ 15,839,461	18,306,590	2,467,129	86.5%	\$ 3,871,636	63.7%
	1/01/10	16,619,831	19,384,503	2,764,672	85.7	3,955,040	69.9
	1/01/11	16,852,691	20,388,759	3,536,068	82.7	3,888,179	90.9
	1/01/12	16,805,952	21,260,843	4,454,891	79.0	3,900,106	114.2
	1/01/13	16,969,392	22,200,896	5,231,504	76.4	3,794,929	137.9
	1/01/14	18,601,513	22,981,585	4,380,072	80.9	3,705,771	118.2
	1/01/15	20,240,645	23,868,225	3,627,580	84.8	3,570,912	101.6
	1/01/16	21,528,737	25,476,579	3,947,842	84.5	3,458,286	114.2
	1/01/17	22,908,184	27,078,436	4,170,252	84.6	3,406,567	122.4
12/31/17	24,412,985	28,088,619	3,675,634	86.9	3,375,321	108.9	
<b>Contributory Retirement System</b>	1/01/09	\$ 1,097,711	1,218,572	120,861	90.1%	133,110	90.8%
	1/01/10	1,116,736	1,236,009	119,273	90.4	127,804	93.3
	1/01/11	1,132,661	1,251,412	118,751	90.5	116,395	102.0
	1/01/12	1,135,251	1,269,042	133,791	89.5	110,103	121.5
	1/01/13	1,133,433	1,280,836	147,403	88.5	103,074	143.0
	1/01/14	1,165,002	1,285,851	120,849	90.6	98,023	123.3
	1/01/15	1,198,862	1,295,581	96,719	92.5	90,623	106.7
	1/01/16	1,209,069	1,282,510	73,441	94.3	82,426	89.1
	1/01/17	1,227,072	1,292,854	65,782	94.9	53,615	122.7
12/31/17	1,245,414	1,298,183	52,769	95.9	45,177	116.8	
<b>Public Safety Retirement System</b>	1/01/09	\$ 2,017,576	2,473,667	456,091	81.6%	\$ 365,043	124.9%
	1/01/10	2,137,027	2,650,675	513,648	80.6	373,959	137.4
	1/01/11	2,194,015	2,844,101	650,086	77.1	363,037	179.1
	1/01/12	2,222,202	2,948,481	726,279	75.4	374,293	194.0
	1/01/13	2,283,911	3,093,227	809,316	73.8	366,471	220.8
	1/01/14	2,530,709	3,191,506	660,797	79.3	365,998	180.5
	1/01/15	2,781,314	3,344,059	562,745	83.2	360,750	156.0
	1/01/16	2,988,371	3,622,965	634,594	82.5	355,172	178.7
	1/01/17	3,217,221	3,908,793	691,572	82.3	352,408	196.2
12/31/17	3,462,919	4,085,203	622,284	84.8	350,783	177.4	
<b>Firefighters Retirement System</b>	1/01/09	\$ 765,871	776,622	10,751	98.6%	\$ 102,252	10.5%
	1/01/10	802,576	833,844	31,268	96.3	107,625	29.1
	1/01/11	810,216	872,133	61,917	92.9	105,275	58.8
	1/01/12	810,764	903,399	92,635	89.7	110,751	83.6
	1/01/13	824,060	944,791	120,731	87.2	110,608	109.2
	1/01/14	903,627	963,574	59,947	93.8	110,741	54.1
	1/01/15	988,806	1,006,646	17,840	98.2	111,305	16.0
	1/01/16	1,060,312	1,076,963	16,651	98.5	111,133	15.0
	1/01/17	1,130,198	1,152,602	22,404	98.1	112,322	19.9
12/31/17	1,195,358	1,205,727	10,369	99.1	112,953	9.2	
<b>Judges Retirement System</b>	1/01/09	\$ 126,120	145,965	19,845	86.4%	\$ 14,404	137.8%
	1/01/10	131,491	158,303	26,812	83.1	14,434	185.8
	1/01/11	131,869	167,581	35,712	78.7	14,234	250.9
	1/01/12	130,561	167,982	37,421	77.7	14,981	249.8
	1/01/13	131,217	174,923	43,706	75.0	14,885	293.6
	1/01/14	145,121	185,113	39,992	78.4	15,195	263.2
	1/01/15	156,956	192,445	35,489	81.6	16,072	220.8
	1/01/16	166,298	203,540	37,242	81.7	15,832	235.2
	1/01/17	177,782	223,971	46,189	79.4	16,755	275.7
12/31/17	192,037	231,069	39,032	83.1	18,661	209.2	

See accompanying notes to required supplementary information.

Schedules of Funding Progress (Concluded)

(dollars in thousands)

System	Date	Based on Actuarial Value of Assets					
		(1) Actuarial Value of Assets	(2) Accrued Liability (AAL) Entry Age	(3) Unfunded AAL (UAAL) Actuarial Value of Assets (2) - (1)	(4) Funded Ratios Based on Actuarial Value of Assets (1) / (2)	(5) Projected Annual Covered Payroll	(6) UAAL as a % of Covered Payroll (3) / (5)
<b>Governors and Legislators Retirement Plan</b>	1/01/09	\$ 10,841	10,982	141	98.7%	\$ 910	15.5%
	1/01/10	10,769	11,305	536	95.3	910	58.9
	1/01/11	10,197	11,513	1,316	88.6	910	144.6
	1/01/12	9,565	12,029	2,464	79.5	910	270.8
	1/01/13	9,077	11,925	2,848	76.1	910	313.0
	1/01/14	9,457	12,186	2,729	77.6	390	699.7
	1/01/15	9,908	12,223	2,315	81.1	928	249.5
	1/01/16	10,173	12,684	2,511	80.2	943	266.3
	1/01/17	10,470	13,144	2,674	79.7	799	334.7
	12/31/17	10,855	13,074	2,219	83.0	722	307.1
<b>Tier 2 Public Employees Contributory Retirement System*</b>	1/01/12	\$ 2,833	3,055	222	92.7%	\$ 36,821	0.6%
	1/01/13	17,818	16,755	(1,063)	106.3	203,779	(0.5)
	1/01/14	46,241	42,328	(3,913)	109.2	353,227	(1.1)
	1/01/15	88,743	81,624	(7,119)	108.7	492,882	(1.4)
	1/01/16	145,518	145,871	353	99.8	637,560	0.1
	1/01/17	219,885	231,205	11,320	95.1	822,196	1.4
		12/31/17	318,754	338,035	19,281	94.3	996,965
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	1/01/12	\$ 90	101	11	89.1%	\$ 855	1.3%
	1/01/13	1,161	1,042	(119)	111.4	10,237	(1.2)
	1/01/14	3,822	3,269	(553)	116.9	20,215	(2.7)
	1/01/15	8,666	7,432	(1,234)	116.6	35,019	(3.5)
	1/01/16	15,618	14,774	(844)	105.7	53,276	(1.6)
	1/01/17	25,388	25,809	421	98.4	74,834	0.6
	12/31/17	38,871	39,023	152	99.6	98,113	0.2
<b>All Retirement Systems</b>	1/01/09	\$ 19,857,580	22,932,398	3,074,818	86.6%	\$ 4,487,355	68.5%
	1/01/10	20,818,430	24,274,639	3,456,209	85.8	4,579,772	75.5
	1/01/11	21,131,649	25,535,499	4,403,850	82.8	4,488,030	98.1
	1/01/12	21,117,218	26,564,932	5,447,714	79.5	4,548,820	119.8
	1/01/11	21,370,069	27,724,395	6,354,326	77.1	4,604,893	138.0
	1/01/14	23,405,492	28,665,412	5,259,920	81.7	4,669,560	112.6
	1/01/15	25,473,901	29,808,235	4,334,334	85.5	4,678,491	92.6
	1/01/16	27,124,096	31,835,886	4,711,790	85.2	4,714,628	99.9
	1/01/17	28,916,200	33,926,814	5,010,614	85.2	4,839,496	103.5
	12/31/17	30,877,194	35,298,933	4,421,739	87.5	4,998,694	88.1

\*New system additional years will be added as they become available.  
See accompanying notes to required supplementary information.

# Solvency Tests

System	Date	Actuarial Accrued Liabilities				Actuarial Value of Assets	Portion of Actuarial Accrued Liabilities Covered by Assets			
		(1)	(2)	(3) Active	(4)		(1)	(2)	(3)	(4)
		Active Members Contributions	Retired and Beneficiaries	Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities					
<b>Noncontributory Retirement System</b>	1/01/09	\$ 699,314	7,671,008	9,936,268	18,306,590	15,839,461	100%	100%	75%	87%
	1/01/10	618,209	8,347,578	10,418,716	19,384,503	16,619,831	100	100	73	86
	1/01/11	575,867	8,958,451	10,854,441	20,388,759	16,852,691	100	100	67	83
	1/01/12	539,951	9,875,383	10,845,509	21,260,843	16,805,952	100	100	59	79
	1/01/13	498,575	10,075,732	11,626,589	22,200,896	16,969,392	100	100	55	76
	1/01/14	455,136	10,798,876	11,727,573	22,981,585	18,601,513	100	100	63	81
	1/01/15	411,752	11,446,753	12,009,720	23,868,225	20,240,645	100	100	70	85
	1/01/16	383,017	12,405,935	12,687,627	25,476,579	21,528,737	100	100	69	85
	1/01/17	331,097	13,201,269	13,546,070	27,078,436	22,908,184	100	100	69	85
	12/31/17	331,775	13,569,930	14,186,914	28,088,619	24,412,985	100	100	74	87
<b>Contributory Retirement System</b>	1/01/09	\$ 334,732	520,848	362,992	1,218,572	1,097,711	100%	100%	67%	90%
	1/01/10	318,205	556,495	361,309	1,236,009	1,116,736	100	100	67	90
	1/01/11	307,896	591,899	351,617	1,251,412	1,132,661	100	100	66	91
	1/01/12	308,962	630,747	329,333	1,269,042	1,135,251	100	100	59	89
	1/01/13	294,317	669,744	316,775	1,280,836	1,133,433	100	100	53	88
	1/01/14	286,020	717,842	281,989	1,285,851	1,165,002	100	100	57	91
	1/01/15	272,720	766,078	256,783	1,295,581	1,198,862	100	100	62	93
	1/01/16	236,592	838,922	206,996	1,282,510	1,209,069	100	100	65	94
	1/01/17	206,024	898,668	188,162	1,292,854	1,227,072	100	100	65	95
	12/31/17	206,344	897,862	193,978	1,298,183	1,245,414	100	100	73	96
<b>Public Safety Retirement System</b>	1/01/09	\$ 87,976	1,254,909	1,130,782	2,473,667	2,017,576	100%	100%	60%	82%
	1/01/10	81,677	1,345,480	1,223,518	2,650,675	2,137,027	100	100	58	81
	1/01/11	76,375	1,455,233	1,312,493	2,844,101	2,194,015	100	100	50	77
	1/01/12	77,231	1,501,102	1,370,148	2,948,481	2,222,202	100	100	47	75
	1/01/13	74,661	1,593,128	1,425,438	3,093,227	2,283,911	100	100	43	74
	1/01/14	74,012	1,682,390	1,435,104	3,191,506	2,530,709	100	100	54	79
	1/01/15	70,992	1,769,909	1,503,158	3,344,059	2,781,314	100	100	63	83
	1/01/16	66,232	1,937,777	1,618,956	3,622,965	2,988,371	100	100	61	82
	1/01/17	61,343	2,093,058	1,754,392	3,908,793	3,217,221	100	100	61	82
	12/31/17	61,419	2,070,512	1,953,272	4,085,203	3,462,919	100	100	68	85
<b>Firefighters Retirement System</b>	1/01/09	\$ 94,583	437,796	244,243	776,622	765,871	100%	100%	96%	99%
	1/01/10	96,734	467,284	269,826	833,844	802,576	100	100	88	96
	1/01/11	103,678	495,985	272,470	872,133	810,216	100	100	77	93
	1/01/12	116,966	516,105	270,328	903,399	810,764	100	100	66	90
	1/01/13	127,442	532,366	284,983	944,791	824,060	100	100	58	87
	1/01/14	141,471	544,643	307,460	993,574	903,627	100	100	71	91
	1/01/15	152,667	566,583	287,396	1,006,646	988,806	100	100	94	98
	1/01/16	162,377	600,565	314,021	1,076,963	1,060,312	100	100	95	98
	1/01/17	171,328	636,389	344,885	1,152,602	1,130,198	100	100	94	98
	12/31/17	172,231	633,548	399,948	1,205,727	1,195,358	100	100	97	99

Solvency Tests (Concluded)

System	Date	Actuarial Accrued Liabilities				Actuarial Value of Assets	Portion of Actuarial Accrued Liabilities Covered by Assets			
		(1)	(2)	(3) Active	(4)		(1)	(2)	(3)	(4)
		Active Members Contributions	Retired and Beneficiaries	Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities					
<b>Judges Retirement System</b>	1/01/09	\$ 7,738	69,534	68,693	145,965	126,120	100%	100%	71%	86%
	1/01/10	5,802	81,582	70,919	158,303	131,491	100	100	62	83
	1/01/11	4,309	93,548	69,724	167,581	131,869	100	100	49	79
	1/01/12	4,376	97,460	66,146	167,982	130,561	100	100	47	78
	1/01/13	4,102	98,499	72,322	174,923	131,217	100	100	40	75
	1/01/14	3,567	111,132	70,414	185,113	145,121	100	100	43	78
	1/01/15	3,374	120,460	68,611	192,445	156,956	100	100	48	82
	1/01/16	2,604	129,958	70,978	203,540	166,298	100	100	48	82
	1/01/17	2,540	136,618	84,813	223,971	177,782	100	10	46	79
12/31/17	2,540	131,763	96,766	231,069	192,037	100	100	60	83	
<b>Utah Governors and Legislators Retirement Plan</b>	1/01/09	\$ 119	6,508	4,355	10,982	10,841	100%	100%	97%	99%
	1/01/10	119	6,508	4,678	11,305	10,769	100	100	89	95
	1/01/11	102	6,315	5,096	11,513	10,197	100	100	74	89
	1/01/12	107	6,482	5,440	12,029	9,565	100	100	55	80
	1/01/13	104	6,396	5,425	11,925	9,077	100	100	48	76
	1/01/14	94	7,037	5,055	12,186	9,457	100	100	46	78
	1/01/15	62	7,201	4,960	12,223	9,908	100	100	37	81
	1/01/16	66	7,619	4,999	12,684	10,173	100	100	50	80
	1/01/17	46	8,254	4,844	13,144	10,470	100	100	45	80
12/31/17	45	8,112	4,916	13,074	10,855	100	100	55	83	
<b>Tier 2 Public Employees Contributory Retirement System*</b>	1/01/12	\$ —	—	3,055	3,055	2,833	100%	100%	100%	93%
	1/01/13	—	—	16,755	16,755	17,818	100	100	106	106
	1/01/14	—	—	42,328	42,328	46,241	100	100	109	109
	1/01/15	—	—	81,624	81,624	88,743	100	100	109	109
	1/01/16	—	12	145,859	145,871	145,518	100	100	100	100
	1/01/17	—	181	231,024	231,205	219,885	100	100	95	95
12/31/17	—	160	337,875	338,035	318,754	100	100	94	94	
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	1/01/12	\$ —	—	101	101	90	100%	100%	100%	89%
	1/01/13	—	—	1,042	1,042	1,161	100	100	100	100
	1/01/14	—	—	3,269	3,269	3,822	100	100	100	117
	1/01/15	—	—	7,432	7,432	8,666	100	100	100	117
	1/01/16	—	—	14,774	14,774	15,618	100	100	100	106
	1/01/17	—	—	25,809	25,809	25,388	100	100	98	98
	12/31/17	—	—	39,023	39,023	38,871	100	100	100	100

\*New systems' additional years will be added as they become available.

## Schedules of Active Member Valuation Data

Year Ended December 31

System	Year	Number of Participating Employers	Active Members	Active Members			Inflation Increase (CPI)
				Projected Annual Payroll	Average Pay	Percent Increase	
<b>Noncontributory Retirement System</b>	2008	416	93,576	\$ 3,871,636,000	40,531	2.39%	0.10%
	2009	416	92,766	3,955,040,000	41,945	3.49	2.70
	2010	419	92,392	3,881,790,000	41,854	(0.22)	1.50
	2011	430	87,901	3,900,106,000	43,308	3.47	3.20
	2012	436	82,259	3,794,929,000	44,828	3.51	2.10
	2013	439	76,845	3,675,331,000	46,294	3.27	1.50
	2014	437	71,827	3,570,912,000	47,994	3.67	1.60
	2015	451	68,273	3,458,286,000	50,002	4.18	0.10
	2016	453	63,214	3,406,567,000	51,984	3.96	1.30
	2017	457	59,578	3,375,321,000	54,845	5.50	2.10
<b>Contributory Retirement System</b>	2008	158	2,743	\$ 133,110,000	46,830	4.38%	0.10%
	2009	160	2,515	127,804,000	47,941	2.37	2.70
	2010	159	2,330	116,395,000	47,620	(0.67)	1.50
	2011	159	2,137	110,103,000	48,806	2.49	3.20
	2012	159	1,937	103,074,000	50,504	3.48	2.10
	2013	159	1,733	94,895,000	51,680	2.33	1.50
	2014	159	1,503	90,623,000	54,003	4.49	1.60
	2015	158	943	82,426,000	56,747	5.08	0.10
	2016	158	738	53,615,000	60,936	7.38	1.30
	2017	158	621	45,178,000	62,264	2.18	2.10
<b>Public Safety Retirement System</b>	2008	128	7,894	\$ 365,043,000	45,964	4.70%	0.10%
	2009	130	7,695	373,959,000	47,145	2.57	2.70
	2010	130	7,624	363,037,000	46,898	(0.52)	1.50
	2011	130	7,619	374,293,000	47,329	0.92	3.20
	2012	130	7,313	366,471,000	48,416	2.30	2.10
	2013	130	7,019	363,389,000	49,825	2.91	1.50
	2014	131	6,672	360,751,000	51,603	3.57	1.60
	2015	131	6,399	355,172,000	53,488	3.65	0.10
	2016	132	6,032	352,408,000	57,381	7.28	1.30
	2017	133	5,704	350,783,000	59,841	4.29	2.10
<b>Firefighters Retirement System</b>	2008	52	1,849	\$ 102,252,000	54,111	3.57%	0.10%
	2009	55	1,907	107,625,000	54,466	0.66	2.70
	2010	56	1,887	105,275,000	54,741	0.50	1.50
	2011	57	1,932	110,751,000	55,240	0.91	3.20
	2012	57	1,884	110,608,000	56,507	2.29	2.10
	2013	58	1,845	112,158,000	58,193	2.98	1.50
	2014	59	1,787	111,305,000	60,081	3.24	1.60
	2015	60	1,735	111,133,000	62,628	4.24	0.10
	2016	62	1,663	112,322,000	67,114	7.16	1.30
	2017	62	1,602	112,954,000	69,242	3.17	2.10



Schedules of Active Member Valuation Data (Concluded)

Year Ended December 31

System	Year	Number of Participating Employers	Active Members	Active Members			Inflation Increase (CPI)
				Projected Annual Payroll	Average Pay	Percent Increase	
<b>Judges Retirement System</b>	2008	1	106	\$ 14,404,000	128,706	7.09%	0.10%
	2009	1	104	14,434,000	131,742	2.36	2.70
	2010	1	109	14,234,000	133,692	1.48	1.50
	2011	1	111	14,918,000	132,615	(0.80)	3.20
	2012	1	111	14,885,000	132,644	0.02	2.10
	2013	1	112	14,942,000	139,135	4.89	1.50
	2014	1	114	15,195,000	136,234	(2.09)	1.60
	2015	1	112	15,832,000	145,112	6.52	0.10
	2016	1	115	16,755,000	155,852	7.40	1.30
2017	1	114	18,661,000	162,345	4.17	2.10	
<b>Utah Governors and Legislators Retirement Plan</b>	2008	1	93	\$ 910,000	9,785	7.42%	0.10%
	2009	1	119	910,000	7,647	(21.85)	2.70
	2010	1	125	910,000	7,280	(4.80)	1.50
	2011	1	115	910,000	7,913	8.70	3.20
	2012	1	113	910,000	8,053	1.77	2.10
	2013	1	99	975,000	10,172	26.31	1.50
	2014	1	105	1,032,000	9,526	(6.35)	1.60
	2015	1	93	943,000	10,099	6.02	0.10
	2016	1	61	799,000	12,285	21.64	1.30
2017	1	52	722,000	12,285	0.00	2.10	
<b>Tier 2 Public Employees Contributory Retirement System*</b>	2011	456	4,777	\$ 36,821,000	7,708	100.00%	1.50%
	2012	461	10,356	203,779,000	27,030	250.68	2.10
	2013	461	13,718	349,257,000	30,279	12.02	1.50
	2014	463	17,225	353,227,000	32,388	6.97	1.60
	2015	465	21,778	637,560,000	34,031	5.07	0.10
	2016	466	24,372	822,196,000	30,809	(9.47)	1.30
	2017	470	27,152	996,965,000	39,229	27.33	2.10
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2011	145	99	\$ 855,000	8,636	100.00%	1.50%
	2012	145	477	10,237,000	33,394	286.68	2.10
	2013	145	885	24,656,000	33,902	1.52	1.50
	2014	149	1,331	35,019,000	35,871	5.81	1.60
	2015	149	1,824	53,276,000	37,051	3.29	0.10
	2016	150	2,240	74,834,000	35,363	(4.56)	1.30
	2017	151	2,699	98,113,000	41,946	18.62	2.10

\*New systems' additional years will be added as they become available.

## Schedules of Retirants and Beneficiaries

Year Ended December 31

System	Year	Added to Rolls		Removed from Rolls		Rolls End of Year		% Increase in Annual Allowances	Average Annual Allowances
		Number	Allowances	Number	Allowances	Number	Allowances		
<b>Noncontributory Retirement System</b>	2008	2,082	\$ 75,142,000	316	\$ 24,876,000	31,731	\$ 659,792,000	8.25%	\$ 19,616
	2009	2,540	84,601,000	370	21,340,000	33,901	723,053,000	9.59	20,039
	2010	2,697	101,281,000	459	30,530,000	36,139	793,804,000	9.79	20,432
	2011	2,629	92,161,000	552	42,268,000	38,216	843,697,000	6.29	20,618
	2012	2,745	99,170,000	505	42,739,000	40,456	900,128,000	6.69	20,841
	2013	3,366	118,337,000	715	43,781,000	43,107	974,684,000	8.28	21,063
	2014	3,680	123,894,000	866	54,780,000	45,921	1,043,798,000	7.09	21,170
	2015	3,399	140,471,000	578	60,622,000	48,742	1,123,647,000	7.65	21,363
	2016	3,965	141,910,000	1,352	81,240,000	51,355	1,184,317,000	5.40	22,475
	2017	3,340	148,952,000	797	85,232,000	53,898	1,248,037,000	5.38	22,576
<b>Contributory Retirement System</b>	2008	151	\$ 6,547,000	464	\$ 6,129,000	5,239	\$ 62,096,000	0.68%	\$ 11,067
	2009	181	8,434,000	449	5,681,000	4,971	64,849,000	4.43	11,961
	2010	218	9,641,000	425	6,925,000	4,764	67,565,000	4.19	12,890
	2011	177	8,271,000	389	7,461,000	4,552	68,375,000	1.20	13,777
	2012	184	9,403,000	366	6,928,000	4,370	70,850,000	3.62	14,863
	2013	222	9,875,000	340	6,567,000	4,252	74,158,000	4.67	15,996
	2014	209	10,036,000	146	7,179,000	4,315	77,015,000	3.85	16,341
	2015	187	11,793,000	280	7,418,000	4,222	81,390,000	5.68	17,497
	2016	227	10,463,000	284	8,406,000	4,165	83,447,000	2.53	19,284
	2017	123	8,205,000	246	6,891,000	4,042	84,761,000	1.57	19,831
<b>Public Safety Retirement System</b>	2008	197	\$ 16,691,000	45	\$ 9,611,000	3,766	\$ 98,944,000	7.71%	\$ 24,391
	2009	170	11,925,000	105	4,597,000	3,831	106,272,000	7.41	25,710
	2010	212	14,221,000	31	4,662,000	4,012	115,831,000	8.99	26,497
	2011	157	11,329,000	44	6,591,000	4,125	120,569,000	4.09	27,182
	2012	195	13,695,000	28	5,725,000	4,292	128,539,000	6.61	27,693
	2013	230	15,532,000	41	6,585,000	4,481	137,486,000	6.96	28,233
	2014	562	15,463,000	135	8,185,000	4,908	144,764,000	5.29	27,226
	2015	268	18,681,000	12	8,058,000	5,164	155,387,000	7.34	27,550
	2016	368	18,523,000	120	9,402,000	5,412	164,508,000	5.87	29,241
	2017	266	16,937,000	40	8,575,000	5,638	172,870,000	5.08	29,504
<b>Firefighters Retirement System</b>	2008	33	\$ 3,457,000	13	\$ 2,038,000	1,083	\$ 35,355,000	4.18%	\$ 29,169
	2009	38	4,503,000	9	1,547,000	1,112	38,311,000	8.36	30,158
	2010	44	5,173,000	7	2,354,000	1,149	41,130,000	7.36	31,044
	2011	32	3,171,000	8	2,897,000	1,173	41,404,000	0.67	31,874
	2012	35	4,114,000	4	1,843,000	1,204	43,675,000	5.48	32,584
	2013	46	4,552,000	20	3,480,000	1,230	44,747,000	2.45	33,292
	2014	119	4,664,000	51	1,701,000	1,298	47,710,000	6.62	32,763
	2015	55	4,788,000	20	2,827,000	1,333	49,671,000	4.11	33,319
	2016	72	4,715,000	33	2,284,000	1,372	52,102,000	4.89	36,574
	2017	62	5,126,000	11	2,435,000	1,423	54,793,000	5.16	37,191

Schedules of Retirants and Beneficiaries (Concluded)

Year Ended December 31

System	Year	Added to Rolls		Removed from Rolls		Rolls End of Year		% Increase in Annual Allowances	Average Annual Allowances
		Number	Allowances	Number	Allowances	Number	Allowances		
<b>Judges Retirement System</b>	2008	3	\$ 583,000	2	\$ 338,000	97	\$ 6,580,000	3.87%	\$ 63,084
	2009	10	1,015,000	—	—	107	7,595,000	15.43	65,133
	2010	8	1,415,000	—	—	115	9,010,000	18.63	68,784
	2011	5	629,000	4	991,000	116	8,648,000	(4.02)	72,696
	2012	4	783,000	3	296,000	117	9,135,000	5.63	74,705
	2013	11	1,898,000	4	844,000	124	10,189,000	11.54	76,264
	2014	14	1,840,000	6	668,000	132	11,361,000	11.50	79,202
	2015	9	1,711,000	1	672,000	140	12,400,000	9.15	81,633
	2016	7	637,000	6	707,000	141	12,330,000	(0.56)	84,793
	2017	10	2,315,000	3	1,024,000	148	13,621,000	10.47	87,512
<b>Utah Governors and Legislators Retirement Plan</b>	2008	8	\$ 70,000	6	\$ 65,000	222	\$ 763,000	0.66%	\$ 2,941
	2009	5	73,000	3	52,000	224	784,000	2.75	3,030
	2010	5	60,000	9	54,000	220	790,000	0.77	3,076
	2011	7	56,000	7	47,000	220	799,000	1.14	3,151
	2012	8	52,000	4	37,000	224	814,000	1.88	3,160
	2013	21	119,000	6	41,000	239	892,000	9.58	3,167
	2014	9	80,000	12	63,000	236	909,000	1.91	3,287
	2015	12	73,000	7	78,000	241	904,000	(0.55)	3,311
	2016	17	128,000	14	91,000	244	941,000	4.09	3,863
2017	11	87,000	2	55,000	253	973,000	3.40	3,883	
<b>Tier 2 Public Employees Contributory Retirement System</b>	2011	—	—	—	—	—	—	—	—
	2012	—	—	—	—	—	—	—	—
	2013	—	—	—	—	—	—	—	—
	2014	—	—	—	—	—	—	—	—
	2015	1	\$ 401,000	—	\$ 68,000	1	\$ 333,000	—	\$ 865
	2016	8	26,000	—	43,000	9	316,000	(5.11)%	1,565
	2017	17	72,000	—	(29,000)	26	417,000	31.96	1,932
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2011	—	—	—	—	—	—	—	—
	2012	—	—	—	—	—	—	—	—
	2013	—	—	—	—	—	—	—	—
	2014	—	—	—	—	—	—	—	—
	2015	—	\$ 30,000	—	—	—	\$ 30,000	—	—
	2016	—	—	—	\$ 2,000	—	28,000	(6.67)%	—
	2017	—	—	—	(33,000)	—	61,000	117.86	—

\*There are currently no retirees in the system.

# DEFINED BENEFIT SYSTEMS SUMMARY OF PLAN PROVISIONS

as of January 1, 2017



## Noncontributory Retirement System

### Membership Eligibility

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 government 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 his or her employer participates in the System and the employee initially began full-time employment prior to July 1, 2011, and works at least 20 hours per week and receives benefits normally provided by his or her employer as approved by the Retirement Board, and teachers who teach half-time.

### Vesting

Retirement benefit becomes vested upon the member's completion of four years of qualifying service.

### 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

† 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.

### Service Benefit Formula

Number of years of service x 2.0% 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 the original retirement benefit. Eligible after one year.

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

*Noncontributory Retirement System (Concluded)*

**Death Benefits**

An active member's death benefit consists of a payment equal to 75% of the highest annual salary with a minimum of \$1,000 and a refund of transferred contributions plus interest, if applicable. 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 15 or more years of service credit.

An inactive member's death benefit for someone with fewer than 10 years of service consists of a refund of transferred contributions plus interest, if applicable. For those with 10 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.

A retired member's death benefit depends on the retirement option selected at retirement. No death benefit is available without a reduced retirement benefit.

**Refunds**

A terminated member who transferred from the Contributory Retirement System is eligible for a 100% refund of transferred member contributions plus interest. There is a 60-day refund processing period after the last day of paid employment.

**Redeposits**

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.

**Contribution Rates** *(as of 12-31-2017)*

Employer rate for State and School (Level A) is 22.19% of covered salary and 18.47% for Local Government (Level B).

**Interest**

Up to 7.20% on member accounts transferred from the Contributory Retirement System.



**Contributory Retirement System**

**Membership Eligibility**

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 his or her employer participates in the System and the employee initially began full-time employment prior to July 1, 2011, and works at least 20 hours per week and receives benefits normally provided by his or her employer as approved by the Retirement Board, and teachers who teach half-time.

**Vesting**

Retirement benefit becomes vested upon the member's completion of four years of qualifying service. Eligible member contributions and interest thereon vest immediately.

**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

† With fewer than 30 years of service from any combination of Utah Retirement Systems, retiring before age 65 will reduce the monthly benefit by 3% for each year between ages 60 and 65.

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

*Contributory Retirement System (Concluded)*

**Service Benefit Formula**

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

\* 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.

**Cost-of-Living Allowance**

Up to 4% annually on the original retirement benefit. Eligible after one year.

**Death Benefits**

An active member's death benefit consists of a payment equal to 75% 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.

An inactive member's death benefit for someone with fewer than 10 years of service consists of a refund of contributions plus interest. For those with 10 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.

A retired member's death benefit depends on the retirement option selected at retirement. No death benefit is available without a reduced retirement benefit.

**Refunds**

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.

**Redeposits**

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.

**Contribution Rates** *(as of 12-31-2017)*

Member contribution rate is 6.00%\* of covered salary. Employer rate for State and School (Level A) is 17.0% of covered salary and 14.46% for Local Government (Level B).

\*Employers have the option of paying all or part of member contributions on behalf of their employees.

**Interest**

Up to 7.20% on member accounts.



**Public Safety Retirement System**

**Membership Eligibility**

The Public Safety Retirement System includes eligible State and local government 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 the employee initially began employment prior to July 1, 2011, and: (1) they are regularly scheduled to work and be compensated for 2,080 hours a year in a recognized public safety department; (2) they have completed a certified training program; (3) their primary duty is as a peace officer, correctional officer, special function officer, certified dispatcher whose employer elected coverage in the Public Safety System, or full-time member of the Board of Pardons and Parole; and (4) in the course of employment their life or personal safety is at risk.

**Vesting**

Retirement benefit becomes vested upon the member's completion of four years of service credit. Eligible member contributions vest immediately.

**Service Retirement**

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

**Defined Benefit Systems**SUMMARY OF PLAN PROVISIONS *(Continued)**Public Safety Retirement System (Concluded)***Service Benefit Formula**

- 1) 2.5% x FAS\* x years of service up to 20 years.
- 2) 2.0% x FAS\* x years of service over 20 years.
- 3) 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.

**Cost-of-Living Allowance**

Up to 2.5% annually on original retirement benefit. Employers have the option to provide an enhanced cost-of-living (COLA) benefit to their public safety retirees that will raise the maximum COLA from 2.5% to 4% based on the CPI. Eligible after one year.

**Death Benefits****Division A (with Social Security)**

If death is in the line of duty, the benefit to the surviving spouse is a lump-sum payment equal to six months of the final average salary plus a monthly benefit of 30% of the final average salary. In the noncontributory system only, if 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 unless the member selects a reduced monthly benefit at the time of retirement to provide a 75% spousal benefit.

**Division B (without Social Security)**

If death is in the line of duty, the benefit to the surviving spouse is a lump-sum payment equal to six months of the final average salary plus a monthly benefit of 37.5% of the final average salary. Each unmarried child under 18 or dependent unmarried mentally or physically disabled child receives \$50 per month if the member has two or more years of service. If death is not in the line of duty and the member has less than two years of service, the spouse at the time of death will receive a refund of contributions plus 50% of the last 12 months of salary. 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 unless the member selects a reduced monthly benefit at the time of retirement to provide a 75% spousal benefit. An unmarried child under 18 or dependent unmarried mentally or physically disabled child receives \$50 per month.

**Refunds**

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.

**Redeposits**

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.

**Contribution Rates** *(as of 12-31-2017)***Noncontributory Option**

Employer rates for Division A are: State units 41.58%; Bountiful 49.58%; other law enforcement units with a 2.5% COLA 34.04% and units with a 4.0% COLA 35.71% of salary. Employer rates for Division B are: Salt Lake City 46.67%; Ogden 48.68%; Provo 42.16%; Logan 41.92%; other law enforcement units with a 2.5% COLA 32.20% and units with a 4.0% COLA 38.94% of salary.

**Contributory Option**

Member rates in Division A are: State units 12.29%; all other law enforcement units with a 2.5% COLA 12.29% and units with a 4.0% COLA 12.29% of covered salary. Member rates in Division B are: other law enforcement units with a 2.5% COLA 10.5% and units with a 4.0% COLA 10.5% of salary.\*

Employer rates for Division A are: State units 29.70%; all other law enforcement units with a 2.5% COLA 22.75% and units with a 4.0% COLA 24.33% of covered salary. Employer rates for Division B are other law enforcement units with a 2.5% COLA 22.29% and units with a 4.0% COLA 28.95% of salary.

\*Employers have the option of paying all or part of member contributions on behalf of their employees.

**Interest**

Up to 7.20% on member accounts.

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

## Firefighters Retirement System



### Membership Eligibility

The Firefighters Retirement System includes eligible State and local government 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 System if they initially began employment prior to July 1, 2011, and are regularly scheduled to work and be compensated for 2,080 hours a year in a regular constituted fire department and are regularly assigned to hazardous duty, or are the State Fire Marshall or a Deputy State Fire Marshall. Although volunteer firefighters who are on the rolls of a legally organized volunteer fire department 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.

### Vesting

Retirement benefit becomes vested upon the member's completion of four years of service credit. Eligible member contributions vest immediately.

### Service Retirement

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

### Service Benefit Formula

- 1) 2.5% x FAS\* x years of service up to 20 years.
- 2) 2.0% x FAS\* x years of service over 20 years.
- 3) 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.

### Cost-of-Living Allowance

Up to 4.0% annually on original retirement benefit. Eligible after one year.

### Disability Benefits

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.

### Death Benefits

#### Division A (with Social Security)

If death is in the line of duty, the benefit to the surviving spouse is a lump-sum payment equal to six months of the final average salary plus a monthly benefit of 30% of 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 \$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. If there is no spouse, the settlement is a 100% refund of vested contributions payable to the beneficiary, or \$500, whichever is greater.



**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

*Firefighter Retirement System (Concluded)*

**Division B (without Social Security)**

If death is in the line of duty, the benefit to the surviving spouse is a lump-sum payment equal to six months of the final average salary plus a monthly benefit of 37.5% of the final average salary. Each unmarried child under 21 or dependent unmarried mentally or physically disabled child receives \$75 per month if the member had five or more years of service. 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. Total benefits cannot exceed 75% of the final average salary.

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 or dependent unmarried mentally or physically disabled child receives \$75 per month.

**Refunds**

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.

**Redeposits**

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.

**Contribution Rates** *(as of 12-31-2017)*

Member rate in Division A is 15.05% of covered salary. Member rate in Division B is 16.71% of covered salary.\* Employer rate in Division A is 3.93% and in Division B is 6.70% of covered salary. A fire insurance premium tax equal to 11.64% 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.*

**Interest**

Member contributions receive no interest.



**Judges Retirement System**

**Membership Eligibility**

The Judges Retirement System includes justices and judges of the courts of record as authorized in state statutes.

**Vesting**

Retirement benefit becomes vested upon the member's completion of 6 years of service credit. Eligible member contributions and interest thereon vest immediately.

**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**

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

*\*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.*

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

*Judges Retirement System (Concluded)*

**Cost-of-Living Allowance**

Up to 4% compounded annually, beginning one year after retirement.

**Death Benefits**

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 member’s most recent 12 months’ compensation prior to death, or a monthly allowance equal to 65% of the amount computed for a service retirement with no early retirement reduction.

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.

**Refunds**

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.

**Redeposits**

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.

**Contribution Rates** *(as of 12-31-2017)*

Employer rate includes 42.69% of covered salary and 9.22% from court fees.

**Interest**

Up to 7.20% on member accounts.



**Utah Governors and Legislators Retirement Plan**

**Membership Eligibility**

The Utah Governors and Legislators Retirement Plan includes only governors and legislators of the State of Utah.

**Vesting**

Retirement benefit becomes vested upon the member’s completion of four years of service credit.

**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 per term increased semi-annually up to 2% based on the CPI. The amount as of 12-31-17 is \$1,380.00.

**Legislators:** \$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 12-31-17 is \$30.00.

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

*Utah Governors and Legislators Retirement Plan (Concluded)*

**Cost-of-Living Allowance**

Up to 4% annually on the original retirement benefit. Eligible after one year.

An additional \$3.50 per month, for each year of service, is payable to elected and appointed legislators and governors who were members of this Plan before March 1, 2000.

**Death Benefits**

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.

**Contribution Rates** *(as of 12-31-2017)*

There was a 2017-18 appropriation payable by June 30, 2018, to the Utah Governors and Legislators Retirement Plan of \$391,883.



**Tier 2 Public Employees  
Contributory Retirement System**

**Membership Eligibility**

The Tier 2 Public Employees Contributory Retirement System, brought about by SB 63, became effective on July 1, 2011. All eligible employees beginning employment on or after July 1, 2011, who have no previous service credit with any of the Utah Retirement Systems, are members of the Tier 2 Retirement System. A person initially entering full-time employment with a participating employer on or after July 1, 2011, must make an election to participate in either the Tier 2 Hybrid Public Employees Retirement System or the Tier 2 Defined Contribution (DC) Plan, within one year of his or her employment date. The election made is irrevocable. If no election is made, the employee automatically becomes a member of the Tier 2 Hybrid Public Employees Retirement System.

An employee is qualified for membership in the Tier 2 Public Employees Retirement System if his or her employer participates in this system, and one of the following: the employment, contemplated to continue during a fiscal or calendar year, normally requires an average of 20 hours or more per week and the employee receives benefits normally provided by the employer as approved by the Retirement Board; the employee is a classified school employee whose employment normally requires an average of 20 hours or more per week regardless of benefits; the employee is a teacher who teaches half-time

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

*Tier 2 Public Employees Contributory Retirement System (Concluded)*

or more and receives benefits normally provided by the employer as approved by the Retirement Board; the employee is an appointed officer\* whose position is full time as certified by the participating employer; the employee is in a probationary status and meets eligibility requirements; the employee performs services through an employee leasing or similar arrangement and meets eligibility requirements.

*\*Appointed officers are employees appointed to a position for a definite and fixed term of office, and the position is recorded in the employer's charter, creation document, or similar document.*

**Vesting**

Retirement benefit is vested upon the member's completion of four years of qualifying service credit.

**Service Retirement**

**Applies only to the Tier 2 Hybrid Retirement System**

Age	Years of Service	Allowance Reduction†
Any age	.....35	..... None
60-61	.....20	..... Full actuarial before age 65
62-64	.....10	..... Full actuarial before age 65
65	..... 4	..... None

† *When fewer than 35 years of service from any combination of Utah Retirement Systems, the allowance will be reduced by approximately 7% for each year between ages 60 and 63 and approximately 9% for each year between ages 64 and 65.*

**Service Benefit Formula**

**Applies only to the Tier 2 Hybrid Retirement System**

Service benefit formula is based upon number of years of service credit x 1.5% x highest five years' earnings converted to a monthly average.

**Cost-of-Living Allowance**

The Tier 2 Hybrid Retirement System has a COLA up to 2.5% on the retirement allowance. There is no COLA in the Tier 2 Defined Contribution Plan.

**Death Benefits**

**Death Benefits for Non-Retired Members — Applies only to the Tier 2 Hybrid Public Employees Retirement System**

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 15 or more years of service credit.

If there are any member contributions in the employee's Tier 2 Hybrid Public Employees Retirement Account and the surviving spouse does not qualify for a career benefit, the beneficiary(ies) will receive a refund of the employee's contributions plus interest.

**Death Benefits — Applies to both the Hybrid Public Employees Retirement System and the DC Plan**

If an employee is a non-retired member who is employed by a participating employer at the time of his or her death, his or her beneficiary(ies) will receive a payment representing 75% of the employee's highest annual salary. If the employee has less than 12 months of service, the benefit is prorated. The minimum insurance payment is \$1,000.

**Death Benefits for Non-Retired Members — in the Tier 2 Retirement Plan**

After death, any money vested in the employee's URS Savings Plans (401(k), 457, IRAs) is payable to his or her beneficiary(ies).

**Refunds**

If the employee has a balance in his or her Tier 2 Defined Contribution account, he or she may be able to withdraw funds under certain circumstances. When an employee has four years of eligible employment, the employer contributions in his or her 401(k) account become vested and he or she is able to take a refund of the account upon termination of employment.

If the employee terminates employment prior to the vesting period and subsequently enters employment with a URS participating employer within 10 years of the previous termination date, all employer contributions will be reinstated upon completion of the vesting period. If he or she is not re-employed and eligible to participate in the DC Plan within 10 years of the previous termination date, the funds are forfeited. If the employee makes personal deferrals (i.e., payroll deductions) to the DC Plan, those deferrals are vested immediately and may be taken as a refund when terminating employment.

**Contribution Rates\*** *(as of 12-31-2017)*

Range from 16.69% to 18.45% of salary for local government employers. The rate for State and School Employers is 20.02%.

*\* Includes 401(k) portion of the contribution rate.*

**Defined Benefit Systems**

SUMMARY OF PLAN PROVISIONS *(Continued)*

## Tier 2 Public Safety and Firefighter Contributory Retirement System



### Membership Eligibility

The Tier 2 Public Safety and Firefighter Contributory Retirement System, brought about by SB 63, became effective on July 1, 2011. All eligible employees beginning employment on or after July 1, 2011, who have no previous service credit with any of the Utah Retirement Systems, are members of the Tier 2 Public Safety and Firefighter Retirement System. A person initially entering full-time employment with a participating employer on or after July 1, 2011, must make an election to participate in either the Tier 2 Public Safety and Firefighter Retirement System or the Tier 2 Defined Contribution (DC) Plan, within one year of his or her employment date. The election made is irrevocable. If no election is made, the employee automatically becomes a member of the Tier 2 Hybrid Public Safety and Firefighter Retirement System.

An employee qualifies for membership if: The employment normally requires an average of 2,080 hours of regularly scheduled employment per year in a recognized public safety department, as a law enforcement officer, correctional officer, special function officer, or full-time member of the Board of Pardons and Parole, and in the course of employment the employee's life or personal safety is at risk, and he or she has completed a certified training program, which is documented with our office, OR, if the employment normally requires an average of 2,080 hours of regularly scheduled employment per year in a regularly constituted fire department, the employee has been trained in firefighter techniques, and is assigned to a position of hazardous duty.

If the employee doesn't meet the eligibility requirements outlined in the previous explanation, based on the employer's participation, the employee will be enrolled in the Tier 2 Public Employees Contributory Retirement System as long as eligibility requirements are met.

### Vesting

Retirement benefit is vested upon the member's completion of four years of qualifying service credit.

### Service Retirement

**Applies only to the Tier 2 Hybrid Public Safety and Firefighter Retirement System**

Age	Years of Service	Allowance Reduction†
Any age	.....25	..... None
60-61	.....20	..... Full actuarial before age 65
62-64	.....10	..... Full actuarial before age 65
65	..... 4	..... None

† When fewer than 25 years of service from any combination of Utah Retirement Systems, the allowance will be reduced by approximately 7% for each year between ages 60 and 63 and approximately 9% for each year between ages 64 and 65.

### Service Benefit Formula

**Applies only to the Tier 2 Hybrid Public Safety and Firefighter Retirement System**

Service benefit formula is based upon number of years of service credit x 1.5% x highest five years' earnings converted to a monthly average.

### Cost-of-Living Allowance

The Tier 2 Hybrid Public Safety and Firefighter Retirement System has a COLA up to 2.5% on the retirement allowance. There is no COLA in the Tier 2 Defined Contribution Plan.

## Defined Benefit Systems

### SUMMARY OF PLAN PROVISIONS *(Concluded)*

*Tier 2 Public Safety and Firefighter Contributory Retirement System (Concluded)*

#### Death Benefits

##### ***Applies only to the Tier 2 Hybrid Public Safety and Firefighter Retirement System***

An active member's death benefit consists of a payment equal to 75% of the highest annual salary with a minimum of \$1,000. 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 15 or more years of service credit. If there are any member contributions in the employee's Tier 2 Hybrid Public Employees Retirement Account and the surviving spouse does not qualify for a career benefit, the beneficiary(ies) will receive a refund of the employee's contributions plus interest.

##### ***Line-of-Duty Death — Applies only to the Tier 2 Hybrid Public Safety and Firefighter Retirement System***

If an employee accrued less than 20 years of public safety or firefighter service credit, his or her spouse at the time of death will receive a lump-sum payment equal to six months of the final average salary and a monthly benefit equal to 30% of the employee's monthly final average salary.

If an employee accrued 20 or more years of public safety or firefighter service credit, he or she will be considered to have retired with an option one selection calculated without an actuarial reduction and his or her spouse at the time of your death will receive the allowance that would have been payable to the employee.

##### ***Death Benefit — Applies to both the Hybrid Public Safety and Firefighter Retirement System and the Tier 2 DC Plan***

If an employee is a non-retired member who is employed by a participating employer at the time of his or her death, his or her beneficiary(ies) will receive a payment representing 75% of the employee's highest annual salary. If the employee has less than 12 months of service, the benefit is prorated. The minimum insurance payment is \$1,000.

##### ***Death Benefits for Non-Retired Members — in the Tier 2 DC Plan***

After death, any money vested in the employee's URS Savings Plans (401(k), 457, IRAs) is payable to his or her beneficiary(ies).



#### Refunds

If the employee has a balance in his or her Tier 2 Defined Contribution account, he or she may be able to withdraw funds under certain circumstances. When an employee has four years of eligible employment, the employer contributions in his or her 401(k) account becomes vested and he or she is able to take a refund of the account upon termination of employment.

If the employee terminates employment prior to the vesting period and subsequently enters employment with a URS participating employer within 10 years of the previous termination date, all employer contributions will be reinstated upon completion of the vesting period. If he or she is not re-employed and eligible to participate in the DC Plan within 10 years of the previous termination date, the funds are forfeited. If the employee makes personal deferrals (i.e., payroll deductions) to the DC Plan, those deferrals are vested immediately and may be taken as a refund when terminating employment.

#### Contribution Rates\* *(as of 12-31-2017)*

Public Safety rates range from a low of 21.72% to a high of 38.97% of salary. The Firefighter rate is 12.08% of salary.

*\*Includes 401(k) portion of the contribution rate.*

## UTAH RETIREMENT SYSTEMS

# CHANGES IN PLAN PROVISIONS

## 2017 Legislation

The following retirement-related bills were passed by the 2017 Utah Legislature:

### FIREFIGHTERS RETIREMENT SYSTEM

#### **S.B. 18: Firefighters' Disability Retirement Benefit Amendments**

Modifies the standard for determining a disability for members of the Firefighters Retirement System, including using the "objective medical impairment" standard that is used for URS' long term disability (LTD) insurance programs.

### GENERAL

#### **S.B. 19: Retirement Systems Payments to Survivors Amendments**

Provides that divorce revokes any URS beneficiary designation naming the divorced member's former spouse.

#### **S.B. 21: Retirement System Amendments**

The annual administrative and technical amendments to Title 49 recommended to the Legislature by URS. At the time of retirement, a retiring member who is married may select options that provide the surviving spouse with an increased monthly allowance if the retiree dies or if there is a divorce without a domestic relations order dividing the benefit. The changes in this bill include a clarification that the increase to such benefits takes effect after notice to the Office of the spouse's death or a divorce.

#### **S.B. 92: Workers' Compensation Fund Revisions**

Requires the Workers' Compensation Fund (WCF) to make an election no later than January 1, 2018, relating to the retirement participation of current employees in conjunction with WCF's withdrawal from URS participation for future employees.



# DEFINED CONTRIBUTION SAVINGS PLANS SUMMARY OF PLAN PROVISIONS



## Defined Contribution Plans

### INTRODUCTION

The 401(k), 457, Roth and traditional IRAs administered by the Board are Defined Contribution Savings Plans. These Plans are generally supplemental plans to the basic retirement benefits of the Retirement Systems, but may also be used as a primary retirement plan. These Plans are voluntary tax-advantaged retirement savings programs authorized under sections 401(k), 457(b), and 408 of the Internal Revenue Code and are available to state, local government, and education employees throughout Utah whose employers have adopted the plans.

### EMPLOYER CONTRIBUTIONS

In addition to accepting employee contributions, the 401(k) and 457 Plans also accept employer contributions on behalf of their employees. All state and public education employees participating in the Noncontributory Retirement System receive an amount equal to 1.5% of their salary in the 401(k) Plan and Tier 2 Public Employees and Tier 2 Public Safety and Firefighter Retirement Systems participants also receive contributions according to their retirement plan. In addition, some employers match a portion of their employees' elective deferrals.

### SOCIAL SECURITY SUBSTITUTE

Organizations 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 cover these employees with a substitute plan.

Employers may use the 401(k)/457 Plans as a qualifying retirement system for these employees, but must contribute a minimum of 7.5% of salary to the Plan(s) on 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 or all of it.

### SUMMARY OF PLAN PROVISIONS

#### Deferral Limits

**401(k)** — Limited in 2017 to an annual maximum of \$18,000. Employer contributions and employee deferrals combined could not exceed the lesser of \$54,000 or 100% of compensation.

**457** — Limited to an annual maximum of \$18,000 or 100% of includable compensation.

**Roth and Traditional IRA** — Limited to an annual maximum of \$5,500 into all IRAs owned by the participant.



**Defined Contribution Savings Plans**SUMMARY OF PLAN PROVISIONS *(Continued)***Coordination of Deferrals**

**401(k)** — Deferrals to the 401(k) and 403(b) plans must be coordinated.

**457** — Contributions to the 457 must be coordinated with all 457(b) plans.

**Roth and Traditional IRA** — All Roth and traditional IRA contributions must be coordinated.

**Catch-up Provisions**

**401(k)** — An additional \$6,000 for participants 50 or older during the year.

**457** — An additional \$6,000 for participants age 50 or older during the year. There is an additional “special catch-up” provision that allows participants to double their contributions to a 457(b) plan during the three years immediately preceding the year they qualify for retirement. However, the special catch-up is limited to unused deferrals allowed in previous years.

**Roth and Traditional IRA** — An additional \$1,000 for participants 50 or older.

**Withdrawals**

**401(k)** — Vested balances upon termination of employment, age 59½, retirement, disability, death, or hardship caused by immediate and heavy financial needs. (Hardships from employee deferrals only.)

**457** — Allowable upon termination of employment, age 70½, retirement, death, or severe unforeseeable financial emergencies.

**Roth and Traditional IRA** — Allowable at any time, but with possible tax penalties if withdrawn prior to age 59½.

**Rollovers**

**401(k)** — Allowable from other eligible retirement plans, or to other eligible retirement plans upon termination of employment or other qualifying events. May be either a direct rollover by the Plan or an indirect rollover by the participant within 60 days after distribution.

**457** — Allowable to other eligible retirement plans or from another 457(b) plan.

**Roth and Traditional IRA** — Allowable from other eligible retirement plans or to other eligible plans (depending on acceptance of receiving plan).

**Vesting**

**401(k)** — Employee and other employer contributions are fully vested. Tier 2 employer required contributions are vested after four years of eligible service (except for elected officials).

**457** — Fully vested.

**Roth and Traditional IRA** — Fully vested.

**Loans**

**401(k) and 457** — Available up to 50% of member account balance, to a maximum of \$50,000 during a 12-month period. Only one outstanding loan allowed, per plan. Tier 2 employer required contributions are not eligible.

**Roth and Traditional IRA** — Not available.

**SHORT-TERM TRADING FEES**

Each time money managers purchase or redeem stocks and bonds there are trading costs involved. Because of the costs generated by frequent or short-term trading, it became necessary to impose a short-term trading fee. Individuals who transfer any or all of their current account between core investment options more often than once every 30 days, are charged 2% of the amount transferred for each additional trade. Each transfer starts a new 30-day period.

**INVESTMENT TRANSFER OPTIONS**

Changes in deferral amounts and in the investment options for future contributions may be made at any time. Participants may make one transfer of accumulated balances within each plan no more frequently than every seven calendar days.

**Defined Contribution Savings Plans**

SUMMARY OF PLAN PROVISIONS *(Continued)*

**2017 CORE INVESTMENT OPTIONS**

**Income Fund**

The Income Fund is a stable value option and the most conservative of the investment choices. Approximately 95% of its assets are invested in investment grade bonds, which are “wrapped” with book value contracts. The contracts are financial agreements from creditworthy banks and insurance companies, protecting against changes in interest rates and allowing the returns to be smoothed over the duration of the portfolio. The remaining 5% is invested in short-term instruments for liquidity.

**Bond Fund**

The Bond Fund invests in a diversified portfolio consisting of U.S. government securities, mortgage and asset-backed securities, corporate bonds, and short-term funds.

**Balanced Fund**

The Balanced Fund invests in a portfolio consisting of approximately 60% stocks and 40% bonds.

**Large Cap Stock Value Fund**

The Large Cap Stock Value Fund invests in a diversified portfolio of common stocks that appear to be undervalued by the stock market, but have a favorable outlook for long-term growth.

**Large Cap Stock Index Fund**

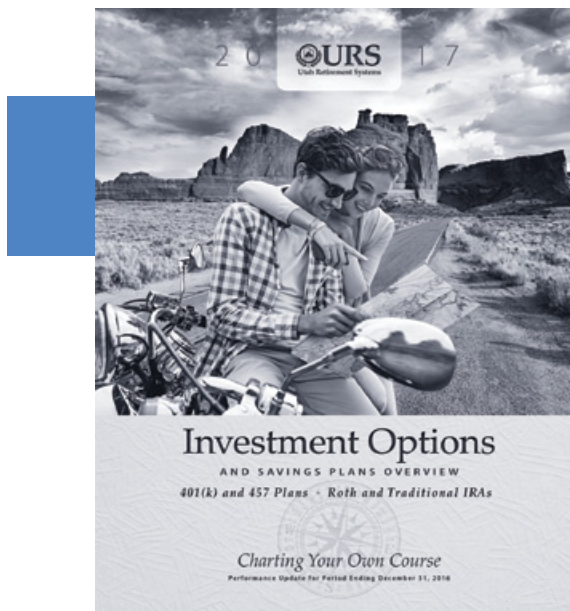
The Large Cap Stock Index Fund invests in stocks included in the Russell 1000 Index and is similarly weighted. This fund represents a broad range of industries in the U.S. economy.

**Large Cap Stock Growth Fund**

The Large Cap Stock Growth Fund emphasizes capital appreciation and seeks to identify companies with future relative earnings strength at a reasonable valuation.

**International Fund**

The International Fund tracks the performance of the MSCI All Country World Index – ex. U.S. – Investable Market Index (ACWI ex. U.S. IMI) as closely as possible. The index is designed as a measure of the global stock market performance of developed and emerging markets that excludes the United States.



**Small Cap Stock Fund**

The Small Cap Stock Fund invests in a broad cross-section of U.S. small companies whose size (market capitalization) falls within the smallest 10% of the market universe. The market universe is comprised of companies listed on the NYSE and NASDAQ.

**BROKERAGE WINDOW**

The brokerage window is a self-directed brokerage account available through Charles Schwab. The brokerage account offers a wide variety of investment options with varying degrees of risk. The brokerage window allows the participant to choose from mutual funds, stocks, bonds, and exchange traded funds (ETFs).

**REAL ASSETS\***

**U.S. REITS**

U.S. REITS, real estate investment trusts, is a passively managed portfolio of real estate properties and mortgage related investments within the U.S. market. The U.S. REITS portfolio tracks the Russell Fundamental US Select Real Estate Index. REITs increase diversification within the Target Date Funds and also add long-term inflation protection.

**Defined Contribution Savings Plans**SUMMARY OF PLAN PROVISIONS *(Concluded)***Target Date Funds Asset Allocation**

Asset Classes	Target Date Funds											
	Retired	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
URS Income Fund	25%	22%	17%	12%	7%	2%	—	—	—	—	—	—
URS Bond Fund	20	21	21	18	15	10	6%	4%	3%	3%	3%	3%
URS Large Cap Stock Value Fund	—	—	—	0.5	2.5	4	6.5	9	10	10	10	10
URS Large Cap Stock Index Fund	14	17	19	23	24	24	23	21	20	20	20	20
URS Large Cap Stock Growth Fund	—	—	—	0.5	2.5	4	6.5	9	10	10	10	10
URS International Stock Fund	4	4	6	11	17	24	30	32	33	33	33	33
URS Small Cap Stock Fund	1	1	2	3	4	7	9	10	10	10	10	10
International Bonds	10	10	10	10	9	7	3	2	2	2	2	2
U.S. Real Estate Investment Trusts	—	—	—	—	2	4	4	4	4	4	4	4
Commodities	3	3	3	3	3	4	4	4	4	4	4	4
Global Inflation-Linked Bonds	20	19	14	9	4	—	—	—	—	—	—	—
Private Real Estate	3	3	8	10	10	10	8	5	4	4	4	4
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Commodities**

Commodities are bulk goods and raw materials, such as grains, metals, livestock, oil, cotton, coffee, sugar, and cocoa; goods used to produce consumer products. Commodities are bought and sold on the cash market, and they are also traded on the futures exchanges in the form of futures contracts. In addition to their diversification benefits, commodities are used as a long-term hedge against inflation.

**Private Real Estate**

Private Real Estate is a fund of funds that allows investors to gain exposure to portfolios of direct real estate investments. The fund will invest primarily in existing private real estate funds, publicly traded real estate securities, and other real estate related investments. These portfolios are comprised of institutional quality commercial real estate across a broad range of real estate asset types.

**International Bonds\*****International Bonds**

International Bonds are used to diversify the bond investments within the Target Date Funds. An international bond is a bond issued outside of the United States by a government or non-U.S. corporation.

**Global Inflation-Linked Bonds**

Global Inflation-linked bonds are debt instruments created to protect investors from the effects of inflation through inflation-linked bonds issued primarily by developed countries. An example of inflation-linked bonds are TIPS (Treasury Inflation-Protected Securities), which are issued by the U.S. Government and are designed to reduce the risk of inflation by indexing the principal of the bond to an inflation rate.

*\*The Real Assets and International Bonds asset classes are exclusive to the URS Target Date Funds and are not available as a stand-alone investment option.*

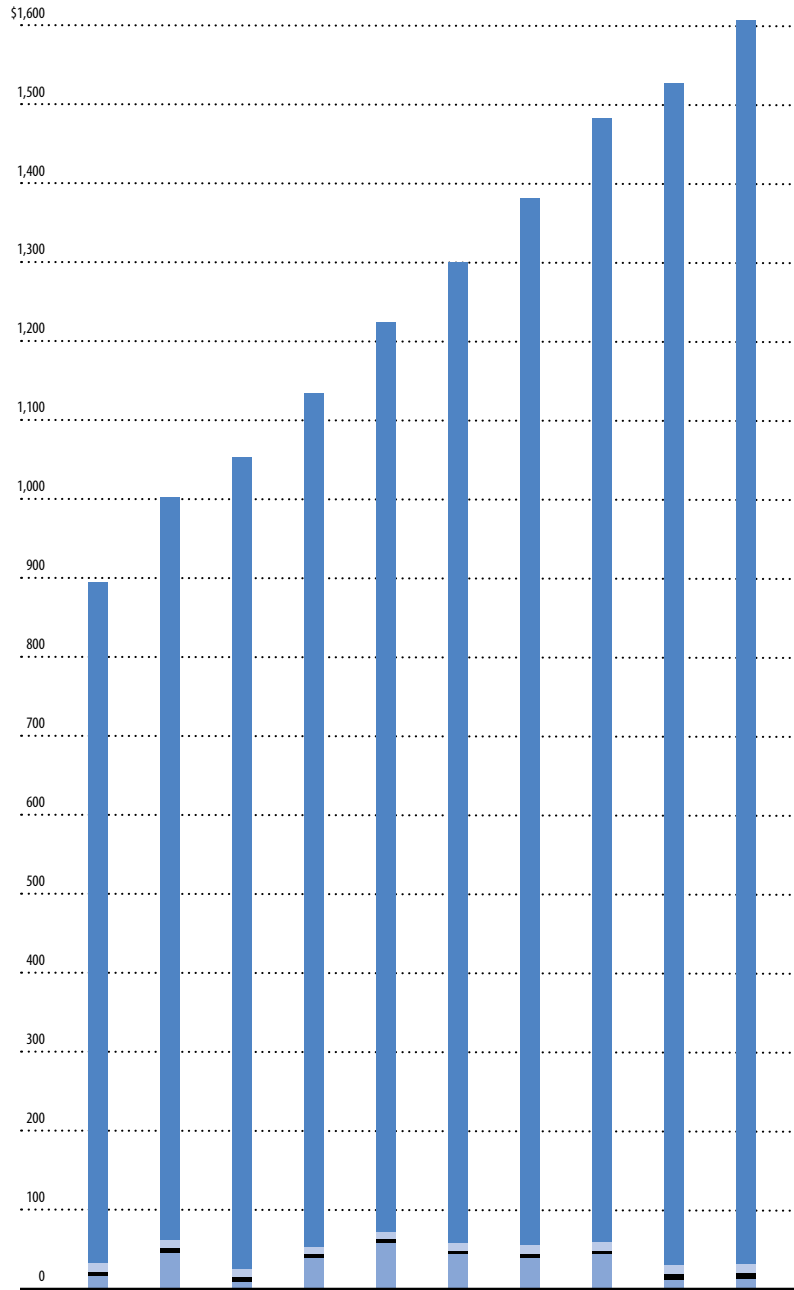
**URS TARGET DATE FUNDS**

The URS Target Date Funds offer a one-fund approach to investing in the URS Savings Plans. A Target Date Fund will give participants a diversified portfolio through a single investment option. The funds will gradually adjust throughout the participant's career and into retirement. The investment mix – which includes stocks, bonds, and real assets – is automatically reallocated to be weighted more conservatively as the participant ages and enters into retirement.

*The historical rates of returns for each investment fund are found on pages 149 and 150.*

# DEDUCTIONS BY TYPE

(in millions)



(in millions)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
■ Benefits	\$ 863	941	1,028	1,083	1,153	1,242	1,326	1,424	1,498	1,576
■ Administrative expense	11	10	11	9	10	10	11	11	11	12
■ Refunds	5	6	6	5	5	5	5	5	7	7
■ Transfers to systems	15	44	7	37	56	42	38	42	10	11
<b>Totals</b>	<b>\$ 894</b>	<b>1,001</b>	<b>1,052</b>	<b>1,134</b>	<b>1,224</b>	<b>1,299</b>	<b>1,380</b>	<b>1,482</b>	<b>1,526</b>	<b>1,606</b>

2017

# STATISTICAL SECTION

<p><b>Schedules of Changes in Net Position — Defined Benefit Systems</b> 196</p> <p>These schedules allow readers to view changes in net assets and benefits over a 10-year period.</p>
<p><b>Schedules of Changes in Net Position — Defined Contribution Plans</b> 200</p> <p>These schedules allow readers to view changes in net assets and refunds over a 10-year period.</p>
<p><b>Schedules of Benefit Deductions by Type</b> 202</p> <p>These schedules provide readers with information regarding the type of benefit deductions for the last 10 years.</p>
<p><b>Schedules of Retired Members by Type of Benefit Option</b> 204</p> <p>These schedules provide readers with information regarding benefit payments by years of service.</p>
<p><b>Schedules of Average Benefit Payments</b> 206</p> <p>These schedules provide readers with information regarding benefit payments by years of service.</p>
<p><b>Schedules of Active Members by Age and Gender</b> 210</p> <p>These schedules provide readers with information regarding members by age and gender.</p>
<p><b>Schedules of Retirees by Age and Gender</b> 211</p> <p>These schedules provide readers with information regarding retirees by age and gender.</p>
<p><b>Schedules of Principal Participating Employers</b> 212</p> <p>These schedules provide readers with information regarding the largest participating employers.</p>
<p><b>Schedule of Utah Retirement Office Employees</b> 216</p> <p>This schedule provides readers with information regarding the number of Utah Retirement Systems' employees.</p>
<p><b>Schedules of Participating Employers</b> 218</p> <p>This schedule provides readers with information regarding the participating employers and the systems in which they participate.</p>
<p><b>Utah Retirement Systems — A Highlight History</b> 224</p> <p>This summary provides readers with historical highlights of the Utah Retirement Systems.</p>

## Schedules of Changes in Net Position — Defined Benefit Systems

Year Ended December 31

*(dollars in thousands)*

System	Year	Beginning Net Position	Member Contributions	Total Employer Contributions		Contributions as a Percent of Covered Payroll	Net Investment Income
				Employer Contributions	Court Fees/ Fire Insurance Tax		
<b>Noncontributory Retirement System</b>	2008	\$ 16,751,804	14,110	522,733	—	13.50%	\$(3,888,624)
	2009	12,714,371	14,109	535,298	—	13.53	1,667,478
	2010	14,152,562	33,528	564,154	—	14.51	1,860,976
	2011	15,802,205	12,879	610,270	—	15.65	401,105
	2012	15,935,472	15,014	644,907	—	16.99	2,000,995
	2013	17,629,437	14,208	710,933	—	19.18	2,588,981
	2014	19,915,815	13,587	772,420	—	21.63	1,419,053
	2015	21,096,512	17,020	813,449	—	23.26	366,748
	2016	21,192,437	16,308	831,631	—	24.05	1,783,911
2017	22,618,743	17,285	854,255	—	25.31	2,987,282	
<b>Contributory Retirement System</b>	2008	\$ 1,131,316	9,410	11,037	—	8.29%	\$(261,227)
	2009	835,370	8,655	10,865	—	8.50	112,626
	2010	937,587	10,299	11,851	—	10.18	121,153
	2011	1,007,248	7,300	11,125	—	10.10	26,009
	2012	1,013,050	6,962	11,705	—	11.36	131,169
	2013	1,136,651	6,376	12,874	—	13.13	169,510
	2014	1,281,945	5,461	12,954	—	14.29	87,577
	2015	1,269,991	4,771	11,719	—	16.50	21,251
	2016	1,183,091	3,420	8,188	—	15.27	97,693
2017	1,204,904	2,675	7,946	—	17.59	155,949	
<b>Public Safety Retirement System</b>	2008	\$ 2,106,302	2,159	93,899	—	25.72%	\$(491,024)
	2009	1,614,057	1,556	98,729	—	26.40	213,627
	2010	1,824,758	1,713	103,586	—	28.53	241,203
	2011	2,058,019	1,070	110,829	—	29.61	52,655
	2012	2,103,751	1,155	117,975	—	32.19	266,753
	2013	2,366,057	1,258	128,744	—	35.18	350,563
	2014	2,712,184	835	135,588	—	37.59	194,222
	2015	2,899,386	905	141,024	—	39.51	50,654
	2016	2,938,839	830	147,099	—	41.74	249,027
2017	3,176,545	793	145,814	—	41.57	421,917	
<b>Firefighters Retirement System</b>	2008	\$ 814,674	10,428	—	10,219	9.99%	\$(188,095)
	2009	612,699	11,273	—	16,159	15.01	79,811
	2010	682,219	14,112	238	10,677	10.37	89,122
	2011	756,260	17,328	316	12,689	11.74	19,218
	2012	765,524	17,503	1,264	16,057	15.66	96,255
	2013	853,778	18,325	3,494	11,285	13.35	125,685
	2014	968,661	18,300	5,514	14,154	17.67	69,070
	2015	1,031,039	18,175	6,690	17,218	21.08	17,934
	2016	1,043,059	18,729	6,954	10,569	15.60	87,746
2017	1,115,726	18,460	6,715	1,223	7.03	146,736	
<b>Judges Retirement System</b>	2008	\$ 134,364	138	1,730	2,072	26.40%	\$(31,053)
	2009	100,895	67	2,083	2,101	28.99	13,214
	2010	111,726	—	2,771	1,944	33.12	14,597
	2011	123,037	—	3,588	1,815	36.22	3,114
	2012	123,235	—	4,232	1,666	39.62	15,485
	2013	136,127	—	4,990	1,498	42.70	20,130
	2014	155,676	317	5,627	1,486	44.26	11,068
	2015	163,834	—	6,555	1,653	49.78	2,842
	2016	163,747	—	7,382	1,470	52.83	13,820
2017	175,618	—	7,563	1,477	48.44	23,435	

UTAH RETIREMENT SYSTEMS

Transfers from Systems	Total Additions	Benefit Payments	Refunds	Administrative & Actuarial Expense	Transfers to Systems	Total Deductions	Changes in Net Position	Ending Net Position
—	(3,351,781)	659,792	2,514	8,809	14,537	685,652	(4,037,433)	12,714,371
—	2,216,885	723,052	2,882	8,340	44,420	778,694	1,438,191	14,152,562
—	2,458,658	793,804	3,620	8,389	3,202	809,015	1,649,643	15,802,205
—	1,024,254	843,696	2,514	7,304	37,473	890,987	133,267	15,935,472
—	2,660,916	900,133	2,858	8,397	55,563	966,951	1,693,965	17,629,437
—	3,314,122	974,684	2,454	8,329	42,277	1,027,744	2,286,378	19,915,815
30,467	2,235,527	1,043,798	2,204	8,828	—	1,054,830	1,180,697	21,096,512
33,648	1,230,865	1,123,647	2,496	8,797	—	1,134,940	95,925	21,192,437
—	2,631,850	1,184,317	4,366	8,856	8,005	1,205,544	1,426,306	22,618,743
—	3,858,822	1,248,037	4,635	9,579	10,187	1,272,438	2,586,384	25,205,127
9,008	(231,772)	62,096	1,473	605	—	64,174	(295,946)	835,370
37,633	169,779	64,849	2,158	555	—	67,562	102,217	937,587
—	143,303	67,565	1,632	535	3,910	73,642	69,661	1,007,248
32,064	76,498	68,375	1,872	449	—	70,696	5,802	1,013,050
47,098	196,934	70,855	1,975	503	—	73,333	123,601	1,136,651
33,094	221,854	74,158	1,922	480	—	76,560	145,294	1,281,945
—	105,992	77,015	2,433	494	38,004	117,946	(11,954)	1,269,991
—	37,741	81,390	1,215	478	41,558	124,641	(86,900)	1,183,091
—	109,301	83,447	1,700	446	1,895	87,488	21,813	1,204,904
—	166,570	84,761	1,613	457	1,177	88,008	78,562	1,283,466
3,727	(391,239)	98,944	899	1,163	—	101,006	(492,245)	1,614,057
4,578	318,490	106,272	390	1,127	—	107,789	210,701	1,824,758
4,248	350,750	115,831	512	1,146	—	117,489	233,261	2,058,019
3,303	167,857	120,570	536	1,019	—	122,125	45,732	2,103,751
6,411	392,294	128,532	292	1,164	—	129,988	262,306	2,366,057
4,676	485,241	137,486	467	1,161	—	139,114	346,127	2,712,184
2,746	333,391	144,763	199	1,227	—	146,189	187,202	2,899,386
4,023	196,606	155,387	533	1,233	—	157,153	39,453	2,938,839
6,701	403,657	164,508	183	1,260	—	165,951	237,706	3,176,545
5,926	574,450	172,870	226	1,382	—	174,478	399,972	3,576,517
1,491	(165,957)	35,355	284	379	—	36,018	(201,975)	612,699
1,173	108,416	38,311	231	354	—	38,896	69,520	682,219
1,784	115,933	41,130	401	361	—	41,892	74,041	756,260
1,699	51,250	41,406	268	312	—	41,986	9,264	765,524
1,325	132,404	43,660	133	357	—	44,150	88,254	853,778
1,302	160,091	44,747	106	355	—	45,208	114,883	968,661
3,713	110,751	47,710	293	370	—	48,373	62,378	1,031,039
2,573	62,590	49,671	528	371	—	50,570	12,020	1,043,059
1,611	125,609	52,102	466	374	—	52,942	72,667	1,115,726
1,259	174,393	54,793	511	408	—	55,712	118,681	1,234,407
294	(26,819)	6,580	—	70	—	6,650	(33,469)	100,895
1,027	18,492	7,595	—	66	—	7,661	10,831	111,726
1,078	20,390	9,010	—	69	—	9,079	11,311	123,037
390	8,907	8,649	—	60	—	8,709	198	123,235
710	22,093	9,135	—	66	—	9,201	12,892	136,127
3,186	29,804	10,189	—	66	—	10,255	19,549	155,676
1,092	19,590	11,361	—	71	—	11,432	8,158	163,834
1,334	12,384	12,400	—	71	—	12,471	(87)	163,747
1,600	24,272	12,340	—	71	—	12,401	11,871	175,618
4,090	36,565	13,621	—	79	—	13,700	22,865	198,483

Continued on page 198.

## Schedules of Changes in Net Position — Defined Benefit Systems (Concluded)

Year Ended December 31

*(dollars in thousands)*

System	Year	Beginning Net Position	Member Contributions	Employer Contributions	Total Employer Contributions		Contributions as a Percent of Covered Payroll	Net Investment Income
					Court Fees/ Fire Insurance Tax			
<b>Utah Governors and Legislators Retirement Plan</b>	2008	\$ 12,196	—	—	—	—	—	\$ (2,763)
	2009	8,675	—	—	—	—	—	1,098
	2010	8,993	—	—	—	—	—	1,142
	2011	9,337	—	153	—	26.94%	—	231
	2012	8,933	—	214	—	46.22	—	1,100
	2013	9,445	—	252	—	64.62	—	1,346
	2014	10,166	—	411	—	44.29	—	717
	2015	10,366	—	421	—	44.50	—	181
	2016	10,039	—	421	—	52.69	—	849
2017	10,352	—	404	—	55.96	—	1,353	
<b>Tier 2 Public Employees Contributory Retirement System*</b>	2011	\$ —	—	2,790	—	7.58%	\$ —	9
	2012	2,799	—	14,208	—	6.97	—	922
	2013	17,933	—	25,743	—	7.29	—	4,017
	2014	47,690	—	37,299	—	7.57	—	4,320
	2015	89,291	—	49,645	—	7.64	—	1,963
	2016	140,539	—	63,062	—	7.67	—	14,059
	2017	217,293	—	79,175	—	7.94	—	33,249
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2011	\$ —	—	89	—	10.41%	\$ —	—
	2012	89	—	1,031	—	10.07	—	56
	2013	1,171	—	2,451	—	12.12	—	316
	2014	3,935	—	4,365	—	12.46	—	404
	2015	8,705	—	6,221	—	10.38	—	199
	2016	15,089	—	8,488	—	11.34	—	1,591
	2017	25,135	—	11,126	—	11.34	—	3,989
<b>All Retirement Systems</b>	2008	\$ 20,950,656	36,245	629,399	12,291	14.30%	—	\$(4,862,786)
	2009	15,886,067	35,660	646,975	18,260	14.53	—	2,087,854
	2010	17,717,845	59,652	682,600	12,621	15.49	—	2,328,193
	2011	19,756,106	38,577	739,160	14,504	16.57	—	502,341
	2012	19,952,853	40,634	795,536	17,723	17.66	—	2,512,735
	2013	22,150,599	40,167	889,481	12,783	19.32	—	3,260,548
	2014	25,096,072	38,500	974,178	15,640	21.16	—	1,786,431
	2015	26,569,124	40,871	1,035,724	18,871	22.37	—	461,772
	2016	26,686,840	39,287	1,073,225	12,039	22.19	—	2,248,696
2017	28,544,316	39,213	1,112,998	2,700	22.32	—	3,773,910	

\*Additional years will be added as they become available.



UTAH RETIREMENT SYSTEMS

Transfers from Systems	Total Additions	Benefit Payments	Refunds	Administrative & Actuarial Expense	Transfers to Systems	Total Deductions	Changes in Net Position	Ending Net Position
17	(2,746)	763	7	5	—	775	(3,521)	8,675
9	1,107	784	—	5	—	789	318	8,993
2	1,144	790	5	5	—	800	344	9,337
17	401	801	—	4	—	805	(404)	8,933
19	1,333	815	1	5	—	821	512	9,445
19	1,617	892	—	4	—	896	721	10,166
—	1,128	909	—	5	14	928	200	10,366
—	602	904	—	5	20	929	(327)	10,039
—	1,270	941	—	4	12	957	313	10,352
89	1,846	973	—	5	—	978	868	11,220
—	2,799	—	—	—	—	—	2,799	2,799
5	15,135	—	—	1	—	1	15,134	17,933
3	29,763	—	—	6	—	6	29,757	47,690
—	41,619	—	—	16	2	18	41,601	89,291
3	51,611	333	—	30	—	363	51,248	140,539
—	77,121	316	—	51	—	367	76,754	217,293
—	112,424	417	—	82	—	499	111,925	329,218
—	89	—	—	—	—	—	89	89
—	1,087	—	—	—	5	5	1,082	1,171
—	2,767	—	—	—	3	3	2,764	3,935
2	4,771	—	—	1	—	1	4,770	8,705
—	6,420	30	—	3	3	36	6,384	15,089
—	10,079	28	—	5	—	33	10,046	25,135
—	15,115	61	—	9	—	70	15,045	40,180
14,537	(4,170,314)	863,530	5,177	11,031	14,537	894,275	(5,064,589)	15,886,067
44,420	2,833,169	940,863	5,661	10,447	44,420	1,001,391	1,831,778	17,717,845
7,112	3,090,178	1,028,130	6,170	10,505	7,112	1,051,917	2,038,261	19,756,106
37,473	1,332,055	1,083,497	5,190	9,148	37,473	1,135,308	196,747	19,952,853
55,568	3,422,196	1,153,130	5,259	10,493	55,568	1,224,450	2,197,746	22,150,599
42,280	4,245,259	1,242,156	4,949	10,401	42,280	1,299,786	2,945,473	25,096,072
38,020	2,852,769	1,325,556	5,129	11,012	38,020	1,379,717	1,473,052	26,569,124
41,581	1,598,819	1,423,762	4,772	10,988	41,581	1,481,103	117,716	26,686,840
9,912	3,383,159	1,497,988	6,715	11,067	9,912	1,525,682	1,857,477	28,544,317
11,364	4,940,185	1,575,533	6,985	12,001	11,364	1,605,883	3,334,302	31,878,618

## Schedules of Changes in Net Position — Defined Contribution Plans

Year Ended December 31

(in thousands)

System	Year	Beginning Net Position	Contributions	Net Investment Income / (Loss)	Total Additions
<b>401(k) Plan</b>	2008	\$ 2,604,148	229,981	(554,176)	(324,195)
	2009	2,131,945	222,369	386,989	609,358
	2010	2,607,287	222,474	254,289	476,763
	2011	2,886,677	210,592	(14,864)	195,728
	2012	2,881,007	218,888	313,374	532,262
	2013	3,212,874	230,086	532,216	762,302
	2014	3,746,281	255,044	213,230	468,274
	2015	3,956,751	271,097	10,658	281,755
	2016	3,980,405	290,632	332,672	623,304
2017	4,338,973	295,804	630,516	926,320	
<b>457 Plan</b>	2008	\$ 277,063	29,021	(57,267)	(28,246)
	2009	229,469	26,617	41,581	68,198
	2010	283,619	26,522	27,628	54,150
	2011	316,874	26,441	(2,422)	24,019
	2012	321,356	24,501	35,065	59,566
	2013	360,381	25,696	60,421	86,117
	2014	424,568	26,711	23,342	50,053
	2015	450,974	26,968	259	27,227
	2016	454,357	27,326	39,252	66,578
2017	494,419	31,475	72,210	103,685	
<b>Roth IRA Plan</b>	2008	\$ 6,336	3,346	(2,051)	1,295
	2009	7,088	3,623	2,008	5,631
	2010	12,248	8,116	1,827	9,943
	2011	20,571	6,619	(508)	6,111
	2012	24,400	7,685	3,256	10,941
	2013	33,750	9,113	6,870	15,983
	2014	47,763	11,664	2,816	14,480
	2015	58,842	14,073	(308)	13,765
	2016	69,714	16,585	7,200	23,785
2017	89,165	19,669	15,389	35,058	
<b>Traditional IRA Plan</b>	2008	\$ 17,840	7,433	(3,488)	3,945
	2009	19,194	3,161	2,803	5,964
	2010	22,471	6,097	1,692	7,789
	2011	26,251	7,346	(55)	7,291
	2012	30,013	9,799	2,811	12,610
	2013	38,595	11,213	5,050	16,263
	2014	49,852	14,930	2,645	17,575
	2015	59,822	17,206	211	17,417
	2016	68,986	16,182	4,825	21,007
2017	81,533	20,593	9,465	30,058	
<b>HRA Plan*</b>	2008	\$ 685	1,129	23	1,152
	2009	1,546	1,974	7	1,981
	2010	2,988	4,274	11	4,285
	2011	6,275	4,264	17	4,281
	2012	9,113	4,092	22	4,114
	2013	11,469	6,750	30	6,780
	2014	16,184	6,393	24	6,417
	2015	19,880	6,318	35	6,353
	2016	23,274	6,796	36	6,832
2017	—	—	—	—	
<b>All Defined Contribution Plans</b>	2008	\$ 2,906,072	270,910	(616,959)	(346,049)
	2009	2,389,242	257,744	433,388	691,132
	2010	2,928,613	267,483	285,447	552,930
	2011	3,256,648	255,262	(17,832)	237,430
	2012	3,265,889	264,965	354,528	619,493
	2013	3,657,069	282,858	604,587	887,445
	2014	4,284,648	314,742	242,058	556,800
	2015	4,546,269	335,662	10,857	346,519
	2016	4,596,736	357,521	383,985	741,506
2017	5,004,090	367,541	727,580	1,095,121	

\*Administration of the HRA was transferred to PEHP in October 2016.

UTAH RETIREMENT SYSTEMS

Refunds	Administrative Expenses	Total Deductions	Changes in Net Position	Ending Net Position
141,904	6,104	148,008	(472,203)	2,131,945
127,675	6,341	134,016	475,342	2,607,287
190,963	6,410	197,373	279,390	2,886,677
194,933	6,465	201,398	(5,670)	2,881,007
194,538	5,857	200,395	331,867	3,212,874
223,523	5,372	228,895	533,407	3,746,281
251,496	6,308	257,804	210,470	3,956,751
251,436	6,665	258,101	23,654	3,980,405
257,651	7,085	264,736	358,568	4,338,973
254,672	7,713	262,385	663,935	5,002,908
18,683	665	19,348	(47,594)	229,469
13,349	699	14,048	54,150	283,619
20,184	711	20,895	33,255	316,874
18,811	726	19,537	4,482	321,356
19,877	664	20,541	39,025	360,381
21,314	616	21,930	64,187	424,568
22,920	727	23,647	26,406	450,974
23,082	762	23,844	3,383	454,357
25,706	810	26,516	40,062	494,419
27,827	887	28,714	74,971	569,390
524	19	543	752	7,088
445	26	471	5,160	12,248
1,582	38	1,620	8,323	20,571
2,230	52	2,282	3,829	24,400
1,538	53	1,591	9,350	33,750
1,908	62	1,970	14,013	47,763
3,310	91	3,401	11,079	58,842
2,781	112	2,893	10,872	69,714
4,192	142	4,334	19,451	89,165
4,752	174	4,926	30,132	119,297
2,545	46	2,591	1,354	19,194
2,635	52	2,687	3,277	22,471
3,954	55	4,009	3,780	26,251
3,469	60	3,529	3,762	30,013
3,967	61	4,028	8,582	38,595
4,940	66	5,006	11,257	49,852
7,514	91	7,605	9,970	59,822
8,148	105	8,253	9,164	68,986
8,332	128	8,460	12,547	81,533
9,035	147	9,182	20,876	102,409
288	3	291	861	1,546
533	6	539	1,442	2,988
987	11	998	3,287	6,275
1,426	17	1,443	2,838	9,113
1,736	22	1,758	2,356	11,469
2,041	24	2,065	4,715	16,184
2,690	31	2,721	3,696	19,880
2,924	35	2,959	3,394	23,274
30,075	31	30,106	(23,274)	—
—	—	—	—	—
163,944	6,837	170,781	(516,830)	2,389,242
144,637	7,124	151,761	539,371	2,928,613
217,670	7,225	224,895	328,035	3,256,648
220,869	7,320	228,189	9,241	3,265,889
221,656	6,657	228,313	391,180	3,657,069
253,726	6,140	259,866	627,579	4,284,648
287,922	7,256	295,178	261,622	4,546,270
288,373	7,679	296,052	50,467	4,596,736
325,956	8,196	334,152	407,354	5,004,090
296,286	8,921	305,207	789,914	5,794,004

## Schedules of Benefit Deductions by Type

Year Ended December 31

*(in thousands)*

System	Year	Service and Disability Benefits	Cost-of-Living Benefits	Supplemental Benefits	Total Benefits
<b>Noncontributory Retirement System</b>	2008	\$ 551,391	108,401	—	659,792
	2009	599,456	123,596	—	723,052
	2010	661,718	132,086	—	793,804
	2011	709,359	134,337	—	843,696
	2012	753,155	146,978	—	900,133
	2013	812,550	162,134	—	974,684
	2014	871,999	171,799	—	1,043,798
	2015	943,591	180,056	—	1,123,647
	2016	1,001,451	182,866	—	1,184,317
2017	1,063,894	184,143	—	1,248,037	
<b>Contributory Retirement System</b>	2008	\$ 44,218	17,309	569	62,096
	2009	47,319	17,086	444	64,849
	2010	50,822	16,389	353	67,564
	2011	52,933	15,160	282	68,375
	2012	55,884	14,746	225	70,855
	2013	59,203	14,778	177	74,158
	2014	62,560	14,328	127	77,015
	2015	67,510	13,785	95	81,390
	2016	70,137	13,232	78	83,447
2017	72,073	12,624	64	84,761	
<b>Public Safety Retirement System</b>	2008	\$ 83,142	15,317	485	98,944
	2009	88,632	17,186	454	106,272
	2010	96,331	19,068	433	115,832
	2011	99,685	20,482	403	120,570
	2012	105,780	22,372	380	128,532
	2013	112,470	24,662	354	137,486
	2014	118,030	26,407	326	144,763
	2015	127,285	27,807	295	155,387
	2016	135,697	28,547	264	164,508
2017	143,774	28,854	242	172,870	
<b>Firefighters Retirement System</b>	2008	\$ 27,792	7,093	470	35,355
	2009	30,097	7,792	422	38,311
	2010	32,490	8,242	401	41,133
	2011	32,716	8,313	377	41,406
	2012	34,445	8,871	344	43,660
	2013	34,951	9,485	311	44,747
	2014	37,597	9,844	269	47,710
	2015	39,340	10,095	236	49,671
	2016	41,687	10,195	220	52,102
2017	44,331	10,258	204	54,793	

Schedules of Benefit Deductions by Type *(Concluded)*

Year Ended December 31

*(in thousands)*

System	Year	Service and Disability Benefits	Cost-of-Living Benefits	Supplemental Benefits	Total Benefits
<b>Judges Retirement System</b>	2008	\$ 5,201	1,379	—	6,580
	2009	6,046	1,549	—	7,595
	2010	7,317	1,693	—	9,010
	2011	6,974	1,675	—	8,649
	2012	7,364	1,771	—	9,135
	2013	8,248	1,941	—	10,189
	2014	9,305	2,056	—	11,361
	2015	10,252	2,148	—	12,400
	2016	10,070	2,260	—	12,330
2017	11,405	2,216	—	13,621	
<b>Utah Governors and Legislators Retirement Plan</b>	2008	\$ 606	157	—	763
	2009	619	165	—	784
	2010	625	165	—	790
	2011	639	162	—	801
	2012	647	168	—	815
	2013	718	174	—	892
	2014	734	175	—	909
	2015	731	173	—	904
	2016	773	168	—	941
2017	808	165	—	973	
<b>Tier 2 Public Employees Contributory Retirement System*</b>	2011	—	—	—	—
	2012	—	—	—	—
	2013	—	—	—	—
	2014	—	—	—	—
	2015	\$ 333	—	—	333
	2016	316	—	—	316
2017	417	—	—	417	
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2011	—	—	—	—
	2012	—	—	—	—
	2013	—	—	—	—
	2014	—	—	—	—
	2015	\$ 30	—	—	30
	2016	28	—	—	28
2017	61	—	—	61	

\*Additional years will be added as they become available.

# Schedules of Retired Members by Type of Benefit Option

Year Ended December 31, 2017

System	Amount of Monthly Benefit	Number of Retirees by Benefit Option								
		1	2	3	4	5	6	7	8	9
<b>Noncontributory Retirement System</b>	\$ 1-1,000	9,832	658	3,519	392	3,585	928	—	—	—
	1,001-2,000	4,864	704	2,508	449	3,048	1,054	—	—	—
	2,001-3,000	3,077	766	2,322	303	2,920	861	—	—	—
	3,001-4,000	2,256	680	1,882	238	2,041	604	—	—	—
	4,001-5,000	814	209	865	129	659	214	—	—	—
	over-5,000	366	107	580	65	291	108	—	—	—
<b>Contributory Retirement System</b>	\$ 1-1,000	548	223	250	50	276	107	—	—	—
	1,001-2,000	343	192	255	33	256	59	—	—	—
	2,001-3,000	209	159	204	32	212	47	—	—	—
	3,001-4,000	103	72	72	16	97	29	—	—	—
	4,001-5,000	30	27	30	7	18	14	—	—	—
	over-5,000	16	14	29	2	7	4	—	—	—
<b>Public Safety Retirement System</b>	\$ 1-1,000	—	—	2	—	—	—	—	540	138
	1,001-2,000	—	—	3	—	—	—	—	925	303
	2,001-3,000	—	—	1	—	—	—	—	1,473	702
	3,001-4,000	—	—	—	—	—	—	—	646	284
	4,001-5,000	—	—	—	—	—	—	—	269	146
	over-5,000	—	—	—	—	—	—	—	142	64
<b>Firefighters Retirement System</b>	\$ 1-1,000	—	—	1	—	—	—	—	—	62
	1,001-2,000	—	—	1	—	—	—	—	—	219
	2,001-3,000	—	—	—	—	—	—	—	—	431
	3,001-4,000	—	—	—	—	—	—	—	—	374
	4,001-5,000	—	—	—	—	—	—	—	—	199
	over-5,000	—	—	—	—	—	—	—	—	136

- 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 lawful 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. Benefit reverts to 100% at time of spouse’s death.

- 6– Approximately 98% of the benefit in type 4 and a lifetime benefit equal to half of the retiree’s for retiree’s lawful spouse at the time of the retirement. Benefit reverts to 100% at time of spouse’s death.
- 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.

Schedules of Retired Members by Type of Benefit Option (Concluded)

Year Ended December 31, 2017

System	Amount of Monthly Benefit	Number of Retirees by Benefit Option								
		1	2	3	4	5	6	7	8	9
<b>Judges Retirement System</b>	\$ 1-1,000	—	—	—	—	—	—	—	—	—
	1,001-2,000	—	—	—	—	—	—	—	4	1
	2,001-3,000	—	—	—	—	—	—	—	6	3
	3,001-4,000	—	—	—	—	—	—	—	4	1
	4,001-5,000	—	—	—	—	—	—	—	5	5
	over-5,000	—	—	—	—	—	—	—	58	61
<b>Utah Governors and Legislators Retirement Plan*</b>	\$ 1-1,000	—	—	3	242	1	—	—	—	—
	1,001-2,000	—	—	—	6	—	—	—	—	—
	2,001-3,000	—	—	—	—	—	—	—	—	—
	3,001-4,000	—	—	—	1	—	—	—	—	—
	4,001-5,000	—	—	—	—	—	—	—	—	—
over-5,000	—	—	—	—	—	—	—	—	—	
<b>Tier 2 Public Employees Retirement System</b>	\$ 1-1,000	15	—	4	—	6	1	—	—	—
	1,001-2,000	—	—	—	—	—	—	—	—	—
	2,001-3,000	—	—	—	—	—	—	—	—	—
	3,001-4,000	—	—	—	—	—	—	—	—	—
	4,001-5,000	—	—	—	—	—	—	—	—	—
over-5,000	—	—	—	—	—	—	—	—	—	
<b>Tier 2 Public Public Safety and Firefighter Retirement System**</b>	\$ 1-1,000	—	—	—	—	—	—	—	—	—
	1,001-2,000	—	—	—	—	—	—	—	—	—
	2,001-3,000	—	—	—	—	—	—	—	—	—
	3,001-4,000	—	—	—	—	—	—	—	—	—
	4,001-5,000	—	—	—	—	—	—	—	—	—
over-5,000	—	—	—	—	—	—	—	—	—	

\*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.

\*\*There are currently no retirees in the system.

# Schedules of Average Benefit Payments

December 31

System		Years of Credited Service						
		4-10	11-15	16-20	21-25	26-30	31+	
<b>Noncontributory Retirement System</b>	2012	Average Monthly Benefit	\$ 334	774	1,228	1,629	2,502	3,419
		Monthly Final Average Salary	2,526	3,182	3,860	4,119	4,774	5,516
		Number of Active Retired	629	422	423	441	463	367
	2013	Average Monthly Benefit	\$ 366	811	1,290	1,626	2,522	3,532
		Monthly Final Average Salary	2,611	3,405	3,990	4,102	4,841	5,611
		Number of Active Retired	719	484	479	535	607	541
	2014	Average Monthly Benefit	\$ 373	837	1,274	1,742	2,610	3,743
		Monthly Final Average Salary	2,498	3,300	3,792	4,093	4,809	5,687
		Number of Active Retired	665	410	468	434	588	467
	2015	Average Monthly Benefit	\$ 376	811	1,294	1,742	2,692	3,736
		Monthly Final Average Salary	2,587	3,275	3,675	4,148	4,907	5,530
		Number of Active Retired	704	443	468	514	737	533
	2016	Average Monthly Benefit	\$ 263	583	831	1,196	2,563	3,525
		Monthly Final Average Salary	1,998	2,453	2,572	3,023	4,766	5,460
		Number of Active Retired	793	551	592	609	784	636
	2017	Average Monthly Benefit	\$ 402	856	1,277	1,800	2,668	3,688
		Monthly Final Average Salary	2,745	3,466	3,903	4,363	5,042	5,682
		Number of Active Retired	640	438	466	456	779	561
<b>Contributory Retirement System</b>	2012	Average Monthly Benefit	\$ 371	561	1,252	1,452	2,126	2,712
		Monthly Final Average Salary	2,294	2,224	3,966	3,952	4,092	4,455
		Number of Active Retired	7	9	8	9	100	51
	2013	Average Monthly Benefit	\$ 600	796	797	1,454	2,085	2,817
		Monthly Final Average Salary	4,494	3,238	2,447	3,446	4,034	4,743
		Number of Active Retired	7	9	12	9	109	76
	2014	Average Monthly Benefit	\$ 300	735	1,219	1,376	2,066	2,840
		Monthly Final Average Salary	2,098	3,447	4,234	3,650	3,993	4,359
		Number of Active Retired	11	8	3	8	75	79
	2015	Average Monthly Benefit	\$ 482	699	1,208	1,612	2,311	3,297
		Monthly Final Average Salary	3,043	3,010	3,801	3,855	4,228	4,801
		Number of Active Retired	5	9	6	11	71	85
	2016	Average Monthly Benefit	\$ 398	587	964	1,132	2,489	2,928
		Monthly Final Average Salary	2,299	2,405	3,045	2,937	4,486	4,476
		Number of Active Retired	12	10	4	6	64	131
	2017	Average Monthly Benefit	\$ 339	604	1,031	3,758	2,243	3,249
		Monthly Final Average Salary	2,456	2,227	2,974	7,936	4,098	5,063
		Number of Active Retired	9	9	3	5	7	90



Schedules of Average Benefit Payments (Continued)

December 31

System			Years of Credited Service					
			4-10	11-15	16-20	21-25	26-30	31+
<b>Public Safety Retirement System</b>	2012	Average Monthly Benefit	\$ 717	1,397	2,187	2,498	3,613	3,969
		Monthly Final Average Salary	3,396	4,489	4,706	4,890	5,827	5,486
		Number of Active Retired	12	13	69	69	17	15
	2013	Average Monthly Benefit	\$ 413	1,339	2,156	2,509	3,676	4,584
		Monthly Final Average Salary	2,676	4,287	4,709	4,813	5,716	6,178
		Number of Active Retired	7	8	88	76	25	24
	2014	Average Monthly Benefit	\$ 617	1,301	2,206	2,828	3,518	4,179
		Monthly Final Average Salary	3,125	3,855	4,665	5,007	5,307	5,574
		Number of Active Retired	16	14	80	96	18	23
	2015	Average Monthly Benefit	\$ 586	2,070	2,358	2,768	3,683	3,900
		Monthly Final Average Salary	2,796	4,799	4,557	4,919	5,368	5,373
		Number of Active Retired	13	12	115	77	31	20
	2016	Average Monthly Benefit	\$ 198	560	588	2,176	3,192	4,120
		Monthly Final Average Salary	1,420	1,768	1,271	3,978	5,556	5,576
		Number of Active Retired	11	20	123	128	55	31
	2017	Average Monthly Benefit	\$ 776	1,344	2,354	2,879	3,559	4,219
		Monthly Final Average Salary	3,160	3,834	4,961	5,205	5,542	5,793
		Number of Active Retired	13	13	104	92	31	13
<b>Firefighters Retirement System</b>	2012	Average Monthly Benefit	\$ 1,731	2,094	2,398	3,315	4,288	4,871
		Monthly Final Average Salary	4,364	4,188	5,094	6,274	6,739	6,487
		Number of Active Retired	4	3	7	6	6	9
	2013	Average Monthly Benefit	\$ 1,800	2,301	2,248	3,078	3,706	4,425
		Monthly Final Average Salary	3,600	4,602	5,337	5,893	5,747	6,012
		Number of Active Retired	1	3	4	10	18	10
	2014	Average Monthly Benefit	\$ 2,052	2,929	2,844	3,332	3,801	6,065
		Monthly Final Average Salary	3,661	5,227	5,292	5,560	6,169	7,451
		Number of Active Retired	1	4	14	13	9	10
	2015	Average Monthly Benefit	\$ 807	1,697	2,407	2,635	5,034	4,238
		Monthly Final Average Salary	1,239	4,780	4,870	5,025	6,771	5,484
		Number of Active Retired	6	2	12	10	11	14
	2016	Average Monthly Benefit	\$ 1,616	1,814	400	3,177	4,260	5,038
		Monthly Final Average Salary	3,232	5,054	800	6,468	6,294	7,757
		Number of Active Retired	4	7	19	9	16	17
	2017	Average Monthly Benefit	\$ 1,427	5,958	2,365	3,447	3,926	6,650
		Monthly Final Average Salary	4,571	6,402	5,801	6,841	7,186	7,220
		Number of Active Retired	5	2	21	14	14	6

Continued on page 208.

Schedules of Average Benefit Payments (Continued)

December 31

System			Years of Credited Service					
			4-10	11-15	16-20	21-25	26-30	
<b>Judges Retirement System</b>	2012	Average Monthly Benefit	\$ —	—	6,768	—	—	9,697
		Monthly Final Average Salary	—	—	11,064	—	—	11,068
		Number of Active Retired	—	—	2	—	—	2
	2013	Average Monthly Benefit	\$ —	—	7,204	8,215	6,647	11,006
		Monthly Final Average Salary	—	—	11,151	11,163	11,688	11,132
		Number of Active Retired	—	—	2	4	1	4
	2014	Average Monthly Benefit	\$ —	—	9,263	8,850	9,836	9,180
		Monthly Final Average Salary	—	—	11,201	11,149	11,225	11,180
		Number of Active Retired	—	—	2	2	2	1
	2015	Average Monthly Benefit	\$ 3,747	4,162	7,807	—	8,884	12,033
		Monthly Final Average Salary	9,556	7,570	11,635	—	11,252	11,690
		Number of Active Retired	2	1	3	—	1	2
	2016	Average Monthly Benefit	\$ —	—	—	8,736	—	11,741
		Monthly Final Average Salary	—	—	—	11,988	—	11,638
		Number of Active Retired	—	2	—	3	—	2
	2017	Average Monthly Benefit	\$ —	7,184	8,109	8,849	—	12,045
		Monthly Final Average Salary	—	13,279	13,374	12,736	—	12,653
		Number of Active Retired	—	2	2	2	—	4
<b>Utah Governors and Legislators Retirement Plan</b>	2012	Average Monthly Benefit	\$ 158	320	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	6	2	—	—	—	—
	2013	Average Monthly Benefit	\$ 216	314	475	555	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	13	3	4	1	—	—
	2014	Average Monthly Benefit	\$ 256	342	—	846	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	4	2	—	1	—	—
	2015	Average Monthly Benefit	\$ 223	347	319	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	7	4	1	—	—	—
	2016	Average Monthly Benefit	\$ 594	—	—	—	—	—
		Monthly Final Average Salary	1,634	—	—	—	—	—
		Number of Active Retired	17	—	—	—	—	—
	2017	Average Monthly Benefit	\$ 201	365	491	—	—	1,016
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	7	2	1	—	—	1

Schedules of Average Benefit Payments (Concluded)

December 31

System			Years of Credited Service					
			4-10	11-15	16-20	21-25	26-30	31+
<b>Tier 2 Public Employees Contributory Retirement System</b>	2012	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2013	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2014	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2015	Average Monthly Benefit	\$ 72	—	—	—	—	—
		Monthly Final Average Salary	1,479	—	—	—	—	—
		Number of Active Retired	1	—	—	—	—	—
	2016	Average Monthly Benefit	\$ 138	—	—	—	—	—
		Monthly Final Average Salary	2,066	—	—	—	—	—
		Number of Active Retired	8	—	—	—	—	—
	2017	Average Monthly Benefit	\$ 176	—	—	—	—	—
		Monthly Final Average Salary	2,710	—	—	—	—	—
		Number of Active Retired	17	—	—	—	—	—
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2012	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2013	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2014	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2015	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2016	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	2017	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—

\*There are currently no retirees in the system.

# Schedules of Active Members by Age and Gender

Year Ended December 31, 2017

System	Ages	Male	Female	Total
<b>Noncontributory Retirement System</b>	Under 20	—	—	—
	20 to 29	262	375	637
	30 to 39	4,372	6,290	10,662
	40 to 49	6,870	10,715	17,585
	50 to 54	3,317	5,871	9,188
	55 to 59	3,395	6,822	10,217
	60 to 69	3,532	7,011	10,543
70 and Older	339	407	746	
Total		22,087	37,491	59,578

<b>Contributory Retirement System</b>	Under 20	—	—	—
	20 to 29	2	2	4
	30 to 39	5	15	20
	40 to 49	13	24	37
	50 to 54	36	44	80
	55 to 59	107	113	220
	60 to 69	125	118	243
70 and Older	11	6	17	
Total		299	322	621

<b>Public Safety Retirement System</b>	Under 20	—	—	—
	20 to 29	72	11	83
	30 to 39	1,742	195	1,937
	40 to 49	2,197	284	2,481
	50 to 54	515	103	618
	55 to 59	305	61	366
	60 to 69	172	40	212
70 and Older	6	1	7	
Total		5,009	695	5,704

<b>Firefighters Retirement System</b>	Under 20	—	—	—
	20 to 29	20	—	20
	30 to 39	513	19	532
	40 to 49	702	20	722
	50 to 54	169	6	175
	55 to 59	91	—	91
	60 to 69	61	1	62
70 and Older	—	—	—	
Total		1,556	46	1,602

<b>Judges Retirement System</b>	Under 20	—	—	—
	20 to 29	—	—	—
	30 to 39	1	—	1
	40 to 49	18	12	30
	50 to 54	16	6	22
	55 to 59	15	8	23
	60 to 69	30	4	34
70 and Older	4	—	4	
Total		84	30	114

System	Ages	Male	Female	Total
<b>Utah Governors and Legislators Retirement Plan</b>	Under 20	—	—	—
	20 to 29	—	—	—
	30 to 39	—	1	1
	40 to 49	12	1	13
	50 to 54	5	1	6
	55 to 59	4	3	7
	60 to 69	19	3	22
70 and Older	3	—	3	
Total		43	9	52

<b>Tier 2 Public Employees Contributory Retirement System</b>	Under 20	95	62	157
	20 to 29	3,175	6,212	9,387
	30 to 39	3,614	4,485	8,099
	40 to 49	1,654	3,769	5,423
	50 to 54	553	1,072	1,625
	55 to 59	512	806	1,318
	60 to 69	573	487	1,060
70 and Older	63	20	83	
Total		10,239	16,913	27,152

<b>Tier 2 Public Safety and Firefighter Contributory Retirement System</b>	Under 20	1	—	1
	20 to 29	1,247	160	1,407
	30 to 39	945	106	1,051
	40 to 49	178	33	211
	50 to 54	14	2	16
	55 to 59	6	1	7
	60 to 69	6	—	6
70 and Older	—	—	—	
Total		2,397	302	2,699

<b>Tier 2 DC Only Public Employees Contributory Retirement System</b>	Under 20	2	1	3
	20 to 29	443	1,203	1,646
	30 to 39	886	875	1,761
	40 to 49	343	718	1,061
	50 to 54	101	220	321
	55 to 59	106	176	282
	60 to 69	130	97	227
70 and Older	23	5	28	
Total		2,034	3,295	5,329

<b>Tier 2 DC Only Public Safety and Firefighter Contributory Retirement System</b>	Under 20	—	—	—
	20 to 29	120	18	138
	30 to 39	133	12	145
	40 to 49	31	7	38
	50 to 54	4	1	5
	55 to 59	4	1	5
	60 to 69	2	—	2
70 and Older	—	—	—	
Total		294	39	333

## Schedules of Retirees by Age and Gender

Year Ended December 31, 2017

System	Ages	Male	Female	Total
<b>Noncontributory Retirement System</b>	Under 55	180	254	434
	55 to 59	614	937	1,551
	60 to 64	2,005	3,807	5,812
	65 to 69	4,671	9,354	14,025
	70 to 74	4,543	8,320	12,863
	75 to 79	3,257	5,487	8,744
	80 to 84	2,229	3,725	5,954
	85 to 89	1,229	2,052	3,281
	90 to 94	413	711	1,124
	95 to 100	36	71	107
Over 100	1	2	3	
<b>Total</b>		<b>19,178</b>	<b>34,720</b>	<b>53,898</b>

<b>Contributory Retirement System</b>	Under 55	18	27	45
	55 to 59	114	123	237
	60 to 64	220	277	497
	65 to 69	314	414	728
	70 to 74	257	445	702
	75 to 79	171	350	521
	80 to 84	97	262	359
	85 to 89	92	242	334
	90 to 94	102	288	390
	95 to 100	39	170	209
Over 100	5	15	20	
<b>Total</b>		<b>1,429</b>	<b>2,613</b>	<b>4,042</b>

<b>Public Safety Retirement System</b>	Under 55	836	241	1,077
	55 to 59	473	143	616
	60 to 64	738	232	970
	65 to 69	814	231	1,045
	70 to 74	670	183	853
	75 to 79	355	151	506
	80 to 84	211	119	330
	85 to 89	92	97	189
	90 to 94	13	28	41
	95 to 100	1	10	11
Over 100	—	—	—	
<b>Total</b>		<b>4,203</b>	<b>1,435</b>	<b>5,638</b>

<b>Firefighters Retirement System</b>	Under 55	137	45	182
	55 to 59	121	28	149
	60 to 64	204	42	246
	65 to 69	248	41	289
	70 to 74	186	43	229
	75 to 79	123	31	154
	80 to 84	50	31	81
	85 to 89	25	32	57
	90 to 94	15	15	30
	95 to 100	3	2	5
Over 100	1	—	1	
<b>Total</b>		<b>1,113</b>	<b>310</b>	<b>1,423</b>

System	Ages	Male	Female	Total
<b>Judges Retirement System</b>	Under 55	—	2	2
	55 to 59	1	—	1
	60 to 64	10	3	13
	65 to 69	23	10	33
	70 to 74	26	8	34
	75 to 79	16	4	20
	80 to 84	10	6	16
	85 to 89	6	10	16
	90 to 94	6	3	9
	95 to 100	—	4	4
Over 100	—	—	—	
<b>Total</b>		<b>98</b>	<b>50</b>	<b>148</b>

<b>Utah Governors and Legislators Retirement Plan</b>	Under 55	—	1	1
	55 to 59	1	1	2
	60 to 64	5	2	7
	65 to 69	35	10	45
	70 to 74	27	19	46
	75 to 79	20	13	33
	80 to 84	30	16	46
	85 to 89	16	26	42
	90 to 94	10	11	21
	95 to 100	6	4	10
Over 100	—	—	—	
<b>Total</b>		<b>150</b>	<b>103</b>	<b>253</b>

<b>Tier 2 Public Employees Contributory Retirement System</b>	Under 55	—	—	—
	55 to 59	—	—	—
	60 to 64	—	—	—
	65 to 69	11	10	21
	70 to 74	4	1	5
	75 to 79	—	—	—
	80 to 84	—	—	—
	85 to 89	—	—	—
	90 to 94	—	—	—
	95 to 100	—	—	—
Over 100	—	—	—	
<b>Total</b>		<b>15</b>	<b>11</b>	<b>26</b>

<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	Under 55	—	—	—
	55 to 59	—	—	—
	60 to 64	—	—	—
	65 to 69	—	—	—
	70 to 74	—	—	—
	75 to 79	—	—	—
	80 to 84	—	—	—
	85 to 89	—	—	—
	90 to 94	—	—	—
	95 to 100	—	—	—
Over 100	—	—	—	
<b>Total</b>		<b>—</b>	<b>—</b>	<b>—</b>

\*There are no retirees in this system.

# Schedules of Principal Participating Employers

Year Ended December 31

System/ Employer	2017			2016			2015			2014		
	Active Members	Rank	Percent of Total Active Member	Active Members	Rank	Percent of Total Active Member	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
<b>Noncontributory Retirement System</b>												
State of Utah	10,277	1	17.25%	10,898	1	17.24%	11,788	1	17.27%	12,550	1	17.47%
Davis School District	3,668	2	6.16	3,904	2	6.18	4,090	2	5.99	4,338	2	6.04
Granite School District	3,460	3	5.81	3,740	3	5.92	4,044	3	5.92	4,337	3	6.04
Alpine School District	3,305	4	5.55	3,458	4	5.47	3,711	4	5.44	3,938	4	5.48
Jordan School District	2,329	5	3.91	2,424	5	3.83	2,635	5	3.86	2,747	5	3.82
Weber School District	2,006	6	3.37	2,130	6	3.37	2,286	6	3.35	2,360	6	3.29
Salt Lake County	1,962	7	3.29	2,079	7	3.29	2,194	7	3.21	2,352	7	3.27
University of Utah	1,620	8	2.72	1,774	8	2.81	1,864	10	2.73	2,039	8	2.84
Nebo School District	1,614	9	2.71	1,753	9	2.77	1,868	9	2.74	1,941	10	2.70
Canyons School District	1,588	10	2.67	—	—	—	1,880	8	2.75	—	—	—
Salt Lake School District	—	—	—	1,684	10	2.66	—	—	—	1,977	9	2.75
Other	27,749	—	46.58	29,370	—	46.46	31,913	—	46.74	33,248	—	46.29
<b>Total Noncontributory System active members</b>	<b>59,578</b>		<b>100.00%</b>	<b>63,214</b>		<b>100.00%</b>	<b>68,273</b>		<b>100.00%</b>	<b>71,827</b>		<b>100.00%</b>
<b>Contributory Retirement System</b>												
State of Utah	101	1	16.26%	117	1	15.85%	152	1	16.13%	186	1	12.38%
DDI Vantage	65	2	10.47	68	2	9.21	70	2	7.42	70	5	4.66
Salt Lake City Corp.	36	3	5.80	44	3	5.96	53	4	5.62	73	4	4.86
University of Utah	36	4	5.80	44	3	5.96	60	3	6.36	68	6	4.52
Granite School District	34	5	5.48	39	5	5.28	53	4	5.62	67	8	4.46
University of Utah Hospital	33	6	5.31	38	6	5.15	42	6	4.45	47	9	3.13
Salt Lake County	23	7	3.70	26	7	3.52	37	7	3.92	45	10	2.99
Davis School District	18	8	2.90	23	8	3.12	30	8	3.18	—	—	—
Salt Lake School District	17	9	2.74	20	9	2.71	25	9	2.65	—	—	—
Duchesne County	16	10	2.58	17	10	2.30	24	10	2.55	68	6	4.52
South Jordan City	—	—	—	—	—	—	—	—	—	153	2	10.18
Uintah County	—	—	—	—	—	—	—	—	—	136	3	9.05
Other	242	—	38.97	302	—	40.92	397	—	42.10	590	—	39.25
<b>Total Contributory System active members</b>	<b>621</b>		<b>100.00%</b>	<b>738</b>		<b>100.00%</b>	<b>943</b>		<b>100.00%</b>	<b>1,503</b>		<b>100.00%</b>
<b>Public Safety Retirement System</b>												
State of Utah	1,789	1	31.36%	1,881	1	31.18%	2,006	1	31.35%	2,076	1	31.12%
Salt Lake City Corp.	400	2	7.01	424	2	7.03	412	2	6.44	423	3	6.34
Salt Lake County	371	3	6.50	381	3	6.32	397	3	6.20	424	2	6.35
Unified Police Department	337	4	5.91	355	4	5.89	359	4	5.61	365	4	5.47
Utah County	220	5	3.86	232	5	3.85	236	5	3.69	239	5	3.58
Weber County Corp.	185	6	3.24	194	6	3.22	211	6	3.30	221	6	3.31
Davis County	135	7	2.37	145	7	2.40	163	7	2.55	179	7	2.68
West Valley City	118	8	2.07	127	8	2.11	145	8	2.27	169	8	2.53
Washington County	87	9	1.53	96	9	1.59	109	9	1.70	113	9	1.69
City of West Jordan	80	10	1.40	89	10	1.48	—	—	—	—	—	—
Ogden City Corp.	—	—	—	—	—	—	97	10	1.52	110	10	1.65
Sandy City	—	—	—	—	—	—	—	—	—	—	—	—
Other	1,982	—	34.75	2,108	—	34.95	2,264	—	35.38	2,353	—	35.27
<b>Total Public Safety System active members</b>	<b>5,704</b>		<b>100.00%</b>	<b>6,032</b>		<b>100.00%</b>	<b>6,399</b>		<b>100.00%</b>	<b>6,672</b>		<b>100.00%</b>

UTAH RETIREMENT SYSTEMS

2013			2012			2011			2010			2009			2008		
Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
13,510	1	17.58%	14,450	1	17.57%	15,273	1	17.38%	16,071	1	17.39%	16,435	1	17.72%	16,979	1	18.14%
4,624	3	6.02	4,871	3	5.92	5,113	3	5.82	5,330	4	5.77	5,433	4	5.86	5,501	4	5.88
4,702	2	6.12	5,012	2	6.09	5,400	2	6.14	5,781	2	6.26	6,148	2	6.63	6,130	2	6.55
4,280	4	5.57	4,659	4	5.66	5,095	4	5.80	5,551	3	6.01	5,487	3	5.91	5,354	5	5.72
2,943	5	3.83	3,099	5	3.77	3,239	6	3.68	3,366	6	3.64	3,560	6	3.84	5,819	3	6.22
2,503	6	3.26	2,660	6	3.23	2,784	8	3.17	2,861	8	3.10	2,875	8	3.10	2,859	9	3.06
2,476	7	3.22	2,605	7	3.17	2,813	7	3.20	2,869	7	3.11	2,968	7	3.20	3,084	7	3.30
2,290	8	2.98	2,646	7	3.22	3,895	5	4.43	4,217	5	4.56	4,274	5	4.61	4,406	6	4.71
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,465	10	2.63
2,076	10	2.70	2,281	10	2.77	2,460	10	2.80	2,637	10	2.85	2,572	10	2.77	—	—	—
2,144	9	2.79	2,343	9	2.85	2,520	9	2.87	2,683	9	2.90	2,842	9	3.06	2,950	8	3.15
35,297	—	45.93	37,633	—	45.75	39,309	—	44.72	41,026	—	44.40	40,172	—	43.30	38,029	—	40.64
76,845	—	100.00%	82,259	—	100.00%	87,901	—	100.00%	92,392	—	100.00%	92,766	—	100.00%	93,576	—	100.00%
237	1	13.68%	269	1	13.89%	293	1	13.71%	325	1	13.95%	387	1	15.39%	435	1	15.86%
76	6	4.39	85	6	4.39	94	7	4.40	91	8	3.91	82	8	3.26	76	10	2.77
84	4	4.85	93	4	4.80	104	5	4.87	112	6	4.81	128	6	5.09	137	6	4.99
75	7	4.33	84	7	4.34	153	4	7.16	162	4	6.95	178	4	7.08	195	3	7.11
81	5	4.67	91	5	4.70	102	6	4.77	114	5	4.89	131	5	5.21	141	5	5.14
50	9	2.89	56	9	2.89	—	—	—	—	—	—	—	—	—	—	—	—
47	10	2.71	52	10	2.68	59	9	2.76	61	9	2.62	80	9	3.18	90	8	3.28
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	55	10	2.57	58	10	2.49	67	10	2.66	—	—	—
73	8	4.21	77	8	3.98	82	8	3.84	104	7	4.46	90	7	3.58	87	7	3.17
167	2	9.64	177	2	9.14	196	2	9.17	203	2	8.71	208	2	8.27	212	2	7.73
146	3	8.42	158	3	8.16	168	3	7.86	187	3	8.03	193	3	7.67	191	4	6.96
697	—	40.22%	795	—	41.04	831	—	38.89	913	—	39.18	971	—	38.61	1,179	—	42.98
1,733	—	100.00%	1,937	—	100.00%	2,137	—	100.00%	2,330	—	100.00%	2,515	—	100.00%	2,743	—	100.00%
2,211	1	31.50%	2,317	1	31.68%	2,390	1	31.37%	2,380	1	31.22%	2,448	1	31.81%	2,592	1	32.84%
432	3	6.15	452	3	6.18	463	3	6.08	480	3	6.30	480	3	6.24	479	3	6.07
459	2	6.54	494	2	6.76	540	2	7.09	547	2	7.17	828	2	10.76	860	2	10.89
378	4	5.39	377	4	5.16	329	4	4.32	293	4	3.84	—	—	—	—	—	—
237	5	3.38	239	5	3.27	236	6	3.10	233	6	3.06	238	5	3.09	244	5	3.09
228	6	3.25	237	6	3.24	249	5	3.27	246	5	3.23	252	4	3.27	266	4	3.37
193	7	2.75	201	7	2.75	208	7	2.73	209	7	2.74	209	6	2.72	208	6	2.63
162	8	2.31	172	8	2.35	177	8	2.32	177	8	2.32	175	7	2.27	176	7	2.23
120	9	1.71	129	9	1.76	129	9	1.69	126	9	1.65	123	8	1.60	120	9	1.52
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
116	10	1.65	122	10	1.67	127	10	1.67	119	10	1.56	117	9	1.52	122	8	1.55
—	—	—	—	—	—	—	—	—	—	—	—	109	10	1.42	115	10	1.46
2,483	—	35.38%	2,573	—	35.18	2,771	—	36.37	2,814	—	36.91	2,716	—	35.30	2,712	—	34.36
7,019	—	100.00%	7,313	—	100.00%	7,619	—	100.00%	7,624	—	100.00%	7,695	—	100.00%	7,894	—	100.00%

Continued on page 214.

Schedules of Principal Participating Employers (Continued)

Year Ended December 31

System/ Employer	2017			2016			2015			2014		
	Active Members	Rank	Percent of Total Active Member	Active Members	Rank	Percent of Total Active Member	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
<b>Firefighters Retirement System</b>												
Unified Fire Authority	354	1	22.10%	380	1	22.85%	386	1	22.25%	395	1	22.10%
Salt Lake City Corp.	273	2	17.04	274	2	16.48	295	2	17.00	302	2	16.90
West Valley City	79	3	4.93	80	4	4.81	80	4	4.61	87	4	4.87
Ogden City Corp.	72	4	4.49	82	3	4.93	85	3	4.90	90	3	5.04
City of West Jordan	62	5	3.87	64	5	3.85	66	6	3.80	66	7	3.69
Provo City	60	6	3.75	63	6	3.79	67	5	3.86	70	5	3.92
Park City Fire Service	56	7	3.50	63	6	3.79	65	7	3.75	68	6	3.81
Sandy City	51	8	3.18	57	8	3.43	59	8	3.40	64	8	3.58
South Davis Metro Fire Agency	48	9	3.00	—	—	—	—	—	—	—	—	—
Murray City	47	10	2.93	—	—	—	—	—	—	51	10	2.85
Orem City	—	—	—	49	10	2.95	52	10	3.00	56	9	3.13
Weber Fire District	—	—	—	51	9	3.07	53	9	3.05	—	—	—
Other	500	—	31.21	500	—	30.07	527	—	30.37	538	—	30.11
Total Firefighters System active members	1,602	—	100.00%	1,663	—	100.00%	1,735	—	100.00%	1,787	—	100.00%
<b>Judges Retirement System</b>												
State of Utah	114	1	100.00%	115	1	100.00%	112	1	100.00%	114	1	100.00%
<b>Utah Governors and Legislators Retirement Plan</b>												
State of Utah	52	1	100.00%	61	1	100.00%	93	1	100.00%	105	1	100.00%
<b>Tier 2 Public Employees Contributory Retirement System</b>												
State of Utah	4,951	1	18.23%	4,345	1	17.83%	3,642	1	16.72%	2,772	1	16.09%
Alpine School District	1,524	2	5.61	1,361	2	5.58	1,232	3	5.66	1,090	3	6.33
Davis School District	1,426	3	5.25	1,263	4	5.18	980	5	4.50	778	5	4.52
Granite School District	1,408	4	5.19	1,302	3	5.34	1,028	4	4.72	829	4	4.81
Jordan School District	1,205	5	4.44	1,095	6	4.49	962	6	4.42	755	6	4.38
Canyons School District	1,003	6	3.69	858	7	3.52	781	7	3.59	614	7	3.56
University of Utah	887	7	3.27	1,181	5	4.85	1,458	2	6.69	1,223	2	7.10
Salt Lake County	870	8	3.20	786	8	3.23	655	8	3.01	484	9	2.81
Nebo School District	836	9	3.08	692	9	2.84	624	9	2.87	549	8	3.19
Washington School District	635	10	2.34	—	—	—	—	—	—	360	10	2.09
Provo School District	—	—	—	—	—	—	—	—	—	—	—	—
Salt Lake City District	—	—	—	—	—	—	479	10	2.20	—	—	—
Weber County School District	—	—	—	494	10	2.03	—	—	—	—	—	—
Other	12,407	—	45.69	10,995	—	45.11	9,937	—	45.63	7,771	—	45.11
Total Tier 2 Public Employees System active members	27,152	—	100.00%	24,372	—	100.00%	21,778	—	100.00%	17,225	—	100.00%

Additional information will be added when it becomes available.



UTAH RETIREMENT SYSTEMS

2013			2012			2011			2010			2009			2008		
Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
398	1	21.57%	404	1	21.44%	404	1	20.91%	356	1	18.87%	365	1	19.14%	352	1	19.04%
309	2	16.75	309	2	16.40	314	2	16.25	312	2	16.53	309	2	16.20	324	2	17.52
89	4	4.82	92	4	4.88	96	4	4.97	100	4	5.30	97	4	5.09	97	4	5.25
102	3	5.53	109	3	5.79	110	3	5.69	111	3	5.88	113	3	5.93	111	3	6.00
68	8	3.69	72	6	3.82	73	7	3.78	73	6	3.87	70	8	3.67	72	8	3.89
72	5	3.90	74	5	3.93	78	5	4.04	64	9	3.39	76	6	3.99	75	6	4.06
71	6	3.85	72	6	3.82	74	6	3.83	77	5	4.08	80	5	4.20	80	5	4.33
69	7	3.74	69	8	3.66	70	8	3.62	70	7	3.71	72	7	3.78	75	7	4.06
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	10	2.98	—	—	—	56	10	2.90	60	10	3.18	59	10	3.09	—	—	—
62	9	3.36	67	9	3.56	68	9	3.52	68	10	3.60	69	9	3.62	66	9	3.57
—	—	—	56	10	2.97	—	—	—	—	—	—	—	—	—	55	10	2.97
550		29.81	560		29.75	589		30.49	596		31.58	597		31.31	542		29.31
1,845		100.00%	1,884		100.00%	1,932		100.00%	1,887		100.00%	1,907		100.00%	1,849		100.00%
112	1	100.00%	111	1	100.00%	111	1	100.00%	109	1	100.00%	104	1	100.00%	106	1	100.00%
99	1	100.00%	113	1	100.00%	115	1	100.00%	125	1	100.00%	119	1	100.00%	97	1	100.00%
2,173	1	15.84%	1,523	1	14.71%	600	1	12.56%									
1,080	2	7.87	1,072	2	10.35	574	2	12.02									
591	7	4.31	463	5	4.47	235	6	4.92									
664	4	4.84	638	4	6.16	336	3	7.03									
661	5	4.82	417	6	4.03	238	5	4.98									
593	6	4.32	387	7	3.74	177	8	3.71									
944	3	6.88	738	3	7.13	323	4	6.76									
378	9	2.76	—	—	—	—	—	—									
403	8	2.94	327	8	3.16	165	9	3.45									
—	—	—	—	—	—	—	—	—									
—	—	—	310	9	2.99	186	7	3.89									
363	10	2.65	302	10	2.92	165	10	3.45									
—	—	—	—	—	—	—	—	—									
5,868		42.78	4,179		40.34	1,778		37.22									
13,718		100.00%	10,356		100.00%	4,777		100.00%									

Continued on page 216.

Schedules of Principal Participating Employers (Concluded)

Year Ended December 31

System/ Employer	2017			2016			2015			2014		
	Active Members	Rank	Percent of Total Active Member	Active Members	Rank	Percent of Total Active Member	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System</b>												
State of Utah	705	1	26.12%	626	1	27.95%	523	1	28.67%	371	1	27.87%
Salt Lake County	203	2	7.52	176	2	7.86	132	2	7.24	122	2	9.17
Salt Lake City Corp.	116	3	4.30	95	3	4.24	58	3	3.18	51	3	3.83
West Valley City	88	4	3.26	68	4	3.04	32	7	1.75	22	7	1.65
Ogden City Corp.	76	5	2.82	54	5	2.41	29	9	1.59	21	9	1.58
Sandy City	58	6	2.15	46	8	2.05	—	—	—	—	—	—
Weber County Corp.	56	7	2.07	41	9	1.83	39	6	2.14	22	7	1.65
Davis County	51	8	1.89	48	7	2.14	43	5	2.36	31	5	2.33
Unified Fire Authority	49	9	1.82	53	6	2.37	44	4	2.41	40	4	3.01
City of South Jordan	46	10	1.70	35	10	1.56	—	—	—	—	—	—
Cache County	—	—	—	—	—	—	31	8	1.70	26	6	1.95
Duchesne County	—	—	—	—	—	—	—	—	—	—	—	—
Grand County	—	—	—	—	—	—	—	—	—	—	—	—
Iron County	—	—	—	—	—	—	—	—	—	—	—	—
Layton City	—	—	—	—	—	—	—	—	—	—	—	—
Murray City	—	—	—	—	—	—	—	—	—	—	—	—
Park City Fire Service	—	—	—	—	—	—	—	—	—	—	—	—
St. George City	—	—	—	—	—	—	—	—	—	—	—	—
Unified Police Department	—	—	—	—	—	—	29	9	1.59	20	10	1.50
Utah County	—	—	—	—	—	—	—	—	—	—	—	—
Other	1,251		46.35	998		44.55	864		47.37	605		45.45
<b>Total Tier 2 Public Safety and Firefighter System active members</b>	<b>2,699</b>		<b>100.00%</b>	<b>2,240</b>		<b>100.00%</b>	<b>1,824</b>		<b>100.00%</b>	<b>1,331</b>		<b>100.00%</b>

Additional information will be added when it becomes available.

Schedule of Utah Retirement Office Employees

Year Ended December 31

Year	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Number of employees	180	176	169	162	168	163	161	161	165	164

UTAH RETIREMENT SYSTEMS

2013			2012			2011		
Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
274	1	30.96	144	1	30.19%	3	9	3.03%
93	2	10.51	46	2	9.64	17	1	17.17
38	3	4.29	34	3	7.13	6	3	6.06
—	—	—	—	—	—	4	8	4.04
11	9	1.24	—	—	—	4	7	4.04
—	—	—	—	—	—	—	—	—
15	6	1.69	—	—	—	—	—	—
22	4	2.49	12	4	2.52	4	5	4.04
13	7	1.47	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
22	4	2.49	8	6	1.68	—	—	—
—	—	—	8	6	1.68	—	—	—
—	—	—	—	—	—	3	10	3.03
11	9	1.24	—	—	—	—	—	—
—	—	—	6	9	1.26	—	—	—
—	—	—	9	5	1.89	—	—	—
12	8	1.36	—	—	—	8	2	8.08
—	—	—	—	—	—	4	6	4.04
—	—	—	—	—	—	—	—	—
—	—	—	7	8	1.47	5	4	5.05
374		42.26	197		41.28	41		41.41
885		100.00	477		100.00%	99		100.00%

# Schedules of Participating Employers

**N** / Public Employees Retirement System — Noncontributory • **C** / Public Employees Retirement System — Contributory  
**PS** / Public Safety Retirement System • **F** / Firefighters Retirement System • **T** / Tier 2 Retirement Systems  
**D** / 457 Plan • **K** / 401(k) Plan

Employer	N	C	PS	F	T	D	K	Employer	N	C	PS	F	T	D	K
<b>School Districts and Education Employers</b>								Northern Utah Academy of Math, Engineering and Science							
Academy for Math, Engineering and Science Charter School (AMES).....	N				T	D	K	Charter School (NUAMES) .....	N				T	D	K
Active Re-Entry Incorporated.....	N				T		K	Ogden School District.....	N	C			T	D	K
Alpine School District .....	N	C			T	D	K	Ogden-Weber Applied Technical Center .....	N	C			T	D	K
Alpine Uniserv .....	N				T	D	K	Ogden Weber/NEA/UEA Uniserv .....	N				T	D	K
American Leadership Academy .....	N				T		K	Park City School District.....	N	C			T	D	K
Beaver School District.....	N				T	D	K	Piute School District .....	N	C			T		K
Bonneville Uniserv .....	N				T	D	K	Provo School District.....	N	C			T	D	K
Box Elder School District.....	N	C			T	D	K	Recreation and Habilitation Services .....	N				T		K
Bridgerland Applied Technology Center.....	N				T	D	K	Rich School District.....	N	C			T	D	K
Cache School District.....	N	C			T	D	K	Salt Lake Arts Academy.....	N				T	D	K
Canyons School District .....	N				T	D	K	Salt Lake Community College.....	N	C			T	D	K
Carbon School District.....	N	C			T	D	K	Salt Lake School District.....	N	C			T	D	K
Color Country Uniserv .....	N				T	D	K	San Juan School District.....	N	C			T	D	K
Daggett School District.....	N	C			T	D	K	Sevier School District .....	N	C			T	D	K
Davis Applied Technology College.....	N				T	D	K	Snow College.....	N	C			T	D	K
Davis School District.....	N	C			T	D	K	Soldier Hollow Charter School.....	N				T		K
Davis Uniserv .....	N				T	D	K	South Sanpete School District.....	N	C			T	D	K
Dixie Applied Technology College .....	N				T		K	South Summit School District.....	N				T	D	K
Dixie State University.....	N	C	PS		T	D	K	Southern Utah University.....	N	C	PS		T	D	K
Duchesne School District .....	N	C			T	D	K	Southwest Applied Technology Center.....	N				T		K
East Hollywood High School.....	N				T	D	K	Southwest Educational Development Center... ..	N				T		K
Educators Mutual Insurance.....	N	C			T	D	K	Space Dynamics Lab/USU .....	N				T	D	K
Emery School District.....	N	C			T	D	K	Success Academy .....	N				T		K
Fast Forward Charter High School.....	N				T		K	Summit Academy Charter School .....	N				T	D	K
Garfield School District.....	N	C			T		K	Summit Academy High School .....	N				T		K
Grand School District .....	N	C			T	D	K	Tintic School District .....	N	C			T	D	K
Granite School District.....	N	C			T	D	K	Tooele Applied Technology College.....	N				T		K
Granite Uniserv.....	N				T	D	K	Tooele School District.....	N	C			T	D	K
High Desert Uniserv.....	N				T	D	K	Tuacahn High School.....	N				T		K
High School Activity Association.....	N	C			T		K	Uintah Basin Applied Technology Center .....	N	C			T	D	K
Intech Collegiate High School .....	N				T		K	Uintah School District .....	N	C			T	D	K
Iron School District .....	N	C			T	D	K	University of Utah.....	N	C	PS		T		K
Itineris High School.....	N				T		K	University of Utah Hospital.....	N	C					K
Jordan School District.....	N	C			T	D	K	Utah County Academy of Sciences.....	N				T		K
Jordan Uniserv.....	N				T	D	K	Utah Education Association .....	N	C			T	D	K
Juab School District .....	N	C			T	D	K	Utah School Boards Association .....	N				T		K
Kane School District .....	N	C			T	D	K	Utah School Boards Risk Man Mut Ins Assn .....	N				T	D	K
Liberty Academy Charter School.....	N				T		K	Utah School Employee Association .....	N				T	D	K
Logan School District.....	N	C			T	D	K	Utah State University .....	N	C	PS		T	D	K
Master Academy, Inc.....	N				T		K	Utah Uniserv.....	N	C			T	D	K
Millard School District.....	N	C			T	D	K	Utah Valley University.....	N	C			T	D	K
Monticello Academy .....	N				T	D	K	Wasatch School District .....	N	C			T	D	K
Morgan School District.....	N				T	D	K	Wasatch Uniserv .....	N				T	D	K
Mountainland Applied Technology Center.....	N				T	D	K	Washington School District.....	N	C			T	D	K
Murray School District .....	N	C			T	D	K	Wayne School District.....	N				T	D	K
Nebo School District.....	N	C			T	D	K	Weber County School District.....	N	C			T	D	K
Noah Webster Academy, Inc.....	N				T	D	K	Weber State University.....	N	C			T	D	K
North Sanpete School District .....	N	C			T	D	K	Woodland Peaks Uniserv.....	N				T		K
North Summit School District .....	N	C			T	D	K								

Schedules of Participating Employers (Continued)

Employer	N	C	PS	F	T	D	K
<b>State and Other Employers</b>							
Heber Valley Historic Railroad .....	N				T		K
State of Utah (also participates in the Judges Retirement System and the Utah Governors and Legislators Retirement Plan)...	N	C	PS	F	T	D	K
Utah Communications Authority .....	N				T	D	K
Utah Dairy Council .....	N				T		K
Utah Housing Corporation .....	N	C			T	D	K
Utah Retirement Systems .....	N				T	D	K
Utah Safety Council .....	N				T		K
Utah State Fair Corporation .....	N				T		K
Workers Compensation Fund .....	N	C			T	D	K
<b>Counties and County Organizations</b>							
Beaver County .....	N		PS		T	D	K
Box Elder County .....	N	C	PS		T	D	K
Cache County .....	N	C	PS	F	T	D	K
Carbon County .....	N	C	PS		T	D	K
Daggett County .....	N		PS		T		K
Davis County .....	N		PS		T	D	K
Duchesne County .....	N	C	PS		T	D	K
Emery County .....	N	C	PS		T	D	K
Garfield County .....	N	C	PS		T	D	K
Grand County .....	N	C	PS		T	D	K
Iron County .....	N	C	PS		T	D	K
Juab County .....	N	C	PS		T		K
Kane County .....	N		PS		T	D	K
Millard County .....	N	C	PS		T	D	K
Morgan County .....	N		PS		T	D	K
Piute County .....	N		PS		T		K
Rich County .....		C	PS		T		K
Salt Lake County .....	N	C	PS	F	T	D	K
San Juan County .....	N	C	PS		T	D	K
Sanpete County .....	N	C	PS		T		K
Sevier County .....	N	C	PS		T	D	K
Summit County .....	N	C	PS		T		K
Tooele County .....	N	C	PS	F	T	D	K
Uintah County .....	N	C	PS		T	D	K
Unified Fire Authority .....	N		PS	F	T	D	K
Utah County .....	N	C	PS		T	D	K
Wasatch County .....	N		PS		T	D	K
Wasatch Co. Fire District .....	N			F	T		K
Washington County .....	N		PS		T	D	K
Wayne County .....	N		PS		T		K
Weber County .....	N	C	PS		T	D	K
Weber Fire District .....	N	C		F	T	D	K
<b>Cities and Towns</b>							
Alpine City .....	N				T	D	K
Alta Town .....	N				T		K
American Fork City .....	N		PS	F	T		K
Annabella Town .....	N				T		K

Employer	N	C	PS	F	T	D	K
Apple Valley Town .....	N				T		K
Aurora City .....	N				T		K
Ballard City .....	N				T	D	K
Beaver City .....	N				T	D	K
Bicknell Town .....	N				T		
Big Water Municipal Corp .....	N		PS		T		K
Blanding City .....	N		PS		T		K
Bluffdale City .....	N	C	PS		T	D	K
Bountiful City .....	N	C	PS	F	T	D	K
Brian Head Town .....	N	C	PS		T	D	K
Brigham City .....	N	C	PS	F	T	D	K
Castle Dale City .....	N				T		K
Cedar City .....	N		PS	F	T	D	K
Cedar Hills City .....	N				T	D	K
Centerfield City .....	N		PS		T	D	K
Centerville City .....	N	C	PS		T	D	K
Clearfield City .....	N		PS	F	T	D	K
Cleveland Town .....	N				T		K
Clinton City .....	N	C	PS	F	T	D	K
Coalville City .....	N				T		K
Corinne City .....		C			T		
Cottonwood Heights City .....	N		PS		T	D	K
Daniel Town .....	N				T		K
Delta City .....	N	C			T		K
Draper City .....	N				T	D	K
Duchesne City .....	N				T		K
Eagle Mountain City .....	N			F	T	D	K
East Carbon City .....	N		PS		T	D	K
Elk Ridge Town .....	N				T		K
Emery Town .....		C			T		K
Enoch City .....	N		PS		T		K
Enterprise City .....	N				T		K
Ephraim City .....	N		PS		T	D	K
Escalante Town .....	N		PS		T	D	K
Eureka City .....	N				T	D	
Fairview City .....	N		PS		T	D	K
Farmington City .....	N	PS	F	T	D	D	K
Farr West City .....	N				T	D	K
Ferron City .....	N				T		K
Fillmore City .....	N				T	D	K
Fountain Green City .....	N		PS		T		
Francis Town .....	N				T		K
Fruit Heights City .....	N				T	D	K
Garden City .....	N				T		K
Garland City .....		C	PS		T	D	K
Genola Town .....	N				T		K
Goshen Town .....	N				T		K
Grantsville City .....	N		PS		T	D	K
Green River City .....	N				T		K
Gunnison City .....	N		PS		T	D	K
Harrisville City .....	N	C	PS		T	D	K
Heber City .....	N		PS		T	D	K
Helper City .....	N		PS		T		K

Schedules of Participating Employers (Continued)

Employer	N	C	PS	F	T	D	K	Employer	N	C	PS	F	T	D	K
Herriman City.....	N				T	D	K	Orem City.....	N	C	PS	F	T	D	K
Highland City.....	N				T	D	K	Panguitch City.....	N				T	D	K
Hinckley Town.....	N				T		K	Paragonah Town.....		C			T		
Holden Town.....	N				T			Park City.....	N	C	PS		T		K
Holladay City.....	N				T	D	K	Parowan City.....	N	C	PS		T	D	K
Hooper City.....	N				T		K	Payson City.....	N		PS	F	T	D	K
Huntington City.....	N				T	D	K	Perry City.....	N		PS		T	D	K
Hurricane City.....	N		PS	F	T	D	K	Plain City.....	N				T	D	K
Hyde Park City.....	N				T		K	Pleasant Grove City.....	N		PS	F	T		K
Hyrum City.....	N				T	D	K	Pleasant View City.....	N	C	PS		T	D	K
Ivins City.....	N		PS	F	T	D	K	Price City.....	N	C	PS	F	T	D	K
Kamas City.....	N		PS		T	D	K	Providence City.....	N				T	D	K
Kanab City.....	N		PS	F	T	D	K	Provo City.....	N	C	PS	F	T	D	K
Kaysville City.....	N	C	PS		T		K	Randolph Town.....	N				T		
LaVerkin City.....		C	PS		T		K	Redmond Town.....	N				T		
Layton City.....	N	C	PS	F	T	D	K	Richfield City.....	N	C	PS		T	D	K
Lehi City.....	N	C	PS	F	T	D	K	Richmond City.....	N				T		K
Levan Town.....	N				T			Riverdale City.....	N	C	PS	F	T	D	K
Lewiston City.....	N				T		K	Riverton City.....	N	C		F	T	D	K
Lindon City.....	N		PS		T	D	K	Roosevelt City.....	N		PS	F	T	D	K
Logan City.....	N	C	PS	F	T	D	K	Roy City.....	N	C	PS	F	T	D	K
Manila Town.....	N	C			T		K	Salem City.....	N		PS		T	D	K
Manti City.....	N				T		K	Salina City.....	N		PS		T	D	K
Mantua City.....	N		PS		T		K	Salt Lake City.....	N	C	PS	F	T	D	K
Mapleton City.....	N		PS		T	D	K	Sandy City.....	N	C	PS	F	T	D	K
Marriott/Slaterville City.....	N				T		K	Santa Clara City.....	N		PS	F	T	D	K
Mayfield Town.....	N				T		K	Santaquin City.....	N		PS		T	D	K
Meadow Town.....	N				T		K	Saratoga Springs Town.....	N		PS	F	T	D	K
Mendon City.....	N				T		K	Smithfield City.....	N		PS	F	T		K
Midvale City.....	N	C	PS	F	T	D	K	South Jordan City.....	N	C	PS	F	T	D	K
Midway City.....	N	C			T	D	K	South Ogden City.....	N		PS	F	T	D	K
Milford City.....	N		PS		T		K	South Salt Lake City.....	N		PS	F	T	D	K
Millcreek City.....	N				T	D	K	South Weber City.....	N				T		K
Millville City.....	N				T	D	K	Spanish Fork City.....	N		PS		T		K
Minersville Town.....	N				T		K	Spring City.....	N	C	PS		T		K
Moab City.....	N	C	PS		T	D	K	Springdale Town.....	N		PS		T	D	K
Monroe City.....	N				T		K	Springville City.....	N	C	PS	F	T		K
Monticello City.....	N		PS		T	D	K	St. George City.....	N	C	PS		T	D	K
Morgan City.....	N				T		K	Stockton Town.....	N				T		K
Moroni City.....	N		PS		T		K	Sunset City.....	N	C	PS		T	D	K
Mt Pleasant City.....	N	C	PS		T		K	Syracuse City.....	N		PS	F	T	D	K
Murray City.....	N	C	PS	F	T	D	K	Taylorsville City.....	N		PS		T	D	K
Myton City.....	N				T		K	Tooele City.....	N	C	PS		T	D	K
Naples City.....	N	C	PS		T	D	K	Toquerville City.....	N				T	D	K
Nephi City.....	N		PS		T	D	K	Torrey Town.....	N				T		K
Nibley City.....	N				T	D	K	Tremonton City.....	N	C	PS		T	D	K
North Logan City.....	N	C	PS	F	T	D	K	Uintah City.....	N				T		K
North Ogden City.....	N	C	PS	F	T		K	Vernal City.....	N	C	PS		T	D	K
North Salt Lake City.....	N		PS		T	D	K	Vineyard Town.....	N				T		K
Oakley City.....		C			T	D	K	Washington City.....	N			F	T	D	K
Ogden City.....	N	C	PS	F	T	D	K	Washington Terrace City.....	N		PS	F	T	D	K
Orangeville City.....	N				T		K	Wellington City.....	N		PS		T		K
Orderville Town.....	N				T		K	Wellsville City.....	N				T		K

Schedules of Participating Employers (Continued)

Employer	N	C	PS	F	T	D	K	Employer	N	C	PS	F	T	D	K
Wendover City.....	N		PS		T	D	K	Emery Water Conservancy District.....	N				T		K
West Bountiful City.....	N	C	PS		T	D	K	Five-County Association of Governments.....	N	C			T	D	K
West Haven City.....	N				T	D	K	Four Corners Regional Care Center.....	N	C			T	D	K
West Jordan City.....	N	C	PS	F	T	D	K	Fox Hollow Golf Course.....	N				T		K
West Point City.....	N				T	D	K	Garden City Fire District.....				F	T		K
West Valley City.....	N	C	PS	F	T	D	K	Grand County Cemetery Maintenance District...	N				T		K
Willard City.....	N		PS		T	D	K	Grand County Water Sewer/Service.....	N				T		K
Woods Cross City.....	N	C	PS		T	D	K	Granger-Hunter Improvement District.....	N				T	D	K
<b>Other Government Entities</b>								Gunnison Valley Fire Department.....	N		PS		T	D	K
Ash Creek Special Service District.....	N				T	D	K	Gunnison Valley Hospital.....	N	C			T	D	K
Ashley Valley Sewer Management Board.....	N				T	D	K	Heber Light & Power.....	N				T	D	K
Ashley Valley Improvement District.....	N				T		K	Heber Valley Special District.....	N				T		
Bear Lake Special Service District.....	N				T		K	Hooper Water Improvement District.....	N				T	D	K
Bear River Association of Governments.....	N				T	D	K	Housing Authority of Carbon County.....	N				T		K
Bear River Health Department.....	N	C			T	D	K	Housing Authority of Ogden City.....	N				T		K
Bear River Mental Health.....	N				T	D	K	Housing Authority of Salt Lake City.....	N	C			T	D	K
Bear River Water District.....	N				T		K	Housing Authority of Salt Lake County.....	N				T		K
Beaver Housing Authority.....	N				T		K	Hurricane Valley Fire Spec. Service District.....				F	T		K
Beaver Valley Hospital.....	N				T	D	K	Impact Mitigation Special Service District.....	N				T		K
Benchland Water Company.....	N				T		K	Jordan River Commission.....	N				T	D	K
Bona Vista Water Improvement.....	N				T	D	K	Jordan Valley Water Conservancy District.....	N	C			T	D	K
Bountiful Irrigation District.....	N				T	D	K	Jordanelle Special Service District.....	N				T	D	K
Box Elder County Mosquito District.....	N				T		K	Kane Water Conservancy District.....	N				T		K
Cache Metro Planning Organization.....	N				T		K	Kearns Improvement District.....	N	C			T	D	K
Carbon County Recreation and Transportation Special Service District.....	N				T		K	Leeds Area Special Service District.....				F	T		
Castle Valley Special Service District.....	N	C			T	D	K	Lone Peak Safety District.....	N		PS	F	T	D	K
Cedar City Housing Authority.....	N				T	D	K	Maesar Water Improvement District.....	N				T		K
Cedar Mountain Fire Protection District.....	N			F	T		K	Magna Mosquito Abatement.....	N				T		K
Central Iron County Water Conservancy Dist.....	N				T		K	Metro Water District—SLC/Sandy.....	N				T	D	K
Central Davis Sewer District.....	N				T	D	K	Midvalley Improvement District.....	N				T		K
Central Utah Counseling Center.....	N				T	D	K	Military Installation Development Authority.....	N				T		K
Central Utah Public Health.....	N				T	D	K	Millard County Care and Rehabilitation, Inc.....	N				T		K
Central Utah Water District.....	N				T	D	K	Moab Valley Fire Protection.....	N			F	T		K
Central Weber Sewer District.....	N	C			T	D	K	Mountain Regional Water Special Service Dist...	N				T		K
Children’s Aid Society—Utah.....	N				T		K	Mountainland Association of Governments.....	N	C			T	D	K
Cottonwood Heights P&R Services.....	N				T	D	K	Mt. Olympus Improvement District.....	N				T		K
Cottonwood Improvement District.....	N				T	D	K	Nebo Credit Union.....	N				T		K
Council on Aging — Golden Age Center Special Service District....	N				T	D	K	North Davis County Sewer District.....	N	C			T		K
Davis & Weber Counties Canal Company.....	N	C			T	D	K	North Davis Fire District.....	N			F	T		K
Davis Behavioral Health.....	N				T	D	K	North East Counseling Center.....	N				T	D	K
Davis County Housing Authority.....	N	C			T		K	North Emery Water Users Special Service Dist....	N				T		K
Davis County Mosquito Abatement.....	N				T		K	North Fork Special Service District.....	N				T		K
Davis County Solid Waste Management.....	N				T	D	K	North Park Police Agency.....	N		PS		T	D	K
DDI Advantage.....	C				T		K	North Pointe Solid Waste Special Service Dist....	N				T	D	K
Duchesne County Mosquito District.....	C				T			North Tooele County Fire Protection Service District.....	N			F	T	D	K
Duchesne County Water Conservancy District...	N				T	D	K	North View Fire District.....	N			F	T		K
East Duchesne Culinary Water Imp District.....	N				T		K	Northern Utah Environmental Resource Agency	N				T	D	K
Emery County Care and Rehabilitation Center...	C				T	D	K	Oquirrh Recreation and Parks District.....	N				T	D	K
Emery County Recreation Special Service Dist....	N				T		K	Park City Fire Service District.....	N			F	T	D	K
								Price River Water Improvement.....	N				T	D	K
								Provo Housing Authority.....	N				T		K
								Provo River Water Users.....	N				T	D	K

Schedules of Participating Employers (Continued)

Employer	N	C	PS	F	T	D	K	Employer	N	C	PS	F	T	D	K
Roosevelt City Housing Authority	N				T			Unified Police Department	N		PS		T	D	K
Roy Water Conservancy District	N				T	D	K	Upper Country Water District	N					D	
Salt Lake County Service Area 3	N				T		K	Utah Association of Counties	N				T		K
Salt Lake City Library	N				T	D	K	Utah Counties Indemnity Pool	N				T		K
Salt Lake City Mosquito Abatement	N				T	K		Utah County Housing Authority	N	C			T	D	K
Salt Lake City Sub. Sanitation #1	N				T	K		Utah Local Governments Trust	N				T	D	K
San Juan Mental Health/Substance Abuse Dist...	N				T	K		Utah Lake Commission	N				T		K
Sandy Suburban Improvement District	N				T	D	K	Utah League of Cities & Towns		C			T		K
Six-County Association of Governments	N	C			T	D	K	Utah Municipal Power Agency	N				T		K
Six-County Infrastructure Coalition	N				T	K		Utah Public Employees Association	N	C			T	D	K
Snyderville Basin Water Reclamation District	N	C			T	D	K	Utah Telecommunication Open Infrastructure Agency (UTOPIA)	N				T	D	K
Solid Waste Management Special Serv Dist #1	N				T	K		Utah Valley Dispatch Special Services Dist	N				T		K
Solitude Improvement District	N				T	K		Utah Zoological Society	N	C			T		K
South Davis County Sewer Improvement Dist...	N	C			T	D	K	Valley Emergency Communication Center	N				T	D	K
South Davis County Water Improvement Dist...	N				T	D	K	Wasatch Front Regional Council		C			T	D	K
South Davis Metro Fire Agency	N			F	T	D	K	Wasatch Front Waste and Recycling District	N				T	D	K
South Davis Recreation Center	N				T	D	K	Wasatch Integrated Waste Management	N				T	D	K
South Ogden Conservancy District	N				T	D	K	Wasatch Mental Health Special Services Dist ...	N	C			T	D	K
South Utah Valley Animal Services Special Service District	N				T	K		Washington County Solid Waste #1	N				T	D	K
South Utah Valley Electric Service District	N				T	K		Washington County Water District	N	C			T		K
South Utah Valley Solid Waste	N				T	K		Waste Management Service District #5	N				T		K
South Valley Sewer District	N	C			T	D	K	Weber Area Dispatch 911 & Emergency Services District	N				T	D	K
South Valley Water Reclamation Facility	N				T	K		Weber Basin Water Conservancy	N				T	D	K
Southeastern Utah Assoc. of Governments	N	C			T	D	K	Weber County Mosquito Abatement	N				T	D	K
Southeastern Utah Health	N	C			T	K		Weber Human Services	N				T	D	K
Southern Salt Lake Valley Mosquito Abatement ..	N				T	D	K	Weber River Water Users		C			T		K
Southern Utah Valley Power System	N				T	D	K	Western Kane County Special Service District #1	N				T		K
Southwest Behavioral Health Center	N				T	D	K	White City Water Improvement District	N				T	D	K
Southwest Mosquito Abatement and Control District	N				T	K									
Southwest Utah Public Health Department	N	C			T	D	K								
St. George Housing Authority	N				T	K									
Summit Mosquito Abatement District	N				T	K									
Taylor West Weber Water Improvement Dist ...	N				T		K								
Taylorville – Bennion Improvement	N				T	D	K								
Timber Lakes Special Service District	N				T	K									
Timpanogos Special Service District	N	C			T	K									
Tooele County Housing	N				T	D	K								
Tooele Valley Mosquito Abatement District	N				T	K									
Trans-Jordan Cities	N				T	D	K								
Tridell-Lapoint Water District	N				T	K									
Uintah Animal Control and Shelter Special Service District	N				T	K									
Uintah Basin Assistance Council	N				T	K									
Uintah Basin Association of Government	N				T	D	K								
Uintah County Care Center	N				T	D	K								
Uintah County Mosquito Abatement	N				T	K									
Uintah Fire Suppression Special Service Dist...	N			F	T	K									
Uintah Highlands Improvement District	N				T	K									
Uintah Recreation District	N				T	D	K								
Uintah Transportation Special Service Dist	N				T	K									
Uintah Water Conservancy District	N				T	K									

**Total Participating Employers**

Noncontributory	457
Contributory	158
Public Safety	133
Firefighters	62
Judges	1
Governor and Legislators	1
Tier 2 Public Employees	470
Tier 2 Public Safety and Firefighter	151
457 Plan	267
401(k) Plan	451



Schedules of Participating Employers (Concluded)

Employer

**Inactive Units**

American Fork Hospital	Marysvale Town	Twin Creeks Special Service District
Bay Area Refuse Disposal	Metro Water District — Orem	U of U Research Institute
Bear River Town	Metro Water District — Provo	U S H Patients Funds
Bingham City	Midvale Wastewater Treatment	Uintah Basin Counseling
Box Elder County Nursing Home	Midway Sanitation District	Uintah Basin Dist Health
Carbon County Hospital	Milford Valley Hospital	Uintah Basin Medical Center
Carbon Nursing Home	Morgan County Historical Society	Uintah County Council on Aging
Cedar City Library	Morgan County Library	Uintah County Hospital
Central Utah Ed Ser	Mountain America Credit Union	USU Comm Credit Union
Circleville	Nebo Credit Union	USU Community Credit Union
Coalville Health Center	New Harmony Town	Ut Assn of Sec Sch Princ
College of Eastern Utah	Northern Utah Crime	Utah College of Applied Technology
Copperton Improvement District	Payson City Hospital	Utah County Council of Govt
Cottage Program	Pioneer Care Center	Utah Industries for the Blind
Davis County Department of Human Services	Randolph Town	Utah Partnership for Education Economics
Department of Employment Security	Reg 2 Law Enforcement Plan Agency	Utah Technology Corporation
Dixie Center at St. George	Salt Lake County Fair	Valley Mental Health
Dixie Hospital	Salt Lake School District Credit Union	Washington County Association for Retarded Citizens
East Layton	San Juan County Hospital	Wasatch County Hospital
Emery Medical Center	Six-County Economic Development	Wasatch County Special Service District #1
Four Corners Regional Hospital	Snow College South	Weber County Hospital
Genola	South Davis Fire Department	Weber Economic Development Corp
Golden Hours Homemaker	Southeastern Utah Economic Development	Weber River Water Quality
Grand County Road Special Service District	Statewide Assn of Prosec	West Millard Hospital
Hiawatha Town	Sugarhouse Park Authority	West Millard Recreation
Honeyville Town	Summit Employment	Woodland Hills City
I W Allen Hospital	Summit Park Water Special Service District	
Juab County Hospital	Thomas Edison Charter School	
Kanosh Town Corporation	Timpanogos Academy	
Leeds Town	Tooele Council of Aging	
	Tooele Valley Hospital	
	Trail Incorporated	

## UTAH RETIREMENT SYSTEMS

# A HIGHLIGHT HISTORY 1907-2017

- 1907** | The Legislature authorizes the organization of local teacher retirement associations.
- 1908** | Salt Lake City institutes the first teacher retirement commission. Ogden follows in 1933 and Provo in 1934.
- 1919** | First statewide pension plan for all full-time paid and volunteer firemen. Actuarially unsound, the system would be transferred to the Retirement Office in 1965.
- 1921** | First police pension plans in Salt Lake, Ogden, Provo, and Logan. Actuarially unsound, these plans would be transferred to the Public Safety Retirement System in 1969.
- 1927** | The Prison and Industrial School Guards Retirement System is enacted. Industrial school guards join the teachers retirement system in 1937. Prison guards transfer to the Public Safety Retirement System in 1970.
- 1934** | The Utah Education Association prepares a teacher retirement plan to present to the Legislature. This plan will form much of the basis for a new retirement system.
- 1937** | First statewide teachers retirement system. Seven member board hires Ray L. Lillywhite as the first executive secretary.
- 1943** | Utah Supreme Court rules that a retiree's statutory retirement benefit cannot be reduced, affirming the principle of vested rights. The Court would later affirm that a vested retirement benefit may not be reduced without providing a "substantial substitute."



- 1947** | The State Officers' and Employees' Retirement System is created with a 3% contribution rate each by employee and employer.  
  
Teachers in local systems are required to join the State Teachers Retirement System.
- 1948** | The Utah Supreme Court permits service credit for prior service in parochial schools.
- 1949** | The State Officers and Employees Retirement System is renamed The Public Employees Retirement System; it will cover all public employees and judges. Retirement benefit ceiling is \$100 a month.
- 1952** | Ray Lillywhite resigns; Leonard W. McDonald is hired as second executive secretary of the Teachers Retirement System.
- 1953** | The short-lived Teachers Retirement System is liquidated in favor of Social Security.

A HIGHLIGHT HISTORY 1907-2017 *(Continued)*

- 1954** | The Teachers Retirement System is replaced by the Utah School Employees Retirement System and integrated with Social Security to preserve its solvency. Local teacher retirement associations are terminated.
- 1957** | Minimum monthly retirement benefit is \$85.
- 1959** | The Utah State Public Employees Association is formed with the intent to produce a comprehensive plan for a statewide public employee retirement system.
- 1961** | The Public Employees Retirement System is created with a seven member board.  
  
The public employees and teachers retirement systems retain separate boards but unite under a single administrator and office.
- 1963** | Creation of a single board for all retirement systems is the crowning achievement in Utah public retirement history and the birth of today's Utah Retirement Systems.
- 1967** | The heretofore separate school and public retirement systems are consolidated into a single Utah State Retirement System.
- 1969** | The Utah Public Safety Retirement Act covers all public safety employees engaged full time in hazardous duty. Benefits were uniform in each jurisdiction, but contribution rates varied.
- 1971** | Members gain a salary deferral program.
- 1975** | Current service formula rises from 1.25% to 2%. The cost-of-living ceiling rises to 4%.
- 1976** | Leonard W. McDonald retires. Bert D. Hunsaker becomes executive director.
- 1977** | Governor Scott Matheson dedicates the new Leonard W. McDonald Building for the Utah Retirement Systems.
- 1979** | Board gains custody of the retirement fund and greater investment authority.



- 1982** | The court affirms that the Board is independent of the executive department and has authority to hire its own legal counsel.
- 1983** | The Retirement Board sees its first actuarial surplus as new investments prove their worth; hires a full-time investment manager.
- 1986** | Public Employees Noncontributory Retirement System debuts: employers pay all contributions; 3-year final average salary; State and education employers pay 1.5% of salary into URS' 401(k) Plan. Employees forfeit access to contributions, but the new system portends a superior career retirement.
- 1987** | A "25-and-out" retirement incentive plan permits public employees to retire after 25 years with no actuarial reduction; and increases to 2% the value of each year of service. Over 3000 employees take advantage of its 6-month window.

A HIGHLIGHT HISTORY 1907-2017 *(Continued)*

**1989** | The U.S. Supreme Court rules that if federal retirement benefits are taxable, then state-provided retirement benefits cannot be exempt. Legislature grants a 3% substantial substitute benefit for affected members.

Bert Hunsaker steps down. Dee Williams becomes executive director.

The Public Safety Noncontributory Retirement System is created.

The Systems' assets nearly quadruple from \$1 billion to \$3.85 billion during the 1980s.

**1990** | Public Employees Noncontributory Retirement members receive 2% for all years of service.

**1994** | URS begins dividing pension, death, and DC benefits after court rules that a former spouse may be awarded death and retirement benefits, whether or not the spouse remarries.

**1995** | Members with 25 years of service in the Public Employees Noncontributory System may buy future service credit to permit immediate retirement.

**1996** | URS recovers 100% of member assets originally invested in Guaranteed Investment Contracts that failed when Confederation Life Insurance Company of Canada was declared insolvent in August 1994.

**1997** | Judges Noncontributory Retirement System is created.

The URS DC video receives a Telly Award — the commercial equivalent of an "Oscar" for motion pictures; URS' publication for retirees, *Cycles*, places second worldwide among corporate and institutional newsletters.

Legislature affirms the Board's authority to define provisions and terms of the retirement code.



**1998** | The 401(k) Plan launches a bold marketing program to help members better map a retirement investment strategy. Investment options are enhanced and expanded.

State employees at retirement may defer 25% of accumulated sick leave to the 401(k) Plan, convert it to paid-up health or Medicare supplement insurance or take it as cash.

**1999** | Members may buy up to five years of future service credit, even if it exceeds the years required to retire.

Leonard W. McDonald, director of the Utah Retirement Systems 1952-1976 and to whom much of the structure of the Systems can be attributed, dies.

Dee Williams retires. Robert V. Newman becomes executive director.

Systems' assets rise from \$3.85 billion to over \$13 billion during the 1990s.

**2000** | 401(k) Plan participants may now apply for a fixed rate loan for any purpose of up to 50% of his or her 401(k) account balance.

A HIGHLIGHT HISTORY 1907-2017 *(Continued)*

**2001** | A value stock fund joins the menu of DC investment options.

URS website calculators invite members to estimate pension benefits and compute potential 401(k)/457 earnings.

**2002** | The Olympic Winter Games are staged in Salt Lake City. URS adopts telecommuting.

457 Plan permits deferrals up to 100% of includable compensation; offers a new catch-up feature; drops irrevocable withdrawal decisions; allows rollovers to any acceptant 457, 403(b), 401(k), or IRA; allows use for URS pension redeposits or to buy URS service credit.

Internet-based personal retirement account manager, myURS, lets members view and transfer account balances, alter deferrals, estimate payouts, integrate Social Security, and more.

**2003** | To protect 401(k) and 457 investors from the costs of others' adverse trading activities, URS restricts frequent trading privileges. Systems' assets are \$14.2 billion.

**2004** | Ray L. Lillywhite, executive secretary of the Teachers Retirement System from 1937 to 1952, dies.

**2005** | Legislature repeals 1998 benefit allowing 25% of a state employee's accumulated sick leave to be converted to other retirement benefits.

**2006** | Members gain a partial lump-sum payment option (PLSO) at retirement.

**2007** | Retirement Systems' assets reached \$23.9 billion.

Members of the Public Safety Contributory Retirement System gain a window to convert to the Public Safety Noncontributory System.

**2008** | The Retirement Systems pay over \$1,000,000,000 in annual benefits.

**2009** | New online enrollment feature at urs.org offers simple, convenient way to enroll for benefits electronically.



IRS Private Letter Ruling confirms URS 457 Plan is an eligible deferred compensation plan as defined in IRC Section 457(b).

**2010** | Retirees who resume work for a URS employer within a year after retiring will be returned to active status to earn further service credit and may thereafter choose between retirement allowance options.

**2011** | URS creates the Tier 2 Retirement System for members initially entering full-time employment with a participating employer on or after July 1, 2011. These employees choose to participate in either the Tier 2 Hybrid Retirement System or the Tier 2 Defined Contribution (DC) Plan.

The URS Defined Contribution Department introduces a new and expanded set of asset classes within the Horizon Funds. The changes bring a broader, more diversified mix of securities to the Horizon Funds and offer inflation protection as well as exposure to real estate and commodities.

A HIGHLIGHT HISTORY 1907-2017 *(Concluded)*

**2012** | Legislative bills brought about four noteworthy changes for the Utah Retirement Systems. First, executive director of the Department of Corrections is now allowed to exempt from the Noncontributory Retirement System. Second, Tier 2 firefighters, including volunteers, are covered under the PEHP long-term disability policy. Third, certain Tier 2 Retirement Systems at-will employees are allowed to exempt from the 4-year vesting requirements. And fourth, new legislators and governors will not receive post-retirement health benefits.

**2013** | Robert V. Newman retires. Daniel D. Andersen becomes executive director.

**2014** | URS received a No-Action Letter from the Utah Division of Securities in preparation for its new Investment Advice Program to be offered in 2015.

After the close of business on December 31, 2014, all assets held in the DC Plan Horizon Funds were transferred into the new Target Date Funds. The assets were allocated according to the Target Date that corresponded with the participant's age.

**2015** | URS rolled out its retirement planning advisory program. In 2015, advisors conducted more than 1,600 sessions across the state. In satisfaction surveys, 98% of members were at least satisfied with their session, with 85% giving the highest satisfaction rating.

**2016** | S.B. 19: establishes an optional "Phased Retirement" program that allows continuing employment on a half-time basis of a retiree with the same participating employer after the retiree's retirement date while the retiree receives 50% of the retiree's monthly retirement allowance. This new program is offered beginning on January 1, 2017.



**2017** | URS broadened the scope of member education. The "Your Benefits, Your Way" campaign debuted, encouraging members to learn about their benefits in the way that best fits their learning style. Options include publications, videos, live trainings and, new for 2017, regular webinars. The online Message Center debuted, allowing members to send secure messages to URS through their myURS account. URS published targeted editions of the member newsletter *ViewPoint*, tailored to three specific audiences, Tier 1 members, Tier 2 members, and members within their first year of employment. URS continued to increase participation in individual retirement planning sessions. More than 3,700 members attended such sessions in 2017.

2017

# GASB SCHEDULES OF EMPLOYER ALLOCATION AND PENSION REPORTING SECTION

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# INDEPENDENT AUDITORS' REPORT FOR AGENT PLANS



## INDEPENDENT AUDITORS' REPORT

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Utah State Retirement Board:

### REPORT ON THE SCHEDULE

We have audited the fiduciary net position as of December 31, 2017, and the changes in fiduciary net position for the year then ended, included in the accompanying Schedule of Changes in Fiduciary Net Position by Employer—Pension Trust Fund by Division ("Schedule") of the Public Safety Retirement System of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, and the related notes.

#### *Management's Responsibility for the Schedule*

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

#### *Auditors' Responsibility*

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

An audit involves performing procedures to obtain audit evidence about the amounts in the Schedule. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the fiduciary net position and the changes in fiduciary net position included in the Schedule, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the fiduciary net position and the changes in fiduciary net position included in the Schedule in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's



INDEPENDENT AUDITORS' REPORT FOR AGENT PLANS *(Concluded)*

internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the fiduciary net position and the changes in fiduciary net position included in the Schedule.

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

**Opinion**

In our opinion, the Schedule referred to above presents fairly, in all material respects, the fiduciary net position of the Public Safety Retirement System of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, as of December 31, 2017, and the changes in fiduciary net position for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

**Other Matters**

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, which includes the Public Safety Retirement System, as of and for the year ended December 31, 2017, and our report thereon, dated April 26, 2018, expressed an unmodified opinion on those financial statements and included an emphasis-of-matter paragraph regarding the fair value of investments where a publicly listed price is not available.

Our audit of the financial statements of Utah Retirement Systems was conducted for the purpose of forming an opinion on the financial statements as a whole. The individual employer information presented in each of the individual columns of the accompanying Schedule is presented for purposes of additional analysis and is not a required part of the financial statements. The individual employer information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Each column of individual employer information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the individual employer information presented in each individual column of the accompanying Schedule is stated fairly, in all material respects, in relation to the financial statements of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, which includes the Public Safety Retirement System, as a whole. We do not express an opinion on the fiduciary net position or changes in fiduciary net position of each individual employer.

**Restrictions on Use**

Our report is intended solely for the information and use of Utah Retirement Systems' management, the Utah State Retirement Board, the participating employers of the Public Safety Retirement System of Utah Retirement Systems and their auditors and is not intended to be and should not be used by anyone other than these specified parties.



April 26, 2018

**Public Safety Retirement System****Schedule of Changes in Fiduciary Net Position —  
Pension Trust Fund by Division**

Year Ended December 31, 2017

With Comparative Totals for Year Ended December 31, 2016

*(in thousands)*

	Salt Lake City	Ogden	Provo
<b>Additions:</b>			
Contributions:			
Member	\$ —	—	—
Employer	14,899	3,072	2,258
Total contributions	14,899	3,072	2,258
Investment income:			
Net appreciation in fair value of investments	29,703	6,733	5,272
Interest, dividends, and other investment income	5,366	1,216	952
Total income from investment activity	35,069	7,949	6,224
Less investment expenses	521	118	93
Net income from investment activity	34,548	7,831	6,131
Income from security lending activity	62	14	11
Less security lending expense	7	2	1
Net income from security lending activity	55	12	10
Net investment income	34,603	7,843	6,141
Transfers from (to) affiliated systems	1,642	(128)	16
Total additions	51,144	10,787	8,415
<b>Deductions:</b>			
Retirement benefits	14,779	3,372	2,523
Cost-of-living benefits	3,930	910	561
Supplemental retirement benefits	36	4	5
Refunds	2	—	—
Administrative expenses	129	29	22
Total deductions	18,876	4,315	3,111
Increase from operations	32,268	6,472	5,304
Net position restricted for pensions beginning of year	260,675	59,439	46,580
Net position restricted for pensions end of year	\$ 292,943	65,911	51,884

Agent Plans		Cost Sharing Plans			Total All Divisions	
		State of Utah Public Safety	Other Division A (with Social Security)	Other Division B (without Social Security)	2017	2016
Logan	Bountiful					
—	—	221	366	206	793	830
1,034	911	49,386	53,112	21,142	145,814	147,099
1,034	911	49,607	53,478	21,348	146,607	147,929
2,967	2,145	122,491	147,479	45,387	362,177	199,385
536	388	22,129	26,643	8,200	65,430	54,203
3,503	2,533	144,620	174,122	53,587	427,607	253,588
52	38	2,150	2,588	797	6,357	5,444
3,451	2,495	142,470	171,534	52,790	421,250	248,144
6	4	256	308	95	756	1,015
1	1	30	36	11	89	132
5	3	226	272	84	667	883
3,456	2,498	142,696	171,806	52,874	421,917	249,027
36	323	233	(11,797)	15,601	5,926	6,701
4,526	3,732	192,536	213,487	89,823	574,450	403,657
1,265	1,268	53,258	49,985	17,324	143,774	135,697
282	245	11,079	10,061	1,786	28,854	28,547
—	1	114	82	—	242	264
—	—	66	158	—	226	183
12	9	470	542	169	1,382	1,260
1,559	1,523	64,987	60,828	19,279	174,478	165,951
2,967	2,209	127,549	152,659	70,544	399,972	237,706
26,171	18,853	1,079,035	1,298,262	387,530	3,176,545	2,938,839
29,138	21,062	1,206,584	1,450,921	458,074	3,576,517	3,176,545

# INDEPENDENT AUDITORS' REPORT FOR COST SHARING PLANS



## INDEPENDENT AUDITORS' REPORT

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Utah State Retirement Board:

### REPORT ON THE SCHEDULES

We have audited the employer allocations and the total for all entities of the columns titled employer contributions, net pension liability/(asset), total deferred outflows of resources, total deferred inflows of resources, and total employer net pension expense excluding that attributable to employer-paid member contributions (specified column totals) included in the accompanying schedules of employer allocations and pension amounts of the Noncontributory Retirement System, Contributory Retirement System, Public Safety Retirement System, Firefighters Retirement System, Judges Retirement System, Utah Governors and Legislators Retirement Plan, Tier 2 Public Employees Contributory Retirement System, and Tier 2 Public Safety and Firefighters Contributory Retirement System ("Defined Benefit Pension Plans") of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, as of and for the year ended December 31, 2017, and the related notes.

### *Management's Responsibility for the Schedules*

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

### *Auditors' Responsibility*

Our responsibility is to express an opinion on the employer allocations and the specified column totals included in the schedules of employer allocations and pension amounts based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the employer allocations and the specified column totals included in the schedules of employer allocations and pension amounts are free of material misstatement.

INDEPENDENT AUDITORS' REPORT FOR COST SHARING PLANS *(Concluded)*

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

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

**Opinion**

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and the total employer contributions, net pension liability/(asset), total deferred outflows of resources, total deferred inflows of resources, and total employer net pension expense excluding that attributable to employer-paid member contributions for the total of all participating entities for the Noncontributory Retirement System, Contributory Retirement System, Public Safety Retirement System, Firefighters Retirement System, Judges Retirement System, Utah Governors and

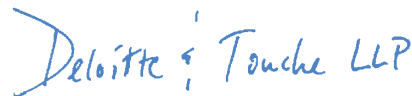
Legislators Retirement Plan, Tier 2 Public Employees Contributory Retirement System, and Tier 2 Public Safety and Firefighters Contributory Retirement System of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, as of and for the year ended December 31, 2017, in accordance with accounting principles generally accepted in the United States of America.

**Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of Utah Retirement Systems, a component unit of the State of Utah, administered by the Utah State Retirement Board, which includes the Defined Benefit Pension Plans, as of and for the year ended December 31, 2017, and our report thereon, dated April 26, 2018, expressed an unmodified opinion on those financial statements and included an emphasis-of-matter paragraph regarding the fair value of investments where a publicly listed price is not available.

**Restrictions on Use**

Our report is intended solely for the information and use of Utah Retirement Systems' management, the Utah State Retirement Board, the employers of the Defined Benefit Pension Plans of Utah Retirement Systems and their auditors and is not intended to be and should not be used by anyone other than these specified parties.



April 26, 2018

**Noncontributory Retirement System  
Local Government Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
4 Corners Comm Behavior Health	\$ 406,338	0.2370289%	\$ 1,038,495	2,808,577	(433,241)	23,165	223,581
Alpine City	137,190	0.0800270	350,622	948,247	(146,273)	7,821	75,487
American Fork City	812,532	0.4739739	2,076,622	5,616,160	(866,329)	46,322	447,083
Annabella Town	14,795	0.0086302	37,811	102,260	(15,774)	843	8,141
Ash Creek SS District	157,181	0.0916884	401,714	1,086,424	(167,588)	8,961	86,486
Ashley Valley Improv Dist	139,458	0.0813497	356,417	963,920	(148,691)	7,950	76,734
Ashley Valley Sewer Mgmt Board	69,816	0.0407257	178,432	482,563	(74,438)	3,980	38,415
Ballard Town	30,821	0.0179788	78,771	213,032	(32,862)	1,757	16,959
Bear Lake SSD	21,304	0.0124275	54,449	147,255	(22,715)	1,215	11,722
Bear River Assn of Govts	232,066	0.1353711	593,101	1,604,025	(247,431)	13,230	127,691
Bear River Health Dept	748,426	0.4365793	1,912,785	5,173,068	(797,979)	42,667	411,810
Bear River Mental Health	582,767	0.3399452	1,489,402	4,028,042	(621,351)	33,223	320,658
Bear River Water District	31,396	0.0183140	80,239	217,004	(33,474)	1,790	17,275
Beaver City	163,593	0.0954284	418,100	1,130,740	(174,424)	9,326	90,014
Beaver County	315,743	0.1841821	806,957	2,182,391	(336,648)	18,000	173,732
Beaver Housing Authority	18,552	0.0108218	47,414	128,228	(19,780)	1,058	10,208
Beaver Valley Hospital	745,858	0.4350809	1,906,220	5,155,313	(795,240)	42,521	410,396
Benchland Water Company	69,106	0.0403116	176,617	477,656	(73,681)	3,940	38,024
Bicknell Town	5,763	0.0033615	14,728	39,831	(6,144)	329	3,171
Big Cottonwood Canyon Imp Dist	11,821	0.0068954	30,211	81,704	(12,603)	674	6,504
Blanding City	138,662	0.0808854	354,383	958,419	(147,842)	7,905	76,296
Bluffdale City	243,848	0.1422440	623,214	1,685,462	(259,993)	13,902	134,174
Bona Vista Water Improve	85,088	0.0496341	217,462	588,119	(90,721)	4,851	46,818
Bountiful Irrigation District	82,286	0.0479998	210,302	568,754	(87,734)	4,691	45,276
Box Elder Co Mosq Dist	41,336	0.0241127	105,645	285,714	(44,073)	2,357	22,745
Box Elder County	764,944	0.4462148	1,955,001	5,287,240	(815,591)	43,609	420,898
Brigham City	718,987	0.4194068	1,837,547	4,969,590	(766,591)	40,989	395,611
Cache County	1,011,974	0.5903142	2,586,344	6,994,687	(1,078,975)	57,692	556,822
Cache Metro Planning Org	15,258	0.0089003	38,995	105,460	(16,268)	870	8,395
Carbon County	776,855	0.4531626	1,985,441	5,369,565	(828,290)	44,288	427,452
Carbon County Rec/Trans SSD	8,188	0.0047761	20,926	56,592	(8,730)	467	4,505
Castle Dale City	17,987	0.0104923	45,970	124,324	(19,178)	1,025	9,897
Castle Valley SSD	88,416	0.0515759	225,969	611,128	(94,270)	5,041	48,650
Cedar City	706,272	0.4119892	1,805,048	4,881,698	(753,033)	40,264	388,615
Cedar City Housing Auth	29,313	0.0170989	74,915	202,606	(31,253)	1,671	16,129
Centerfield City	12,089	0.0070519	30,896	83,559	(12,889)	689	6,652
Centerville City	315,140	0.1838307	805,417	2,178,227	(336,005)	17,966	173,401
Central Davis Sewer Dist	169,113	0.0986488	432,210	1,168,899	(180,310)	9,641	93,052
Central Iron Co Water Conserv	24,857	0.0144995	63,527	171,806	(26,502)	1,417	13,677
Central Ut Public Health	254,252	0.1483126	649,802	1,757,370	(271,085)	14,495	139,898
Central Utah Counseling Center	490,042	0.2858561	1,252,421	3,387,135	(522,487)	27,937	269,638
Central Utah Water Dist	1,248,035	0.7280158	3,189,656	8,626,326	(1,330,666)	71,149	686,711
Central Weber Sewer Dist	274,519	0.1601348	701,599	1,897,452	(292,694)	15,650	151,049
City of Aurora	13,177	0.0076864	33,676	91,077	(14,049)	751	7,250
City of Bountiful	1,410,478	0.8227739	3,604,819	9,749,123	(1,503,865)	80,410	776,093
City of Cedar Hills	177,719	0.1036686	454,203	1,228,379	(189,485)	10,132	97,787
City of Draper	1,031,160	0.6015060	2,635,378	7,127,300	(1,099,432)	58,786	567,379
City of Duchesne	45,121	0.0263206	115,318	311,875	(48,109)	2,572	24,827
City of Enterprise	62,647	0.0365437	160,109	433,010	(66,795)	3,571	34,470
City of Green River	59,368	0.0346311	151,729	410,347	(63,299)	3,385	32,666
City of Harrisville	100,631	0.0587011	257,187	695,555	(107,294)	5,737	55,371
City of Helper	44,902	0.0261929	114,759	310,362	(47,875)	2,560	24,707
City of Holladay	174,730	0.1019250	446,564	1,207,719	(186,298)	9,961	96,142
City of Kanab	86,584	0.0505070	221,286	598,462	(92,317)	4,936	47,641
City of Milford	44,062	0.0257029	112,612	304,556	(46,980)	2,512	24,245

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
373,022	34,177	653,945	63,554	587,085	24,264	29,037	703,940	369,803	(5,554)	—	364,249
125,942	23,236	232,486	21,458	198,215	8,192	18,915	246,780	124,855	6,368	—	131,223
745,913	105,271	1,344,589	127,086	1,173,961	48,519	45,446	1,395,012	739,475	23,265	—	762,740
13,582	1,757	24,323	2,314	21,376	883	390	24,963	13,464	451	—	13,915
144,294	43,580	283,321	24,584	227,098	9,386	—	261,068	143,048	15,081	—	158,129
128,023	6,433	219,140	21,812	201,491	8,327	27,382	259,012	126,918	(5,860)	—	121,058
64,092	332	106,819	10,920	100,871	4,169	1,919	117,879	63,539	(603)	—	62,936
28,294	1,303	48,313	4,821	44,531	1,840	3,986	55,178	28,050	(637)	—	27,413
19,558	3,849	36,344	3,332	30,781	1,272	1,049	36,434	19,389	1,133	—	20,522
213,039	5,740	359,700	36,297	335,294	13,857	9,128	394,576	211,200	(116)	—	211,084
687,063	28,207	1,169,747	117,059	1,081,341	44,691	24,560	1,267,651	681,133	8,066	—	689,199
534,986	—	888,867	91,149	841,993	34,799	108,586	1,076,527	530,369	(52,863)	—	477,506
28,822	3,045	50,932	4,911	45,361	1,875	584	52,731	28,573	1,418	—	29,991
150,180	—	249,520	25,587	236,362	9,769	61,827	333,545	148,883	(27,793)	—	121,090
289,855	16,306	497,893	49,384	456,191	18,854	56,926	581,355	287,353	(13,737)	—	273,616
17,031	5,023	33,320	2,902	26,804	1,108	—	30,814	16,884	1,895	—	18,779
684,705	122,781	1,260,403	116,658	1,077,629	44,537	22,810	1,261,634	678,795	32,956	—	711,751
63,440	21,479	126,883	10,809	99,846	4,127	—	114,782	62,893	8,723	—	71,616
5,290	1,022	9,812	901	8,326	344	842	10,413	5,244	213	—	5,457
10,852	2,086	20,116	1,849	17,079	706	794	20,428	10,758	329	—	11,087
127,293	—	211,494	21,688	200,341	8,280	24,536	254,845	126,194	(13,574)	—	112,620
223,855	290,933	662,864	38,140	352,317	14,561	—	405,018	221,923	143,387	—	365,310
78,111	6,788	136,568	13,308	122,936	5,081	20,141	161,466	77,437	(3,248)	—	74,189
75,539	914	126,420	12,870	118,888	4,914	13,796	150,468	74,887	(5,865)	—	69,022
37,947	3,255	66,304	6,465	59,724	2,468	—	68,657	37,620	1,263	—	38,883
702,227	82,349	1,249,083	119,643	1,105,206	45,677	30,575	1,301,101	696,166	19,729	—	715,895
660,038	29,600	1,126,238	112,455	1,038,807	42,933	28,371	1,222,566	654,341	(7,504)	—	646,837
929,003	87,596	1,631,113	158,280	1,462,119	60,428	—	1,680,827	920,984	36,943	—	957,927
14,007	1,734	25,006	2,386	22,045	911	—	25,342	13,886	743	—	14,629
713,161	—	1,184,901	121,506	1,122,415	46,388	124,786	1,415,095	707,006	(55,953)	—	651,053
7,516	817	13,305	1,281	11,830	489	783	14,383	7,451	(93)	—	7,358
16,512	377	27,811	2,813	25,988	1,074	529	30,404	16,370	(68)	—	16,302
81,167	1,981	136,839	13,829	127,746	5,280	1,578	148,433	80,467	118	—	80,585
648,365	8,383	1,085,627	110,466	1,020,435	42,174	62,224	1,235,299	642,769	(31,065)	—	611,704
26,909	3,961	48,670	4,585	42,351	1,750	1,345	50,031	26,677	1,116	—	27,793
11,098	—	18,439	1,891	17,466	722	13,057	33,136	11,002	(4,691)	—	6,311
289,302	12,931	493,600	49,290	455,321	18,818	75,467	598,896	286,805	(19,728)	—	267,077
155,248	—	257,941	26,451	244,338	10,098	28,302	309,189	153,908	(12,839)	—	141,069
22,818	5,667	43,579	3,888	35,913	1,484	—	41,285	22,622	2,480	—	25,102
233,406	17,792	405,591	39,767	367,348	15,182	32,399	454,696	231,391	(1,639)	—	229,752
449,864	61,327	808,766	76,646	708,022	29,262	—	813,930	445,981	25,642	—	471,623
1,145,709	104,366	2,007,935	195,202	1,803,185	74,524	78,739	2,151,650	1,135,820	(6,247)	—	1,129,573
252,011	31,232	449,942	42,937	396,630	16,392	22,298	478,257	249,836	(1,087)	—	248,749
12,096	1,091	21,188	2,061	19,038	787	233	22,119	11,992	333	—	12,325
1,294,834	45,044	2,196,381	220,609	2,037,886	84,224	212,368	2,555,087	1,283,658	(68,990)	—	1,214,668
163,148	5,421	276,488	27,796	256,771	10,612	28,784	323,963	161,740	(6,678)	—	155,062
946,616	84,860	1,657,641	161,281	1,489,839	61,574	103,058	1,815,752	938,445	(14,373)	—	924,072
41,422	4,818	73,639	7,057	65,192	2,694	10,708	85,651	41,064	(1,134)	—	39,930
57,510	4,792	100,343	9,798	90,513	3,741	3,887	107,939	57,014	(243)	—	56,771
54,500	23,108	113,659	9,286	85,776	3,545	5,771	104,378	54,030	4,515	—	58,545
92,380	17,785	171,273	15,739	145,394	6,009	2,806	169,948	91,583	7,207	—	98,790
41,221	916	69,404	7,023	64,876	2,681	4,442	79,022	40,865	(1,745)	—	39,120
160,404	19,040	285,547	27,329	252,453	10,434	46,105	336,321	159,019	(6,888)	—	152,131
79,485	264	132,326	13,542	125,098	5,170	11,982	155,792	78,799	(4,815)	—	73,984
40,450	8,918	76,125	6,892	63,662	2,631	—	73,185	40,101	3,638	—	43,739

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** *(Continued)*

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Moab	\$ 466,328	0.2720231%	\$ 1,191,815	3,223,227	(497,203)	26,585	256,590
City of Monticello	71,383	0.0416397	182,436	493,393	(76,109)	4,069	39,277
City of Naples	52,262	0.0304862	133,569	361,234	(55,723)	2,979	28,757
City of North Salt Lake	419,322	0.2446027	1,071,678	2,898,320	(447,084)	23,905	230,725
City of Orem	1,968,088	1.1480441	5,029,925	13,603,280	(2,098,393)	112,199	1,082,909
City of Riverton	864,963	0.5045584	2,210,622	5,978,559	(922,231)	49,311	475,932
City of Santa Clara	243,226	0.1418812	621,624	1,681,163	(259,330)	13,866	133,831
City of Saratoga Springs	507,113	0.2958139	1,296,049	3,505,126	(540,688)	28,910	279,031
City of South Jordan	1,701,084	0.9922930	4,347,533	11,757,771	(1,813,711)	96,977	935,994
City of South Salt Lake	794,579	0.4635013	2,030,738	5,492,069	(847,187)	45,298	437,204
City of St George	3,721,118	2.1706389	9,510,220	25,720,099	(3,967,490)	212,138	2,047,486
City of Taylorsville	288,847	0.1684929	738,218	1,996,488	(307,971)	16,467	158,933
City of Uintah	16,821	0.0098120	42,989	116,263	(17,934)	959	9,255
City of Washington Terrace	156,515	0.0912999	400,012	1,081,821	(166,878)	8,923	86,120
City of Wendover	44,106	0.0257282	112,723	304,856	(47,026)	2,514	24,268
City of West Haven	108,634	0.0633695	277,641	750,871	(115,827)	6,193	59,774
City of West Jordan	2,168,605	1.2650118	5,542,396	14,989,241	(2,312,186)	123,630	1,193,240
City of Woodland Hills	29,105	0.0169779	74,385	201,173	(31,032)	1,659	16,015
Clearfield City	542,163	0.3162596	1,385,628	3,747,389	(578,059)	30,908	298,316
Cleveland Town	2,062	0.0012030	5,271	14,254	(2,199)	118	1,135
Clinton City	282,239	0.1646383	721,330	1,950,814	(300,926)	16,090	155,297
Coalville City	45,432	0.0265017	116,112	314,021	(48,440)	2,590	24,998
Cottonwood Heights City	328,749	0.1917693	840,199	2,272,292	(350,516)	18,742	180,889
Cottonwood Heights P&R Srv	158,282	0.0923304	404,527	1,094,031	(168,761)	9,024	87,092
Cottonwood Imp District	357,865	0.2087534	914,611	2,473,538	(381,559)	20,402	196,910
Council On Aging Golden Age SS	45,850	0.0267456	117,180	316,911	(48,886)	2,614	25,228
Daggett County	99,927	0.0582903	255,387	690,687	(106,543)	5,697	54,983
Davis Behavioral Health Inc	1,397,550	0.8152326	3,571,778	9,659,766	(1,490,081)	79,673	768,980
Davis Co Housing Authority	66,750	0.0389371	170,595	461,369	(71,169)	3,805	36,728
Davis Co Mosquito Abate	38,887	0.0226838	99,385	268,782	(41,461)	2,217	21,397
Davis County	4,531,143	2.6431503	11,580,434	31,318,930	(4,831,145)	258,317	2,493,189
Delta City	100,765	0.0587795	257,531	696,484	(107,437)	5,745	55,445
Duchesne Co Water Conserv Dist	33,653	0.0196307	86,008	232,606	(35,881)	1,919	18,517
Duchesne County	551,925	0.3219544	1,410,579	3,814,867	(588,468)	31,465	303,688
E Duchesne Cul Water Imp Dist	11,545	0.0067347	29,507	79,800	(12,310)	658	6,353
Eagle Mountain City	431,088	0.2514663	1,101,749	2,979,647	(459,630)	24,576	237,199
East Carbon City	46,152	0.0269217	117,952	318,998	(49,207)	2,631	25,394
Elk Ridge City	16,070	0.0093739	41,070	111,072	(17,134)	916	8,842
Emery County	486,992	0.2840770	1,244,627	3,366,054	(519,235)	27,763	267,960
Emery County Recreation SSD	2,816	0.0016426	7,197	19,463	(3,002)	161	1,549
Emery Water Conserv Dist	45,912	0.0267816	117,338	317,338	(48,951)	2,617	25,262
Enoch City	75,106	0.0438114	191,951	519,125	(80,078)	4,282	41,326
Ephraim City	179,579	0.1047535	458,956	1,241,234	(191,468)	10,238	98,810
Escalante City	32,689	0.0190683	83,544	225,942	(34,853)	1,864	17,986
Eureka City Corporation	19,317	0.0112682	49,369	133,518	(20,596)	1,101	10,629
Fairview City	52,863	0.0308368	135,105	365,388	(56,363)	3,014	29,087
Farmington City	438,469	0.2557718	1,120,613	3,030,663	(467,499)	24,997	241,260
Farr West City	67,635	0.0394535	172,858	467,488	(72,113)	3,856	37,215
Ferron City	19,556	0.0114075	49,980	135,169	(20,851)	1,115	10,760
Fillmore City	68,619	0.0400275	175,372	474,290	(73,162)	3,912	37,757
Five-County Assn of Govts	267,737	0.1561792	684,268	1,850,582	(285,464)	15,263	147,318
Fountain Green City	16,593	0.0096795	42,409	114,693	(17,692)	946	9,130
Fox Hollow Golf Course	24,060	0.0140347	61,490	166,298	(25,653)	1,372	13,238
Francis City	23,236	0.0135540	59,384	160,603	(24,774)	1,325	12,785
Fruit Heights City	70,189	0.0409432	179,384	485,140	(74,836)	4,001	38,620



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Plan Gross Pension Expense	Proportionate Share of Employer Contributions	Proportionate Share of Nonemployer Contributions	
428,094	233,925	945,194	72,937	673,760	27,846	74,896	849,439	424,399	38,905	—	463,304
65,530	8,346	117,222	11,165	103,135	4,262	9,371	127,933	64,965	1,312	—	66,277
47,977	69,297	149,010	8,174	75,510	3,121	—	86,805	47,563	31,006	—	78,569
384,942	22,626	662,198	65,585	605,844	25,039	35,114	731,582	381,619	1,247	—	382,866
1,806,726	29,618	3,031,452	307,823	2,843,531	117,520	122,185	3,391,059	1,791,131	(37,839)	—	1,753,292
794,045	34,812	1,354,100	135,286	1,249,715	51,650	153,506	1,590,157	787,191	(33,347)	—	753,844
223,284	30,891	401,872	38,042	351,418	14,524	24,500	428,484	221,357	(1,285)	—	220,072
465,535	67,868	841,344	79,316	732,686	30,281	—	842,283	461,517	28,858	—	490,375
1,561,614	2,047,122	4,641,707	266,062	2,457,759	101,577	—	2,825,398	1,548,135	1,002,413	—	2,550,548
729,432	27,857	1,239,791	124,278	1,148,022	47,447	96,728	1,416,475	723,136	(31,693)	—	691,443
3,416,027	181,580	5,857,231	582,010	5,376,343	222,199	26,254	6,206,806	3,386,542	77,594	—	3,464,136
265,164	—	440,564	45,178	417,331	17,248	108,148	587,905	262,876	(41,007)	—	221,869
15,442	8,566	34,222	2,631	24,303	1,004	2,261	30,199	15,308	2,072	—	17,380
143,683	10,012	248,738	24,480	226,136	9,346	2,059	262,021	142,442	3,184	—	145,626
40,490	28,018	95,290	6,898	63,725	2,634	4,444	77,701	40,140	7,666	—	47,806
99,727	18,372	184,066	16,991	156,957	6,487	6,278	186,713	98,866	2,880	—	101,746
1,990,803	250,472	3,558,145	339,185	3,133,242	129,494	43,861	3,645,782	1,973,620	90,125	—	2,063,745
26,719	32,244	76,637	4,552	42,052	1,738	153	48,495	26,488	11,011	—	37,499
497,711	38,783	865,718	84,798	783,327	32,374	56,144	956,643	493,415	(18,771)	—	474,644
1,893	233	3,379	323	2,980	123	3,105	6,531	1,877	(1,531)	—	346
259,098	5,539	436,024	44,144	407,784	16,853	13,672	482,453	256,862	(4,459)	—	252,403
41,707	3,866	73,161	7,106	65,641	2,713	509	75,969	41,347	1,128	—	42,475
301,796	110,678	612,105	51,419	474,983	19,631	—	546,033	299,191	48,808	—	347,999
145,304	28,414	269,834	24,756	228,688	9,451	2,587	265,482	144,050	14,407	—	158,457
328,524	11,363	557,199	55,973	517,051	21,369	51,426	645,819	325,689	(12,870)	—	312,819
42,091	—	69,933	7,171	66,245	2,738	26,197	102,351	41,727	(10,045)	—	31,682
91,734	—	152,414	15,629	144,376	5,967	83,904	249,876	90,942	(33,393)	—	57,549
1,282,966	161,534	2,293,153	218,587	2,019,208	83,452	124,927	2,446,174	1,271,893	10,460	—	1,282,353
61,277	84,051	185,861	10,440	96,441	3,986	10,655	121,522	60,748	38,477	—	99,225
35,698	2,070	61,382	6,082	56,184	2,322	5,045	69,633	35,390	(2,327)	—	33,063
4,159,638	244,136	7,155,280	708,703	6,546,683	270,568	325,503	7,851,457	4,123,735	(46,903)	—	4,076,832
92,504	8,829	162,523	15,760	145,588	6,017	20,767	188,132	91,705	(7,772)	—	83,933
30,894	15,948	67,278	5,264	48,622	2,010	2,537	58,433	30,627	4,486	—	35,113
506,673	716,600	1,558,426	86,325	797,432	32,957	29,248	945,962	502,300	318,150	—	820,450
10,599	1,281	18,891	1,806	16,681	689	607	19,783	10,507	269	—	10,776
395,743	—	657,518	67,425	622,844	25,742	182,845	898,856	392,327	(95,880)	—	296,447
42,368	4,729	75,122	7,218	66,681	2,756	28,567	105,222	42,002	(7,223)	—	34,779
14,752	—	24,510	2,513	23,218	960	25,439	52,130	14,625	(12,836)	—	1,789
447,064	14,879	757,666	76,169	703,616	29,080	99,500	908,365	443,205	(44,713)	—	398,492
2,585	489	4,784	440	4,068	168	2,865	7,541	2,563	(836)	—	1,727
42,147	10,655	80,681	7,181	66,334	2,742	1,414	77,671	41,784	3,301	—	45,085
68,948	—	114,556	11,747	108,514	4,485	2,446	127,192	68,353	(974)	—	67,379
164,855	34,884	308,787	28,087	259,459	10,723	2,402	300,671	163,432	12,211	—	175,643
30,009	1,401	51,260	5,113	47,229	1,952	4,497	58,791	29,750	(1,917)	—	27,833
17,733	4,462	33,925	3,021	27,910	1,153	309	32,393	17,580	1,329	—	18,909
48,529	5,314	85,944	8,268	76,378	3,157	19,060	106,863	48,110	(3,793)	—	44,317
402,519	55,164	723,940	68,580	633,508	26,182	—	728,270	399,045	21,551	—	420,596
62,090	21,429	124,590	10,579	97,720	4,039	1,858	114,196	61,554	7,589	—	69,143
17,952	—	29,827	3,059	28,255	1,168	20,582	53,064	17,798	(7,745)	—	10,053
62,993	14,128	118,790	10,733	99,142	4,097	1,103	115,075	62,449	4,965	—	67,414
245,786	7,841	416,208	41,876	386,832	15,987	30,528	475,223	243,664	(14,703)	—	228,961
15,233	195	25,504	2,595	23,975	991	6,951	34,512	15,102	(2,351)	—	12,751
22,087	154	36,851	3,763	34,762	1,437	1,674	41,636	21,896	(490)	—	21,406
21,331	5,368	40,809	3,634	33,571	1,387	—	38,592	21,146	2,054	—	23,200
64,434	9,857	116,912	10,978	101,410	4,191	—	116,579	63,878	4,204	—	68,082

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Garfield County	\$ 343,188	0.2001916%	\$ 877,099	2,372,089	(365,910)	19,565	188,834
Genola Town	16,915	0.0098669	43,230	116,914	(18,035)	964	9,307
Grand Co Cemetery Mtce Dist	14,553	0.0084894	37,195	100,592	(15,517)	830	8,008
Grand County	741,236	0.4323850	1,894,408	5,123,369	(790,312)	42,257	407,853
Grand Water/Sewer Service	38,205	0.0222859	97,641	264,068	(40,734)	2,178	21,021
Granger-Hunter Imp Dist	654,524	0.3818030	1,672,793	4,524,019	(697,859)	37,314	360,141
Grantsville City	185,330	0.1081083	473,655	1,280,985	(197,600)	10,565	101,975
Gunnison City	42,705	0.0249109	109,142	295,172	(45,532)	2,435	23,498
Gunnison Valley Hospital	916,097	0.5343866	2,341,308	6,331,996	(976,751)	52,226	504,068
Gunnison Valley Police Dept	9,719	0.0056695	24,840	67,178	(10,363)	554	5,348
Heber City	406,732	0.2372588	1,039,502	2,811,301	(433,661)	23,187	223,798
Heber Light & Power	528,719	0.3084177	1,351,270	3,654,470	(563,725)	30,142	290,919
Heber Valley SSD	33,889	0.0197686	86,612	234,240	(36,133)	1,932	18,647
Herriman City	820,904	0.4788577	2,098,019	5,674,029	(875,255)	46,799	451,689
Highland City	232,425	0.1355806	594,019	1,606,507	(247,814)	13,250	127,888
Hinckley Town	10,038	0.0058554	25,654	69,381	(10,702)	572	5,523
Hooper City	58,300	0.0340083	149,001	402,967	(62,160)	3,324	32,079
Hooper Water Improv Dist	79,680	0.0464799	203,642	550,745	(84,956)	4,543	43,843
Housing Auth of Carbon Co	39,723	0.0231718	101,523	274,565	(42,353)	2,265	21,857
Housing Auth of SI County	525,303	0.3064250	1,342,540	3,630,858	(560,083)	29,947	289,040
Housing Authority of SLC	530,505	0.3094592	1,355,834	3,666,810	(565,629)	30,244	291,902
Housing Authority Ogden City	129,027	0.0752651	329,759	891,823	(137,569)	7,356	70,995
Huntington City	36,496	0.0212889	93,273	252,254	(38,912)	2,081	20,081
Hurricane City	587,881	0.3429286	1,502,473	4,063,392	(626,804)	33,515	323,472
Hurricane Valley Fire SSD	14,673	0.0085593	37,501	101,420	(15,645)	837	8,074
Hyde Park City	78,080	0.0455463	199,552	539,682	(83,249)	4,451	42,962
Hyrum City	245,528	0.1432240	627,507	1,697,074	(261,785)	13,997	135,098
Impact Mitigation SSD	31,002	0.0180842	79,232	214,281	(33,054)	1,767	17,058
Iron County	747,805	0.4362166	1,911,196	5,168,770	(797,316)	42,632	411,467
Ivins City	239,565	0.1397454	612,267	1,655,856	(255,426)	13,657	131,817
Jordan River Commission	14,908	0.0086963	38,101	103,043	(15,895)	850	8,203
Jordan Valley Water Conserv	1,492,552	0.8706501	3,814,579	10,316,413	(1,591,373)	85,089	821,253
Jordanelle SSD	249,006	0.1452528	636,396	1,721,114	(265,493)	14,196	137,012
Juab County	300,707	0.1754111	768,529	2,078,462	(320,616)	17,143	165,459
Kamas City	40,278	0.0234956	102,941	278,402	(42,945)	2,296	22,163
Kane County	436,147	0.2544178	1,114,681	3,014,620	(465,024)	24,864	239,983
Kane County Water Conserv Dist	73,675	0.0429768	188,294	509,236	(78,553)	4,200	40,538
Kaysville City	622,645	0.3632073	1,591,320	4,303,677	(663,870)	35,496	342,600
Kearns Improvement Dist	311,635	0.1817857	796,458	2,153,995	(332,268)	17,766	171,472
Laverkin City	91,077	0.0531282	232,771	629,521	(97,108)	5,192	50,114
Layton City	1,201,415	0.7008208	3,070,506	8,304,090	(1,280,959)	68,492	661,059
Lehi City	1,543,580	0.9004162	3,944,993	10,669,114	(1,645,779)	87,998	849,330
Lewiston City	31,776	0.0185361	81,212	219,636	(33,880)	1,812	17,484
Lindon City	338,799	0.1976314	865,882	2,341,753	(361,230)	19,315	186,419
Logan City	2,229,993	1.3008213	5,699,288	15,413,551	(2,377,639)	127,130	1,227,018
Lone Peak PS District	35,831	0.0209016	91,576	247,665	(38,204)	2,043	19,716
Maeser Water Improve Dist	58,182	0.0339393	148,698	402,150	(62,034)	3,317	32,014
Magna Mosquito Abatement	14,706	0.0085783	37,584	101,645	(15,679)	838	8,092
Manti City	94,599	0.0551827	241,772	653,865	(100,863)	5,393	52,052
Mapleton City	232,457	0.1355993	594,101	1,606,729	(247,848)	13,252	127,906
Marriott-Slaterville City	30,458	0.0177669	77,842	210,522	(32,474)	1,736	16,759
Mayfield Town	8,314	0.0048500	21,249	57,468	(8,865)	474	4,575
Mendon City	10,148	0.0059199	25,937	70,145	(10,820)	579	5,584
Metro Water Dist Slc/Sandy	700,881	0.4088446	1,791,271	4,844,437	(747,285)	39,957	385,648
Midvale City	615,519	0.3590503	1,573,107	4,254,420	(656,271)	35,090	338,679

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Plan Gross Pension Expense	Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
315,050	—	523,449	53,677	495,844	20,493	31,991	602,005	312,331	(12,830)	—	299,501
15,528	2,955	28,754	2,646	24,439	1,010	—	28,095	15,394	1,505	—	16,899
13,360	7,376	29,574	2,276	21,027	869	—	24,172	13,245	3,316	—	16,561
680,463	129,517	1,260,090	115,935	1,070,952	44,261	42,698	1,273,846	674,589	19,141	—	693,730
35,072	10,693	68,964	5,975	55,199	2,281	10,777	74,232	34,770	(1,575)	—	33,195
600,860	—	998,315	102,372	945,668	39,084	164,145	1,251,269	595,673	(64,318)	—	531,355
170,135	1,825	284,500	28,987	267,768	11,067	11,469	319,291	168,666	(6,299)	—	162,367
39,203	—	65,136	6,679	61,701	2,550	11,430	82,360	38,865	(4,287)	—	34,578
840,987	141,850	1,539,131	143,284	1,323,595	54,703	38,068	1,559,650	833,728	57,751	—	891,479
8,922	20,185	35,009	1,520	14,042	580	—	16,142	8,845	6,847	—	15,692
373,384	145,357	765,726	63,616	587,654	24,287	—	675,557	370,161	51,428	—	421,589
485,370	57,463	863,894	82,696	763,904	31,571	54,226	932,397	481,181	(12,361)	—	468,820
31,111	—	51,690	5,301	48,964	2,024	10,110	66,399	30,842	(3,539)	—	27,303
753,599	169,891	1,421,978	128,395	1,186,058	49,019	—	1,363,472	747,094	79,122	—	826,216
213,369	4,964	359,471	36,353	335,813	13,879	7,637	393,682	211,527	(2,736)	—	208,791
9,215	1,158	16,468	1,570	14,503	599	5,699	22,371	9,135	(1,507)	—	7,628
53,520	5,615	94,538	9,119	84,233	3,481	6,833	103,666	53,058	(2,257)	—	50,801
73,147	8,260	129,793	12,463	115,124	4,758	136	132,481	72,516	3,170	—	75,686
36,466	—	60,588	6,213	57,393	2,372	34,609	100,587	36,152	(12,977)	—	23,175
482,234	24,926	826,147	82,161	758,968	31,367	38,835	911,331	478,072	(7,365)	—	470,707
487,009	26,047	835,202	82,975	766,484	31,678	122,523	1,003,660	482,806	(53,216)	—	429,590
118,448	4,709	201,508	20,181	186,420	7,705	12,632	226,938	117,426	(2,283)	—	115,143
33,503	3,924	59,589	5,708	52,729	2,179	4,081	64,697	33,214	(839)	—	32,375
539,681	44,061	940,729	91,949	849,382	35,104	26,755	1,003,190	535,023	11,611	—	546,634
13,470	17,647	40,028	2,295	21,200	876	—	24,371	13,354	8,839	—	22,193
71,678	2,668	121,759	12,212	112,811	4,662	4,831	134,516	71,059	(1,561)	—	69,498
225,398	23,283	397,776	38,402	354,744	14,661	20,732	428,539	223,452	(1,231)	—	222,221
28,460	560	47,845	4,849	44,792	1,851	2,163	53,655	28,214	(845)	—	27,369
686,493	17,030	1,157,622	116,962	1,080,442	44,654	180,807	1,422,865	680,567	(72,359)	—	608,208
219,923	19,729	385,126	37,470	346,128	14,305	74,639	472,542	218,025	(15,811)	—	202,214
13,686	653	23,392	2,332	21,539	890	3,177	27,938	13,568	(690)	—	12,878
1,370,179	2,901	2,279,422	233,446	2,156,468	89,125	36,959	2,515,998	1,358,353	(17,552)	—	1,340,801
228,591	15,966	395,765	38,946	359,769	14,869	14,869	428,403	226,617	888	—	227,505
276,052	49,814	508,468	47,033	434,467	17,956	15,402	514,858	273,669	7,875	—	281,544
36,976	1,365	62,800	6,300	58,195	2,405	6,499	73,399	36,657	(1,369)	—	35,288
400,388	26,690	691,925	68,217	630,154	26,044	44,385	768,800	396,932	(7,438)	—	389,494
67,634	6,269	118,641	11,523	106,447	4,399	8,700	131,069	67,051	(41)	—	67,010
571,595	46,370	996,061	97,386	899,609	37,180	60,825	1,095,000	566,661	5,478	—	572,139
286,084	6,153	481,475	48,742	450,256	18,609	22,774	540,381	283,615	(7,258)	—	276,357
83,610	188,433	327,349	14,245	131,590	5,439	—	151,274	82,888	64,036	—	146,924
1,102,912	—	1,832,463	187,910	1,735,827	71,740	185,307	2,180,784	1,093,392	(73,851)	—	1,019,541
1,417,023	186,204	2,540,555	241,427	2,230,194	92,172	—	2,563,793	1,404,792	70,982	—	1,475,774
29,171	2,079	50,546	4,970	45,911	1,897	18,263	71,041	28,919	(5,416)	—	23,503
311,021	45,407	562,162	52,991	489,503	20,231	2,439	565,164	308,336	16,823	—	325,159
2,047,158	46,742	3,448,048	348,787	3,221,937	133,160	203,567	3,907,451	2,029,488	(53,479)	—	1,976,009
32,894	14,824	69,477	5,604	51,770	2,140	4,142	63,656	32,610	2,534	—	35,144
53,412	259	89,002	9,100	84,062	3,474	7,623	104,259	52,951	(4,039)	—	48,912
13,500	4,289	26,719	2,300	21,247	878	3,018	27,443	13,384	(402)	—	12,982
86,843	6,626	150,914	14,796	136,679	5,649	3,319	160,443	86,094	2,286	—	88,380
213,398	2,649	357,205	36,358	335,859	13,881	42,485	428,583	211,556	(13,035)	—	198,521
27,961	2,590	49,046	4,764	44,006	1,819	116	50,705	27,719	985	—	28,704
7,633	3,936	16,618	1,300	12,013	496	362	14,171	7,567	1,170	—	8,737
9,316	2,517	17,996	1,587	14,663	606	—	16,856	9,236	966	—	10,202
643,416	7,254	1,076,275	109,623	1,012,646	41,852	56,078	1,220,199	637,863	(16,623)	—	621,240
565,053	2,520	941,342	96,272	889,313	36,754	34,498	1,056,837	560,176	(13,091)	—	547,085

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Midvalley Improvement District	\$ 110,859	0.0646676%	\$ 283,328	766,252	(118,199)	6,320	60,999
Midway City	117,828	0.0687327	301,139	814,420	(125,630)	6,717	64,833
Military Installation Devel	47,655	0.0277984	121,793	329,386	(50,810)	2,717	26,221
Millard Co Care & Rehab Inc	202,595	0.1181799	517,782	1,400,324	(216,009)	11,550	111,475
Millard County	695,549	0.4057347	1,777,645	4,807,588	(741,601)	39,653	382,715
Millcreek City	16,835	0.0098201	43,025	116,359	(17,949)	960	9,263
Millville City	29,663	0.0173036	75,812	205,032	(31,627)	1,691	16,322
Minersville Town	26,938	0.0157136	68,846	186,192	(28,721)	1,536	14,822
Monroe City	84,916	0.0495340	217,023	586,933	(90,538)	4,841	46,724
Morgan City Corporation	152,618	0.0890267	390,053	1,054,886	(162,723)	8,701	83,976
Morgan County	262,779	0.1532870	671,596	1,816,312	(280,178)	14,981	144,590
Moroni City	16,043	0.0093583	41,002	110,887	(17,105)	915	8,827
Mount Pleasant City	107,098	0.0624737	273,716	740,257	(114,189)	6,106	58,929
Mountain Regional Water SSD	298,037	0.1738540	761,707	2,060,012	(317,770)	16,991	163,990
Mountainland Assn of Govt	388,847	0.2268262	993,794	2,687,684	(414,593)	22,168	213,957
Mt Olympus Improvement Dist	290,401	0.1693994	742,190	2,007,229	(309,628)	16,556	159,788
Murray City	2,385,422	1.3914877	6,096,525	16,487,865	(2,543,359)	135,991	1,312,540
Myton City	21,228	0.0123826	54,252	146,723	(22,633)	1,210	11,680
N Tooele Co Fire Protection SD	627	0.0003655	1,601	4,331	(668)	36	345
N Ut Environmental Rsrc Agcy	56,349	0.0328700	144,013	389,480	(60,080)	3,212	31,005
Nebo Credit Union	132,493	0.0772871	338,618	915,782	(141,265)	7,553	72,902
Nephi City	271,855	0.1585813	694,792	1,879,044	(289,855)	15,498	149,584
Nibley City Corporation	100,763	0.0587781	257,524	696,467	(107,435)	5,744	55,443
North Davis Co Sewer Dist	466,030	0.2718489	1,191,052	3,221,162	(496,885)	26,568	256,425
North Davis Fire District	10,504	0.0061272	26,845	72,602	(11,199)	599	5,780
North Emery Water Users SSD	4,448	0.0025944	11,367	30,741	(4,742)	254	2,447
North Fork SSD	17,510	0.0102142	44,751	121,029	(18,669)	998	9,635
North Logan City	154,402	0.0900675	394,613	1,067,218	(164,625)	8,802	84,957
North Ogden City	285,285	0.1664153	729,115	1,971,870	(304,174)	16,264	156,974
North Park Police Agency	14,872	0.0086751	38,008	102,792	(15,856)	848	8,183
North Pointe Solid Waste	178,246	0.1039762	455,551	1,232,024	(190,048)	10,162	98,077
North View Fire District	8,502	0.0049592	21,728	58,762	(9,064)	485	4,678
Northeastern Counseling Ctr	365,652	0.2132958	934,513	2,527,361	(389,862)	20,846	201,194
Ogden City Corp	2,380,440	1.3885814	6,083,792	16,453,428	(2,538,046)	135,707	1,309,799
Oquirrh Rec And Parks District	169,750	0.0990203	433,838	1,173,301	(180,989)	9,677	93,402
Orangeville City	19,218	0.0112105	49,117	132,834	(20,491)	1,096	10,574
Orderville Town	14,580	0.0085051	37,263	100,778	(15,546)	831	8,023
Panguitch City Corporation	39,950	0.0233040	102,102	276,131	(42,595)	2,278	21,982
Park City	2,021,766	1.1793561	5,167,113	13,974,298	(2,155,625)	115,259	1,112,444
Park City Fire Service	69,450	0.0405122	177,496	480,033	(74,048)	3,959	38,214
Parowan City	177,214	0.1033744	452,914	1,224,893	(188,948)	10,103	97,509
Payson City	739,269	0.4312374	1,889,380	5,109,771	(788,215)	42,145	406,771
Perry City	67,911	0.0396145	173,563	469,396	(72,407)	3,872	37,367
Piute County	88,236	0.0514704	225,507	609,877	(94,078)	5,030	48,550
Plain City	55,703	0.0324933	142,363	385,016	(59,391)	3,176	30,650
Pleasant Grove City	551,829	0.3218981	1,410,332	3,814,200	(588,365)	31,459	303,635
Pleasant View City	131,750	0.0768539	336,720	910,649	(140,473)	7,511	72,494
Price City	449,306	0.2620933	1,148,309	3,105,567	(479,054)	25,615	247,223
Price River Water Improve	252,077	0.1470439	644,243	1,742,337	(268,767)	14,371	138,701
Providence City	83,784	0.0488737	214,130	579,109	(89,331)	4,776	46,101
Provo City Corp	3,645,882	2.1267511	9,317,934	25,200,068	(3,887,272)	207,849	2,006,088
Provo Housing Authority	113,491	0.0662027	290,054	784,442	(121,005)	6,470	62,447
Provo River Water Users	157,015	0.0915917	401,291	1,085,278	(167,411)	8,951	86,395
Recreation & Habilitation Svcs	9,152	0.0053384	23,389	63,255	(9,758)	522	5,036
Redmond Town	16,949	0.0098868	43,317	117,150	(18,071)	966	9,326

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
101,770	36,431	205,520	17,339	160,172	6,620	—	184,131	100,892	14,364	—	115,256
108,168	12,992	192,710	18,429	170,240	7,036	6,683	202,388	107,234	5,669	—	112,903
43,748	7,923	80,609	7,454	68,852	2,846	—	79,152	43,370	3,274	—	46,644
185,985	9,940	318,950	31,687	292,714	12,098	12,773	349,272	184,379	190	—	184,569
638,522	—	1,060,890	108,789	1,004,943	41,533	92,762	1,248,027	633,011	(41,707)	—	591,304
15,454	34,963	60,640	2,633	24,323	1,005	—	27,961	15,321	11,860	—	27,181
27,231	3,411	48,655	4,640	42,858	1,771	4,527	53,796	26,996	13	—	27,009
24,729	6,642	47,729	4,213	38,920	1,609	1,439	46,181	24,516	2,115	—	26,631
77,954	13,103	142,622	13,281	122,688	5,071	—	141,040	77,281	5,386	—	82,667
140,105	19,486	252,268	23,871	220,506	9,113	—	253,490	138,896	7,184	—	146,080
241,234	3,596	404,401	41,101	379,669	15,691	15,290	451,751	239,152	(6,218)	—	232,934
14,728	2,301	26,771	2,509	23,179	958	4,942	31,588	14,600	(1,107)	—	13,493
98,318	22,682	186,035	16,751	154,738	6,395	706	178,590	97,469	10,063	—	107,532
273,601	16,435	471,017	46,615	430,610	17,797	3,086	498,108	271,240	8,218	—	279,458
356,966	34,800	627,891	60,819	561,814	23,219	—	645,852	353,885	13,065	—	366,950
266,591	16,998	459,933	45,421	419,577	17,341	40,691	523,030	264,290	(10,024)	—	254,266
2,189,843	26,458	3,664,832	373,097	3,446,504	142,441	156,239	4,118,281	2,170,942	(42,041)	—	2,128,901
19,487	13,914	46,291	3,320	30,670	1,268	2,320	37,578	19,319	3,800	—	23,119
575	1,301	2,257	98	905	37	—	1,040	570	441	—	1,011
51,729	117,028	202,974	8,813	81,414	3,365	—	93,592	51,282	39,698	—	90,980
121,630	18,123	220,208	20,723	191,428	7,912	10,587	230,650	120,580	492	—	121,072
249,566	8,301	422,949	42,520	392,782	16,233	26,227	477,762	247,412	(12,223)	—	235,189
92,502	16,287	169,976	15,760	145,584	6,017	—	167,361	91,703	8,806	—	100,509
427,820	6,593	717,406	72,890	673,329	27,828	38,203	812,250	424,128	(11,582)	—	412,546
9,643	1,090	17,112	1,643	15,176	627	579	18,025	9,559	56	—	9,615
4,083	20	6,804	696	6,426	266	9,525	16,913	4,048	(3,221)	—	827
16,075	635	27,343	2,739	25,299	1,046	15,155	44,239	15,936	(6,546)	—	9,390
141,743	10,147	245,649	24,150	223,084	9,220	84,189	340,643	140,520	(25,706)	—	114,814
261,895	18,843	453,976	44,621	412,185	17,035	14,561	488,402	259,634	(1,122)	—	258,512
13,652	24,366	47,049	2,326	21,487	888	—	24,701	13,535	9,320	—	22,855
163,632	18,667	290,538	27,879	257,533	10,644	6,845	302,901	162,219	2,845	—	165,064
7,805	563	13,531	1,330	12,283	508	97	14,218	7,737	175	—	7,912
335,673	3,995	561,708	57,191	528,301	21,834	43,120	650,446	332,775	(19,914)	—	312,861
2,185,270	139,228	3,770,004	372,318	3,439,306	142,143	46,878	4,000,645	2,166,408	50,496	—	2,216,904
155,832	40,115	299,026	26,550	245,258	10,136	1,566	283,510	154,487	12,649	—	167,136
17,642	1,389	30,701	3,006	27,767	1,148	—	31,921	17,490	590	—	18,080
13,385	1,746	23,985	2,280	21,066	871	—	24,217	13,269	625	—	13,894
36,674	11,827	72,761	6,248	57,720	2,386	9,631	75,985	36,358	(1,506)	—	34,852
1,856,003	336,650	3,420,356	316,219	2,921,086	120,726	147,284	3,505,315	1,839,983	75,346	—	1,915,329
63,756	13,143	119,072	10,862	100,343	4,147	8,004	123,356	63,205	3,090	—	66,295
162,685	6,124	276,421	27,718	256,043	10,582	27,501	321,844	161,281	(7,193)	—	154,088
678,657	26,737	1,154,310	115,627	1,068,110	44,144	47,811	1,275,692	672,799	(2,278)	—	670,521
62,343	6,157	109,739	10,622	98,119	4,055	4,822	117,618	61,805	2,130	—	63,935
81,001	8,330	142,911	13,801	127,484	5,269	23,178	169,732	80,302	(10,353)	—	69,949
51,136	28,161	113,123	8,712	80,481	3,326	7,626	100,145	50,695	9,038	—	59,733
506,585	51,127	892,806	86,310	797,293	32,951	26,192	942,746	502,212	14,258	—	516,470
120,948	16,177	217,130	20,607	190,355	7,867	4,234	223,063	119,904	8,238	—	128,142
412,467	—	685,305	70,275	649,165	26,829	90,439	836,708	408,907	(36,999)	—	371,908
231,409	—	384,481	39,427	364,205	15,052	38,276	456,960	229,412	(15,726)	—	213,686
76,915	—	127,792	13,104	121,053	5,003	16,047	155,207	76,251	(6,960)	—	69,291
3,346,959	—	5,560,896	570,242	5,267,640	217,707	315,894	6,371,483	3,318,070	(125,553)	—	3,192,517
104,186	—	173,103	17,751	163,974	6,777	22,249	210,751	103,287	(9,341)	—	93,946
144,142	449	239,937	24,558	226,859	9,376	12,624	273,417	142,898	(4,890)	—	138,008
8,401	899	14,858	1,431	13,222	546	2,895	18,094	8,329	(569)	—	7,760
15,559	1,604	27,455	2,651	24,488	1,012	285	28,436	15,425	558	—	15,983

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Rich County	\$ 96,381	0.0562216%	\$ 246,324	666,175	(102,762)	5,495	53,032
Richfield City	201,850	0.1177453	515,877	1,395,175	(215,215)	11,507	111,065
Richmond City	37,441	0.0218402	95,688	258,787	(39,919)	2,134	20,601
Riverdale City	327,270	0.1909065	836,419	2,262,069	(348,939)	18,657	180,075
Roosevelt City	227,293	0.1325866	580,902	1,571,031	(242,342)	12,958	125,064
Roosevelt City Housing	7,026	0.0040985	17,957	48,564	(7,491)	401	3,866
Roy City	603,535	0.3520598	1,542,480	4,171,589	(643,494)	34,407	332,085
Roy Water Conserv Dist	77,546	0.0452349	198,188	535,992	(82,680)	4,421	42,668
S Utah Valley Electric Svc Dst	150,481	0.0877801	384,591	1,040,114	(160,444)	8,579	82,800
S Utah Valley Solid Waste	141,351	0.0824540	361,256	977,005	(150,709)	8,058	77,776
Salem City	290,969	0.1697310	743,642	2,011,158	(310,234)	16,588	160,101
Salina City	53,643	0.0312914	137,097	370,775	(57,194)	3,058	29,516
Salt Lake City Corp	17,418,367	10.1606511	44,516,859	120,394,484	(18,571,619)	993,006	9,584,178
Salt Lake City Public Library	812,245	0.4738069	2,075,890	5,614,181	(866,023)	46,305	446,925
Salt Lake Co Serv Area 3	30,640	0.0178732	78,308	211,781	(32,669)	1,747	16,859
Salt Lake County	23,243,992	13.5589116	59,405,660	160,660,771	(24,782,956)	1,325,110	12,789,642
San Juan County	732,059	0.4270319	1,870,955	5,059,940	(780,528)	41,734	402,804
San Juan Mental Health	138,604	0.0808519	354,236	958,022	(147,781)	7,902	76,265
Sandy City	2,566,741	1.4972565	6,559,930	17,741,129	(2,736,683)	146,328	1,412,308
Sandy Suburban Imp Dist	198,415	0.1157411	507,096	1,371,427	(211,551)	11,311	109,174
Sanpete County	350,920	0.2047020	896,861	2,425,533	(374,154)	20,006	193,088
Santaquin City	209,749	0.1223531	536,066	1,449,773	(223,637)	11,958	115,411
Seven County Infrastructure	2,463	0.0014365	6,294	17,021	(2,626)	140	1,355
Sevier County	392,084	0.2287140	1,002,065	2,710,053	(418,043)	22,352	215,738
Six-County Assoc of Govt	160,568	0.0936643	410,371	1,109,837	(171,199)	9,154	88,350
Slc Mosquito Abatement	78,575	0.0458354	200,819	543,108	(83,778)	4,480	43,235
Smithfield City Corp	213,081	0.1242967	544,581	1,472,803	(227,189)	12,148	117,245
Snyder Basin Special Rec Dist	155,127	0.0904905	396,466	1,072,230	(165,398)	8,844	85,356
Snyderville Basin W R D	517,849	0.3020769	1,323,489	3,579,337	(552,136)	29,522	284,938
So Davis Metro Fire Agency	18,839	0.0109894	48,148	130,214	(20,086)	1,074	10,366
So Davis Recreation Center	82,140	0.0479149	209,930	567,748	(87,579)	4,683	45,196
So SI Valley Mosq Abate	36,292	0.0211704	92,754	250,850	(38,695)	2,069	19,969
So Utah Valley Animal Svcs SSD	15,168	0.0088479	38,765	104,840	(16,172)	865	8,346
So Utah Valley Power Systems	17,167	0.0100138	43,873	118,654	(18,303)	979	9,446
Solid Waste SSD #1	24,496	0.0142891	62,605	169,313	(26,118)	1,396	13,478
South Davis Sewer Dist	313,330	0.1827746	800,790	2,165,713	(334,075)	17,863	172,405
South Davis Water Dist	64,545	0.0376509	164,960	446,129	(68,818)	3,680	35,515
South Ogden City	321,377	0.1874685	821,356	2,221,331	(342,655)	18,321	176,832
South Ogden Conserv Dist	210,565	0.1228287	538,149	1,455,408	(224,506)	12,004	115,860
South Valley Sewer District	512,838	0.2991534	1,310,681	3,544,696	(546,792)	29,236	282,181
South Valley Water Reclamation	474,352	0.2767033	1,212,320	3,278,683	(505,758)	27,042	261,004
South Weber City	80,432	0.0469185	205,564	555,942	(85,758)	4,585	44,257
Southeastern Utah AOG	127,295	0.0742547	325,332	879,851	(135,723)	7,257	70,042
Southeastern Utah Health	150,315	0.0876831	384,166	1,038,965	(160,267)	8,569	82,708
Spanish Fork City	1,428,972	0.8335616	3,652,083	9,876,948	(1,523,582)	81,464	786,269
Spring City	31,395	0.0183135	80,237	216,998	(33,473)	1,790	17,274
Springville City	1,294,682	0.7552263	3,308,873	8,948,745	(1,380,401)	73,809	712,378
St George Housing Auth	26,551	0.0154882	67,858	183,521	(28,309)	1,514	14,609
Summit County	1,901,198	1.1090256	4,858,974	13,140,946	(2,027,075)	108,386	1,046,104
Sunset City	79,610	0.0464390	203,463	550,260	(84,881)	4,539	43,804
Sw Behavioral Health Center	1,051,292	0.6132501	2,686,833	7,266,457	(1,120,897)	59,933	578,457
Sw Mosquito Abatement/Control	22,300	0.0130082	56,993	154,135	(23,776)	1,271	12,270
Sw Ut Public Health Dept	365,839	0.2134048	934,990	2,528,653	(390,061)	20,856	201,297
Syracuse City Corp	339,748	0.1981849	868,307	2,348,311	(362,242)	19,369	186,941
Taylor West Weber Wtr Imp Dist	26,964	0.0157292	68,914	186,377	(28,750)	1,537	14,837

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	
88,478	151,259	298,264	15,075	139,252	5,755	—	160,082	87,715	59,222	—	146,937
185,301	10,747	318,620	31,571	291,637	12,053	9,189	344,450	183,701	(1,966)	—	181,735
34,371	4,258	61,364	5,856	54,095	2,236	22,739	84,926	34,074	(5,315)	—	28,759
300,438	11,824	510,994	51,187	472,846	19,542	4,882	548,457	297,845	2,676	—	300,521
208,657	22,161	368,840	35,550	328,397	13,572	46,797	424,316	206,856	(5,629)	—	201,227
6,450	—	10,717	1,099	10,151	420	661	12,331	6,394	(296)	—	6,098
554,052	65,277	985,821	94,397	871,999	36,039	60,520	1,062,955	549,269	214	—	549,483
71,188	7,779	126,056	12,129	112,040	4,631	3,979	132,779	70,574	1,832	—	72,406
138,143	29,424	258,946	23,536	217,418	8,986	2,103	252,043	136,951	12,262	—	149,213
129,761	—	215,595	22,108	204,226	8,440	148,819	383,593	128,641	(52,276)	—	76,365
267,113	54,347	498,149	45,510	420,398	17,375	—	483,283	264,807	21,511	—	286,318
49,245	1,113	82,932	8,390	77,504	3,203	26,457	115,554	48,820	(9,821)	—	38,999
15,990,249	153,361	26,720,794	2,724,358	25,166,392	1,040,103	1,305,176	30,236,029	15,852,232	(360,464)	—	15,491,768
745,650	32,507	1,271,387	127,041	1,173,548	48,502	54,653	1,403,744	739,214	(6,291)	—	732,923
28,128	815	47,549	4,792	44,269	1,830	1,827	52,718	27,885	(264)	—	27,621
21,338,241	177,386	35,630,379	3,635,529	33,583,371	1,387,969	1,714,944	40,321,813	21,154,068	(782,538)	—	20,371,530
672,038	32,120	1,148,696	114,499	1,057,693	43,713	23,673	1,239,578	666,238	9,314	—	675,552
127,240	29,912	241,319	21,679	200,258	8,276	12,205	242,418	126,142	10,774	—	136,916
2,356,296	130,809	4,045,741	401,457	3,708,477	153,268	227,080	4,490,282	2,335,958	(26,546)	—	2,309,412
182,147	1,651	304,283	31,033	286,673	11,848	25,740	355,294	180,575	(9,555)	—	171,020
322,148	4,731	539,973	54,886	507,016	20,954	17,341	600,197	319,368	(6,964)	—	312,404
192,552	14,795	334,716	32,806	303,050	12,525	785	349,166	190,890	8,063	—	198,953
2,261	33,691	37,447	385	3,558	147	62,665	66,755	2,241	(1,871)	—	370
359,937	6,496	604,523	61,325	566,490	23,412	221,188	872,415	356,830	(83,395)	—	273,435
147,403	—	244,907	25,114	231,992	9,588	48,505	315,199	146,131	(23,327)	—	122,804
72,133	5,048	124,896	12,290	113,527	4,692	11,768	142,277	71,511	(1,425)	—	70,086
195,611	4,167	329,171	33,327	307,864	12,724	31,969	385,884	193,923	(10,174)	—	183,749
142,409	226,103	462,712	24,263	224,131	9,263	—	257,657	141,180	92,242	—	233,422
475,391	75,857	865,708	80,995	748,199	30,922	11,809	871,925	471,288	24,691	—	495,979
17,294	3,383	32,117	2,947	27,219	1,125	—	31,291	17,145	1,207	—	18,352
75,406	—	125,285	12,847	118,678	4,905	11,678	148,108	74,755	(4,635)	—	70,120
33,317	1,556	56,911	5,676	52,436	2,167	288	60,567	33,029	553	—	33,582
13,924	6,583	29,718	2,372	21,915	906	964	26,157	13,804	2,520	—	16,324
15,759	789	26,973	2,685	24,803	1,025	96	28,609	15,623	237	—	15,860
22,487	1,362	38,723	3,831	35,392	1,463	25,407	66,093	22,293	(7,965)	—	14,328
287,640	27,106	505,014	49,007	452,705	18,710	15,064	535,486	285,157	8,075	—	293,232
59,253	1,526	99,974	10,095	93,256	3,854	381	107,586	58,741	792	—	59,533
295,027	13,356	503,536	50,266	464,331	19,190	11,576	545,363	292,481	2,832	—	295,313
193,301	—	321,165	32,934	304,228	12,573	71,481	421,216	191,632	(33,039)	—	158,593
470,790	39,565	821,772	80,211	740,958	30,623	—	851,792	466,727	16,671	—	483,398
435,460	18,339	741,845	74,192	685,352	28,325	21,535	809,404	431,701	3,309	—	435,010
73,838	13,784	136,464	12,580	116,210	4,803	29,660	163,253	73,200	(2,925)	—	70,275
116,858	14,489	208,646	19,910	183,918	7,601	44,825	256,254	115,849	(19,585)	—	96,264
137,991	—	229,268	23,510	217,178	8,976	116,517	366,181	136,800	(51,104)	—	85,696
1,311,811	170,920	2,350,464	223,501	2,064,606	85,328	—	2,373,435	1,300,489	70,307	—	1,370,796
28,821	44,421	92,306	4,910	45,360	1,875	—	52,145	28,572	18,431	—	47,003
1,188,532	—	1,974,719	202,498	1,870,581	77,309	224,851	2,375,239	1,178,273	(83,067)	—	1,095,206
24,374	2,873	43,370	4,153	38,362	1,585	1,111	45,211	24,164	573	—	24,737
1,745,321	72,124	2,971,935	297,361	2,746,888	113,526	152,844	3,310,619	1,730,256	(7,623)	—	1,722,633
73,083	4,581	126,007	12,452	115,022	4,754	16,449	148,677	72,452	(2,831)	—	69,621
965,098	31,676	1,635,164	164,430	1,518,928	62,776	28,328	1,774,462	956,768	826	—	957,594
20,472	5,966	39,979	3,488	32,219	1,332	—	37,039	20,295	2,600	—	22,895
335,844	—	557,997	57,220	528,571	21,845	64,421	672,057	332,945	(31,731)	—	301,214
311,892	16,203	534,405	53,139	490,874	20,287	19,186	583,486	309,200	(4,888)	—	304,312
24,754	9,080	50,208	4,217	38,959	1,610	—	44,786	24,540	3,483	—	28,023

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Taylorville-Bennion Imp	\$ 372,267	0.2171544%	\$ 951,419	2,573,082	(396,914)	21,223	204,834
Timberlakes Water SSD	35,492	0.0207034	90,708	245,316	(37,842)	2,023	19,529
Timpanogos SSD	362,343	0.2113651	926,054	2,504,484	(386,333)	20,657	199,373
Tooele City	637,864	0.3720852	1,630,217	4,408,872	(680,097)	36,364	350,975
Tooele County	1,415,662	0.8257978	3,618,068	9,784,954	(1,509,392)	80,706	778,945
Tooele County Housing	45,417	0.0264934	116,076	313,923	(48,425)	2,589	24,990
Tooele Valley Mosquito Abtmnt	3,899	0.0022743	9,964	26,948	(4,157)	222	2,145
Toquerville City	15,052	0.0087803	38,469	104,039	(16,049)	858	8,282
Torrey Town	2,981	0.0017391	7,620	20,607	(3,179)	170	1,640
Town of Alta	79,886	0.0465996	204,167	552,163	(85,175)	4,554	43,956
Town of Apple Valley	11,779	0.0068709	30,103	81,414	(12,559)	671	6,481
Town of Brian Head	85,313	0.0497653	218,037	589,674	(90,961)	4,864	46,942
Town of Daniel	6,160	0.0035932	15,743	42,576	(6,568)	351	3,389
Town of Garden City	38,063	0.0222032	97,279	263,088	(40,583)	2,170	20,943
Town of Goshen	4,675	0.0027269	11,947	32,311	(4,984)	267	2,572
Town of Levan	24,151	0.0140877	61,722	166,926	(25,749)	1,377	13,288
Town of Manila	4,762	0.0027779	12,171	32,916	(5,077)	271	2,620
Town of Mantua	14,342	0.0083660	36,654	99,129	(15,291)	818	7,891
Town of Randolph	9,499	0.0055409	24,276	65,655	(10,128)	542	5,227
Town of Springdale	114,447	0.0667606	292,498	791,052	(122,025)	6,525	62,973
Trans-Jordan Cities	271,426	0.1583309	693,695	1,876,077	(289,397)	15,474	149,348
Tremonton City	222,309	0.1296792	568,163	1,536,581	(237,027)	12,674	122,322
Tridell-Lapoint Water	7,646	0.0044603	19,542	52,851	(8,153)	436	4,207
Uintah Animal Control/Shelter	42,895	0.0250220	109,629	296,488	(45,735)	2,445	23,602
Uintah Basin Assn of Govt	166,339	0.0970304	425,119	1,149,722	(177,352)	9,483	91,525
Uintah Basin Asst Council	5,329	0.0031086	13,620	36,834	(5,682)	304	2,932
Uintah Co Care Center SSD	397,065	0.2316196	1,014,795	2,744,482	(423,354)	22,636	218,478
Uintah County	1,404,582	0.8193346	3,589,751	9,708,371	(1,497,578)	80,074	772,849
Uintah Fire Suppression SSD	5,286	0.0030833	13,509	36,534	(5,636)	301	2,908
Uintah Highlands Improv Dist	13,439	0.0078396	34,348	92,892	(14,329)	766	7,395
Uintah Mosquito Abate District	31,464	0.0183538	80,414	217,476	(33,547)	1,794	17,312
Uintah Recreation District	182,811	0.1066393	467,219	1,263,579	(194,915)	10,422	100,589
Uintah Transportation SSD	31,899	0.0186078	81,526	220,486	(34,011)	1,819	17,552
Uintah Water Conserv Dist	88,607	0.0516871	226,457	612,445	(94,474)	5,051	48,755
Unified Fire Authority	482,735	0.2815938	1,233,747	3,336,631	(514,697)	27,520	265,617
Unified Police Department	1,060,152	0.6184180	2,709,475	7,327,691	(1,130,343)	60,438	583,332
Upper Country Water Dist	19,793	0.0115458	50,586	136,807	(21,103)	1,128	10,891
Ut Municipal Power Agency	257,521	0.1502198	658,158	1,779,968	(274,571)	14,681	141,697
Ut Public Employees Assn	38,055	0.0221986	97,259	263,033	(40,575)	2,169	20,939
Utah Assn of Counties	100,442	0.0585908	256,704	694,248	(107,092)	5,726	55,267
Utah Co Housing Authority	159,319	0.0929354	407,178	1,101,200	(169,867)	9,083	87,663
Utah Counties Indemnity Pool	66,509	0.0387967	169,980	459,706	(70,913)	3,792	36,596
Utah County	5,338,289	3.1139825	13,643,291	36,897,863	(5,691,731)	304,331	2,937,308
Utah Lake Commission	2,340	0.0013650	5,980	16,174	(2,495)	133	1,288
Utah Local Governments Trust	240,696	0.1404052	615,157	1,663,674	(256,632)	13,722	132,439
Utah Valley Dispatch SSD	269,037	0.1569371	687,588	1,859,562	(286,849)	15,338	148,033
Utah Zoological Society	790,200	0.4609469	2,019,547	5,461,802	(842,518)	45,049	434,795
UTOPIA	403,489	0.2353673	1,031,215	2,788,889	(430,204)	23,003	222,014
Valley Emergency Comm Ctr	710,910	0.4146947	1,816,902	4,913,755	(757,978)	40,528	391,167
Vernal City	370,511	0.2161302	946,931	2,560,947	(395,042)	21,123	203,868
Vineyard Town	122,755	0.0716065	313,730	848,472	(130,882)	6,998	67,544
Wasatch County	1,309,385	0.7638032	3,346,451	9,050,374	(1,396,078)	74,647	720,468
Wasatch County Fire District	14,831	0.0086513	37,904	102,510	(15,813)	845	8,160
Wasatch Front Regional Council	318,041	0.1855225	812,830	2,198,273	(339,098)	18,131	174,997
Wasatch Front Waste/Recycling	518,870	0.3026723	1,326,098	3,586,392	(553,224)	29,580	285,500



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Inflows of Resources	Proportionate Share of Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of	Proportionate Share of	
341,745	27,888	595,690	58,225	537,859	22,229	—	618,313	338,795	10,338	—	349,133
32,582	2,763	56,897	5,551	51,279	2,119	1,228	60,177	32,301	815	—	33,116
332,634	24,975	577,639	56,673	523,519	21,637	13,763	615,592	329,763	10,424	—	340,187
585,566	—	972,905	99,767	921,599	38,089	87,061	1,146,516	580,512	(33,131)	—	547,381
1,299,593	101,014	2,260,258	221,420	2,045,376	84,533	56,904	2,408,233	1,288,376	28,651	—	1,317,027
41,694	2,776	72,049	7,104	65,620	2,712	156	75,592	41,334	910	—	42,244
3,579	879	6,825	610	5,633	233	4,676	11,152	3,548	(2,528)	—	1,020
13,818	31,261	54,219	2,354	21,747	899	—	25,000	13,699	10,604	—	24,303
2,737	1,484	6,031	466	4,307	178	933	5,884	2,713	(2)	—	2,711
73,336	7,937	129,783	12,495	115,420	4,770	7,537	140,222	72,703	981	—	73,684
10,813	13,978	31,943	1,842	17,018	703	—	19,563	10,720	6,969	—	17,689
78,318	98,717	228,841	13,343	123,261	5,094	2,265	143,963	77,642	49,970	—	127,612
5,655	10,066	19,461	963	8,900	368	—	10,231	5,606	3,999	—	9,605
34,942	9,912	67,967	5,953	54,994	2,273	9,284	72,504	34,641	(2,348)	—	32,293
4,291	1,953	9,083	731	6,754	279	4,004	11,768	4,254	(1,216)	—	3,038
22,170	2,384	39,219	3,777	34,893	1,442	44	40,156	21,979	1,403	—	23,382
4,372	8,521	15,784	745	6,880	284	—	7,909	4,334	3,112	—	7,446
13,166	1,931	23,806	2,243	20,721	856	2,492	26,312	13,052	(853)	—	12,199
8,720	369	14,858	1,486	13,724	567	320	16,097	8,645	25	—	8,670
105,064	8,790	183,352	17,900	165,356	6,834	3,105	193,195	104,157	2,965	—	107,122
249,172	73,126	487,120	42,453	392,162	16,208	48,204	499,027	247,021	16,248	—	263,269
204,082	8,249	347,327	34,771	321,196	13,275	9,649	378,891	202,320	(831)	—	201,489
7,019	575	12,237	1,196	11,047	457	266	12,966	6,959	206	—	7,165
39,378	—	65,425	6,709	61,976	2,561	27,943	99,189	39,038	(10,955)	—	28,083
152,701	—	253,709	26,017	240,330	9,933	42,751	319,031	151,383	(17,281)	—	134,102
4,892	783	8,911	834	7,700	318	13,071	21,923	4,850	(4,188)	—	662
364,510	15,031	620,655	62,104	573,687	23,710	119,188	778,689	361,363	(34,813)	—	326,550
1,289,422	1,882,358	4,024,703	219,687	2,029,368	83,872	242,701	2,575,628	1,278,292	802,234	—	2,080,526
4,852	—	8,061	827	7,637	316	3,728	12,508	4,810	(1,576)	—	3,234
12,338	6,684	27,183	2,102	19,418	803	—	22,323	12,231	2,353	—	14,584
28,884	1,540	49,530	4,921	45,460	1,879	2,938	55,198	28,635	(828)	—	27,807
167,823	—	278,834	28,593	264,129	10,916	47,155	350,793	166,374	(18,415)	—	147,959
29,284	37,000	85,655	4,989	46,089	1,905	21,401	74,384	29,031	4,186	—	33,217
81,342	7,491	142,639	13,859	128,021	5,291	11,265	158,436	80,640	587	—	81,227
443,156	92,102	828,395	75,503	697,465	28,826	8,912	810,706	439,331	36,345	—	475,676
973,231	59,892	1,676,893	165,815	1,531,728	63,305	51,965	1,812,813	964,830	(5,420)	—	959,410
18,170	540	30,729	3,096	28,597	1,182	788	33,663	18,013	(88)	—	17,925
236,407	—	392,785	40,278	372,072	15,377	27,228	454,955	234,367	(10,600)	—	223,767
34,935	1,151	59,194	5,952	54,983	2,272	10,496	73,703	34,633	(5,320)	—	29,313
92,207	34,808	188,008	15,710	145,121	5,998	79,945	246,774	91,411	(8,557)	—	82,854
146,256	—	243,002	24,919	230,187	9,513	21,530	286,149	144,994	(10,012)	—	134,982
61,056	1,522	102,966	10,402	96,094	3,971	10,175	120,642	60,529	(3,148)	—	57,381
4,900,607	159,543	8,301,789	834,947	7,712,862	318,765	639,099	9,505,673	4,858,308	(146,458)	—	4,711,850
2,148	1,744	5,313	366	3,381	140	14,394	18,281	2,130	(7,682)	—	(5,552)
220,962	10,092	377,215	37,647	347,762	14,373	32,815	432,597	219,054	(14,103)	—	204,951
246,979	—	410,350	42,079	388,709	16,065	49,471	496,324	244,847	(23,401)	—	221,446
725,412	30,625	1,235,881	123,593	1,141,696	47,185	4,454	1,316,928	719,150	12,027	—	731,177
370,408	62,270	677,695	63,109	582,969	24,094	38,996	709,168	367,210	(316)	—	366,894
652,623	—	1,084,318	111,191	1,027,136	42,451	155,470	1,336,248	646,990	(65,156)	—	581,834
340,133	5,657	570,781	57,951	535,322	22,124	90,494	705,891	337,197	(29,035)	—	308,162
112,690	155,672	342,904	19,200	177,358	7,330	—	203,888	111,718	60,847	—	172,565
1,202,030	52,119	2,049,264	204,797	1,891,825	78,187	16,804	2,191,613	1,191,654	25,436	—	1,217,090
13,615	5,956	28,576	2,320	21,428	886	308	24,942	13,497	2,048	—	15,545
291,965	25,845	510,938	49,744	459,511	18,991	—	528,246	289,445	12,699	—	302,144
476,328	8,134	799,542	81,155	749,673	30,983	27,882	889,693	472,217	(11,900)	—	460,317

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** *(Concluded)*

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Wasatch Integrated Waste Mgmt	\$ 427,949	0.2496354%	\$ 1,093,728	2,957,953	(456,283)	24,397	235,472
Wasatch Mental Health SSD	2,417,699	1.4103159	6,179,017	16,710,962	(2,577,773)	137,831	1,330,300
Washington City	819,179	0.4778517	2,093,612	5,662,108	(873,416)	46,701	450,740
Washington Co Solid Waste	99,985	0.0583239	255,534	691,085	(106,604)	5,700	55,015
Washington Co Wat Con Dist	331,881	0.1935961	848,203	2,293,938	(353,855)	18,920	182,612
Washington County	1,789,059	1.0436110	4,572,373	12,365,842	(1,907,510)	101,993	984,401
Waste Management Serv Dist #5	26,058	0.0152006	66,598	180,113	(27,784)	1,486	14,338
Wayne County	103,631	0.0604508	264,853	716,287	(110,492)	5,908	57,021
Weber Area Dispatch 911	502,786	0.2932901	1,284,992	3,475,221	(536,075)	28,663	276,650
Weber Basin Water Conserv	941,024	0.5489272	2,405,015	6,504,289	(1,003,328)	53,647	517,783
Weber Co Mosquito Abate	88,571	0.0516662	226,365	612,198	(94,435)	5,049	48,735
Weber County Corp	3,631,971	2.1186366	9,282,382	25,103,919	(3,872,440)	207,056	1,998,434
Weber Fire District	21,719	0.0126694	55,508	150,121	(23,157)	1,238	11,951
Weber Human Services	1,769,873	1.0324192	4,523,338	12,233,230	(1,887,054)	100,899	973,844
Wellington City	15,635	0.0091205	39,960	108,070	(16,670)	891	8,603
Wellsville City Corp	62,474	0.0364427	159,666	431,813	(66,610)	3,562	34,375
West Bountiful City	110,834	0.0646525	283,262	766,073	(118,172)	6,319	60,984
West Kane County SSD #1	33,080	0.0192966	84,544	228,647	(35,270)	1,886	18,202
West Point City	127,615	0.0744414	326,150	882,063	(136,064)	7,275	70,218
West Valley City	2,851,524	1.6633788	7,287,761	19,709,528	(3,040,321)	162,563	1,569,006
White City Water Imp Dist	77,822	0.0453959	198,893	537,900	(82,975)	4,437	42,820
Willard City Corp	42,823	0.0249802	109,446	295,993	(45,659)	2,441	23,563
Woods Cross City	153,718	0.0896683	392,864	1,062,488	(163,896)	8,763	84,581
<b>Grand Total</b>	<b>\$ 171,429,638</b>	<b>100.0000000%</b>	<b>\$ 438,129,988</b>	<b>1,184,909,145</b>	<b>(182,779,814)</b>	<b>9,773,059</b>	<b>94,326,413</b>
<b>No Proportionate Share for 2017</b>							
Canyonlands Health Care	\$ —	0.0000000%	\$ —	—	—	—	—
Sunnyside City	—	0.0000000	—	—	—	—	—
Valley Mental Health	—	0.0000000	—	—	—	—	—
Summit Mosquito Abatement Dist	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 171,429,638</b>	<b>100.0000000%</b>	<b>\$ 438,129,988</b>	<b>1,184,909,145</b>	<b>(182,779,814)</b>	<b>9,773,059</b>	<b>94,326,413</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	
392,862	—	652,731	66,934	618,309	25,554	386,320	1,097,117	389,471	(139,546)	—	249,925
2,219,474	272,096	3,959,701	378,146	3,493,139	144,368	62,113	4,077,766	2,200,317	75,693	—	2,276,010
752,016	117,725	1,367,182	128,126	1,183,566	48,916	46,333	1,406,941	745,525	15,431	—	760,956
91,787	1,249	153,751	15,638	144,459	5,970	12,043	178,110	90,995	(3,796)	—	87,199
304,670	438,345	944,547	51,909	479,508	19,818	—	551,235	302,041	192,255	—	494,296
1,642,375	—	2,728,769	279,822	2,584,866	106,830	200,311	3,171,829	1,628,199	(71,072)	—	1,557,127
23,922	1,833	41,579	4,076	37,650	1,556	39	43,321	23,715	671	—	24,386
95,134	—	158,063	16,209	149,727	6,188	33,158	205,282	94,313	(14,486)	—	79,827
461,563	25,452	792,328	78,639	726,435	30,023	37,867	872,964	457,579	607	—	458,186
863,870	123,495	1,558,795	147,183	1,359,609	56,191	—	1,562,983	856,414	55,368	—	911,782
81,309	2,233	137,326	13,853	127,969	5,289	33,484	180,595	80,607	(12,186)	—	68,421
3,334,189	352,171	5,891,850	568,066	5,247,542	216,876	365,938	6,398,422	3,305,410	(25,783)	—	3,279,627
19,938	38,048	71,175	3,397	31,380	1,297	—	36,074	19,766	14,058	—	33,824
1,624,762	105,483	2,804,988	276,821	2,557,146	105,684	62,404	3,002,055	1,610,738	21,248	—	1,631,986
14,353	—	23,847	2,445	22,590	934	4,081	30,050	14,229	(2,259)	—	11,970
57,351	11,942	107,230	9,771	90,263	3,730	340	104,104	56,856	4,123	—	60,979
101,746	135,565	304,614	17,335	160,134	6,618	—	184,087	100,868	65,110	—	165,978
30,368	4,295	54,751	5,174	47,795	1,975	845	55,789	30,106	1,110	—	31,216
117,152	—	194,645	19,960	184,380	7,620	13,955	225,915	116,140	(5,035)	—	111,105
2,617,730	51,113	4,400,412	445,999	4,119,937	170,273	239,534	4,975,743	2,595,135	(79,257)	—	2,515,878
71,441	4,713	123,411	12,172	112,439	4,647	1,364	130,622	70,825	1,164	—	71,989
39,312	8,882	74,198	6,698	61,872	2,557	5,843	76,970	38,973	(233)	—	38,740
141,115	19,140	253,599	24,043	222,095	9,179	2,214	257,531	139,897	6,510	—	146,407
157,374,259	15,500,883	276,974,614	26,812,831	247,684,837	10,236,580	14,966,033	299,700,281	156,015,905	603,500	—	156,619,405
—	—	—	—	—	—	30,845	30,845	—	(19,111)	—	(19,111)
—	—	—	—	—	—	1,498	1,498	—	(928)	—	(928)
—	—	—	—	—	—	3,985,459	3,985,459	—	(2,067,355)	—	(2,067,355)
—	—	—	—	—	—	13,769	13,769	—	(6,438)	—	(6,438)
157,374,259	15,500,883	276,974,614	26,812,831	247,684,837	10,236,580	18,997,604	303,731,852	156,015,905	(1,490,332)	—	154,525,573

**Noncontributory Retirement System  
State and School Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Active Re Entry Inc	\$ 68,763	0.0104014%	\$ 254,352	555,358	2,772	—	41,725
Alpine School District	48,766,784	7.3766612	180,386,083	393,859,133	1,965,573	—	29,591,115
Alpine Uniserv	17,987	0.0027208	66,533	145,271	725	—	10,914
American Leadership Academy	913,172	0.1381302	3,377,784	7,375,131	36,806	—	554,103
AMES Charter School	366,210	0.0553944	1,354,594	2,957,651	14,760	—	222,212
Beaver School District	1,262,661	0.1909952	4,670,524	10,197,731	50,892	—	766,168
Box Elder School District	8,518,526	1.2885468	31,509,636	68,798,866	343,344	—	5,168,942
Bridgerland Technical College	1,059,644	0.1602861	3,919,576	8,558,092	42,710	—	642,980
Cache School District	12,169,419	1.8407956	45,014,119	98,284,866	490,495	—	7,384,261
Canyons School District	25,358,168	3.8357792	93,798,694	204,802,231	1,022,075	—	15,387,041
Carbon School District	2,706,951	0.4094643	10,012,885	21,862,364	109,105	—	1,642,546
Color Country Uniserv	17,519	0.0026501	64,805	141,496	706	—	10,631
Daggett School District	334,402	0.0505830	1,236,938	2,700,758	13,478	—	202,911
Davis School District	50,590,431	7.6525134	187,131,668	408,587,600	2,039,076	—	30,697,683
Davis Technical College	824,759	0.1247564	3,050,746	6,661,069	33,242	—	500,454
Davis Uniserv	12,693	0.0019200	46,951	102,514	512	—	7,702
Dixie Applied Tech College	84,198	0.0127362	311,446	680,019	3,394	—	51,091
Dixie State University	1,063,990	0.1609435	3,935,651	8,593,192	42,885	—	645,617
Duchesne School District	3,534,151	0.5345900	13,072,662	28,543,151	142,446	—	2,144,482
East Hollywood High School	193,689	0.0292982	716,447	1,564,307	7,807	—	117,528
Educators Mutual Insurance	1,381,057	0.2089043	5,108,467	11,153,944	55,664	—	838,009
Emery School District	2,399,743	0.3629949	8,876,540	19,381,242	96,723	—	1,456,136
Fast Forward Charter HS	187,915	0.0284248	695,089	1,517,674	7,574	—	114,025
Garfield School District	984,674	0.1489458	3,642,264	7,952,604	39,688	—	597,489
Grand School District	1,504,492	0.2275755	5,565,045	12,150,848	60,639	—	912,908
Granite School District	51,948,025	7.8578686	192,153,347	419,552,048	2,093,794	—	31,521,455
Granite Uniserv	56,773	0.0085877	210,000	458,520	2,288	—	34,449
Heber Valley Historic Railroad	52,172	0.0078917	192,981	421,358	2,103	—	31,657
High Desert Uniserv	8,575	0.0012971	31,719	69,256	346	—	5,203
High School Activities Assn	117,268	0.0177385	433,771	947,105	4,727	—	71,157
Intech Collegiate High School	117,432	0.0177632	434,375	948,423	4,733	—	71,256
Iron School District	6,533,925	0.9883480	24,168,688	52,770,471	263,354	—	3,964,710
Itineris High School	238,707	0.0361078	882,966	1,927,889	9,621	—	144,845
Jordan School District	34,572,654	5.2295997	127,882,653	279,221,934	1,393,470	—	20,978,283
Jordan Uniserv	42,444	0.0064202	156,997	342,791	1,711	—	25,754
Juab School District	1,749,414	0.2646235	6,471,003	14,128,937	70,511	—	1,061,524
Kane School District	1,221,596	0.1847836	4,518,628	9,866,077	49,237	—	741,250
Liberty Academy Charter	76,837	0.0116227	284,217	620,566	3,097	—	46,624
Logan School District	4,075,160	0.6164252	15,073,829	32,912,545	164,252	—	2,472,760
Millard School District	3,101,610	0.4691621	11,472,713	25,049,785	125,012	—	1,882,021
Monticello Academy	293,902	0.0444568	1,087,130	2,373,664	11,846	—	178,336
Morgan School District	1,596,946	0.2415605	5,907,029	12,897,544	64,366	—	969,008
Mountainland Technical College	346,553	0.0524210	1,281,883	2,798,894	13,968	—	210,284
Murray School District	4,884,044	0.7387803	18,065,854	39,445,402	196,854	—	2,963,581
Nebo School District	22,862,043	3.4582051	84,565,640	184,642,567	921,467	—	13,872,421
Noah Webster Academy Inc	183,870	0.0278129	680,126	1,485,003	7,411	—	111,570
North Sanpete School Dist	1,970,469	0.2980612	7,288,676	15,914,263	79,421	—	1,195,658
North Summit School District	1,065,181	0.1611236	3,940,056	8,602,808	42,933	—	646,339
Nuames Charter School	465,727	0.0704477	1,722,701	3,761,386	18,771	—	282,598
Ogden School District	9,715,260	1.4695695	35,936,297	78,464,139	391,579	—	5,895,106
Ogden Weber/Nea/Uea Uniserv	25,113	0.0037988	92,894	202,828	1,012	—	15,239
Ogden-Weber Tech College	718,367	0.1086631	2,657,206	5,801,806	28,954	—	435,897
Park City School District	6,126,770	0.9267600	22,662,639	49,482,127	246,943	—	3,717,652
Piute School District	397,299	0.0600970	1,469,589	3,208,735	16,013	—	241,076
Provo School District	10,798,617	1.6334426	39,943,588	87,213,750	435,244	—	6,552,475

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Plan Gross Pension Expense	Proportionate Share of Employer Contributions	Proportionate Share of Nonemployer Contributions	
64,222	4,575	110,522	14,733	105,360	1,933	5,542	127,568	62,488	512	—	63,000
45,546,212	4,978,389	80,115,716	10,448,948	74,720,920	1,371,019	—	86,540,887	44,316,136	2,025,858	—	46,341,994
16,799	—	27,713	3,854	27,560	506	32,841	64,761	16,346	(19,341)	—	(2,995)
852,867	156,832	1,563,802	195,660	1,399,172	25,673	71,715	1,692,220	829,833	26,907	—	856,740
342,025	72,210	636,447	78,465	561,110	10,296	5,293	655,164	332,788	23,983	—	356,771
1,179,274	16,327	1,961,769	270,542	1,934,661	35,498	108,886	2,349,587	1,147,426	(28,831)	—	1,118,595
7,955,961	761,547	13,886,450	1,825,210	13,052,165	239,488	250,898	15,367,761	7,741,092	120,536	—	7,861,628
989,665	106,271	1,738,916	227,043	1,623,597	29,791	144,409	2,024,840	962,937	20,211	—	983,148
11,365,747	1,882,330	20,632,338	2,607,464	18,646,097	342,129	—	21,595,690	11,058,790	782,626	—	11,841,416
23,683,508	397,790	39,468,339	5,433,333	38,854,021	712,914	722,085	45,722,353	23,043,882	(133,668)	—	22,910,214
2,528,183	—	4,170,729	580,001	4,147,615	76,103	332,120	5,135,839	2,459,904	(160,491)	—	2,299,413
16,363	40,165	67,159	3,754	26,844	493	3,584	34,675	15,921	13,281	—	29,202
312,318	75,096	590,325	71,650	512,374	9,401	21,384	614,809	303,883	14,090	—	317,973
47,249,425	4,201,984	82,149,092	10,839,690	77,515,129	1,422,289	799,609	90,576,717	45,973,350	1,083,179	—	47,056,529
770,292	150,108	1,420,854	176,716	1,263,704	23,187	—	1,463,607	749,488	71,410	—	820,898
11,855	191	19,748	2,720	19,448	357	29,000	51,525	11,535	(15,897)	—	(4,362)
78,638	77,505	207,234	18,041	129,010	2,367	—	149,418	76,514	32,316	—	108,830
993,724	—	1,639,341	227,974	1,630,256	29,913	356,677	2,244,820	966,886	(141,024)	—	825,862
3,300,755	67,312	5,512,549	757,240	5,415,059	99,358	199,358	6,471,016	3,211,611	(27,501)	—	3,184,110
180,898	74,405	372,831	41,501	296,772	5,445	8,028	351,746	176,012	21,378	—	197,390
1,289,852	49,119	2,176,980	295,910	2,116,069	38,827	339,740	2,790,546	1,255,016	(120,250)	—	1,134,766
2,241,264	—	3,697,400	514,178	3,676,909	67,466	524,485	4,783,038	2,180,733	(249,635)	—	1,931,098
175,505	68,492	358,022	40,263	287,925	5,283	—	333,471	170,765	26,563	—	197,328
919,646	93,570	1,610,705	210,980	1,508,727	27,683	78,388	1,825,778	894,809	31,033	—	925,842
1,405,135	11,311	2,329,354	322,358	2,305,196	42,297	48,101	2,717,952	1,367,186	(15,771)	—	1,351,415
48,517,363	2,309,431	82,348,249	11,130,573	79,595,247	1,460,456	4,479,959	96,666,235	47,207,045	(1,566,636)	—	45,640,409
53,024	36,766	124,239	12,164	86,988	1,596	—	100,748	51,592	18,671	—	70,263
48,726	16,931	97,314	11,178	79,938	1,467	—	92,583	47,410	10,246	—	57,656
8,009	18,285	31,497	1,837	13,139	241	3,584	18,801	7,792	4,533	—	12,325
109,524	5,110	185,791	25,126	179,680	3,297	24,505	232,608	106,566	(5,699)	—	100,867
109,677	72,270	253,203	25,161	179,930	3,301	—	208,392	106,714	31,516	—	138,230
6,102,423	262,399	10,329,532	1,399,983	10,011,341	183,693	132,049	11,727,066	5,937,614	36,957	—	5,974,571
222,943	24,085	391,873	51,146	365,749	6,711	3,155	426,761	216,922	12,083	—	229,005
32,289,467	1,812,349	55,080,099	7,407,663	52,972,543	971,969	792,588	62,144,763	31,417,419	273,487	—	31,690,906
39,641	468	65,863	9,094	65,033	1,193	14,080	89,400	38,570	(4,569)	—	34,001
1,633,883	281,989	2,977,396	374,836	2,680,469	49,183	—	3,104,488	1,589,756	118,140	—	1,707,896
1,140,922	18,717	1,900,889	261,744	1,871,741	34,344	21,624	2,189,453	1,110,109	1,282	—	1,111,391
71,763	17,043	135,430	16,463	117,731	2,160	92,105	228,459	69,825	(37,151)	—	32,674
3,806,035	189,188	6,467,983	873,159	6,243,998	114,568	574,032	7,805,757	3,703,245	(89,956)	—	3,613,289
2,896,779	112,400	4,891,200	664,562	4,752,316	87,198	129,920	5,633,996	2,818,545	23,884	—	2,842,429
274,493	36,951	489,780	62,973	450,319	8,263	121,919	643,474	267,079	(30,595)	—	236,484
1,491,483	72,712	2,533,203	342,167	2,446,855	44,896	79,279	2,913,197	1,451,202	(24,912)	—	1,426,290
323,666	96,118	630,068	74,254	530,992	9,743	12,171	627,160	314,925	44,295	—	359,220
4,561,501	478,827	8,003,909	1,046,473	7,483,378	137,309	378,675	9,045,835	4,438,307	(18,263)	—	4,420,044
21,352,227	2,361,547	37,586,195	4,898,504	35,029,434	642,739	—	40,570,677	20,775,563	1,033,737	—	21,809,300
171,727	5,952	289,249	39,397	281,727	5,169	19,051	345,344	167,089	(3,429)	—	163,660
1,840,339	27,238	3,063,235	422,200	3,019,172	55,397	18,451	3,515,220	1,790,637	5,589	—	1,796,226
994,836	103,879	1,745,054	228,230	1,632,080	29,946	33,259	1,923,515	967,968	15,957	—	983,925
434,970	352,987	1,070,555	99,788	713,591	13,093	—	826,472	423,223	152,621	—	575,844
9,073,661	125,006	15,093,773	2,081,627	14,885,811	273,133	790,691	18,031,262	8,828,607	(247,831)	—	8,580,776
23,455	20,274	58,968	5,381	38,479	706	—	44,566	22,822	7,777	—	30,599
670,926	—	1,106,823	153,920	1,100,689	20,196	381,235	1,656,040	652,806	(152,410)	—	500,396
5,722,156	602,115	10,041,923	1,312,744	9,387,494	172,247	299,206	11,171,691	5,567,617	110,643	—	5,678,260
371,061	1,993	614,130	85,127	608,745	11,170	72,499	777,541	361,040	(27,625)	—	333,415
10,085,474	946,061	17,584,010	2,313,751	16,545,742	303,590	472,724	19,635,807	9,813,093	65,083	—	9,878,176

**Noncontributory Retirement System  
State and School Division**

**Schedule of Employer Allocations and Pension Amounts** *(Concluded)*

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Rich School District	\$ 670,216	0.1013796%	\$ 2,479,098	5,412,921	27,013	—	406,679
Salt Lake Arts Academy	256,817	0.0388471	949,952	2,074,148	10,351	—	155,833
Salt Lake Community College	3,695,975	0.5590681	13,671,240	29,850,100	148,968	—	2,242,674
Salt Lake School District	24,603,882	3.7216829	91,008,626	198,710,333	991,673	—	14,929,349
San Juan School District	3,538,681	0.5352753	13,089,420	28,579,741	142,629	—	2,147,231
Sevier School District	3,810,763	0.5764315	14,095,838	30,777,177	153,595	—	2,312,327
Snow College	888,796	0.1344429	3,287,616	7,178,256	35,823	—	539,311
Soldier Hollow Charter School	136,713	0.0206798	505,696	1,104,148	5,510	—	82,956
South Sanpete School Dist	2,784,013	0.4211211	10,297,936	22,484,751	112,211	—	1,689,307
South Summit School District	1,436,527	0.2172948	5,313,645	11,601,935	57,900	—	871,667
Southern Utah University	2,520,913	0.3813235	9,324,741	20,359,854	101,607	—	1,529,661
Southwest Educ Development Ctr	87,534	0.0132407	323,783	706,955	3,528	—	53,114
Southwest Technical College	334,754	0.0506362	1,238,238	2,703,598	13,492	—	203,125
Space Dynamics Lab / USU	607,565	0.0919028	2,247,356	4,906,930	24,488	—	368,664
State of Utah	155,091,069	23.4597029	573,674,704	1,252,574,570	6,251,035	—	94,107,451
Success Academy	192,523	0.0291218	712,133	1,554,889	7,760	—	116,821
Summit Academy High School	208,908	0.0316002	772,739	1,687,217	8,420	—	126,763
Summit Academy Inc	938,627	0.1419806	3,471,940	7,580,714	37,832	—	569,548
Tintic School District	357,522	0.0540802	1,322,457	2,887,483	14,410	—	216,940
Tooele School District	9,671,575	1.4629616	35,774,710	78,111,326	389,818	—	5,868,599
Tooele Technical College	224,685	0.0339867	831,098	1,814,638	9,056	—	136,336
Tuacahn High School	236,960	0.0358436	876,506	1,913,783	9,551	—	143,785
Uintah Basin Technical College	595,883	0.0901357	2,204,144	4,812,580	24,017	—	361,575
Uintah School District	5,048,046	0.7635878	18,672,487	40,769,939	203,464	—	3,063,095
University of Utah	20,920,155	3.1644674	77,382,689	168,959,147	843,199	—	12,694,106
University of Utah Hospital	8,376,290	1.2670315	30,983,509	67,650,108	337,611	—	5,082,635
UT School Board Risk Mgmt	179,619	0.0271698	664,400	1,450,666	7,240	—	108,990
Utah Co Academy of Sciences	222,322	0.0336293	822,358	1,795,556	8,961	—	134,902
Utah Communications Authority	463,792	0.0701551	1,715,546	3,745,763	18,693	—	281,424
Utah Dairy Council	104,436	0.0157975	386,306	843,470	4,209	—	63,371
Utah Education Association	299,664	0.0453284	1,108,444	2,420,201	12,078	—	181,833
Utah Housing Corporation	1,051,485	0.1590519	3,889,395	8,492,195	42,381	—	638,029
Utah Retirement Systems	5,683,883	0.8597671	21,024,419	45,905,202	229,092	—	3,448,914
Utah Safety Council	81,222	0.0122859	300,435	655,976	3,274	—	49,284
Utah School Boards Association	154,651	0.0233931	572,046	1,249,018	6,233	—	93,840
Utah School Employees Assn	72,877	0.0110236	269,567	588,579	2,937	—	44,221
Utah State Fair Corp	106,994	0.0161844	395,767	864,127	4,312	—	64,923
Utah State University	8,733,955	1.3211334	32,306,496	70,538,749	352,027	—	5,299,662
Utah Valley University	4,961,388	0.7504796	18,351,944	40,070,058	199,972	—	3,010,512
Wasatch School District	5,544,466	0.8386783	20,508,722	44,779,216	223,473	—	3,364,317
Wasatch Uniserv	18,946	0.0028658	70,079	153,013	764	—	11,496
Washington School District	21,131,669	3.1964618	78,165,068	170,667,412	851,724	—	12,822,450
Wayne School District	470,379	0.0711514	1,739,909	3,798,958	18,959	—	285,420
Weber County School District	24,903,327	3.7669782	92,116,260	201,128,766	1,003,743	—	15,111,049
Weber State University	3,544,939	0.5362218	13,112,565	28,630,277	142,881	—	2,151,028
Woodland Peaks Uniserv	29,504	0.0044628	109,132	238,281	1,189	—	17,902
Workers Compensation Fund	6,415,956	0.9705035	23,732,326	51,817,707	258,599	—	3,893,127
<b>Grand Total</b>	<b>\$ 661,095,616</b>	<b>100.0000000%</b>	<b>\$ 2,445,362,179</b>	<b>5,339,260,164</b>	<b>26,645,831</b>	<b>—</b>	<b>401,145,107</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
625,955	102,364	1,134,998	143,603	1,026,911	18,842	—	1,189,356	609,050	40,321	—	649,371
239,856	74,247	469,936	55,026	393,497	7,220	—	455,743	233,378	28,081	—	261,459
3,451,892	866,394	6,560,960	791,913	5,663,007	103,908	1,259,524	7,818,352	3,358,666	43,313	—	3,401,979
22,979,035	—	37,908,384	5,271,717	37,698,298	691,709	1,620,901	45,282,625	22,358,436	(740,096)	—	21,618,340
3,304,986	28,099	5,480,316	758,211	5,422,001	99,486	206,494	6,486,192	3,215,728	(64,991)	—	3,150,737
3,559,100	23,055	5,894,482	816,508	5,838,887	107,135	129,467	6,891,997	3,462,978	(45,785)	—	3,417,193
830,100	67,138	1,436,549	190,437	1,361,822	24,987	131,270	1,708,516	807,681	(9,664)	—	798,017
127,685	—	210,641	29,293	209,473	3,844	85,065	327,675	124,236	(43,656)	—	80,580
2,600,156	—	4,289,463	596,513	4,265,691	78,269	114,189	5,054,662	2,529,933	(66,386)	—	2,463,547
1,341,658	249,243	2,462,568	307,795	2,201,059	40,386	38,097	2,587,337	1,305,423	62,944	—	1,368,367
2,354,431	336,269	4,220,361	540,140	3,862,566	70,872	3,696	4,477,274	2,290,845	128,504	—	2,419,349
81,753	37,578	172,445	18,755	134,120	2,461	—	155,336	79,545	19,526	—	99,071
312,646	137,037	652,808	71,726	512,913	9,411	—	594,050	304,203	70,358	—	374,561
567,442	229,905	1,166,011	130,179	930,917	17,081	—	1,078,177	552,117	105,100	—	657,217
144,848,808	7,975,412	246,931,671	33,230,376	237,631,975	4,360,199	25,767,904	300,990,454	140,936,844	(6,089,432)	—	134,847,412
179,809	93,293	389,923	41,251	294,985	5,413	—	341,649	174,953	36,336	—	211,289
195,111	42,221	364,095	44,761	320,090	5,873	—	370,724	189,842	18,454	—	208,296
876,640	910,183	2,356,371	201,114	1,438,174	26,388	—	1,665,676	852,965	384,919	—	1,237,884
333,911	42,074	592,925	76,604	547,798	10,051	—	634,453	324,893	24,171	—	349,064
9,032,862	326,544	15,228,005	2,072,267	14,818,877	271,905	958,838	18,121,887	8,788,909	(363,586)	—	8,425,323
209,846	75,468	421,650	48,142	344,264	6,317	—	398,723	204,179	37,269	—	241,448
221,312	28,790	393,887	50,772	363,073	6,662	47,548	468,055	215,335	2,338	—	217,673
556,531	—	918,106	127,676	913,018	16,753	149,645	1,207,092	541,501	(86,725)	—	454,776
4,714,671	—	7,777,766	1,081,613	7,734,662	141,920	866,146	9,824,341	4,587,341	(373,774)	—	4,213,567
19,538,583	—	32,232,689	4,482,429	32,054,057	588,145	9,968,311	47,092,942	19,010,900	(3,948,583)	—	15,062,317
7,823,117	—	12,905,752	1,794,734	12,834,229	235,489	1,780,302	16,644,754	7,611,837	(798,480)	—	6,813,357
167,756	96,102	372,848	38,486	275,213	5,050	24,508	343,257	163,226	26,118	—	189,344
207,640	29,481	372,023	47,635	340,644	6,250	—	394,529	202,032	15,951	—	217,983
433,163	486,536	1,201,123	99,374	710,627	13,039	—	823,040	421,465	222,693	—	644,158
97,540	8,923	169,834	22,377	160,019	2,936	16,233	201,565	94,905	(3,518)	—	91,387
279,874	—	461,707	64,207	459,148	8,425	52,777	584,557	272,316	(22,676)	—	249,640
982,045	130,833	1,750,907	225,295	1,611,095	29,561	—	1,865,951	955,522	77,642	—	1,033,164
5,308,517	1,316,084	10,073,515	1,217,849	8,708,898	159,796	77,045	10,163,588	5,165,149	466,395	—	5,631,544
75,858	41,402	166,544	17,403	124,448	2,283	21,283	165,417	73,809	15,280	—	89,089
144,438	141,230	379,508	33,136	236,957	4,348	12,147	286,588	140,537	46,558	—	187,095
68,064	—	112,285	15,615	111,662	2,049	56,103	185,429	66,226	(30,907)	—	35,319
99,928	18,776	183,627	22,925	163,938	3,008	3,222	193,093	97,230	6,535	—	103,765
8,157,162	222,508	13,679,332	1,871,369	13,382,247	245,545	1,741,551	17,240,712	7,936,860	(497,881)	—	7,438,979
4,633,736	448,584	8,092,832	1,063,045	7,601,884	139,483	1,071,670	9,876,082	4,508,592	(140,952)	—	4,367,640
5,178,307	788,450	9,331,074	1,187,977	8,495,282	155,876	58,570	9,897,705	5,038,456	319,615	—	5,358,071
17,695	21,683	50,874	4,059	29,029	533	449	34,070	17,217	7,309	—	24,526
19,736,128	1,328,549	33,887,127	4,527,748	32,378,140	594,091	—	37,499,979	19,203,110	600,110	—	19,803,220
439,315	3,850	728,585	100,785	720,719	13,224	174,445	1,009,173	427,450	(69,078)	—	358,372
23,258,705	665,956	39,035,710	5,335,878	38,157,111	700,127	625,454	44,818,570	22,630,553	(58,086)	—	22,572,467
3,310,830	129,579	5,591,437	759,551	5,431,588	99,662	523,488	6,814,289	3,221,414	(129,485)	—	3,091,929
27,555	1,499	46,956	6,322	45,205	829	1	52,357	26,811	950	—	27,761
5,992,245	934,419	10,819,791	1,374,706	9,830,588	180,377	—	11,385,671	5,830,411	371,018	—	6,201,429
617,436,684	42,154,377	1,060,736,168	141,648,750	1,012,936,857	18,585,908	60,615,245	1,233,786,760	600,761,442	(7,267,038)	—	593,494,404

**Contributory Retirement System  
Local Government Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Box Elder County	\$ 18,402	0.6271518%	\$ 51,034	346,015	(196,402)	—	64,447
Brigham City	7,463	0.2543553	20,698	140,334	(79,655)	—	26,138
Carbon County	16,027	0.5462064	44,447	301,355	(171,053)	—	56,129
Castle Valley SSD	11,980	0.4082823	33,224	225,259	(127,860)	—	41,956
Centerville City	26,929	0.9177603	74,682	506,350	(287,411)	—	94,310
City of Naples	8,838	0.3011952	24,510	166,177	(94,324)	—	30,951
City of Orem	134,861	4.5962283	374,014	2,535,848	(1,439,381)	—	472,314
City of South Jordan	1,203	0.0410018	3,336	22,622	(12,840)	—	4,213
City of St George	15,448	0.5264730	42,841	290,468	(164,873)	—	54,101
City of West Jordan	8,967	0.3055995	24,868	168,607	(95,703)	—	31,404
Clinton City	13,942	0.4751719	38,667	262,164	(148,808)	—	48,829
Corinne City	18,334	0.6248353	50,845	344,736	(195,677)	—	64,209
Davis & Weber County Canal Co	101,639	3.4639813	281,878	1,911,161	(1,084,800)	—	355,963
Davis Co Housing Authority	27,899	0.9508243	77,373	524,592	(297,766)	—	97,708
DDI Vantage	576,621	19.6519595	1,599,161	10,842,453	(6,154,321)	—	2,019,460
Duchesne Co Mosquito Dist	9,197	0.3134304	25,505	172,927	(98,156)	—	32,208
Duchesne County	116,059	3.9554467	321,871	2,182,313	(1,238,710)	—	406,468
Emery Co Care & Rehab Ctr	78,863	2.6877335	218,712	1,482,886	(841,706)	—	276,195
Emery County	14,708	0.5012839	40,792	276,570	(156,985)	—	51,513
Emery Town	5,924	0.2018868	16,428	111,386	(63,224)	—	20,746
Five-County Assn of Govts	11,118	0.3789076	30,833	209,052	(118,661)	—	38,937
Garfield County	9,120	0.3108041	25,291	171,478	(97,333)	—	31,939
Garland City	25,414	0.8661456	70,482	477,873	(271,247)	—	89,006
Grand County	18,704	0.6374406	51,871	351,691	(199,625)	—	65,504
Honeyville City	13,564	0.4622622	37,616	255,041	(144,765)	—	47,503
Housing Authority of SLC	7,789	0.2654753	21,603	146,469	(83,138)	—	27,281
Iron County	6,809	0.2320729	18,885	128,040	(72,677)	—	23,848
Jordan Valley Water Conserv	37,865	1.2904699	105,011	711,983	(404,131)	—	132,610
Juab County	7,837	0.2671003	21,735	147,366	(83,647)	—	27,448
Kaysville City	12,386	0.4221291	34,350	232,899	(132,196)	—	43,379
Kearns Improvement Dist	37,048	1.2626538	102,747	696,636	(395,420)	—	129,752
Laverkin City	6,193	0.2110731	17,176	116,454	(66,101)	—	21,690
Layton City	36,568	1.2462996	101,417	687,613	(390,298)	—	128,071
Logan City	12,846	0.4378243	35,628	241,558	(137,112)	—	44,991
Mountainland Assn of Govt	17,046	0.5809550	47,275	320,527	(181,935)	—	59,700
Murray City	61,538	2.0972913	170,665	1,157,125	(656,800)	—	215,520
North Davis Co Sewer Dist	12,307	0.4194541	34,133	231,423	(131,359)	—	43,104
North Logan City	8,772	0.2989745	24,329	164,951	(93,629)	—	30,723
Oakley City	20,751	0.7072152	57,549	390,187	(221,476)	—	72,674
Ogden City Corp	80,457	2.7420655	223,133	1,512,863	(858,721)	—	281,778
Park City	125,648	4.2822288	348,463	2,362,607	(1,341,048)	—	440,047
Provo City Corp	61,178	2.0850282	169,667	1,150,360	(652,959)	—	214,260
Provo Housing Authority	19,597	0.6678810	54,348	368,486	(209,157)	—	68,632
Rich County	9,903	0.3374999	27,464	186,207	(105,693)	—	34,682
Roy City	12,463	0.4247650	34,565	234,353	(133,022)	—	43,649
Salt Lake City Corp	407,927	13.9026595	1,131,317	7,670,428	(4,353,837)	—	1,428,654
Salt Lake County	226,318	7.7131952	627,655	4,255,553	(2,415,509)	—	792,617
Sandy City	90,297	3.0774344	250,424	1,697,894	(963,747)	—	316,241
South Davis Sewer Dist	45,494	1.5504906	126,170	855,443	(485,561)	—	159,330
Tooele City	2,621	0.0893416	7,270	49,292	(27,979)	—	9,181
Tooele County	7,584	0.2584563	21,032	142,596	(80,940)	—	26,559
Town of Manila	8,489	0.2893097	23,542	159,619	(90,602)	—	29,730
Town of Paragonah	5,677	0.1934756	15,744	106,745	(60,590)	—	19,882
Utah Co Housing Authority	11,143	0.3797774	30,904	209,532	(118,933)	—	39,026
Utah County	80,694	2.7501520	223,791	1,517,324	(861,254)	—	282,609



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
—	—	64,447	—	146,349	—	—	146,349	16,269	(14,906)	—	1,363
—	—	26,138	—	59,355	—	—	59,355	6,598	8,097	—	14,695
—	—	56,129	—	127,460	—	—	127,460	14,169	(7,535)	—	6,634
—	—	41,956	—	95,274	—	—	95,274	10,591	21,327	—	31,918
—	—	94,310	—	214,163	—	—	214,163	23,808	28,859	—	52,667
—	—	30,951	—	70,285	—	—	70,285	7,813	(27,631)	—	(19,818)
—	—	472,314	—	1,072,550	—	—	1,072,550	119,233	87,642	—	206,875
—	—	4,213	—	9,568	—	—	9,568	1,064	(123,516)	—	(122,452)
—	—	54,101	—	122,855	—	—	122,855	13,658	(28,149)	—	(14,491)
—	—	31,404	—	71,313	—	—	71,313	7,928	6,369	—	14,297
—	—	48,829	—	110,883	—	—	110,883	12,327	(51,538)	—	(39,211)
—	—	64,209	—	145,808	—	—	145,808	16,209	25,542	—	41,751
—	—	355,963	—	808,335	—	—	808,335	89,861	61,599	—	151,460
—	—	97,708	—	221,879	—	—	221,879	24,666	16,410	—	41,076
—	—	2,019,460	—	4,585,870	—	—	4,585,870	509,803	678,837	—	1,188,640
—	—	32,208	—	73,140	—	—	73,140	8,131	11,231	—	19,362
—	—	406,468	—	923,020	—	—	923,020	102,613	28,999	—	131,612
—	—	276,195	—	627,194	—	—	627,194	69,724	76,819	—	146,543
—	—	51,513	—	116,977	—	—	116,977	13,004	4,147	—	17,151
—	—	20,746	—	47,111	—	—	47,111	5,237	7,897	—	13,134
—	—	38,937	—	88,420	—	—	88,420	9,829	14,350	—	24,179
—	—	31,939	—	72,527	—	—	72,527	8,063	11,618	—	19,681
—	—	89,006	—	202,119	—	—	202,119	22,469	31,455	—	53,924
—	—	65,504	—	148,750	—	—	148,750	16,536	(6,849)	—	9,687
—	—	47,503	—	107,871	—	—	107,871	11,992	16,957	—	28,949
—	—	27,281	—	61,950	—	—	61,950	6,887	(4,179)	—	2,708
—	—	23,848	—	54,155	—	—	54,155	6,020	6,928	—	12,948
—	—	132,610	—	301,137	—	—	301,137	33,477	51,315	—	84,792
—	—	27,448	—	62,329	—	—	62,329	6,929	11,675	—	18,604
—	—	43,379	—	98,506	—	—	98,506	10,951	12,502	—	23,453
—	—	129,752	—	294,646	—	—	294,646	32,755	5,095	—	37,850
—	—	21,690	—	49,255	—	—	49,255	5,476	(448,108)	—	(442,632)
—	—	128,071	—	290,829	—	—	290,829	32,331	(20,300)	—	12,031
—	—	44,991	—	102,168	—	—	102,168	11,358	14,809	—	26,167
—	—	59,700	—	135,568	—	—	135,568	15,071	23,856	—	38,927
—	—	215,520	—	489,412	—	—	489,412	54,407	(62,922)	—	(8,515)
—	—	43,104	—	97,881	—	—	97,881	10,881	13,765	—	24,646
—	—	30,723	—	69,767	—	—	69,767	7,756	(12,105)	—	(4,349)
—	—	72,674	—	165,032	—	—	165,032	18,346	23,738	—	42,084
—	—	281,778	—	639,873	—	—	639,873	71,134	(41,816)	—	29,318
—	—	440,047	—	999,277	—	—	999,277	111,088	162,760	—	273,848
—	—	214,260	—	486,550	—	—	486,550	54,089	52,857	—	106,946
—	—	68,632	—	155,853	—	—	155,853	17,326	18,967	—	36,293
—	—	34,682	—	78,757	—	—	78,757	8,755	(126,825)	—	(118,070)
—	—	43,649	—	99,121	—	—	99,121	11,019	19,655	—	30,674
—	—	1,428,654	—	3,244,246	—	—	3,244,246	360,657	(60,146)	—	300,511
—	—	792,617	—	1,799,907	—	—	1,799,907	200,093	(96,416)	—	103,677
—	—	316,241	—	718,133	—	—	718,133	79,834	24,306	—	104,140
—	—	159,330	—	361,814	—	—	361,814	40,222	56,973	—	97,195
—	—	9,181	—	20,848	—	—	20,848	2,318	(26,487)	—	(24,169)
—	—	26,559	—	60,312	—	—	60,312	6,705	8,935	—	15,640
—	—	29,730	—	67,512	—	—	67,512	7,505	8,610	—	16,115
—	—	19,882	—	45,148	—	—	45,148	5,019	13,868	—	18,887
—	—	39,026	—	88,623	—	—	88,623	9,852	14,064	—	23,916
—	—	282,609	—	641,760	—	—	641,760	71,343	(19,706)	—	51,637

**Contributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** *(Concluded)*

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Utah League Cities/Towns	\$ 54,123	1.8445904%	\$ 150,102	1,017,704	(577,663)	—	189,552
Vernal City	23,300	0.7940805	64,618	438,113	(248,679)	—	81,601
Weber County Corp	16,621	0.5664797	46,097	312,540	(177,402)	—	58,212
Weber River Water Users	9,130	0.3111718	25,321	171,681	(97,448)	—	31,976
West Valley City	46,093	1.5708981	127,830	866,702	(491,952)	—	161,427
Woods Cross City	12,431	0.4236628	34,475	233,745	(132,677)	—	43,536
<b>Grand Total</b>	<b>\$ 2,934,164</b>	<b>100.0000000%</b>	<b>\$ 8,137,414</b>	<b>55,172,376</b>	<b>(31,316,578)</b>	<b>—</b>	<b>10,276,123</b>
<b>No Proportionate Share for 2017</b>							
Bountiful City	\$ —	0.0000000%	\$ —	—	—	—	—
Gunnison Valley Hospital	—	0.0000000	—	—	—	—	—
Riverdale City	—	0.0000000	—	—	—	—	—
San Juan County	—	0.0000000	—	—	—	—	—
Spring City	—	0.0000000	—	—	—	—	—
Springville City	—	0.0000000	—	—	—	—	—
Timpanogos Special Service District	—	0.0000000	—	—	—	—	—
Uintah County	—	0.0000000	—	—	—	—	—
Washington County Water District	—	0.0000000	—	—	—	—	—
Weber Fire District	—	0.0000000	—	—	—	—	—
Bluffdale City	—	0.0000000	—	—	—	—	—
Brian Head Town	—	0.0000000	—	—	—	—	—
Millard County	—	0.0000000	—	—	—	—	—
Southeastern Utah Assoc. of Governments	—	0.0000000	—	—	—	—	—
Sunset City	—	0.0000000	—	—	—	—	—
West Bountiful City	—	0.0000000	—	—	—	—	—
Cache County	—	0.0000000	—	—	—	—	—
Midway City	—	0.0000000	—	—	—	—	—
Mount Pleasant City	—	0.0000000	—	—	—	—	—
Pleasant View City	—	0.0000000	—	—	—	—	—
Sevier County	—	0.0000000	—	—	—	—	—
South Valley Sewer District	—	0.0000000	—	—	—	—	—
Southeastern Utah Health	—	0.0000000	—	—	—	—	—
Valley Mental Health	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 2,934,164</b>	<b>100.0000000%</b>	<b>\$ 8,137,414</b>	<b>55,172,376</b>	<b>(31,316,578)</b>	<b>—</b>	<b>10,276,123</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
—	—	189,552	—	430,443	—	—	430,443	47,852	(43,325)	—	4,527
—	—	81,601	—	185,302	—	—	185,302	20,600	27,614	—	48,214
—	—	58,212	—	132,190	—	—	132,190	14,695	(37,972)	—	(23,277)
—	—	31,976	—	72,613	—	—	72,613	8,072	14,042	—	22,114
—	—	161,427	—	366,576	—	—	366,576	40,752	(121,808)	—	(81,056)
—	—	43,536	—	98,864	—	—	98,864	10,990	18,518	—	29,508
—	—	10,276,123	—	23,335,433	—	—	23,335,433	2,594,160	360,768	—	2,954,928
—	—	—	—	—	—	—	—	—	(47,628)	—	(47,628)
—	—	—	—	—	—	—	—	—	(27,848)	—	(27,848)
—	—	—	—	—	—	—	—	—	(21,043)	—	(21,043)
—	—	—	—	—	—	—	—	—	(46,855)	—	(46,855)
—	—	—	—	—	—	—	—	—	(16,979)	—	(16,979)
—	—	—	—	—	—	—	—	—	(48,212)	—	(48,212)
—	—	—	—	—	—	—	—	—	(104,718)	—	(104,718)
—	—	—	—	—	—	—	—	—	(32,843)	—	(32,843)
—	—	—	—	—	—	—	—	—	(10,474)	—	(10,474)
—	—	—	—	—	—	—	—	—	(16,887)	—	(16,887)
—	—	—	—	—	—	—	—	—	(9,234)	—	(9,234)
—	—	—	—	—	—	—	—	—	(7,320)	—	(7,320)
—	—	—	—	—	—	—	—	—	141	—	141
—	—	—	—	—	—	—	—	—	(318)	—	(318)
—	—	—	—	—	—	—	—	—	(2,262)	—	(2,262)
—	—	—	—	—	—	—	—	—	(4,320)	—	(4,320)
—	—	—	—	—	—	—	—	—	(3,204)	—	(3,204)
—	—	—	—	—	—	—	—	—	(1,140)	—	(1,140)
—	—	—	—	—	—	—	—	—	(1,001)	—	(1,001)
—	—	—	—	—	—	—	—	—	(3,101)	—	(3,101)
—	—	—	—	—	—	—	—	—	(775)	—	(775)
—	—	—	—	—	—	—	—	—	(585)	—	(585)
—	—	—	—	—	—	—	—	—	(157)	—	(157)
—	—	—	—	—	—	—	—	—	(622)	—	(622)
—	—	10,276,123	—	23,335,433	—	—	23,335,433	2,594,160	(46,617)	—	2,547,543

**Contributory Retirement System  
State and School Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Alpine School District	\$ 150,886	3.7466170%	\$ 246,543	3,249,144	(2,309,740)	—	699,824
Box Elder School District	14,777	0.3669324	24,146	318,211	(226,209)	—	68,539
Cache School District	68,569	1.7026128	112,039	1,476,541	(1,049,638)	—	318,028
Carbon School District	2,686	0.0667065	4,390	57,849	(41,124)	—	12,460
Davis School District	207,476	5.1517894	339,009	4,467,738	(3,176,010)	—	962,293
Dixie State University	8,250	0.2048447	13,480	177,646	(126,284)	—	38,263
Duchesne School District	34,432	0.8549635	56,260	741,442	(527,074)	—	159,697
Educators Mutual Insurance	28,792	0.7149357	47,046	620,007	(440,748)	—	133,542
Emery School District	12,407	0.3080711	20,272	267,166	(189,922)	—	57,544
Granite School District	379,369	9.4200388	619,877	8,169,253	(5,807,330)	—	1,759,552
Iron School District	10,213	0.2536067	16,688	219,933	(156,345)	—	47,371
Jordan School District	87,645	2.1763100	143,210	1,887,341	(1,341,666)	—	406,509
Kane School District	2,350	0.0583500	3,840	50,602	(35,972)	—	10,899
Logan School District	24,068	0.5976242	39,326	518,272	(368,427)	—	111,629
Millard School District	30,063	0.7464813	49,122	647,364	(460,196)	—	139,434
Murray School District	9,392	0.2332231	15,347	202,256	(143,779)	—	43,563
Nebo School District	11,046	0.2742856	18,049	237,866	(169,093)	—	51,233
North Sanpete School Dist	2,939	0.0729674	4,802	63,279	(44,983)	—	13,629
Ogden-Weber Tech College	15,550	0.3861244	25,409	334,855	(238,041)	—	72,123
Park City School District	10,200	0.2532695	16,666	219,641	(156,137)	—	47,308
Provo School District	46,946	1.1657032	76,708	1,010,922	(718,641)	—	217,740
Salt Lake Community College	45,487	1.1294832	74,325	979,511	(696,312)	—	210,974
Salt Lake School District	223,985	5.5617268	365,984	4,823,245	(3,428,731)	—	1,038,865
San Juan School District	3,581	0.0889145	5,851	77,108	(54,815)	—	16,608
Sevier School District	8,039	0.1996111	13,135	173,107	(123,058)	—	37,285
Snow College	7,889	0.1958899	12,890	169,880	(120,764)	—	36,590
Southern Utah University	5,420	0.1345811	8,856	116,712	(82,967)	—	25,138
State of Utah	1,247,622	30.9794794	2,038,574	26,866,044	(19,098,441)	—	5,786,601
Tooele School District	2,730	0.0677760	4,460	58,777	(41,783)	—	12,660
Uintah School District	30,608	0.7600335	50,013	659,117	(468,551)	—	141,965
University of Utah	401,347	9.9657805	655,789	8,642,531	(6,143,772)	—	1,861,490
University of Utah Hospital	411,432	10.2162054	672,268	8,859,705	(6,298,156)	—	1,908,267
Utah Housing Corporation	96,925	2.4067297	158,373	2,087,166	(1,483,717)	—	449,549
Utah State University	74,832	1.8581414	122,273	1,611,419	(1,145,520)	—	347,079
Utah Valley University	91,387	2.2692109	149,323	1,967,907	(1,398,939)	—	423,862
Washington School District	32,361	0.8035448	52,877	696,851	(495,375)	—	150,093
Weber State University	85,323	2.1186295	139,414	1,837,319	(1,306,107)	—	395,735
Workers Compensation Fund	100,230	2.4888050	163,773	2,158,343	(1,534,315)	—	464,879
<b>Grand Total</b>	<b>\$ 4,027,252</b>	<b>100.0000000%</b>	<b>\$ 6,580,407</b>	<b>86,722,070</b>	<b>(61,648,682)</b>	<b>—</b>	<b>18,678,820</b>
<b>No Proportionate Share for 2017</b>							
Juab School District	\$ —	0.0000000%	\$ —	—	—	—	—
Weber County School District	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 4,027,252</b>	<b>100.0000000%</b>	<b>\$ 6,580,407</b>	<b>86,722,070</b>	<b>(61,648,682)</b>	<b>—</b>	<b>18,678,820</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
—	—	699,824	—	1,624,991	—	—	1,624,991	63,958	(34,580)	—	29,378
—	—	68,539	—	159,147	—	—	159,147	6,264	8,896	—	15,160
—	—	318,028	—	738,461	—	—	738,461	29,065	(2,468)	—	26,597
—	—	12,460	—	28,932	—	—	28,932	1,139	(16,455)	—	(15,316)
—	—	962,293	—	2,234,445	—	—	2,234,445	87,945	(67,236)	—	20,709
—	—	38,263	—	88,846	—	—	88,846	3,497	10,634	—	14,131
—	—	159,697	—	370,817	—	—	370,817	14,595	3,020	—	17,615
—	—	133,542	—	310,083	—	—	310,083	12,205	(27,972)	—	(15,767)
—	—	57,544	—	133,617	—	—	133,617	5,259	11,990	—	17,249
—	—	1,759,552	—	4,085,679	—	—	4,085,679	160,808	(106,506)	—	54,302
—	—	47,371	—	109,995	—	—	109,995	4,329	5,866	—	10,195
—	—	406,509	—	943,914	—	—	943,914	37,151	8,514	—	45,665
—	—	10,899	—	25,308	—	—	25,308	996	(10,352)	—	(9,356)
—	—	111,629	—	259,203	—	—	259,203	10,202	30,759	—	40,961
—	—	139,434	—	323,765	—	—	323,765	12,743	25,181	—	37,924
—	—	43,563	—	101,154	—	—	101,154	3,981	14,733	—	18,714
—	—	51,233	—	118,964	—	—	118,964	4,682	15,341	—	20,023
—	—	13,629	—	31,648	—	—	31,648	1,246	(6,927)	—	(5,681)
—	—	72,123	—	167,471	—	—	167,471	6,591	(90,707)	—	(84,116)
—	—	47,308	—	109,849	—	—	109,849	4,324	(70,183)	—	(65,859)
—	—	217,740	—	505,591	—	—	505,591	19,900	(97,473)	—	(77,573)
—	—	210,974	—	489,882	—	—	489,882	19,281	(120,183)	—	(100,902)
—	—	1,038,865	—	2,412,244	—	—	2,412,244	94,943	11,880	—	106,823
—	—	16,608	—	38,564	—	—	38,564	1,518	(55,215)	—	(53,697)
—	—	37,285	—	86,576	—	—	86,576	3,408	10,302	—	13,710
—	—	36,590	—	84,962	—	—	84,962	3,344	11,710	—	15,054
—	—	25,138	—	58,371	—	—	58,371	2,297	4,522	—	6,819
—	—	5,786,601	—	13,436,484	—	—	13,436,484	528,846	(266,444)	—	262,402
—	—	12,660	—	29,396	—	—	29,396	1,157	(51,752)	—	(50,595)
—	—	141,965	—	329,643	—	—	329,643	12,974	(35,083)	—	(22,109)
—	—	1,861,490	—	4,322,380	—	—	4,322,380	170,124	(465,414)	—	(295,290)
—	—	1,908,267	—	4,430,994	—	—	4,430,994	174,399	138,998	—	313,397
—	—	449,549	—	1,043,852	—	—	1,043,852	41,085	152,163	—	193,248
—	—	347,079	—	805,917	—	—	805,917	31,720	49,812	—	81,532
—	—	423,862	—	984,207	—	—	984,207	38,737	(137,997)	—	(99,260)
—	—	150,093	—	348,515	—	—	348,515	13,717	(7,066)	—	6,651
—	—	395,735	—	918,896	—	—	918,896	36,167	89,443	—	125,610
—	—	464,879	—	1,079,450	—	—	1,079,450	42,486	133,152	—	175,638
—	—	18,678,820	—	43,372,213	—	—	43,372,213	1,707,083	(933,097)	—	773,986
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	(16,323)	—	(16,323)
—	—	18,678,820	—	43,372,213	—	—	43,372,213	1,707,083	(949,420)	—	757,663

**Public Safety Retirement System  
Other Division A with Social Security**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
American Fork City	\$ 524,542	0.9866517%	\$ 1,547,719	3,899,557	(358,418)	—	278,462
Beaver County	800,488	1.5057001	2,361,929	5,950,999	(546,971)	—	424,953
Big Water Municipal Corp	3,910	0.0073554	11,538	29,071	(2,672)	—	2,076
Blanding City	73,768	0.1387556	217,660	548,406	(50,405)	—	39,161
Box Elder County	1,029,838	1.9371014	3,038,650	7,656,032	(703,685)	—	546,707
Brigham City	471,440	0.8867681	1,391,036	3,504,785	(322,134)	—	250,272
Cache County	1,588,588	2.9880980	4,687,305	11,809,900	(1,085,478)	—	843,329
Carbon County	689,734	1.2973734	2,035,135	5,127,626	(471,293)	—	366,157
Cedar City	547,486	1.0298082	1,615,417	4,070,125	(374,095)	—	290,642
Centerfield City	3,694	0.0069487	10,900	27,463	(2,524)	—	1,961
Centerville City	339,224	0.6380725	1,000,918	2,521,862	(231,791)	—	180,083
City of Draper	588,440	1.1068419	1,736,257	4,374,586	(402,079)	—	312,383
City of Harrisville	88,755	0.1669461	261,881	659,823	(60,646)	—	47,117
City of Helper	65,558	0.1233136	193,437	487,374	(44,796)	—	34,803
City of Kanab	86,116	0.1619829	254,096	640,207	(58,843)	—	45,716
City of Moab	188,541	0.3546422	556,312	1,401,657	(128,830)	—	100,090
City of Monticello	33,976	0.0639085	100,251	252,586	(23,216)	—	18,037
City of Naples	59,805	0.1124923	176,462	444,605	(40,865)	—	31,749
City of North Salt Lake	359,681	0.6765509	1,061,277	2,673,941	(245,769)	—	190,943
City of South Jordan	835,966	1.5724336	2,466,611	6,214,750	(571,213)	—	443,787
City of South Salt Lake	930,811	1.7508336	2,746,460	6,919,843	(636,020)	—	494,137
City of St George	1,855,379	3.4899246	5,474,499	13,793,276	(1,267,775)	—	984,959
Clearfield City	405,864	0.7634211	1,197,547	3,017,279	(277,326)	—	215,460
Clinton City	212,278	0.3992895	626,349	1,578,117	(145,049)	—	112,691
Daggett County	71,581	0.1346416	211,207	532,146	(48,911)	—	38,000
Davis County	3,212,454	6.0425527	9,478,700	23,882,062	(2,195,060)	—	1,705,386
Duchesne County	460,328	0.8658668	1,358,249	3,422,177	(314,541)	—	244,373
East Carbon City	27,345	0.0514355	80,685	203,289	(18,685)	—	14,517
Emery County	541,766	1.0190491	1,598,540	4,027,601	(370,187)	—	287,606
Enoch City	46,712	0.0878650	137,830	347,270	(31,918)	—	24,798
Ephraim City	76,849	0.1445514	226,752	571,312	(52,511)	—	40,797
Fairview City	515	0.0009684	1,519	3,827	(352)	—	273
Farmington City	246,176	0.4630506	726,368	1,830,121	(168,211)	—	130,686
Fountain Green City	12,595	0.0236908	37,163	93,633	(8,606)	—	6,686
Garfield County	409,361	0.7699981	1,207,864	3,043,274	(279,715)	—	217,316
Garland City	29,195	0.0549152	86,143	217,042	(19,949)	—	15,499
Grand County	295,415	0.5556692	871,655	2,196,179	(201,856)	—	156,826
Grantsville City	150,824	0.2836970	445,024	1,121,259	(103,058)	—	80,068
Gunnison City	11,755	0.0221104	34,684	87,387	(8,032)	—	6,240
Heber City	337,518	0.6348638	995,884	2,509,181	(230,625)	—	179,177
Hurricane City	321,126	0.6040303	947,517	2,387,317	(219,424)	—	170,475
Iron County	861,729	1.6208921	2,542,626	6,406,274	(588,817)	—	457,463
Ivins City	188,992	0.3554897	557,642	1,405,007	(129,138)	—	100,330
Juab County	263,861	0.4963167	778,551	1,961,599	(180,296)	—	140,075
Kamas City	35,392	0.0665719	104,429	263,113	(24,183)	—	18,789
Kane County	479,105	0.9011864	1,413,653	3,561,771	(327,371)	—	254,341
Kaysville City	474,881	0.8932410	1,401,190	3,530,368	(324,485)	—	252,099
Laverkin City	53,072	0.0998277	156,596	394,550	(36,264)	—	28,174
Layton City	1,269,557	2.3880074	3,745,967	9,438,154	(867,484)	—	673,966
Lehi City	711,861	1.3389936	2,100,423	5,292,122	(486,412)	—	377,903
Lindon City	309,860	0.5828402	914,277	2,303,567	(211,727)	—	164,495
Mapleton City	115,887	0.2179803	341,937	861,526	(79,185)	—	61,520
Millard County	746,964	1.4050214	2,203,998	5,553,085	(510,398)	—	396,538
Morgan County	134,150	0.2523327	395,824	997,298	(91,664)	—	71,216
Mount Pleasant City	75,869	0.1427087	223,861	564,030	(51,841)	—	40,277

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
569,928	26,778	875,168	226,999	715,804	21,327	35,981	1,000,111	598,766	(5,876)	—	592,890
869,751	67,936	1,362,640	346,417	1,092,368	32,546	—	1,471,331	913,759	49,239	—	962,998
4,249	1,533	7,858	1,692	5,336	159	433	7,620	4,464	1,241	—	5,705
80,151	25,990	145,302	31,924	100,666	2,999	—	135,589	84,206	12,620	—	96,826
1,118,945	18,255	1,683,907	445,670	1,405,344	41,871	136,950	2,029,835	1,175,562	(41,844)	—	1,133,718
512,232	75,194	837,698	204,019	643,340	19,168	10,849	877,376	538,150	25,653	—	563,803
1,726,041	94,451	2,663,821	687,473	2,167,830	64,589	163,214	3,083,106	1,813,376	(2,486)	—	1,810,890
749,413	69,563	1,185,133	298,487	941,229	28,043	25,937	1,293,696	787,332	48,312	—	835,644
594,857	63,293	948,792	236,928	747,114	22,260	9,177	1,015,479	624,956	18,717	—	643,673
4,014	1,470	7,445	1,599	5,041	150	31,799	38,589	4,217	(12,938)	—	(8,721)
368,575	54,887	603,545	146,802	462,914	13,792	—	623,508	387,225	37,197	—	424,422
639,355	33,982	985,720	254,652	803,001	23,925	59,706	1,141,284	671,705	(9,601)	—	662,104
96,435	19,063	162,615	38,409	121,117	3,609	16,159	179,294	101,314	2,495	—	103,809
71,231	—	106,034	28,371	89,463	2,665	19,651	140,150	74,835	(13,424)	—	61,411
93,568	6,880	146,164	37,267	117,517	3,501	—	158,285	98,302	4,642	—	102,944
204,855	42,547	347,492	81,593	257,289	7,666	11,561	358,109	215,220	7,558	—	222,778
36,916	26,586	81,539	14,703	46,365	1,381	435	62,884	38,784	12,500	—	51,284
64,980	—	96,729	25,881	81,612	2,432	70,249	180,174	68,268	(38,797)	—	29,471
390,802	26,860	608,605	155,654	490,830	14,624	—	661,108	410,576	14,386	—	424,962
908,299	36,229	1,388,315	361,771	1,140,782	33,989	39,520	1,576,062	954,257	12,000	—	966,257
1,011,349	—	1,505,486	402,815	1,270,209	37,845	182,992	1,893,861	1,062,522	(104,449)	—	958,073
2,015,916	202,454	3,203,329	802,929	2,531,900	75,436	109,474	3,519,739	2,117,918	77,252	—	2,195,170
440,982	10,189	666,631	175,641	553,853	16,502	57,436	803,432	463,295	(43,396)	—	419,899
230,645	26,588	369,924	91,865	289,680	8,631	—	390,176	242,315	15,841	—	258,156
77,774	—	115,774	30,977	97,681	2,910	181,946	313,514	81,709	(93,559)	—	(11,850)
3,490,412	11,363	5,207,161	1,390,213	4,383,801	130,613	734,943	6,639,570	3,667,022	(373,084)	—	3,293,938
500,158	43,279	787,810	199,210	628,176	18,716	111,856	957,958	525,465	(22,667)	—	502,798
29,711	96	44,324	11,834	37,316	1,112	17,510	67,772	31,214	(13,878)	—	17,336
588,642	67,162	943,410	234,453	739,308	22,027	62,685	1,058,473	618,427	(645)	—	617,782
50,754	7,575	83,127	20,215	63,745	1,899	36,792	122,651	53,322	(11,714)	—	41,608
83,498	32,221	156,516	33,257	104,870	3,125	10,164	151,416	87,723	16,093	—	103,816
559	1,096	1,928	223	703	21	—	947	588	464	—	1,052
267,476	15,840	414,002	106,534	335,938	10,009	47,232	499,713	281,010	(11,383)	—	269,627
13,685	—	20,371	5,451	17,187	512	931	24,081	14,377	(518)	—	13,859
444,781	14,689	676,786	177,154	558,625	16,644	13,126	765,549	467,286	4,889	—	472,175
31,721	—	47,220	12,634	39,840	1,187	42,915	96,576	33,326	(26,943)	—	6,383
320,976	35,907	513,709	127,843	403,132	12,011	10,932	553,918	337,217	6,884	—	344,101
163,874	3,385	247,327	65,270	205,819	6,132	19,557	296,778	172,166	(14,159)	—	158,007
12,772	—	19,012	5,087	16,041	478	85,362	106,968	13,418	(36,514)	—	(23,096)
366,722	124,823	670,722	146,063	460,586	13,723	—	620,372	385,277	63,847	—	449,124
348,911	30,046	549,432	138,970	438,217	13,056	8,775	599,018	366,566	19,191	—	385,757
936,290	—	1,393,753	372,919	1,175,938	35,036	204,547	1,788,440	983,665	(115,461)	—	868,204
205,345	30,532	336,207	81,788	257,904	7,684	44,282	391,658	215,735	(291)	—	215,444
286,692	47,490	474,257	114,188	360,072	10,728	7,566	492,554	301,198	14,106	—	315,304
38,455	11,319	68,563	15,316	48,297	1,439	1,755	66,807	40,400	9,020	—	49,420
520,560	20,880	795,781	207,336	653,800	19,480	2,690	883,306	546,900	12,330	—	559,230
515,971	49,710	817,780	205,508	648,036	19,308	71,835	944,687	542,078	3,717	—	545,795
57,664	2,707	88,545	22,967	72,424	2,158	15,389	112,938	60,582	(6,834)	—	53,748
1,379,406	17,161	2,070,533	549,410	1,732,471	51,618	113,070	2,446,569	1,449,201	(42,580)	—	1,406,621
773,455	77,169	1,228,527	308,063	971,424	28,943	58,334	1,366,764	812,590	28,902	—	841,492
336,671	53,183	554,349	134,094	422,844	12,598	—	569,536	353,706	25,084	—	378,790
125,914	5,689	193,123	50,151	158,142	4,712	13,210	226,215	132,285	(8,903)	—	123,382
811,595	7,317	1,215,450	323,254	1,019,327	30,370	37,324	1,410,275	852,660	(11,865)	—	840,795
145,757	7,902	224,875	58,054	183,064	5,454	33,083	279,655	153,132	(18,092)	—	135,040
82,434	8,148	130,859	32,833	103,533	3,085	788	140,239	86,605	3,352	—	89,957

**Public Safety Retirement System  
Other Division A with Social Security**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Murray City	\$ 1,260,512	2.3709950%	\$ 3,719,281	9,370,915	(861,304)	—	669,164
Nephi City	127,412	0.2396597	375,944	947,210	(87,060)	—	67,639
North Ogden City	264,745	0.4979801	781,161	1,968,173	(180,900)	—	140,545
North Park Police Agency	91,886	0.1728356	271,120	683,100	(62,785)	—	48,779
Park City	748,360	1.4076471	2,208,117	5,563,462	(511,352)	—	397,279
Parowan City	66,304	0.1247169	195,638	492,920	(45,306)	—	35,199
Payson City	280,873	0.5283152	828,746	2,088,067	(191,920)	—	149,106
Perry City	91,993	0.1730358	271,434	683,892	(62,858)	—	48,836
Piute County	46,976	0.0883610	138,608	349,230	(32,099)	—	24,938
Pleasant Grove City	363,605	0.6839326	1,072,857	2,703,116	(248,450)	—	193,026
Pleasant View City	120,230	0.2261499	354,752	893,815	(82,153)	—	63,826
Price City	261,627	0.4921150	771,960	1,944,993	(178,769)	—	138,889
Rich County	93,759	0.1763578	276,645	697,021	(64,065)	—	49,773
Richfield City	187,703	0.3530646	553,838	1,395,422	(128,257)	—	99,645
Riverdale City	388,919	0.7315468	1,147,547	2,891,302	(265,747)	—	206,464
Roosevelt City	166,095	0.3124200	490,080	1,234,782	(113,492)	—	88,174
Roy City	659,743	1.2409621	1,946,645	4,904,671	(450,801)	—	350,236
Salem City	158,970	0.2990184	469,058	1,181,814	(108,624)	—	84,392
Salina City	35,206	0.0662217	103,879	261,729	(24,056)	—	18,690
Salt Lake County	8,090,153	15.2173917	23,870,888	60,143,908	(5,527,976)	—	4,294,798
San Juan County	321,033	0.6038551	947,242	2,386,625	(219,361)	—	170,426
Sanpete County	441,536	0.8305200	1,302,802	3,282,475	(301,701)	—	234,397
Santaquin City	187,935	0.3535016	554,523	1,397,149	(128,415)	—	99,769
Sevier County	631,279	1.1874218	1,862,659	4,693,063	(431,351)	—	335,125
Smithfield City Corp	88,795	0.1670221	262,001	660,124	(60,674)	—	47,139
South Ogden City	445,660	0.8382768	1,314,970	3,313,133	(304,518)	—	236,586
Spanish Fork City	635,212	1.1948197	1,874,264	4,722,302	(434,039)	—	337,213
Springville City	361,168	0.6793483	1,065,665	2,684,997	(246,785)	—	191,732
Stockton Town	13,570	0.0255253	40,040	100,884	(9,273)	—	7,204
Summit County	1,729,279	3.2527334	5,102,427	12,855,822	(1,181,611)	—	918,017
Sunset City	85,463	0.1607542	252,168	635,351	(58,397)	—	45,370
Syracuse City Corp	339,138	0.6379115	1,000,665	2,521,226	(231,732)	—	180,037
Tooele City	474,687	0.8928747	1,400,615	3,528,921	(324,352)	—	251,995
Tooele County	853,534	1.6054773	2,518,445	6,345,349	(583,217)	—	453,113
Town of Brian Head	93,971	0.1767580	277,273	698,603	(64,210)	—	49,886
Town of Springdale	138,797	0.2610742	409,536	1,031,847	(94,840)	—	73,683
Tremonton City	115,661	0.2175551	341,270	859,846	(79,031)	—	61,400
Uintah County	793,552	1.4926527	2,341,462	5,899,431	(542,232)	—	421,270
Unified Fire Authority	52,947	0.0995923	156,226	393,620	(36,179)	—	28,108
Vernal City	366,739	0.6898284	1,082,105	2,726,418	(250,592)	—	194,690
Wasatch County	781,544	1.4700657	2,306,031	5,810,160	(534,026)	—	414,896
Washington City	208,854	0.3928491	616,246	1,552,663	(142,709)	—	110,874
Washington County	1,958,694	3.6842591	5,779,343	14,561,347	(1,338,370)	—	1,039,806
Wayne County	60,267	0.1133613	177,825	448,039	(41,180)	—	31,994
Weber County Corp	4,544,209	8.5475520	13,408,188	33,782,604	(3,105,044)	—	2,412,370
Wellington City	20,254	0.0380971	59,761	150,572	(13,839)	—	10,752
West Bountiful City	117,861	0.2216936	347,761	876,203	(80,534)	—	62,568
Willard City Corp	40,571	0.0763130	119,709	301,613	(27,722)	—	21,538
<b>Grand Total</b>	<b>\$ 53,163,860</b>	<b>100.0000000%</b>	<b>\$ 156,865,824</b>	<b>395,231,340</b>	<b>(36,326,707)</b>	<b>—</b>	<b>28,222,940</b>
<b>No Proportionate Share for 2017</b>							
Escalante Town	\$ —	0.0000000%	\$ —	—	—	—	—
Taylorsville City	—	0.0000000	—	—	—	—	—
North Logan City	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 53,163,860</b>	<b>100.0000000%</b>	<b>\$ 156,865,824</b>	<b>395,231,340</b>	<b>(36,326,707)</b>	<b>—</b>	<b>28,222,940</b>

Columns may not add to total due to rounding.



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Inflows of Resources	Proportionate Share of Plan Gross Pension Expense	Proportionate Share of Employer Contributions	Proportionate Share of Nonemployer Contributions	
1,369,579	118,600	2,157,343	545,496	1,720,129	51,250	226,983	2,543,858	1,438,877	(21,368)	—	1,417,509
138,437	19,748	225,824	55,139	173,870	5,180	23,314	257,503	145,441	2,047	—	147,488
287,653	56,416	484,614	114,571	361,279	10,764	—	486,614	302,207	30,318	—	332,525
99,837	149,074	297,690	39,764	125,390	3,736	—	168,890	104,888	75,670	—	180,558
813,111	261,660	1,472,050	323,858	1,021,232	30,427	—	1,375,517	854,254	155,098	—	1,009,352
72,041	17,483	124,723	28,694	90,481	2,696	—	121,871	75,686	8,444	—	84,130
305,175	32,908	487,189	121,550	383,287	11,420	75,431	591,688	320,617	(2,529)	—	318,088
99,952	70,871	219,659	39,810	125,535	3,740	—	169,085	105,010	36,450	—	141,460
51,041	4,079	80,058	20,329	64,105	1,910	1,727	88,071	53,623	409	—	54,032
395,066	—	588,092	157,353	496,185	14,784	72,714	741,036	415,056	(36,873)	—	378,183
130,633	20,754	215,213	52,030	164,069	4,888	4,975	225,962	137,243	13,116	—	150,359
284,265	9,981	433,135	113,221	357,024	10,637	45,663	526,545	298,648	(26,296)	—	272,352
101,871	18,371	170,015	40,575	127,946	3,812	10,006	182,339	107,026	11,290	—	118,316
203,944	9,703	313,292	81,230	256,144	7,632	349	345,355	214,263	4,305	—	218,568
422,570	29,804	658,838	168,307	530,729	15,813	25,087	739,936	443,951	(5,019)	—	438,932
180,466	10,421	279,061	71,879	226,657	6,753	10,715	316,004	189,597	(1,266)	—	188,331
716,828	86,481	1,153,545	285,509	900,304	26,824	33,269	1,245,906	753,098	8,285	—	761,383
172,725	32,652	289,769	68,795	216,934	6,463	8,749	300,941	181,464	17,088	—	198,552
38,252	—	56,942	15,236	48,043	1,431	10,283	74,993	40,188	(5,923)	—	34,265
8,790,151	491,725	13,576,674	3,501,077	11,040,042	328,934	363,655	15,233,708	9,234,924	(83,486)	—	9,151,438
348,810	—	519,236	138,929	438,090	13,053	61,158	651,230	366,459	(36,661)	—	329,798
479,741	29,613	743,751	191,078	602,533	17,952	7,884	819,447	504,015	8,786	—	512,801
204,196	30,965	334,930	81,330	256,461	7,641	17,413	362,845	214,528	18,138	—	232,666
685,901	—	1,021,026	273,191	861,461	25,667	147,089	1,307,408	720,606	(80,763)	—	639,843
96,478	12,352	155,969	38,427	121,173	3,610	22,694	185,904	101,360	(15,554)	—	85,806
484,221	47,273	768,080	192,863	608,160	18,120	15,176	834,319	508,722	10,543	—	519,265
690,174	62,122	1,089,509	274,893	866,828	25,827	—	1,167,548	725,096	44,274	—	769,370
392,418	—	584,150	156,298	492,859	14,684	121,181	785,022	412,274	(69,938)	—	342,336
14,744	14,459	36,407	5,873	18,518	552	2,338	27,281	15,490	5,284	—	20,774
1,878,905	447,495	3,244,417	748,358	2,359,820	70,309	—	3,178,487	1,973,974	259,888	—	2,233,862
92,858	587	138,815	36,985	116,625	3,475	10,753	167,838	97,556	(10,048)	—	87,508
368,482	127,417	675,936	146,765	462,797	13,789	—	623,351	387,127	61,215	—	448,342
515,759	8,707	776,461	205,424	647,770	19,300	41,437	913,931	541,856	(32,074)	—	509,782
927,386	45,769	1,426,268	369,373	1,164,755	34,703	42,763	1,611,594	974,310	(11,256)	—	963,054
102,102	12,732	164,720	40,667	128,236	3,821	—	172,724	107,268	7,743	—	115,011
150,807	161,299	385,789	60,065	189,406	5,643	—	255,114	158,437	83,107	—	241,544
125,668	13,656	200,724	50,053	157,834	4,703	—	212,590	132,027	6,409	—	138,436
862,214	48,934	1,332,418	343,415	1,082,902	32,264	208,251	1,666,832	905,841	(46,949)	—	858,892
57,528	5,045	90,681	22,913	72,253	2,153	—	97,319	60,439	2,515	—	62,954
398,472	—	593,162	158,709	500,462	14,911	83,143	757,225	418,634	(51,841)	—	366,793
849,167	49,668	1,313,731	338,219	1,066,515	31,776	12,780	1,449,290	892,133	25,394	—	917,527
226,925	23,561	361,360	90,383	285,007	8,492	8,337	392,219	238,407	6,686	—	245,093
2,128,171	24,192	3,192,169	847,639	2,672,887	79,637	364,030	3,964,193	2,235,853	(131,271)	—	2,104,582
65,482	20,973	118,449	26,081	82,242	2,450	389	111,162	68,795	9,216	—	78,011
4,937,397	1,283,895	8,633,662	1,966,540	6,201,149	184,759	455,999	8,808,447	5,187,221	292,481	—	5,479,702
22,006	1,173	33,931	8,765	27,639	823	12,577	49,804	23,120	(7,028)	—	16,092
128,059	20,087	210,714	51,005	160,836	4,792	7,071	223,704	134,538	11,983	—	146,521
44,081	16,646	82,265	17,557	55,364	1,650	—	74,571	46,312	8,290	—	54,602
57,763,873	5,606,770	91,593,583	23,007,051	72,548,832	2,161,548	5,525,506	103,242,937	60,686,633	13,959	—	60,700,592
—	—	—	—	—	—	9,310	9,310	—	(7,548)	—	(7,548)
—	—	—	—	—	—	9,116	9,116	—	(8,757)	—	(8,757)
—	3,076	3,076	—	—	—	148,671	148,671	—	(73,677)	—	(73,677)
57,763,873	5,609,846	91,596,659	23,007,051	72,548,832	2,161,548	5,692,603	103,410,034	60,686,633	(76,022)	—	60,610,611

**Public Safety Retirement System  
State of Utah**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Dixie State University	\$ 78,012	0.1560612%	\$ 271,370	563,901	31,125	3,915	36,524
Snow College	28,836	0.0576864	100,309	208,440	11,505	1,447	13,501
Southern Utah University	99,422	0.1988919	345,846	718,663	39,667	4,990	46,547
State of Utah	48,751,653	97.5263743	169,585,356	352,395,484	19,450,621	2,446,744	22,824,498
University of Utah	855,764	1.7119332	2,976,823	6,185,789	341,427	42,949	400,651
Utah State University	174,485	0.3490530	606,957	1,261,245	69,615	8,757	81,690
<b>Grand Total</b>	<b>\$ 49,988,173</b>	<b>100.0000000%</b>	<b>\$ 173,886,661</b>	<b>361,333,522</b>	<b>19,943,960</b>	<b>2,508,802</b>	<b>23,403,411</b>

Columns may not add to total due to rounding.

**Public Safety Retirement System  
Salt Lake City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Salt Lake City Corp	\$ 14,899,169	100.0000000%	\$ 86,194,634	137,497,858	44,045,920	3,226,957	5,633,153

**Public Safety Retirement System  
Ogden City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Ogden City Corp	\$ 3,072,136	100.0000000%	\$ 19,938,952	31,567,731	10,420,361	1,211,508	1,314,543

**Public Safety Retirement System  
Provo City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Provo City Corp	\$ 2,257,577	100.0000000%	\$ 11,389,861	20,182,811	4,192,119	298,874	1,008,506

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
55,171	2,819	98,429	7,019	93,817	604	48,141	149,581	66,289	(18,005)	—	48,284
20,394	28,566	63,908	2,594	34,679	223	—	37,496	24,503	23,005	—	47,508
70,313	20,525	142,375	8,945	119,566	770	15,133	144,414	84,481	1,551	—	86,032
34,477,873	216,132	59,965,247	4,386,215	58,628,794	377,622	—	63,392,631	41,425,335	135,235	—	41,560,570
605,209	470,535	1,519,344	76,994	1,029,143	6,629	—	1,112,766	727,161	321,208	—	1,048,369
123,398	8,778	222,623	15,699	209,836	1,352	—	226,887	148,264	5,264	—	153,528
35,352,358	747,354	62,011,925	4,497,466	60,115,835	387,200	63,274	65,063,775	42,476,033	468,257	—	42,944,290

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
13,482,399	—	22,342,509	—	14,590,217	—	—	14,590,217	17,369,585	—	—	17,369,585

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
2,379,400	—	4,905,451	229,345	3,316,907	—	—	3,546,252	4,831,200	—	—	4,831,200

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
2,448,597	—	3,755,977	1,164,499	2,586,915	169,040	—	3,920,454	2,391,349	—	—	2,391,349

**Public Safety Retirement System  
Logan City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Logan City	\$ 1,034,307	100.0000000%	\$ 5,809,852	10,703,039	1,855,547	33,602	578,561

**Public Safety Retirement System  
Bountiful City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Bountiful	\$ 910,989	100.0000000%	\$ 6,280,025	9,848,354	3,335,206	444,052	419,780

**Public Safety Retirement System  
Other Division B without Social Security**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Orem	\$ 1,565,019	7.4094711%	\$ 3,580,282	9,223,958	(1,020,816)	1,904,993	576,775
City of Saratoga Springs	318,200	1.5064946	727,943	1,875,416	(207,552)	387,323	117,270
City of West Jordan	1,973,926	9.3454120	4,515,735	11,633,987	(1,287,533)	2,402,728	727,474
Cottonwood Heights City	516,534	2.4454912	1,181,670	3,044,361	(336,920)	628,742	190,364
Gunnison Valley Police Dept	49,380	0.2337858	112,966	291,037	(32,209)	60,107	18,199
Lone Peak PS District	337,129	1.5961116	771,247	1,986,979	(219,899)	410,364	124,246
Sandy City	1,644,979	7.7880332	3,763,204	9,695,225	(1,072,971)	2,002,322	606,243
Town of Mantua	18,075	0.0855763	41,351	106,533	(11,790)	22,002	6,662
Unified Police Department	7,410,984	35.0867757	16,954,051	43,679,088	(4,833,965)	9,020,893	2,731,259
Utah County	4,219,392	19.9764093	9,652,669	24,868,382	(2,752,184)	5,135,983	1,555,022
West Valley City	2,893,751	13.7002595	6,620,012	17,055,282	(1,887,508)	3,522,369	1,066,468
Woods Cross City	174,505	0.8261797	399,213	1,028,501	(113,824)	212,413	64,312
<b>Grand Total</b>	<b>\$ 21,121,873</b>	<b>100.0000000%</b>	<b>\$ 48,320,343</b>	<b>124,488,749</b>	<b>(13,777,171)</b>	<b>25,710,239</b>	<b>7,784,294</b>

Columns may not add to total due to rounding.

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
1,164,705	—	1,776,868	619,112	1,459,198	60,256	—	2,138,566	1,155,195	—	—	1,155,195

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
1,059,443	—	1,923,275	328,830	1,057,220	33,272	—	1,419,322	1,114,700	—	—	1,114,700

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
1,666,071	27,870	4,175,709	—	1,641,976	162,340	118,066	1,922,382	953,362	(25,906)	—	927,456
338,746	20,138	863,477	—	333,847	33,007	11,284	378,138	193,838	1,849	—	195,687
2,101,380	215,202	5,446,784	—	2,070,991	204,756	14,467	2,290,214	1,202,456	68,872	—	1,271,328
549,886	64,885	1,433,877	—	541,933	53,580	13,724	609,237	314,657	17,939	—	332,596
52,568	46,184	177,058	—	51,808	5,122	—	56,930	30,081	12,138	—	42,219
358,897	4,488	897,995	—	353,706	34,971	17,891	406,568	205,369	(4,440)	—	200,929
1,751,193	3,051	4,362,809	—	1,725,868	170,635	92,942	1,989,445	1,002,071	(28,415)	—	973,656
19,242	16,609	64,515	—	18,964	1,875	—	20,839	11,011	4,466	—	15,477
7,889,502	319,334	19,960,988	—	7,775,407	768,747	144,762	8,688,916	4,514,548	36,268	—	4,550,816
4,491,833	173,011	11,355,849	—	4,426,873	437,680	105,992	4,970,545	2,570,326	26,979	—	2,597,305
3,080,598	—	7,669,435	—	3,036,047	300,170	357,676	3,693,893	1,762,786	(105,781)	—	1,657,005
185,772	3,928	466,425	—	183,086	18,101	15,672	216,859	106,303	(3,308)	—	102,995
22,485,688	894,701	56,874,922	—	22,160,506	2,190,984	892,476	25,243,966	12,866,808	661	—	12,867,469

**Firefighters Retirement System  
Other Division A with Social Security**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
American Fork City	\$ 22,193	1.9399639%	\$ (121,161)	516,958	(636,771)	—	79,330
Brigham City	12,477	1.0906511	(68,117)	290,635	(357,994)	—	44,599
Cache County	8,006	0.6998638	(43,710)	186,498	(229,722)	—	28,619
Cedar City	21,283	1.8604718	(116,196)	495,775	(610,679)	—	76,079
City of Draper	47,885	4.1858671	(261,429)	1,115,442	(1,373,964)	—	171,170
City of Kanab	2,305	0.2015288	(12,587)	53,703	(66,150)	—	8,241
City of Santa Clara	4,634	0.4050682	(25,299)	107,942	(132,959)	—	16,564
City of South Jordan	96,672	8.4505314	(527,780)	2,251,883	(2,773,791)	—	345,562
City of South Salt Lake	91,141	7.9670752	(497,586)	2,123,052	(2,615,102)	—	325,793
City of St George	57,258	5.0051828	(312,600)	1,333,772	(1,642,895)	—	204,674
City of Washington Terrace	1,973	0.1724810	(10,772)	45,962	(56,615)	—	7,053
Clinton City	12,586	1.1001583	(68,711)	293,168	(361,115)	—	44,988
Farmington City	12,575	1.0992229	(68,652)	292,919	(360,807)	—	44,950
Hurricane Valley Fire SSD	14,116	1.2339138	(77,064)	328,811	(405,018)	—	50,458
Kaysville City	5,714	0.4995134	(31,197)	133,109	(163,960)	—	20,426
Layton City	109,618	9.5822288	(598,461)	2,553,455	(3,145,258)	—	391,840
Lehi City	61,799	5.4021529	(337,393)	1,439,556	(1,773,196)	—	220,907
Moab Valley Fire Protection	5,349	0.4675573	(29,201)	124,594	(153,470)	—	19,120
Morgan County	2,750	0.2403496	(15,011)	64,048	(78,892)	—	9,828
Murray City	132,451	11.5781685	(723,117)	3,085,333	(3,800,403)	—	473,458
N Tooele Co Fire Protection SD	2,227	0.1946694	(12,158)	51,875	(63,898)	—	7,960
North Davis Fire District	30,566	2.6718695	(166,872)	711,995	(877,011)	—	109,259
North Fork SSD	2,523	0.2205825	(13,777)	58,780	(72,404)	—	9,020
North Logan City	5,803	0.5072530	(31,681)	135,172	(166,500)	—	20,743
North View Fire District	20,811	1.8191956	(113,618)	484,776	(597,130)	—	74,391
Payson City	3,480	0.3041595	(18,996)	81,052	(99,837)	—	12,438
Pleasant Grove City	18,946	1.6561702	(103,437)	441,333	(543,619)	—	67,725
Price City	2,916	0.2548569	(15,917)	67,914	(83,654)	—	10,422
Riverdale City	20,391	1.7824474	(111,323)	474,983	(585,068)	—	72,889
Roy City	44,258	3.8688262	(241,629)	1,030,958	(1,269,898)	—	158,206
Smithfield City Corp	4,728	0.4132930	(25,812)	110,134	(135,659)	—	16,901
So Davis Metro Fire Agency	125,305	10.9534331	(684,100)	2,918,851	(3,595,340)	—	447,912
South Ogden City	24,420	2.1346254	(133,319)	568,831	(700,667)	—	87,290
Springville City	6,018	0.5260681	(32,856)	140,186	(172,676)	—	21,512
State of Utah	43,885	3.8361804	(239,590)	1,022,259	(1,259,183)	—	156,871
Syracuse City Corp	20,800	1.8182585	(113,560)	484,526	(596,823)	—	74,353
Uintah Fire Suppression SSD	4,713	0.4120054	(25,732)	109,790	(135,236)	—	16,848
Wasatch County Fire District	32,747	2.8625598	(178,782)	762,810	(939,603)	—	117,057
Washington City	6,653	0.5815955	(36,324)	154,983	(190,902)	—	23,783
<b>Grand Total</b>	<b>\$ 1,143,975</b>	<b>100.0000000%</b>	<b>(6,245,527)</b>	<b>26,647,823</b>	<b>(32,823,869)</b>	<b>—</b>	<b>4,089,239</b>
<b>No Proportionate Share for 2017</b>							
Hurricane City	\$ —	0.0000000%	\$ —	—	—	—	—
Leeds Area Special Service District	—	0.0000000	—	—	—	—	—
Ivins City	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 1,143,975</b>	<b>100.0000000%</b>	<b>(6,245,527)</b>	<b>26,647,823</b>	<b>(32,823,869)</b>	<b>—</b>	<b>4,089,239</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Employer Contributions	Proportionate Share of Nonemployer Contributions	
165,368	2,643	247,341	57,198	208,536	39,022	21,963	326,719	57,648	(3,528)	(5,081)	49,039
92,970	—	137,569	32,157	117,239	21,938	32,961	204,295	32,410	(6,472)	(2,857)	23,081
59,658	941	89,218	20,635	75,232	14,078	1,010	110,955	20,797	2	(1,833)	18,966
158,592	1,742	236,413	54,855	199,991	37,423	9,388	301,657	55,286	(1,368)	(4,873)	49,045
356,816	—	527,986	123,417	449,959	84,198	175,695	833,269	124,387	(32,228)	(10,963)	81,196
17,179	664	26,084	5,942	21,663	4,054	—	31,659	5,989	137	(528)	5,598
34,529	—	51,093	11,943	43,543	8,148	9,513	73,147	12,037	(1,945)	(1,061)	9,031
720,349	13,461	1,079,372	249,157	908,388	169,981	—	1,327,526	251,115	2,676	(22,133)	231,658
679,137	73,142	1,078,072	234,903	856,419	160,256	1,135	1,252,713	236,749	13,342	(20,867)	229,224
426,657	13,714	645,045	147,574	538,031	100,678	9,029	795,312	148,734	711	(13,109)	136,336
14,703	169	21,925	5,085	18,541	3,469	91	27,186	5,125	12	(452)	4,685
93,781	15,652	154,421	32,437	118,261	22,129	2,002	174,829	32,692	2,422	(2,881)	32,233
93,701	—	138,651	32,410	118,161	22,111	7,205	179,887	32,664	(1,403)	(2,879)	28,382
105,183	55	155,696	36,381	132,639	24,820	13,916	207,756	36,667	(3,038)	(3,232)	30,397
42,580	—	63,006	14,728	53,695	10,048	19,219	97,690	14,844	(3,834)	(1,308)	9,702
816,818	55,559	1,264,217	282,525	1,030,039	192,745	—	1,505,309	284,745	10,483	(25,097)	270,131
460,496	8,625	690,028	159,278	580,703	108,663	9,418	858,062	160,530	(341)	(14,149)	146,040
39,856	709	59,685	13,786	50,260	9,405	2,004	75,455	13,894	(243)	(1,225)	12,426
20,488	—	30,316	7,087	25,836	4,835	10,032	47,790	7,142	(1,850)	(630)	4,662
986,958	23,400	1,483,816	341,371	1,244,592	232,890	22,000	1,840,853	344,056	(38)	(30,324)	313,694
16,594	2,536	27,090	5,740	20,926	3,916	357	30,939	5,785	468	(510)	5,743
227,758	18,308	355,325	78,778	287,212	53,744	—	419,734	79,397	3,621	(6,998)	76,020
18,803	707	28,530	6,504	23,711	4,437	8,962	43,614	6,555	(1,539)	(578)	4,438
43,240	812	64,795	14,956	54,527	10,203	4,969	84,655	15,073	(756)	(1,329)	12,988
155,074	621	230,086	53,638	195,554	36,593	11,586	297,371	54,059	(1,992)	(4,765)	47,302
25,927	729	39,094	8,968	32,696	6,118	111	47,893	9,038	116	(797)	8,357
141,177	24,911	233,813	48,831	178,030	33,314	—	260,175	49,215	4,793	(4,338)	49,670
21,725	356	32,503	7,514	27,396	5,126	6	40,042	7,573	67	(668)	6,972
151,941	11,716	236,546	52,554	191,604	35,854	—	280,012	52,967	2,225	(4,668)	50,524
329,790	23,472	511,468	114,069	415,878	77,821	—	607,768	114,966	4,544	(10,133)	109,377
35,230	11,329	63,460	12,186	44,427	8,313	—	64,926	12,281	2,283	(1,082)	13,482
933,704	33,409	1,415,025	322,953	1,177,436	220,326	—	1,720,715	325,491	6,287	(28,689)	303,089
181,962	1,956	271,208	62,938	229,461	42,938	153	335,490	63,432	348	(5,591)	58,189
44,844	1,047	67,403	15,511	56,550	10,582	1,729	84,372	15,633	(122)	(1,378)	14,133
327,008	19,412	503,291	113,107	412,369	77,164	28,651	631,291	113,996	(2,480)	(10,048)	101,468
154,994	1,403	230,750	53,610	195,453	36,574	846	286,483	54,031	88	(4,762)	49,357
35,121	1,550	53,519	12,148	44,288	8,287	463	65,186	12,243	226	(1,079)	11,390
244,013	547	361,617	84,400	307,710	57,580	16,579	466,269	85,064	(2,973)	(7,497)	74,594
49,577	11,335	84,695	17,148	62,518	11,699	82	91,447	17,283	2,198	(1,523)	17,958
8,524,301	376,631	12,990,171	2,948,422	10,749,474	2,011,480	421,075	16,130,451	2,971,593	(9,099)	(261,915)	2,700,579
—	9,433	9,433	—	—	—	—	—	—	2,101	—	2,101
—	6,323	6,323	—	—	—	—	—	—	1,291	—	1,291
—	11,023	11,023	—	—	—	—	—	—	2,148	—	2,148
8,524,301	403,410	13,016,950	2,948,422	10,749,474	2,011,480	421,075	16,130,451	2,971,593	(3,560)	(261,915)	2,706,118

**Firefighters Retirement System  
Other Division B without Social Security**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Orem	\$ 212,364	3.7993255%	\$ (852,323)	4,371,965	(5,146,081)	—	769,527
City of Saratoga Springs	26,892	0.4811169	(107,932)	553,632	(651,659)	—	97,447
City of West Jordan	322,946	5.7776911	(1,296,140)	6,648,513	(7,825,722)	—	1,170,232
Logan City	158,792	2.8408753	(637,309)	3,269,056	(3,847,887)	—	575,400
Lone Peak PS District	32,021	0.5728708	(128,515)	659,215	(775,938)	—	116,031
Ogden City Corp	338,857	6.0623445	(1,359,998)	6,976,070	(8,211,277)	—	1,227,887
Park City Fire Service	296,169	5.2986341	(1,188,671)	6,097,252	(7,176,853)	—	1,073,202
Provo City Corp	274,511	4.9111599	(1,101,747)	5,651,377	(6,652,030)	—	994,722
Salt Lake City Corp	1,419,609	25.3976443	(5,697,589)	29,225,615	(34,400,404)	—	5,144,120
Sandy City	265,064	4.7421452	(1,063,831)	5,456,888	(6,423,104)	—	960,489
Unified Fire Authority	1,691,545	30.2627299	(6,788,998)	34,823,975	(40,990,028)	—	6,129,509
Weber Fire District	177,311	3.1721957	(711,636)	3,650,314	(4,296,651)	—	642,507
West Valley City	373,451	6.6812668	(1,498,844)	7,688,277	(9,049,590)	—	1,353,245
<b>Grand Total</b>	<b>\$ 5,589,531</b>	<b>100.0000000%</b>	<b>\$ (22,433,533)</b>	<b>115,072,149</b>	<b>(135,447,224)</b>	<b>—</b>	<b>20,254,318</b>

Columns may not add to total due to rounding.

**Judges Retirement System**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
State of Utah	\$ 7,563,431	100.0000000%	\$ 32,585,945	58,167,690	10,782,067	1,593,433	3,835,628

**Utah Governors and Legislators Retirement Plan**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
State Of Utah	\$ 404,409	100.0000000%	\$ 1,853,770	3,133,984	766,391	—	236,248



Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
1,314,994	430	2,084,951	723,107	1,940,497	253,529	16,841	2,933,974	129,209	(4,825)	(36,497)	87,887
166,521	7,053	271,021	91,569	245,729	32,105	—	369,403	16,362	2,005	(4,622)	13,745
1,999,731	41,682	3,211,645	1,099,639	2,950,943	385,545	—	4,436,127	196,490	12,160	(55,502)	153,148
983,262	1,399	1,560,061	540,690	1,450,971	189,571	9,714	2,190,946	96,614	(2,398)	(27,290)	66,926
198,278	3,330	317,639	109,032	292,593	38,228	468	440,321	19,482	877	(5,503)	14,856
2,098,253	11,358	3,337,498	1,153,816	3,096,329	404,540	21,025	4,675,710	206,171	(3,595)	(58,236)	144,340
1,833,924	—	2,907,126	1,008,463	2,706,266	353,578	12,133	4,080,440	180,198	(3,365)	(50,900)	125,933
1,699,814	—	2,694,536	934,717	2,508,364	327,722	5,094	3,775,897	167,021	(1,371)	(47,178)	118,472
8,790,442	1,107	13,935,669	4,833,808	12,971,791	1,694,784	3,635	19,504,018	863,735	(462)	(243,976)	619,297
1,641,316	8,239	2,610,044	902,549	2,422,040	316,443	6,261	3,647,293	161,273	772	(45,554)	116,491
10,474,309	24,391	16,628,209	5,759,754	15,456,625	2,019,430	14,050	23,249,859	1,029,190	3,110	(290,713)	741,587
1,097,937	6,481	1,746,925	603,748	1,620,192	211,680	—	2,435,620	107,881	1,787	(30,473)	79,195
2,312,470	5,781	3,671,496	1,271,612	3,412,442	445,841	27,934	5,157,829	227,220	(6,970)	(64,182)	156,068
34,611,251	111,250	54,976,819	19,032,504	51,074,782	6,672,996	117,153	76,897,435	3,400,846	(2,274)	(960,626)	2,437,946

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
11,166,493	—	16,595,554	—	9,905,667	—	—	9,905,667	6,711,217	—	(1,476,874)	5,234,343

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
—	—	236,248	—	587,225	—	—	587,225	546,774	—	—	546,774

Tier 2 Public Employees Contributory Retirement System

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
4 Corners Comm Behavior Health	\$ 82,576	0.1003664%	\$ 8,849	104,193	(64,675)	331	2,775
Active Re Entry Inc	1,757	0.0021360	188	2,217	(1,376)	7	59
Alpine City	17,813	0.0216500	1,909	22,475	(13,951)	71	599
Alpine School District	4,592,044	5.5813395	492,092	5,794,139	(3,596,547)	18,423	154,304
American Fork City	77,924	0.0947122	8,351	98,323	(61,031)	313	2,618
American Leadership Academy	142,470	0.1731627	15,267	179,765	(111,584)	572	4,787
AMES Charter School	4,801	0.0058350	514	6,057	(3,760)	19	161
Ash Creek SS District	2,991	0.0036351	320	3,774	(2,342)	12	100
Ashley Valley Improv Dist	10,437	0.0126855	1,118	13,169	(8,174)	42	351
Ballard Town	1,791	0.0021774	192	2,260	(1,403)	7	60
Bear River Assn of Govts	24,356	0.0296028	2,610	30,731	(19,076)	98	818
Bear River Health Dept	106,652	0.1296282	11,429	134,571	(83,531)	428	3,584
Bear River Mental Health	90,558	0.1100676	9,704	114,264	(70,926)	363	3,043
Bear River Water District	7,305	0.0088793	783	9,218	(5,722)	29	245
Beaver City	24,809	0.0301537	2,659	31,303	(19,431)	100	834
Beaver County	55,866	0.0679015	5,987	70,490	(43,755)	224	1,877
Beaver School District	75,937	0.0922964	8,138	95,815	(59,475)	305	2,552
Beaver Valley Hospital	72,438	0.0880432	7,763	91,400	(56,734)	291	2,434
Benchland Water Company	3,357	0.0040805	360	4,236	(2,629)	13	113
Blanding City	13,699	0.0166501	1,468	17,285	(10,729)	55	460
Bluffdale City	64,498	0.0783930	6,912	81,382	(50,515)	259	2,167
Bona Vista Water Improve	3,300	0.0040114	354	4,164	(2,585)	13	111
Bountiful Irrigation District	5,020	0.0061011	538	6,334	(3,931)	20	169
Box Elder Co Mosq Dist	3,421	0.0041584	367	4,317	(2,680)	14	115
Box Elder County	77,118	0.0937316	8,264	97,305	(60,400)	309	2,591
Box Elder School District	609,751	0.7411140	65,342	769,370	(477,565)	2,446	20,489
Bridgerland Technical College	41,676	0.0506540	4,466	52,585	(32,641)	167	1,400
Brigham City	86,466	0.1050945	9,266	109,101	(67,722)	347	2,905
Cache County	98,440	0.1196470	10,549	124,209	(77,099)	395	3,308
Cache School District	936,491	1.1382455	100,356	1,181,643	(733,472)	3,757	31,468
Canyons School District	2,957,503	3.5946577	316,931	3,731,711	(2,316,354)	11,865	99,379
Carbon County	117,925	0.1433307	12,637	148,795	(92,361)	473	3,963
Carbon School District	264,023	0.3209033	28,293	333,138	(206,786)	1,059	8,872
Castle Dale City	1,961	0.0023840	210	2,475	(1,536)	8	66
Castle Valley SSD	3,577	0.0043479	383	4,514	(2,802)	14	120
Cedar City	88,381	0.1074217	9,471	111,517	(69,221)	355	2,970
Cedar City Housing Auth	5,214	0.0063374	559	6,579	(4,084)	21	175
Centerfield City	1,147	0.0013946	123	1,448	(899)	5	39
Centerville City	16,483	0.0200346	1,766	20,798	(12,910)	66	554
Central Davis Sewer Dist	11,487	0.0139620	1,231	14,494	(8,997)	46	386
Central Iron Co Water Conserv	10,310	0.0125312	1,105	13,009	(8,075)	41	346
Central Ut Public Health	31,920	0.0387971	3,421	40,276	(25,000)	128	1,073
Central Utah Counseling Center	43,887	0.0533416	4,703	55,375	(34,373)	176	1,475
Central Utah Water Dist	143,024	0.1738361	15,327	180,464	(112,018)	574	4,806
Central Weber Sewer Dist	62,737	0.0762534	6,723	79,161	(49,137)	252	2,108
City of Bountiful	171,977	0.2090270	18,429	216,997	(134,694)	690	5,779
City of Cedar Hills	14,307	0.0173892	1,533	18,052	(11,205)	57	481
City of Draper	134,244	0.1631646	14,386	169,386	(105,141)	539	4,511
City of Duchesne	5,241	0.0063700	562	6,613	(4,105)	21	176
City of Green River	8,999	0.0109379	964	11,355	(7,048)	36	302
City of Harrisville	7,076	0.0086000	758	8,928	(5,542)	28	238
City of Helper	6,638	0.0080678	711	8,375	(5,199)	27	223
City of Holladay	15,622	0.0189876	1,674	19,712	(12,235)	63	525
City of Kanab	24,391	0.0296455	2,614	30,776	(19,103)	98	820
City of Milford	8,854	0.0107615	949	11,172	(6,935)	36	298
City of Moab	87,283	0.1060867	9,353	110,131	(68,361)	350	2,933
City of Monticello	15,092	0.0183430	1,617	19,042	(11,820)	61	507
City of Naples	7,851	0.0095428	841	9,907	(6,149)	31	264
City of North Salt Lake	40,636	0.0493908	4,355	51,274	(31,827)	163	1,365
City of Orem	243,530	0.2959959	26,097	307,281	(190,736)	977	8,183

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
11,909	10,486	25,501	8,287	12,872	896	—	22,055	83,970	1,050	—	85,020
253	222	541	176	274	19	29	498	1,787	18	—	1,805
2,569	2,356	5,595	1,788	2,777	193	—	4,758	18,113	232	—	18,345
662,260	557,250	1,392,237	460,861	715,802	49,817	—	1,226,480	4,669,566	56,409	—	4,725,975
11,238	9,569	23,738	7,821	12,147	845	—	20,813	79,240	976	—	80,216
20,547	17,981	43,887	14,298	22,208	1,546	—	38,052	144,875	1,811	—	146,686
692	676	1,548	482	748	52	185	1,467	4,882	55	—	4,937
431	422	965	300	466	32	—	798	3,041	39	—	3,080
1,505	1,176	3,074	1,047	1,627	113	—	2,787	10,613	119	—	10,732
258	197	522	180	279	19	—	478	1,822	21	—	1,843
3,513	3,047	7,476	2,444	3,797	264	—	6,505	24,767	309	—	25,076
15,381	13,037	32,430	10,704	16,625	1,157	—	28,486	108,452	1,348	—	109,800
13,060	10,583	27,049	9,088	14,116	982	—	24,186	92,087	1,102	—	93,189
1,054	937	2,265	733	1,139	79	—	1,951	7,429	97	—	7,526
3,578	3,152	7,664	2,490	3,867	269	—	6,626	25,228	318	—	25,546
8,057	6,935	17,093	5,607	8,708	606	—	14,921	56,809	700	—	57,509
10,952	9,342	23,151	7,621	11,837	824	—	20,282	77,219	941	—	78,160
10,447	9,353	22,525	7,270	11,291	786	—	19,347	73,660	920	—	74,580
484	387	997	337	523	36	—	896	3,414	40	—	3,454
1,976	1,843	4,334	1,375	2,135	149	—	3,659	13,930	180	—	14,110
9,302	8,135	19,863	6,473	10,054	700	—	17,227	65,587	818	—	66,405
476	450	1,050	331	514	36	—	881	3,356	48	—	3,404
724	670	1,583	504	782	54	—	1,340	5,104	66	—	5,170
493	389	1,011	343	533	37	—	913	3,479	40	—	3,519
11,122	10,036	24,058	7,740	12,021	837	—	20,598	78,420	1,001	—	79,421
87,938	77,337	188,210	61,195	95,047	6,615	—	162,857	620,045	7,689	—	627,734
6,010	5,462	13,039	4,183	6,496	452	—	11,131	42,379	563	—	42,942
12,470	10,534	26,256	8,678	13,478	938	—	23,094	87,926	1,054	—	88,980
14,197	11,476	29,376	9,879	15,345	1,068	—	26,292	100,101	1,181	—	101,282
135,060	120,892	291,177	93,987	145,979	10,159	—	250,125	952,301	11,939	—	964,240
426,528	358,530	896,302	296,817	461,012	32,084	—	789,913	3,007,431	36,129	—	3,043,560
17,007	14,718	36,161	11,835	18,382	1,279	—	31,496	119,916	1,497	—	121,413
38,077	32,732	80,740	26,498	41,156	2,864	—	70,518	268,480	3,274	—	271,754
283	248	605	197	306	21	66	590	1,995	21	—	2,016
516	404	1,054	359	558	39	—	956	3,638	42	—	3,680
12,746	11,369	27,440	8,870	13,777	959	—	23,606	89,873	1,137	—	91,010
752	597	1,545	523	813	57	—	1,393	5,302	62	—	5,364
165	195	404	115	179	12	99	405	1,167	11	—	1,178
2,377	2,018	5,015	1,654	2,569	179	—	4,402	16,762	200	—	16,962
1,657	1,245	3,334	1,153	1,791	125	—	3,069	11,681	128	—	11,809
1,487	1,180	3,054	1,035	1,607	112	—	2,754	10,484	121	—	10,605
4,604	3,928	9,733	3,204	4,976	346	—	8,526	32,459	390	—	32,849
6,329	5,344	13,324	4,405	6,841	476	—	11,722	44,628	522	—	45,150
20,627	19,506	45,513	14,354	22,294	1,552	—	38,200	145,438	1,916	—	147,354
9,048	7,829	19,237	6,296	9,779	681	—	16,756	63,797	784	—	64,581
24,802	20,889	52,160	17,260	26,808	1,866	—	45,934	174,880	2,145	—	177,025
2,063	1,711	4,312	1,436	2,230	155	—	3,821	14,548	180	—	14,728
19,360	17,045	41,455	13,473	20,926	1,456	—	35,855	136,510	1,694	—	138,204
756	670	1,623	526	817	57	—	1,400	5,329	67	—	5,396
1,298	1,275	2,911	903	1,403	98	—	2,404	9,151	120	—	9,271
1,020	980	2,266	710	1,103	77	—	1,890	7,195	95	—	7,290
957	761	1,968	666	1,035	72	—	1,773	6,750	80	—	6,830
2,253	1,831	4,672	1,568	2,435	169	—	4,172	15,886	186	—	16,072
3,518	3,225	7,661	2,448	3,802	265	—	6,515	24,803	314	—	25,117
1,277	1,091	2,702	889	1,380	96	—	2,365	9,003	109	—	9,112
12,588	11,877	27,748	8,760	13,606	947	—	23,313	88,756	1,140	—	89,896
2,177	1,824	4,569	1,515	2,352	164	—	4,031	15,346	189	—	15,535
1,132	1,064	2,491	788	1,224	85	—	2,097	7,984	113	—	8,097
5,861	4,792	12,181	4,078	6,334	441	—	10,853	41,322	484	—	41,806
35,122	30,372	74,654	24,441	37,961	2,642	—	65,044	247,642	3,082	—	250,724

Tier 2 Public Employees Contributory Retirement System

Schedule of Employer Allocations and Pension Amounts (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Riverton	\$ 110,692	0.1345390%	\$ 11,862	139,669	(86,695)	444	3,720
City of Santa Clara	25,946	0.0315360	2,780	32,738	(20,321)	104	872
City of Saratoga Springs	110,007	0.1337068	11,789	138,805	(86,159)	441	3,697
City of South Jordan	201,919	0.2454196	21,638	254,777	(158,145)	810	6,785
City of South Salt Lake	141,219	0.1716426	15,133	178,187	(110,604)	567	4,745
City of St George	542,804	0.6597438	58,168	684,898	(425,131)	2,178	18,240
City of Taylorsville	34,606	0.0420613	3,708	43,665	(27,104)	139	1,163
City of Washington Terrace	9,945	0.0120871	1,066	12,548	(7,789)	40	334
City of Wendover	20,236	0.0245955	2,169	25,533	(15,849)	81	680
City of West Haven	16,163	0.0196448	1,732	20,394	(12,659)	65	543
City of West Jordan	283,889	0.3450485	30,422	358,204	(222,345)	1,139	9,539
City of Woodland Hills	3,893	0.0047315	417	4,912	(3,049)	16	131
Clearfield City	96,661	0.1174857	10,358	121,965	(75,706)	388	3,248
Cleveland Town	2,623	0.0031883	281	3,310	(2,055)	11	88
Clinton City	22,246	0.0270384	2,384	28,069	(17,423)	89	748
Coalville City	9,102	0.0110634	975	11,485	(7,129)	37	306
Color Country Uniserv	1,524	0.0018525	163	1,923	(1,194)	6	51
Cottonwood Heights City	59,546	0.0723742	6,381	75,134	(46,637)	239	2,001
Cottonwood Heights P&R Srv	18,673	0.0226962	2,001	23,562	(14,625)	75	627
Cottonwood Imp District	19,350	0.0235186	2,074	24,415	(15,155)	78	650
Council On Aging Golden Age SS	4,229	0.0051396	453	5,336	(3,312)	17	142
Daggett County	8,678	0.0105481	930	10,950	(6,797)	35	292
Daggett School District	28,296	0.0343916	3,032	35,703	(22,162)	114	951
Davis & Weber County Canal Co	6,783	0.0082443	727	8,559	(5,313)	27	228
Davis Behavioral Health Inc	235,682	0.2864562	25,256	297,378	(184,589)	946	7,919
Davis Co Housing Authority	9,972	0.0121208	1,069	12,583	(7,810)	40	335
Davis County	393,943	0.4788127	42,216	497,068	(308,541)	1,580	13,237
Davis School District	4,005,178	4.8680402	429,202	5,053,644	(3,136,906)	16,068	134,584
Davis Technical College	57,993	0.0704864	6,215	73,174	(45,421)	233	1,949
DDI Vantage	129,256	0.1571028	13,851	163,093	(101,235)	519	4,343
Delta City	13,955	0.0169616	1,495	17,608	(10,930)	56	469
Dixie State University	57,534	0.0699292	6,165	72,595	(45,062)	231	1,933
Duchesne County	101,924	0.1238824	10,922	128,606	(79,828)	409	3,425
Duchesne School District	420,078	0.5105785	45,016	530,045	(329,011)	1,685	14,116
Eagle Mountain City	84,802	0.1030719	9,088	107,002	(66,418)	340	2,850
East Carbon City	6,346	0.0077128	680	8,007	(4,970)	25	213
East Hollywood High School	36,036	0.0437999	3,862	45,470	(28,224)	145	1,211
Educators Mutual Insurance	29,639	0.0360246	3,176	37,398	(23,214)	119	996
Elk Ridge City	17,224	0.0209344	1,846	21,733	(13,490)	69	579
Emery Co Care & Rehab Ctr	15,803	0.0192081	1,694	19,940	(12,377)	63	531
Emery County	40,793	0.0495812	4,371	51,472	(31,950)	164	1,371
Emery County Recreation SSD	3,579	0.0043494	383	4,515	(2,803)	14	120
Emery School District	130,015	0.1580254	13,933	164,050	(101,830)	522	4,369
Emery Water Conserv Dist	12,463	0.0151482	1,336	15,726	(9,761)	50	419
Enoch City	16,133	0.0196081	1,729	20,356	(12,635)	65	542
Ephraim City	22,607	0.0274776	2,423	28,525	(17,706)	91	760
Fairview City	2,808	0.0034127	301	3,543	(2,199)	11	94
Farmington City	69,401	0.0843521	7,437	87,568	(54,355)	278	2,332
Farr West City	736	0.0008944	79	929	(576)	3	25
Fast Forward Charter HS	31,523	0.0383142	3,378	39,775	(24,689)	126	1,059
Ferron City	4,653	0.0056556	499	5,871	(3,644)	19	156
Fillmore City	7,523	0.0091443	806	9,493	(5,892)	30	253
Five-County Assn of Govts	52,122	0.0633512	5,586	65,767	(40,823)	209	1,751
Francis City	1,365	0.0016589	146	1,722	(1,069)	5	46
Fruit Heights City	7,457	0.0090631	799	9,409	(5,840)	30	251
Garfield County	26,437	0.0321327	2,833	33,358	(20,706)	106	888
Garfield School District	48,721	0.0592175	5,221	61,475	(38,159)	195	1,637
Garland City	5,531	0.0067226	593	6,979	(4,332)	22	186
Grand Co Cemetery Mtce Dist	6,024	0.0073215	646	7,601	(4,718)	24	202
Grand County	114,145	0.1387361	12,232	144,026	(89,400)	458	3,836

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
15,964	13,285	33,413	11,109	17,255	1,201	—	29,565	112,561	1,354	—	113,915
3,742	3,369	8,087	2,604	4,044	281	—	6,929	26,384	333	—	26,717
15,865	14,539	34,542	11,040	17,148	1,193	—	29,381	111,864	1,437	—	113,301
29,121	25,519	62,235	20,265	31,475	2,191	—	53,931	205,328	2,577	—	207,905
20,366	16,792	42,470	14,173	22,013	1,532	—	37,718	143,603	1,706	—	145,309
78,283	65,273	163,974	54,476	84,612	5,889	—	144,977	551,967	6,662	—	558,629
4,991	3,815	10,108	3,473	5,394	375	—	9,242	35,190	404	—	35,594
1,434	1,149	2,957	998	1,550	108	—	2,656	10,113	119	—	10,232
2,918	2,925	6,604	2,031	3,154	220	—	5,405	20,578	272	—	20,850
2,331	2,114	5,053	1,622	2,519	175	—	4,316	16,436	208	—	16,644
40,942	37,213	88,833	28,491	44,252	3,080	—	75,823	288,681	3,695	—	292,376
561	628	1,336	391	607	42	—	1,040	3,959	56	—	4,015
13,940	12,490	30,066	9,701	15,067	1,049	—	25,817	98,293	1,237	—	99,530
378	352	829	263	409	28	—	700	2,667	36	—	2,703
3,208	2,686	6,731	2,233	3,468	241	—	5,942	22,621	271	—	22,892
1,313	1,123	2,779	914	1,419	99	—	2,432	9,256	117	—	9,373
220	192	469	153	238	17	—	408	1,550	20	—	1,570
8,588	7,934	18,762	5,976	9,282	646	—	15,904	60,551	771	—	61,322
2,693	2,399	5,794	1,874	2,911	203	—	4,988	18,989	235	—	19,224
2,791	2,433	5,952	1,942	3,016	210	—	5,168	19,677	240	—	19,917
610	450	1,219	424	659	46	—	1,129	4,300	48	—	4,348
1,252	992	2,571	871	1,353	94	—	2,318	8,825	107	—	8,932
4,081	3,493	8,639	2,840	4,411	307	—	7,558	28,773	350	—	29,123
978	1,385	2,618	681	1,057	74	927	2,739	6,898	58	—	6,956
33,990	28,855	71,710	23,653	36,738	2,557	—	62,948	239,660	2,913	—	242,573
1,438	1,217	3,030	1,001	1,554	108	—	2,663	10,141	124	—	10,265
56,814	48,557	120,188	39,536	61,407	4,274	—	105,217	400,593	4,908	—	405,501
577,622	504,792	1,233,066	401,963	624,322	43,450	—	1,069,735	4,072,792	50,295	—	4,123,087
8,364	7,407	17,953	5,820	9,040	629	—	15,489	58,972	730	—	59,702
18,641	14,882	38,385	12,972	20,148	1,402	—	34,522	131,438	1,543	—	132,981
2,013	1,695	4,233	1,401	2,175	151	—	3,727	14,191	176	—	14,367
8,298	6,494	16,956	5,774	8,968	624	—	15,366	58,505	686	—	59,191
14,699	12,195	30,728	10,229	15,888	1,106	—	27,223	103,645	1,246	—	104,891
60,583	50,642	127,026	42,159	65,481	4,557	—	112,197	427,170	5,188	—	432,358
12,230	10,554	25,974	8,511	13,219	920	—	22,650	86,234	1,063	—	87,297
915	735	1,888	637	989	69	—	1,695	6,453	75	—	6,528
5,197	4,188	10,741	3,617	5,617	391	—	9,625	36,645	437	—	37,082
4,275	3,023	8,413	2,975	4,620	322	—	7,917	30,140	317	—	30,457
2,484	2,110	5,242	1,729	2,685	187	—	4,601	17,515	222	—	17,737
2,279	1,743	4,616	1,586	2,463	171	79	4,299	16,070	179	—	16,249
5,883	5,268	12,686	4,094	6,359	443	—	10,896	41,482	532	—	42,014
516	402	1,052	359	558	39	48	1,004	3,639	40	—	3,679
18,751	15,969	39,611	13,048	20,267	1,410	—	34,725	132,210	1,616	—	133,826
1,797	1,562	3,828	1,251	1,943	135	—	3,329	12,674	154	—	12,828
2,327	2,199	5,133	1,619	2,515	175	—	4,309	16,405	211	—	16,616
3,260	2,873	6,984	2,269	3,524	245	—	6,038	22,989	286	—	23,275
405	396	906	282	438	30	—	750	2,855	41	—	2,896
10,009	8,487	21,106	6,965	10,818	753	—	18,536	70,572	864	—	71,436
106	102	236	74	115	8	—	197	748	9	—	757
4,546	4,035	9,766	3,164	4,914	342	—	8,420	32,055	395	—	32,450
671	715	1,561	467	725	50	—	1,242	4,732	70	—	4,802
1,085	1,048	2,416	755	1,173	82	253	2,263	7,650	87	—	7,737
7,517	6,282	15,759	5,231	8,125	565	—	13,921	53,002	632	—	53,634
197	220	468	137	213	15	—	365	1,388	20	—	1,408
1,075	874	2,230	748	1,162	81	—	1,991	7,583	87	—	7,670
3,813	3,555	8,362	2,653	4,121	287	—	7,061	26,883	344	—	27,227
7,027	6,156	15,015	4,890	7,595	529	—	13,014	49,544	601	—	50,145
798	800	1,806	555	862	60	—	1,477	5,624	76	—	5,700
869	832	1,927	605	939	65	—	1,609	6,125	87	—	6,212
16,462	14,996	35,752	11,456	17,793	1,238	—	30,487	116,072	1,482	—	117,554

Tier 2 Public Employees Contributory Retirement System

Schedule of Employer Allocations and Pension Amounts (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Grand School District	\$ 221,547	0.2692763%	\$ 23,741	279,543	(173,518)	889	7,445
Grand Water/Sewer Service	10,568	0.0128453	1,133	13,335	(8,277)	42	355
Granger-Hunter Imp Dist	87,804	0.1067205	9,409	110,789	(68,769)	352	2,950
Granite School District	4,325,428	5.2572836	463,521	5,457,728	(3,387,730)	17,353	145,345
Grantsville City	25,501	0.0309949	2,733	32,177	(19,973)	102	857
Gunnison City	2,826	0.0034353	303	3,566	(2,214)	11	95
Gunnison Valley Hospital	83,061	0.1009556	8,901	104,805	(65,055)	333	2,791
Heber City	92,239	0.1121103	9,884	116,385	(72,243)	370	3,099
Heber Light & Power	48,051	0.0584033	5,149	60,630	(37,634)	193	1,615
Heber Valley Historic Railroad	16,303	0.0198155	1,747	20,571	(12,769)	65	548
Herriman City	106,210	0.1290918	11,382	134,014	(83,185)	426	3,569
High Desert Uniserv	1,524	0.0018525	163	1,923	(1,194)	6	51
High School Activities Assn	3,188	0.0038743	342	4,022	(2,497)	13	107
Highland City	10,856	0.0131953	1,163	13,698	(8,503)	44	365
Hinckley Town	5,572	0.0067729	597	7,031	(4,364)	22	187
Hooper City	14,841	0.0180384	1,590	18,726	(11,624)	60	499
Hooper Water Improv Dist	3,452	0.0041954	370	4,355	(2,703)	14	116
Housing Auth of Carbon Co	2,645	0.0032153	283	3,338	(2,072)	11	89
Housing Auth of SI County	136,134	0.1654628	14,588	171,771	(106,622)	546	4,574
Housing Authority of SLC	103,033	0.1252302	11,041	130,005	(80,697)	413	3,462
Housing Authority Ogden City	8,767	0.0106561	940	11,062	(6,867)	35	295
Hurricane City	60,594	0.0736480	6,493	76,456	(47,458)	243	2,036
Hurricane Valley Fire SSD	1,623	0.0019730	174	2,048	(1,271)	7	55
Hyde Park City	4,488	0.0054550	481	5,663	(3,515)	18	151
Hyrum City	11,093	0.0134834	1,189	13,997	(8,689)	45	373
Intech Collegiate High School	21,914	0.0266348	2,348	27,650	(17,163)	88	736
Iron County	115,726	0.1406582	12,401	146,021	(90,638)	464	3,889
Iron School District	444,965	0.5408270	47,683	561,447	(348,502)	1,785	14,952
Itineris High School	15,918	0.0193474	1,706	20,085	(12,467)	64	535
Ivins City	38,073	0.0462752	4,080	48,040	(29,819)	153	1,279
Jordan School District	3,579,619	4.3508001	383,598	4,516,683	(2,803,603)	14,361	120,284
Jordan Valley Water Conserv	105,757	0.1285404	11,333	133,441	(82,830)	424	3,554
Jordanelle SSD	27,221	0.0330848	2,917	34,346	(21,319)	109	915
Juab County	23,006	0.0279618	2,465	29,028	(18,018)	92	773
Juab School District	137,876	0.1675793	14,775	173,969	(107,986)	553	4,633
Kamas City	1,123	0.0013651	120	1,417	(880)	5	38
Kane County	118,852	0.1444571	12,736	149,965	(93,086)	477	3,994
Kane County Water Conserv Dist	13,847	0.0168307	1,484	17,472	(10,845)	56	465
Kane School District	120,266	0.1461758	12,888	151,749	(94,194)	482	4,041
Kaysville City	65,709	0.0798652	7,041	82,910	(51,464)	264	2,208
Kearns Improvement Dist	22,561	0.0274209	2,418	28,466	(17,670)	91	758
Laverkin City	6,539	0.0079483	701	8,251	(5,122)	26	220
Layton City	170,537	0.2072770	18,275	215,180	(133,567)	684	5,730
Lehi City	202,304	0.2458871	21,679	255,262	(158,447)	812	6,798
Lewiston City	8,711	0.0105873	933	10,991	(6,822)	35	293
Liberty Academy Charter	53,324	0.0648121	5,714	67,283	(41,764)	214	1,792
Lindon City	18,912	0.0229866	2,027	23,863	(14,812)	76	635
Logan City	237,598	0.2887848	25,461	299,795	(186,089)	953	7,984
Logan School District	392,828	0.4774572	42,096	495,661	(307,668)	1,576	13,200
Lone Peak PS District	618	0.0007516	66	780	(484)	2	21
Manti City	9,442	0.0114765	1,012	11,914	(7,395)	38	317
Mapleton City	18,640	0.0226562	1,998	23,520	(14,599)	75	626
Marriott-Slaterville City	2,599	0.0031594	279	3,280	(2,036)	10	87
Mendon City	1,877	0.0022819	201	2,369	(1,470)	8	63
Metro Water Dist Slc/Sandy	35,276	0.0428754	3,780	44,510	(27,628)	142	1,185
Midvale City	102,767	0.1249071	11,013	129,669	(80,489)	412	3,453
Midvalley Improvement District	4,508	0.0054786	483	5,687	(3,530)	18	151
Midway City	20,355	0.0247398	2,181	25,683	(15,942)	82	684
Millard Co Care & Rehab Inc	50,202	0.0610176	5,380	63,344	(39,319)	201	1,687
Millard County	68,366	0.0830940	7,326	86,262	(53,545)	274	2,297

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Employer Contributions	Proportionate Share of Nonemployer Contributions	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
31,951	27,593	67,878	22,235	34,534	2,403	—	59,172	225,287	2,788	—	228,075	
1,524	1,276	3,197	1,061	1,647	115	—	2,823	10,747	129	—	10,876	
12,663	11,771	27,736	8,812	13,687	953	—	23,452	89,287	1,145	—	90,432	
623,808	537,532	1,324,038	434,103	674,242	46,924	—	1,155,269	4,398,449	54,086	—	4,452,535	
3,678	3,576	8,213	2,559	3,975	277	—	6,811	25,932	345	—	26,277	
408	308	822	284	441	31	—	756	2,874	32	—	2,906	
11,979	10,203	25,306	8,336	12,947	901	—	22,184	84,463	1,011	—	85,474	
13,303	11,727	28,499	9,257	14,378	1,001	—	24,636	93,796	1,162	—	94,958	
6,930	6,079	14,817	4,822	7,490	521	—	12,833	48,862	608	—	49,470	
2,351	1,953	4,917	1,636	2,541	177	—	4,354	16,578	205	—	16,783	
15,318	13,307	32,620	10,659	16,556	1,152	—	28,367	108,003	1,342	—	109,345	
220	192	469	153	238	17	—	408	1,550	20	—	1,570	
460	513	1,093	320	497	35	—	852	3,241	46	—	3,287	
1,566	1,568	3,543	1,090	1,692	118	369	3,269	11,040	113	—	11,153	
804	888	1,901	559	869	60	—	1,488	5,666	80	—	5,746	
2,140	1,921	4,620	1,489	2,313	161	—	3,963	15,092	190	—	15,282	
498	415	1,043	346	538	37	—	921	3,510	43	—	3,553	
382	427	909	265	412	29	—	706	2,690	38	—	2,728	
19,633	17,436	42,189	13,663	21,220	1,477	—	36,360	138,433	1,753	—	140,186	
14,859	12,936	31,670	10,340	16,061	1,118	—	27,519	104,772	1,279	—	106,051	
1,264	1,196	2,790	880	1,367	95	—	2,342	8,915	126	—	9,041	
8,739	7,669	18,687	6,081	9,445	657	—	16,183	61,617	767	—	62,384	
234	340	636	163	253	18	52	486	1,651	27	—	1,678	
647	606	1,422	450	700	49	—	1,199	4,564	64	—	4,628	
1,600	1,258	3,276	1,113	1,729	120	—	2,962	11,281	126	—	11,407	
3,160	2,841	6,825	2,199	3,416	238	—	5,853	22,284	290	—	22,574	
16,690	13,917	34,960	11,614	18,039	1,255	—	30,908	117,680	1,391	—	119,071	
64,172	54,777	135,686	44,657	69,361	4,827	—	118,845	452,477	5,482	—	457,959	
2,296	2,155	5,050	1,598	2,481	173	—	4,252	16,187	215	—	16,402	
5,491	4,745	11,668	3,821	5,935	413	—	10,169	38,716	483	—	39,199	
516,249	436,810	1,087,704	359,253	557,986	38,833	—	956,072	3,640,049	44,013	—	3,684,062	
15,252	13,239	32,469	10,614	16,485	1,147	—	28,246	107,542	1,336	—	108,878	
3,926	3,473	8,423	2,732	4,243	295	—	7,270	27,680	357	—	28,037	
3,318	2,795	6,978	2,309	3,586	250	—	6,145	23,394	268	—	23,662	
19,884	17,759	42,829	13,837	21,492	1,496	—	36,825	140,203	1,764	—	141,967	
162	181	386	113	175	12	—	300	1,142	16	—	1,158	
17,141	14,448	36,060	11,928	18,526	1,289	—	31,743	120,858	1,470	—	122,328	
1,997	1,773	4,291	1,390	2,159	150	—	3,699	14,081	176	—	14,257	
17,345	14,890	36,758	12,070	18,747	1,305	—	32,122	122,296	1,513	—	123,809	
9,476	8,441	20,389	6,595	10,243	713	—	17,551	66,818	838	—	67,656	
3,254	2,754	6,857	2,264	3,517	245	—	6,026	22,941	275	—	23,216	
943	819	2,008	656	1,019	71	—	1,746	6,650	81	—	6,731	
24,595	21,752	52,761	17,115	26,583	1,850	—	45,548	173,416	2,174	—	175,590	
29,176	25,879	62,665	20,303	31,535	2,195	—	54,033	205,719	2,537	—	208,256	
1,256	1,129	2,713	874	1,358	94	—	2,326	8,858	110	—	8,968	
7,690	6,713	16,409	5,352	8,312	578	—	14,242	54,224	707	—	54,931	
2,727	2,327	5,765	1,898	2,948	205	—	5,051	19,231	238	—	19,469	
34,266	29,884	73,087	23,845	37,036	2,578	—	63,459	241,609	3,012	—	244,621	
56,653	47,122	118,551	39,424	61,233	4,262	—	104,919	399,459	4,841	—	404,300	
89	99	211	62	96	7	—	165	629	9	—	638	
1,362	1,070	2,787	948	1,472	102	—	2,522	9,602	103	—	9,705	
2,688	2,725	6,114	1,871	2,906	202	—	4,979	18,955	260	—	19,215	
375	419	891	261	405	28	—	694	2,643	37	—	2,680	
271	246	588	188	293	20	—	501	1,909	23	—	1,932	
5,087	4,531	10,945	3,540	5,499	383	—	9,422	35,871	449	—	36,320	
14,821	12,822	31,508	10,314	16,019	1,115	—	27,448	104,502	1,277	—	105,779	
650	465	1,284	452	703	49	—	1,204	4,584	50	—	4,634	
2,936	2,500	6,202	2,043	3,173	221	—	5,437	20,698	263	—	20,961	
7,240	5,660	14,788	5,038	7,825	545	—	13,408	51,050	580	—	51,630	
9,860	9,245	21,676	6,861	10,657	742	—	18,260	69,520	892	—	70,412	

Tier 2 Public Employees Contributory Retirement System

Schedule of Employer Allocations and Pension Amounts (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Millard School District	\$ 209,041	0.2540760%	\$ 22,401	263,763	(163,723)	839	7,024
Millcreek City	4,132	0.0050222	443	5,214	(3,236)	17	139
Millville City	3,389	0.0041191	363	4,276	(2,654)	14	114
Minersville Town	1,132	0.0013759	121	1,428	(887)	5	38
Monroe City	1,641	0.0019944	176	2,070	(1,285)	7	55
Monticello Academy	65,798	0.0799738	7,051	83,023	(51,534)	264	2,211
Morgan City Corporation	5,433	0.0066035	582	6,855	(4,255)	22	183
Morgan County	25,828	0.0313925	2,768	32,589	(20,229)	104	868
Morgan School District	173,982	0.2114640	18,644	219,526	(136,265)	698	5,846
Moroni City	3,900	0.0047406	418	4,921	(3,055)	16	131
Mount Pleasant City	15,185	0.0184565	1,627	19,160	(11,893)	61	510
Mountain Regional Water SSD	20,292	0.0246634	2,175	25,604	(15,893)	81	682
Mountainland Assn of Govt	30,841	0.0374848	3,305	38,914	(24,155)	124	1,036
Mt Olympus Improvement Dist	21,549	0.0261918	2,309	27,190	(16,878)	86	724
Murray City	203,383	0.2471986	21,795	256,624	(159,292)	816	6,834
Murray School District	406,446	0.4940096	43,555	512,845	(318,334)	1,631	13,658
Myton City	2,459	0.0029882	263	3,102	(1,926)	10	83
N Ut Environmental Rsrc Agcy	3,504	0.0042592	376	4,422	(2,745)	14	118
Nebo Credit Union	12,430	0.0151082	1,332	15,684	(9,736)	50	418
Nebo School District	2,200,132	2.6741210	235,770	2,776,077	(1,723,171)	8,827	73,930
Nephi City	36,782	0.0447064	3,942	46,411	(28,808)	148	1,236
Nibley City Corporation	20,364	0.0247514	2,182	25,695	(15,950)	82	684
Noah Webster Academy Inc	57,693	0.0701218	6,182	72,795	(45,186)	231	1,939
North Davis Co Sewer Dist	24,069	0.0292549	2,579	30,370	(18,852)	97	809
North Emery Water Users SSD	4,495	0.0054640	482	5,672	(3,521)	18	151
North Fork SSD	5,069	0.0061613	543	6,396	(3,970)	20	170
North Logan City	26,508	0.0322191	2,841	33,448	(20,762)	106	891
North Ogden City	54,016	0.0656528	5,788	68,156	(42,306)	217	1,815
North Pointe Solid Waste	25,176	0.0306001	2,698	31,767	(19,718)	101	846
North Sanpete School Dist	128,798	0.1565461	13,802	162,515	(100,876)	517	4,328
North Summit School District	44,127	0.0536337	4,729	55,679	(34,561)	177	1,483
Northeastern Counseling Ctr	53,715	0.0652875	5,756	67,777	(42,070)	216	1,805
Nuames Charter School	38,757	0.0471068	4,153	48,903	(30,355)	155	1,302
Oakley City	5,430	0.0066004	582	6,852	(4,253)	22	182
Ogden City Corp	368,355	0.4477123	39,474	464,782	(288,500)	1,478	12,378
Ogden School District	1,190,515	1.4469956	127,578	1,502,165	(932,426)	4,776	40,004
Ogden-Weber Tech College	16,686	0.0202805	1,788	21,054	(13,069)	67	561
Oquirrh Rec And Parks District	2,632	0.0031994	282	3,321	(2,062)	11	88
Orangeville City	652	0.0007919	70	822	(510)	3	22
Orderville Town	1,277	0.0015517	137	1,611	(1,000)	5	43
Panguitch City Corporation	9,575	0.0116380	1,026	12,082	(7,499)	38	322
Park City	527,627	0.6412973	56,541	665,748	(413,244)	2,117	17,730
Park City Fire Service	14,989	0.0182188	1,606	18,913	(11,740)	60	504
Park City School District	604,779	0.7350711	64,809	763,097	(473,671)	2,426	20,322
Parowan City	11,773	0.0143090	1,262	14,855	(9,221)	47	396
Payson City	82,344	0.1000834	8,824	103,899	(64,493)	330	2,767
Perry City	5,392	0.0065537	578	6,804	(4,223)	22	181
Piute County	5,536	0.0067287	593	6,985	(4,336)	22	186
Piute School District	33,463	0.0406717	3,586	42,222	(26,208)	134	1,124
Plain City	4,250	0.0051653	455	5,362	(3,328)	17	143
Pleasant Grove City	56,466	0.0686307	6,051	71,247	(44,225)	227	1,897
Pleasant View City	14,584	0.0177256	1,563	18,401	(11,422)	59	490
Price City	33,647	0.0408953	3,606	42,455	(26,352)	135	1,131
Price River Water Improve	17,897	0.0217527	1,918	22,582	(14,017)	72	601
Providence City	12,700	0.0154365	1,361	16,025	(9,947)	51	427
Provo City Corp	545,632	0.6631815	58,471	688,467	(427,346)	2,189	18,335
Provo Housing Authority	26,611	0.0323441	2,852	33,577	(20,842)	107	894
Provo River Water Users	12,513	0.0152089	1,341	15,789	(9,800)	50	420
Provo School District	1,248,359	1.5173017	133,776	1,575,152	(977,731)	5,008	41,948
Rich County	19,525	0.0237313	2,092	24,636	(15,292)	78	656



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes of Assumptions	Changes in Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions		
30,148	26,587	64,598	20,979	32,585	2,268	—	55,832	212,570	2,653	—	215,223	
596	666	1,418	415	644	45	—	1,104	4,202	60	—	4,262	
489	546	1,163	340	528	37	—	905	3,446	49	—	3,495	
163	139	345	114	176	12	—	302	1,151	14	—	1,165	
237	186	485	165	256	18	—	439	1,669	19	—	1,688	
9,489	7,934	19,898	6,604	10,257	714	—	17,575	66,909	804	—	67,713	
784	760	1,749	545	847	59	—	1,451	5,525	76	—	5,601	
3,725	2,875	7,572	2,592	4,026	280	—	6,898	26,264	300	—	26,564	
25,091	22,797	54,432	17,461	27,120	1,887	—	46,468	176,919	2,252	—	179,171	
563	437	1,147	391	608	42	—	1,041	3,966	45	—	4,011	
2,190	1,892	4,653	1,524	2,367	165	—	4,056	15,441	196	—	15,637	
2,926	2,236	5,925	2,036	3,163	220	—	5,419	20,634	239	—	20,873	
4,448	3,940	9,548	3,095	4,807	335	—	8,237	31,361	404	—	31,765	
3,108	2,603	6,521	2,163	3,359	234	—	5,756	21,913	266	—	22,179	
29,332	24,392	61,374	20,412	31,703	2,206	—	54,321	206,816	2,493	—	209,309	
58,617	51,645	125,551	40,791	63,356	4,409	—	108,556	413,308	5,122	—	418,430	
355	339	787	247	383	27	—	657	2,500	32	—	2,532	
505	565	1,202	352	546	38	—	936	3,563	50	—	3,613	
1,793	1,522	3,783	1,248	1,938	135	—	3,321	12,640	156	—	12,796	
317,301	274,960	675,018	220,807	342,954	23,868	—	587,629	2,237,274	27,541	—	2,264,815	
5,305	4,805	11,494	3,691	5,734	399	—	9,824	37,403	477	—	37,880	
2,937	2,513	6,216	2,044	3,174	221	—	5,439	20,708	254	—	20,962	
8,320	7,017	17,507	5,790	8,993	626	—	15,409	58,667	690	—	59,357	
3,471	3,352	7,729	2,416	3,752	261	—	6,429	24,476	332	—	24,808	
648	478	1,295	451	701	49	—	1,201	4,571	50	—	4,621	
731	594	1,515	509	790	55	30	1,384	5,155	57	—	5,212	
3,823	3,523	8,343	2,660	4,132	288	—	7,080	26,956	344	—	27,300	
7,790	6,811	16,633	5,421	8,420	586	—	14,427	54,928	682	—	55,610	
3,631	3,012	7,590	2,527	3,924	273	—	6,724	25,601	308	—	25,909	
18,575	16,294	39,714	12,926	20,077	1,397	—	34,400	130,973	1,644	—	132,617	
6,364	5,343	13,367	4,429	6,878	479	—	11,786	44,872	537	—	45,409	
7,747	6,618	16,386	5,391	8,373	583	—	14,347	54,622	673	—	55,295	
5,590	4,662	11,709	3,890	6,041	420	—	10,351	39,411	488	—	39,899	
783	875	1,862	545	846	59	—	1,450	5,522	78	—	5,600	
53,124	46,241	113,221	36,968	57,419	3,996	—	98,383	374,574	4,645	—	379,219	
171,695	143,933	360,408	119,481	185,576	12,915	—	317,972	1,210,613	14,659	—	1,225,272	
2,406	2,189	5,223	1,675	2,601	181	—	4,457	16,967	212	—	17,179	
380	406	885	264	410	29	167	870	2,677	26	—	2,703	
94	105	224	65	102	7	—	174	663	9	—	672	
184	193	425	128	199	14	—	341	1,298	18	—	1,316	
1,381	1,195	2,936	961	1,493	104	—	2,558	9,737	125	—	9,862	
76,094	68,242	164,183	52,953	82,246	5,724	—	140,923	536,534	6,855	—	543,389	
2,162	1,707	4,433	1,504	2,337	163	15	4,019	15,243	179	—	15,422	
87,221	77,983	187,952	60,696	94,272	6,561	—	161,529	614,989	7,686	—	622,675	
1,698	1,613	3,754	1,182	1,835	128	—	3,145	11,971	161	—	12,132	
11,875	10,333	25,305	8,264	12,836	893	—	21,993	83,734	1,058	—	84,792	
778	951	1,932	541	841	58	350	1,790	5,483	70	—	5,553	
798	658	1,664	556	863	60	—	1,479	5,629	69	—	5,698	
4,826	4,328	10,412	3,358	5,216	363	—	8,937	34,028	437	—	34,465	
613	440	1,213	427	662	46	—	1,135	4,321	45	—	4,366	
8,143	7,265	17,532	5,667	8,802	613	—	15,082	57,419	742	—	58,161	
2,103	2,139	4,791	1,464	2,273	158	—	3,895	14,830	202	—	15,032	
4,852	4,265	10,383	3,377	5,245	365	—	8,987	34,215	434	—	34,649	
2,581	2,182	5,436	1,796	2,790	194	—	4,780	18,199	212	—	18,411	
1,832	1,599	3,909	1,275	1,980	138	—	3,393	12,915	156	—	13,071	
78,690	66,241	165,455	54,760	85,052	5,919	—	145,731	554,844	6,719	—	561,563	
3,838	3,329	8,168	2,671	4,148	289	—	7,108	27,060	321	—	27,381	
1,805	1,424	3,699	1,256	1,951	136	—	3,343	12,724	139	—	12,863	
180,037	150,642	377,635	125,286	194,593	13,543	—	333,422	1,269,434	15,315	—	1,284,749	
2,816	2,153	5,703	1,960	3,044	212	—	5,216	19,855	225	—	20,080	

Tier 2 Public Employees Contributory Retirement System

Schedule of Employer Allocations and Pension Amounts (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Rich School District	\$ 37,782	0.0459212%	\$ 4,049	47,672	(29,591)	152	1,270
Richfield City	6,515	0.0079190	698	8,221	(5,103)	26	219
Richmond City	11,929	0.0144989	1,278	15,052	(9,343)	48	401
Riverdale City	20,708	0.0251689	2,219	26,129	(16,219)	83	696
Roosevelt City	24,968	0.0303468	2,676	31,504	(19,555)	100	839
Roy City	68,996	0.0838608	7,394	87,058	(54,039)	277	2,318
S Utah Valley Electric Svc Dst	18,396	0.0223597	1,971	23,212	(14,408)	74	618
S Utah Valley Solid Waste	3,445	0.0041877	369	4,347	(2,699)	14	116
Salem City	19,477	0.0236725	2,087	24,575	(15,254)	78	654
Salina City	5,041	0.0061273	540	6,361	(3,948)	20	169
Salt Lake Arts Academy	34,665	0.0421333	3,715	43,740	(27,150)	139	1,165
Salt Lake City Corp	2,218,151	2.6960221	237,701	2,798,813	(1,737,284)	8,899	74,535
Salt Lake City Public Library	104,534	0.1270542	11,202	131,898	(81,872)	419	3,513
Salt Lake Community College	385,073	0.4680321	41,265	485,877	(301,594)	1,545	12,939
Salt Lake County	2,768,307	3.3647022	296,657	3,492,988	(2,168,173)	11,106	93,022
Salt Lake School District	1,861,507	2.2625445	199,482	2,348,808	(1,457,956)	7,468	62,551
San Juan County	64,727	0.0786714	6,936	81,671	(50,695)	260	2,175
San Juan Mental Health	10,486	0.0127450	1,124	13,231	(8,213)	42	352
San Juan School District	323,223	0.3928568	34,637	407,835	(253,152)	1,297	10,861
Sandy City	275,754	0.3351613	29,550	347,940	(215,974)	1,106	9,266
Sandy Suburban Imp Dist	3,968	0.0048225	425	5,006	(3,108)	16	133
Sanpete County	51,268	0.0623130	5,494	64,689	(40,154)	206	1,723
Santaquin City	20,823	0.0253088	2,231	26,274	(16,309)	84	700
Sevier County	51,313	0.0623675	5,499	64,745	(40,189)	206	1,724
Sevier School District	186,665	0.2268795	20,003	235,530	(146,198)	749	6,272
Six-County Assoc of Govt	3,780	0.0045947	405	4,770	(2,961)	15	127
Slc Mosquito Abatement	18,131	0.0220370	1,943	22,877	(14,200)	73	609
Smithfield City Corp	27,856	0.0338572	2,985	35,148	(21,817)	112	936
Snow College	38,593	0.0469069	4,136	48,695	(30,226)	155	1,297
Snyder Basin Special Rec Dist	56,642	0.0688445	6,070	71,469	(44,363)	227	1,903
Snyderville Basin W R D	24,027	0.0292035	2,575	30,317	(18,818)	96	807
So Davis Recreation Center	8,976	0.0109096	962	11,326	(7,030)	36	302
So SI Valley Mosq Abate	7,801	0.0094821	836	9,844	(6,110)	31	262
So Utah Valley Animal Svcs SSD	4,686	0.0056953	502	5,912	(3,670)	19	157
Soldier Hollow Charter School	25,729	0.0312724	2,757	32,465	(20,152)	103	865
Solid Waste SSD #1	16,904	0.0205462	1,812	21,330	(13,240)	68	568
South Davis Sewer Dist	11,322	0.0137612	1,213	14,286	(8,868)	45	380
South Ogden City	19,236	0.0233803	2,061	24,272	(15,066)	77	646
South Ogden Conserv Dist	29,440	0.0357820	3,155	37,146	(23,057)	118	989
South Sanpete School Dist	171,743	0.2087423	18,404	216,701	(134,511)	689	5,771
South Summit School District	89,813	0.1091618	9,625	113,324	(70,343)	360	3,018
South Valley Sewer District	65,924	0.0801267	7,065	83,182	(51,633)	264	2,215
South Valley Water Reclamation	50,012	0.0607870	5,359	63,105	(39,170)	201	1,681
South Weber City	15,064	0.0183092	1,614	19,007	(11,798)	60	506
Southeastern Utah AOG	12,161	0.0147813	1,303	15,345	(9,525)	49	409
Southeastern Utah Health	25,722	0.0312638	2,756	32,456	(20,146)	103	864
Southern Utah University	278,652	0.3386836	29,861	351,597	(218,244)	1,118	9,363
Southwest Educ Development Ctr	17,413	0.0211643	1,866	21,971	(13,638)	70	585
Southwest Technical College	45,896	0.0557836	4,918	57,910	(35,946)	184	1,542
Space Dynamics Lab / USU	27,666	0.0336265	2,965	34,909	(21,669)	111	930
Spanish Fork City	180,873	0.2198402	19,383	228,222	(141,662)	726	6,078
Spring City	2,834	0.0034451	304	3,576	(2,220)	11	95
Springville City	165,293	0.2009037	17,713	208,564	(129,460)	663	5,554
St George Housing Auth	1,762	0.0021418	189	2,223	(1,380)	7	59
State of Utah	15,147,184	18.4104436	1,623,208	19,112,389	(11,863,473)	60,767	508,980
Success Academy	23,356	0.0283877	2,503	29,470	(18,293)	94	785
Summit Academy High School	57,525	0.0699177	6,164	72,583	(45,054)	231	1,933
Summit Academy Inc	288,576	0.3507462	30,924	364,119	(226,017)	1,158	9,697
Summit County	201,609	0.2450434	21,605	254,386	(157,903)	809	6,775
Sunset City	6,519	0.0079233	699	8,225	(5,106)	26	219

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
5,449	4,559	11,430	3,792	5,889	410	—	10,091	38,419	450	—	38,869
940	768	1,953	654	1,016	71	30	1,771	6,625	70	—	6,695
1,720	1,700	3,869	1,197	1,859	129	—	3,185	12,130	163	—	12,293
2,986	2,616	6,381	2,078	3,228	225	—	5,531	21,057	251	—	21,308
3,601	2,638	7,178	2,506	3,892	271	—	6,669	25,389	263	—	25,652
9,951	8,626	21,172	6,925	10,755	749	—	18,429	70,161	867	—	71,028
2,653	2,262	5,607	1,846	2,868	200	—	4,914	18,707	229	—	18,936
497	497	1,124	346	537	37	180	1,100	3,504	35	—	3,539
2,809	2,584	6,125	1,955	3,036	211	—	5,202	19,805	252	—	20,057
727	711	1,627	506	786	55	—	1,347	5,126	69	—	5,195
4,999	3,822	10,125	3,479	5,404	376	—	9,259	35,250	400	—	35,650
319,899	270,450	673,783	222,615	345,762	24,064	—	592,441	2,255,597	27,439	—	2,283,036
15,076	12,913	31,921	10,491	16,295	1,134	—	27,920	106,299	1,285	—	107,584
55,535	46,030	116,049	38,646	60,025	4,177	3,554	106,402	391,574	4,563	—	396,137
399,242	339,253	842,623	277,829	431,520	30,032	—	739,381	2,815,041	34,343	—	2,849,384
268,465	229,887	568,371	186,822	290,169	20,194	—	497,185	1,892,933	23,196	—	1,916,129
9,335	8,608	20,378	6,496	10,090	702	—	17,288	65,820	862	—	66,682
1,512	1,080	2,986	1,052	1,635	114	32	2,833	10,663	111	—	10,774
46,615	39,955	98,728	32,439	50,384	3,506	—	86,329	328,679	4,044	—	332,723
39,769	34,818	84,959	27,675	42,984	2,992	—	73,651	280,409	3,536	—	283,945
572	458	1,179	398	618	43	—	1,059	4,035	48	—	4,083
7,394	6,153	15,476	5,145	7,992	556	—	13,693	52,133	619	—	52,752
3,003	2,542	6,329	2,090	3,246	226	—	5,562	21,174	257	—	21,431
7,400	6,337	15,667	5,150	7,999	557	—	13,706	52,179	638	—	52,817
26,921	22,355	56,297	18,734	29,097	2,025	—	49,856	189,816	2,301	—	192,117
545	461	1,148	379	589	41	—	1,009	3,844	50	—	3,894
2,615	2,439	5,736	1,820	2,826	197	—	4,843	18,437	244	—	18,681
4,017	3,278	8,343	2,796	4,342	302	—	7,440	28,326	343	—	28,669
5,566	4,904	11,922	3,873	6,016	419	—	10,308	39,244	532	—	39,776
8,169	7,809	18,108	5,685	8,829	614	2,236	17,364	57,598	582	—	58,180
3,465	2,832	7,200	2,411	3,745	261	—	6,417	24,433	293	—	24,726
1,294	1,065	2,697	901	1,399	97	—	2,397	9,127	110	—	9,237
1,125	995	2,413	783	1,216	85	—	2,084	7,933	103	—	8,036
676	708	1,560	470	730	51	—	1,251	4,765	64	—	4,829
3,711	3,229	7,908	2,582	4,011	279	—	6,872	26,164	329	—	26,493
2,438	2,295	5,369	1,697	2,635	183	—	4,515	17,190	226	—	17,416
1,633	1,467	3,525	1,136	1,765	123	—	3,024	11,513	142	—	11,655
2,774	2,360	5,857	1,931	2,999	209	314	5,453	19,561	224	—	19,785
4,246	3,818	9,171	2,955	4,589	319	—	7,863	29,937	375	—	30,312
24,769	21,037	52,266	17,236	26,771	1,863	—	45,870	174,642	2,166	—	176,808
12,953	11,083	27,414	9,014	14,000	974	—	23,988	91,329	1,129	—	92,458
9,508	7,981	19,968	6,616	10,276	715	—	17,607	67,037	822	—	67,859
7,213	6,095	15,190	5,019	7,796	543	—	13,358	50,857	616	—	51,473
2,172	1,777	4,515	1,512	2,348	163	—	4,023	15,318	180	—	15,498
1,754	1,795	4,007	1,221	1,896	132	13	3,262	12,367	169	—	12,536
3,710	3,516	8,193	2,582	4,010	279	—	6,871	26,157	335	—	26,492
40,187	36,846	87,514	27,966	43,436	3,023	—	74,425	283,356	3,560	—	286,916
2,511	2,114	5,280	1,748	2,714	189	—	4,651	17,707	220	—	17,927
6,619	5,310	13,655	4,606	7,154	498	—	12,258	46,671	537	—	47,208
3,990	3,406	8,437	2,777	4,313	300	—	7,390	28,133	364	—	28,497
26,085	23,231	56,120	18,153	28,194	1,962	—	48,309	183,927	2,299	—	186,226
409	341	856	284	442	31	—	757	2,882	33	—	2,915
23,838	21,683	51,738	16,589	25,766	1,793	—	44,148	168,084	2,114	—	170,198
254	213	533	177	275	19	—	471	1,792	21	—	1,813
2,184,503	1,824,540	4,578,790	1,520,182	2,361,112	164,317	—	4,045,611	15,402,898	185,361	—	15,588,259
3,368	2,838	7,085	2,344	3,641	253	—	6,238	23,750	293	—	24,043
8,296	6,419	16,879	5,773	8,967	624	—	15,364	58,496	687	—	59,183
41,618	37,551	90,024	28,962	44,983	3,131	—	77,076	293,448	3,722	—	297,170
29,076	23,201	59,861	20,234	31,427	2,187	—	53,848	205,013	2,388	—	207,401
940	893	2,078	654	1,016	71	—	1,741	6,629	87	—	6,716

Tier 2 Public Employees Contributory Retirement System

Schedule of Employer Allocations and Pension Amounts (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Sw Behavioral Health Center	\$ 178,543	0.2170077%	\$ 19,133	225,282	(139,837)	716	5,999
Sw Mosquito Abatement/Control	8,454	0.0102753	906	10,667	(6,621)	34	284
Sw Ut Public Health Dept	53,878	0.0654855	5,774	67,982	(42,198)	216	1,810
Syracuse City Corp	59,241	0.0720038	6,348	74,749	(46,398)	238	1,991
Taylor West Weber Wtr Imp Dist	4,996	0.0060718	535	6,303	(3,913)	20	168
Taylorsville-Bennion Imp	25,923	0.0315080	2,778	32,709	(20,303)	104	871
Timberlakes Water SSD	8,075	0.0098141	865	10,188	(6,324)	32	271
Timpanogos SSD	47,612	0.0578689	5,102	60,075	(37,290)	191	1,600
Tintic School District	10,295	0.0125126	1,103	12,990	(8,063)	41	346
Tooele City	92,481	0.1124047	9,910	116,690	(72,432)	371	3,108
Tooele County	229,712	0.2792006	24,616	289,846	(179,913)	922	7,719
Tooele County Housing	14,297	0.0173773	1,532	18,040	(11,198)	57	480
Tooele School District	830,557	1.0094891	89,004	1,047,978	(650,503)	3,332	27,909
Tooele Technical College	17,618	0.0214140	1,888	22,230	(13,799)	71	592
Toquerville City	11,822	0.0143684	1,267	14,916	(9,259)	47	397
Torrey Town	2,903	0.0035287	311	3,663	(2,274)	12	98
Town of Alta	3,410	0.0041451	365	4,303	(2,671)	14	115
Town of Apple Valley	4,567	0.0055513	489	5,763	(3,577)	18	153
Town of Brian Head	5,272	0.0064074	565	6,652	(4,129)	21	177
Town of Garden City	12,346	0.0150060	1,323	15,578	(9,670)	50	415
Town of Goshen	5,962	0.0072466	639	7,523	(4,670)	24	200
Town of Manila	6,057	0.0073613	649	7,642	(4,744)	24	204
Town of Paragonah	1,176	0.0014299	126	1,484	(921)	5	40
Town of Springdale	17,101	0.0207849	1,833	21,577	(13,394)	69	575
Trans-Jordan Cities	36,132	0.0439165	3,872	45,591	(28,299)	145	1,214
Tremonton City	17,865	0.0217133	1,914	22,541	(13,992)	72	600
Tridell-Lapoint Water	9,717	0.0118104	1,041	12,261	(7,610)	39	327
Tuacahn High School	37,919	0.0460885	4,063	47,846	(29,699)	152	1,274
Uintah Animal Control/Shelter	3,190	0.0038767	342	4,025	(2,498)	13	107
Uintah Basin Assn of Govt	52,215	0.0634636	5,595	65,883	(40,895)	209	1,755
Uintah Basin Asst Council	3,770	0.0045817	404	4,756	(2,952)	15	127
Uintah Basin Technical College	110,998	0.1349106	11,895	140,054	(86,935)	445	3,730
Uintah Co Care Center SSD	67,068	0.0815163	7,187	84,624	(52,528)	269	2,254
Uintah County	242,456	0.2946904	25,982	305,926	(189,895)	973	8,147
Uintah Highlands Improv Dist	4,147	0.0050408	444	5,233	(3,248)	17	139
Uintah Recreation District	24,403	0.0296597	2,615	30,791	(19,112)	98	820
Uintah School District	610,002	0.7414185	65,369	769,687	(477,761)	2,447	20,498
Uintah Transportation SSD	17,318	0.0210495	1,856	21,852	(13,564)	69	582
Unified Fire Authority	40,022	0.0486443	4,289	50,499	(31,346)	161	1,345
Unified Police Department	142,152	0.1727768	15,233	179,364	(111,335)	570	4,777
University of Utah	2,622,887	3.1879526	281,073	3,309,500	(2,054,278)	10,523	88,135
University of Utah Hospital	3,277	0.0039833	351	4,135	(2,567)	13	110
Ut Municipal Power Agency	11,314	0.0137515	1,212	14,276	(8,861)	45	380
Ut Public Employees Assn	6,685	0.0081246	716	8,434	(5,235)	27	225
UT School Board Risk Mgmt	9,937	0.0120783	1,065	12,539	(7,783)	40	334
Utah Assn of Counties	756	0.0009189	81	954	(592)	3	25
Utah Co Academy of Sciences	26,004	0.0316061	2,787	32,811	(20,367)	104	874
Utah Co Housing Authority	41,514	0.0504579	4,449	52,382	(32,514)	167	1,395
Utah Communications Authority	9,402	0.0114273	1,008	11,863	(7,364)	38	316
Utah Counties Indemnity Pool	2,705	0.0032876	290	3,413	(2,118)	11	91
Utah County	611,006	0.7426385	65,476	770,953	(478,547)	2,451	20,531
Utah Dairy Council	5,040	0.0061258	540	6,359	(3,947)	20	169
Utah Education Association	20,894	0.0253953	2,239	26,364	(16,364)	84	702
Utah Housing Corporation	143,054	0.1738736	15,330	180,503	(112,042)	574	4,807
Utah Lake Commission	2,855	0.0034700	306	3,602	(2,236)	11	96
Utah League Cities/Towns	3,761	0.0045708	403	4,745	(2,945)	15	126
Utah Local Governments Trust	26,299	0.0319646	2,818	33,183	(20,598)	106	884
Utah Retirement Systems	464,630	0.5647288	49,791	586,260	(363,904)	1,864	15,613
Utah Safety Council	18,291	0.0222313	1,960	23,079	(14,326)	73	615
Utah School Boards Association	16,749	0.0203568	1,795	21,133	(13,118)	67	563

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
25,749	22,004	54,468	17,919	27,831	1,937	—	47,687	181,557	2,280	—	183,837
1,219	1,022	2,559	848	1,318	92	—	2,258	8,597	103	—	8,700
7,770	6,614	16,410	5,407	8,398	584	—	14,389	54,788	671	—	55,459
8,544	7,211	17,984	5,945	9,234	643	—	15,822	60,241	719	—	60,960
720	563	1,471	501	779	54	—	1,334	5,080	59	—	5,139
3,739	3,443	8,157	2,602	4,041	281	—	6,924	26,361	334	—	26,695
1,165	1,002	2,470	810	1,259	88	—	2,157	8,211	105	—	8,316
6,866	5,734	14,391	4,778	7,422	517	—	12,717	48,415	593	—	49,008
1,485	1,382	3,254	1,033	1,605	112	—	2,750	10,469	127	—	10,596
13,337	11,204	28,020	9,281	14,416	1,003	—	24,700	94,042	1,121	—	95,163
33,129	29,380	71,150	23,054	35,807	2,492	—	61,353	233,590	2,934	—	236,524
2,062	1,795	4,394	1,435	2,229	155	—	3,819	14,539	190	—	14,729
119,782	101,386	252,409	83,355	129,466	9,010	—	221,831	844,578	10,224	—	854,802
2,541	1,949	5,153	1,768	2,746	191	—	4,705	17,916	197	—	18,113
1,705	1,905	4,054	1,186	1,843	128	—	3,157	12,021	170	—	12,191
419	295	824	291	453	31	—	775	2,952	29	—	2,981
492	344	965	342	532	37	—	911	3,468	36	—	3,504
659	585	1,415	458	712	50	—	1,220	4,644	60	—	4,704
760	658	1,616	529	822	57	—	1,408	5,361	65	—	5,426
1,781	1,519	3,765	1,239	1,925	134	—	3,298	12,555	152	—	12,707
860	848	1,932	598	929	65	37	1,629	6,063	74	—	6,137
873	865	1,966	608	944	66	—	1,618	6,159	80	—	6,239
170	189	404	118	183	13	—	314	1,196	17	—	1,213
2,466	2,502	5,612	1,716	2,666	186	—	4,568	17,389	240	—	17,629
5,211	4,487	11,057	3,626	5,632	392	—	9,650	36,742	450	—	37,192
2,576	2,156	5,404	1,793	2,785	194	—	4,772	18,166	224	—	18,390
1,401	1,053	2,820	975	1,515	105	—	2,595	9,881	111	—	9,992
5,469	4,817	11,712	3,806	5,911	411	—	10,128	38,559	475	—	39,034
460	356	936	320	497	35	—	852	3,243	37	—	3,280
7,530	6,359	15,853	5,240	8,139	566	—	13,945	53,096	635	—	53,731
544	523	1,209	378	588	41	116	1,123	3,833	46	—	3,879
16,008	13,288	33,471	11,140	17,302	1,204	—	29,646	112,871	1,373	—	114,244
9,672	7,454	19,649	6,731	10,454	728	—	17,913	68,200	792	—	68,992
34,967	27,457	71,544	24,333	37,794	2,630	—	64,757	246,549	2,907	—	249,456
598	642	1,396	416	646	45	—	1,107	4,217	58	—	4,275
3,519	3,106	7,543	2,449	3,804	265	—	6,518	24,814	331	—	25,145
87,974	69,947	180,866	61,220	95,086	6,618	—	162,924	620,300	7,372	—	627,672
2,498	2,335	5,484	1,738	2,700	188	—	4,626	17,611	232	—	17,843
5,772	4,749	12,027	4,017	6,239	434	—	10,690	40,698	489	—	41,187
20,501	17,024	42,872	14,266	22,158	1,542	—	37,966	144,552	1,755	—	146,307
378,270	330,292	807,220	263,235	408,852	28,454	56,675	757,216	2,667,166	30,859	—	2,698,025
473	528	1,124	329	511	36	—	876	3,333	47	—	3,380
1,632	1,227	3,284	1,135	1,764	123	—	3,022	11,505	128	—	11,633
964	824	2,040	671	1,042	73	—	1,786	6,797	80	—	6,877
1,433	1,205	3,012	997	1,549	108	—	2,654	10,105	126	—	10,231
109	122	259	76	118	8	—	202	769	11	—	780
3,750	3,065	7,793	2,610	4,053	282	—	6,945	26,443	318	—	26,761
5,987	5,218	12,767	4,166	6,471	450	—	11,087	42,215	532	—	42,747
1,356	1,158	2,868	944	1,466	102	—	2,512	9,561	123	—	9,684
390	315	807	271	422	29	24	746	2,751	31	—	2,782
88,119	77,112	188,213	61,321	95,243	6,628	—	163,192	621,320	7,753	—	629,073
727	589	1,505	506	786	55	—	1,347	5,125	62	—	5,187
3,013	2,829	6,628	2,097	3,257	227	—	5,581	21,247	301	—	21,548
20,631	17,202	43,214	14,357	22,299	1,552	—	38,208	145,469	1,738	—	147,207
412	421	940	287	445	31	—	763	2,903	41	—	2,944
542	561	1,244	377	586	41	157	1,161	3,824	44	—	3,868
3,793	3,474	8,257	2,639	4,099	285	—	7,023	26,743	362	—	27,105
67,008	56,946	141,431	46,631	72,426	5,041	—	124,098	472,474	5,785	—	478,259
2,638	1,789	5,115	1,836	2,851	198	—	4,885	18,600	183	—	18,783
2,415	2,094	5,139	1,681	2,611	182	—	4,474	17,031	200	—	17,231

Tier 2 Public Employees Contributory Retirement System

Schedule of Employer Allocations and Pension Amounts (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Utah School Employees Assn	4,480	0.0054449%	480	5,652	(3,509)	18	151
Utah State Fair Corp	8,346	0.0101439	894	10,531	(6,537)	33	280
Utah State University	638,160	0.7756433	68,386	805,216	(499,815)	2,560	21,444
Utah Valley Dispatch SSD	42,189	0.0512785	4,521	53,234	(33,043)	169	1,418
Utah Valley University	465,837	0.5661958	49,920	587,783	(364,850)	1,869	15,653
Utah Zoological Society	161,297	0.1960464	17,285	203,521	(126,330)	647	5,420
UTOPIA	114,190	0.1387905	12,237	144,082	(89,435)	458	3,837
Valley Emergency Comm Ctr	186,652	0.2268641	20,002	235,514	(146,188)	749	6,272
Vernal City	32,304	0.0392637	3,462	40,761	(25,301)	130	1,085
Vineyard Town	47,182	0.0573468	5,056	59,533	(36,954)	189	1,585
Wasatch County	206,713	0.2512465	22,152	260,826	(161,900)	829	6,946
Wasatch Front Regional Council	39,230	0.0476816	4,204	49,500	(30,725)	157	1,318
Wasatch Front Waste/Recycling	122,248	0.1485845	13,100	154,250	(95,746)	490	4,108
Wasatch Integrated Waste Mgmt	56,873	0.0691251	6,095	71,761	(44,543)	228	1,911
Wasatch Mental Health SSD	261,987	0.3184292	28,075	330,570	(205,192)	1,051	8,803
Wasatch School District	552,840	0.6719420	59,243	697,561	(432,991)	2,218	18,577
Washington City	81,839	0.0994700	8,770	103,262	(64,097)	328	2,750
Washington Co Solid Waste	12,934	0.0157203	1,386	16,320	(10,130)	52	435
Washington Co Wat Con Dist	36,675	0.0445758	3,930	46,275	(28,724)	147	1,232
Washington County	217,993	0.2649571	23,361	275,059	(170,735)	875	7,325
Washington School District	1,803,235	2.1917175	193,238	2,275,281	(1,412,316)	7,234	60,593
Wayne County	15,036	0.0182747	1,611	18,971	(11,776)	60	505
Wayne School District	36,448	0.0443001	3,906	45,989	(28,546)	146	1,225
Weber Area Dispatch 911	79,472	0.0965934	8,516	100,276	(62,244)	319	2,670
Weber Basin Water Conserv	58,478	0.0710768	6,267	73,787	(45,801)	235	1,965
Weber County Corp	660,367	0.8026349	70,766	833,237	(517,208)	2,649	22,190
Weber County School District	1,552,107	1.8864876	166,327	1,958,414	(1,215,630)	6,227	52,154
Weber Fire District	10,469	0.0127246	1,122	13,210	(8,200)	42	352
Weber Human Services	288,690	0.3508846	30,937	364,263	(226,106)	1,158	9,701
Weber State University	259,670	0.3156128	27,827	327,646	(203,377)	1,042	8,726
Wellington City	6,286	0.0076400	674	7,931	(4,923)	25	211
Wellsville City Corp	6,608	0.0080315	708	8,338	(5,175)	27	222
West Bountiful City	23,236	0.0282423	2,490	29,319	(18,199)	93	781
West Kane County SSD #1	3,952	0.0048035	424	4,987	(3,095)	16	133
West Point City	29,557	0.0359252	3,167	37,295	(23,150)	119	993
West Valley City	323,900	0.3936794	34,710	408,689	(253,682)	1,299	10,884
White City Water Imp Dist	4,419	0.0053705	474	5,575	(3,461)	18	148
Willard City Corp	3,910	0.0047522	419	4,933	(3,062)	16	131
Woods Cross City	10,184	0.0123783	1,091	12,850	(7,976)	41	342
Workers Compensation Fund	609,810	0.7411857	65,348	769,445	(477,611)	2,447	20,491
<b>Grand Total</b>	<b>\$ 82,274,953</b>	<b>100.0000000%</b>	<b>\$ 8,816,731</b>	<b>103,812,697</b>	<b>(64,438,786)</b>	<b>330,080</b>	<b>2,764,635</b>
<b>No Proportionate Share for 2017</b>							
Aurora City	\$ —	0.0000000%	\$ —	—	—	—	—
Canyonlands Health Care	—	0.0000000	—	—	—	—	—
Alpine Uniserv	—	0.0000000	—	—	—	—	—
Davis County Mosquito Abatement	—	0.0000000	—	—	—	—	—
Enterprise City	—	0.0000000	—	—	—	—	—
Huntington City	—	0.0000000	—	—	—	—	—
Maeser Water District	—	0.0000000	—	—	—	—	—
Mantua City	—	0.0000000	—	—	—	—	—
Valley Mental Health	—	0.0000000	—	—	—	—	—
Jordan River Commission	—	0.0000000	—	—	—	—	—
Ogden Weber/NEA/UEA Uniserv	—	0.0000000	—	—	—	—	—
Recreation and Habilitation Services	—	0.0000000	—	—	—	—	—
Uintah City	—	0.0000000	—	—	—	—	—
Uintah Water Conserv Dist	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 82,274,953</b>	<b>100.0000000%</b>	<b>\$ 8,816,731</b>	<b>103,812,697</b>	<b>(64,438,786)</b>	<b>330,080</b>	<b>2,764,635</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Changes of Assumptions	Changes in Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Employer Contributions	Proportionate Share of Nonemployer Contributions	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
646	635	1,450	450	698	49	—	1,197	4,555	61	—	4,616	
1,204	1,764	3,281	838	1,301	91	1,652	3,882	8,487	43	—	8,530	
92,035	76,128	192,167	64,046	99,476	6,923	8,610	179,055	648,933	7,453	—	656,386	
6,085	4,902	12,574	4,234	6,576	458	—	11,268	42,902	506	—	43,408	
67,183	57,632	142,337	46,752	72,614	5,054	4,753	129,173	473,701	5,821	—	479,522	
23,262	19,129	48,458	16,188	25,143	1,750	—	43,081	164,020	1,979	—	165,999	
16,468	13,903	34,666	11,460	17,800	1,239	—	30,499	116,118	1,437	—	117,555	
26,919	23,748	57,688	18,733	29,095	2,025	—	49,853	189,803	2,399	—	192,202	
4,659	3,521	9,395	3,242	5,036	350	—	8,628	32,850	360	—	33,210	
6,805	6,705	15,284	4,735	7,355	512	—	12,602	47,979	630	—	48,609	
29,812	26,632	64,219	20,746	32,222	2,243	—	55,211	210,203	2,685	—	212,888	
5,658	4,608	11,741	3,937	6,115	426	—	10,478	39,892	473	—	40,365	
17,630	14,470	36,698	12,269	19,056	1,326	—	32,651	124,312	1,491	—	125,803	
8,202	6,489	16,830	5,708	8,865	617	64	15,254	57,833	674	—	58,507	
37,784	32,136	79,774	26,293	40,838	2,842	—	69,973	266,410	3,277	—	269,687	
79,730	70,153	170,678	55,483	86,176	5,997	—	147,656	562,173	7,002	—	569,175	
11,803	10,141	25,022	8,213	12,757	888	—	21,858	83,220	1,015	—	84,235	
1,865	1,731	4,083	1,298	2,016	140	—	3,454	13,152	168	—	13,320	
5,289	4,578	11,246	3,681	5,717	398	—	9,796	37,294	449	—	37,743	
31,439	27,607	67,246	21,878	33,981	2,365	—	58,224	221,673	2,728	—	224,401	
260,060	228,929	556,816	180,974	281,086	19,562	—	481,622	1,833,676	22,820	—	1,856,496	
2,168	1,832	4,565	1,509	2,344	163	—	4,016	15,289	188	—	15,477	
5,256	4,361	10,988	3,658	5,681	395	—	9,734	37,063	451	—	37,514	
11,461	9,828	24,278	7,976	12,388	862	—	21,226	80,814	997	—	81,811	
8,434	7,355	17,989	5,869	9,116	634	—	15,619	59,466	755	—	60,221	
95,237	84,000	204,076	66,275	102,937	7,164	—	176,376	671,516	8,507	—	680,023	
223,843	194,324	476,548	155,771	241,940	16,838	—	414,549	1,578,309	19,517	—	1,597,826	
1,510	1,730	3,634	1,051	1,632	114	103	2,900	10,646	149	—	10,795	
41,635	34,820	87,314	28,973	45,001	3,132	—	77,106	293,564	3,588	—	297,152	
37,449	29,163	76,380	26,061	40,477	2,817	—	69,355	264,054	3,084	—	267,138	
907	751	1,894	631	980	68	—	1,679	6,392	80	—	6,472	
953	987	2,189	663	1,030	72	—	1,765	6,719	90	—	6,809	
3,351	2,855	7,080	2,332	3,622	252	—	6,206	23,629	295	—	23,924	
570	483	1,202	397	616	43	—	1,056	4,019	48	—	4,067	
4,263	3,748	9,123	2,966	4,607	321	—	7,894	30,056	370	—	30,426	
46,712	37,991	96,886	32,507	50,489	3,514	—	86,510	329,368	3,913	—	333,281	
637	493	1,296	443	689	48	—	1,180	4,493	52	—	4,545	
564	552	1,263	392	609	42	—	1,043	3,976	51	—	4,027	
1,469	1,264	3,116	1,022	1,588	110	—	2,720	10,356	129	—	10,485	
87,946	74,684	185,568	61,201	95,056	6,615	—	162,872	620,105	7,445	—	627,550	
11,865,602	10,134,801	25,095,118	8,257,173	12,824,908	892,556	81,218	22,055,855	83,663,902	1,019,310	—	84,683,212	
—	—	—	—	—	—	95	95	—	(11)	—	(11)	
—	—	—	—	—	—	532	532	—	(61)	—	(61)	
—	175	175	—	—	—	155	155	—	4	—	4	
—	45	45	—	—	—	107	107	—	(5)	—	(5)	
—	—	—	—	—	—	84	84	—	(9)	—	(9)	
—	6	6	—	—	—	45	45	—	(4)	—	(4)	
—	—	—	—	—	—	82	82	—	(9)	—	(9)	
—	—	—	—	—	—	88	88	—	(10)	—	(10)	
—	6,944	6,944	—	—	—	14,559	14,559	—	(663)	—	(663)	
—	171	171	—	—	—	208	208	—	(0)	—	(0)	
—	283	283	—	—	—	452	452	—	(9)	—	(9)	
—	124	124	—	—	—	121	121	—	3	—	3	
—	328	328	—	—	—	505	505	—	(10)	—	(10)	
—	412	412	—	—	—	464	464	—	4	—	4	
11,865,602	10,143,289	25,103,606	8,257,173	12,824,908	892,556	98,716	22,073,353	83,663,902	1,018,530	0	84,682,432	

**Tier 2 Public Safety and Firefighter Contributory Retirement System**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
American Fork City	\$ 157,541	1.3835740%	\$ (16,009)	141,770	(136,552)	8,351	3,950
Beaver County	72,927	0.6404653	(7,411)	65,626	(63,211)	3,866	1,828
Big Water Municipal Corp	3,589	0.0315223	(365)	3,230	(3,111)	190	90
Blanding City	3,705	0.0325426	(377)	3,335	(3,212)	196	93
Bluffdale City	8,155	0.0716233	(829)	7,339	(7,069)	432	204
Box Elder County	72,979	0.6409247	(7,416)	65,673	(63,256)	3,869	1,830
Brigham City	31,202	0.2740269	(3,171)	28,078	(27,045)	1,654	782
Cache County	140,494	1.2338577	(14,277)	126,429	(121,776)	7,448	3,523
Carbon County	50,624	0.4445921	(5,144)	45,556	(43,879)	2,684	1,269
Cedar City	52,107	0.4576159	(5,295)	46,890	(45,165)	2,762	1,306
Cedar Mtn Fire Protection Dist	3,606	0.0316664	(366)	3,245	(3,125)	191	90
Centerville City	4,577	0.0401947	(465)	4,119	(3,967)	243	115
City of Bountiful	27,640	0.2427410	(2,809)	24,873	(23,957)	1,465	693
City of Draper	76,434	0.6712652	(7,767)	68,782	(66,251)	4,052	1,916
City of Harrisville	9,229	0.0810498	(938)	8,305	(7,999)	489	231
City of Helper	9,199	0.0807858	(935)	8,278	(7,973)	488	231
City of Moab	27,881	0.2448621	(2,833)	25,090	(24,167)	1,478	699
City of Monticello	9,642	0.0846751	(980)	8,676	(8,357)	511	242
City of Naples	7,307	0.0641748	(743)	6,576	(6,334)	387	183
City of North Salt Lake	25,677	0.2255066	(2,609)	23,107	(22,256)	1,361	644
City of Orem	186,028	1.6337586	(18,904)	167,405	(161,244)	9,861	4,664
City of Santa Clara	416	0.0036548	(42)	374	(361)	22	10
City of Saratoga Springs	61,327	0.5385951	(6,232)	55,188	(53,157)	3,251	1,538
City of South Jordan	197,829	1.7373905	(20,103)	178,024	(171,472)	10,487	4,960
City of South Salt Lake	108,267	0.9508348	(11,002)	97,428	(93,843)	5,739	2,715
City of St George	150,746	1.3239008	(15,318)	135,655	(130,663)	7,991	3,780
City of West Jordan	176,683	1.5516803	(17,954)	158,995	(153,143)	9,366	4,430
Clearfield City	46,360	0.4071432	(4,711)	41,718	(40,183)	2,458	1,162
Clinton City	41,245	0.3622222	(4,191)	37,116	(35,750)	2,186	1,034
Cottonwood Heights City	49,125	0.4314339	(4,992)	44,207	(42,580)	2,604	1,232
Daggett County	5,160	0.0453132	(524)	4,643	(4,472)	274	129
Davis County	248,139	2.1792298	(25,215)	223,297	(215,080)	13,154	6,221
Dixie State University	4,563	0.0400736	(464)	4,106	(3,955)	242	114
Duchesne County	77,174	0.6777614	(7,842)	69,448	(66,892)	4,091	1,935
East Carbon City	8,076	0.0709238	(821)	7,267	(7,000)	428	202
Emery County	29,136	0.2558834	(2,961)	26,219	(25,254)	1,545	731
Enoch City	9,630	0.0845711	(979)	8,666	(8,347)	510	241
Ephraim City	2,085	0.0183082	(212)	1,876	(1,807)	111	52
Farmington City	41,898	0.3679596	(4,258)	37,703	(36,316)	2,221	1,050
Garfield County	28,957	0.2543126	(2,943)	26,058	(25,099)	1,535	726
Garland City	4,376	0.0384328	(445)	3,938	(3,793)	232	110
Grand County	54,846	0.4816774	(5,573)	49,356	(47,539)	2,907	1,375
Grantsville City	23,762	0.2086810	(2,415)	21,383	(20,596)	1,260	596
Gunnison Valley Police Dept	3,450	0.0302987	(351)	3,105	(2,990)	183	86
Heber City	32,429	0.2848050	(3,295)	29,183	(28,109)	1,719	813
Hurricane City	17,317	0.1520796	(1,760)	15,583	(15,010)	918	434
Hurricane Valley Fire SSD	51,206	0.4497034	(5,203)	46,079	(44,384)	2,714	1,284
Iron County	93,620	0.8222001	(9,513)	84,248	(81,147)	4,963	2,347
Ivins City	16,848	0.1479603	(1,712)	15,161	(14,603)	893	422
Juab County	46,490	0.4082862	(4,724)	41,836	(40,296)	2,464	1,166
Kane County	32,630	0.2865633	(3,316)	29,363	(28,282)	1,730	818
Kaysville City	33,153	0.2911591	(3,369)	29,834	(28,736)	1,757	831
Laverkin City	1,153	0.0101289	(117)	1,038	(1,000)	61	29
Layton City	130,787	1.1486106	(13,290)	117,694	(113,362)	6,933	3,279
Lehi City	151,459	1.3301614	(15,391)	136,297	(131,281)	8,029	3,797



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
35,053	12,931	60,285	48	21,365	1,369	—	22,782	147,064	788	—	147,852
16,226	6,128	28,048	22	9,890	634	—	10,546	68,077	365	—	68,442
799	767	1,846	1	487	31	129	648	3,351	38	—	3,389
824	927	2,040	1	503	32	430	966	3,459	27	—	3,486
1,815	—	2,451	2	1,106	71	1,472	2,651	7,613	(86)	—	7,527
16,238	3,214	25,151	22	9,897	634	1,075	11,628	68,126	137	—	68,263
6,943	672	10,051	10	4,231	271	1,401	5,913	29,127	(48)	—	29,079
31,260	24,884	67,115	43	19,053	1,221	—	20,317	131,151	1,525	—	132,676
11,264	560	15,777	15	6,865	440	769	8,089	47,257	(15)	—	47,242
11,594	—	15,662	16	7,066	453	2,533	10,068	48,641	(155)	—	48,486
802	908	1,991	1	489	31	464	985	3,366	31	—	3,397
1,018	342	1,718	1	621	40	610	1,272	4,272	(18)	—	4,254
6,150	960	9,268	8	3,748	240	1,467	5,463	25,802	(34)	—	25,768
17,007	3,074	26,049	23	10,365	664	6,033	17,085	71,351	(162)	—	71,189
2,053	1,788	4,561	3	1,252	80	563	1,898	8,615	77	—	8,692
2,047	449	3,215	3	1,247	80	1,142	2,472	8,587	(44)	—	8,543
6,204	1,416	9,797	8	3,781	242	831	4,862	26,027	30	—	26,057
2,145	353	3,251	3	1,308	84	134	1,529	9,000	15	—	9,015
1,626	1,560	3,756	2	991	63	48	1,104	6,821	91	—	6,912
5,713	1,493	9,211	8	3,482	223	1,412	5,125	23,970	10	—	23,980
41,391	3,025	58,941	57	25,228	1,616	2,089	28,990	173,657	63	—	173,720
93	1,098	1,223	—	56	4	513	573	388	32	—	420
13,645	3,396	21,830	19	8,317	533	—	8,869	57,249	210	—	57,459
44,017	1,602	61,066	60	26,828	1,719	6,053	34,660	184,673	(257)	—	184,416
24,090	3,149	35,693	33	14,683	941	5,066	20,723	101,067	(138)	—	100,929
33,541	14,688	60,000	46	20,443	1,310	—	21,799	140,722	884	—	141,606
39,312	22,264	75,372	54	23,961	1,535	—	25,550	164,933	1,356	—	166,289
10,315	2,613	16,548	14	6,287	403	2,708	9,412	43,277	(9)	—	43,268
9,177	5,360	17,757	13	5,593	358	—	5,964	38,502	333	—	38,835
10,930	3,925	18,691	15	6,662	427	1,625	8,729	45,858	149	—	46,007
1,148	5,587	7,138	2	700	45	1,993	2,740	4,816	201	—	5,017
55,211	26,821	101,407	76	33,651	2,156	—	35,883	231,637	1,630	—	233,267
1,015	788	2,159	1	619	40	—	660	4,260	49	—	4,309
17,171	13,269	36,466	24	10,466	671	—	11,161	72,041	806	—	72,847
1,797	137	2,564	2	1,095	70	1,068	2,235	7,539	(56)	—	7,483
6,483	1,168	9,927	9	3,951	253	2,278	6,491	27,199	(59)	—	27,140
2,143	810	3,704	3	1,306	84	1,663	3,056	8,989	(51)	—	8,938
464	1,430	2,057	1	283	18	376	678	1,946	68	—	2,014
9,322	2,090	14,683	13	5,682	364	171	6,230	39,112	119	—	39,231
6,443	3,551	12,255	9	3,927	252	—	4,188	27,032	216	—	27,248
974	—	1,316	1	593	38	597	1,229	4,085	(36)	—	4,049
12,203	5,307	21,792	17	7,438	477	1,735	9,667	51,199	205	—	51,404
5,287	2,270	9,413	7	3,222	206	—	3,435	22,181	137	—	22,318
768	—	1,037	1	468	30	623	1,122	3,221	(36)	—	3,185
7,216	5,616	15,364	10	4,398	282	—	4,690	30,273	337	—	30,610
3,853	1,035	6,240	5	2,348	150	62	2,565	16,165	63	—	16,228
11,393	40	15,431	16	6,944	445	7,871	15,276	47,800	(463)	—	47,337
20,831	7,695	35,836	29	12,696	813	—	13,538	87,394	470	—	87,864
3,749	954	6,018	5	2,285	146	271	2,707	15,727	45	—	15,772
10,344	6,956	20,930	14	6,305	404	—	6,723	43,398	421	—	43,819
7,260	1,216	11,024	10	4,425	284	254	4,973	30,460	60	—	30,520
7,377	2,737	12,702	10	4,496	288	1,171	5,965	30,948	86	—	31,034
257	656	1,003	—	156	10	499	665	1,077	8	—	1,085
29,100	5,668	44,980	40	17,737	1,136	2,384	21,297	122,089	215	—	122,304
33,700	138	45,664	46	20,540	1,316	1,262	23,164	141,387	(66)	—	141,321

**Tier 2 Public Safety and Firefighter Contributory Retirement System**

**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Logan City	\$ 96,764	0.8498104%	\$ (9,833)	87,077	(83,872)	5,129	2,426
Lone Peak PS District	58,414	0.5130109	(5,936)	52,566	(50,632)	3,097	1,465
Mapleton City	13,943	0.1224532	(1,417)	12,547	(12,086)	739	350
Millard County	71,490	0.6278485	(7,265)	64,333	(61,966)	3,790	1,792
Moab Valley Fire Protection	4,252	0.0373439	(432)	3,826	(3,686)	225	107
Morgan County	20,758	0.1823062	(2,109)	18,680	(17,993)	1,100	520
Murray City	169,760	1.4908812	(17,251)	152,765	(147,143)	8,999	4,256
N Tooele Co Fire Protection SD	9,882	0.0867906	(1,004)	8,893	(8,566)	524	248
Nephi City	14,191	0.1246330	(1,442)	12,771	(12,301)	752	356
North Davis Fire District	34,649	0.3043000	(3,521)	31,180	(30,033)	1,837	869
North Ogden City	25,180	0.2211418	(2,559)	22,660	(21,826)	1,335	631
North Park Police Agency	13,080	0.1148755	(1,329)	11,771	(11,338)	693	328
North View Fire District	42,263	0.3711698	(4,295)	38,032	(36,633)	2,240	1,060
Ogden City Corp	300,881	2.6424306	(30,575)	270,760	(260,795)	15,950	7,544
Park City	33,111	0.2907906	(3,365)	29,796	(28,700)	1,755	830
Park City Fire Service	98,932	0.8688494	(10,053)	89,028	(85,751)	5,244	2,480
Parowan City	7,941	0.0697406	(807)	7,146	(6,883)	421	199
Payson City	31,826	0.2795099	(3,234)	28,640	(27,586)	1,687	798
Perry City	4,476	0.0393088	(455)	4,028	(3,880)	237	112
Pleasant Grove City	58,012	0.5094809	(5,895)	52,205	(50,283)	3,075	1,455
Pleasant View City	5,131	0.0450631	(521)	4,617	(4,448)	272	129
Price City	15,513	0.1362408	(1,576)	13,960	(13,446)	822	389
Provo City Corp	188,848	1.6585203	(19,190)	169,942	(163,688)	10,011	4,735
Rich County	5,121	0.0449766	(520)	4,609	(4,439)	271	128
Richfield City	10,912	0.0958308	(1,109)	9,819	(9,458)	578	274
Riverdale City	25,183	0.2211644	(2,559)	22,662	(21,828)	1,335	631
Roosevelt City	10,152	0.0891577	(1,032)	9,136	(8,799)	538	255
Roy City	106,867	0.9385360	(10,860)	96,168	(92,629)	5,665	2,679
Salem City	8,376	0.0735608	(851)	7,537	(7,260)	444	210
Salina City	3,785	0.0332408	(385)	3,406	(3,281)	201	95
Salt Lake City Corp	589,773	5.1795695	(59,931)	530,731	(511,199)	31,264	14,787
Salt Lake County	789,715	6.9355150	(80,249)	710,656	(684,502)	41,863	19,800
San Juan County	38,197	0.3354604	(3,882)	34,373	(33,108)	2,025	958
Sandy City	236,298	2.0752385	(24,012)	212,642	(204,816)	12,526	5,925
Sanpete County	23,871	0.2096460	(2,426)	21,482	(20,691)	1,265	599
Santaquin City	5,641	0.0495447	(573)	5,077	(4,890)	299	141
Sevier County	33,321	0.2926380	(3,386)	29,986	(28,882)	1,766	835
Smithfield City Corp	24,422	0.2144840	(2,482)	21,977	(21,169)	1,295	612
So Davis Metro Fire Agency	85,814	0.7536485	(8,720)	77,223	(74,382)	4,549	2,152
South Ogden City	37,972	0.3334788	(3,859)	34,170	(32,913)	2,013	952
Southern Utah University	3,708	0.0325679	(377)	3,337	(3,214)	197	93
Spanish Fork City	39,429	0.3462816	(4,007)	35,482	(34,176)	2,090	989
Springville City	56,936	0.5000307	(5,786)	51,236	(49,351)	3,018	1,428
State of Utah	2,883,084	25.3201170	(292,965)	2,594,458	(2,498,975)	152,838	72,288
Summit County	66,183	0.5812395	(6,725)	59,557	(57,366)	3,508	1,659
Sunset City	12,255	0.1076291	(1,245)	11,028	(10,622)	650	307
Syracuse City Corp	41,342	0.3630793	(4,201)	37,203	(35,834)	2,192	1,037
Tooele City	80,916	0.7106312	(8,223)	72,816	(70,136)	4,289	2,029
Tooele County	56,682	0.4977973	(5,760)	51,007	(49,130)	3,005	1,421
Town of Brian Head	4,139	0.0363517	(421)	3,725	(3,588)	219	104
Tremonton City	6,778	0.0595283	(689)	6,100	(5,875)	359	170
Uintah County	110,500	0.9704407	(11,229)	99,437	(95,778)	5,858	2,771
Unified Fire Authority	259,433	2.2784157	(26,363)	233,461	(224,869)	13,753	6,505
Unified Police Department	186,436	1.6373416	(18,945)	167,772	(161,598)	9,883	4,674
University of Utah	34,672	0.3045036	(3,523)	31,201	(30,053)	1,838	869

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
21,530	14,144	43,229	29	13,123	841	—	13,993	90,329	848	—	91,177
12,997	7,878	25,437	18	7,922	508	912	9,360	54,530	411	—	54,941
3,102	2,237	6,428	4	1,891	121	—	2,016	13,016	135	—	13,151
15,907	3,707	25,196	22	9,695	621	—	10,338	66,736	222	—	66,958
946	622	1,900	1	577	37	42	657	3,969	34	—	4,003
4,619	363	6,602	6	2,815	180	1,368	4,369	19,378	(59)	—	19,319
37,772	19,897	70,924	52	23,022	1,475	—	24,549	158,470	1,194	—	159,664
2,199	1,965	4,936	3	1,340	86	389	1,818	9,225	102	—	9,327
3,158	1,097	5,363	4	1,925	123	171	2,223	13,248	55	—	13,303
7,709	785	11,200	11	4,699	301	733	5,744	32,345	2	—	32,347
5,603	4,157	11,726	8	3,415	219	—	3,642	23,506	254	—	23,760
2,910	—	3,931	4	1,774	114	2,103	3,995	12,210	(124)	—	12,086
9,404	2,771	15,475	13	5,732	367	—	6,112	39,453	170	—	39,623
66,946	22,316	112,756	92	40,804	2,614	—	43,510	280,872	1,369	—	282,241
7,367	7,686	17,638	10	4,490	288	—	4,788	30,909	467	—	31,376
22,012	11,818	41,554	30	13,417	860	—	14,307	92,353	727	—	93,080
1,767	857	3,244	2	1,077	69	368	1,516	7,413	32	—	7,445
7,081	1,132	10,698	10	4,316	277	635	5,238	29,710	25	—	29,735
996	1,200	2,545	1	607	39	607	1,254	4,178	36	—	4,214
12,908	—	17,438	18	7,867	504	3,896	12,285	54,154	(242)	—	53,912
1,142	770	2,313	2	696	45	422	1,165	4,790	19	—	4,809
3,452	1,190	5,853	5	2,104	135	1,131	3,375	14,481	—	—	14,481
42,019	5,409	62,174	58	25,610	1,641	—	27,309	176,289	330	—	176,619
1,139	1,234	2,772	2	695	44	—	741	4,781	75	—	4,856
2,428	1,013	4,293	3	1,480	95	670	2,248	10,186	17	—	10,203
5,603	406	7,975	8	3,415	219	2,209	5,851	23,508	(105)	—	23,403
2,259	2,388	5,440	3	1,377	88	166	1,634	9,477	133	—	9,610
23,778	10,188	42,310	33	14,493	929	—	15,455	99,760	619	—	100,379
1,864	1,516	4,034	3	1,136	73	1,209	2,421	7,819	24	—	7,843
842	122	1,260	1	513	33	559	1,106	3,533	(27)	—	3,506
131,225	30,053	207,329	180	79,981	5,124	—	85,285	550,553	1,823	—	552,376
175,712	97,173	334,548	241	107,096	6,861	—	114,198	737,198	6,021	—	743,219
8,499	2,261	13,743	12	5,180	332	—	5,524	35,657	135	—	35,792
52,576	13,420	84,447	72	32,045	2,053	2,643	36,813	220,584	630	—	221,214
5,311	2,079	9,254	7	3,237	207	37	3,488	22,284	121	—	22,405
1,255	—	1,695	2	765	49	929	1,745	5,266	(55)	—	5,211
7,414	5,587	15,602	10	4,519	290	—	4,819	31,105	339	—	31,444
5,434	—	7,341	7	3,312	212	2,742	6,273	22,798	(168)	—	22,630
19,094	11,550	37,345	26	11,638	746	—	12,410	80,108	706	—	80,814
8,449	1,924	13,338	12	5,149	330	—	5,491	35,447	115	—	35,562
825	—	1,115	1	503	32	559	1,095	3,462	(33)	—	3,429
8,773	1,091	12,943	12	5,347	343	1,836	7,538	36,807	(42)	—	36,765
12,668	8,482	25,596	17	7,721	495	—	8,233	53,150	520	—	53,670
641,487	223,675	1,090,288	875	390,985	25,047	—	416,907	2,691,356	13,554	—	2,704,910
14,726	3,642	23,535	20	8,975	575	3,413	12,983	61,782	—	—	61,782
2,727	925	4,609	4	1,662	106	59	1,831	11,440	54	—	11,494
9,199	5,627	18,055	13	5,607	359	—	5,979	38,593	343	—	38,936
18,004	3,769	28,091	25	10,973	703	652	12,353	75,535	195	—	75,730
12,612	4,229	21,267	17	7,687	492	3,147	11,343	52,912	46	—	52,958
921	—	1,244	1	561	36	605	1,203	3,864	(36)	—	3,828
1,508	783	2,820	2	919	59	229	1,209	6,327	36	—	6,363
24,586	18,156	51,371	34	14,985	960	—	15,979	103,151	1,100	—	104,251
57,724	23,312	101,294	79	35,183	2,254	—	37,516	242,180	1,416	—	243,596
41,482	10,898	66,937	57	25,283	1,620	—	26,960	174,038	659	—	174,697
7,715	4,755	15,177	11	4,702	301	—	5,014	32,367	281	—	32,648

**Tier 2 Public Safety and Firefighter Contributory Retirement System**

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Utah County	\$ 176,670	1.5515733%	\$ (17,953)	158,984	(153,133)	9,365	4,430
Utah State University	3,641	0.0319725	(370)	3,276	(3,156)	193	91
Vernal City	12,348	0.1084463	(1,255)	11,112	(10,703)	655	310
Wasatch County	34,202	0.3003697	(3,475)	30,778	(29,645)	1,813	858
Wasatch County Fire District	25,798	0.2265645	(2,622)	23,215	(22,361)	1,368	647
Washington City	50,033	0.4394074	(5,084)	45,024	(43,367)	2,652	1,254
Washington County	139,073	1.2213792	(14,132)	125,150	(120,544)	7,372	3,487
Wayne County	2,966	0.0260465	(301)	2,669	(2,571)	157	74
Weber County Corp	234,556	2.0599419	(23,835)	211,074	(203,306)	12,434	5,881
Weber Fire District	98,071	0.8612884	(9,966)	88,253	(85,005)	5,199	2,459
Wellington City	4,064	0.0356872	(413)	3,657	(3,522)	215	102
West Bountiful City	22,901	0.2011225	(2,327)	20,608	(19,850)	1,214	574
West Valley City	395,793	3.4759765	(40,219)	356,170	(343,062)	20,981	9,924
Woods Cross City	28,320	0.2487134	(2,878)	25,485	(24,547)	1,501	710
<b>Grand Total</b>	<b>\$ 11,386,535</b>	<b>100.0000000%</b>	<b>\$ (1,157,070)</b>	<b>10,246,620</b>	<b>(9,869,526)</b>	<b>603,603</b>	<b>285,489</b>
<b>No Proportionate Share for 2017</b>							
Springdale Town	\$ —	0.0000000%	—	—	—	—	—
Garden City Fire District	—	0.0000000	—	—	—	—	—
North Logan City	—	0.0000000	—	—	—	—	—
Stockton Town	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 11,386,535</b>	<b>100.0000000%</b>	<b>\$ (1,157,070)</b>	<b>10,246,620</b>	<b>(9,869,526)</b>	<b>603,603</b>	<b>285,489</b>

Columns may not add to total due to rounding.

**Utah Retirement Systems**

**Schedule of Employer Allocations and Pension Amounts**

at December 31, 2017

Retirement System	Employer Contributions	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Net Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Noncontributory Retirement System	\$ 832,525,254	2,883,492,167	6,524,169,309	(156,133,983)	9,773,059	495,471,520	774,810,943
Contributory Retirement System	6,961,415	14,717,821	141,894,446	(92,965,260)	—	28,954,943	—
Public Safety Retirement System	146,448,085	508,686,152	1,090,853,404	33,689,235	33,434,034	68,365,188	136,136,463
Firefighters Retirement System	6,733,506	(28,679,060)	141,719,972	(168,271,093)	—	24,343,557	43,135,552
Judges Retirement System	7,563,431	32,585,945	58,167,690	10,782,067	1,593,433	3,835,628	11,166,493
Utah Governors and Legislators Retirement Plan	404,409	1,853,770	3,133,984	766,391	—	236,248	—
Tier 2 Public Employees Contributory Retirement System	82,274,953	8,816,731	103,812,697	(64,438,786)	330,080	2,764,635	11,865,602
Tier 2 Public Safety & Firefighter Contributory Retirement System	11,386,535	(1,157,070)	10,246,620	(9,869,526)	603,603	285,489	2,533,513
<b>Grand Total</b>	<b>\$ 1,094,297,588</b>	<b>3,420,316,456</b>	<b>8,073,998,122</b>	<b>(446,440,955)</b>	<b>45,734,209</b>	<b>624,257,208</b>	<b>979,648,566</b>

Columns may not add to total due to rounding.

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
810	—	1,094	1	494	32	608	1,135	3,398	(36)	—	3,362
2,748	—	3,713	4	1,675	107	910	2,696	11,527	(58)	—	11,469
7,610	2,845	13,126	10	4,638	297	—	4,945	31,927	173	—	32,100
5,740	1,229	8,984	8	3,499	224	2,325	6,056	24,082	(77)	—	24,005
11,132	7,461	22,499	15	6,785	435	—	7,235	46,706	458	—	47,164
30,944	9,155	50,958	42	18,860	1,208	2,664	22,774	129,824	373	—	130,197
660	609	1,500	1	402	26	494	923	2,769	5	—	2,774
52,189	7,158	77,662	71	31,809	2,038	4,921	38,839	218,958	146	—	219,104
21,821	8,025	37,504	30	13,300	852	1,413	15,595	91,549	386	—	91,935
904	128	1,349	1	551	35	589	1,176	3,793	(28)	—	3,765
5,095	1,736	8,619	7	3,106	199	1,077	4,389	21,378	34	—	21,412
88,064	9,507	128,476	121	53,675	3,439	3,271	60,506	369,472	383	—	369,855
6,301	—	8,512	9	3,841	246	2,718	6,814	26,437	(163)	—	26,274
2,533,513	873,220	4,295,825	3,469	1,544,172	98,932	120,804	1,767,377	10,629,312	45,734	—	10,675,046
—	686	686	—	—	—	—	—	—	42	—	42
—	1,146	1,146	—	—	—	—	—	—	74	—	74
—	1,570	1,570	—	—	—	—	—	—	95	—	95
—	1,222	1,222	—	—	—	633	633	—	33	—	33
2,533,513	877,843	4,300,448	3,469	1,544,172	98,932	121,437	1,768,010	10,629,312	45,978	—	10,675,290

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
											57,655,261
—	28,954,943	—	66,707,646	—	—	66,707,646	4,301,243	(996,037)	—	3,305,206	
7,251,901	245,187,586	29,846,303	177,835,630	5,002,300	6,648,353	219,332,586	142,891,503	392,896	—	143,284,399	
514,660	67,993,769	21,980,926	61,824,256	8,684,476	538,229	93,027,887	6,372,439	(5,834)	(1,222,541)	5,144,064	
—	16,595,554	—	9,905,667	—	—	9,905,667	6,711,217	—	(1,476,874)	5,234,343	
—	236,248	—	587,225	—	—	587,225	546,774	—	—	546,774	
10,143,289	25,103,606	8,257,173	12,824,908	892,556	98,716	22,073,353	83,663,902	1,018,530	—	84,682,432	
877,843	4,300,448	3,469	1,544,172	98,932	121,437	1,768,010	10,629,312	45,978	—	10,675,290	
76,442,954	1,726,082,937	228,549,452	1,591,851,198	43,500,752	87,019,583	1,950,920,985	1,011,893,737	(8,301,837)	(2,699,415)	1,000,892,485	

## UTAH RETIREMENT SYSTEMS

# NOTES TO THE PUBLIC SAFETY SYSTEM SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION—PENSION TRUST FUND BY DIVISION AND SCHEDULES OF EMPLOYER ALLOCATIONS AND PENSION AMOUNTS



## Note 1 / Description of Systems

A brief description of the Utah Retirement Systems (Systems) follows. For a more complete description of plan provisions, membership and benefit statistics, see the Systems Highlights on pages 14 through 30 and Summaries of Plan Provisions on pages 178 through 193.

### A) GENERAL INFORMATION AND REPORTING ENTITY

**General** — The Utah Retirement Systems are comprised of the following pension trust funds:

- i) the **Public Employees Noncontributory Retirement System (Noncontributory System)**; the **Public Employees Contributory Retirement System (Contributory System)**; and the **Firefighters Retirement System** are multiple-employer, cost-sharing, public employee retirement systems;
- ii) the **Public Safety Retirement System** is a mixed agent and cost-sharing, multiple-employer retirement system;
- iii) the **Judges Retirement System** and the **Utah Governors and Legislators Retirement Plan** are single-employer service-employee retirement systems; and

- iv) the **Tier 2 Public Employees Contributory Retirement System** and the **Tier 2 Public Safety and Firefighter Contributory Retirement System** are multiple-employer, cost-sharing public employee retirement systems.

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

**Reporting Entity** — These Schedules of Employer Allocations and Pension amounts cover all of the foregoing retirement systems administered by the Utah State Retirement Board (Board), the sole governing body for these Systems.

The Systems are established and governed by the respective sections of Title 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 Title 49 provides for the administration of the Systems under the direction of the Board, whose members are appointed by the Governor. The Systems are fiduciary funds defined as pension (and other employee benefit) trust funds. Utah Retirement Systems is a component unit of the State of Utah.

NOTES TO THE SCHEDULES OF EMPLOYER ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

**Summary of Benefits by System**

	Noncontributory System	Contributory System	Public Safety System	Fire-fighters System	Judges System	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System
Final average salary is	Highest 3 years	Highest 5 years	Highest 3 years		Highest 2 years	Highest 5 years	Highest 5 years
Years of service required and/or age eligible for benefit	30 years any age 25 years any age* 20 years age 60* 10 years age 62* 4 years age 65	30 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	35 years any age 20 years age 60* 10 years age 62* 4 years age 65	25 years any age 20 years age 60* 10 years age 62* 4 years age 65
Benefit percent per year of service**	2.0% per year all years	1.25% per year to June 1975 2.0% per year July 1975 to present	2.5% per year up to 20 years 2.0% per year over 20 years		5.0% first 10 years 2.25% second 10 years 1.0% over 20 years	1.5% per year all years	1.5% per year all years

Note: The Utah Governors and Legislators Retirement Plan benefits are explained in the second paragraph of section B) below.

\*With actuarial reductions.

\*\*For members and retirees in the systems, prior to January 1, 1989, there may be a 3% benefit enhancement.

**B) RETIREMENT AND DEATH BENEFITS**

Retirement Systems' benefits are specified by the statute in Note 1(A) and 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 table above.

The Utah Governors and Legislators Retirement Plan provides the following benefits. Former governors at age 65 receive \$1,380 per month per term. Legislators receive a benefit at age 65 with four or more years of service at the rate of \$30 per month per year of service. Retirement at age 62 with 10 or more years of service will receive an actuarial reduction. 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) CONTRIBUTIONS**

As a condition of participation in the Defined Benefit Systems, employers and/or employees are required to contribute certain percentages of salaries and wages as authorized by statute and specified by the Board.

**Contribution Rates**

December 31, 2017

System	Contribution Rates as a Percent of Covered Payroll		
	Member	Employer	Other
Noncontributory	—	18.47-22.19%	—
Contributory	6.00%	14.46-17.70	—
Public Safety: Noncontributory	—	32.20-49.58	—
Contributory	10.50-12.29	22.19-29.70	—
Firefighters: Division A	15.05	3.93	11.60%
Division B	16.71	6.70	11.60
Judges: Noncontributory	—	42.69	9.22
Governors and Legislators	—	\$ 391,883	—
Tier 2 Public Employees	—	15.11-18.44%	—
Tier 2 Public Safety and Firefighter	—	10.82-37.71	—

NOTES TO THE SCHEDULES OF EMPLOYER  
 ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

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.

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 his or her account balance including interest that has been credited. Upon withdrawal a member forfeits the service credit that corresponds to the member contributions withdrawn.

The noncontributory retirement systems have no required member contributions flowing into them. 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 that may be withdrawn upon the termination of employment.

**D) COVERED EMPLOYEES**

The **Public Employees Noncontributory Retirement System (Noncontributory System)** was established on July 1, 1986, and is comprised of two divisions, the State and School division and the Local Government division. These divisions are not separate plans. All eligible employees of the State and School entities hired subsequent to that date are automatically members of the Noncontributory System until July 1, 2011, when Tier 2 came into effect. Local government 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 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. The System is comprised of two divisions, the State and School division and the Local Government division. These divisions are not separate plans. 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 Safety Retirement System** includes eligible State and local government employees directly involved in law enforcement (e.g., game wardens, prison guards, police officers, and highway patrol officers) and is comprised of eight divisions, the State of Utah, Division A with Social Security, Salt Lake City, Ogden, Provo, Logan, Bountiful, and Division B without Social Security. These divisions are not separate plans. 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 government employees directly involved in fire fighting and is comprised of two divisions, Division A with Social Security and Division B without Social Security. These divisions are not separate plans.

**Participating Membership by System**

	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Utah Governors and Legislators Retirement Plan	Tier 2 Public Employees System	Tier 2 Public Safety and Firefighter System
Number of participating:								
Employers	457	158	133	62	1	1	470	151
Members:								
Active	59,578	621	5,704	1,602	114	52	27,152	2,699
Terminated vested	47,292	1,294	4,824	435	11	95	1,175	75
Retirees and beneficiaries:								
Service benefits	49,287	3,388	4,900	1,196	115	176	26	—
Beneficiary benefits	4,611	654	738	227	33	77	—	—



NOTES TO THE SCHEDULES OF EMPLOYER ALLOCATIONS AND PENSION AMOUNTS *(Continued)*

December 31, 2017

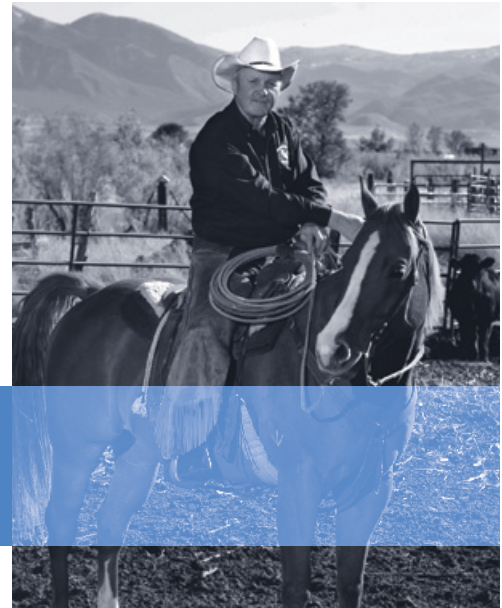
The **Judges Retirement System** includes justices and judges of the court as authorized by state statutes.

The **Utah Governors and Legislators Retirement Plan** includes only governors and legislators of the State.

The **Tier 2 Public Employees Contributory Retirement System** includes eligible public employees entering into the Utah Retirement Systems on or after July 1, 2011, when Tier 2 came into effect.

The **Tier 2 Public Safety and Firefighter Contributory Retirement System** includes eligible public safety and firefighters entering into the Utah Retirement Systems on or after July 1, 2011, when Tier 2 came into effect.

As of December 31, 2017, participating members by System are included in the table to the left.



## Note 2 / Basis of Presentation

The Schedules of Employer Allocations and Pension Amounts for the Noncontributory Retirement System, Contributory Retirement System, Public Safety Retirement System, Firefighters Retirement System, Judges Retirement System, Utah Governors and Legislators Retirement Plan, Tier 2 Public Employees Contributory Retirement System and the Tier 2 Public Safety and Firefighter Retirement System present amounts that are considered elements of the financial statements of the Systems or of its participating employers. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of the Systems or of its participating employers. The amounts presented in the Schedules were prepared in accordance with accounting principles generally accepted in the United State of America. Such preparation requires management of the Systems to make a number of estimates and assumptions related to the reported amounts. Due to the inherent nature of these estimates, actual results could differ from those estimates. The following are the significant accounting policies followed by the Systems:

### A) ALLOCATION PERCENTAGE METHODOLOGY

Each employer's proportion is equal to the ratio of the employer's actual contributions to the Systems during the plan year over the total of all employer contributions to the Systems during the plan year. This allocation method is a reasonable representation of each employer's proportionate share of the projected long-term contribution effort to the System and satisfies applicable requirements within Governmental Accounting Standards Board Statement Number 68 (GASB No. 68). The change in proportion each year is reflected in deferred outflows and deferred inflows of resources.

NOTES TO THE SCHEDULES OF EMPLOYER  
ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

## B) COLLECTIVE NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS AND ACTUARIAL INFORMATION

The Systems used updated procedures to roll forward the total pension liability from January 1, 2017, to December 31, 2017. The components of the current-year pension liability/(asset) of the employers as of December 31, 2017, were as shown in the schedule below.

## C) ACTUARIAL ASSUMPTIONS

Actuarial valuation of the ongoing Systems involve estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The last experience study was performed in 2017 and the

### Net Pension Liability by Division

Year Ended December 31, 2017

System	(in thousands)					
	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/ (Asset) as a Percentage of Covered Employee Payroll
<b>Noncontributory Retirement System</b>						
Local Government	\$ 5,411,975,297	4,973,845,309	438,129,988	91.9%	\$ 811,404,013	54.0%
State and School	22,676,644,771	20,231,282,592	2,445,362,179	89.2	2,563,916,530	95.4
<b>Total</b>	<b>28,088,620,068</b>	<b>25,205,127,901</b>	<b>2,883,492,167</b>	<b>89.7</b>	<b>3,375,320,543</b>	<b>85.4</b>
<b>Contributory Retirement System</b>						
Local Government	462,881,788	454,744,374	8,137,414	98.2	20,724,385	39.3
State and School	835,299,312	828,718,905	6,580,407	99.2	24,453,262	26.9
<b>Total</b>	<b>1,298,181,100</b>	<b>1,283,463,279</b>	<b>14,717,821</b>	<b>98.9</b>	<b>45,177,647</b>	<b>32.6</b>
<b>Public Safety Retirement System</b>						
State of Utah	1,380,470,403	1,206,583,742	173,886,661	87.4	107,557,496	161.7
Other Division A (with Social Security)	1,607,786,477	1,450,920,653	156,865,824	90.2	137,270,438	114.3
Salt Lake City	379,138,746	292,944,112	86,194,634	77.3	30,142,604	286.0
Ogden	85,849,551	65,910,599	19,938,952	76.8	5,371,519	371.2
Provo	63,273,188	51,883,327	11,389,861	82.0	5,023,277	226.7
Logan	34,947,387	29,137,535	5,809,852	83.4	2,088,014	278.2
Bountiful	27,340,057	21,060,032	6,280,025	77.0	1,813,605	346.3
Other Division B (without Social Security)	506,393,599	458,073,256	48,320,343	90.5	61,516,156	78.5
<b>Total</b>	<b>4,085,199,408</b>	<b>3,576,513,256</b>	<b>508,686,152</b>	<b>87.5</b>	<b>350,783,109</b>	<b>145.0</b>
<b>Firefighters Retirement System</b>						
Division A (with Social Security)	211,491,670	217,737,197	(6,245,527)	103.0	27,603,447	(22.6)
Division B (without Social Security)	994,234,908	1,016,668,441	(22,433,533)	102.3	85,350,287	(26.3)
<b>Total</b>	<b>1,205,726,578</b>	<b>1,234,405,638</b>	<b>(28,679,060)</b>	<b>102.4</b>	<b>112,953,734</b>	<b>(25.4)</b>
Judges Retirement System	231,071,842	198,485,897	32,585,945	85.9	18,660,643	174.6
Governors and Legislators Retirement Plan	13,073,434	11,219,664	1,853,770	85.8	721,630	256.9
Tier 2 Public Employees Retirement System	338,033,998	329,217,267	8,816,731	97.4	996,964,512	0.9
Tier 2 Public Safety and Firefighter Retirement System	39,023,571	40,180,641	(1,157,070)	103.0	98,113,308	(1.2)
<b>Grand Total</b>	<b>\$ 35,298,929,999</b>	<b>31,878,613,543</b>	<b>3,420,316,456</b>	<b>90.3%</b>	<b>\$ 4,998,695,126</b>	<b>68.4%</b>

NOTES TO THE SCHEDULES OF EMPLOYER  
 ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

**Summary of Actuarial Assumptions**

	Noncontributory	Contributory	Public Safety	Firefighters	Judges	Governors and Legislators	Tier 2 Public Employees	Tier 2 Public Safety and Firefighter
Valuation date	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17	1/1/17
Actuarial cost method	Entry Age	Entry Age	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	Level Percent of Payroll	Level Percent of Payroll
Amortization period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period	Closed Group 17-Year Closed Period	Open Group 20-Year Open Period	Open Group 20-Year Open Period
Actuarial asset valuation method (All Systems under same method)	Based on the total fair value income of investments with the excess or shortfall of actual investment income over or under the expected investment return smoothed over five years. One-fifth of the excess or shortfall is recognized each year for five years.							
Actuarial assumptions:								
Investment rate of return	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%	6.95%
Projected salary increases*	3.25-9.75%	3.25-9.75%	3.25-7.25%	3.25-8.75%	3.25%	None	3.25-9.75%	3.25-8.75%
Inflation rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Post-retirement cost-of-living adjustment	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Mortality: (Non-educators)	Male: 110% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for males, projected with Scale AA from the year 2017. Female: 110% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for females, projected with Scale AA from the year 2017.							
Mortality: (Educators)	Male: 90% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for males, projected with Scale AA from the year 2017. Female: 90% of 2017 Public Retirees of Utah (PR Utah) Mortality Table for females, projected with Scale AA from the year 2017.							

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.

\*Composed of 2.50% inflation, plus 0.75% productivity increase rate, plus step-rate promotional increases for members with less than 25 years of service.

NOTES TO THE SCHEDULES OF EMPLOYER  
 ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

next experience study is scheduled to be conducted in 2020. The Schedule of Employers' Net Pension Liability presents multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the Required Supplementary Information section. The total pension liability as of December 31, 2017, is based on the results of an actuarial valuation date of January 1, 2017, and rolled-forward using accepted actuarial procedures.

A summary of the actuarial assumptions, as of the latest actuarial valuation, is as shown in the table on page 297.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Systems target asset allocation, as of December 31, 2017, are summarized in the top table above.

**2017 CAFR (Arithmetic Basis)**

Asset Class	Target Asset Allocation	Real Return Arithmetic Basis	Long-term Expected Portfolio Real Rate of Return*
Equity securities	40%	6.15%	2.46%
Debt securities	20	0.40	0.08
Real assets	15	5.75	0.86
Private equity	9	9.95	0.89
Absolute return	16	2.85	0.46
Cash and cash equivalents	0	0.00	0.00
<b>Totals</b>	<b>100%</b>		<b>4.75%</b>
Inflation			2.50%
Expected arithmetic nominal return			7.25%

\*The total URS Defined Benefit long-term expected rate of return is 6.95%, which is comprised of a 2.50% inflation assumption and a 4.45% net real rate of return assumption.

**D) DISCOUNT RATE**

The discount rate used to measure the total pension liability was 6.95%. The projection of cash flows used to determine the discount rate assumed contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates under Utah State Code. Based on those assumptions, the Systems' fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**E) SENSITIVITY TO THE DISCOUNT RATE**

The table to the right presents the current-period net pension liability/(asset) of the employers calculated using the current-period discount rate assumption of 6.95%, as well as what the net pension liability/(asset) would be if it were calculated using a 1.00% point lower (5.95%) or a 1.00% point higher (7.95%) than the current assumption.

NOTES TO THE SCHEDULES OF EMPLOYER  
 ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

 **Changes in Discount Rate**  
 Year ended December 31, 2017

System	Net Pension Liability/(Asset) 1% Decrease (5.95%)	Net Pension Liability/(Asset) Current Discount Rate (6.95%)	Net Pension Liability/(Asset) 1% Increase (7.95%)
<b>Noncontributory Retirement System</b>			
Local Government	\$ 1,184,909,145	438,129,988	(182,779,814)
State and School	5,339,260,164	2,445,362,179	26,645,831
<b>Total</b>	<b>6,524,169,310</b>	<b>2,883,492,167</b>	<b>(156,133,983)</b>
<b>Contributory Retirement System</b>			
Local Government	55,172,376	8,137,414	(31,316,579)
State and School	86,722,070	6,580,407	(61,648,682)
<b>Total</b>	<b>141,894,446</b>	<b>14,717,821</b>	<b>(92,965,261)</b>
<b>Public Safety Retirement System</b>			
State of Utah	361,333,522	173,886,661	19,943,960
Other Division A (with Social Security)	395,231,340	156,865,824	(36,326,707)
Salt Lake City	137,497,858	86,194,634	44,045,920
Ogden	31,567,731	19,938,952	10,420,361
Provo	20,182,811	11,389,861	4,192,119
Logan	10,703,039	5,809,852	1,855,547
Bountiful	9,848,354	6,280,025	3,335,206
Other Division B (without Social Security)	124,488,750	48,320,343	(13,777,171)
<b>Total</b>	<b>1,090,853,405</b>	<b>508,686,152</b>	<b>33,689,235</b>
<b>Firefighters Retirement System</b>			
Division A (with Social Security)	26,647,823	(6,245,527)	(32,823,869)
Division B (without Social Security)	115,072,149	(22,433,533)	(135,447,224)
<b>Total</b>	<b>141,719,971</b>	<b>(28,679,060)</b>	<b>(168,271,093)</b>
Judges Retirement System	58,167,690	32,585,945	10,782,067
Governors and Legislators Retirement Plan	3,133,984	1,853,770	766,391
Tier 2 Public Employees Retirement System	103,812,697	8,816,731	(64,438,786)
Tier 2 Public Safety and Firefighter Retirement System	10,246,620	(1,157,070)	(9,869,526)
<b>Grand Total</b>	<b>\$ 8,073,998,121</b>	<b>3,420,316,456</b>	<b>(446,440,956)</b>

NOTES TO THE SCHEDULES OF EMPLOYER  
 ALLOCATIONS AND PENSION AMOUNTS *(Continued)*

December 31, 2017



## Note 3 / Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred outflows of resources and deferred inflows of resources represent the inflows or outflows that have been deferred or delayed until a future period. What is being deferred is the recognition of those outflows and inflows as revenues and expenses.

### A) DIFFERENCE BETWEEN EXPECTED AND ACTUAL EXPERIENCE

The difference between expected and actual experience with regard to economic and demographic factors is amortized over the average remaining service lives of the members (active and inactive members). The first year of amortization is recognized as a pension expense with the remaining years shown as either a deferred inflow or deferred outflow of resources. The collective amounts of the difference between the expected and actual experience for the year ended December 31, 2017, are shown in the left table on page 301.

### B) CHANGES IN ASSUMPTIONS

The changes in assumptions about future economic or demographic factors or other inputs is amortized over the average remaining service lives of the members (active and inactive members). The first year of amortization is recognized as a pension expense with the remaining years shown as either a deferred inflow or deferred outflow of resources.

#### Assumptions and Methods

Every three years in conjunction with the actuarial valuation the actuary performs an experience study. Based upon the 2017 experience study, the actuary recommended some changes in the actuarial assumptions that were adopted by the Board. Some of the changes were to decrease the earnings assumptions from 7.2% to 6.95%, decrease the inflation assumptions from 2.6% to 2.5%, and construct a new post-retirement mortality table based on actual experience (increases life expectancy for most groups). Additional changes by the Board were a decrease to the wage inflation assumption from 3.35% to 3.25% and a decrease to the payroll growth assumption from 3.1% to 3.0%.

NOTES TO THE SCHEDULES OF EMPLOYER  
ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

**Differences Between Expected  
and Actual Experience**

December 31, 2017

System	Deferred Outflows	Deferred Inflows
<b>Noncontributory Retirement System</b>		
Local Government	\$ 9,773,059	26,812,831
State and School	—	141,648,750
Total	9,773,059	168,461,581
<b>Contributory Retirement System</b>		
Local Government	—	—
State and School	—	—
Total	—	—
<b>Public Safety Retirement System</b>		
State of Utah	2,508,802	4,497,466
Other Division A (with Social Security)	—	23,007,051
Salt Lake City	3,226,957	—
Ogden	1,211,508	229,345
Provo	298,874	1,164,499
Logan	33,602	619,112
Bountiful	444,052	328,830
Other Division B (without Social Security)	25,710,239	—
Total	33,434,034	29,846,303
<b>Firefighters Retirement System</b>		
Other Division A (with Social Security)	—	2,948,422
Other Division B (without Social Security)	—	19,032,504
Total	—	21,980,926
Judges Retirement System	1,593,433	—
Governors and Legislators Retirement Plan	—	—
Tier 2 Public Employees Retirement System	330,080	8,257,173
Tier 2 Public Safety and Firefighter Retirement System	603,603	3,469
Grand Total	\$ 45,734,209	228,549,452

**C) NET DIFFERENCE BETWEEN  
PROJECTED AND ACTUAL  
INVESTMENT EARNINGS ON  
PENSION PLAN INVESTMENTS**

The difference between the System's expected rate of return of 6.95% and actual investment earnings on pension plan investments is amortized over a five-year closed

**Changes in Assumptions**

December 31, 2017

System	Deferred Outflows	Deferred Inflows
<b>Noncontributory Retirement System</b>		
Local Government	\$ 157,374,259	10,236,580
State and School	617,436,684	18,585,908
Total	774,810,943	28,822,488
<b>Contributory Retirement System</b>		
Local Government	—	—
State and School	—	—
Total	—	—
<b>Public Safety Retirement System</b>		
State of Utah	35,352,358	387,200
Other Division A (with Social Security)	57,763,873	2,161,548
Salt Lake City	13,482,399	—
Ogden	2,379,400	—
Provo	2,448,597	169,040
Logan	1,164,705	60,256
Bountiful	1,059,443	33,272
Other Division B (without Social Security)	22,485,688	2,190,984
Total	136,136,463	5,002,300
<b>Firefighters Retirement System</b>		
Other Division A (with Social Security)	8,524,301	2,011,480
Other Division B (without Social Security)	34,611,251	6,672,996
Total	43,135,552	8,684,476
Judges Retirement System	11,166,493	—
Governors and Legislators Retirement Plan	—	—
Tier 2 Public Employees Retirement System	11,865,602	892,556
Tier 2 Public Safety and Firefighter Retirement System	2,533,513	98,932
Grand Total	\$ 979,648,566	43,500,752

period in accordance with GASB Statement No. 68. The first year of amortization is recognized as pension expense with the remaining years shown as either a deferred outflow or deferred inflow of resources. The collective deferred outflow amounts of the difference between expected and actual experience for the year ended December 31, 2017, is \$624,257,208 and deferred inflows of \$1,591,851,198 as illustrated in the table at the top left of page 302.

NOTES TO THE SCHEDULES OF EMPLOYER  
 ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

**Net Difference Between Projected  
and Actual Investment Earnings  
on Plan Investments**

December 31, 2017

System	Deferred Outflows	Deferred Inflows
<b>Noncontributory Retirement System</b>		
Local Government	\$ 94,326,413	247,684,837
State and School	401,145,107	1,012,936,857
<b>Total</b>	<b>495,471,520</b>	<b>1,260,621,694</b>
<b>Contributory Retirement System</b>		
Local Government	10,276,123	23,335,433
State and School	18,678,820	43,372,213
<b>Total</b>	<b>28,954,943</b>	<b>66,707,646</b>
<b>Public Safety Retirement System</b>		
State of Utah	23,403,411	60,115,835
Other Division A (with Social Security)	28,222,940	72,548,832
Salt Lake City	5,633,153	14,590,217
Ogden	1,314,543	3,316,907
Provo	1,008,506	2,586,915
Logan	578,561	1,459,198
Bountiful	419,780	1,057,220
Other Division B (without Social Security)	7,784,294	22,160,506
<b>Total</b>	<b>68,365,188</b>	<b>177,835,630</b>
<b>Firefighters Retirement System</b>		
Other Division A (with Social Security)	4,089,239	10,749,474
Other Division B (without Social Security)	20,254,318	51,074,782
<b>Total</b>	<b>24,343,557</b>	<b>61,824,256</b>
Judges Retirement System	3,835,628	9,905,667
Governors and Legislators Retirement Plan	236,248	587,225
Tier 2 Public Employees Retirement System	2,764,635	12,824,908
Tier 2 Public Safety and Firefighter Retirement System	285,489	1,544,172
<b>Grand Total</b>	<b>\$ 624,257,208</b>	<b>1,591,851,198</b>

**Proportionate Share  
of Gross Pension Expense**

December 31, 2017

System	
<b>Noncontributory Retirement System</b>	
Local Government	\$ 156,015,905
State and School	600,761,442
<b>Total</b>	<b>756,777,347</b>
<b>Contributory Retirement System</b>	
Local Government	2,594,159
State and School	1,707,083
<b>Total</b>	<b>4,301,242</b>
<b>Public Safety Retirement System</b>	
State of Utah	42,476,033
Other Division A (with Social Security)	60,686,632
Salt Lake City	17,369,585
Ogden	4,831,200
Provo	2,391,349
Logan	1,155,195
Bountiful	1,114,700
Other Division B (without Social Security)	12,866,808
<b>Total</b>	<b>142,891,502</b>
<b>Firefighters Retirement System</b>	
Other Division A (with Social Security)	2,971,593
Other Division B (without Social Security)	3,400,846
<b>Total</b>	<b>6,372,439</b>
Judges Retirement System	6,711,217
Governors and Legislators Retirement Plan	546,774
Tier 2 Public Employees Retirement System	83,663,902
Tier 2 Public Safety and Firefighter Retirement System	10,629,312
<b>Grand Total</b>	<b>\$ 1,011,893,735</b>

**D) CHANGES IN PROPORTION AND  
DIFFERENCES BETWEEN CONTRIBUTIONS  
AND PROPORTIONATE SHARE  
OF CONTRIBUTIONS**

The change in employer proportionate share is the amount of difference between the employer proportionate share of the net pension liability/(asset) in the prior year compared to the current year. The difference between the employer contributions and proportionate share of contributions is the difference between the total amount

of the employer contributions and the amount of the proportionate share of the employer contributions. The change in proportionate share and the difference between employer contributions and proportionate share of contributions is amortized over the average remaining service lives of the members (active and inactive members). The first year of amortization is recognized as pension expense with the remaining years shown as either a deferred outflow or deferred inflow of resources.



NOTES TO THE SCHEDULES OF EMPLOYER  
ALLOCATIONS AND PENSION AMOUNTS (Continued)

December 31, 2017

**E) PROPORTIONATE SHARE  
OF ALLOCABLE GROSS  
PENSION EXPENSE**

The collective gross pension expense includes certain current period changes in the collective net pension liability/(asset), projected earnings on pension plan investments and amortization of deferred inflows of resources and deferred outflows of resources for the current period. The collective pension expense for the year ended December 31, 2017, is as shown in the top-right table on page 302.

**F) NET AMORTIZATION  
OF DEFERRED AMOUNTS  
FROM CHANGES IN PROPORTION  
AND DIFFERENCES BETWEEN  
EMPLOYER CONTRIBUTIONS  
AND PROPORTIONATE  
SHARE OF CONTRIBUTIONS**

The change in the employer's proportion of the collective net pension liability/(asset), since the prior measurement date (December 31, 2016), the net effect of the change on the employer's proportionate share of the collective net pension liability/(asset), and collective deferred outflows of resources and deferred inflows of resources related to pensions, determined at the beginning of the measurement period, is recognized in the employer's pension expense, beginning in the current period, using average remaining services lives for both active and inactive members. The table to the right illustrates the average remaining service lives for the cost sharing retirement plans.

**G) PROPORTIONATE SHARE OF  
NONEMPLOYER CONTRIBUTIONS**

The Firefighters Retirement System collects fire insurance premium tax. Fire insurance premium taxes are collected by the Utah State Treasurer and are used to help fund the Firefighters Retirement System. The proportionate share of nonemployer contributions is based upon the same methodology used to calculate each employer's proportionate share of the net pension liability/(asset) and was equal to \$1,222,541 in calendar year 2017 and

**Net Amortization of Deferred Amounts  
from Changes in Proportion and  
Differences Between Employer  
Contributions and Proportionate  
Share of Contributions**

Year ended December 31, 2017

Cost Sharing Retirement System	Average Remaining Service Lives
<b>Noncontributory Retirement System</b>	
Local Government	3.95
State and School	3.00
<b>Contributory Retirement System</b>	
Local Government	0.73
State and School	0.37
<b>Public Safety Retirement System</b>	
State of Utah	3.26
Other Division A (with Social Security)	3.36
Other Division B (without Social Security)	4.81
<b>Firefighters Retirement System</b>	
Other Division A (with Social Security)	6.46
Other Division B (without Social Security)	5.61
Tier 2 Public Employees Retirement System	12.19
Tier 2 Public Safety and Firefighter Retirement System	18.10

was used to offset gross pension plan expense in the Firefighters Retirement System.

The Judges Retirement System collects court fees from the Utah Judiciary System and is used to help fund the retirement system. The Judges Retirement System collected \$1,476,874 in court fees in calendar year 2017 and was used to offset gross pension plan expense.

**H) TOTAL EMPLOYER  
NET PENSION PLAN EXPENSE**

This amount is equal to the gross pension expense less net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate of contributions and any proportionate share of nonemployer contributions.

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
4 Corners Comm Behavior Health	N/A	\$ —	—	—	—	—	—
Active Re Entry Inc	N/A	—	—	—	—	—	—
Alpine City	N/A	—	—	—	—	—	—
Alpine School District	N/A	—	—	—	—	—	—
Alpine Uniserv	N/A	—	—	—	—	—	—
American Fork City	N/A	(137,170)	658,728	(773,323)	8,351	83,280	200,421
American Leadership Academy	N/A	—	—	—	—	—	—
Ames Charter School	N/A	—	—	—	—	—	—
Annabella Town	N/A	—	—	—	—	—	—
Ash Creek SS District	N/A	—	—	—	—	—	—
Ashley Valley Improv Dist	N/A	—	—	—	—	—	—
Ashley Valley Sewer Mgmt Board	N/A	—	—	—	—	—	—
Ballard Town	N/A	—	—	—	—	—	—
Bear Lake SSD	N/A	—	—	—	—	—	—
Bear River Assn of Govts	N/A	—	—	—	—	—	—
Bear River Health Dept	N/A	—	—	—	—	—	—
Bear River Mental Health	N/A	—	—	—	—	—	—
Bear River Water District	N/A	—	—	—	—	—	—
Beaver City	N/A	—	—	—	—	—	—
Beaver County	N/A	(7,411)	65,626	(63,211)	3,866	1,828	16,226
Beaver Housing Authority	N/A	—	—	—	—	—	—
Beaver School District	N/A	—	—	—	—	—	—
Beaver Valley Hospital	N/A	—	—	—	—	—	—
Benchland Water Company	N/A	—	—	—	—	—	—
Bicknell Town	N/A	—	—	—	—	—	—
Big Cottonwood Canyon Imp Dist	N/A	—	—	—	—	—	—
Big Water Municipal Corp	N/A	(365)	3,230	(3,111)	190	90	799
Blanding City	N/A	(377)	3,335	(3,212)	196	93	824
Bluffdale City	N/A	(829)	7,339	(7,069)	432	204	1,815
Bona Vista Water Improve	N/A	—	—	—	—	—	—
Bountiful Irrigation District	N/A	—	—	—	—	—	—
Box Elder Co Mosq Dist	N/A	—	—	—	—	—	—
Box Elder County	N/A	(7,416)	65,673	(63,256)	3,869	1,830	16,238
Box Elder School District	N/A	—	—	—	—	—	—
Bridgerland Applied Tech Ctr	N/A	—	—	—	—	—	—
Brigham City	N/A	(71,288)	318,713	(385,039)	1,654	45,381	99,913
Cache County	N/A	(57,987)	312,927	(351,498)	7,448	32,142	90,918
Cache Metro Planning Org	N/A	—	—	—	—	—	—
Cache School District	N/A	—	—	—	—	—	—
Canyons School District	N/A	—	—	—	—	—	—
Carbon County	N/A	(5,144)	45,556	(43,879)	2,684	1,269	11,264
Carbon County Rec/Trans SSD	N/A	—	—	—	—	—	—
Carbon School District	N/A	—	—	—	—	—	—
Castle Dale City	N/A	—	—	—	—	—	—
Castle Valley SSD	N/A	—	—	—	—	—	—
Cedar City	N/A	(121,491)	542,665	(655,844)	2,762	77,385	170,186
Cedar City Housing Auth	N/A	—	—	—	—	—	—
Cedar Mtn Fire Protection Dist	N/A	(366)	3,245	(3,125)	191	90	802
Centerfield City	N/A	—	—	—	—	—	—
Centerville City	N/A	(465)	4,119	(3,967)	243	115	1,018
Central Davis Sewer Dist	N/A	—	—	—	—	—	—
Central Iron Co Water Conserv	N/A	—	—	—	—	—	—
Central UT Public Health	N/A	—	—	—	—	—	—
Central Utah Counseling Center	N/A	—	—	—	—	—	—
Central Utah Water Dist	N/A	—	—	—	—	—	—
Central Weber Sewer Dist	N/A	—	—	—	—	—	—
City of Aurora	N/A	—	—	—	—	—	—
City of Bountiful	N/A	(2,809)	24,873	(23,957)	1,465	693	6,150
City of Cedar Hills	N/A	—	—	—	—	—	—
City of Draper	N/A	(269,196)	1,184,224	(1,440,215)	4,052	173,086	373,823



**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** *(Continued)*

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
City of Duchesne	N/A	\$ —	—	—	—	—	—
City of Enterprise	N/A	—	—	—	—	—	—
City of Green River	N/A	—	—	—	—	—	—
City of Harrisville	N/A	(938)	8,305	(7,999)	489	231	2,053
City of Helper	N/A	(935)	8,278	(7,973)	488	231	2,047
City of Holladay	N/A	—	—	—	—	—	—
City of Kanab	N/A	(12,587)	53,703	(66,150)	—	8,241	17,179
City of Milford	N/A	—	—	—	—	—	—
City of Moab	N/A	(2,833)	25,090	(24,167)	1,478	699	6,204
City of Monticello	N/A	(980)	8,676	(8,357)	511	242	2,145
City of Naples	N/A	(743)	6,576	(6,334)	387	183	1,626
City of North Salt Lake	N/A	(2,609)	23,107	(22,256)	1,361	644	5,713
City of Orem	N/A	(871,227)	4,539,370	(5,307,325)	9,861	774,191	1,356,385
City of Riverton	N/A	—	—	—	—	—	—
City of Santa Clara	N/A	(25,341)	108,316	(133,320)	22	16,574	34,622
City of Saratoga Springs	N/A	(114,164)	608,820	(704,816)	3,251	98,985	180,166
City of South Jordan	N/A	(547,883)	2,429,907	(2,945,263)	10,487	350,522	764,366
City of South Salt Lake	N/A	(508,588)	2,220,480	(2,708,945)	5,739	328,508	703,227
City of St George	N/A	(327,918)	1,469,427	(1,773,558)	7,991	208,454	460,198
City of Taylorsville	N/A	—	—	—	—	—	—
City of Uintah	N/A	—	—	—	—	—	—
City of Washington Terrace	N/A	(10,772)	45,962	(56,615)	—	7,053	14,703
City of Wendover	N/A	—	—	—	—	—	—
City of West Haven	N/A	—	—	—	—	—	—
City of West Jordan	N/A	(1,314,094)	6,807,508	(7,978,865)	9,366	1,174,662	2,039,043
City of Woodland Hills	N/A	—	—	—	—	—	—
Clearfield City	N/A	(4,711)	41,718	(40,183)	2,458	1,162	10,315
Cleveland Town	N/A	—	—	—	—	—	—
Clinton City	N/A	(72,902)	330,284	(396,865)	2,186	46,022	102,958
Coalville City	N/A	—	—	—	—	—	—
Color Country Uniserv	N/A	—	—	—	—	—	—
Corinne City	N/A	—	—	—	—	—	—
Cottonwood Heights City	N/A	(4,992)	44,207	(42,580)	2,604	1,232	10,930
Cottonwood Heights P&R Srv	N/A	—	—	—	—	—	—
Cottonwood Imp District	N/A	—	—	—	—	—	—
Council On Aging Golden Age SS	N/A	—	—	—	—	—	—
Daggett County	N/A	(524)	4,643	(4,472)	274	129	1,148
Daggett School District	N/A	—	—	—	—	—	—
Davis & Weber County Canal Co	N/A	—	—	—	—	—	—
Davis Applied Tech College	N/A	—	—	—	—	—	—
Davis Behavioral Health Inc	N/A	—	—	—	—	—	—
Davis Co Housing Authority	N/A	—	—	—	—	—	—
Davis Co Mosquito Abate	N/A	—	—	—	—	—	—
Davis County	N/A	(25,215)	223,297	(215,080)	13,154	6,221	55,211
Davis School District	N/A	—	—	—	—	—	—
Davis Uniserv	N/A	—	—	—	—	—	—
Ddi Vantage	N/A	—	—	—	—	—	—
Delta City	N/A	—	—	—	—	—	—
Dixie Applied Tech College	N/A	—	—	—	—	—	—
Dixie State University	N/A	(464)	4,106	(3,955)	242	114	1,015
Duchesne Co Mosquito Dist	N/A	—	—	—	—	—	—
Duchesne Co Water Conserv Dist	N/A	—	—	—	—	—	—
Duchesne County	N/A	(7,842)	69,448	(66,892)	4,091	1,935	17,171
Duchesne School District	N/A	—	—	—	—	—	—
E Duchesne Cul Water Imp Dist	N/A	—	—	—	—	—	—
Eagle Mountain City	N/A	—	—	—	—	—	—
East Carbon City	N/A	(821)	7,267	(7,000)	428	202	1,797
East Hollywood High School	N/A	—	—	—	—	—	—
Educators Mutual Insurance	N/A	—	—	—	—	—	—
Elk Ridge City	N/A	—	—	—	—	—	—

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources					Deferred Inflows of Resources			Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
							Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions		
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,788	4,561	3	1,252	80	563	1,898	8,615	77	—	8,692	
449	3,215	3	1,247	80	1,142	2,472	8,587	(44)	—	8,543	
—	—	—	—	—	—	—	—	—	—	—	
664	26,084	5,942	21,663	4,054	—	31,659	5,989	137	(528)	5,598	
1,416	9,797	8	3,781	242	831	4,862	26,027	30	—	26,057	
353	3,251	3	1,308	84	134	1,529	9,000	15	—	9,015	
1,560	3,756	2	991	63	48	1,104	6,821	91	—	6,912	
1,493	9,211	8	3,482	223	1,412	5,125	23,970	10	—	23,980	
3,454	2,143,891	723,164	1,965,725	255,145	18,930	2,962,964	302,866	(4,763)	(36,497)	261,606	
—	—	—	—	—	—	—	—	—	—	—	
1,098	52,316	11,943	43,599	8,152	10,026	73,720	12,425	(1,913)	(1,061)	9,451	
10,449	292,851	91,588	254,046	32,638	—	378,272	73,611	2,215	(4,622)	71,204	
15,063	1,140,438	249,217	935,216	171,700	6,053	1,362,186	435,788	2,419	(22,133)	416,074	
76,291	1,113,765	234,936	871,102	161,197	6,201	1,273,436	337,816	13,204	(20,867)	330,153	
28,401	705,044	147,620	558,474	101,988	9,029	817,111	289,456	1,595	(13,109)	277,942	
—	—	—	—	—	—	—	—	—	—	—	
169	21,925	5,085	18,541	3,469	91	27,186	5,125	12	(452)	4,685	
—	—	—	—	—	—	—	—	—	—	—	
63,946	3,287,017	1,099,693	2,974,904	387,080	—	4,461,677	361,423	13,517	(55,502)	319,438	
—	—	—	—	—	—	—	—	—	—	—	
2,613	16,548	14	6,287	403	2,708	9,412	43,277	(9)	—	43,268	
21,011	172,177	32,450	123,854	22,487	2,002	180,793	71,194	2,755	(2,881)	71,068	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
3,925	18,691	15	6,662	427	1,625	8,729	45,858	149	—	46,007	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
5,587	7,138	2	700	45	1,993	2,740	4,816	201	—	5,017	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
26,821	101,407	76	33,651	2,156	—	35,883	231,637	1,630	—	233,267	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
788	2,159	1	619	40	—	660	4,260	49	—	4,309	
—	—	—	—	—	—	—	—	—	—	—	
13,269	36,466	24	10,466	671	—	11,161	72,041	806	—	72,847	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
137	2,564	2	1,095	70	1,068	2,235	7,539	(56)	—	7,483	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** *(Continued)*

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Emery Co Care & Rehab Ctr	N/A	\$ —	—	—	—	—	—
Emery County	N/A	(2,961)	26,219	(25,254)	1,545	731	6,483
Emery County Recreation SSD	N/A	—	—	—	—	—	—
Emery School District	N/A	—	—	—	—	—	—
Emery Town	N/A	—	—	—	—	—	—
Emery Water Conserv Dist	N/A	—	—	—	—	—	—
Enoch City	N/A	(979)	8,666	(8,347)	510	241	2,143
Ephraim City	N/A	(212)	1,876	(1,807)	111	52	464
Escalante City	N/A	—	—	—	—	—	—
Eureka City Corporation	N/A	—	—	—	—	—	—
Fairview City	N/A	—	—	—	—	—	—
Farmington City	N/A	(72,910)	330,622	(397,123)	2,221	46,000	103,023
Farr West City	N/A	—	—	—	—	—	—
Fast Forward Charter HS	N/A	—	—	—	—	—	—
Ferron City	N/A	—	—	—	—	—	—
Fillmore City	N/A	—	—	—	—	—	—
Five-County Assn of Govts	N/A	—	—	—	—	—	—
Fountain Green City	N/A	—	—	—	—	—	—
Fox Hollow Golf Course	N/A	—	—	—	—	—	—
Francis City	N/A	—	—	—	—	—	—
Fruit Heights City	N/A	—	—	—	—	—	—
Garden City Fire District	N/A	—	—	—	—	—	—
Garfield County	N/A	(2,943)	26,058	(25,099)	1,535	726	6,443
Garfield School District	N/A	—	—	—	—	—	—
Garland City	N/A	(445)	3,938	(3,793)	232	110	974
Genola Town	N/A	—	—	—	—	—	—
Grand Co Cemetery Mtce Dist	N/A	—	—	—	—	—	—
Grand County	N/A	(5,573)	49,356	(47,539)	2,907	1,375	12,203
Grand School District	N/A	—	—	—	—	—	—
Grand Water/Sewer Service	N/A	—	—	—	—	—	—
Granger-Hunter Imp Dist	N/A	—	—	—	—	—	—
Granite School District	N/A	—	—	—	—	—	—
Granite Uniserv	N/A	—	—	—	—	—	—
Grantsville City	N/A	(2,415)	21,383	(20,596)	1,260	596	5,287
Gunnison City	N/A	—	—	—	—	—	—
Gunnison Valley Hospital	N/A	—	—	—	—	—	—
Gunnison Valley Police Dept	N/A	(351)	3,105	(2,990)	183	86	768
Heber City	N/A	(3,295)	29,183	(28,109)	1,719	813	7,216
Heber Light & Power	N/A	—	—	—	—	—	—
Heber Valley Historic Railroad	N/A	—	—	—	—	—	—
Heber Valley SSD	N/A	—	—	—	—	—	—
Herriman City	N/A	—	—	—	—	—	—
High Desert Uniserv	N/A	—	—	—	—	—	—
High School Activities Assn	N/A	—	—	—	—	—	—
Highland City	N/A	—	—	—	—	—	—
Hinckley Town	N/A	—	—	—	—	—	—
Honeyville City	N/A	—	—	—	—	—	—
Hooper City	N/A	—	—	—	—	—	—
Hooper Water Improv Dist	N/A	—	—	—	—	—	—
Housing Auth of Carbon Co	N/A	—	—	—	—	—	—
Housing Auth of SL County	N/A	—	—	—	—	—	—
Housing Authority of SLC	N/A	—	—	—	—	—	—
Housing Authority Ogden City	N/A	—	—	—	—	—	—
Huntington City	N/A	—	—	—	—	—	—
Hurricane City	N/A	(1,760)	15,583	(15,010)	918	434	3,853
Hurricane Valley Fire SSD	N/A	(82,267)	374,890	(449,402)	2,714	51,742	116,576
Hyde Park City	N/A	—	—	—	—	—	—
Hyrum City	N/A	—	—	—	—	—	—
Impact Mitigation SSD	N/A	—	—	—	—	—	—
Intech Collegiate High School	N/A	—	—	—	—	—	—

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
							Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions		
—	—	—	—	—	—	—	—	—	—	—	
1,168	9,927	9	3,951	253	2,278	6,491	27,199	(59)	—	27,140	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
810	3,704	3	1,306	84	1,663	3,056	8,989	(51)	—	8,938	
1,430	2,057	1	283	18	376	678	1,946	68	—	2,014	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
2,090	153,334	32,423	123,843	22,475	7,376	186,117	71,776	(1,284)	(2,879)	67,613	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,146	1,146	—	—	—	—	—	—	74	—	74	
3,551	12,255	9	3,927	252	—	4,188	27,032	216	—	27,248	
—	1,316	1	593	38	597	1,229	4,085	(36)	—	4,049	
—	—	—	—	—	—	—	—	—	—	—	
5,307	21,792	17	7,438	477	1,735	9,667	51,199	205	—	51,404	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
2,270	9,413	7	3,222	206	—	3,435	22,181	137	—	22,318	
—	—	—	—	—	—	—	—	—	—	—	
—	1,037	1	468	30	623	1,122	3,221	(36)	—	3,185	
5,616	15,364	10	4,398	282	—	4,690	30,273	337	—	30,610	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
10,469	15,674	5	2,348	150	62	2,565	16,165	2,164	—	18,329	
95	171,127	36,397	139,583	25,265	21,788	223,033	84,467	(3,501)	(3,232)	77,734	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** *(Continued)*

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions
Iron County	N/A	\$ (9,513)	84,248	(81,147)	4,963	2,347	20,831
Iron School District	N/A	—	—	—	—	—	—
Itineris High School	N/A	—	—	—	—	—	—
Ivins City	N/A	(1,712)	15,161	(14,603)	893	422	3,749
Jordan River Commission	N/A	—	—	—	—	—	—
Jordan School District	N/A	—	—	—	—	—	—
Jordan Uniserv	N/A	—	—	—	—	—	—
Jordan Valley Water Conserv	N/A	—	—	—	—	—	—
Jordanelle SSD	N/A	—	—	—	—	—	—
Juab County	N/A	(4,724)	41,836	(40,296)	2,464	1,166	10,344
Juab School District	N/A	—	—	—	—	—	—
Kamas City	N/A	—	—	—	—	—	—
Kane County	N/A	(3,316)	29,363	(28,282)	1,730	818	7,260
Kane County Water Conserv Dist	N/A	—	—	—	—	—	—
Kane School District	N/A	—	—	—	—	—	—
Kaysville City	N/A	(34,566)	162,943	(192,696)	1,757	21,257	49,957
Kearns Improvement Dist	N/A	—	—	—	—	—	—
Laverkin City	N/A	(117)	1,038	(1,000)	61	29	257
Layton City	N/A	(611,751)	2,671,149	(3,258,620)	6,933	395,119	845,918
Lehi City	N/A	(352,784)	1,575,853	(1,904,477)	8,029	224,704	494,196
Lewiston City	N/A	—	—	—	—	—	—
Liberty Academy Charter	N/A	—	—	—	—	—	—
Lindon City	N/A	—	—	—	—	—	—
Logan City	N/A	(647,142)	3,356,133	(3,931,759)	5,129	577,826	1,004,792
Logan School District	N/A	—	—	—	—	—	—
Lone Peak PS District	N/A	(134,451)	711,781	(826,570)	3,097	117,496	211,275
Maeser Water Improve Dist	N/A	—	—	—	—	—	—
Magna Mosquito Abatement	N/A	—	—	—	—	—	—
Manti City	N/A	—	—	—	—	—	—
Mapleton City	N/A	(1,417)	12,547	(12,086)	739	350	3,102
Marriott-Slaterville City	N/A	—	—	—	—	—	—
Mayfield Town	N/A	—	—	—	—	—	—
Mendon City	N/A	—	—	—	—	—	—
Metro Water Dist SLC/Sandy	N/A	—	—	—	—	—	—
Midvale City	N/A	—	—	—	—	—	—
Midvalley Improvement District	N/A	—	—	—	—	—	—
Midway City	N/A	—	—	—	—	—	—
Military Installation Devel	N/A	—	—	—	—	—	—
Millard Co Care & Rehab Inc	N/A	—	—	—	—	—	—
Millard County	N/A	(7,265)	64,333	(61,966)	3,790	1,792	15,907
Millard School District	N/A	—	—	—	—	—	—
Millcreek City	N/A	—	—	—	—	—	—
Millville City	N/A	—	—	—	—	—	—
Minersville Town	N/A	—	—	—	—	—	—
Moab Valley Fire Protection	N/A	(29,633)	128,420	(157,156)	225	19,227	40,802
Monroe City	N/A	—	—	—	—	—	—
Monticello Academy	N/A	—	—	—	—	—	—
Morgan City Corporation	N/A	—	—	—	—	—	—
Morgan County	N/A	(17,120)	82,728	(96,885)	1,100	10,348	25,107
Morgan School District	N/A	—	—	—	—	—	—
Moroni City	N/A	—	—	—	—	—	—
Mount Pleasant City	N/A	—	—	—	—	—	—
Mountain Regional Water SSD	N/A	—	—	—	—	—	—
Mountainland Assn of Govt	N/A	—	—	—	—	—	—
Mountainland ATC	N/A	—	—	—	—	—	—
Mt Olympus Improvement Dist	N/A	—	—	—	—	—	—
Murray City	N/A	(740,368)	3,238,098	(3,947,546)	8,999	477,714	1,024,730
Murray School District	N/A	—	—	—	—	—	—
Myton City	N/A	—	—	—	—	—	—
N Tooele Co Fire Protection SD	N/A	(13,162)	60,768	(72,464)	524	8,208	18,793



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
							Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	
7,695	35,836	29	12,696	813	—	13,538	87,394	470	—	87,864
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
11,977	17,041	5	2,285	146	271	2,707	15,727	2,193	—	17,920
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
6,956	20,930	14	6,305	404	—	6,723	43,398	421	—	43,819
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
1,216	11,024	10	4,425	284	254	4,973	30,460	60	—	30,520
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
2,737	75,708	14,738	58,191	10,336	20,390	103,655	45,792	(3,747)	(1,308)	40,737
—	—	—	—	—	—	—	—	—	—	—
656	1,003	—	156	10	499	665	1,077	8	—	1,085
61,227	1,309,197	282,565	1,047,776	193,881	2,384	1,526,606	406,834	10,698	(25,097)	392,435
8,763	735,692	159,324	601,243	109,979	10,680	881,226	301,917	(407)	(14,149)	287,361
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
15,542	1,603,289	540,719	1,464,094	190,412	9,714	2,204,939	186,943	(1,550)	(27,290)	158,103
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
11,208	343,076	109,050	300,515	38,736	1,380	449,681	74,012	1,288	(5,503)	69,797
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
2,237	6,428	4	1,891	121	—	2,016	13,016	135	—	13,151
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3,707	25,196	22	9,695	621	—	10,338	66,736	222	—	66,958
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
1,331	61,585	13,787	50,837	9,442	2,046	76,112	17,863	(209)	(1,225)	16,429
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
363	36,918	7,093	28,651	5,015	11,400	52,159	26,520	(1,909)	(630)	23,981
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
43,297	1,554,740	341,423	1,267,614	234,365	22,000	1,865,402	502,526	1,156	(30,324)	473,358
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
4,501	32,026	5,743	22,266	4,002	746	32,757	15,010	570	(510)	15,070

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions
N Ut Environmental Rsrc Agcy	N/A	\$ —	—	—	—	—	—
Ne Counseling Center	N/A	—	—	—	—	—	—
Nebo Credit Union	N/A	—	—	—	—	—	—
Nebo School District	N/A	—	—	—	—	—	—
Nephi City	N/A	(1,442)	12,771	(12,301)	752	356	3,158
Nibley City Corporation	N/A	—	—	—	—	—	—
Noah Webster Academy Inc	N/A	—	—	—	—	—	—
North Davis Co Sewer Dist	N/A	—	—	—	—	—	—
North Davis Fire District	N/A	(170,393)	743,175	(907,044)	1,837	110,128	235,467
North Emery Water Users SSD	N/A	—	—	—	—	—	—
North Fork SSD	N/A	(13,777)	58,780	(72,404)	—	9,020	18,803
North Logan City	N/A	(31,681)	135,172	(166,500)	—	20,743	43,240
North Ogden City	N/A	(2,559)	22,660	(21,826)	1,335	631	5,603
North Park Police Agency	N/A	(1,329)	11,771	(11,338)	693	328	2,910
North Pointe Solid Waste	N/A	—	—	—	—	—	—
North Sanpete School Dist	N/A	—	—	—	—	—	—
North Summit School District	N/A	—	—	—	—	—	—
North View Fire District	N/A	(117,913)	522,808	(633,763)	2,240	75,451	164,478
Northeastern Counseling Ctr	N/A	—	—	—	—	—	—
NUAMES Charter School	N/A	—	—	—	—	—	—
Oakley City	N/A	—	—	—	—	—	—
Ogden City Corp	N/A	(1,390,573)	7,246,830	(8,472,072)	15,950	1,235,431	2,165,199
Ogden School District	N/A	—	—	—	—	—	—
Ogden Weber/NEA/UEA Uniserv	N/A	—	—	—	—	—	—
Ogden-Weber Tech College	N/A	—	—	—	—	—	—
Oquirrh Rec And Parks District	N/A	—	—	—	—	—	—
Orangeville City	N/A	—	—	—	—	—	—
Orderville Town	N/A	—	—	—	—	—	—
Panguitch City Corporation	N/A	—	—	—	—	—	—
Park City	N/A	(3,365)	29,796	(28,700)	1,755	830	7,367
Park City Fire Service	N/A	(1,198,724)	6,186,280	(7,262,604)	5,244	1,075,682	1,855,936
Park City School District	N/A	—	—	—	—	—	—
Parowan City	N/A	(807)	7,146	(6,883)	421	199	1,767
Payson City	N/A	(22,230)	109,692	(127,423)	1,687	13,236	33,008
Perry City	N/A	(455)	4,028	(3,880)	237	112	996
Piute County	N/A	—	—	—	—	—	—
Piute School District	N/A	—	—	—	—	—	—
Plain City	N/A	—	—	—	—	—	—
Pleasant Grove City	N/A	(109,332)	493,538	(593,902)	3,075	69,180	154,085
Pleasant View City	N/A	(521)	4,617	(4,448)	272	129	1,142
Price City	N/A	(17,493)	81,874	(97,100)	822	10,811	25,177
Price River Water Improve	N/A	—	—	—	—	—	—
Providence City	N/A	—	—	—	—	—	—
Provo City Corp	N/A	(1,120,937)	5,821,319	(6,815,718)	10,011	999,457	1,741,833
Provo Housing Authority	N/A	—	—	—	—	—	—
Provo River Water Users	N/A	—	—	—	—	—	—
Provo School District	N/A	—	—	—	—	—	—
Recreation & Habilitation Svcs	N/A	—	—	—	—	—	—
Redmond Town	N/A	—	—	—	—	—	—
Rich County	N/A	(520)	4,609	(4,439)	271	128	1,139
Rich School District	N/A	—	—	—	—	—	—
Richfield City	N/A	(1,109)	9,819	(9,458)	578	274	2,428
Richmond City	N/A	—	—	—	—	—	—
Riverdale City	N/A	(113,882)	497,645	(606,896)	1,335	73,520	157,544
Roosevelt City	N/A	(1,032)	9,136	(8,799)	538	255	2,259
Roosevelt City Housing	N/A	—	—	—	—	—	—
Roy City	N/A	(252,489)	1,127,126	(1,362,527)	5,665	160,885	353,568
Roy Water Conserv Dist	N/A	—	—	—	—	—	—
S Utah Valley Electric Svc Dst	N/A	—	—	—	—	—	—
S Utah Valley Solid Waste	N/A	—	—	—	—	—	—

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
							Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions		
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,097	5,363	4	1,925	123	171	2,223	13,248	55	—	13,303	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
19,093	366,525	78,789	291,911	54,045	733	425,478	111,742	3,623	(6,998)	108,367	
—	—	—	—	—	—	—	—	—	—	—	
707	28,530	6,504	23,711	4,437	8,962	43,614	6,555	(1,539)	(578)	4,438	
2,382	66,365	14,956	54,527	10,203	4,969	84,655	15,073	(660)	(1,329)	13,084	
4,157	11,726	8	3,415	219	—	3,642	23,506	254	—	23,760	
—	3,931	4	1,774	114	2,103	3,995	12,210	(124)	—	12,086	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
3,392	245,561	53,651	201,286	36,960	11,586	303,483	93,512	(1,823)	(4,765)	86,924	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
33,673	3,450,253	1,153,908	3,137,133	407,154	21,025	4,719,220	487,043	(2,226)	(58,236)	426,581	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
7,686	17,638	10	4,490	288	—	4,788	30,909	467	—	31,376	
11,818	2,948,680	1,008,493	2,719,683	354,438	12,133	4,094,747	272,551	(2,638)	(50,900)	219,013	
—	—	—	—	—	—	—	—	—	—	—	
857	3,244	2	1,077	69	368	1,516	7,413	32	—	7,445	
1,862	49,793	8,978	37,012	6,395	745	53,130	38,748	141	(797)	38,092	
1,200	2,545	1	607	39	607	1,254	4,178	36	—	4,214	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
24,911	251,251	48,849	185,897	33,818	3,896	272,460	103,369	4,551	(4,338)	103,582	
770	2,313	2	696	45	422	1,165	4,790	19	—	4,809	
1,546	38,356	7,519	29,500	5,261	1,137	43,417	22,054	68	(668)	21,454	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
5,409	2,756,710	934,775	2,533,974	329,363	5,094	3,803,206	343,310	(1,042)	(47,178)	295,090	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,234	2,772	2	695	44	—	741	4,781	75	—	4,856	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,013	4,293	3	1,480	95	670	2,248	10,186	17	—	10,203	
—	—	—	—	—	—	—	—	—	—	—	
12,122	244,521	52,562	195,019	36,073	2,209	285,863	76,475	2,120	(4,668)	73,927	
2,388	5,440	3	1,377	88	166	1,634	9,477	133	—	9,610	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
33,659	553,777	114,102	430,371	78,750	—	623,223	214,726	5,163	(10,133)	209,756	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions
Salem City	N/A	\$ (851)	7,537	(7,260)	444	210	1,864
Salina City	N/A	(385)	3,406	(3,281)	201	95	842
Salt Lake Arts Academy	N/A	—	—	—	—	—	—
Salt Lake City Corp	N/A	(5,757,520)	29,756,346	(34,911,603)	31,264	5,158,907	8,921,667
Salt Lake City Public Library	N/A	—	—	—	—	—	—
Salt Lake Co Serv Area 3	N/A	—	—	—	—	—	—
Salt Lake Community College	N/A	—	—	—	—	—	—
Salt Lake County	N/A	(80,249)	710,656	(684,502)	41,863	19,800	175,712
Salt Lake School District	N/A	—	—	—	—	—	—
San Juan County	N/A	(3,882)	34,373	(33,108)	2,025	958	8,499
San Juan Mental Health	N/A	—	—	—	—	—	—
San Juan School District	N/A	—	—	—	—	—	—
Sandy City	N/A	(1,087,843)	5,669,530	(6,627,920)	12,526	966,414	1,693,892
Sandy Suburban Imp Dist	N/A	—	—	—	—	—	—
Sanpete County	N/A	(2,426)	21,482	(20,691)	1,265	599	5,311
Santaquin City	N/A	(573)	5,077	(4,890)	299	141	1,255
Seven County Infrastructure	N/A	—	—	—	—	—	—
Sevier County	N/A	(3,386)	29,986	(28,882)	1,766	835	7,414
Sevier School District	N/A	—	—	—	—	—	—
Six-County Assoc of Govt	N/A	—	—	—	—	—	—
Slc Mosquito Abatement	N/A	—	—	—	—	—	—
Smithfield City Corp	N/A	(28,294)	132,111	(156,828)	1,295	17,513	40,664
Snow College	N/A	—	—	—	—	—	—
Snyder Basin Special Rec Dist	N/A	—	—	—	—	—	—
Snyderville Basin W R D	N/A	—	—	—	—	—	—
So Davis Metro Fire Agency	N/A	(692,820)	2,996,074	(3,669,722)	4,549	450,064	952,798
So Davis Recreation Center	N/A	—	—	—	—	—	—
So SI Valley Mosq Abate	N/A	—	—	—	—	—	—
So Utah Valley Animal Svcs SSD	N/A	—	—	—	—	—	—
So Utah Valley Power Systems	N/A	—	—	—	—	—	—
Soldier Hollow Charter School	N/A	—	—	—	—	—	—
Solid Waste SSD #1	N/A	—	—	—	—	—	—
Solitude Improvement Dist	N/A	—	—	—	—	—	—
South Davis Sewer Dist	N/A	—	—	—	—	—	—
South Davis Water Dist	N/A	—	—	—	—	—	—
South Ogden City	N/A	(137,178)	603,001	(733,580)	2,013	88,242	190,411
South Ogden Conserv Dist	N/A	—	—	—	—	—	—
South Sanpete School Dist	N/A	—	—	—	—	—	—
South Summit School District	N/A	—	—	—	—	—	—
South Valley Sewer District	N/A	—	—	—	—	—	—
South Valley Water Reclamation	N/A	—	—	—	—	—	—
South Weber City	N/A	—	—	—	—	—	—
Southeastern Utah AOG	N/A	—	—	—	—	—	—
Southeastern Utah Health	N/A	—	—	—	—	—	—
Southern Utah University	N/A	(377)	3,337	(3,214)	197	93	825
Southwest Applied Tech	N/A	—	—	—	—	—	—
Southwest Educ Development Ctr	N/A	—	—	—	—	—	—
Space Dynamics Lab / USU	N/A	—	—	—	—	—	—
Spanish Fork City	N/A	(4,007)	35,482	(34,176)	2,090	989	8,773
Spring City	N/A	—	—	—	—	—	—
Springville City	N/A	(38,642)	191,422	(222,027)	3,018	22,940	57,512
St George Housing Auth	N/A	—	—	—	—	—	—
State of Utah	N/A	(532,555)	3,616,717	(3,758,158)	152,838	229,159	968,495
Stockton Town	N/A	—	—	—	—	—	—
Success Academy	N/A	—	—	—	—	—	—
Summit Academy High School	N/A	—	—	—	—	—	—
Summit Academy Inc	N/A	—	—	—	—	—	—
Summit County	N/A	(6,725)	59,557	(57,366)	3,508	1,659	14,726
Sunset City	N/A	(1,245)	11,028	(10,622)	650	307	2,727
SW Behavioral Health Center	N/A	—	—	—	—	—	—

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources		Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
1,516	4,034	3	1,136	73	1,209	2,421	7,819	24	—	7,843
122	1,260	1	513	33	559	1,106	3,533	(27)	—	3,506
—	—	—	—	—	—	—	—	—	—	—
31,160	14,142,998	4,833,988	13,051,772	1,699,908	3,635	19,589,303	1,414,288	1,361	(243,976)	1,171,673
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
97,173	334,548	241	107,096	6,861	—	114,198	737,198	6,021	—	743,219
—	—	—	—	—	—	—	—	—	—	—
2,261	13,743	12	5,180	332	—	5,524	35,657	135	—	35,792
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
21,659	2,694,491	902,621	2,454,085	318,496	8,904	3,684,106	381,857	1,402	(45,554)	337,705
—	—	—	—	—	—	—	—	—	—	—
2,079	9,254	7	3,237	207	37	3,488	22,284	121	—	22,405
—	1,695	2	765	49	929	1,745	5,266	(55)	—	5,211
—	—	—	—	—	—	—	—	—	—	—
5,587	15,602	10	4,519	290	—	4,819	31,105	339	—	31,444
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
11,329	70,801	12,193	47,739	8,525	2,742	71,199	35,079	2,116	(1,082)	36,113
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
44,959	1,452,370	322,979	1,189,074	221,072	—	1,733,125	405,599	6,993	(28,689)	383,903
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3,880	284,546	62,950	234,610	43,268	153	340,981	98,879	463	(5,591)	93,751
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	1,115	1	503	32	559	1,095	3,462	(33)	—	3,429
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
1,091	12,943	12	5,347	343	1,836	7,538	36,807	(42)	—	36,765
—	—	—	—	—	—	—	—	—	—	—
9,528	92,998	15,528	64,271	11,077	1,729	92,605	68,783	397	(1,378)	67,802
—	—	—	—	—	—	—	—	—	—	—
243,087	1,593,579	113,982	803,354	102,211	28,651	1,048,198	2,805,352	11,074	(10,048)	2,806,378
1,222	1,222	—	—	—	633	633	—	33	—	33
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3,642	23,535	20	8,975	575	3,413	12,983	61,782	—	—	61,782
925	4,609	4	1,662	106	59	1,831	11,440	54	—	11,494
—	—	—	—	—	—	—	—	—	—	—

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** *(Continued)*

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions
Sw Mosquito Abatement/Control	N/A	\$ —	—	—	—	—	—
SW Ut Public Health Dept	N/A	—	—	—	—	—	—
Syracuse City Corp	N/A	(117,761)	521,729	(632,657)	2,192	75,390	164,193
Taylor West Weber Wtr Imp Dist	N/A	—	—	—	—	—	—
Taylorville-Bennion Imp	N/A	—	—	—	—	—	—
Timber Lakes Water SSD	N/A	—	—	—	—	—	—
Timpanogos SSD	N/A	—	—	—	—	—	—
Tintic School District	N/A	—	—	—	—	—	—
Tooele Applied Tech College	N/A	—	—	—	—	—	—
Tooele City	N/A	(8,223)	72,816	(70,136)	4,289	2,029	18,004
Tooele County	N/A	(5,760)	51,007	(49,130)	3,005	1,421	12,612
Tooele County Housing	N/A	—	—	—	—	—	—
Tooele School District	N/A	—	—	—	—	—	—
Tooele Valley Mosquito Abtmnt	N/A	—	—	—	—	—	—
Toquerville City	N/A	—	—	—	—	—	—
Torrey Town	N/A	—	—	—	—	—	—
Town of Alta	N/A	—	—	—	—	—	—
Town of Apple Valley	N/A	—	—	—	—	—	—
Town of Brian Head	N/A	(421)	3,725	(3,588)	219	104	921
Town of Daniel	N/A	—	—	—	—	—	—
Town of Garden City	N/A	—	—	—	—	—	—
Town of Goshen	N/A	—	—	—	—	—	—
Town of Levan	N/A	—	—	—	—	—	—
Town of Manila	N/A	—	—	—	—	—	—
Town of Mantua	N/A	—	—	—	—	—	—
Town of Paragonah	N/A	—	—	—	—	—	—
Town of Randolph	N/A	—	—	—	—	—	—
Town of Springdale	N/A	—	—	—	—	—	—
Trans-Jordan Cities	N/A	—	—	—	—	—	—
Tremonton City	N/A	(689)	6,100	(5,875)	359	170	1,508
Tridell-Lapoint Water	N/A	—	—	—	—	—	—
Tuacahn High School	N/A	—	—	—	—	—	—
Uintah Animal Control/Shelter	N/A	—	—	—	—	—	—
Uintah Basin Applied Tech Ctr	N/A	—	—	—	—	—	—
Uintah Basin Assn of Govt	N/A	—	—	—	—	—	—
Uintah Basin Asst Council	N/A	—	—	—	—	—	—
Uintah Co Care Center SSD	N/A	—	—	—	—	—	—
Uintah County	N/A	(11,229)	99,437	(95,778)	5,858	2,771	24,586
Uintah Fire Suppression SSD	N/A	(25,732)	109,790	(135,236)	—	16,848	35,121
Uintah Highlands Improv Dist	N/A	—	—	—	—	—	—
Uintah Mosquito Abate District	N/A	—	—	—	—	—	—
Uintah Recreation District	N/A	—	—	—	—	—	—
Uintah School District	N/A	—	—	—	—	—	—
Uintah Transportation SSD	N/A	—	—	—	—	—	—
Uintah Water Conserv Dist	N/A	—	—	—	—	—	—
Unified Fire Authority	N/A	(6,815,361)	35,057,436	(41,214,897)	13,753	6,136,014	10,532,033
Unified Police Department	N/A	(18,945)	167,772	(161,598)	9,883	4,674	41,482
University of Utah	N/A	(3,523)	31,201	(30,053)	1,838	869	7,715
University of Utah Hospital	N/A	—	—	—	—	—	—
Upper Country Water Dist	N/A	—	—	—	—	—	—
Ut Municipal Power Agency	N/A	—	—	—	—	—	—
Ut Public Employees Assn	N/A	—	—	—	—	—	—
UT School Board Risk Mgmt	N/A	—	—	—	—	—	—
Utah Assn of Counties	N/A	—	—	—	—	—	—
Utah Co Academy of Sciences	N/A	—	—	—	—	—	—
Utah Co Housing Authority	N/A	—	—	—	—	—	—
Utah Communications Authority	N/A	—	—	—	—	—	—
Utah Counties Indemnity Pool	N/A	—	—	—	—	—	—
Utah County	N/A	(17,953)	158,984	(153,133)	9,365	4,430	39,309
Utah Dairy Council	N/A	—	—	—	—	—	—

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources			Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
							Proportionate Share of Allocable Plan Gross Pension Expense	Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions		
—	—	—	—	—	—	—	—	—	—	—	—
7,030	248,805	53,623	201,060	36,933	846	292,462	92,624	431	(4,762)	88,293	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
3,769	28,091	25	10,973	703	652	12,353	75,535	195	—	75,730	—
4,229	21,267	17	7,687	492	3,147	11,343	52,912	46	—	52,958	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	1,244	1	561	36	605	1,203	3,864	(36)	—	3,828	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
686	686	—	—	—	—	—	—	42	—	42	—
783	2,820	2	919	59	229	1,209	6,327	36	—	6,363	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
18,156	51,371	34	14,985	960	—	15,979	103,151	1,100	—	104,251	—
1,550	53,519	12,148	44,288	8,287	463	65,186	12,243	226	(1,079)	11,390	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
47,703	16,729,503	5,759,833	15,491,808	2,021,684	14,050	23,287,375	1,271,370	4,525	(290,713)	985,182	—
10,898	66,937	57	25,283	1,620	—	26,960	174,038	659	—	174,697	—
4,755	15,177	11	4,702	301	—	5,014	32,367	281	—	32,648	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
3,623	56,727	54	23,959	1,535	2,530	28,078	164,922	74	—	164,996	—

**Aggregation of Funds with a Net Pension Asset**

(Employer's Collective Net Pension Asset for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Utah Education Association	N/A	\$ —	—	—	—	—	—
Utah Housing Corporation	N/A	—	—	—	—	—	—
Utah Lake Commission	N/A	—	—	—	—	—	—
Utah League Cities/Towns	N/A	—	—	—	—	—	—
Utah Local Governments Trust	N/A	—	—	—	—	—	—
Utah Retirement Systems	N/A	—	—	—	—	—	—
Utah Safety Council	N/A	—	—	—	—	—	—
Utah School Boards Association	N/A	—	—	—	—	—	—
Utah School Employees Assn	N/A	—	—	—	—	—	—
Utah State Fair Corp	N/A	—	—	—	—	—	—
Utah State University	N/A	(370)	3,276	(3,156)	193	91	810
Utah Valley Dispatch SSD	N/A	—	—	—	—	—	—
Utah Valley University	N/A	—	—	—	—	—	—
Utah Zoological Society	N/A	—	—	—	—	—	—
UTOPIA	N/A	—	—	—	—	—	—
Valley Emergency Comm Ctr	N/A	—	—	—	—	—	—
Vernal City	N/A	(1,255)	11,112	(10,703)	655	310	2,748
Vineyard Town	N/A	—	—	—	—	—	—
Wasatch County	N/A	(3,475)	30,778	(29,645)	1,813	858	7,610
Wasatch County Fire District	N/A	(181,404)	786,025	(961,964)	1,368	117,704	249,753
Wasatch Front Regional Council	N/A	—	—	—	—	—	—
Wasatch Front Waste/Recycling	N/A	—	—	—	—	—	—
Wasatch Integrated Waste Mgmt	N/A	—	—	—	—	—	—
Wasatch Mental Health SSD	N/A	—	—	—	—	—	—
Wasatch School District	N/A	—	—	—	—	—	—
Wasatch Uniserv	N/A	—	—	—	—	—	—
Washington City	N/A	(41,408)	200,007	(234,269)	2,652	25,037	60,709
Washington Co Solid Waste	N/A	—	—	—	—	—	—
Washington Co Wat Con Dist	N/A	—	—	—	—	—	—
Washington County	N/A	(14,132)	125,150	(120,544)	7,372	3,487	30,944
Washington School District	N/A	—	—	—	—	—	—
Waste Management Serv Dist #5	N/A	—	—	—	—	—	—
Wayne County	N/A	(301)	2,669	(2,571)	157	74	660
Wayne School District	N/A	—	—	—	—	—	—
Weber Area Dispatch 911	N/A	—	—	—	—	—	—
Weber Basin Water Conserv	N/A	—	—	—	—	—	—
Weber Co Mosquito Abate	N/A	—	—	—	—	—	—
Weber County Corp	N/A	(23,835)	211,074	(203,306)	12,434	5,881	52,189
Weber County School District	N/A	—	—	—	—	—	—
Weber Fire District	N/A	(721,602)	3,738,567	(4,381,656)	5,199	644,966	1,119,758
Weber Human Services	N/A	—	—	—	—	—	—
Weber River Water Users	N/A	—	—	—	—	—	—
Weber State University	N/A	—	—	—	—	—	—
Wellington City	N/A	(413)	3,657	(3,522)	215	102	904
Wellsville City Corp	N/A	—	—	—	—	—	—
West Bountiful City	N/A	(2,327)	20,608	(19,850)	1,214	574	5,095
West Kane County SSD #1	N/A	—	—	—	—	—	—
West Point City	N/A	—	—	—	—	—	—
West Valley City	N/A	(1,539,063)	8,044,447	(9,392,652)	20,981	1,363,169	2,400,534
White City Water Imp Dist	N/A	—	—	—	—	—	—
Willard City Corp	N/A	—	—	—	—	—	—
Woodland Peaks Uniserv	N/A	—	—	—	—	—	—
Woods Cross City	N/A	(2,878)	25,485	(24,547)	1,501	710	6,301
Workers Compensation Fund	N/A	—	—	—	—	—	—
<b>Grand Total</b>		<b>\$ (29,836,130)</b>	<b>151,966,592</b>	<b>(178,140,619)</b>	<b>603,603</b>	<b>24,629,046</b>	<b>45,669,065</b>
<b>No Proportionate Share for 2017</b>							
Sunnyside City	N/A	\$ —	—	—	—	—	—
Valley Mental Health	N/A	—	—	—	—	—	—
Summit Mosquito Abatement Dist	N/A	—	—	—	—	—	—
Leeds Area Special Service District	N/A	—	—	—	—	—	—
Canyonlands Health Care	N/A	—	—	—	—	—	—
<b>Grand Total</b>		<b>\$ (29,836,130)</b>	<b>151,966,592</b>	<b>(178,140,619)</b>	<b>603,603</b>	<b>24,629,046</b>	<b>45,669,065</b>

Columns may not add to total due to rounding.





**Aggregation of Funds with a Net Pension Liability**  
(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
4 Corners Comm Behavior Health	N/A	\$ 1,047,344	2,912,770	(497,916)	23,496	226,356	384,931
Active Re Entry Inc	N/A	254,540	557,575	1,396	7	41,784	64,475
Alpine City	N/A	352,531	970,722	(160,224)	7,892	76,086	128,511
Alpine School District	N/A	181,124,718	402,902,416	(3,940,714)	18,423	30,445,243	46,208,472
Alpine Uniserv	N/A	66,533	145,271	725	—	10,914	16,799
American Fork City	N/A	3,632,692	9,614,040	(1,285,778)	46,635	728,163	1,327,079
American Leadership Academy	N/A	3,393,051	7,554,896	(74,778)	572	558,890	873,414
Ames Charter School	N/A	1,355,108	2,963,708	11,000	19	222,373	342,717
Annabella Town	N/A	37,811	102,260	(15,774)	843	8,141	13,582
Ash Creek SS District	N/A	402,034	1,090,198	(169,930)	8,973	86,586	144,725
Ashley Valley Improv Dist	N/A	357,535	977,089	(156,865)	7,992	77,085	129,528
Ashley Valley Sewer Mgmt Board	N/A	178,432	482,563	(74,438)	3,980	38,415	64,092
Ballard Town	N/A	78,963	215,292	(34,265)	1,764	17,019	28,552
Bear Lake SSD	N/A	54,449	147,255	(22,715)	1,215	11,722	19,558
Bear River Assn of Govts	N/A	595,711	1,634,756	(266,507)	13,328	128,509	216,552
Bear River Health Dept	N/A	1,924,214	5,307,639	(881,510)	43,095	415,394	702,444
Bear River Mental Health	N/A	1,499,106	4,142,306	(692,277)	33,586	323,701	548,046
Bear River Water District	N/A	81,022	226,222	(39,196)	1,819	17,520	29,876
Beaver City	N/A	420,759	1,162,043	(193,855)	9,426	90,848	153,758
Beaver County	N/A	3,174,873	8,203,880	(927,374)	18,224	600,562	1,167,663
Beaver Housing Authority	N/A	47,414	128,228	(19,780)	1,058	10,208	17,031
Beaver School District	N/A	4,678,662	10,293,546	(8,583)	305	768,720	1,190,226
Beaver Valley Hospital	N/A	1,913,983	5,246,713	(851,974)	42,812	412,830	695,152
Benchland Water Company	N/A	176,977	481,892	(76,310)	3,953	38,137	63,924
Bicknell Town	N/A	14,728	39,831	(6,144)	329	3,171	5,290
Big Cottonwood Canyon Imp Dist	N/A	30,211	81,704	(12,603)	674	6,504	10,852
Big Water Municipal Corp	N/A	11,538	29,071	(2,672)	—	2,076	4,249
Blanding City	N/A	573,511	1,524,110	(208,976)	7,960	115,917	209,420
Bluffdale City	N/A	630,126	1,766,844	(310,508)	14,161	136,341	233,157
Bona Vista Water Improve	N/A	217,816	592,283	(93,306)	4,864	46,929	78,587
Bountiful Irrigation District	N/A	210,840	575,088	(91,665)	4,711	45,445	76,263
Box Elder Co Mosq Dist	N/A	106,012	290,031	(46,753)	2,371	22,860	38,440
Box Elder County	N/A	5,052,949	13,386,592	(1,776,078)	43,918	1,034,643	1,832,294
Box Elder School District	N/A	31,599,124	69,886,447	(360,430)	2,446	5,257,970	8,043,899
Bridgerland Applied Tech Ctr	N/A	3,924,042	8,610,677	10,069	167	644,380	995,675
Brigham City	N/A	3,258,547	8,723,810	(1,236,102)	41,336	674,926	1,184,740
Cache County	N/A	7,284,198	18,928,796	(2,241,552)	58,087	1,403,459	2,669,241
Cache Metro Planning Org	N/A	38,995	105,460	(16,268)	870	8,395	14,007
Cache School District	N/A	45,226,514	100,943,050	(1,292,615)	3,757	7,733,757	11,500,807
Canyons School District	N/A	94,115,625	208,533,942	(1,294,279)	11,865	15,486,420	24,110,036
Carbon County	N/A	4,077,660	10,947,341	(1,562,997)	44,761	853,701	1,479,581
Carbon County Rec/Trans SSD	N/A	20,926	56,592	(8,730)	467	4,505	7,516
Carbon School District	N/A	10,045,568	22,253,351	(138,805)	1,059	1,663,878	2,566,260
Castle Dale City	N/A	46,180	126,799	(20,714)	1,033	9,963	16,795
Castle Valley SSD	N/A	259,576	840,901	(224,932)	5,055	90,726	81,683
Cedar City	N/A	3,429,936	9,063,340	(1,196,349)	40,619	682,227	1,255,968
Cedar City Housing Auth	N/A	75,474	209,185	(35,337)	1,692	16,304	27,661
Cedar Mtn Fire Protection Dist	N/A	—	—	—	—	—	—
Centerfield City	N/A	41,919	112,470	(16,312)	694	8,652	15,277
Centerville City	N/A	1,882,783	5,227,237	(868,117)	18,032	448,348	660,254
Central Davis Sewer Dist	N/A	433,441	1,183,393	(189,307)	9,687	93,438	156,905
Central Iron Co Water Conserv	N/A	64,632	184,815	(34,577)	1,458	14,023	24,305
Central UT Public Health	N/A	653,223	1,797,646	(296,085)	14,623	140,971	238,010
Central Utah Counseling Center	N/A	1,257,124	3,442,510	(556,860)	28,113	271,113	456,193
Central Utah Water Dist	N/A	3,204,983	8,806,790	(1,442,684)	71,723	691,517	1,166,336
Central Weber Sewer Dist	N/A	708,322	1,976,613	(341,831)	15,902	153,157	261,059
City of Aurora	N/A	33,676	91,077	(14,049)	751	7,250	12,096
City of Bountiful	N/A	9,903,273	19,814,474	1,696,647	525,152	1,201,652	2,379,079
City of Cedar Hills	N/A	455,736	1,246,431	(200,690)	10,189	98,268	165,211
City of Draper	N/A	4,386,021	11,671,272	(1,606,652)	59,325	884,273	1,605,331

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources					Deferred Inflows of Resources			Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
								Proportionate Share of Nonemployer Contributions	Proportionate Share of Employer Contributions		
44,663	679,446	71,841	599,957	25,160	29,037	725,995	453,773	(4,504)	—	449,269	
4,797	111,063	14,909	105,634	1,952	5,571	128,066	64,275	530	—	64,805	
25,592	238,081	23,246	200,992	8,385	18,915	251,538	142,968	6,600	—	149,568	
5,535,639	82,207,777	10,909,809	77,061,713	1,420,836	—	89,392,358	49,049,660	2,047,687	—	51,097,347	
175	27,888	3,854	27,560	506	32,996	64,916	16,346	(19,336)	—	(2,990)	
141,618	2,243,495	361,906	1,901,912	70,691	81,426	2,415,935	1,417,481	18,365	—	1,435,846	
174,814	1,607,690	209,958	1,421,380	27,219	71,715	1,730,272	974,708	28,718	—	1,003,426	
72,885	637,994	78,947	561,858	10,348	5,478	656,631	337,670	24,038	—	361,708	
1,757	24,323	2,314	21,376	883	390	24,963	13,464	451	—	13,915	
44,002	284,286	24,884	227,564	9,418	—	261,866	146,089	15,120	—	161,209	
7,609	222,214	22,859	203,118	8,440	27,382	261,799	137,531	(5,741)	—	131,790	
332	106,819	10,920	100,871	4,169	1,919	117,879	63,539	(603)	—	62,936	
1,500	48,835	5,001	44,810	1,859	3,986	55,656	29,872	(617)	—	29,255	
3,849	36,344	3,332	30,781	1,272	1,049	36,434	19,389	1,133	—	20,522	
8,786	367,175	38,741	339,091	14,121	9,128	401,081	235,967	193	—	236,160	
41,244	1,202,177	127,763	1,097,966	45,848	24,560	1,296,137	789,585	9,415	—	799,000	
10,583	915,916	100,237	856,109	35,781	108,586	1,100,713	622,456	(51,761)	—	570,695	
3,982	53,197	5,644	46,500	1,954	584	54,682	36,002	1,515	—	37,517	
3,152	257,184	28,077	240,229	10,038	61,827	340,171	174,111	(27,475)	—	146,636	
91,177	1,877,626	401,408	1,557,267	52,006	56,926	2,067,607	1,257,921	36,202	—	1,294,123	
5,023	33,320	2,902	26,804	1,108	—	30,814	16,884	1,895	—	18,779	
25,669	1,984,920	278,163	1,946,498	36,322	108,886	2,369,869	1,224,645	(27,891)	—	1,196,754	
132,134	1,282,928	123,928	1,088,920	45,323	22,810	1,280,981	752,455	33,876	—	786,331	
21,866	127,880	11,146	100,369	4,163	—	115,678	66,307	8,764	—	75,071	
1,022	9,812	901	8,326	344	842	10,413	5,244	213	—	5,457	
2,086	20,116	1,849	17,079	706	794	20,428	10,758	329	—	11,087	
1,533	7,858	1,692	5,336	159	433	7,620	4,464	1,241	—	5,705	
27,833	361,130	54,987	303,142	11,428	24,536	394,093	224,330	(775)	—	223,555	
299,068	682,727	44,613	362,371	15,261	—	422,245	287,510	134,972	—	422,482	
7,238	137,618	13,639	123,450	5,117	20,141	162,347	80,793	(3,200)	—	77,593	
1,584	128,003	13,374	119,670	4,968	13,796	151,808	79,991	(5,800)	—	74,191	
3,644	67,315	6,808	60,257	2,505	—	69,570	41,099	1,303	—	42,402	
110,640	3,021,495	573,053	2,668,920	88,385	167,526	3,497,884	1,966,417	(36,020)	—	1,930,397	
838,884	14,143,199	1,886,405	13,306,359	246,103	250,898	15,689,765	8,367,401	137,121	—	8,504,522	
111,734	1,751,956	231,226	1,630,093	30,243	144,409	2,035,971	1,005,316	20,774	—	1,026,090	
115,328	2,016,330	325,152	1,754,980	63,039	39,220	2,182,391	1,287,015	27,300	—	1,314,315	
193,523	4,324,310	855,632	3,645,294	126,085	163,214	4,790,225	2,834,461	32,434	—	2,868,895	
1,734	25,006	2,386	22,045	911	—	25,342	13,886	743	—	14,629	
2,003,222	21,241,543	2,701,451	19,530,537	352,288	—	22,584,276	12,040,156	792,097	—	12,832,253	
756,320	40,364,641	5,730,150	39,315,033	744,998	722,085	46,512,266	26,051,313	(97,539)	—	25,953,774	
84,281	2,462,324	431,828	2,209,486	75,710	150,724	2,867,748	1,628,423	(13,679)	—	1,614,744	
817	13,305	1,281	11,830	489	783	14,383	7,451	(93)	—	7,358	
32,732	4,263,929	606,499	4,217,703	78,967	332,120	5,235,289	2,729,523	(173,673)	—	2,555,850	
625	28,416	3,010	26,294	1,095	595	30,994	18,365	(47)	—	18,318	
2,384	179,848	14,188	223,578	5,319	1,578	244,663	94,696	21,487	—	116,183	
83,045	2,061,859	356,264	1,781,326	65,393	71,400	2,274,383	1,357,598	(11,211)	—	1,346,387	
4,558	50,215	5,108	43,164	1,807	1,345	51,424	31,979	1,178	—	33,157	
—	—	—	—	—	—	—	—	—	—	—	
1,665	26,288	3,605	22,686	884	44,955	72,130	16,386	(17,618)	—	(1,232)	
69,836	1,196,470	197,746	1,134,967	32,789	75,467	1,440,969	714,600	46,527	—	761,127	
1,245	261,275	27,604	246,129	10,223	28,302	312,258	165,589	(12,711)	—	152,878	
6,847	46,633	4,923	37,520	1,596	—	44,039	33,106	2,601	—	35,707	
21,721	415,325	42,971	372,324	15,528	32,399	463,222	263,850	(1,248)	—	262,602	
66,671	822,090	81,051	714,863	29,738	—	825,652	490,609	26,163	—	516,772	
123,872	2,053,448	209,556	1,825,479	76,076	78,739	2,189,850	1,281,258	(4,331)	—	1,276,927	
39,061	469,179	49,233	406,409	17,073	22,298	495,013	313,633	(303)	—	313,330	
1,091	21,188	2,061	19,038	787	329	22,215	11,992	322	—	12,314	
65,933	4,171,816	566,699	3,121,914	119,362	212,368	4,020,343	2,573,238	(114,473)	—	2,458,765	
7,132	280,800	29,232	259,001	10,767	28,784	327,784	176,288	(6,498)	—	169,790	
135,887	2,684,816	429,406	2,313,766	86,955	162,764	2,992,891	1,746,660	(22,280)	—	1,724,380	

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
City of Duchesne	N/A	\$ 115,880	318,488	(52,214)	2,593	25,003	42,178
City of Enterprise	N/A	160,109	433,010	(66,795)	3,571	34,470	57,510
City of Green River	N/A	152,693	421,702	(70,347)	3,421	32,968	55,798
City of Harrisville	N/A	519,826	1,364,306	(173,482)	5,765	102,726	189,835
City of Helper	N/A	308,907	806,111	(97,870)	2,587	59,733	113,409
City of Holladay	N/A	448,238	1,227,431	(198,533)	10,024	96,667	162,657
City of Kanab	N/A	477,996	1,269,445	(170,263)	5,034	94,177	176,571
City of Milford	N/A	113,561	315,728	(53,915)	2,548	24,543	41,727
City of Moab	N/A	1,757,480	4,735,015	(694,394)	26,935	359,613	645,537
City of Monticello	N/A	284,304	765,021	(111,145)	4,130	57,821	104,623
City of Naples	N/A	335,382	981,923	(197,061)	3,010	91,721	114,089
City of North Salt Lake	N/A	2,137,310	5,623,535	(724,680)	24,068	423,033	781,605
City of Orem	N/A	9,010,318	25,670,367	(4,749,326)	2,018,169	2,140,181	3,507,919
City of Riverton	N/A	2,222,484	6,118,228	(1,008,926)	49,755	479,652	810,009
City of Santa Clara	N/A	624,404	1,713,901	(279,651)	13,970	134,703	227,026
City of Saratoga Springs	N/A	2,035,781	5,519,347	(834,399)	416,674	399,998	820,146
City of South Jordan	N/A	6,839,118	18,249,920	(2,555,909)	97,787	1,390,779	2,499,034
City of South Salt Lake	N/A	4,792,331	12,590,099	(1,593,811)	45,865	936,086	1,761,147
City of St George	N/A	15,085,728	40,488,741	(5,825,269)	214,316	3,104,786	5,510,226
City of Taylorsville	N/A	741,926	2,040,153	(335,075)	16,606	160,096	270,155
City of Uintah	N/A	42,989	116,263	(17,934)	959	9,255	15,442
City of Washington Terrace	N/A	401,078	1,094,369	(174,667)	8,963	86,454	145,117
City of Wendover	N/A	114,892	330,389	(62,875)	2,595	24,948	43,408
City of West Haven	N/A	279,373	771,265	(128,486)	6,258	60,317	102,058
City of West Jordan	N/A	10,113,421	27,150,039	(3,917,767)	2,527,497	1,961,657	4,133,125
City of Woodland Hills	N/A	74,802	206,085	(34,081)	1,675	16,146	27,280
Clearfield City	N/A	2,593,533	6,886,633	(931,091)	31,296	517,024	952,633
Cleveland Town	N/A	5,552	17,564	(4,254)	129	1,223	2,271
Clinton City	N/A	1,388,730	3,819,164	(612,206)	16,179	317,565	492,951
Coalville City	N/A	117,087	325,506	(55,569)	2,627	25,304	43,020
Color Country Uniserv	N/A	64,968	143,419	(488)	6	10,682	16,583
Corinne City	N/A	50,845	344,736	(195,677)	—	64,209	—
Cottonwood Heights City	N/A	2,028,250	5,391,787	(734,073)	647,723	373,254	860,270
Cottonwood Heights P&R Srv	N/A	406,528	1,117,593	(183,386)	9,099	87,719	147,997
Cottonwood Imp District	N/A	916,685	2,497,953	(396,714)	20,480	197,560	331,315
Council On Aging Golden Age SS	N/A	117,633	322,247	(52,198)	2,631	25,370	42,701
Daggett County	N/A	467,524	1,233,783	(162,251)	5,732	93,275	170,760
Daggett School District	N/A	1,239,970	2,736,461	(8,684)	114	203,862	316,399
Davis & Weber County Canal Co	N/A	282,605	1,919,720	(1,090,113)	27	356,191	978
Davis Applied Tech College	N/A	3,056,961	6,734,243	(12,179)	233	502,403	778,656
Davis Behavioral Health Inc	N/A	3,597,034	9,957,144	(1,674,670)	80,619	776,899	1,316,956
Davis Co Housing Authority	N/A	249,037	998,544	(376,745)	3,845	134,771	62,715
Davis Co Mosquito Abate	N/A	99,385	268,782	(41,461)	2,217	21,397	35,698
Davis County	N/A	21,101,350	55,698,060	(7,334,746)	259,897	4,211,812	7,706,864
Davis School District	N/A	187,899,879	418,108,982	(4,273,840)	16,068	31,794,560	47,827,047
Davis Uniserv	N/A	46,951	102,514	512	—	7,702	11,855
Ddi Vantage	N/A	1,613,012	11,005,546	(6,255,556)	519	2,023,803	18,641
Delta City	N/A	259,026	714,092	(118,367)	5,801	55,914	94,517
Dixie Applied Tech College	N/A	311,446	680,019	3,394	—	51,091	78,638
Dixie State University	N/A	4,226,666	9,407,334	(97,336)	4,146	722,337	1,057,193
Duchesne Co Mosquito Dist	N/A	25,505	172,927	(98,156)	—	32,208	—
Duchesne Co Water Conserv Dist	N/A	86,008	232,606	(35,881)	1,919	18,517	30,894
Duchesne County	N/A	3,101,621	9,547,963	(2,221,547)	31,874	957,954	1,021,530
Duchesne School District	N/A	13,173,938	29,814,638	(713,639)	1,685	2,318,295	3,361,338
E Duchesne Cul Water Imp Dist	N/A	29,507	79,800	(12,310)	658	6,353	10,599
Eagle Mountain City	N/A	1,110,837	3,086,649	(526,048)	24,916	240,049	407,973
East Carbon City	N/A	199,317	530,294	(72,862)	2,656	40,124	72,994
East Hollywood High School	N/A	720,309	1,609,777	(20,417)	145	118,739	186,095
Educators Mutual Insurance	N/A	5,158,689	11,811,349	(408,298)	119	972,547	1,294,127
Elk Ridge City	N/A	42,916	132,805	(30,624)	985	9,421	17,236

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources					Deferred Inflows of Resources			Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
								Proportionate Share of Contributions	Proportionate Share of Contributions			
5,487	75,261	7,583	66,009	2,751	10,708	87,051	46,393	(1,067)	—	45,326		
4,792	100,343	9,798	90,513	3,741	3,972	108,024	57,014	(253)	—	56,761		
24,383	116,570	10,189	87,179	3,643	5,771	106,782	63,181	4,635	—	67,816		
37,828	336,154	54,858	267,614	9,695	18,965	351,132	200,092	9,797	—	209,889		
1,676	177,405	36,060	155,374	5,418	24,093	220,945	122,450	(15,089)	—	107,361		
20,871	290,219	28,897	254,888	10,603	46,105	340,493	174,905	(6,703)	—	168,202		
10,370	286,152	53,257	246,417	8,936	11,982	320,592	201,904	141	—	202,045		
10,009	78,827	7,781	65,042	2,727	—	75,550	49,104	3,746	—	52,850		
288,349	1,320,434	163,290	944,655	36,459	86,457	1,230,861	728,375	47,603	—	775,978		
36,756	203,330	27,383	151,852	5,807	9,806	194,848	119,095	14,001	—	133,096		
70,361	279,181	34,843	228,631	5,638	70,249	339,361	131,628	(35,310)	—	96,318		
54,278	1,282,984	225,317	1,103,008	40,104	35,114	1,403,543	833,517	16,117	—	849,634		
87,860	7,754,129	332,264	5,596,018	282,502	240,251	6,451,035	3,111,368	26,979	—	3,138,347		
48,097	1,387,513	146,395	1,266,970	52,851	153,506	1,619,722	899,752	(31,994)	—	867,758		
34,260	409,959	40,646	355,462	14,805	24,500	435,413	247,741	(952)	—	246,789		
102,546	1,739,364	90,356	1,083,681	64,481	11,284	1,249,802	767,219	32,143	—	799,362		
2,108,870	6,096,470	648,098	3,639,584	137,757	39,520	4,464,959	2,708,784	893,474	—	3,602,258		
44,649	2,787,747	541,266	2,440,244	86,824	279,720	3,348,054	1,929,261	(134,436)	—	1,794,825		
449,307	9,278,635	1,439,415	8,115,710	303,524	135,729	9,994,378	6,070,085	133,358	—	6,203,443		
3,815	450,672	48,651	422,725	17,623	117,264	606,263	298,066	(49,361)	—	248,705		
8,894	34,550	2,631	24,303	1,004	2,766	30,704	15,308	2,063	—	17,371		
11,161	251,695	25,478	227,686	9,454	2,059	264,677	152,555	3,303	—	155,858		
30,943	101,894	8,929	66,879	2,854	4,444	83,106	60,718	7,938	—	68,656		
20,486	189,119	18,613	159,476	6,662	6,278	191,029	115,302	3,088	—	118,390		
502,888	9,125,167	367,676	5,319,798	337,330	58,327	6,083,131	3,472,685	169,062	—	3,641,747		
32,872	77,973	4,943	42,659	1,780	153	49,535	30,447	11,067	—	41,514		
61,462	1,562,415	270,140	1,352,247	49,925	113,580	1,785,892	1,055,003	(60,929)	—	994,074		
585	4,208	586	3,389	151	3,105	7,231	4,544	(1,496)	—	3,048		
34,812	861,507	138,242	811,815	25,725	13,672	989,454	534,125	(39,886)	—	494,239		
4,989	75,940	8,020	67,060	2,812	509	78,401	50,603	1,245	—	51,848		
40,357	67,628	3,907	27,082	510	3,584	35,083	17,471	13,301	—	30,772		
—	64,209	—	145,808	—	—	145,808	16,209	25,542	—	41,751		
183,497	2,064,744	57,395	1,026,198	73,857	13,724	1,171,174	674,399	67,518	—	741,917		
30,814	275,629	26,630	231,599	9,654	2,587	270,470	163,039	14,642	—	177,681		
13,796	563,151	57,915	520,067	21,579	51,426	650,987	345,366	(12,630)	—	332,736		
450	71,152	7,595	66,904	2,784	26,197	103,480	46,027	(9,997)	—	36,030		
992	270,759	47,477	243,410	8,971	265,850	565,708	181,476	(126,845)	—	54,631		
78,590	598,965	74,490	516,785	9,708	21,384	622,367	332,656	14,440	—	347,096		
1,385	358,581	681	809,392	74	927	811,074	96,759	61,657	—	158,416		
157,514	1,438,806	182,536	1,272,744	23,816	—	1,479,096	808,460	72,139	—	880,599		
190,390	2,364,864	242,240	2,055,946	86,009	124,927	2,509,122	1,511,553	13,373	—	1,524,926		
85,268	286,599	11,441	319,874	4,094	10,655	346,064	95,555	55,011	—	150,566		
2,116	61,428	6,082	56,184	2,322	5,152	69,740	35,390	(2,332)	—	33,058		
304,056	12,482,629	2,138,452	10,991,891	405,455	1,060,446	14,596,244	8,191,350	(415,079)	—	7,776,271		
4,706,776	84,344,451	11,241,653	80,373,896	1,465,739	799,609	93,880,897	50,134,087	1,066,238	—	51,200,325		
191	19,748	2,720	19,448	357	29,000	51,525	11,535	(15,897)	—	(4,362)		
14,882	2,057,845	12,972	4,606,018	1,402	—	4,620,392	641,241	680,380	—	1,321,621		
10,525	166,757	17,161	147,763	6,168	20,767	191,859	105,896	(7,596)	—	98,300		
77,505	207,234	18,041	129,010	2,367	—	149,418	76,514	32,316	—	108,830		
9,312	1,792,988	240,767	1,821,887	31,141	404,818	2,498,613	1,095,177	(147,708)	—	947,469		
—	32,208	—	73,140	—	—	73,140	8,131	11,231	—	19,362		
15,948	67,278	5,264	48,622	2,010	2,537	58,433	30,627	4,486	—	35,113		
772,073	2,783,431	295,764	2,364,516	52,779	141,103	2,854,162	1,234,023	325,728	—	1,559,751		
117,955	5,799,273	799,399	5,851,357	103,915	199,359	6,954,030	3,653,376	(19,293)	—	3,634,083		
1,281	18,891	1,806	16,681	689	607	19,783	10,507	269	—	10,776		
10,554	683,492	75,936	636,063	26,662	182,845	921,506	478,561	(94,817)	—	383,744		
5,560	121,334	19,689	104,986	3,937	46,077	174,689	79,669	(21,027)	—	58,642		
78,593	383,572	45,118	302,389	5,836	8,028	361,371	212,657	21,815	—	234,472		
52,141	2,318,934	298,885	2,430,772	39,149	339,740	3,108,546	1,297,361	(147,905)	—	1,149,456		
2,110	29,752	4,242	25,903	1,147	25,439	56,731	32,140	(12,615)	—	19,525		

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Emery Co Care & Rehab Ctr	N/A	\$ 220,406	1,502,826	(854,083)	63	276,726	2,279
Emery County	N/A	2,888,330	7,721,697	(1,078,357)	27,927	608,450	1,041,589
Emery County Recreation SSD	N/A	7,580	23,978	(5,805)	175	1,669	3,101
Emery School District	N/A	8,910,745	19,812,458	(195,029)	522	1,518,049	2,260,015
Emery Town	N/A	16,428	111,386	(63,224)	—	20,746	—
Emery Water Conserv Dist	N/A	118,674	333,064	(58,712)	2,667	25,681	43,944
Enoch City	N/A	331,510	886,751	(124,631)	4,347	66,666	122,029
Ephraim City	N/A	688,131	1,841,071	(261,685)	10,329	140,367	251,613
Escalante City	N/A	83,544	225,942	(34,853)	1,864	17,986	30,009
Eureka City Corporation	N/A	49,369	133,518	(20,596)	1,101	10,629	17,733
Fairview City	N/A	136,925	372,758	(58,914)	3,025	29,454	49,493
Farmington City	N/A	1,854,418	4,948,352	(690,065)	25,275	374,278	680,004
Farr West City	N/A	172,937	468,417	(72,689)	3,859	37,240	62,196
Fast Forward Charter HS	N/A	698,467	1,557,449	(17,115)	126	115,084	180,051
Ferron City	N/A	50,479	141,040	(24,495)	1,134	10,916	18,623
Fillmore City	N/A	176,178	483,783	(79,054)	3,942	38,010	64,078
Five-County Assn of Govts	N/A	720,687	2,125,401	(444,948)	15,472	188,006	253,303
Fountain Green City	N/A	79,572	208,326	(26,298)	946	15,816	28,918
Fox Hollow Golf Course	N/A	61,490	166,298	(25,653)	1,372	13,238	22,087
Francis City	N/A	59,530	162,325	(25,843)	1,330	12,831	21,528
Fruit Heights City	N/A	180,183	494,549	(80,676)	4,031	38,871	65,509
Garden City Fire District	N/A	—	—	—	—	—	—
Garfield County	N/A	2,113,087	5,620,199	(763,664)	19,671	438,977	763,644
Garfield School District	N/A	3,647,485	8,014,079	1,529	195	599,126	926,673
Garland City	N/A	157,218	701,894	(295,528)	22	104,691	32,519
Genola Town	N/A	43,230	116,914	(18,035)	964	9,307	15,528
Grand Co Cemetery Mtce Dist	N/A	37,841	108,193	(20,235)	854	8,210	14,229
Grand County	N/A	2,830,166	7,815,265	(1,281,193)	42,715	634,019	1,017,901
Grand School District	N/A	5,588,786	12,430,391	(112,879)	889	920,353	1,437,086
Grand Water/Sewer Service	N/A	98,774	277,403	(49,011)	2,220	21,376	36,596
Granger-Hunter Imp Dist	N/A	1,682,202	4,634,808	(766,628)	37,666	363,091	613,523
Granite School District	N/A	193,236,745	433,179,029	(7,101,266)	17,353	33,426,352	49,141,171
Granite Uniserv	N/A	210,000	458,520	2,288	—	34,449	53,024
Grantsville City	N/A	921,412	2,434,421	(320,631)	10,667	182,900	337,687
Gunnison City	N/A	144,129	386,125	(55,778)	2,446	29,833	52,383
Gunnison Valley Hospital	N/A	2,350,209	6,436,801	(1,041,806)	52,559	506,859	852,966
Gunnison Valley Police Dept	N/A	137,806	358,215	(42,572)	60,661	23,547	61,490
Heber City	N/A	2,045,270	5,436,867	(736,529)	23,557	406,074	753,409
Heber Light & Power	N/A	1,356,419	3,715,100	(601,359)	30,335	292,534	492,300
Heber Valley Historic Railroad	N/A	194,728	441,929	(10,666)	65	32,205	51,077
Heber Valley SSD	N/A	86,612	234,240	(36,133)	1,932	18,647	31,111
Herriman City	N/A	2,109,401	5,808,043	(958,440)	47,225	455,258	768,917
High Desert Uniserv	N/A	31,882	71,179	(848)	6	5,254	8,229
High School Activities Assn	N/A	434,113	951,127	2,230	13	71,264	109,984
Highland City	N/A	595,182	1,620,205	(256,317)	13,294	128,253	214,935
Hinckley Town	N/A	26,251	76,412	(15,066)	594	5,710	10,019
Honeyville City	N/A	37,616	255,041	(144,765)	—	47,503	—
Hooper City	N/A	150,591	421,693	(73,784)	3,384	32,578	55,660
Hooper Water Improv Dist	N/A	204,012	555,100	(87,659)	4,557	43,959	73,645
Housing Auth of Carbon Co	N/A	101,806	277,903	(44,425)	2,276	21,946	36,848
Housing Auth of SL County	N/A	1,357,128	3,802,629	(666,705)	30,493	293,614	501,867
Housing Authority of SLC	N/A	1,388,478	3,943,284	(729,464)	30,657	322,645	501,868
Housing Authority Ogden City	N/A	330,699	902,885	(144,436)	7,391	71,290	119,712
Huntington City	N/A	93,273	252,254	(38,912)	2,081	20,081	33,503
Hurricane City	N/A	2,456,483	6,527,165	(893,686)	33,758	495,983	897,331
Hurricane Valley Fire SSD	N/A	37,675	103,468	(16,916)	844	8,129	13,704
Hyde Park City	N/A	200,033	545,345	(86,764)	4,469	43,113	72,325
Hyrum City	N/A	628,696	1,711,071	(270,474)	14,042	135,471	226,998
Impact Mitigation SSD	N/A	79,232	214,281	(33,054)	1,767	17,058	28,460
Intech Collegiate High School	N/A	436,723	976,073	(12,430)	88	71,992	112,837

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Contributions	Proportionate Share of Contributions		
1,743	280,811	1,586	629,657	171	79	631,493	85,794	76,998	—	162,792	
87,308	1,765,274	314,716	1,566,260	51,550	162,185	2,094,711	1,116,118	(40,679)	—	1,075,439	
890	5,835	799	4,626	207	2,913	8,545	6,202	(796)	—	5,406	
15,969	3,794,555	527,226	3,830,793	68,876	524,485	4,951,380	2,318,202	(236,028)	—	2,082,174	
—	20,746	—	47,111	—	—	47,111	5,237	7,897	—	13,134	
12,217	84,509	8,432	68,277	2,877	1,414	81,000	54,458	3,455	—	57,913	
9,774	202,816	33,581	174,774	6,559	39,238	254,152	138,080	(12,477)	—	125,603	
69,978	472,287	63,613	367,853	14,093	12,566	458,125	274,144	28,590	—	302,734	
1,401	51,260	5,113	47,229	1,952	13,807	68,101	29,750	(9,465)	—	20,285	
4,462	33,925	3,021	27,910	1,153	309	32,393	17,580	1,329	—	18,909	
6,806	88,778	8,773	77,519	3,208	19,060	108,560	51,553	(3,288)	—	48,265	
79,491	1,159,048	182,079	980,264	36,944	47,232	1,246,519	750,627	11,033	—	761,660	
21,531	124,826	10,653	97,835	4,047	1,858	114,393	62,302	7,598	—	69,900	
72,527	367,788	43,427	292,839	5,625	—	341,891	202,820	26,958	—	229,778	
715	31,388	3,526	28,980	1,218	20,582	54,306	22,530	(7,675)	—	14,855	
15,176	121,206	11,488	100,315	4,179	1,356	117,338	70,099	5,052	—	75,151	
14,123	470,904	47,107	483,377	16,552	30,528	577,564	306,495	279	—	306,774	
195	45,875	8,046	41,162	1,503	7,882	58,593	29,479	(2,869)	—	26,610	
154	36,851	3,763	34,762	1,437	1,674	41,636	21,896	(490)	—	21,406	
5,588	41,277	3,771	33,784	1,402	—	38,957	22,534	2,074	—	24,608	
10,731	119,142	11,726	102,572	4,272	—	118,570	71,461	4,291	—	75,752	
18,245	1,240,537	233,484	1,131,117	37,424	45,118	1,447,143	814,563	4,021	—	818,584	
99,727	1,625,721	215,870	1,516,322	28,212	78,388	1,838,792	944,353	31,635	—	975,988	
800	138,032	13,189	242,821	1,247	42,915	300,172	61,419	4,588	—	66,007	
2,955	28,754	2,646	24,439	1,010	—	28,095	15,394	1,505	—	16,899	
8,208	31,501	2,881	21,966	934	—	25,781	19,370	3,403	—	22,773	
180,420	1,875,055	255,234	1,640,627	57,510	53,629	2,007,000	1,144,414	20,658	—	1,165,072	
38,905	2,397,233	344,593	2,339,730	44,700	48,101	2,777,124	1,592,473	(12,984)	—	1,579,489	
11,969	72,161	7,036	56,846	2,396	10,777	77,055	45,517	(1,446)	—	44,071	
11,771	1,026,051	111,184	959,355	40,037	164,145	1,274,721	684,960	(63,173)	—	621,787	
2,846,963	85,431,839	11,564,676	84,355,168	1,507,380	4,479,959	101,907,183	51,766,302	(1,619,056)	—	50,147,246	
36,766	124,239	12,164	86,988	1,596	—	100,748	51,592	18,671	—	70,263	
8,785	540,039	96,816	477,562	17,476	31,027	622,881	366,764	(20,113)	—	346,651	
308	84,970	12,050	78,183	3,059	96,792	190,084	55,157	(40,769)	—	14,388	
152,054	1,564,438	151,620	1,336,542	55,604	38,068	1,581,834	918,191	30,914	—	949,105	
66,369	212,067	1,520	65,850	5,702	—	73,072	38,926	18,985	—	57,911	
281,908	1,464,948	218,936	1,062,618	39,011	—	1,320,565	849,234	116,437	—	965,671	
63,542	878,711	87,518	771,394	32,092	54,226	945,230	530,043	(11,753)	—	518,290	
18,883	102,230	12,814	82,479	1,644	—	96,937	63,988	10,451	—	74,439	
—	51,690	5,301	48,964	2,024	10,110	66,399	30,842	(3,539)	—	27,303	
183,199	1,454,599	139,054	1,202,614	50,171	—	1,391,839	855,097	80,465	—	935,562	
18,477	31,966	1,990	13,377	258	3,584	19,209	9,342	4,553	—	13,895	
5,624	186,885	25,446	180,177	3,332	24,505	233,460	109,807	(5,653)	—	104,154	
6,531	363,013	37,443	337,505	13,997	8,006	396,951	222,567	(2,623)	—	219,944	
2,047	18,370	2,129	15,372	659	5,699	23,859	14,801	(1,428)	—	13,373	
—	47,503	—	107,871	—	—	107,871	11,992	16,957	—	28,949	
7,536	99,158	10,608	86,546	3,642	6,833	107,629	68,150	(2,067)	—	66,083	
8,675	130,836	12,809	115,662	4,795	136	133,402	76,026	3,213	—	79,239	
427	61,497	6,478	57,805	2,401	34,609	101,293	38,842	(12,939)	—	25,903	
42,362	868,336	95,824	780,188	32,844	38,835	947,691	616,505	(5,612)	—	610,893	
38,983	894,153	93,315	844,495	32,796	122,523	1,093,129	594,465	(56,117)	—	538,348	
5,904	204,297	21,061	187,787	7,800	12,632	229,280	126,341	(2,157)	—	124,184	
3,930	59,595	5,708	52,729	2,179	4,126	64,742	33,214	(843)	—	32,371	
81,776	1,508,848	237,000	1,297,044	48,817	35,530	1,618,391	963,206	31,570	—	994,776	
17,987	40,664	2,458	21,453	894	52	24,857	15,005	8,866	—	23,871	
3,275	123,182	12,662	113,511	4,711	4,831	135,715	75,623	(1,498)	—	74,125	
24,541	401,052	39,515	356,473	14,781	20,732	431,501	234,733	(1,104)	—	233,629	
560	47,845	4,849	44,792	1,851	2,163	53,655	28,214	(845)	—	27,369	
75,110	260,027	27,360	183,346	3,539	—	214,245	128,998	31,806	—	160,804	

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Iron County	N/A	\$ 4,485,108	11,849,105	(1,549,448)	43,096	896,667	1,639,473
Iron School District	N/A	24,233,059	53,551,851	(241,493)	1,785	4,027,033	6,166,595
Itineris High School	N/A	884,672	1,947,974	(2,846)	64	145,380	225,239
Ivins City	N/A	1,173,989	3,108,903	(414,383)	13,810	233,426	430,759
Jordan River Commission	N/A	38,101	103,043	(15,895)	850	8,203	13,686
Jordan School District	N/A	128,409,461	285,625,958	(2,751,799)	14,361	21,505,076	32,805,716
Jordan Uniserv	N/A	156,997	342,791	1,711	—	25,754	39,641
Jordan Valley Water Conserv	N/A	3,930,923	11,161,837	(2,078,334)	85,513	957,417	1,385,431
Jordanelle SSD	N/A	639,313	1,755,460	(286,812)	14,305	137,927	232,517
Juab County	N/A	1,571,280	4,216,455	(602,577)	17,235	333,755	566,062
Juab School District	N/A	6,485,778	14,302,906	(37,475)	553	1,066,157	1,653,767
Kamas City	N/A	207,490	542,932	(68,008)	2,301	40,990	75,593
Kane County	N/A	2,541,070	6,726,356	(885,481)	25,341	498,318	938,089
Kane County Water Conserv Dist	N/A	189,778	526,708	(89,398)	4,256	41,003	69,631
Kane School District	N/A	4,535,356	10,068,428	(80,929)	482	756,190	1,158,267
Kaysville City	N/A	3,033,901	8,149,854	(1,172,015)	35,760	640,286	1,097,042
Kearns Improvement Dist	N/A	901,623	2,879,097	(745,358)	17,857	301,982	289,338
Laverkin City	N/A	407,244	1,148,776	(204,595)	5,218	100,198	142,217
Layton City	N/A	6,936,165	18,645,037	(2,672,308)	69,176	1,468,826	2,506,913
Lehi City	N/A	6,067,095	16,216,498	(2,290,638)	88,810	1,234,031	2,219,654
Lewiston City	N/A	82,145	230,627	(40,702)	1,847	17,777	30,427
Liberty Academy Charter	N/A	289,931	687,849	(38,667)	214	48,416	79,453
Lindon City	N/A	1,782,186	4,669,183	(587,769)	19,391	351,549	650,419
Logan City	N/A	11,570,229	26,657,943	(845,293)	161,685	1,858,554	3,246,129
Logan School District	N/A	15,155,251	33,926,478	(511,843)	1,576	2,597,589	3,862,688
Lone Peak PS District	N/A	862,889	2,235,424	(258,587)	412,409	143,983	391,880
Maeser Water Improve Dist	N/A	148,698	402,150	(62,034)	3,317	32,014	53,412
Magna Mosquito Abatement	N/A	37,584	101,645	(15,679)	838	8,092	13,500
Manti City	N/A	242,784	665,779	(108,258)	5,431	52,369	88,205
Mapleton City	N/A	938,036	2,491,775	(341,632)	13,327	190,052	342,000
Marriott-Slaterville City	N/A	78,121	213,802	(34,510)	1,746	16,846	28,336
Mayfield Town	N/A	21,249	57,468	(8,865)	474	4,575	7,633
Mendon City	N/A	26,138	72,514	(12,290)	587	5,647	9,587
Metro Water Dist SLC/Sandy	N/A	1,795,051	4,888,947	(774,913)	40,099	386,833	648,503
Midvale City	N/A	1,584,120	4,384,089	(736,760)	35,502	342,132	579,874
Midvalley Improvement District	N/A	283,811	771,939	(121,729)	6,338	61,150	102,420
Midway City	N/A	303,320	840,103	(141,572)	6,799	65,517	111,104
Military Installation Devel	N/A	121,793	329,386	(50,810)	2,717	26,221	43,748
Millard Co Care & Rehab Inc	N/A	523,162	1,463,668	(255,328)	11,751	113,162	193,225
Millard County	N/A	3,988,969	10,446,935	(1,305,544)	39,927	781,550	1,459,977
Millard School District	N/A	11,544,236	25,960,912	(498,907)	839	2,028,479	2,926,927
Millcreek City	N/A	43,468	121,573	(21,185)	977	9,402	16,050
Millville City	N/A	76,175	209,308	(34,281)	1,705	16,436	27,720
Minersville Town	N/A	68,967	187,620	(29,608)	1,541	14,860	24,892
Moab Valley Fire Protection	N/A	—	—	—	—	—	—
Monroe City	N/A	217,199	589,003	(91,823)	4,848	46,779	78,191
Monticello Academy	N/A	1,094,181	2,456,687	(39,688)	264	180,547	283,982
Morgan City Corporation	N/A	390,635	1,061,741	(166,978)	8,723	84,159	140,889
Morgan County	N/A	1,070,188	2,846,199	(392,071)	15,085	216,674	390,716
Morgan School District	N/A	5,925,673	13,117,070	(71,899)	698	974,854	1,516,574
Moroni City	N/A	41,420	115,808	(20,160)	931	8,958	15,291
Mount Pleasant City	N/A	499,204	1,323,447	(177,923)	6,167	99,716	182,942
Mountain Regional Water SSD	N/A	763,882	2,085,616	(333,663)	17,072	164,672	276,572
Mountainland Assn of Govt	N/A	1,044,374	3,047,125	(620,683)	22,292	274,693	361,414
Mountainland ATC	N/A	1,281,883	2,798,894	13,968	—	210,284	323,666
Mt Olympus Improvement Dist	N/A	744,499	2,034,419	(326,506)	16,642	160,512	269,699
Murray City	N/A	10,008,266	27,272,529	(4,220,755)	136,807	2,204,058	3,588,754
Murray School District	N/A	18,124,756	40,160,503	(265,259)	1,631	3,020,802	4,620,118
Myton City	N/A	54,515	149,825	(24,559)	1,220	11,763	19,842
N Tooele Co Fire Protection SD	N/A	1,601	4,331	(668)	36	345	575



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources					Deferred Inflows of Resources			Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
								Proportionate Share of Nonemployer Contributions	Proportionate Share of Employer Contributions		
30,948	2,610,184	501,495	2,328,574	80,945	385,353	3,296,367	1,787,932	(179,502)	—	1,608,430	
317,175	10,512,588	1,444,640	10,190,697	188,520	132,049	11,955,906	6,394,420	48,306	—	6,442,726	
26,240	396,923	52,744	368,230	6,884	3,155	431,013	233,109	12,298	—	245,407	
55,006	733,001	123,079	609,967	22,402	118,921	874,369	472,476	(15,620)	—	456,856	
824	23,563	2,332	21,539	890	3,385	28,146	13,568	(691)	—	12,877	
2,249,159	56,574,312	7,766,916	54,474,443	1,010,802	792,588	64,044,749	35,094,619	326,013	—	35,420,632	
468	65,863	9,094	65,033	1,193	14,080	89,400	38,570	(4,569)	—	34,001	
16,140	2,444,501	244,060	2,474,090	90,272	36,959	2,845,381	1,499,372	35,099	—	1,534,471	
19,439	404,188	41,678	364,012	15,164	14,819	435,673	254,297	1,244	—	255,541	
100,099	1,017,151	163,530	860,454	28,934	22,969	1,075,887	605,190	33,924	—	639,114	
299,749	3,020,226	388,673	2,701,961	50,679	—	3,141,313	1,729,959	119,904	—	1,849,863	
12,865	131,749	21,729	106,667	3,856	8,254	140,506	78,199	7,667	—	85,866	
62,018	1,523,766	287,481	1,302,480	46,813	47,075	1,683,849	1,064,690	6,363	—	1,071,053	
8,043	122,933	12,913	108,606	4,549	8,700	134,768	81,132	135	—	81,267	
33,607	1,948,546	273,814	1,915,796	35,649	21,624	2,246,883	1,233,401	(7,558)	—	1,225,843	
104,521	1,877,609	309,489	1,656,394	57,201	132,660	2,155,744	1,186,508	22,534	—	1,209,042	
8,906	618,083	51,006	748,419	18,854	22,774	841,053	339,311	(1,888)	—	337,423	
191,960	439,593	37,868	254,288	7,668	15,389	315,213	155,596	(390,826)	—	(235,230)	
38,913	4,083,828	754,435	3,785,710	125,208	298,377	4,963,730	2,748,340	(134,558)	—	2,613,782	
289,252	3,831,747	569,793	3,233,153	123,310	58,334	3,984,590	2,423,101	102,421	—	2,525,522	
3,207	53,258	5,844	47,269	1,991	18,263	73,367	37,777	(5,306)	—	32,471	
23,757	151,840	21,815	126,043	2,738	92,105	242,701	124,049	(36,444)	—	87,605	
100,917	1,122,276	188,983	915,295	33,034	2,439	1,139,751	681,273	42,146	—	723,419	
76,626	5,342,994	991,744	4,820,339	195,994	203,567	6,211,644	3,437,650	(35,658)	—	3,401,992	
236,310	6,698,163	912,583	6,564,434	118,830	574,032	8,169,879	4,112,906	(54,355)	—	4,058,551	
19,412	967,684	5,666	405,572	37,118	22,033	470,389	238,608	(1,897)	—	236,711	
259	89,002	9,100	84,062	3,474	7,705	104,341	52,951	(4,048)	—	48,903	
4,289	26,719	2,300	21,247	878	3,018	27,443	13,384	(402)	—	12,982	
7,696	153,701	15,744	138,151	5,751	3,319	162,965	95,696	2,389	—	98,085	
11,064	556,443	88,380	496,907	18,795	55,695	659,777	362,796	(21,678)	—	341,118	
3,008	49,936	5,025	44,411	1,847	116	51,399	30,362	1,022	—	31,384	
3,936	16,618	1,300	12,013	496	362	14,171	7,567	1,170	—	8,737	
2,763	18,584	1,775	14,956	626	—	17,357	11,145	989	—	12,134	
11,785	1,087,220	113,163	1,018,145	42,235	56,078	1,229,621	673,734	(16,174)	—	657,560	
15,342	972,850	106,586	905,332	37,869	34,498	1,084,285	664,678	(11,814)	—	652,864	
36,896	206,804	17,791	160,875	6,669	—	185,335	105,476	14,414	—	119,890	
15,492	198,912	20,472	173,413	7,257	6,683	207,825	127,932	4,793	—	132,725	
7,923	80,609	7,454	68,852	2,846	—	79,152	43,370	3,274	—	46,644	
15,600	333,738	36,725	300,539	12,643	12,773	362,680	235,429	770	—	236,199	
16,562	2,298,016	438,904	2,034,927	72,645	130,086	2,676,562	1,555,191	(52,538)	—	1,502,653	
138,987	5,095,232	685,541	5,108,666	89,466	129,920	6,013,593	3,043,858	51,718	—	3,095,576	
35,629	62,058	3,048	24,967	1,050	—	29,065	19,523	11,919	—	31,442	
3,957	49,818	4,980	43,386	1,808	4,527	54,701	30,442	61	—	30,503	
6,781	48,074	4,327	39,096	1,621	1,439	46,483	25,667	2,130	—	27,797	
—	—	—	—	—	—	—	—	—	—	—	
13,290	143,108	13,446	122,944	5,089	—	141,479	78,950	5,405	—	84,355	
44,886	509,679	69,577	460,576	8,977	121,919	661,049	333,988	(29,790)	—	304,198	
20,246	254,017	24,416	221,353	9,172	—	254,941	144,421	7,260	—	151,681	
14,373	636,848	101,747	566,759	21,425	48,373	738,304	418,548	(24,009)	—	394,539	
95,509	2,587,635	359,628	2,473,975	46,783	79,279	2,959,665	1,628,121	(22,661)	—	1,605,460	
2,738	27,918	2,900	23,787	1,000	4,942	32,629	18,566	(1,062)	—	17,504	
32,722	321,547	51,108	260,638	9,645	1,493	322,884	199,515	12,610	—	212,125	
18,671	476,942	48,651	433,773	18,017	3,086	503,527	291,874	8,456	—	300,330	
38,740	697,139	63,914	702,189	23,554	—	789,657	400,317	37,325	—	437,642	
96,118	630,068	74,254	530,992	9,743	12,171	627,160	314,925	44,295	—	359,220	
19,601	466,454	47,584	422,936	17,575	40,691	528,786	286,203	(9,758)	—	276,445	
169,450	6,099,069	939,005	5,687,748	195,897	383,221	7,205,871	3,871,042	(123,838)	—	3,747,204	
530,472	8,173,023	1,087,264	7,647,888	141,718	378,675	9,255,545	4,855,596	1,592	—	4,857,188	
14,253	47,078	3,567	31,053	1,295	2,320	38,235	21,819	3,831	—	25,650	
1,301	2,257	98	905	37	—	1,040	570	441	—	1,011	

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
N Ut Environmental Rsrc Agcy	N/A	\$ 144,389	393,902	(62,825)	3,226	31,123	52,234
Ne Counseling Center	N/A	—	—	—	—	—	—
Nebo Credit Union	N/A	339,950	931,466	(151,001)	7,603	73,320	123,423
Nebo School District	N/A	84,819,459	187,656,510	(970,797)	8,827	13,997,584	21,669,528
Nephi City	N/A	1,074,678	2,872,665	(405,723)	15,646	218,459	393,308
Nibley City Corporation	N/A	259,706	722,162	(123,385)	5,826	56,127	95,439
Noah Webster Academy Inc	N/A	686,308	1,557,798	(37,775)	231	113,509	180,047
North Davis Co Sewer Dist	N/A	1,227,764	3,482,955	(647,096)	26,665	300,338	431,291
North Davis Fire District	N/A	26,845	72,602	(11,199)	599	5,780	9,643
North Emery Water Users SSD	N/A	11,849	36,413	(8,263)	272	2,598	4,731
North Fork SSD	N/A	45,294	127,425	(22,639)	1,018	9,805	16,806
North Logan City	N/A	421,783	1,265,617	(279,016)	8,908	116,571	145,566
North Ogden City	N/A	1,516,064	4,008,199	(527,380)	16,481	299,334	557,338
North Park Police Agency	N/A	309,128	785,892	(78,641)	848	56,962	113,489
North Pointe Solid Waste	N/A	458,249	1,263,791	(209,766)	10,263	98,923	167,263
North Sanpete School Dist	N/A	7,307,280	16,140,057	(66,438)	517	1,213,615	1,858,914
North Summit School District	N/A	3,944,785	8,658,487	8,372	177	647,822	1,001,200
North View Fire District	N/A	21,728	58,762	(9,064)	485	4,678	7,805
Northeastern Counseling Ctr	N/A	940,269	2,595,138	(431,932)	21,062	202,999	343,420
NUAMES Charter School	N/A	1,726,854	3,810,289	(11,584)	155	283,900	440,560
Oakley City	N/A	58,131	397,039	(225,729)	22	72,856	783
Ogden City Corp	N/A	26,285,351	49,998,804	6,735,094	1,348,693	2,918,498	4,617,794
Ogden School District	N/A	36,063,875	79,966,304	(540,847)	4,776	5,935,110	9,245,356
Ogden Weber/NEA/UEA Uniserv	N/A	92,894	202,828	1,012	—	15,239	23,455
Ogden-Weber Tech College	N/A	2,684,403	6,157,715	(222,156)	67	508,581	673,332
Oquirrh Rec And Parks District	N/A	434,120	1,176,622	(183,051)	9,688	93,490	156,212
Orangeville City	N/A	49,187	133,656	(21,001)	1,099	10,596	17,736
Orderville Town	N/A	37,400	102,389	(16,546)	836	8,066	13,569
Panguitch City Corporation	N/A	103,128	288,213	(50,094)	2,316	22,304	38,055
Park City	N/A	7,780,234	22,566,115	(4,421,269)	117,376	1,967,500	2,745,208
Park City Fire Service	N/A	179,102	498,946	(85,788)	4,019	38,718	65,918
Park City School District	N/A	22,744,114	50,464,865	(382,865)	2,426	3,785,282	5,809,377
Parowan City	N/A	649,814	1,732,668	(243,475)	10,150	133,104	236,424
Payson City	N/A	2,726,950	7,301,737	(1,044,628)	42,475	558,644	995,707
Perry City	N/A	445,575	1,160,092	(139,488)	3,894	86,384	163,073
Piute County	N/A	364,708	966,092	(130,513)	5,052	73,674	132,840
Piute School District	N/A	1,473,175	3,250,957	(10,195)	134	242,200	375,887
Plain City	N/A	142,818	390,378	(62,719)	3,193	30,793	51,749
Pleasant Grove City	N/A	2,489,240	6,588,563	(881,040)	31,686	498,558	909,794
Pleasant View City	N/A	693,035	1,822,865	(234,048)	7,570	136,810	253,684
Price City	N/A	1,923,875	5,093,015	(684,175)	25,750	387,243	701,584
Price River Water Improve	N/A	646,161	1,764,919	(282,784)	14,443	139,302	233,990
Providence City	N/A	215,491	595,134	(99,278)	4,827	46,528	78,747
Provo City Corp	N/A	20,935,933	47,221,706	(775,458)	508,912	3,247,189	5,874,246
Provo Housing Authority	N/A	347,254	1,186,505	(351,004)	6,577	131,973	108,024
Provo River Water Users	N/A	402,632	1,101,067	(177,211)	9,001	86,815	145,947
Provo School District	N/A	40,154,072	89,799,824	(1,261,128)	5,008	6,812,163	10,265,511
Recreation & Habilitation Svcs	N/A	23,389	63,255	(9,758)	522	5,036	8,401
Redmond Town	N/A	43,317	117,150	(18,071)	966	9,326	15,559
Rich County	N/A	552,525	1,574,039	(287,812)	5,573	138,143	193,165
Rich School District	N/A	2,483,147	5,460,593	(2,578)	152	407,949	631,404
Richfield City	N/A	1,070,413	2,798,818	(348,575)	11,533	210,929	390,185
Richmond City	N/A	96,966	273,839	(49,262)	2,182	21,002	36,091
Riverdale City	N/A	1,986,185	5,179,500	(630,905)	18,740	387,235	725,994
Roosevelt City	N/A	1,073,658	2,837,317	(375,389)	13,058	214,077	392,724
Roosevelt City Housing	N/A	17,957	48,564	(7,491)	401	3,866	6,450
Roy City	N/A	3,531,084	9,397,671	(1,281,356)	34,684	728,288	1,280,831
Roy Water Conserv Dist	N/A	198,188	535,992	(82,680)	4,421	42,668	71,188
S Utah Valley Electric Svc Dst	N/A	386,562	1,063,326	(174,852)	8,653	83,418	140,796
S Utah Valley Solid Waste	N/A	361,625	981,352	(153,408)	8,072	77,892	130,258

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources					Deferred Inflows of Resources			Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Contributions	Proportionate Share of Contributions		
117,593	204,176	9,165	81,960	3,403	—	94,528	54,845	39,748	—	—	94,593
—	—	—	—	—	—	—	—	—	—	—	—
19,645	223,991	21,971	193,366	8,047	10,587	233,971	133,220	649	—	—	133,869
2,636,507	38,312,446	5,119,311	35,491,352	666,607	—	41,277,270	23,017,519	1,076,618	—	—	24,094,137
32,854	660,267	101,350	572,386	21,812	49,541	745,089	430,256	(9,698)	—	—	420,558
18,799	176,191	17,804	148,758	6,238	—	172,800	112,411	9,060	—	—	121,471
12,969	306,756	45,187	290,720	5,795	19,051	360,753	225,756	(2,740)	—	—	223,016
9,945	768,239	75,306	774,962	28,089	38,203	916,560	459,485	2,516	—	—	462,001
1,090	17,112	1,643	15,176	627	579	18,025	9,559	56	—	—	9,615
498	8,099	1,147	7,127	315	9,525	18,114	8,619	(3,171)	—	—	5,448
1,229	28,858	3,248	26,089	1,101	15,186	45,624	21,091	(6,489)	—	—	14,602
16,747	287,792	26,810	296,983	9,508	232,860	566,161	175,232	(111,143)	—	—	64,089
82,070	955,223	164,613	781,884	28,385	14,561	989,443	616,769	29,878	—	—	646,647
173,440	344,739	42,090	146,877	4,624	—	193,591	118,423	84,990	—	—	203,413
21,679	298,128	30,406	261,457	10,917	6,845	309,625	187,820	3,152	—	—	190,972
43,532	3,116,578	435,126	3,070,897	56,794	18,451	3,581,268	1,922,856	306	—	—	1,923,162
109,222	1,758,421	232,659	1,638,958	30,425	33,259	1,935,301	1,012,840	16,495	—	—	1,029,335
563	13,531	1,330	12,283	508	97	14,218	7,737	175	—	—	7,912
10,614	578,095	62,582	536,674	22,417	43,120	664,793	387,397	(19,241)	—	—	368,156
357,649	1,082,264	103,678	719,632	13,513	—	836,823	462,634	153,109	—	—	615,743
875	74,536	545	165,878	59	—	166,482	23,868	23,817	—	—	47,685
185,469	9,070,454	638,631	7,453,505	146,139	46,878	8,285,153	7,443,316	13,326	—	—	7,456,642
268,940	15,454,182	2,201,108	15,071,387	286,048	790,691	18,349,234	10,039,220	(233,172)	—	—	9,806,048
20,556	59,250	5,381	38,479	706	452	45,018	22,822	7,768	—	—	30,590
2,189	1,184,169	155,595	1,270,761	20,377	381,235	1,827,968	676,364	(242,905)	—	—	433,459
40,521	299,911	26,814	245,668	10,165	1,733	284,380	157,164	12,675	—	—	169,839
1,494	30,925	3,071	27,869	1,155	—	32,095	18,153	599	—	—	18,752
1,938	24,409	2,408	21,265	885	—	24,558	14,567	642	—	—	15,209
13,022	75,697	7,209	59,213	2,490	9,631	78,543	46,095	(1,381)	—	—	44,714
666,553	5,496,637	693,030	5,023,841	156,877	147,284	6,021,032	3,341,859	400,059	—	—	3,741,918
14,851	123,506	12,366	102,680	4,310	8,018	127,374	78,448	3,269	—	—	81,717
680,098	10,277,183	1,373,440	9,591,615	178,808	299,206	11,443,069	6,186,930	48,146	—	—	6,235,076
25,220	404,898	57,594	348,359	13,406	27,501	446,860	248,938	1,412	—	—	250,350
69,978	1,666,804	245,441	1,464,233	56,457	123,242	1,889,373	1,077,150	(3,749)	—	—	1,073,401
77,979	331,330	50,973	224,495	7,853	5,172	288,493	172,298	38,650	—	—	210,948
13,067	224,633	34,686	192,452	7,239	24,904	259,281	139,554	(9,875)	—	—	129,679
6,320	624,541	88,485	613,961	11,533	72,499	786,478	395,068	(27,188)	—	—	367,880
28,602	114,337	9,139	81,143	3,372	7,626	101,280	55,016	9,083	—	—	64,099
58,392	1,498,430	249,330	1,302,280	48,348	98,906	1,698,864	974,687	(21,873)	—	—	952,814
39,070	437,134	74,101	356,697	12,913	9,209	452,920	271,977	18,454	—	—	290,431
14,246	1,128,823	186,873	1,011,434	37,831	136,102	1,372,240	741,770	(62,861)	—	—	678,909
2,182	389,917	41,223	366,995	15,246	38,276	461,740	247,611	(15,513)	—	—	232,098
1,599	131,701	14,379	123,033	5,141	16,047	158,600	89,166	(6,804)	—	—	82,362
66,241	9,696,588	1,789,501	8,426,157	392,666	315,894	10,924,218	6,318,352	(65,978)	—	—	6,252,374
3,329	249,903	20,422	323,975	7,066	22,249	373,712	147,673	9,948	—	—	157,621
1,872	243,635	25,814	228,810	9,512	12,624	276,760	155,622	(4,750)	—	—	150,872
1,096,703	18,179,385	2,439,037	17,245,926	317,133	472,724	20,474,820	11,102,427	(17,075)	—	—	11,085,352
1,023	14,982	1,431	13,222	546	3,016	18,215	8,329	(566)	—	—	7,763
1,604	27,455	2,651	24,488	1,012	285	28,436	15,425	558	—	—	15,983
171,783	508,664	57,610	348,999	9,779	10,006	426,394	223,351	(56,087)	—	—	167,264
106,924	1,146,429	147,395	1,032,800	19,252	—	1,199,447	647,469	40,771	—	—	688,240
21,218	633,865	113,455	548,797	19,756	9,568	691,576	404,589	2,410	—	—	406,999
5,958	65,233	7,053	55,954	2,365	22,739	88,111	46,204	(5,153)	—	—	41,051
44,244	1,176,213	221,572	1,006,803	35,580	29,969	1,293,924	762,853	(23,135)	—	—	739,718
35,221	655,080	109,935	558,946	20,596	57,512	746,989	421,842	(6,632)	—	—	415,210
—	10,717	1,099	10,151	420	661	12,331	6,394	(296)	—	—	6,098
160,383	2,204,186	386,831	1,882,179	63,612	93,790	2,426,412	1,383,547	29,022	—	—	1,412,569
7,779	126,056	12,129	112,040	4,631	3,979	132,779	70,574	1,832	—	—	72,406
31,686	264,553	25,382	220,286	9,186	2,103	256,957	155,658	12,491	—	—	168,149
497	216,719	22,454	204,763	8,477	148,999	384,693	132,145	(52,242)	—	—	79,903

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Salem City	N/A	\$ 1,214,787	3,217,547	(434,112)	16,666	245,147	442,647
Salina City	N/A	241,516	638,865	(85,198)	3,078	48,375	88,224
Salt Lake Arts Academy	N/A	953,667	2,117,888	(16,799)	139	156,998	244,855
Salt Lake City Corp	N/A	132,080,511	268,361,583	19,383,180	4,228,862	16,720,520	29,792,547
Salt Lake City Public Library	N/A	2,087,092	5,746,079	(947,895)	46,724	450,438	760,726
Salt Lake Co Serv Area 3	N/A	78,308	211,781	(32,669)	1,747	16,859	28,128
Salt Lake Community College	N/A	13,786,830	31,315,488	(848,938)	1,545	2,466,587	3,507,427
Salt Lake County	N/A	84,200,860	228,553,220	(34,894,614)	1,336,216	17,970,079	30,527,634
Salt Lake School District	N/A	91,574,092	205,882,386	(3,895,014)	7,468	16,030,765	23,247,500
San Juan County	N/A	2,825,133	7,528,236	(1,050,584)	41,994	575,405	1,030,183
San Juan Mental Health	N/A	355,360	971,253	(155,994)	7,944	76,617	128,752
San Juan School District	N/A	13,129,908	29,064,684	(165,338)	1,297	2,174,700	3,351,601
Sandy City	N/A	10,603,108	29,482,188	(4,989,375)	2,149,756	2,344,058	4,147,258
Sandy Suburban Imp Dist	N/A	507,521	1,376,433	(214,659)	11,327	109,307	182,719
Sanpete County	N/A	2,205,157	5,772,697	(716,009)	20,212	429,208	809,283
Santaquin City	N/A	1,092,820	2,873,196	(368,361)	12,042	215,880	399,751
Seven County Infrastructure	N/A	6,294	17,021	(2,626)	140	1,355	2,261
Sevier County	N/A	2,870,223	7,467,861	(889,583)	22,558	552,587	1,053,238
Sevier School District	N/A	14,128,976	31,185,814	(115,661)	749	2,355,884	3,586,021
Six-County Assoc of Govt	N/A	410,776	1,114,607	(174,160)	9,169	88,477	147,948
Slc Mosquito Abatement	N/A	202,762	565,985	(97,978)	4,553	43,844	74,748
Smithfield City Corp	N/A	809,567	2,168,075	(309,680)	12,260	165,320	296,106
Snow College	N/A	3,404,951	7,605,271	(103,662)	1,602	590,699	856,060
Snyder Basin Special Rec Dist	N/A	402,536	1,143,699	(209,761)	9,071	87,259	150,578
Snyderville Basin W R D	N/A	1,326,064	3,609,654	(570,954)	29,618	285,745	478,856
So Davis Metro Fire Agency	N/A	48,148	130,214	(20,086)	1,074	10,366	17,294
So Davis Recreation Center	N/A	210,892	579,074	(94,609)	4,719	45,498	76,700
So SI Valley Mosq Abate	N/A	93,590	260,694	(44,805)	2,100	20,231	34,442
So Utah Valley Animal Svcs SSD	N/A	39,267	110,752	(19,842)	884	8,503	14,600
So Utah Valley Power Systems	N/A	43,873	118,654	(18,303)	979	9,446	15,759
Soldier Hollow Charter School	N/A	508,453	1,136,613	(14,642)	103	83,821	131,396
Solid Waste SSD #1	N/A	64,417	190,643	(39,358)	1,464	14,046	24,925
Solitude Improvement Dist	N/A	—	—	—	—	—	—
South Davis Sewer Dist	N/A	928,173	3,035,442	(828,504)	17,908	332,115	289,273
South Davis Water Dist	N/A	164,960	446,129	(68,818)	3,680	35,515	59,253
South Ogden City	N/A	2,138,387	5,558,736	(662,239)	18,398	414,064	782,022
South Ogden Conserv Dist	N/A	541,304	1,492,554	(247,563)	12,122	116,849	197,547
South Sanpete School Dist	N/A	10,316,340	22,701,452	(22,300)	689	1,695,078	2,624,925
South Summit School District	N/A	5,323,270	11,715,259	(12,443)	360	874,685	1,354,611
South Valley Sewer District	N/A	1,317,746	3,627,878	(598,425)	29,500	284,396	480,298
South Valley Water Reclamation	N/A	1,217,679	3,341,788	(544,928)	27,243	262,685	442,673
South Weber City	N/A	207,178	574,949	(97,556)	4,645	44,763	76,010
Southeastern Utah AOG	N/A	326,635	895,196	(145,248)	7,306	70,451	118,612
Southeastern Utah Health	N/A	386,922	1,071,421	(180,413)	8,672	83,572	141,701
Southern Utah University	N/A	9,709,304	21,546,826	(159,937)	6,108	1,610,709	2,464,931
Southwest Applied Tech	N/A	1,243,156	2,761,508	(22,454)	184	204,667	319,265
Southwest Educ Development Ctr	N/A	325,649	728,926	(10,110)	70	53,699	84,264
Space Dynamics Lab / USU	N/A	2,250,321	4,941,839	2,819	111	369,594	571,432
Spanish Fork City	N/A	5,545,730	14,827,472	(2,099,283)	82,190	1,129,560	2,028,070
Spring City	N/A	80,541	220,574	(35,693)	1,801	17,369	29,230
Springville City	N/A	4,392,251	11,842,306	(1,756,646)	74,472	909,664	1,604,788
St George Housing Auth	N/A	68,047	185,744	(29,689)	1,521	14,668	24,628
State of Utah	N/A	781,361,557	1,712,250,161	6,288,200	4,100,944	127,299,406	192,677,677
Stockton Town	N/A	40,040	100,884	(9,273)	—	7,204	14,744
Success Academy	N/A	714,636	1,584,359	(10,533)	94	117,606	183,177
Summit Academy High School	N/A	778,903	1,759,800	(36,634)	231	128,696	203,407
Summit Academy Inc	N/A	3,502,864	7,944,833	(188,185)	1,158	579,245	918,258
Summit County	N/A	9,983,006	26,251,154	(3,366,589)	109,195	1,970,896	3,653,302
Sunset City	N/A	456,330	1,193,836	(148,384)	4,565	89,393	166,881
SW Behavioral Health Center	N/A	2,705,966	7,491,739	(1,260,734)	60,649	584,456	990,847

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources		Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Contributions	Proportionate Share of Contributions		
89,583	794,043	116,260	640,368	24,049	8,749	789,426	466,076	38,851	—	504,927	
1,824	141,501	24,132	126,333	4,689	36,741	191,895	94,134	(15,675)	—	78,459	
78,069	480,061	58,505	398,901	7,596	—	465,002	268,628	28,481	—	297,109	
423,811	51,165,740	2,946,973	43,346,617	1,064,167	1,305,176	48,662,933	35,838,071	(393,172)	—	35,444,899	
45,420	1,303,308	137,532	1,189,843	49,636	54,653	1,431,664	845,513	(5,006)	—	840,507	
815	47,549	4,792	44,269	1,830	1,827	52,718	27,885	(264)	—	27,621	
912,424	6,887,983	830,559	6,212,914	108,085	1,263,078	8,414,636	3,769,521	(72,306)	—	3,697,215	
1,008,364	50,842,293	7,414,435	46,854,840	1,746,935	2,078,599	58,094,809	33,404,126	(928,098)	—	32,476,028	
229,887	39,515,620	5,458,539	40,400,711	711,903	1,620,901	48,192,054	24,346,312	(705,020)	—	23,641,292	
40,729	1,688,311	259,924	1,505,873	57,468	84,831	1,908,096	1,098,517	(73,340)	—	1,025,177	
30,992	244,305	22,731	201,893	8,390	12,237	245,251	136,805	10,885	—	147,690	
68,054	5,595,652	790,650	5,510,949	102,992	206,494	6,611,085	3,545,925	(116,162)	—	3,429,763	
168,679	8,809,751	429,132	6,195,462	326,895	320,022	7,271,511	3,698,272	(27,119)	—	3,671,153	
2,108	305,461	31,431	287,291	11,891	25,740	356,353	184,610	(9,507)	—	175,103	
40,497	1,299,200	251,109	1,117,541	39,462	25,225	1,433,337	875,516	2,441	—	877,957	
48,302	675,975	116,226	562,757	20,392	18,198	717,573	426,592	26,458	—	453,050	
33,691	37,447	385	3,558	147	62,665	66,755	2,241	(1,871)	—	370	
12,833	1,641,216	339,666	1,435,950	49,636	368,277	2,193,529	1,129,615	(164,295)	—	965,320	
45,409	5,988,063	835,242	5,954,560	109,160	129,467	7,028,429	3,656,202	(33,182)	—	3,623,020	
461	246,055	25,493	232,581	9,629	48,505	316,208	149,975	(23,276)	—	126,699	
7,487	130,632	14,110	116,353	4,889	11,768	147,120	89,948	(1,181)	—	88,767	
19,797	493,483	74,550	433,379	16,636	54,663	579,228	323,609	(25,385)	—	298,224	
100,608	1,548,969	196,904	1,487,479	25,629	131,270	1,841,282	874,772	25,584	—	900,356	
233,912	480,820	29,948	232,960	9,877	2,236	275,021	198,778	92,824	—	291,602	
78,689	872,908	83,406	751,944	31,183	11,809	878,342	495,721	24,984	—	520,705	
3,383	32,117	2,947	27,219	1,125	—	31,291	17,145	1,207	—	18,352	
1,065	127,982	13,748	120,077	5,002	11,678	150,505	83,882	(4,525)	—	79,357	
2,551	59,324	6,459	53,652	2,252	288	62,651	40,962	657	—	41,619	
7,290	31,277	2,842	22,645	957	964	27,408	18,569	2,585	—	21,154	
789	26,973	2,685	24,803	1,025	96	28,609	15,623	237	—	15,860	
3,229	218,549	31,875	213,484	4,123	85,065	334,547	150,400	(43,328)	—	107,072	
3,657	44,092	5,528	38,027	1,646	25,407	70,608	39,483	(7,739)	—	31,744	
28,573	667,869	50,143	816,284	18,833	15,064	900,324	336,892	65,190	—	402,082	
1,526	99,974	10,095	93,256	3,854	381	107,586	58,741	792	—	59,533	
62,989	1,277,473	245,060	1,075,490	37,519	27,066	1,385,135	820,764	13,599	—	834,363	
3,818	330,336	35,889	308,817	12,892	71,481	429,079	221,569	(32,664)	—	188,905	
21,037	4,341,729	613,749	4,292,462	80,132	114,189	5,100,532	2,704,575	(64,220)	—	2,640,355	
260,326	2,489,982	316,809	2,215,059	41,360	38,097	2,611,325	1,396,752	64,073	—	1,460,825	
47,546	841,740	86,827	751,234	31,338	—	869,399	533,764	16,909	—	550,673	
24,434	757,035	79,211	693,148	28,868	21,535	822,762	482,558	3,925	—	486,483	
15,560	140,978	14,092	118,558	4,966	29,660	167,276	88,518	(2,745)	—	85,773	
16,284	212,653	21,131	185,814	7,733	44,838	259,516	128,216	(19,734)	—	108,482	
3,516	237,461	26,092	221,188	9,255	116,517	373,052	162,957	(50,926)	—	112,031	
393,640	4,475,388	577,051	4,083,939	74,665	18,829	4,754,484	2,660,979	138,136	—	2,799,115	
142,347	666,463	76,332	520,067	9,909	—	606,308	350,874	70,895	—	421,769	
39,693	177,726	20,503	136,834	2,650	—	159,987	97,252	19,746	—	116,998	
233,311	1,174,448	132,956	935,230	17,381	—	1,085,567	580,250	105,464	—	685,714	
256,273	3,496,093	516,547	2,959,628	113,117	—	3,589,292	2,209,512	116,881	—	2,326,393	
44,762	93,162	5,194	45,802	1,906	—	52,902	31,454	1,484	—	32,938	
21,683	2,610,607	375,385	2,389,206	93,786	346,032	3,204,409	1,758,631	(199,102)	—	1,559,529	
3,086	43,903	4,330	38,637	1,604	1,111	45,682	25,956	594	—	26,550	
10,016,083	334,094,110	39,136,773	322,551,257	4,902,138	25,767,904	392,358,072	205,551,914	(6,035,280)	(1,476,874)	198,039,760	
14,459	36,407	5,873	18,518	552	2,338	27,281	15,490	5,284	—	20,774	
96,131	397,008	43,595	298,626	5,666	—	347,887	198,703	36,629	—	235,332	
48,640	380,974	50,534	329,057	6,497	—	386,088	248,338	19,140	—	267,478	
947,734	2,446,395	230,076	1,483,157	29,519	—	1,742,752	1,146,413	388,641	—	1,535,054	
542,820	6,276,213	1,065,953	5,138,135	186,022	152,844	6,542,954	3,909,243	254,653	—	4,163,896	
6,060	266,899	50,091	232,663	8,300	27,202	318,256	176,637	(15,054)	—	161,583	
53,679	1,689,631	182,349	1,546,759	64,713	28,328	1,822,149	1,138,325	3,106	—	1,141,431	

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Sw Mosquito Abatement/Control	N/A	\$ 57,899	164,802	(30,397)	1,305	12,554	21,691
SW Ut Public Health Dept	N/A	940,764	2,596,635	(432,259)	21,072	203,107	343,614
Syracuse City Corp	N/A	1,875,320	4,944,286	(640,372)	19,607	368,969	688,918
Taylor West Weber Wtr Imp Dist	N/A	69,449	192,680	(32,663)	1,557	15,005	25,474
Taylorville-Bennion Imp	N/A	954,197	2,605,791	(417,217)	21,327	205,705	345,484
Timber Lakes Water SSD	N/A	91,573	255,504	(44,166)	2,055	19,800	33,747
Timpanogos SSD	N/A	931,156	2,564,559	(423,623)	20,848	200,973	339,500
Tintic School District	N/A	1,323,560	2,900,473	6,347	41	217,286	335,396
Tooele Applied Tech College	N/A	832,986	1,836,868	(4,743)	71	136,928	212,387
Tooele City	N/A	3,048,012	8,103,775	(1,104,860)	36,735	615,259	1,114,662
Tooele County	N/A	6,182,161	16,562,745	(2,353,462)	81,628	1,266,336	2,260,108
Tooele County Housing	N/A	117,608	331,963	(59,623)	2,646	25,470	43,756
Tooele School District	N/A	35,868,174	79,218,081	(302,468)	3,332	5,909,168	9,152,644
Tooele Valley Mosquito Abtmt	N/A	9,964	26,948	(4,157)	222	2,145	3,579
Toquerville City	N/A	39,736	118,955	(25,308)	905	8,679	15,523
Torrey Town	N/A	7,931	24,270	(5,453)	182	1,738	3,156
Town of Alta	N/A	204,532	556,466	(87,846)	4,568	44,071	73,828
Town of Apple Valley	N/A	30,592	87,177	(16,136)	689	6,634	11,472
Town of Brian Head	N/A	495,875	1,294,929	(159,300)	4,885	97,005	181,180
Town of Daniel	N/A	15,743	42,576	(6,568)	351	3,389	5,655
Town of Garden City	N/A	98,602	278,666	(50,253)	2,220	21,358	36,723
Town of Goshen	N/A	12,586	39,834	(9,654)	291	2,772	5,151
Town of Levan	N/A	61,722	166,926	(25,749)	1,377	13,288	22,170
Town of Manila	N/A	36,362	200,177	(100,423)	295	32,554	5,245
Town of Mantua	N/A	78,005	205,662	(27,081)	22,820	14,553	32,408
Town of Paragonah	N/A	15,870	108,229	(61,511)	5	19,922	170
Town of Randolph	N/A	24,276	65,655	(10,128)	542	5,227	8,720
Town of Springdale	N/A	703,867	1,844,476	(230,259)	6,594	137,231	258,337
Trans-Jordan Cities	N/A	697,567	1,921,668	(317,696)	15,619	150,562	254,383
Tremonton City	N/A	911,347	2,418,968	(330,050)	12,746	184,322	332,326
Tridell-Lapoint Water	N/A	20,583	65,112	(15,763)	475	4,534	8,420
Tuacahn High School	N/A	880,569	1,961,629	(20,148)	152	145,059	226,781
Uintah Animal Control/Shelter	N/A	109,971	300,513	(48,233)	2,458	23,709	39,838
Uintah Basin Applied Tech Ctr	N/A	2,216,039	4,952,634	(62,918)	445	365,305	572,539
Uintah Basin Assn of Govt	N/A	430,714	1,215,605	(218,247)	9,692	93,280	160,231
Uintah Basin Asst Council	N/A	14,024	41,590	(8,634)	319	3,059	5,436
Uintah Co Care Center SSD	N/A	1,021,982	2,829,106	(475,882)	22,905	220,732	374,182
Uintah County	N/A	5,957,195	15,913,728	(2,229,705)	81,047	1,202,266	2,186,603
Uintah Fire Suppression SSD	N/A	13,509	36,534	(5,636)	301	2,908	4,852
Uintah Highlands Improv Dist	N/A	34,792	98,125	(17,577)	783	7,534	12,936
Uintah Mosquito Abate District	N/A	80,414	217,476	(33,547)	1,794	17,312	28,884
Uintah Recreation District	N/A	469,834	1,294,370	(214,027)	10,520	101,409	171,342
Uintah School District	N/A	18,787,869	42,198,743	(742,848)	2,447	3,225,558	4,802,645
Uintah Transportation SSD	N/A	83,382	242,338	(47,575)	1,888	18,134	31,782
Uintah Water Conserv Dist	N/A	226,457	612,445	(94,474)	5,051	48,755	81,342
Unified Fire Authority	N/A	1,394,262	3,780,750	(582,222)	27,681	295,070	506,456
Unified Police Department	N/A	19,678,759	51,186,143	(6,075,643)	9,081,901	3,319,368	8,883,234
University of Utah	N/A	81,296,374	187,096,967	(7,013,424)	53,472	15,044,382	20,522,062
University of Utah Hospital	N/A	31,656,128	76,513,948	(5,963,112)	13	6,991,012	7,823,590
Upper Country Water Dist	N/A	50,586	136,807	(21,103)	1,128	10,891	18,170
Ut Municipal Power Agency	N/A	659,370	1,794,244	(283,432)	14,726	142,077	238,039
Ut Public Employees Assn	N/A	97,975	271,467	(45,810)	2,196	21,164	35,899
UT School Board Risk Mgmt	N/A	665,465	1,463,205	(543)	40	109,324	169,189
Utah Assn of Counties	N/A	256,785	695,202	(107,684)	5,729	55,292	92,316
Utah Co Academy of Sciences	N/A	825,145	1,828,367	(11,406)	104	135,776	211,390
Utah Co Housing Authority	N/A	442,531	1,363,114	(321,314)	9,250	128,084	152,243
Utah Communications Authority	N/A	1,716,554	3,757,626	11,329	38	281,740	434,519
Utah Counties Indemnity Pool	N/A	170,270	463,119	(73,031)	3,803	36,687	61,446
Utah County	N/A	23,585,227	64,054,522	(9,783,716)	5,442,765	4,795,470	9,480,559
Utah Dairy Council	N/A	386,846	849,829	262	20	63,540	98,267

UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources					Deferred Inflows of Resources			Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
								Proportionate Share of Nonemployer Contributions	Proportionate Share of Employer Contributions		
6,988	42,538	4,336	33,537	1,424	—	39,297	28,892	2,703	—	31,595	
6,614	574,407	62,627	536,969	22,429	64,421	686,446	387,733	(31,061)	—	356,672	
150,831	1,228,325	205,849	962,905	34,719	19,186	1,222,659	756,568	57,046	—	813,614	
9,643	51,679	4,718	39,738	1,664	—	46,120	29,620	3,542	—	33,162	
31,330	603,846	60,827	541,900	22,510	—	625,237	365,156	10,672	—	375,828	
3,765	59,367	6,361	52,538	2,207	1,228	62,334	40,512	920	—	41,432	
30,709	592,030	61,451	530,941	22,154	13,763	628,309	378,178	(93,701)	—	284,477	
43,455	596,178	77,637	549,403	10,163	—	637,203	335,362	24,299	—	359,661	
77,417	426,803	49,910	347,010	6,508	—	403,428	222,095	37,466	—	259,561	
19,911	1,786,567	314,472	1,604,633	58,392	128,499	2,105,996	1,218,728	(90,571)	—	1,128,157	
176,164	3,784,236	613,847	3,306,250	121,728	99,667	4,141,492	2,502,981	29,264	—	2,532,245	
4,571	76,443	8,539	67,849	2,867	156	79,411	55,873	1,100	—	56,973	
427,930	15,493,074	2,155,622	14,977,739	280,915	958,838	18,373,114	9,634,644	(405,115)	—	9,229,529	
879	6,825	610	5,633	233	4,676	11,152	3,548	(2,528)	—	1,020	
33,166	58,273	3,540	23,590	1,027	—	28,157	25,720	10,774	—	36,494	
1,779	6,855	757	4,760	209	933	6,659	5,665	27	—	5,692	
8,281	130,748	12,837	115,952	4,807	7,537	141,133	76,171	1,017	—	77,188	
14,563	33,358	2,300	17,730	753	—	20,783	15,364	7,029	—	22,393	
112,107	395,177	54,539	252,319	8,972	2,265	318,095	190,271	50,458	—	240,729	
10,066	19,461	963	8,900	368	—	10,231	5,606	3,999	—	9,605	
11,430	71,731	7,192	56,919	2,407	9,284	75,802	47,196	(2,196)	—	45,000	
2,801	11,015	1,329	7,683	344	4,042	13,398	10,317	(1,142)	—	9,175	
2,384	39,219	3,777	34,893	1,442	44	40,156	21,979	1,403	—	23,382	
9,386	47,480	1,353	75,336	350	—	77,039	17,998	11,802	—	29,800	
18,540	88,321	2,243	39,685	2,731	2,580	47,239	24,063	3,603	—	27,666	
189	20,286	118	45,331	13	—	45,462	6,215	13,885	—	20,100	
369	14,858	1,486	13,724	567	320	16,097	8,645	25	—	8,670	
172,591	574,753	79,681	357,428	12,663	3,105	452,877	279,983	86,311	—	366,294	
77,613	498,177	46,079	397,794	16,600	48,204	508,677	283,763	16,698	—	300,461	
24,061	553,455	86,617	481,815	18,172	9,649	596,253	352,513	5,802	—	358,315	
1,627	15,056	2,171	12,562	562	266	15,561	16,840	316	—	17,156	
33,607	405,599	54,578	368,984	7,073	47,548	478,183	253,894	2,813	—	256,707	
356	66,361	7,029	62,473	2,596	27,943	100,041	42,281	(10,918)	—	31,363	
13,288	951,577	138,816	930,320	17,957	149,645	1,236,738	654,372	(85,352)	—	569,020	
6,359	269,562	31,257	248,469	10,499	42,751	332,976	204,479	(16,645)	—	187,834	
1,307	10,121	1,212	8,288	359	13,186	23,045	8,683	(4,142)	—	4,541	
22,485	640,304	68,835	584,141	24,438	119,188	796,602	429,563	(34,021)	—	395,542	
1,958,749	5,428,665	587,435	3,150,064	118,766	450,952	4,307,217	2,430,682	725,349	—	3,156,031	
—	8,061	827	7,637	316	3,728	12,508	4,810	(1,576)	—	3,234	
7,326	28,579	2,518	20,064	848	—	23,430	16,448	2,411	—	18,859	
1,540	49,530	4,921	45,460	1,879	2,938	55,198	28,635	(828)	—	27,807	
3,106	286,377	31,042	267,933	11,181	47,155	357,311	191,188	(18,084)	—	173,104	
69,947	8,100,597	1,142,833	8,159,391	148,538	866,146	10,316,908	5,220,615	(401,486)	—	4,819,129	
39,335	91,139	6,727	48,789	2,093	21,401	79,010	46,642	4,418	—	51,060	
7,904	143,052	13,859	128,021	5,291	11,729	158,900	80,640	591	—	81,231	
101,895	931,102	102,433	775,957	31,413	8,912	918,715	540,468	39,349	—	579,817	
396,250	21,680,753	180,081	9,329,293	833,594	196,728	10,539,696	5,623,930	32,604	—	5,656,534	
800,827	36,420,743	4,822,658	37,814,432	623,228	10,024,986	53,285,304	22,575,351	(4,061,930)	—	18,513,421	
528	14,815,143	1,795,063	17,265,734	235,525	1,780,302	21,076,624	7,789,569	(659,434)	—	7,130,135	
540	30,729	3,096	28,597	1,182	788	33,663	18,013	(88)	—	17,925	
1,227	396,069	41,413	373,836	15,500	27,228	457,977	245,872	(10,472)	—	235,400	
1,974	61,233	6,623	56,025	2,345	10,496	75,489	41,430	(5,241)	—	36,189	
97,307	375,860	39,483	276,762	5,158	24,508	345,911	173,331	26,244	—	199,575	
34,929	188,266	15,786	145,239	6,006	79,945	246,976	92,180	(8,546)	—	83,634	
32,546	379,816	50,245	344,697	6,532	—	401,474	228,475	16,269	—	244,744	
5,218	294,795	29,085	325,281	9,963	21,530	385,859	197,061	4,584	—	201,645	
487,695	1,203,992	100,318	712,093	13,141	—	825,552	431,026	222,816	—	653,842	
1,837	103,773	10,673	96,516	4,000	10,199	121,388	63,280	(3,117)	—	60,163	
409,666	20,128,460	896,268	12,876,738	763,073	745,091	15,281,170	8,121,297	(131,432)	—	7,989,865	
9,511	171,338	22,883	160,805	2,991	16,233	202,912	100,030	(3,456)	—	96,574	

**Aggregation of Funds with a Net Pension Liability**

(Employer's Collective Net Pension Liability for All Participating Retirement Systems)

**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2017

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (6.95% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (5.95%)	Net Pension Liability/(Asset) 1.00% Increase (7.95%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Utah Education Association	N/A	\$ 1,110,683	2,446,565	(4,286)	84	182,535	282,887
Utah Housing Corporation	N/A	4,063,098	10,759,864	(1,553,378)	574	1,092,385	1,002,676
Utah Lake Commission	N/A	6,286	19,776	(4,731)	144	1,384	2,560
Utah League Cities/Towns	N/A	150,505	1,022,449	(580,608)	15	189,678	542
Utah Local Governments Trust	N/A	617,975	1,696,857	(277,230)	13,828	133,323	224,755
Utah Retirement Systems	N/A	21,074,210	46,491,462	(134,812)	1,864	3,464,527	5,375,525
Utah Safety Council	N/A	302,395	679,055	(11,052)	73	49,899	78,496
Utah School Boards Association	N/A	573,841	1,270,151	(6,885)	67	94,403	146,853
Utah School Employees Assn	N/A	270,047	594,231	(572)	18	44,372	68,710
Utah State Fair Corp	N/A	396,661	874,658	(2,225)	33	65,203	101,132
Utah State University	N/A	33,104,112	74,216,629	(1,223,693)	11,317	5,749,875	8,372,595
Utah Valley Dispatch SSD	N/A	692,109	1,912,796	(319,892)	15,507	149,451	253,064
Utah Valley University	N/A	18,551,187	42,625,748	(1,563,817)	1,869	3,450,027	4,700,919
Utah Zoological Society	N/A	2,036,832	5,665,323	(968,848)	45,696	440,215	748,674
UTOPIA	N/A	1,043,452	2,932,971	(519,639)	23,461	225,851	386,876
Valley Emergency Comm Ctr	N/A	1,836,904	5,149,269	(904,166)	41,277	397,439	679,542
Vernal City	N/A	2,097,116	5,766,239	(919,614)	21,253	481,244	743,264
Vineyard Town	N/A	318,786	908,005	(167,836)	7,187	69,129	119,495
Wasatch County	N/A	5,674,634	15,121,360	(2,092,004)	75,476	1,142,310	2,081,009
Wasatch County Fire District	N/A	37,904	102,510	(15,813)	845	8,160	13,615
Wasatch Front Regional Council	N/A	817,034	2,247,773	(369,823)	18,288	176,315	297,623
Wasatch Front Waste/Recycling	N/A	1,339,198	3,740,642	(648,970)	30,070	289,608	493,958
Wasatch Integrated Waste Mgmt	N/A	1,099,823	3,029,714	(500,826)	24,625	237,383	401,064
Wasatch Mental Health SSD	N/A	6,207,092	17,041,532	(2,782,965)	138,882	1,339,103	2,257,258
Wasatch School District	N/A	20,567,965	45,476,777	(209,518)	2,218	3,382,894	5,258,037
Wasatch Uniserv	N/A	70,079	153,013	764	—	11,496	17,695
Washington City	N/A	2,718,628	7,318,033	(1,080,222)	47,029	564,364	990,744
Washington Co Solid Waste	N/A	256,920	707,405	(116,734)	5,752	55,450	93,652
Washington Co Wat Con Dist	N/A	852,133	2,340,213	(382,579)	19,067	183,844	309,959
Washington County	N/A	10,375,077	27,202,248	(3,416,615)	102,868	2,031,532	3,801,985
Washington School District	N/A	78,411,183	173,639,544	(1,055,967)	7,234	13,033,136	19,996,188
Waste Management Serv Dist #5	N/A	66,598	180,113	(27,784)	1,486	14,338	23,922
Wayne County	N/A	444,289	1,183,297	(163,448)	5,968	89,520	162,784
Wayne School District	N/A	1,743,815	3,844,947	(9,587)	146	286,645	444,571
Weber Area Dispatch 911	N/A	1,293,508	3,575,497	(598,319)	28,982	279,320	473,024
Weber Basin Water Conserv	N/A	2,411,282	6,578,076	(1,049,129)	53,882	519,748	872,304
Weber Co Mosquito Abate	N/A	226,365	612,198	(94,435)	5,049	48,735	81,309
Weber County Corp	N/A	22,807,433	60,032,300	(7,672,094)	209,705	4,491,206	8,366,823
Weber County School District	N/A	92,282,587	203,087,180	(211,887)	6,227	15,163,203	23,482,548
Weber Fire District	N/A	56,630	163,331	(31,357)	1,280	12,303	21,448
Weber Human Services	N/A	4,554,275	12,597,493	(2,113,160)	102,057	983,545	1,666,397
Weber River Water Users	N/A	25,321	171,681	(97,448)	—	31,976	—
Weber State University	N/A	13,279,806	30,795,242	(1,366,603)	1,042	2,555,489	3,348,279
Wellington City	N/A	100,395	266,573	(35,432)	916	19,566	37,266
Wellsville City Corp	N/A	160,374	440,151	(71,785)	3,589	34,597	58,304
West Bountiful City	N/A	633,513	1,671,595	(216,905)	6,412	124,333	233,156
West Kane County SSD #1	N/A	84,968	233,634	(38,365)	1,902	18,335	30,938
West Point City	N/A	329,317	919,358	(159,214)	7,394	71,211	121,415
West Valley City	N/A	14,070,313	38,040,201	(5,673,463)	3,686,231	2,807,785	5,745,040
White City Water Imp Dist	N/A	199,367	543,475	(86,436)	4,455	42,968	72,078
Willard City Corp	N/A	229,574	602,539	(76,443)	2,457	45,232	83,957
Woodland Peaks Uniserv	N/A	109,132	238,281	1,189	—	17,902	27,555
Woods Cross City	N/A	827,643	2,337,584	(418,373)	221,217	192,771	328,356
Workers Compensation Fund	N/A	23,961,447	54,745,495	(1,753,327)	2,447	4,378,497	6,080,191
<b>Grand Total</b>	<b>N/A</b>	<b>\$ 3,450,152,586</b>	<b>7,922,031,530</b>	<b>(268,300,336)</b>	<b>45,130,606</b>	<b>599,628,162</b>	<b>933,979,501</b>
<b>No Proportionate Share for 2017</b>							
Sunnyside City	N/A	\$ —	—	—	—	—	—
Valley Mental Health	N/A	—	—	—	—	—	—
Summit Mosquito Abatement Dist	N/A	—	—	—	—	—	—
Leeds Area Special Service District	N/A	—	—	—	—	—	—
Canyonlands Health Care	N/A	—	—	—	—	—	—
<b>Grand Total</b>	<b>N/A</b>	<b>\$ 3,450,152,586</b>	<b>7,922,031,530</b>	<b>(268,300,336)</b>	<b>45,130,606</b>	<b>599,628,162</b>	<b>933,979,501</b>

Columns may not add to total due to rounding.



UTAH RETIREMENT SYSTEMS

Deferred Outflows of Resources		Deferred Inflows of Resources					Pension Expense Excluding That Attributable to Employer-Paid Member Contributions			
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Allocable Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
								Proportionate Share of Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	
2,829	468,335	66,304	462,405	8,652	52,777	590,138	293,563	(22,376)	—	271,187
148,035	2,243,670	239,652	2,677,246	31,113	—	2,948,011	1,142,076	231,543	—	1,373,619
2,164	6,252	653	3,826	171	14,394	19,044	5,033	(7,641)	—	(2,608)
561	190,796	377	431,029	41	157	431,604	51,676	(43,281)	—	8,395
13,567	385,473	40,286	351,861	14,658	32,815	439,620	245,797	(13,741)	—	232,056
1,373,030	10,214,946	1,264,480	8,781,324	164,837	77,045	10,287,686	5,637,623	472,180	—	6,109,803
43,191	171,659	19,239	127,299	2,481	21,283	170,302	92,409	15,463	—	107,872
143,324	384,647	34,817	239,568	4,530	12,147	291,062	157,568	46,757	—	204,325
635	113,735	16,065	112,360	2,098	56,103	186,626	70,781	(30,846)	—	39,935
20,539	186,907	23,763	165,239	3,099	4,873	196,974	105,717	6,578	—	112,295
307,413	14,441,200	1,951,114	14,497,476	253,820	1,750,160	18,452,570	8,765,777	(435,352)	—	8,330,425
4,902	422,924	46,313	395,285	16,523	49,471	507,592	287,749	(22,895)	—	264,854
506,217	8,659,032	1,109,797	8,658,705	144,537	1,076,423	10,989,462	5,021,030	(273,128)	—	4,747,902
49,754	1,284,339	139,781	1,166,839	48,935	4,454	1,360,009	883,170	14,005	—	897,175
76,173	712,361	74,569	600,769	25,333	38,996	739,667	483,328	1,121	—	484,449
23,748	1,142,006	129,924	1,056,231	44,476	155,470	1,386,101	836,793	(62,757)	—	774,036
9,178	1,254,939	219,902	1,226,122	37,385	173,637	1,657,046	809,281	(52,903)	—	756,378
162,377	358,188	23,935	184,713	7,842	—	216,490	159,697	61,477	—	221,174
128,419	3,427,214	563,762	2,990,562	112,206	29,584	3,696,114	2,293,990	53,515	—	2,347,505
5,956	28,576	2,320	21,428	886	308	24,942	13,497	2,048	—	15,545
30,452	522,678	53,681	465,626	19,417	—	538,724	329,337	13,173	—	342,510
22,604	836,240	93,424	768,729	32,309	27,882	922,344	596,529	(10,409)	—	586,120
6,489	669,561	72,642	627,174	26,171	386,384	1,112,371	447,304	(138,872)	—	308,432
304,232	4,039,475	404,439	3,533,977	147,210	62,113	4,147,739	2,466,727	78,969	—	2,545,696
858,603	9,501,752	1,243,460	8,581,458	161,873	58,570	10,045,361	5,600,629	326,617	—	5,927,246
21,683	50,874	4,059	29,029	533	449	34,070	17,217	7,309	—	24,526
151,426	1,753,563	226,722	1,481,330	58,296	54,670	1,821,018	1,067,152	23,133	—	1,090,285
2,980	157,834	16,936	146,475	6,110	12,043	181,564	104,147	(3,628)	—	100,519
442,922	955,792	55,590	485,225	20,216	—	561,031	339,335	182,230	—	521,565
51,799	5,988,184	1,149,339	5,291,734	188,832	564,341	7,194,246	4,085,725	(199,615)	—	3,886,110
1,557,478	34,594,036	4,708,722	33,007,741	613,653	—	38,330,116	21,050,503	615,864	—	21,666,367
1,833	41,579	4,076	37,650	1,556	39	43,321	23,715	671	—	24,386
22,804	281,076	43,799	234,313	8,801	33,547	320,460	178,397	(5,081)	—	173,316
8,210	739,572	104,443	726,400	13,619	174,445	1,018,907	464,513	(68,627)	—	395,886
35,279	816,605	86,615	738,823	30,885	37,867	894,190	538,393	1,604	—	539,997
130,849	1,576,783	153,052	1,368,725	56,825	—	1,578,602	915,880	56,122	—	972,002
2,233	137,326	13,853	127,969	5,289	33,484	180,595	80,607	(12,186)	—	68,421
1,720,066	14,787,800	2,600,881	11,683,818	408,799	821,937	15,515,435	9,178,842	237,232	—	9,416,074
860,280	39,512,258	5,491,649	38,399,051	716,965	625,454	45,233,119	24,208,862	(54,892)	—	24,153,970
39,778	74,809	4,448	33,012	1,411	103	38,974	30,412	(2,680)	—	27,732
140,303	2,892,302	305,794	2,602,147	108,816	62,404	3,079,161	1,904,302	24,836	—	1,929,138
—	31,976	—	72,613	—	—	72,613	8,072	14,042	—	22,114
158,742	6,063,552	785,612	6,390,961	102,479	523,488	7,802,540	3,521,635	(36,958)	—	3,484,677
1,924	59,672	11,841	51,209	1,825	16,658	81,533	43,741	(9,207)	—	34,534
12,929	109,419	10,434	91,293	3,802	340	105,869	63,575	4,213	—	67,788
158,508	522,409	70,672	324,592	11,662	7,071	413,997	259,035	73,068	—	332,103
4,779	55,954	5,571	48,411	2,018	845	56,845	34,125	1,158	—	35,283
3,748	203,768	22,926	188,987	7,941	13,955	233,809	146,196	(4,665)	—	141,531
89,104	12,328,160	478,506	7,573,049	473,957	597,210	9,122,722	4,728,041	(302,933)	—	4,425,108
5,206	124,707	12,615	113,128	4,695	1,364	131,802	75,318	1,216	—	76,534
26,080	157,726	24,647	117,845	4,249	5,843	152,584	89,261	8,108	—	97,369
1,499	46,956	6,322	45,205	829	1	52,357	26,811	950	—	27,761
24,332	766,676	25,065	505,633	27,390	17,886	575,974	267,546	21,849	—	289,395
1,009,103	11,470,238	1,435,907	11,005,094	186,992	—	12,627,993	6,493,002	511,615	—	7,004,617
75,043,507	1,653,781,776	206,565,057	1,528,482,770	34,717,344	82,313,256	1,852,078,427	994,891,986	(6,246,803)	(1,476,874)	987,168,309
—	—	—	—	—	1,498	1,498	—	(928)	—	(928)
6,944	6,944	—	—	—	4,000,018	4,000,018	—	(2,068,641)	—	(2,068,641)
—	—	—	—	—	13,769	13,769	—	(6,438)	—	(6,438)
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	31,377	31,377	—	(19,172)	—	(19,172)
75,050,451	1,653,788,720	206,565,057	1,528,482,770	34,717,344	86,359,917	1,856,125,088	994,891,986	(8,341,981)	(1,476,874)	985,073,131

# SYSTEMS AND PLANS STATISTICAL HIGHLIGHTS

Year Ended December 31, 2017

## Defined Benefit Systems

	Noncontributory	Contributory	Public Safety	Firefighters	Judges	Governors and Legislators	Tier 2 Public Employees	Tier 2 Public Safety and Firefighter	Tier 2 Defined Contribution Only	Averages and Totals All Systems
<b>Membership Information</b>										
<b>Total Membership</b>	160,768	5,957	16,166	3,460	273	400	28,353	2,774	6,065	224,216
Active	59,578	621	5,704	1,602	114	52	27,152	2,699	5,662	103,184
Terminated vested	47,292	1,294	4,824	435	11	95	1,175	75	403	55,604
Retired	53,898	4,042	5,638	1,423	148	253	26	—	—	65,428
<b>Total 2017 Active Members</b>	59,578	621	5,704	1,602	114	52	27,152	2,699	5,662	103,184
Average age	49.7	57.7	43.3	43.5	55.4	57.1	36.5	30.5	37.1	44.6
Average years of service	16.1	29.8	15.8	15.7	15.8	12.2	2.6	2.7	3.3	11.5
Average annual salary	\$ 54,845	62,264	59,841	69,242	162,345	N/A	39,229	41,946	45,078	50,504
<b>2017 Retirees</b>										
Number	3,340	123	266	62	10	11	17	—	N/A	3,829
Average age	64.1	62.9	52.8	51.9	63.7	65.6	67.5	—	N/A	63.1
Average years of service	21.7	29.5	21.8	23.6	27.4	10.8	4.7	—	N/A	21.9
Final average annual salary	\$ 50,983	56,336	60,163	76,882	155,269	N/A	32,516	—	N/A	52,413
Average annual benefit	22,223	33,141	31,749	41,010	115,756	3,973	2,116	—	N/A	23,650
Average annual benefit —all retirees	\$ 22,576	19,831	29,504	37,191	87,512	3,883	1,932	—	N/A	23,375
<b>Financial Information</b>										
<b>Changes in Fiduciary Net Position Restricted for Pensions</b>										
<i>(in thousands)</i>										
Contributions	\$ 871,540	10,621	146,607	26,398	9,040	404	79,175	11,126	N/A	1,154,911
Investment income	2,987,282	155,949	421,917	146,736	23,435	1,353	33,249	3,989	N/A	3,773,910
Pension benefits	1,248,037	84,761	172,870	54,793	13,621	973	417	61	N/A	1,575,533
Plan fiduciary net position	\$ 25,205,127	1,283,466	3,576,517	1,234,407	198,483	11,220	329,218	40,180	N/A	31,878,618
<b>Actuarial Information (GASB 67)</b>										
<b>Employers' Net Pension Liability/(Asset) <i>(dollars in thousands)</i></b>										
Total pension liability	\$ 28,088,619	1,298,183	4,085,203	1,205,727	231,069	13,074	338,035	39,023	N/A	35,298,933
Plan fiduciary net position (market value)	25,205,127	1,283,466	3,576,517	1,234,407	198,483	11,220	329,218	40,180	N/A	31,878,618
Employers net pension liability/(asset)	2,883,492	14,717	508,686	(28,680)	32,586	1,854	8,817	(1,157)	N/A	3,420,315
Percentage of the total pension liability	89.7%	98.9%	87.5%	102.4%	85.9%	85.8%	97.4%	103.0%	N/A	90.3%
<b>Actuarial Information (Funding)</b>										
<b>Funding Progress <i>(dollars in thousands)</i></b>										
Actuarial value of assets	\$ 24,412,985	1,245,414	3,462,919	1,195,358	192,037	10,855	318,754	38,871	N/A	30,877,194
Actuarial accrued liability	\$ 28,088,619	1,298,183	4,085,203	1,205,727	231,069	13,074	338,035	39,023	N/A	35,298,933
Unfunded actuarial accrued liability	\$ 3,675,634	52,769	622,284	10,369	39,032	2,219	19,281	152	N/A	4,421,739
Funded ratios	86.9%	95.9%	84.8%	99.1%	83.1%	83.0%	94.3%	99.6%	N/A	87.5%

SYSTEMS AND PLANS STATISTICAL HIGHLIGHTS *(Concluded)*

Year Ended December 31, 2017

## Defined Contribution Plans

	401(k)	457	Roth IRA	Traditional IRA	
<b>Membership Information</b>					
<b>Number of Active Employees Eligible to Participate</b>	106,137	102,180	224,216	224,216	
Employee contributions (excluding employer contributions):					
Number of employees contributing	39,423	8,403	7,507	548	
Percent of eligible employees contributing	37.1%	8.2%	3.3%	0.2%	
Average percent of salary deferred by employees	5.6%	6.1%	3.7%	2.5%	
Total participants	171,966	17,903	10,383	2,042	
Average participant account balance	\$ 29,092	31,804	11,490	50,151	
<b>Financial Information</b>					
<b>Changes in Fiduciary Net Position</b>					
	<i>(in thousands)</i>				<b>Total</b>
Contributions	\$ 295,804	31,475	19,669	20,593	367,541
Net investment income	630,516	72,210	15,389	9,465	727,580
Refunds	254,672	27,827	4,752	9,035	296,286
Plan net position	\$ 5,002,908	569,390	119,297	102,409	5,794,004

**Back cover:** (left to right, top to bottom)

Judge Diana Hagen, Utah Court of Appeals

Alexia Martinez, Digital Media Specialist, Ogden City

Aubrey Freiberg, Firefighter, Lehi City Fire Department

Eric Holmes, Public Information Officer, Unified Fire Authority

Representative Sue Duckworth, Utah House of Representatives, District 22

Shawn Bias, Sergeant, West Valley City Police Department

Michael Fazio, City Engineer, Bluffdale City

Logan Sattelmair, Police Officer, Ogden City Police Department

Greta Ericsson, Teacher, DDI Vantage



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