

# Utah Retirement Systems

A Component Unit of the State of Utah

## 2016 Comprehensive Annual Financial Report

for the Year Ended December 31, 2016



**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 Plan**

**Roth and Traditional IRAs**

**Health Reimbursement  
Arrangement (HRA)**





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, 2015**

Executive Director/CEO



Public Pension Coordinating Council

**Public Pension Standards Award  
For Funding and Administration  
2016**

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

## 2016 Comprehensive Annual Financial Report

for the Year Ended December 31, 2016

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

Health Reimbursement Arrangement (HRA)



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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**Aggregation of Funds with a Net Pension Asset**

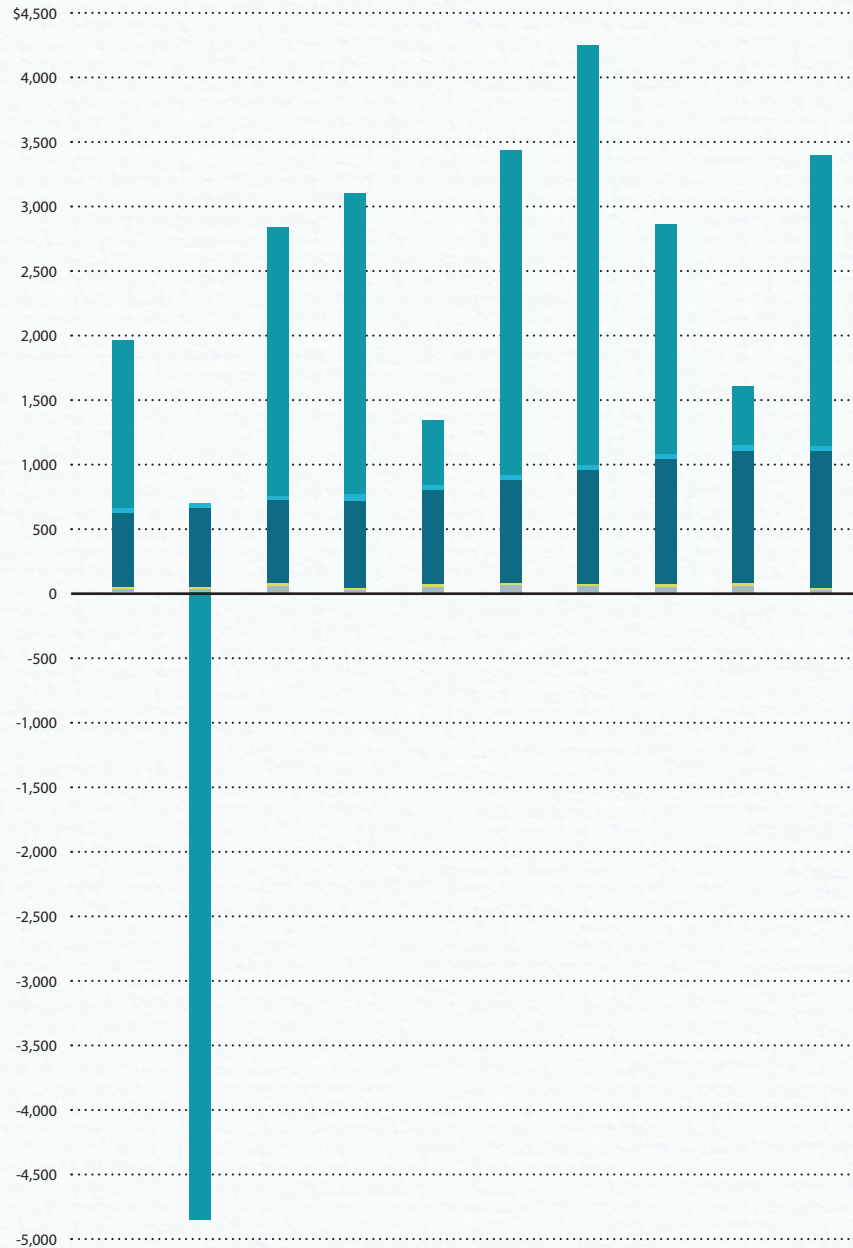
**Aggregation of Funds with a Net Pension Liability**

**Systems and Plans Statistical Highlights**

Utah Retirement Systems

# Additions by Source

(in millions)



(in millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Net investment income (loss)	\$ 1,304	(4,862)	2,088	2,328	502	2,513	3,261	1,786	462	2,249
Employee contributions	41	36	36	60	39	40	40	39	41	39
Employer contributions	581	629	647	682	739	796	889	974	1,036	1,073
Court fees and fire insurance tax	16	12	18	13	15	18	13	16	19	12
Transfers from systems	12	15	44	7	37	55	42	38	42	10
<b>Totals</b>	<b>\$ 1,954</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>



Utah Retirement Systems

2016

Comprehensive Annual Financial Report

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## Utah Retirement Systems

# 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, 2017

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

Dear Board Members:

We are pleased to present the 2016 Comprehensive Annual Financial Report of the Utah Retirement Systems (Systems), including the 401(k), 457, Roth and traditional IRAs, and the Health Reimbursement Arrangement (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 2016.

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, Roth and traditional IRAs, and Health Reimbursement Arrangement (HRA).

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.



## Letter of Transmittal *(Continued)*

The Utah Retirement Systems and 401(k), 457, Roth and traditional IRAs, and HRA 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 166 through 181. 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 2016 annual actuarial valuation, 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 7.5% to 7.2%, decrease the inflation assumption from 2.75% to 2.6%, and decrease the payroll growth assumption and wage inflation by 0.15%.

## Investments

The economic condition of the Systems is based primarily upon investment earnings. For 2016 the Systems experienced a 8.79% 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 134 of this report.

The investment portfolio mix at fair value as of the end of 2016 was 15% debt securities, 35% equities, 11% private equity, 15% real assets, 8% short-term, and 16% 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 \$33.9 billion in both the Defined Benefit and Defined Contribution investments at fair value as of December 31, 2016, 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 the 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 7.2%) 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

## Letter of Transmittal *(Concluded)*

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, 2015. 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 32 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 2016 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, 2017

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

Dear Members of the Retirement Systems:

Think, for a moment, of Utah Retirement Systems as your car.

With this Comprehensive Annual Financial Report, you can look under the hood, take apart the engine, and examine the inner-workings down to the finest nuts and bolts. It contains statistical and financial information about URS detailed enough to satisfy even the most sophisticated automotive enthusiast.

But, if you're more like the average person, you probably have just a couple of simple questions. Will my car start when I need it? Will it get me where I want to go?

Well, let me sum up hundreds of pages of schematics and technical specifications with one clear assurance: When you're ready to take the keys, your pension will be gassed up and waiting.

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. In 2016, things continued to run smoothly. If you have a few moments to kick the tires with me, I'd like to share some highlights.

- The URS pension fund earned an 8.8% return in 2016, growing by \$1.86 billion to \$28.5 billion, an all-time high.
- At year's end, the Plans Fiduciary Net Position, as a percentage of the Total Pension Liability, was 86%. Many 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 \$357.5 million in 2016, with total assets reaching more than \$5 billion, both all-time highs.

These numbers continue to demonstrate a well-oiled machine. However, the Board is committed to taking proactive steps well before any warning lights start to blink. That's why we lowered the assumed rate of return from 7.5% to 7.2% in 2016. This more conservative estimate helps ensure a healthy outlook for the pension fund for years to come.

So, I can confidently assure you URS will provide its promised benefits to current and future retirees. Wherever the open road takes you.

Sincerely,



William W. Wallace  
President, Utah State Retirement Board



UTAH RETIREMENT SYSTEMS  
**Retirement Board**

*Pictured Left to Right*

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

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

*Vice 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

*President*  
**William W. Wallace**  
 Appointed September 18, 2013  
 Term Expires July 1, 2019  
 Represents Investment Community

**Executive Director**



**Daniel D. Andersen**

**Membership Council**

*Executive Committee Members:*

*Chairperson*

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

*Vice Chairperson*

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

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

**Mr. Tom Hardy** ..... Represents Utah League of Cities and Towns

**Senior Trooper**

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

*Council Members:*

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

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

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

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

**Honorable**

**Kimberly K. Hornack** ..... Represents Utah Judicial Council

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

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

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

# Organization Chart

As of December 31, 2016

## MEMBERSHIP COUNCIL

### Administrative Staff

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

**Todd W Rupp, CPA**  
*Deputy Executive Director*

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

**Dee S Larsen**  
*General Counsel*

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

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

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

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

**Robert K. Kellersberger, CGFM**  
*Director, Finance*

**Matthew K. Judd**  
*Director, Records Management*

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

**Judy C. Lund**  
*Director, Retirement*

**Ed K. Archer, CIA, CISA**  
*Chief Compliance Officer — Investments*

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


### 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



**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

**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.*



**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 RECORDS MANAGEMENT**  
.....  
*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
- Health Reimbursement Arrangement (HRA)



**DIRECTOR RETIREMENT**  
.....  
*Judy C. Lund*

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



**CHIEF COMPLIANCE OFFICER INVESTMENTS**  
.....  
*Ed K. Archer*

- Investment Compliance
- Proxy Voting



**DIRECTOR RETIREMENT PLANNING**  
.....  
*Ryan C. Ashcraft*

- Member Education
- Retirement Planning
- Seminars
- Stakeholder Relations

# Noncontributory Retirement System Highlights

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

## Service Retirement

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

## Service Benefit Formula

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

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

## Cost-of-Living Allowance

Up to 4% annually on original retirement benefit.

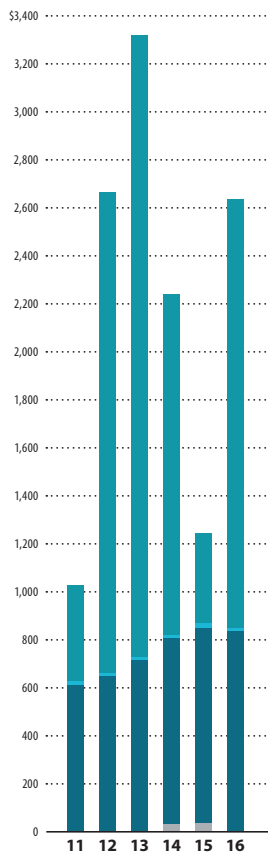
## Contribution Rates

(as of 12-31-2016)

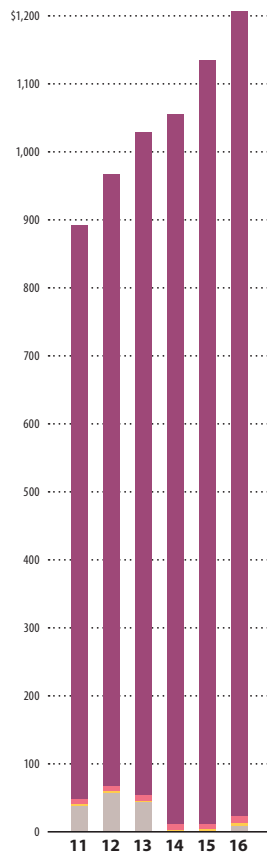
Employer rate for the State and School Division (Level A) is 22.19% of covered salary and 18.47% for the Local Government Division (Level B).

For more detail see Summary of Plan Provisions on page 166.

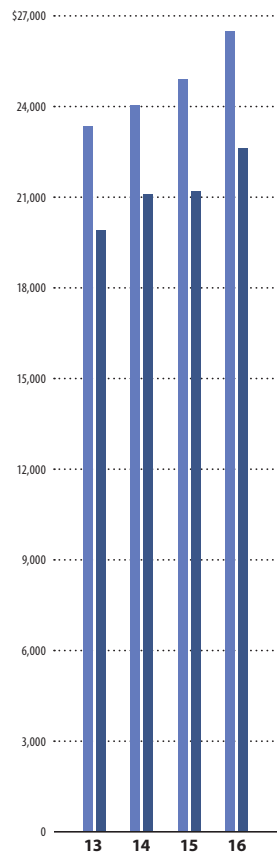
**Additions by Source**  
(in millions)



**Deductions by Type**  
(in millions)



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



	(in millions)					
	2011	2012	2013	2014	2015	2016
<b>Additions by Source</b>						
Investment income	\$ 401.1	2,001.0	2,589.0	1,419.1	366.7	1,783.9
Member contributions	12.9	15.0	14.2	13.6	17.0	16.3
Employer contributions	610.3	644.9	710.9	772.4	813.5	831.6
Transfers from systems	—	—	—	30.5	33.7	—
<b>Totals</b>	<b>\$ 1,024.3</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>

	(in millions)					
	2011	2012	2013	2014	2015	2016
<b>Deductions by Type</b>						
Benefit payments	\$ 843.7	900.1	974.7	1,043.8	1,123.6	1,184.3
Administrative expense	7.3	8.4	8.3	8.8	8.8	8.9
Refunds	2.5	2.9	2.5	2.2	2.5	4.4
Transfers to systems	37.5	55.6	42.3	—	—	8.0
<b>Totals</b>	<b>\$ 891.0</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>

	(in millions)			
	2013	2014	2015	2016
<b>Schedule of Employers Net Pension Liability*</b>				
Total pension liability	\$ 23,344.3	24,043.3	24,899.5	26,501.8
Statement of plan net position	19,915.8	21,096.5	21,192.4	22,618.7
<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>

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





### Noncontributory Composite Picture

**Total Membership:** 161,542

Active: 63,214 • Terminated Vested: 47,933 • Retired: 51,355

**2016 Active Members:** 63,214

Average Age: 49.2 • Average Years of Service: 15.5 • Average Annual Salary: \$51,984

**2016 Retirees Number:** 3,965

Average Age: 64.2 • Average Years of Service: 21.1 • Average Annual Salary: \$48,980  
Average Annual Benefit: \$21,224

**Average Annual Benefit — All Retirees:** \$22,475

*Pictured: Mark Busico, Streets Supervisor, Tooele City Corp.*

# Contributory Retirement System Highlights

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

## Service Retirement

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

## Service Benefit Formula

- Number of years of service before 7-1-75 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

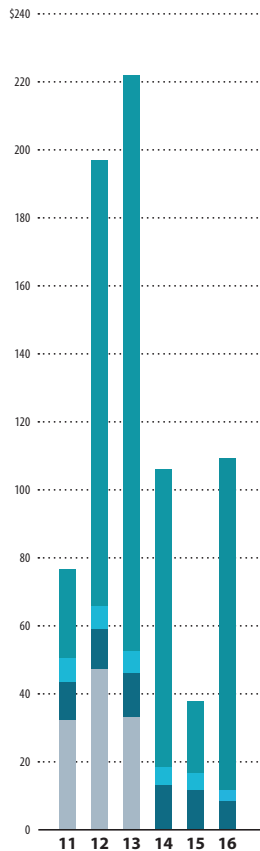
(as of 12-31-2016)

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 167.

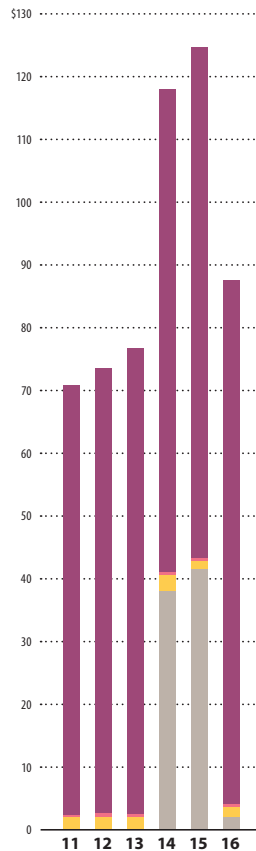
**Additions by Source**

(in millions)



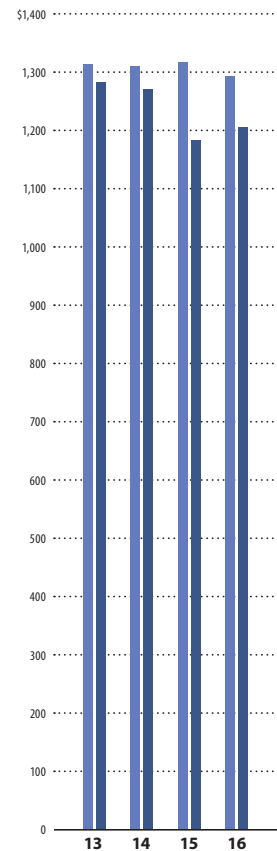
**Deductions by Type**

(in millions)



**Schedule of Employers Net Pension Liability**

(in millions)



**Additions by Source**

	2011	2012	2013	2014	2015	2016
Investment income	\$ 26.0	131.2	169.5	87.6	21.2	97.7
Member contributions	7.3	7.0	6.4	5.4	4.8	3.4
Employer contributions	11.1	11.7	12.9	13.0	11.7	8.2
Transfers from systems	32.1	47.1	33.1	—	—	—
<b>Totals</b>	<b>\$ 76.5</b>	<b>197.0</b>	<b>221.9</b>	<b>106.0</b>	<b>37.7</b>	<b>109.3</b>

**Deductions by Type**

	2011	2012	2013	2014	2015	2016
Benefit payments	\$ 68.4	70.9	74.2	77.0	81.4	83.4
Administrative expense	0.4	0.5	0.5	0.5	0.5	0.4
Refunds	1.9	2.0	1.9	2.4	1.2	1.7
Transfers to systems	—	—	—	38.0	41.5	1.9
<b>Totals</b>	<b>\$ 70.7</b>	<b>73.4</b>	<b>76.6</b>	<b>117.9</b>	<b>124.6</b>	<b>87.4</b>

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

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

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



### Contributory Composite Picture

**Total Membership:** 6,329

Active: 738 • Terminated Vested: 1,274 • Retired: 4,165

**2016 Active Members:** 738

Average Age: 57.3 • Average Years of Service: 29.0 • Average Annual Salary: \$60,936

**2016 Retirees Number:** 227

Average Age: 62.1 • Average Years of Service: 30.1 • Average Annual Salary: \$52,211  
Average Annual Benefit: \$30,729

**Average Annual Benefit — All Retirees:** \$19,284

*Pictured: Kayleen Meikle, Corporation Secretary/Office Manager, Davis & Weber Counties Canal*

# Public Safety Retirement 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.

## 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 12-31-2016)

### Noncontributory

Employer rates range from 32.20% to 48.68% of covered salary.

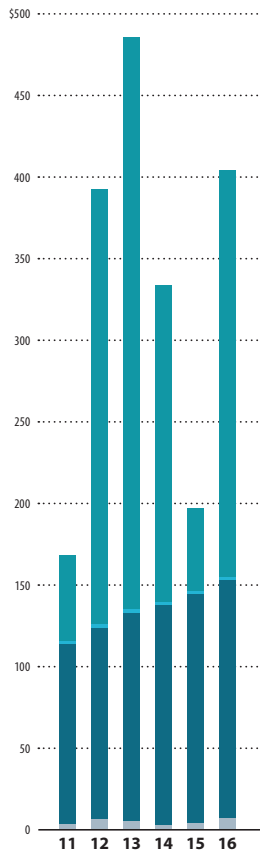
### Contributory

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 168.

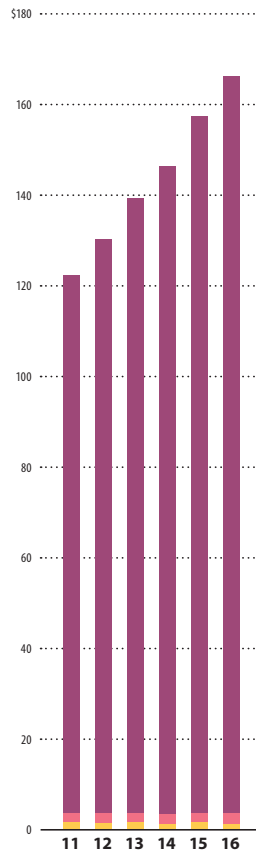
**Additions by Source**

(in millions)



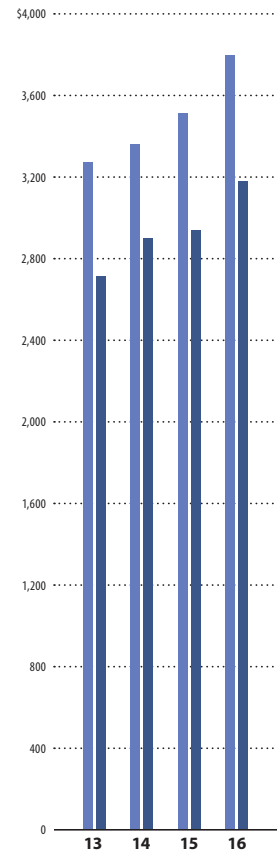
**Deductions by Type**

(in millions)



**Schedule of Employers Net Pension Liability**

(in millions)



	(in millions)					
<b>Additions by Source</b>	2011	2012	2013	2014	2015	2016
Investment income	\$ 52.7	266.8	350.6	194.2	50.7	249.0
Member contributions	1.1	1.2	1.3	0.8	0.9	0.8
Employer contributions	110.8	118.0	128.7	135.6	141.0	147.1
Transfers from systems	3.3	6.4	4.7	2.7	4.0	6.7
<b>Totals</b>	<b>\$ 167.9</b>	<b>392.4</b>	<b>485.3</b>	<b>333.3</b>	<b>196.6</b>	<b>403.6</b>

	(in millions)					
<b>Deductions by Type</b>	2011	2012	2013	2014	2015	2016
Benefit payments	\$ 120.6	128.5	137.5	144.8	155.4	164.5
Administrative expense	1.0	1.2	1.2	1.2	1.2	1.3
Refunds	0.5	0.3	0.5	0.2	0.5	0.2
<b>Totals</b>	<b>\$ 122.1</b>	<b>130.0</b>	<b>139.2</b>	<b>146.2</b>	<b>157.1</b>	<b>166.0</b>

	(in millions)			
<b>Schedule of Employers Net Pension Liability*</b>	2013	2014	2015	2016
Total pension liability	\$ 3,269.1	3,360.0	3,511.2	3,794.9
Statement of plan net position	2,712.2	2,899.4	2,938.8	3,176.5
<b>Net pension liability</b>	<b>\$ 556.9</b>	<b>460.6</b>	<b>572.4</b>	<b>618.4</b>

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



## Public Safety Composite Picture

**Total Membership: 14,587**

Active: 6,032 • Terminated Vested: 4,615 • Retired: 5,412

**2016 Active Members: 6,032**

Average Age: 42.6 • Average Years of Service: 15.2 • Average Annual Salary: \$57,381

**2016 Retirees Number: 368**

Average Age: 53.5 • Average Years of Service: 22.6 • Average Annual Salary: \$60,881  
Average Annual Benefit: \$34,036

**Average Annual Benefit — All Retirees: \$29,241**

*Pictured: Clayton Eves, Deputy, Summit County Sheriff's Office*

# Firefighters Retirement 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.

## 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

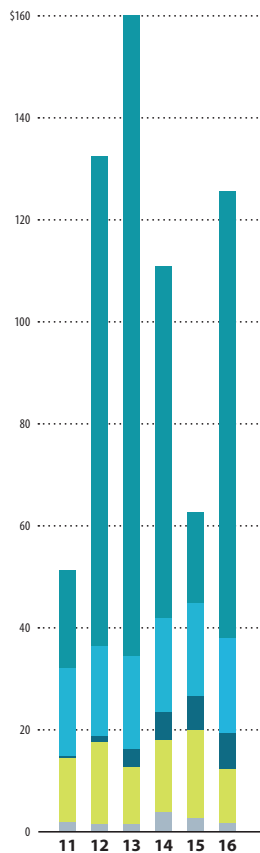
(as of 12-31-2016)

Member rate for Division A (with Social Security) is 15.05% of covered salary and 16.71% for Division B (without Social Security). Employer rate for Division A is 3.89% of covered salary and 6.66% for Division B.

For more detail see Summary of Plan Provisions on page 170.

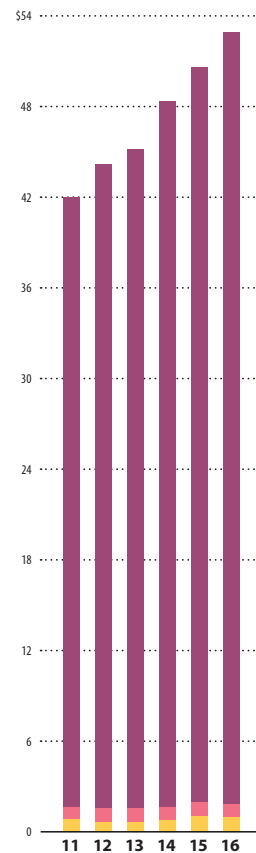
**Additions by Source**

(in millions)



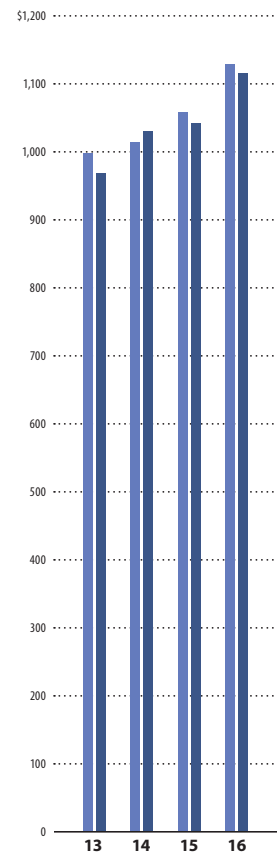
**Deductions by Type**

(in millions)



**Schedule of Employers Net Pension Liability**

(in millions)



Additions by Source	(in millions)					
	2011	2012	2013	2014	2015	2016
Investment income	\$ 19.2	96.3	125.7	69.1	17.9	87.7
Member contributions	17.3	17.5	18.3	18.3	18.2	18.7
Employer contributions	0.3	1.3	3.5	5.5	6.7	7.0
Fire insurance tax	12.7	16.1	11.3	14.2	17.2	10.6
Transfers from systems	1.7	1.3	1.3	3.7	2.6	1.6
<b>Totals</b>	<b>\$ 51.2</b>	<b>132.5</b>	<b>160.1</b>	<b>110.8</b>	<b>62.6</b>	<b>125.6</b>

Deductions by Type	(in millions)					
	2011	2012	2013	2014	2015	2016
Benefit payments	\$ 41.4	43.7	44.7	47.7	49.7	52.1
Administrative expense	0.3	0.4	0.4	0.4	0.4	0.4
Refunds	0.3	0.1	0.1	0.2	0.5	0.4
<b>Totals</b>	<b>\$ 42.0</b>	<b>44.2</b>	<b>45.2</b>	<b>48.3</b>	<b>50.6</b>	<b>52.9</b>

Schedule of Employers Net Pension Liability*	(in millions)			
	2013	2014	2015	2016
Total pension liability	\$ 999.0	1,014.3	1,058.2	1,129.7
Statement of plan net position	968.7	1,031.0	1,043.0	1,115.7
<b>Net pension liability (asset)</b>	<b>\$ 30.3</b>	<b>(16.7)</b>	<b>15.2</b>	<b>14.0</b>

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



## Firefighters Composite Picture

**Total Membership: 3,325**

Active: 1,663 • Terminated Vested: 390 • Retired: 1,372

**2016 Active Members: 1,663**

Average Age: 42.8 • Average Years of Service: 15.0 • Average Annual Salary: \$67,114

**2016 Retirees Number: 72**

Average Age: 55.0 • Average Years of Service: 25.2 • Average Annual Salary: \$79,969  
Average Annual Benefit: \$47,671

**Average Annual Benefit — All Retirees: \$36,574**

*Pictured: David Yei, Firefighter/Paramedic, Provo City*

# Judges Retirement System Highlights

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

## 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.

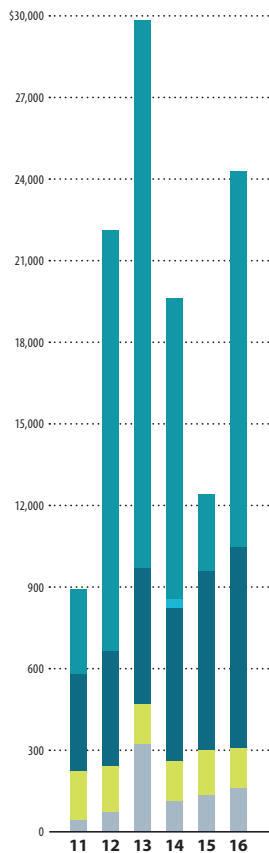
## Contribution Rates

(as of 12-31-2016)

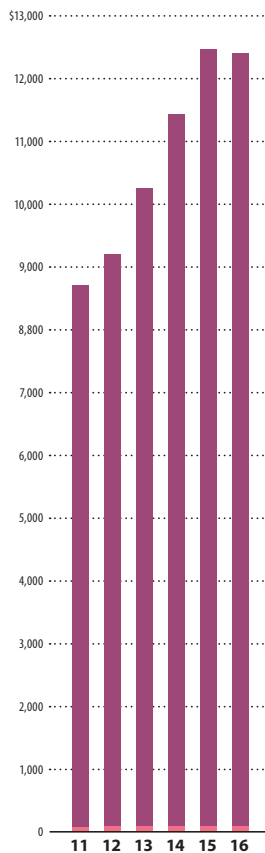
Employer rate is 42.12% of covered salary.

For more detail see Summary of Plan Provisions on page 171.

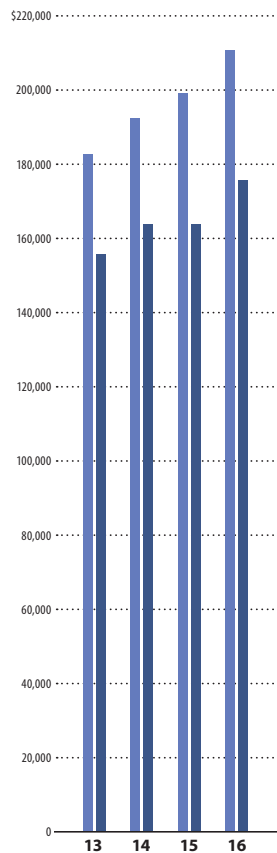
**Additions by Source**  
(in thousands)



**Deductions by Type**  
(in thousands)



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



		(in thousands)					
<b>Additions by Source</b>		2011	2012	2013	2014	2015	2016
■ Investment income		\$ 3,114	15,485	20,130	11,068	2,842	13,820
■ Member contributions		—	—	—	317	—	—
■ Employer contributions		3,588	4,232	4,990	5,627	6,555	7,382
■ Court fees		1,815	1,666	1,498	1,486	1,653	1,470
■ Transfers from systems		390	710	3,186	1,092	1,334	1,600
<b>Totals</b>		<b>\$ 8,907</b>	<b>22,093</b>	<b>29,804</b>	<b>19,590</b>	<b>12,384</b>	<b>24,272</b>

		(in thousands)					
<b>Deductions by Type</b>		2011	2012	2013	2014	2015	2016
■ Benefit payments		\$ 8,649	9,135	10,189	11,361	12,400	12,330
■ Administrative expense		60	66	66	71	71	71
<b>Totals</b>		<b>\$ 8,709</b>	<b>9,201</b>	<b>10,255</b>	<b>11,432</b>	<b>12,471</b>	<b>12,401</b>

		(in thousands)			
<b>Schedule of Employers Net Pension Liability*</b>		2013	2014	2015	2016
■ Total pension liability		\$ 182,638	192,285	198,986	210,623
■ Statement of plan net position		155,676	163,834	163,747	175,618
<b>Net pension liability</b>		<b>\$ 26,962</b>	<b>28,451</b>	<b>35,239</b>	<b>35,005</b>

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





## Judges Composite Picture

**Total Membership: 257**

Active: 115 • Terminated Vested: 3 • Retired: 141

**2016 Active Members: 115**

Average Age: 56.1 • Average Years of Service: 16.6 • Average Annual Salary: \$155,852

**2016 Retirees Number: 7**

Average Age: 65.3 • Average Years of Service: 29.2 • Average Annual Salary: \$139,428  
Average Annual Benefit: \$106,141

**Average Annual Benefit — All Retirees: \$84,793**

*Pictured: Judge Thomas M. Higbee, Fifth District Juvenile Court*

# Utah Governors & Legislators

## Retirement Plan Highlights

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

### Service Retirement

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

### Service Benefit Formula

#### Governors

\$500\*per month per term.

\*Increased semi annually up to 2% based on the CPI. The amount as of 12-31-16 is \$1,360.

#### 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 12-31-16 is \$29.60.

### Cost-of-Living Allowance

Up to 4% annually on original retirement benefit.

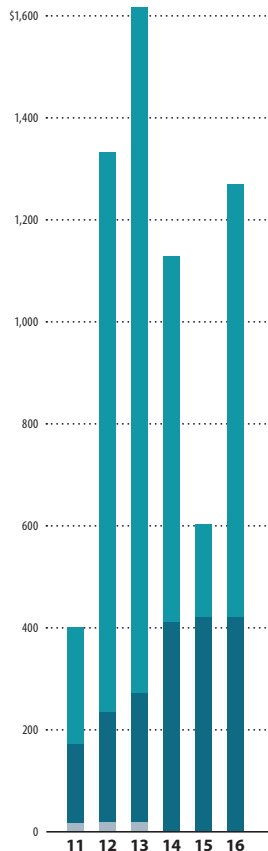
### Contribution Rates

(as of 12-31-2016)

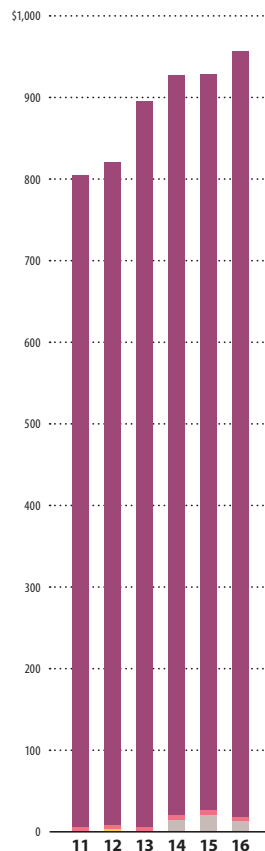
There was a 2016-17 appropriation payable by June 30, 2017, to the Utah Governors and Legislators Retirement Plan of \$404,409.

For more detail see Summary of Plan Provisions on page 172.

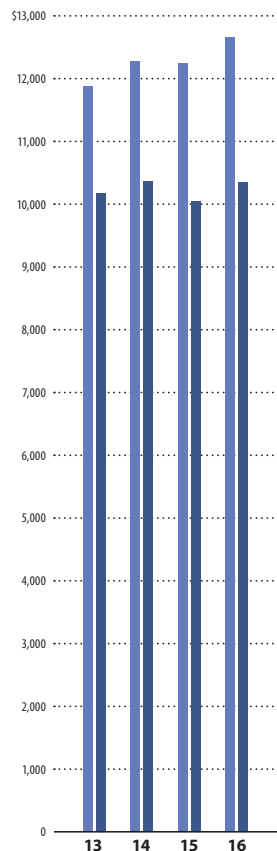
**Additions by Source**  
(in thousands)



**Deductions by Type**  
(in thousands)



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

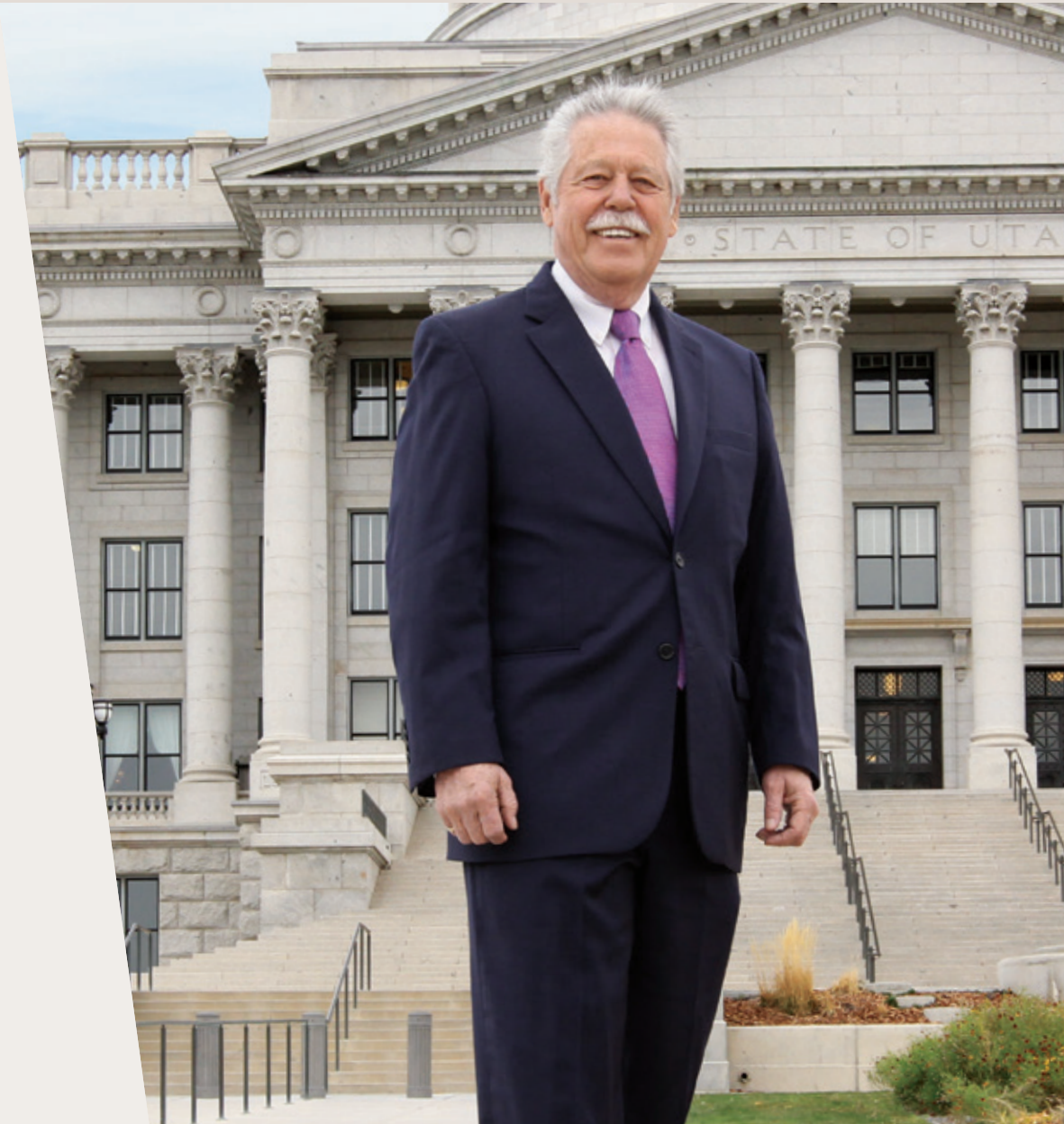


		(in thousands)					
<b>Additions by Source</b>		2011	2012	2013	2014	2015	2016
■ Investment income		\$ 231	1,100	1,346	717	181	849
■ Employer contributions		153	214	252	411	421	421
■ Transfers from systems		17	19	19	—	—	—
<b>Totals</b>		<b>\$ 401</b>	<b>1,333</b>	<b>1,617</b>	<b>1,128</b>	<b>602</b>	<b>1,270</b>

		(in thousands)					
<b>Deductions by Type</b>		2011	2012	2013	2014	2015	2016
■ Benefit payments		\$ 801	815	892	909	904	941
■ Administrative expense		4	5	4	5	5	4
■ Refunds		—	1	—	—	—	—
■ Transfers to systems		—	—	—	14	20	12
<b>Totals</b>		<b>\$ 805</b>	<b>821</b>	<b>896</b>	<b>928</b>	<b>929</b>	<b>957</b>

		(in thousands)			
<b>Schedule of Employers Net Pension Liability*</b>		2013	2014	2015	2016
■ Total pension liability		\$ 11,879	12,267	12,247	12,654
■ Statement of plan net position		10,166	10,366	10,039	10,352
<b>Net pension liability</b>		<b>\$ 1,713</b>	<b>1,901</b>	<b>2,208</b>	<b>2,302</b>

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



## Utah Governors and Legislators Composite Picture

**Total Membership: 336**

Active: 61 • Terminated Vested: 96 • Retired: 244

**2016 Active Members: 61**

Average Age: 55.8 • Average Years of Service: 12.1 • Average Annual Salary: \$12,285

**2016 Retirees Number: 17**

Average Age: 66.1 • Average Years of Service: 6.1 • Average Annual Salary: \$19,603  
Average Annual Benefit: \$7,125

**Average Annual Benefit — All Retirees: \$3,863**

*Pictured: Senator Gene Davis, Minority Leader, Utah State Senate*

# Tier 2 Public Employees

## Contributory Retirement 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.

### 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

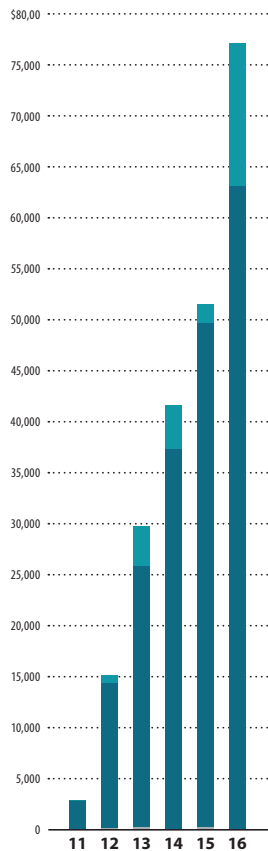
(as of 12-31-2016)

Employer rates range from 14.91% to 18.24% of covered salary.

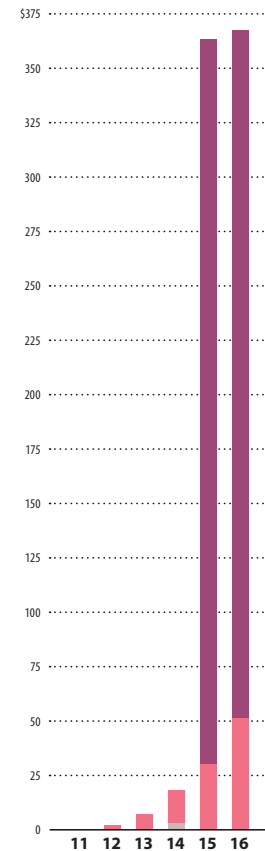
(Includes active member death benefit and Tier 1 amortization rate.)

For more detail see Summary of Plan Provisions on page 173.

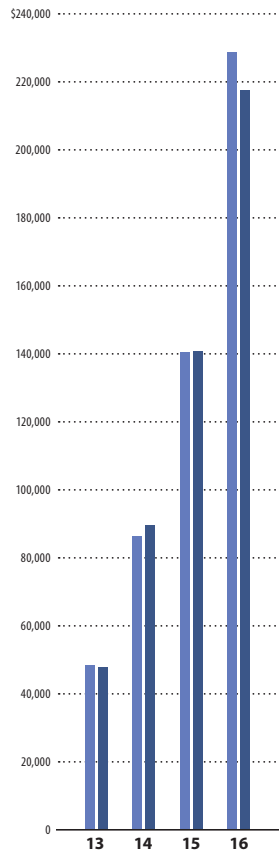
**Additions by Source**  
(in thousands)



**Deductions by Type**  
(in thousands)



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



	(in thousands)					
<b>Additions by Source</b>	2011	2012	2013	2014	2015	2016
Investment income	\$ 9	922	4,017	4,320	1,963	14,059
Employer contributions	2,790	14,208	25,743	37,299	49,645	63,062
Transfers from systems	—	5	3	—	3	—
<b>Totals</b>	<b>\$ 2,799</b>	<b>15,135</b>	<b>29,763</b>	<b>41,619</b>	<b>51,611</b>	<b>77,121</b>

	(in thousands)					
<b>Deductions by Type</b>	2011	2012	2013	2014	2015	2016
Benefit payments	\$ —	—	—	—	333	316
Administrative expense	—	1	6	16	30	51
Transfers to systems	—	—	—	2	—	—
<b>Totals</b>	<b>\$ —</b>	<b>1</b>	<b>6</b>	<b>18</b>	<b>363</b>	<b>367</b>

	(in thousands)			
<b>Schedule of Employers Net Pension Liability</b>	2013	2014	2015	2016
Total pension liability*	\$ 48,292	86,261	140,321	228,450
Statement of plan net position	47,690	89,291	140,539	217,293
<b>Net pension liability</b>	<b>\$ 602</b>	<b>(3,030)</b>	<b>(218)</b>	<b>11,157</b>

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



## Tier 2 Public Employees Composite Picture

**Total Membership: 27,051**

Active: 24,372 • Terminated Vested: 464 • Retired: 9

**2016 Active Members: 24,372**

Average Age: 35.9 • Average Years of Service: 2.2 • Average Annual Salary: \$30,809

**2016 Retirees Number: 8**

Average Age: 67.0 • Average Years of Service: 4.5 • Average Annual Salary: \$24,789  
Average Annual Benefit: \$1,651

**Average Annual Benefit — All Retirees: \$1,565**

*Pictured: Chris Neal, Finance Specialist, Utah's Hogle Zoo*

# Tier 2 Public Safety & Firefighter

## Contributory Retirement 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 indirectly involved in fire fighting and whose duties are classified as hazardous.

### 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

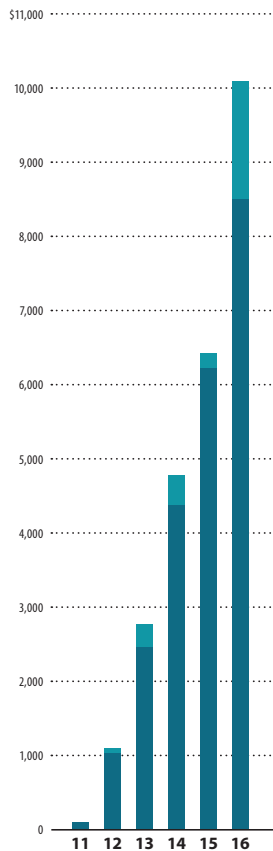
(as of 12-31-2016)

Employer rates range from 10.75% to 37.02% of covered salary.

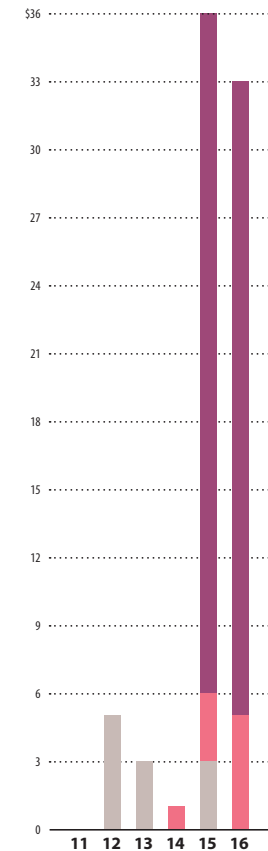
(Includes active member death benefit and Tier 1 amortization rate.)

For more detail see Summary of Plan Provisions on page 175.

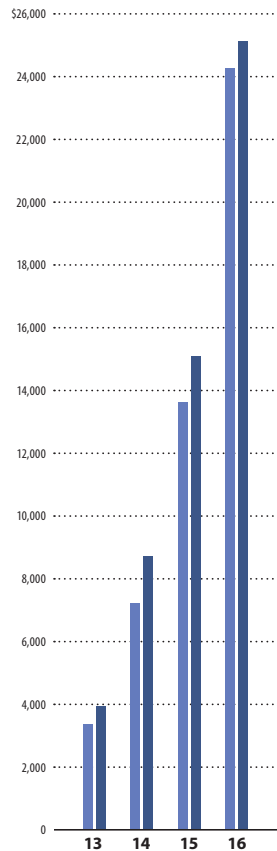
**Additions by Source**  
(in thousands)



**Deductions by Type**  
(in thousands)



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



**Additions by Source**

	2011	2012	2013	2014	2015	2016
Investment income	\$ —	56	316	404	199	1,591
Employer contributions	89	1,031	2,451	4,365	6,221	8,488
Transfers from systems	—	—	—	2	—	—
<b>Totals</b>	<b>\$ 89</b>	<b>1,087</b>	<b>2,767</b>	<b>4,771</b>	<b>6,420</b>	<b>10,079</b>

**Deductions by Type**

	2011	2012	2013	2014	2015	2016
Benefit payments	\$ —	—	—	—	30	28
Administrative expense	—	—	—	1	3	5
Transfers to systems	—	5	3	—	3	—
<b>Totals</b>	<b>\$ —</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>36</b>	<b>33</b>

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

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

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



## Tier 2 Public Safety and Firefighter Composite Picture

**Total Membership:** 2,305

Active: 2,240 • Terminated Vested: 28 • Retired: —

**2016 Active Members:** 2,240

Average Age: 30.2 • Average Years of Service: 2.3 • Average Annual Salary: \$35,363

**2016 Retirees Number:** —

Average Age: — • Average Years of Service: — • Average Annual Salary: \$—  
Average Annual Benefit: \$—

**Average Annual Benefit — All Retirees:** \$—

*Pictured: (Left) Charity Salinas, Trooper, Utah Highway Patrol; (Right) Kim Myers, Firefighter/AEMT, Weber Fire District*

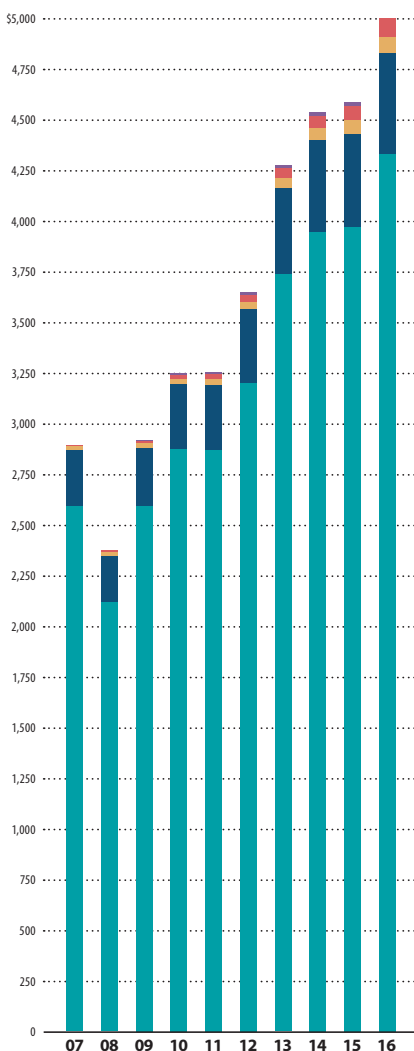
# Defined Contribution Savings Plans

## Highlights

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.

### Defined Contributions Member Balances

(in millions)



### Membership Information

at December 31, 2016

	401(k)	457	Roth IRA	Traditional IRA
Number of active employees eligible to participate	105,864	101,497	221,405	221,405
Employee contributions (excluding employer contributions):				
Number of employees contributing	39,462	8,232	6,376	452
Percent of eligible employees contributing	37.3%	8.1%	2.9%	0.2%
Average % of salary deferred by employees	5.5%	6.0%	3.7%	2.5%
Total participants	166,430	17,416	8,772	1,763
Average participant account balance	\$26,071	\$28,389	\$10,165	\$46,247

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, 2016, 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 139 and 140.

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 (except HRA)
- 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, 2016

	(in millions)									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
HRA*	\$ 1	2	3	6	9	11	16	20	23	—
Roth IRA	6	7	12	21	24	34	48	59	70	89
Traditional IRA	18	19	22	26	30	39	50	60	69	82
457	277	229	284	317	321	360	425	451	454	494
401(k)	2,604	2,132	2,608	2,887	2,881	3,213	3,746	3,956	3,980	4,339
Totals	\$ 2,906	2,389	2,929	3,257	3,265	3,657	4,285	4,546	4,596	5,004

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





Utah Retirement Systems

2016

Comprehensive Annual Financial Report

# 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 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, 2016, 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.

## Independent Auditors' Report *(Continued)*

### **Opinions**

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 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, 2016, 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 \$12.2 billion (34.7% of total assets) at December 31, 2016. 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' 2015 basic financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated April 27, 2016, 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, 2015 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 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.

Independent Auditors' Report *(Continued)*

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, 2017 on our consideration of Utah Retirement Systems' internal control over financial reporting and on our tests of their 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 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, 2017

## Deloitte.

### 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 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, 2016, 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, 2017, which included an emphasis-of-matter paragraph regarding the fair value of investments where a publicly listed price is not available.

#### 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

## Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters *(Concluded)*

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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 over financial reporting 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, 2017

# 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, 2016. 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 five 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 five defined contribution plans (Plans) are the 401(k), 457, Roth and traditional IRAs, and Health Reimbursement Arrangement. 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 \$1.9 billion, or 7.0% during calendar year 2016. 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 2016 was 8.79% compared with the calendar year 2015 rate of return of 1.92%. The increase in rate of return was due primarily to the increase in market performance in 2016.
- The URS Defined Benefit Pension Systems had a Net Pension Liability of \$4.7 billion and the Net Pension Liability as a percentage of covered payroll was 96.1% as of December 31, 2016.
- The Defined Contribution Plans' combined total net position increased \$407 million during calendar year 2016 primarily due to investment gains.
- The Defined Contribution Plans' rates of return for investment options ranged from a high of 23.3% to a low of 1.1% compared to prior year investment option returns of a high of 9.0% and a low of negative 4.6%.



## Overview of the Financial Statements

The URS 2016 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, 2016. 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, 2016, 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 13 pension (and other employee benefit) trust funds that consist of eight defined benefit systems and five defined contribution plans.

- The Statements of Fiduciary Net Position are presented for the pension trust funds at December 31, 2016, with combined total comparative information at December 31, 2015. 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, 2016, with combined total comparative information for the year ended December 31, 2015. These financial statements reflect the changes in the resources available to pay benefits to members, including retirees and beneficiaries, for calendar years 2016 and 2015.

### 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:

## Management’s Discussion and Analysis *(Continued)*

- 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 of 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.

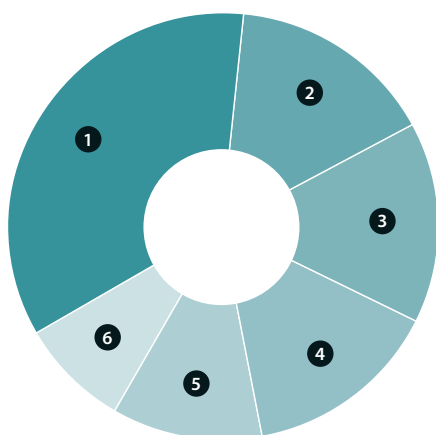
### 4) Other Supplementary Schedules

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





**Defined Benefit  
Systems Investments  
at Fair Value**



- 1 Equity Securities (35.2%)
- 2 Absolute Return (15.6%)
- 3 Debt Securities (15.0%)
- 4 Real Assets (14.7%)
- 5 Private Equity (11.3%)
- 6 Short Term (8.2%)

## Financial Analysis of the Systems — Defined Benefit Plans

### 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, 2016, URS Defined Benefit Systems had total net position of \$28.5 billion, an increase of \$1.9 billion from calendar year 2015 investment totals. The combined investment portfolio experienced a return of 8.79% compared with the URS investment benchmark return of 7.62%. Investment results over time compared with URS benchmarks are presented on page 134 in the Investment Section.

Because the investment gain in all of the retirement systems was about 8.79% of net position, further investment performance will not be evaluated in each respective system.

### Equity Securities

As of December 31, 2016, URS Defined Benefit Systems held \$10.2 billion in U.S. and international equity securities, an increase of \$1.0 billion from year 2015. Equity securities had a return of 11.17% for calendar year 2016 compared with the URS benchmark return of 8.39%.

### Debt Securities

As of December 31, 2016, URS Defined Benefit Systems held \$4.4 billion in U.S. debt and international debt securities, an increase of \$74.8 million from year 2015. Debt securities returned 4.62% in calendar year 2016 compared with the URS benchmark return of 4.71%.

### Real Assets

As of December 31, 2016, URS Defined Benefit Systems held \$4.3 billion in real assets investments, an increase of \$243.6 million from year 2015. Real assets investments returned 11.32% in calendar year 2016 compared with the URS benchmark return of 6.99%.

### Private Equity

As of December 31, 2016, URS Defined Benefit Systems held \$3.3 billion in private equity investments, an increase of \$76.1 million from year 2015. Private equity investments returned 9.12% in calendar year 2016. The URS benchmark for private equity investments was 16.07%.

Management’s Discussion and Analysis (Continued)

**Short Term**

As of December 31, 2016, URS Defined Benefit Systems held \$2.4 billion in short-term investments, an increase of \$162.4 million from year 2015. Short-term investments returned 0.54% in calendar year 2016 which compared with the URS benchmark return of 0.33%.

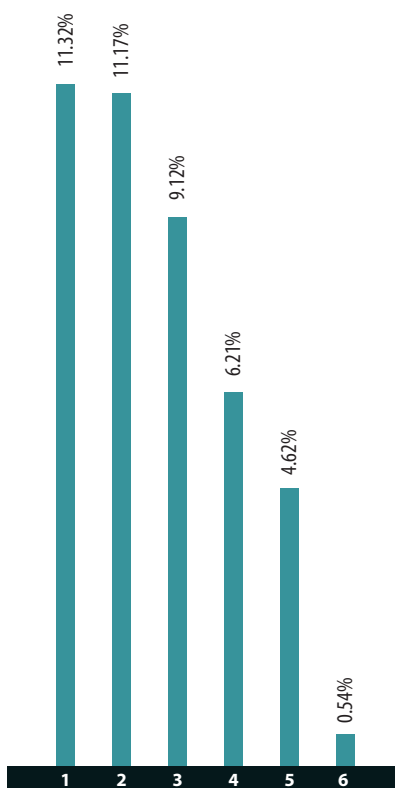
**Absolute Return**

As of December 31, 2016, URS Defined Benefit Systems held \$4.5 billion in absolute return investments, an increase of \$367.5 million from year 2015. Absolute return investments returned a 6.21% in calendar year 2016 compared with the URS benchmark return of 5.33%.

**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, 2016, the Systems had \$658 million on loan secured by collateral of \$699 million. For calendar year 2016, net securities lending income to the Systems amounted to \$8.0 million, a decrease of \$1.1 million over calendar year 2015. In order to mitigate risk, security lending was restricted to high yield low risk lending which resulted in lower revenue for 2016.

**Defined Benefit Systems Investment Rates of Return by Investment Type for 2016**  
(in percents)



- 1 Real Assets
- 2 Equity Securities
- 3 Private Equity
- 4 Absolute Return
- 5 Debt Securities
- 6 Short Term



## 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, 2016, totaled \$22.6 billion, an increase of \$1.4 billion (6.7%) from \$21.2 billion as of December 31, 2015.

Additions to the Noncontributory System net position include employer contributions, investment income, and transfers. For the calendar year 2016, member and employer contributions increased from \$830.5 million for calendar year 2015 to \$847.9 million, an increase of \$17.4 million (2.1%). Contributions increased because salaries increased. The system recognized a net investment gain of \$1.78 billion for calendar year 2016 compared with net investment gain of \$366.7 million for calendar year 2015. The increase in investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Noncontributory System net position include retirement benefits, administrative expenses, and transfers. For the calendar year 2016, benefits amounted to \$1.2 billion, an increase of \$62.5 million (5.6%) over calendar year 2015. The increase in benefit payments was due to an increased number of benefit recipients and benefit increases.

For the calendar year 2016, the costs of administering the system totaled \$8.9 million, an increase of \$59 thousand (0.07%) from calendar year 2015.

At December 31, 2016, the Noncontributory Retirement System total pension liability was \$26.5 billion. The Plan's fiduciary net position was \$22.6 billion leaving a net pension liability of \$3.9 billion. The Plan fiduciary net position as a percentage of the total pension liability was 85.3%.

### 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, 2016, totaled \$1.2 billion, an increase of \$21.8 million (1.8%) from \$1.2 billion as of December 31, 2015.

Additions to the Contributory System net position include employer and member contributions, investment income, and transfers. For calendar year 2016, member and employer contributions decreased from \$16.5 million for calendar year 2015 to \$11.6 million, a decrease of \$4.9 million (29.6%). 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 investment gain of \$97.7 million for calendar year 2016 compared with net investment gain of \$21.3 million for the calendar year 2015. The increase in investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Contributory System net position include retirement benefits, administrative expenses, and transfers. For calendar year 2016, benefits amounted to \$85.1 million, an increase of \$2.5 million (3.1%) from calendar year 2015. The increase in benefit payments was due to the increase in the number of retired members in the system. For calendar year 2016, the costs of administering the system totaled \$446 thousand, a decrease of \$32 thousand (6.7%) from calendar year 2015.

At December 31, 2016, the Contributory Retirement System total pension liability was \$1.29 billion. The Plan's fiduciary net position was \$1.2 billion leaving a net pension liability of \$88 million. The Plan fiduciary net position as a percentage of the total pension liability was 93.2%.

## 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		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Assets:</b>									
Cash and receivables	\$ 394,604	264,655	347,450	19,301	13,175	18,980	55,097	33,339	44,454
Investments at fair value	22,995,043	21,506,695	21,401,055	1,226,675	1,202,149	1,289,979	3,229,586	2,985,545	2,943,857
Invested securities									
lending collateral	554,319	1,602,253	1,812,356	29,570	89,560	109,243	77,853	222,424	249,302
Property and equipment	3,875	2,488	2,954	207	139	178	544	345	408
<b>Total assets</b>	<b>23,947,841</b>	<b>23,376,091</b>	<b>23,563,815</b>	<b>1,275,753</b>	<b>1,305,023</b>	<b>1,418,380</b>	<b>3,363,080</b>	<b>3,241,653</b>	<b>3,238,021</b>
<b>Liabilities:</b>									
Securities lending liability	554,319	1,602,253	1,812,356	29,570	89,560	109,243	77,853	222,424	249,302
Investment accounts and other payables	774,779	581,401	654,947	41,279	32,372	39,146	108,682	80,390	89,333
<b>Total liabilities</b>	<b>1,329,098</b>	<b>2,183,654</b>	<b>2,467,303</b>	<b>70,849</b>	<b>121,932</b>	<b>148,389</b>	<b>186,535</b>	<b>302,814</b>	<b>338,635</b>
<b>Net position restricted for pensions</b>	<b>\$ 22,618,743</b>	<b>21,192,437</b>	<b>21,096,512</b>	<b>1,204,904</b>	<b>1,183,091</b>	<b>1,269,991</b>	<b>3,176,545</b>	<b>2,938,839</b>	<b>2,899,386</b>

(dollars in thousands)

	Tier 2 Public Employees System			Tier 2 Public Safety and Firefighter System			Total Defined Benefit Pension Plans			2016 Percent Change	2015 Percent Change
	2016	2015	2014	2016	2015	2014	2016	2015	2014		
<b>Assets:</b>											
Cash and receivables	\$ 7,015	3,973	3,375	754	271	233	499,760	329,458	433,607	51.7%	(24.0)%
Investments at fair value	217,563	140,329	88,592	25,226	15,226	8,737	29,017,100	27,086,314	26,955,610	7.1	0.5
Invested securities											
lending collateral	5,245	10,454	7,502	608	1,134	740	699,487	2,017,935	2,282,747	(65.3)	(11.6)
Property and equipment	37	16	12	4	2	1	4,890	3,133	3,722	56.1	(15.8)
<b>Total assets</b>	<b>229,860</b>	<b>154,772</b>	<b>99,481</b>	<b>26,592</b>	<b>16,633</b>	<b>9,711</b>	<b>30,221,237</b>	<b>29,436,840</b>	<b>29,675,686</b>	<b>2.7</b>	<b>(0.8)</b>
<b>Liabilities:</b>											
Securities lending liability	5,245	10,454	7,502	608	1,134	740	699,487	2,017,935	2,282,747	(65.3)	(11.6)
Investment accounts and other payables	7,322	3,779	2,688	849	410	266	977,434	732,065	823,815	33.5	(11.1)
<b>Total liabilities</b>	<b>12,567</b>	<b>14,233</b>	<b>10,190</b>	<b>1,457</b>	<b>1,544</b>	<b>1,006</b>	<b>1,676,921</b>	<b>2,750,000</b>	<b>3,106,562</b>	<b>(39.0)</b>	<b>(11.5)</b>
<b>Total position restricted for pensions</b>	<b>\$ 217,293</b>	<b>140,539</b>	<b>89,291</b>	<b>25,135</b>	<b>15,089</b>	<b>8,705</b>	<b>28,544,316</b>	<b>26,686,840</b>	<b>26,569,124</b>	<b>7.0%</b>	<b>0.4%</b>

Management's Discussion and Analysis *(Continued)*

Firefighters System			Judges System			Utah Governors and Legislators Retirement Plan		
2016	2015	2014	2016	2015	2014	2016	2015	2014
19,654	11,916	16,416	3,172	1,904	2,542	163	225	157
1,134,044	1,059,550	1,046,228	178,422	166,303	166,317	10,541	10,517	10,845
27,337	78,936	88,601	4,301	12,390	14,085	254	784	918
191	123	145	30	19	23	2	1	1
1,181,226	1,150,525	1,151,390	185,925	180,616	182,967	10,960	11,527	11,921
27,337	78,936	88,601	4,301	12,390	14,085	254	784	918
38,163	28,530	31,750	6,006	4,479	5,048	354	704	637
65,500	107,466	120,351	10,307	16,869	19,133	608	1,488	1,555
1,115,726	1,043,059	1,031,039	175,618	163,747	163,834	10,352	10,039	10,366

### 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, 2016, amounted to \$3.2 billion, an increase of \$237.7 million (8.0%) from \$2.9 billion as of December 31, 2015.

Additions to the Public Safety System net position include employer contributions, investment income, and transfers. For calendar year 2016, member and employer contributions increased from \$141.9 million for calendar year 2015 to \$147.9 million, an increase of \$6.0 million (4.0%). Contributions increased because salaries increased. The system recognized a net investment gain of \$249.0 million for calendar year 2016 compared with net investment gain of \$50.7 million for calendar year 2015. The increase in the investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Public Safety System net position include retirement benefits and administrative expenses. For calendar year 2016, benefits amounted to \$164.7 million, an increase of \$8.8 million (5.6%) over calendar year 2015. The increase in benefit payments was due to an increased number of benefit recipients and benefit increases. For calendar year 2016, the costs of administering the system totaled \$1.3 million, an increase of \$27 thousand (2.2%) from calendar year 2015.

At December 31, 2016, the Public Safety Retirement System total pension liability was \$3.8 billion. The Plan's fiduciary net position was \$3.2 billion leaving a net pension liability of \$618 million. The Plan fiduciary net position as a percentage of the total pension liability was 83.7%.

## 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		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Additions:</b>									
Contributions	\$ 847,939	830,469	786,007	11,608	16,490	18,415	147,929	141,929	136,423
Investment income	1,783,911	366,748	1,419,053	97,693	21,251	87,577	249,027	50,654	194,222
Transfers from affiliated systems	—	33,648	30,467	—	—	—	6,701	4,023	2,746
Total additions	2,631,850	1,230,865	2,235,527	109,301	37,741	105,992	403,657	196,606	333,391
<b>Deductions:</b>									
Pension benefits	\$ 1,184,317	1,123,647	1,043,798	83,447	81,390	77,015	164,508	155,387	144,763
Refunds	4,366	2,496	2,204	1,700	1,215	2,433	183	533	199
Administrative expenses	8,856	8,797	8,828	446	478	494	1,260	1,233	1,227
Transfers to affiliated systems	8,005	—	—	1,895	41,558	38,004	—	—	—
Total deductions	1,205,544	1,134,940	1,054,830	87,488	124,641	117,946	165,951	157,153	146,189
Increase (decrease) in net position restricted for pensions	\$ 1,426,306	95,925	1,180,697	21,813	(86,900)	(11,954)	237,706	39,453	187,202

(dollars in thousands)

	Tier 2 Public Employees System			Tier 2 Public Safety and Firefighter System			Total Defined Benefit Pension Plans			2016 Percent Change	2015 Percent Change
	2016	2015	2014	2016	2015	2014	2016	2015	2014		
<b>Additions:</b>											
Contributions	\$ 63,062	49,645	37,299	8,488	6,221	4,365	1,124,551	1,095,466	1,028,318	2.7%	6.5%
Investment income	14,059	1,963	4,320	1,591	199	404	2,248,696	461,772	1,786,431	387.0	(74.2)
Transfers from affiliated systems	—	3	—	—	—	2	9,912	41,581	38,020	(76.2)	9.4
Total additions	77,121	51,611	41,619	10,079	6,420	4,771	3,383,159	1,598,819	2,852,769	111.6	(44.0)
<b>Deductions:</b>											
Retirement benefits	316	333	—	28	30	—	1,497,989	1,423,762	1,325,556	5.2	7.4
Refunds	—	—	—	—	—	—	6,715	4,772	5,129	40.7	(7.0)
Administrative expense	51	30	16	5	3	1	11,067	10,988	11,012	0.7	(0.2)
Transfers to affiliated systems	—	—	2	—	3	—	9,912	41,581	38,020	(76.2)	9.4
Total deductions	367	363	18	33	36	1	1,525,683	1,481,103	1,379,717	3.0	7.3
Increase in net position restricted for pensions	\$ 76,754	51,248	41,601	10,046	6,384	4,770	1,857,476	117,716	1,473,052	1,477.9%	(92.0)%

Management's Discussion and Analysis *(Continued)*

Firefighters System			Judges System			Utah Governors and Legislators Retirement Plan		
2016	2015	2014	2016	2015	2014	2016	2015	2014
36,252	42,083	37,968	8,852	8,208	7,430	421	421	411
87,746	17,934	69,070	13,820	2,842	11,068	849	181	717
1,611	2,573	3,713	1,600	1,334	1,092	—	—	—
125,609	62,590	110,751	24,272	12,384	19,590	1,270	602	1,128
52,102	49,671	47,710	12,330	12,400	11,361	941	904	909
466	528	293	—	—	—	—	—	—
374	371	370	71	71	71	4	5	5
—	—	—	—	—	—	12	20	14
52,942	50,570	48,373	12,401	12,471	11,432	957	929	928
72,667	12,020	62,378	11,871	(87)	8,158	313	(327)	200

### 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, 2016, amounted to \$1.1 billion, an increase of \$72.7 million (7.0%) from \$1.0 billion as of December 31, 2015.

Additions to the Firefighters System net position consist of employer contributions, including insurance premium taxes, investment income, and transfers. For calendar year 2016, member and employer contributions decreased from \$42.1 million for calendar year 2015 to \$36.3 million, a decrease of \$5.8 million (13.9%). Contributions decreased because insurance premium taxes decreased. The system recognized a net investment gain of \$87.7 million for calendar year 2016 compared with net investment gain of \$17.9 million for calendar year 2015. The increase in investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Firefighters System net position include retirement benefits and administrative expenses. For calendar year 2016, benefits amounted to \$52.6 million, an increase of \$2.4 million (4.7%) over calendar year 2015. The increase in benefit payments was due to an increased number of benefit recipients and benefit increases. For calendar year 2016, the costs of administering the system totaled \$374 thousand, an increase of \$3 thousand (0.8%) from calendar year 2015.

At December 31, 2016, the Firefighters Retirement System total pension liability was \$1.1 billion. The Plan's fiduciary net position was \$1.1 billion leaving a net pension liability of \$14.0 million. The Plan fiduciary net position as a percentage of the total pension liability was 98.8%.

## Management's Discussion and Analysis *(Continued)*



### 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, 2016, amounted to \$175.6 million, an increase of \$11.9 thousand (7.3%) from \$163.7 million as of December 31, 2015.

Additions to the Judges System net position consist of employer contributions, including court fees, investment income, and transfers. For calendar year 2016, employer contributions increased from \$8.2 million for calendar year 2015 to \$8.9 million, an increase of \$644 thousand (7.8%). Contributions increased because court fees increased. The system recognized a net investment gain of \$13.8 million for the calendar year 2016 compared with net investment gain of \$2.8 million for calendar year 2015. The increase in investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Judges System net position held in trust for benefits include retirement benefits and administrative expenses. For calendar year 2016, benefits amounted to \$12.3 million, a decrease of \$70 thousand (0.6%) over calendar year 2015. The decrease in benefit payments was due to a decrease in the current year retirees. For calendar year 2016, the costs of administering the system totaled \$71 thousand, a slight decrease over the preceding year.



At December 31, 2016, the Judges System total pension liability was \$210.6 million. The Plan's fiduciary net position was 175.6 million leaving a net pension liability of \$35.0 million. The Plan fiduciary net position as a percentage of the total pension liability was 83.4%.

### 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, 2016, amounted to \$10.4 million, an increase of \$313 thousand (3.1%) from \$10.0 million as of December 31, 2015.

Additions to the Governors and Legislators Retirement Plan net position include investment income and transfers. For calendar year 2016 employer contributions amounted to \$421 thousand. The Plan recognized a net investment gain of \$849 thousand for calendar year 2016 compared with net investment gain of \$181 thousand for calendar year 2015. The increase in investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Governors and Legislators Retirement Plan net position include retirement benefits and administrative expenses. For calendar year 2016, retirement benefits amounted to \$941 thousand, a decrease of \$37 thousand (4.1%) from calendar year 2015. The increase in benefit payments was due to an increase in the number of benefit recipients. For calendar year 2016, the costs of administering the system totaled \$4 thousand, a slight decrease over the preceding year.



## Management's Discussion and Analysis *(Continued)*

At December 31, 2016, the Governors and Legislators Retirement Plan total pension liability was \$12.7 million. The Plan's fiduciary net position was \$10.4 million leaving a net pension liability of \$2.3 million. The Plan fiduciary net position as a percentage of the total pension liability was 81.8%.

### 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, 2016, amounted to \$217.3 million, an increase of \$76.8 million (54.6%) from \$140.5 million as of December 31, 2015.

Additions to the Tier 2 Public Employees System net position consist of employer contributions, investment income, and transfers. For calendar year 2016, member and employer contributions increased from \$49.6 million for calendar year 2015, to \$63.1 million, an increase of \$13.4 million (27.0%). Contributions increased because membership increased. The system recognized a net investment gain of \$14.1 million for calendar year 2016 compared with an investment gain of \$2.0 million for calendar year 2015. The increase in the investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Tier 2 Public Employees System net position for benefits include retirement benefits and administrative expenses. For calendar year 2016 the system paid \$316 thousand in retirement benefits and \$333 thousand in 2015. The costs of administering the system totaled \$51 thousand, an increase of \$21 thousand (70.0%) from calendar year 2015.

At December 31, 2016, the Tier 2 Public Employees Retirement System total pension liability was \$228.5 million. The Plan's fiduciary net position was \$217.3 million leaving a net pension liability of \$11.2 million. The Plan's fiduciary net position as a percentage of the total pension liability was 95.1%.

### 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, 2016, amounted to \$25.1 million, an increase of \$10.0 million (66.6%) from \$15.1 million as of December 31, 2015.

Additions to the Tier 2 Public Safety and Firefighter System net position consist of employer contributions, investment income, and transfers. For calendar year 2016, member and employer contributions increased from \$6.2 million for calendar year 2015, to \$8.5 million in 2016, an increase of \$2.3 million (36.4%). Contributions increased because membership increased. The system recognized a net investment gain of \$1.6 million for calendar year 2016 compared with net investment gain of \$199 thousand for calendar year 2015. The increase in the investment gain for 2016 compared to 2015 was due to the higher rate of return realized in 2016.

Deductions from the Tier 2 Public Safety and Firefighter System net position include retirement benefits and administrative expenses. For calendar years 2016 the system paid \$28 thousand in retirement benefits and \$30 thousand in 2015. The costs of administering the system totaled \$5 thousand.

At December 31, 2016, the Tier 2 Public Safety and Firefighter Retirement System total pension liability was \$24.3 million. The Plan's fiduciary net position was \$25.1 million leaving a net pension asset of \$870 thousand. The Plan's fiduciary net position as a percentage of the total pension liability was 103.6%.



## Actuarial Valuations and Funding Progress

Actuarial valuation of each defined benefit system is performed annually. As of January 1, 2016, 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 a decrease from the Systems' January 1, 2015, valuation average funded ratio of 85.5%, a decrease in funded status of 0.03%. The funded ratio decrease for all systems was the result of decreasing the investment return assumption from 7.5% to 7.2% and partially offset by higher than expected investment returns over the previous five 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, 2016, the Systems' underfunded actuarial accrued liability was \$4.7 billion. This was a net increase in the unfunded position of \$377 million compared to January 1, 2015. As of January 1, 2016, the difference between the actuarial value of assets and market value of assets was \$437 million in actuarially deferred gains. These actuarially deferred gains 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 2014 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 wage inflation assumption from 3.75% to 3.50%, decrease the payroll growth assumption from 3.50% to 3.25%, and new mortality assumptions.

In conjunction with the 2016 annual actuarial valuation, 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 7.5% to 7.2%, decrease the inflation assumption from 2.75% to 2.6%, and decrease the payroll growth assumption and wage inflation by 0.15%.

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 7.20%, 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 (6.20%) or 1.00% higher (8.20%) than the current rate.

Management's Discussion and Analysis *(Continued)*

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

*(dollars in thousands)*

System	1.00% Decrease (6.20%)	Current Discount Rate (7.20%)	1.00% Increase (8.20%)
Noncontributory Retirement System	\$ 7,272,333	3,883,038	1,044,993
Contributory Retirement System	213,702	87,608	(19,165)
Public Safety Retirement System	1,150,467	618,335	182,948
Firefighters Retirement System	169,686	14,003	(114,022)
Judges Retirement System	56,845	35,005	16,253
Governors and Legislative Retirement System	3,526	2,302	1,265
Tier 2 Public Employees System	75,928	11,157	(38,121)
Tier 2 Public Safety and Firefighter System	6,073	(869)	(6,202)
<b>Total</b>	<b>\$ 8,948,560</b>	<b>4,650,579</b>	<b>1,067,948</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 \$21.851 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, 2016, amounted to \$4.3 billion, an increase of \$359 million (9.0%) over net position as of December 31, 2015.

Additions to the 401(k) Plan net position include contributions and investment income. For calendar year 2016, contributions increased from those of calendar year 2015 from \$271.1 million to \$290.6 million or an increase of \$19.5 million (7.2%).

Contributions increased because of increased participation. The plan recognized a net investment gain of \$332.7 million for calendar year 2016 compared with a net investment gain of \$10.7 million for the calendar year 2015.

Deductions from the 401(k) Plan net position include participant and beneficiary refunds (including rollovers) and administrative expenses. For calendar year 2016, refunds amounted to \$257.7 million, an increase of \$6.2 million (2.5%) over calendar year 2015. The increase in refunds was due to an increase in withdrawals for calendar year 2016. For calendar year 2016, the costs of administering the plan amounted to \$7.1 million, an increase of \$420 thousand over calendar year 2015.

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.

Management's Discussion and Analysis *(Continued)***Statements of Fiduciary Net Position — Defined Contribution Savings Plans**

December 31

*(dollars in thousands)*

	401(k) Plan			457 Plan			Roth IRA Plan		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Assets:</b>									
Cash and receivables	\$ 95,409	96,857	96,894	10,187	10,247	10,244	224	238	170
Investments at fair value	4,253,489	3,896,025	3,873,336	484,552	444,668	441,353	88,971	69,664	58,835
<b>Total assets</b>	<b>4,348,898</b>	<b>3,992,882</b>	<b>3,970,230</b>	<b>494,739</b>	<b>454,915</b>	<b>451,597</b>	<b>89,195</b>	<b>69,902</b>	<b>59,005</b>
<b>Liabilities:</b>									
Investment accounts and other payables	9,925	12,477	13,479	320	558	623	30	188	163
<b>Total liabilities</b>	<b>9,925</b>	<b>12,477</b>	<b>13,479</b>	<b>320</b>	<b>558</b>	<b>623</b>	<b>30</b>	<b>188</b>	<b>163</b>
<b>Net position restricted for pensions</b>	<b>\$ 4,338,973</b>	<b>3,980,405</b>	<b>3,956,751</b>	<b>494,419</b>	<b>454,357</b>	<b>450,974</b>	<b>89,165</b>	<b>69,714</b>	<b>58,842</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		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Additions:</b>									
Contributions	\$ 290,632	271,097	255,044	27,326	26,968	26,711	16,585	14,073	11,664
Investment income (loss)	332,672	10,658	213,230	39,252	259	23,342	7,200	(308)	2,816
<b>Total additions</b>	<b>623,304</b>	<b>281,755</b>	<b>468,274</b>	<b>66,578</b>	<b>27,227</b>	<b>50,053</b>	<b>23,785</b>	<b>13,765</b>	<b>14,480</b>
<b>Deductions:</b>									
Refunds	257,651	251,436	251,496	25,706	23,082	22,920	4,192	2,781	3,310
Administrative expenses	7,085	6,665	6,308	810	762	727	142	112	91
<b>Total deductions</b>	<b>264,736</b>	<b>258,101</b>	<b>257,804</b>	<b>26,516</b>	<b>23,844</b>	<b>23,647</b>	<b>4,334</b>	<b>2,893</b>	<b>3,401</b>
<b>Increase (decrease) in net position restricted for pensions</b>	<b>\$ 358,568</b>	<b>23,654</b>	<b>210,470</b>	<b>40,062</b>	<b>3,383</b>	<b>26,406</b>	<b>19,451</b>	<b>10,872</b>	<b>11,079</b>

**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, 2016, amounted to \$494.4 million, an increase of \$40.0 million (8.8%) over net position as of December 31, 2015.

Additions to the 457 Plan net position include contributions and investment income. For calendar year 2016, contributions increased from those of calendar year 2015 from

## Management's Discussion and Analysis (Concluded)

Traditional IRA Plan			Health Reimbursement Arrangement (HRA)			Total Defined Contribution Plans			2016 Percent Change	2015 Percent Change
2016	2015	2014	2016	2015	2014	2016	2015	2014		
72	121	6	—	255	1,948	105,892	107,718	109,262	(1.7)%	(1.4)%
81,484	69,108	59,873	—	23,156	18,082	4,908,496	4,502,621	4,451,479	9.0	1.1
81,556	69,229	59,879	—	23,411	20,030	5,014,388	4,610,339	4,560,741	8.8	1.1
23	243	57	—	137	150	10,298	13,603	14,472	(24.3)	(6.0)
23	243	57	—	137	150	10,298	13,603	14,472	(24.3)	(6.0)
81,533	68,986	59,822	—	23,274	19,880	5,004,090	4,596,736	4,546,269	8.9%	1.1%

Traditional IRA Plan			Health Reimbursement Arrangement (HRA)			Total Defined Contribution Plans			2016 Percent Change	2015 Percent Change
2016	2015	2014	2016	2015	2014	2016	2015	2014		
16,182	17,206	14,930	6,796	6,318	6,393	357,521	335,662	314,742	6.5%	6.6%
4,825	211	2,645	36	35	24	383,985	10,855	242,057	3,437.4	(95.5)
21,007	17,417	17,575	6,832	6,353	6,417	741,506	346,517	556,799	114.0	(37.7)
8,332	8,148	7,514	30,075	2,924	2,690	325,956	288,371	287,930	13.0	0.2
128	105	91	31	35	31	8,196	7,679	7,248	6.7	5.9
8,460	8,253	7,605	30,106	2,959	2,721	334,152	296,050	295,178	12.9	0.3
12,547	9,164	9,970	(23,274)	3,394	3,696	407,354	50,467	261,621	707.2%	(80.7)%

\$27.0 million to \$27.3 million or an increase of \$358 thousand (1.3%). Contributions increased because of increased participation. The plan recognized a net investment gain of \$39.3 million for calendar year 2016 compared with a net investment gain of \$259 thousand for the calendar year 2015.

Deductions from the 457 Plan net position include participant and beneficiary refunds (including rollovers) and administrative expenses. For calendar year 2016, refunds amounted to \$25.7 million, an increase of \$2.6 million (11.4%) over calendar year 2015. The increase in refunds was due to an increase in withdrawals for calendar

year 2016. For calendar year 2016, the costs of administering the plan amounted to \$810 thousand, an increase of \$48 thousand over calendar year 2015.

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

Management’s Discussion and Analysis (Continued)

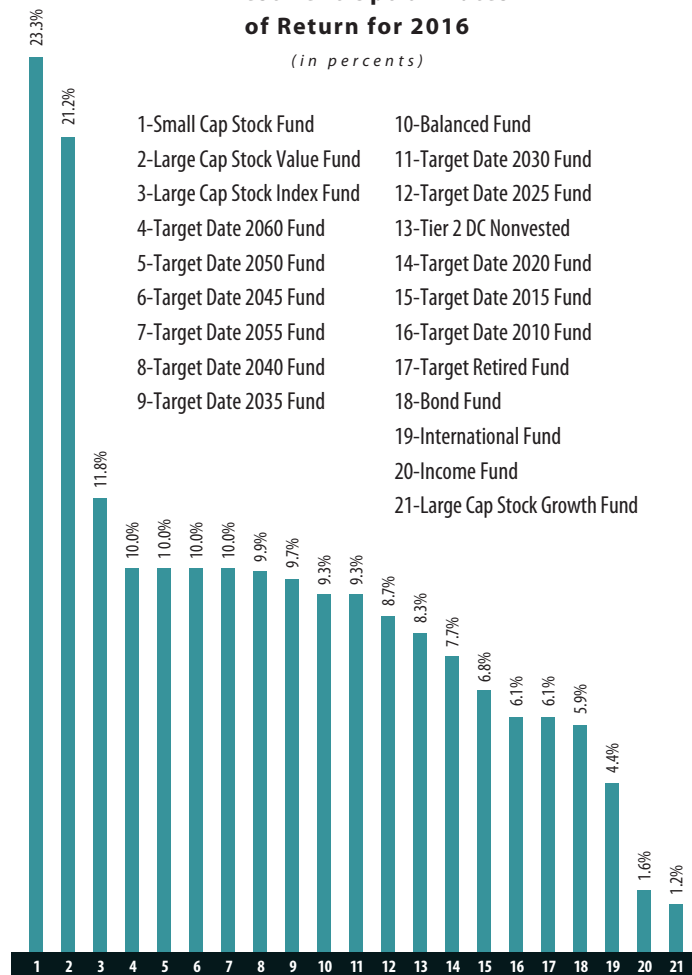
**Defined Contribution  
Comparative  
Annualized Rates of Return**

Year ended December 31

Investment Option Comparative Index	2016	2015
Income Fund	1.6%	1.6%
Bond Fund	5.9	(0.3)
Balanced Fund	9.3	1.3
Large Cap Value Stock Fund	21.2	(4.6)
Large Cap Stock Index Fund	11.8	0.8
Large Cap Stock Growth Fund	1.2	9.0
Small Cap Stock Fund	23.3	(3.4)
International Fund	4.4	(4.6)
Target Retired	6.1	0.3
Target Date 2010	6.1	0.0
Target Date 2015	6.8	0.3
Target Date 2020	7.7	0.2
Target Date 2025	8.7	(0.3)
Target Date 2030	9.3	(0.6)
Target Date 2035	9.7	(1.2)
Target Date 2040	9.9	(1.3)
Target Date 2045	10.0	(1.4)
Target Date 2050	10.0	(1.4)
Target Date 2055	10.0	(1.4)
Target Date 2060	10.0	(1.4)
Tier 2 DC Nonvested	8.3	(1.6)

**Defined Contribution Savings Plans  
Investment Option Rates  
of Return for 2016**

(in percents)



## Management's Discussion and Analysis *(Continued)*

### 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, 2016, amounted to \$89.2 million, an increase of \$19.5 million (27.9%) over net position as of December 31, 2015.

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 2016, contributions increased from those of calendar year 2015 from \$14.1 million to \$16.6 million (17.8%). Contributions increased because of increased participation. The plan recognized a net investment gain of \$7.2 million for calendar year 2016 compared with a net investment loss of \$308 thousand for calendar year 2015.

Deductions from the Roth IRA Plan net position include participant and beneficiary refunds, transfers and rollovers, and administrative expenses. For calendar year 2016, refunds amounted to \$4.2 million, an increase of \$1.4 million (50.7%) over calendar year 2015. For calendar year 2016, the costs of administering the plan amounted to \$142 thousand, an increase of \$30 thousand over calendar year 2015.

### 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, 2016, amounted to \$81.5 million, an increase of \$12.5 million (18.2%) over net position as of December 31, 2015.

Additions to the traditional IRA Plan include contributions, rollovers, and investment earnings. For calendar year 2016, contributions decreased from those of calendar year 2015 from \$17.2 million to \$16.2 million (negative 6.0%). The plan recognized a net investment gain of \$4.8 million for calendar year 2016 compared with a net investment gain of \$211 thousand for calendar year 2015.

Deductions from the traditional IRA Plan net position include participant and beneficiary refunds, rollovers and transfers, and administrative expenses. For calendar year 2016, refunds amounted to \$8.3 million, an increase of \$184 thousand (2.3%) over calendar year 2015. For calendar year 2016, the costs of administering the plan amounted to \$128 thousand, an increase of \$23 thousand over calendar year 2015.

### Health Reimbursement Arrangement

The Health Reimbursement Arrangement (HRA) is a tax-advantaged health savings plan for State employees funded by employer contributions to pay for qualified healthcare expenses incurred after retirement. No employee contributions are permitted. The plan net position as of December 31, 2016, was \$0, a decrease of \$23.3 million (100%) over the net position as of December 31, 2015.

Additions to the HRA include contributions and investment earnings. For calendar year 2016, contributions increased from those of calendar year 2015 from \$6.3 million to \$6.8 million (7.6%).

Deductions from the HRA net position include participant, spouse, and dependent refunds and administrative expense. For calendar year 2016 refunds amounted to \$30.0 million, an increase of \$27.2 million (928.6%) over calendar year 2015. The increase in refunds was due to the funds being transferred to PEHP for administration.

The costs of administering the plan was \$31 thousand for calendar year 2016 compared to \$35 thousand for year 2015.

During 2016 the HRA Plan was transferred to the Utah Public Employees Health Plan to administer.

### 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, 2016  
With Comparative Totals  
for December 31, 2015

(in thousands)

	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Utah Governors and Legislators Retirement Plan	Tier 2 Public Employees System
<b>Assets:</b>							
Cash	\$ 827	2	20	2	1	1	2
Receivables:							
Member contributions	—	126	14	652	—	—	—
Employer contributions	41,021	355	5,520	—	288	—	3,675
Court fees and fire insurance tax	—	—	—	1,603	146	—	—
Investments	352,756	18,818	49,543	17,397	2,737	162	3,338
Total receivables	393,777	19,299	55,077	19,652	3,171	162	7,013
Investments at fair value:							
Short-term securities	1,895,723	101,128	266,248	93,491	14,709	869	17,936
Debt securities	3,452,309	184,164	484,867	170,258	26,787	1,583	32,663
Equity investments	8,083,041	431,192	1,135,241	398,630	62,717	3,705	76,476
Absolute return	3,573,055	190,605	501,825	176,211	27,724	1,638	33,806
Private equity	2,607,844	139,116	366,264	128,611	20,235	1,195	24,674
Real assets	3,383,071	180,470	475,141	166,843	26,250	1,551	32,008
Total investments	22,995,043	1,226,675	3,229,586	1,134,044	178,422	10,541	217,563
Invested securities lending collateral	554,319	29,570	77,853	27,337	4,301	254	5,245
Property and equipment at cost, net of accumulated depreciation	3,875	207	544	191	30	2	37
Total assets	23,947,841	1,275,753	3,363,080	1,181,226	185,925	10,960	229,860
<b>Liabilities:</b>							
Securities lending liability	554,319	29,570	77,853	27,337	4,301	254	5,245
Disbursements in excess of cash balance	31,136	1,660	4,373	1,536	242	14	295
Compensated absences, post-employment benefits and insurance reserve	16,377	874	2,301	807	127	8	155
Investment accounts payable	564,811	30,079	79,192	27,808	4,375	258	5,335
Real estate liabilities	162,455	8,666	22,816	8,012	1,262	74	1,537
Total liabilities	1,329,098	70,849	186,535	65,500	10,307	608	12,567
Net position restricted for pensions	\$ 22,618,743	1,204,904	3,176,545	1,115,726	175,618	10,352	217,293

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 Safety and Firefighter System	Total Defined Benefit Pension Plans	Additional Combining Information					Total Defined Contribution Plans	Total Pension Trust Funds		
		401(k) Plan	457 Plan	Roth IRA Plan	Traditional IRA Plan	Health Reimbursement Arrangement		2016	2015	
2	857	12,353	589	224	72	—	13,238	14,095	15,155	
—	792	—	—	—	—	—	—	792	384	
365	51,224	—	—	—	—	—	—	51,224	37,705	
—	1,749	—	—	—	—	—	—	1,749	470	
387	445,138	83,056	9,598	—	—	—	92,654	537,792	383,462	
752	498,903	83,056	9,598	—	—	—	92,654	591,557	422,021	
2,080	2,392,184	—	—	—	—	—	—	2,392,184	2,252,955	
3,787	4,356,418	1,506,993	162,583	25,259	44,845	—	1,739,680	6,096,098	5,918,379	
8,867	10,199,869	2,601,022	305,799	59,635	33,990	—	3,000,446	13,200,315	11,885,023	
3,920	4,508,784	—	—	—	—	—	—	4,508,784	4,141,321	
2,861	3,290,800	—	—	—	—	—	—	3,290,800	3,214,680	
3,711	4,269,045	145,474	16,170	4,077	2,649	—	168,370	4,437,415	4,176,577	
25,226	29,017,100	4,253,489	484,552	88,971	81,484	—	4,908,496	33,925,596	31,588,935	
608	699,487	—	—	—	—	—	—	699,487	2,017,935	
4	4,890	—	—	—	—	—	—	4,890	3,133	
26,592	30,221,237	4,348,898	494,739	89,195	81,556	—	5,014,388	35,235,625	34,047,179	
608	699,487	—	—	—	—	—	—	699,487	2,017,935	
34	39,290	2,043	169	6	—	—	2,218	41,508	38,745	
18	20,667	—	—	—	—	—	—	20,667	20,079	
619	712,477	7,882	151	24	23	—	8,080	720,557	394,672	
178	205,000	—	—	—	—	—	—	205,000	292,172	
1,457	1,676,921	9,925	320	30	23	—	10,298	1,687,219	2,763,603	
25,135	28,544,316	4,338,973	494,419	89,165	81,533	—	5,004,090	33,548,406	31,283,576	

## 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, 2016

With Comparative Totals for

Year Ended December 31, 2015

(in thousands)

	Noncontributory System	Contributory System	Public Safety System	Firefighters System	Judges System	Utah Governors and Legislators Retirement Plan	Tier 2 Public Employees System
<b>Additions:</b>							
Contributions:							
Member	\$ 16,308	3,420	830	18,729	—	—	—
Employer	831,631	8,188	147,099	6,954	7,382	421	63,062
Court fees and fire insurance tax	—	—	—	10,569	1,470	—	—
Total contributions	847,939	11,608	147,929	36,252	8,852	421	63,062
Investment income:							
Net appreciation in fair value of investments	1,428,287	78,218	199,385	70,254	11,065	680	11,223
Interest, dividends and other investment income	388,277	21,264	54,203	19,099	3,008	185	3,097
Total income from investment activity	1,816,564	99,482	253,588	89,353	14,073	865	14,320
Less investment expenses	38,987	2,135	5,444	1,918	302	19	311
Net income from investment activity	1,777,577	97,347	248,144	87,435	13,771	846	14,009
Income from security lending activity	7,279	398	1,015	358	56	3	58
Less security lending expense	945	52	132	47	7	—	8
Net income from security lending activity	6,334	346	883	311	49	3	50
Net investment income	1,783,911	97,693	249,027	87,746	13,820	849	14,059
Transfers from affiliated systems	—	—	6,701	1,611	1,600	—	—
Total additions	2,631,850	109,301	403,657	125,609	24,272	1,270	77,121
<b>Deductions:</b>							
Retirement benefits	1,001,451	70,137	135,697	41,687	10,070	773	316
Cost-of-living benefits	182,866	13,232	28,547	10,195	2,260	168	—
Supplemental retirement benefits	—	78	264	220	—	—	—
Refunds	4,366	1,700	183	466	—	—	—
Administrative expenses	8,856	446	1,260	374	71	4	51
Transfers to affiliated systems	8,005	1,895	—	—	—	12	—
Total deductions	1,205,544	87,488	165,951	52,942	12,401	957	367
Increase (decrease) from operations	1,426,306	21,813	237,706	72,667	11,871	313	76,754
Net position restricted for pensions benefits beginning of year	21,192,437	1,183,091	2,938,839	1,043,059	163,747	10,039	140,539
Net position restricted for pensions benefits end of year	\$ 22,618,743	1,204,904	3,176,545	1,115,726	175,618	10,352	217,293

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

Defined Benefit Pension Plans		Defined Contribution Plans							Total Pension Trust Funds		
		Additional Combining Information					Total Defined Contribution Plans	2016			2015
		401(k) Plan	457 Plan	Roth IRA Plan	Traditional IRA Plan	Health Reimbursement Arrangement					
Tier 2 Public Safety and Firefighter System	Total Defined Benefit Pension Plans										
—	39,287	290,632	27,326	16,585	16,182	—	350,725	390,012	370,215		
8,488	1,073,225	—	—	—	—	6,796	6,796	1,080,021	1,042,042		
—	12,039	—	—	—	—	—	—	12,039	18,871		
8,488	1,124,551	290,632	27,326	16,585	16,182	6,796	357,521	1,482,072	1,431,128		
1,272	1,800,384	332,221	39,183	7,259	4,884	36	383,583	2,183,967	58,936		
348	489,481	3,522	401	—	—	—	3,923	493,404	462,470		
1,620	2,289,865	335,743	39,584	7,259	4,884	36	387,506	2,677,371	521,406		
35	49,151	3,071	332	59	59	—	3,521	52,672	57,883		
1,585	2,240,714	332,672	39,252	7,200	4,825	36	383,985	2,624,699	463,523		
7	9,174	—	—	—	—	—	—	9,174	10,464		
1	1,192	—	—	—	—	—	—	1,192	1,360		
6	7,982	—	—	—	—	—	—	7,982	9,104		
1,591	2,248,696	332,672	39,252	7,200	4,825	36	383,985	2,632,681	472,627		
—	9,912	—	—	—	—	—	—	9,912	41,581		
10,079	3,383,159	623,304	66,578	23,785	21,007	6,832	741,506	4,124,665	1,945,336		
28	1,260,159	—	—	—	—	—	—	1,260,159	1,189,072		
—	237,268	—	—	—	—	—	—	237,268	234,064		
—	562	—	—	—	—	—	—	562	626		
—	6,715	257,651	25,706	4,192	8,332	30,075	325,956	332,671	293,143		
5	11,067	7,085	810	142	128	31	8,196	19,263	18,667		
—	9,912	—	—	—	—	—	—	9,912	41,581		
33	1,525,683	264,736	26,516	4,334	8,460	30,106	334,152	1,859,835	1,777,153		
10,046	1,857,476	358,568	40,062	19,451	12,547	(23,274)	407,354	2,264,830	168,183		
15,089	26,686,840	3,980,405	454,357	69,714	68,986	23,274	4,596,736	31,283,576	31,115,393		
25,135	28,544,316	4,338,973	494,419	89,165	81,533	—	5,004,090	33,548,406	31,283,576		

# Notes to Basic Financial Statements

December 31, 2016

Note 1

## Description of Systems and Plans

A brief description of the Utah Retirement Systems (Systems), 401(k), 457, Roth and traditional IRAs (Plans), and Health Reimbursement Arrangement (HRA) 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 166 through 181.

### 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) five defined contribution plans comprised of the **401(k) Plan, 457 Plan, Roth** and **traditional IRAs, and HRA**.

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



## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### 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.

**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.

### B) Retirement and Death Benefits

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

The Utah Governors and Legislators Retirement Plan provides the following benefits. Former governors at age 65 receive \$1,360 per month per term. Legislators receive a benefit at age 65 with four or more years of service at the rate of \$29.60 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.

Notes to the Basic Financial Statements *(Continued)*

December 31, 2016

**Defined Contribution Plans**

	401(k)	457	Roth IRA	Traditional IRA
Number of participating employers	445	255	NA	NA
Total participants	166,430	17,416	8,772	1,763

**C) Defined Contribution Plans**

The 401(k), 457, Roth and traditional IRAs, and HRA 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 445 employers participating in the 401(k) Plan and 255 employers participating in the 457 Plan. There are 166,430 plan participants in the 401(k) Plan, 17,416 participants in the 457 Plan, 8,772 participants in the Roth IRA, and 1,763 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.

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### 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	453	158	132	62	1	1	466	150
Members:								
Active	63,214	738	6,032	1,663	115	61	24,372	2,240
Terminated vested	47,933	1,274	4,615	390	3	96	464	28
Retirees and beneficiaries:								
Service benefits	47,047	3,460	4,693	1,145	107	173	9	0
Beneficiary benefits	4,308	705	719	227	34	71	0	0

## 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 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, 2016, 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 88.

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 65.

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, 2015, from which the summarized information was derived.





Notes to the Basic Financial Statements (Continued)

December 31, 2016

**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.

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.

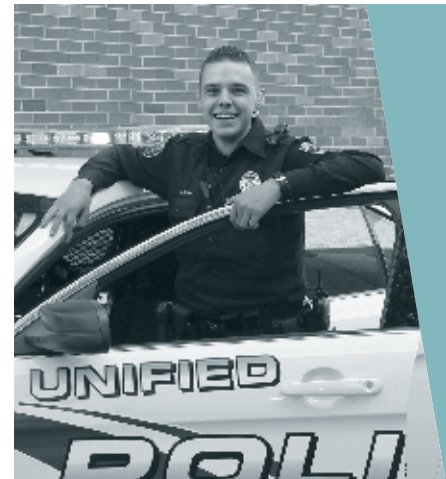
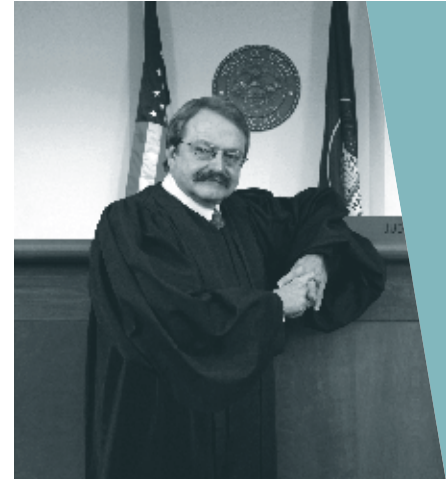
The fair value of real estate investments has been estimated based on independent appraisals and/or property cash flow. Short-term securities are reported at market value when published market prices and quotations are available, or at cost plus accrued interest, which approximates market or fair value. 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 10.6% of the investments held in trust for pension benefits are invested in debt securities of the U.S. Government and its instrumentalities. Of the 10.6%, approximately 3.1% are U.S. Government debt securities and approximately 7.5% 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, 2016:

Asset Class	Target Allocation
Debt securities .....	20%
Equities .....	40
Real assets.....	15
Private equity.....	9
Absolute return.....	16
Cash and cash equivalents.....	0
<b>Total.....</b>	<b>100%</b>



## Notes to the Basic Financial Statements *(Continued)*

December 31, 2016

**Rate of return.** For the year ended December 31, 2016, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 8.73%. 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, 2017, the date the basic financial statements were available to be issued. No material events were identified by the Systems and Plans.

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, 2016

## 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.

Cash Deposits (in thousands)	
Cash	\$ 14,095
Disbursements in excess of cash balances	(41,508)
Total	\$ (27,413)

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, 2016, the carrying amount of deposits totaled approximately \$(27,413,000) and the corresponding bank balance was \$213,000 of which \$0 was exposed to custodial credit risk.

Investments at December 31, 2016	(in thousands)		Fair Value Total All Systems and Plans
	Defined Benefit	Defined Contribution	
Short-term securities pools	\$ 2,392,184	—	2,392,184
Debt securities	4,341,261	1,739,680	6,080,941
Equity securities	9,556,366	3,000,446	12,556,812
Absolute Return	4,508,784	—	4,508,784
Private Equity	3,290,800	—	3,290,800
Real Assets	4,269,045	168,370	4,437,415
Investments held by broker-dealers under securities lending program:			
Equities	643,503	—	643,503
Debt	15,157	—	15,157
Total investments	\$ 29,017,100	4,908,496	33,925,596
Securities lending collateral pool (not categorized)	\$ 699,487		669,487

## B) Investments

The table on the bottom of this page shows the Systems' and Plans' investments by type.

The investments listed directly below are not listed on national exchanges, over-the-counter markets, nor do they have quoted market prices available.

(in thousands)	12/31/2016
Private equity	\$ 3,290,800
Absolute return	4,508,784
Real assets	4,437,415
	\$ 12,236,999

## 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 prices 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

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### Investments and Derivative Instruments Measured at Fair Value

(in thousands)

	Defined Benefit				Defined Contribution			
	Fair Value Measures Using				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	
12/31/16	Level 1	Level 2	Level 3	12/31/16	Level 1	Level 2	Level 3	
<b>Investments by fair value level</b>								
Short-term securities	\$ 2,290,674	—	2,290,674	—	\$ —	—	—	—
Debt securities								
Asset backed	294,369	—	275,264	19,105	5,014	—	3,352	1,662
Commercial mortgage-backed	121,421	—	113,867	7,554	2,698	—	2,428	270
Corporate bonds	811,079	—	808,037	3,042	266,683	—	263,859	2,824
Funds – other fixed income	80	—	80	—	54,207	—	54,207	—
Government agencies	82,377	—	82,361	16	14,725	—	14,725	—
Government bonds	1,094,668	—	1,094,476	192	177,053	—	176,307	746
Government mortgage backed securities	808,911	—	755,500	53,411	194,951	—	190,958	3,993
Index linked government bonds	1,113,523	—	1,098,928	14,595	90,443	—	90,443	—
Non-government backed C.M.O.s	28,996	—	21,888	7,108	340	—	75	265
Total debt securities	4,355,424	—	4,250,401	105,023	806,114	—	796,354	9,760
Equity investments								
Consumer goods	1,992,666	1,991,773	500	393	300,268	299,802	458	8
Energy	700,926	698,961	1,739	226	89,721	89,721	—	—
Equity other	2,919	128	463	2,328	209,070	96,743	112,327	—
Financials	1,669,735	1,665,171	4,444	120	167,806	167,432	374	—
Health care	951,013	950,816	155	42	176,978	176,978	—	—
Industrials	1,201,310	1,200,476	507	327	119,615	119,615	—	—
Information technology	1,396,080	1,395,997	48	35	372,049	372,049	—	—
Materials	533,178	532,286	99	793	34,489	34,472	17	—
Real estate investment trusts	349,829	349,518	262	49	67,122	67,122	—	—
Telecommunication services	217,859	216,482	1,377	—	22,964	22,964	—	—
Utilities	243,221	242,999	213	9	27,202	27,202	—	—
Total equity investments	9,258,736	9,244,607	9,807	4,322	1,587,284	1,474,100	113,176	8
Real assets								
Agriculture	102,187	—	—	102,187	—	—	—	—
Commodities	33,899	33,899	—	—	—	—	—	—
Real estate	1,693,336	—	—	1,693,336	—	—	—	—
Total real assets	1,829,422	33,899	—	1,795,523	—	—	—	—
Total investments by fair value level	\$ 17,734,256	9,278,506	6,550,882	1,904,868	\$ 2,393,398	1,474,100	909,530	9,768

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

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

(in thousands)

	Defined Benefit				Defined Contribution			
	Fair Value Measures Using				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	
12/31/16	Level 1	Level 2	Level 3	12/31/16	Level 1	Level 2	Level 3	
<b>Investments measured at the net asset value (NAV)</b>								
Short-term securities	\$ 101,686				\$ —			
Equity investments								
Co-mingled international equity fund	637,039				484,041			
Co-mingled U.S. small cap equity fund	303,491				409,732			
Co-mingled large cap equity fund	—				511,712			
Co-mingled Russell 1000 Growth equity fund	—				7,677			
Total equity investments measured at the NAV	940,530				1,413,162			
Absolute return								
Directional	1,061,173				—			
Equity long/short	283,317				—			
Event driven	1,030,425				—			
Multistrategy	1,095,671				—			
Relative value	1,038,198				—			
Total absolute return measured at the NAV	4,508,784				—			
Private equity – private equity partnerships	3,290,800				—			
Real assets								
Co-mingled commodities fund	—				55,180			
Co-mingled real estate equity fund	—				113,190			
Energy	968,120				—			
Minerals	253,777				—			
Real estate	1,004,604				—			
Royalty	3,674				—			
Timber	225,652				—			
Total real assets measured at the NAV	2,455,827				168,370			
Total investments measured at the NAV	11,297,627				1,581,532			
Total investments measured at fair value	\$ 29,031,883				\$3,974,930			
Synthetic guaranteed investments contracts measured at contract value	\$ —				\$ 933,515			
<b>Investments derivative instruments</b>								
Short-term securities – options	\$ (176)	—	(176)	—	\$ —	—	—	—
Debt securities								
Options	386	—	386	—	(25)	—	(25)	—
Swaptions	(429)	—	(429)	—	64	—	64	—
Swap liabilities	(2,484)	—	(2,484)	—	(107)	—	(107)	—
Swap assets	3,522	—	3,522	—	119	—	119	—
Total debt security derivatives	995	—	995	—	51	—	51	—
Equity investments – options	603	603	—	—	—	—	—	—
Real assets – swap liabilities	(16,204)	—	(16,204)	—	—	—	—	—
Total investment derivative instruments	\$ (14,782)	603	(15,385)	—	\$ 51	—	51	—
<b>Invested securities lending collateral</b>								
Short-term securities	195,742	—	195,742	—	—	—	—	—
Debt securities	178,865	—	178,865	—	—	—	—	—
Equity investments	324,880	324,880	—	—	—	—	—	—
Total invested securities lending collateral	\$ 699,487	324,881	374,607	—	\$ —	—	—	—

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

**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	\$ 101,686	—	Daily	None
Equity investments				
Co-mingled international equity fund	637,039	27,916	Daily	None
Co-mingled U.S. small cap equity fund	303,491	—	Daily	None
Total equity investments	940,530	27,916		
Absolute return				
Directional	1,061,173	15,177	Monthly, Quarterly	3-60 days
Equity long/short	283,317	—	Monthly, Quarterly, Annually	30-90 days
Event driven	1,030,425	86,899	Monthly, Quarterly, Semi-annually, Annually, Bi-annually	60-120 days
Multistrategy	1,095,671	—	Monthly, Quarterly, Semi-annually, Annually	45-90 days
Relative value	1,038,198	—	Weekly, Monthly, Quarterly	5-90 days
Total absolute return	4,508,784	102,076		
Private equity – partnerships	3,290,800	1,570,779	Not eligible	N/A
Real assets				
Energy	968,120	420,371	Not eligible	N/A
Minerals	253,777	120,992	Not eligible	N/A
Real estate*	1,004,604	188,341	Not eligible	N/A
Royalty	3,674	87,123	Not eligible	N/A
Timber*	225,652	33,562	Not eligible	N/A
Total real assets	2,455,827	850,389		
Total investments measured at the NAV	\$11,297,627	2,551,160		

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

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.

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

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### Investments Measured at the NAV — Defined Contribution

(in thousands)

	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
<b>Equity securities</b>				
Co-mingled large cap equity fund	\$ 511,712	—	Daily	None
Co-mingled international equity fund	484,041	—	Daily	None
Co-mingled U.S. small cap equity fund	409,732	—	Daily	None
Co-mingled Russell 1000 Growth equity fund	7,677	—	Daily	None
Total equity securities	1,413,162	—		
<b>Real assets</b>				
Co-mingled real estate equity fund	113,190	—	Quarterly	90 days
Co-mingled commodities fund	55,180	—	Daily	None
Total real assets	168,370	—		
Total investments measured at the NAV	\$ 1,581,532	—		

#### 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 invests 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 seven 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 four 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 fourteen 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 \$10.7 million over the next 2 to 10 years. Two new funds with a value of \$42.6 million have redemption restrictions of 3-4 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 \$7.8 million over the next 1-5 years. *Relative value funds* include investments in twelve funds. These funds seek returns by capitalizing on the mispricing of related securities or financial instruments. It is anticipated that

five of these funds representing \$83.7 million or 8% will be redeemed over the next 1 to 10 years. One fund which represents 2.0% of the value in this type is restricted from redemption for 18 months as of December 31, 2016. All other funds currently have no redemption restrictions other than the restrictions noted above.

- 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

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

guidelines established by the URS. The Systems and Plans have no plans to liquidate the total portfolio. As of December 31, 2016, 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 and Plans 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, 2016, 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 and Plans 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.

#### 6. Real Estate and Timber Funds.

This type includes 19 investments which are *invested* primarily in apartments and retail space in the United States. Timber includes two funds which invest in timber related resources. Investments in these types can never be redeemed with the

### Debt Securities Investments

at December 31, 2016 (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	\$ 294,369	1.46	\$ 5,014	0.75	\$ 299,383
Commercial mortgage-backed	121,421	3.08	2,698	0.87	124,119
Corporate bonds	811,079	6.10	266,683	6.66	1,077,762
Fixed income other	1,074	—	54,269	0.22	55,343
Government agencies	82,376	4.92	14,725	8.28	97,101
Government bonds	1,094,667	7.21	177,053	3.77	1,271,720
Government mortgage backed securities	808,911	5.45	194,951	3.25	1,003,862
Index linked bonds	1,113,524	12.10	90,433	5.19	1,203,957
Non-government backed C.M.O.s	28,997	3.57	339	1.58	29,336
Total measured at fair value	4,356,418	7.39	806,165	4.82	5,162,583
Synthetic guaranteed investment contracts measured at contract value	—	—	933,515	—	933,515
Total	\$ 4,356,418		\$ 1,739,680		\$ 6,096,098

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 and Plans 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" (S&P) or equivalent rating.
- Securities with a quality rating of below BBB- are considered below investment grade. No more than 5% of an investment manager's assets at market with a single issuer of 1% of the total portfolio can be below investment grade.
- Upon approval, a domestic debt securities investment manager may invest up to 10% of the portfolio in non-U.S. dollar denominated bonds.



## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### Credit Risk Debt Securities at Fair Value

at December 31, 2016

(in thousands)

Quality Rating	Total	Defined Benefit Plans								
		Asset Backed	Commercial Mortgage Backed	Corporate Bonds	Fixed Income Other	Government Agencies	Government Bonds	Government Mortgage Backed	Index Linked Bonds	Non-Government Backed C.M.O.s
AAA	\$ 465,675	223,310	68,718	27,455	—	33,819	48,623	1,054	56,159	6,537
AA+	364,538	11,413	6,142	10,531	—	12,200	24,131	3,953	294,589	1,579
AA	114,097	5,625	10,179	10,027	—	—	21,808	—	66,458	—
AA-	51,213	374	3,226	43,614	—	—	3,922	—	—	77
A+	204,687	12,571	1,149	35,665	—	—	72,515	—	82,290	497
A	142,907	16,219	5,432	111,320	—	—	832	—	8,323	781
A-	114,509	—	3,827	104,008	—	—	6,473	—	—	201
BBB+	250,249	2,208	2,633	185,355	—	4,517	34,588	—	20,510	438
BBB	233,684	9,530	2,001	124,848	—	—	17,238	—	78,609	1,458
BBB-	134,750	—	4,760	97,015	—	—	30,086	—	—	2,889
BB+	30,416	369	—	16,384	—	—	13,260	—	—	403
BB	12,508	—	1,863	3,194	—	—	7,029	—	—	422
BB-	11,867	—	2,396	4,140	—	—	5,116	—	—	215
B+	13,473	—	2,028	6,499	—	—	3,299	—	—	1,647
B	2,929	—	1,055	1,874	—	—	—	—	—	—
B-	13,054	—	1,195	2,229	—	—	7,330	—	—	2,300
CCC+	1,073	—	—	864	—	—	—	—	—	209
CCC	9,469	1,459	1,192	5,243	—	—	—	—	—	1,575
CCC-	5,977	1,009	—	268	—	—	—	—	3,312	1,388
CC	272	—	—	—	—	—	—	—	—	272
D	2,298	175	—	—	—	—	—	—	—	2,123
NR	712,375	10,107	3,625	20,546	1,074	31,840	19,444	618,124	3,629	3,986
Subtotal	2,892,020	294,369	121,421	811,079	1,074	82,376	315,694	623,131	613,879	28,997
U.S. Treasuries	1,278,618									
Explicit U.S. Government Agencies	185,780									
Total debt securities investments	\$ 4,356,418									

Quality Rating	Total	Defined Contribution Plans								
		Asset Backed	Commercial Mortgage Backed	Corporate Bonds	Fixed Income Other	Government Agencies	Government Bonds	Government Mortgage Backed	Index Linked Bonds	Non-Government Backed C.M.O.s
AAA	\$ 26,740	404	49	—	—	2,840	18,423	—	5,024	—
AA+	2,815	—	—	192	—	—	—	—	2,532	91
AA	25,197	221	—	4,045	—	—	6,980	—	13,951	—
AA-	15,682	—	—	6,229	—	—	9,453	—	—	—
A+	4,357	—	—	471	—	—	3,761	—	—	125
A	30,812	276	—	10,551	—	—	10,663	—	9,322	—
A-	13,359	—	59	12,554	—	—	746	—	—	—
BBB+	93,608	—	—	57,424	—	11,616	12,836	—	11,732	—
BBB	70,485	298	—	61,339	—	—	8,848	—	—	—
BBB-	58,098	—	320	52,110	—	223	4,900	—	545	—
BB+	33,262	24	—	24,513	6,501	—	2,224	—	—	—
BB	8,987	—	—	7,925	—	—	1,062	—	—	—
BB-	11,934	—	346	11,361	—	—	227	—	—	—
B+	5,570	—	—	5,015	—	—	505	—	—	50
B	1,150	—	860	290	—	—	—	—	—	—
B-	1,296	—	425	275	—	—	596	—	—	—
CCC	10,919	—	287	10,632	—	—	—	—	—	—
NR	248,663	3,791	350	1,757	46,256	46	550	194,951	889	73
Subtotal	662,934	5,014	2,696	266,683	52,757	14,725	81,774	194,951	43,995	339
U.S. Treasuries	143,231									
Synthetic Guaranteed Investment Contracts	933,515									
Total debt securities investments	\$ 1,739,680									

Notes to the Basic Financial Statements (Continued)

December 31, 2016



- The international debt securities investment managers may hold up to 25% of the market value of their portfolios in securities rated below investment grade (S&P index below BBB- or Moody's index below Baa3). The remaining assets will have an investment grade rating.

The Systems and Plans' weighted quality rating average of the global debt securities, excluding pooled investments, as of December 31, 2016, was AA-, and the fair value of below grade investments was \$178,234,000 or 2.93%.

The government mortgage backed securities in both the Systems and Plans' that are not rated include \$265,166,000 Federal Home Loan Mortgage Corporation and \$546,241,000 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, 2016, the table below represents the investments that have

**/// Custodial Credit Risk**

**Exposed to Custodial Credit Risk** (in thousands)

Type of Investment	Fair Value
Cash and cash equivalents	\$ 87,278

**Exposure to Custodial Credit Risk Not Determined** (in thousands)

Investment	Fair Value
Other assets	\$ 545,387

custodial credit risk. The \$87,278,000 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.

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 market value of outstanding debt of a single issuer with the exception of the U.S. Government or its agencies, or collateralized mortgage obligations.

## Notes to the Basic Financial Statements *(Continued)*

December 31, 2016

- 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, 2016, there were no single issuer investments that exceeded the above guidelines.

### 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 range as of December 31, 2016, was 4.42 - 7.36 for domestic debt securities, 5.18 - 8.63 for global debt securities, and 10.02 - 15.02 for inflation-linked debt securities.

The Plans compare an investment's effective duration against the Bloomberg Barclays US 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 range as of December 31, 2016, was 4.42 - 7.36 for domestic debt securities, 6.25 - 9.37 for international debt securities and 3.86 - 5.80 for inflation-linked debt securities.

As of December 31, 2016, no individual debt security investment manager's portfolio was outside of the policy guidelines. As of December 31, 2016, 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, 2016

### Foreign Currency Risk

International Investment Securities at Fair Value at December 31, 2016

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	\$ —	3,436	—	—	—	3,436	550	—	550	3,986
Australian dollar	1,903	15,371	162,908	—	9,178	189,360	10,295	24,789	35,084	224,444
Bermudian dollar	—	—	—	—	—	—	—	24	24	24
Brazilian real	163	3,415	82,686	—	—	86,264	508	7,757	8,265	94,529
British pound sterling	6,720	294,090	683,192	—	52,478	1,036,480	13,402	61,786	75,188	1,111,668
Canadian dollar	2,271	64,578	267,516	—	—	334,365	7,754	34,565	42,319	376,684
Cayman Islands dollar	—	—	—	—	—	—	—	75	75	75
Chilean peso	71	—	10,232	—	—	10,303	—	1,274	1,274	11,577
Chinese yuan renminbi	—	—	—	—	—	—	—	27,279	27,279	27,279
Colombian peso	138	3,533	5,262	—	—	8,933	554	478	1,032	9,965
Czech koruna	9	—	993	—	—	1,002	—	188	188	1,190
Danish krone	67	1,990	51,656	—	—	53,713	270	5,506	5,776	59,489
Egyptian pound	140	—	—	—	—	140	—	203	203	343
European euro	4,010	288,513	946,113	405,789	195,692	1,840,117	43,333	102,511	145,844	1,985,961
Hong Kong dollar	482	—	300,638	—	—	301,120	—	10,953	10,953	312,073
Hungarian forint	350	8,051	6,076	—	—	14,477	1,181	309	1,490	15,967
Indian rupee	980	—	76,602	—	—	77,582	—	2,808	2,808	80,390
Indonesian rupiah	198	—	17,515	—	—	17,713	—	9,372	9,372	27,085
Japanese yen	48,521	149,932	790,392	—	—	988,845	19,178	85,345	104,523	1,093,368
Macau pataca	—	—	—	—	—	—	—	9	9	9
Malaysian ringgit	641	—	28,319	—	—	28,960	—	2,795	2,795	31,755
Mexican peso	738	9,073	35,276	—	—	45,087	1,287	3,711	4,998	50,085
Moroccan dirham	16	—	—	—	—	16	—	—	—	16
Israeli new shekel	61	33	9,842	—	—	9,936	—	2,627	2,627	12,563
Taiwan new dollar	715	—	93,503	—	—	94,218	—	13,814	13,814	108,032
New Zealand dollar	667	35,342	7,010	—	—	43,019	4,460	1,039	5,499	48,518
Norwegian krone	618	7,892	21,359	—	—	29,869	656	2,761	3,417	33,286
Peruvian nuevo sol	29	—	147	—	—	176	—	364	364	540
Philippine peso	155	—	11,801	—	—	11,956	—	1,276	1,276	13,232
Polish zloty	268	—	7,683	—	—	7,951	33	1,211	1,244	9,195
Qatar riyal	—	—	—	—	—	—	—	933	933	933
Russian ruble	—	3,711	18,930	—	—	22,641	576	4,328	4,904	27,545
Singapore dollar	1,025	2,691	48,520	—	—	52,236	20	4,452	4,472	56,708
South African rand	157	—	49,911	—	—	50,068	—	7,403	7,403	57,471
South Korean won	850	12,404	136,808	—	—	150,062	1,797	15,969	17,766	167,828
Swedish krona	524	9,360	83,789	—	—	93,673	2,025	10,687	12,712	106,385
Swiss franc	1,182	—	282,868	—	—	284,050	1	27,450	27,451	311,501
Thai baht	187	—	31,433	—	—	31,620	—	2,728	2,728	34,348
Turkish lira	28	3,597	12,536	—	—	16,161	545	1,132	1,677	17,838
United Arab Emirates dirham	55	—	9,393	—	—	9,448	—	917	917	10,365
<b>Total securities subject to foreign currency risk</b>	<b>\$ 73,939</b>	<b>917,012</b>	<b>4,290,909</b>	<b>405,789</b>	<b>257,348</b>	<b>5,944,997</b>	<b>108,425</b>	<b>480,828</b>	<b>589,253</b>	<b>6,534,250</b>

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

## 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 market value of the domestic securities on loan and 105% of the market value of the international securities on loan, with a simultaneous agreement to return the collateral for the same securities in the future. The custodial bank is the agent for the securities lending program. Securities under loan are maintained in the financial records, and corresponding liabilities are recorded for the market value of the collateral received.

At December 31, 2016, there was no credit risk exposure to borrowers because the collateral exceeded the amount borrowed. The securities on loan at year end were \$658,660,000 and the collateral received for those securities on loan was \$699,487,000. 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, 2016, the Systems and Plans had five types of derivative financial instruments: futures, currency forwards, options, swaps, and Synthetic Guaranteed Investment Contracts (SGIC).

## Futures

(in thousands)

	Notional Market Value	
	Defined Benefit Plans 2016	Defined Contribution Plans 2016
Cash & Cash Equivalents		
Long	\$ 197,175	14,242
Short	(78,267)	(3,920)
Equity		
Long	498,652	80,788
Short	(82,635)	—
Fixed Income		
Long	761,180	58,232
Short	(443,970)	(55,143)
<b>Total Futures</b>	<b>\$ 852,135</b>	<b>94,199</b>

## 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, 2016, the Systems' and Plans' investments had the notional future balances as shown above.

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### Currency Forwards

(in thousands)

Currency	Defined Benefit Plans			
	Notional Cost	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Fair Value 2016
Australian dollar	\$ (15,825)	3,700	(19,280)	(15,580)
Brazilian real	1,673	1,741	(3)	1,738
British pound sterling	(291,420)	27,701	(316,420)	(288,719)
Canadian dollar	(67,083)	5,393	(73,059)	(67,666)
Colombian peso	214	3,247	(3,247)	—
Danish krone	(1,834)	—	(1,816)	(1,816)
Euro	(308,264)	31,754	(340,653)	(308,899)
Hong Kong dollar	1,530	1,530	—	1,530
Hungarian forint	(8,644)	—	(8,372)	(8,372)
Indian rupee	144	9,930	(9,930)	—
Indonesian rupiah	6,730	6,597	—	6,597
Japanese yen	(215,294)	7,354	(219,360)	(212,006)
Mexican peso	(7,168)	19,767	(25,484)	(5,717)
New Taiwan dollar	(9,953)	—	(9,900)	(9,900)
New Zealand dollar	(36,646)	—	(36,498)	(36,498)
Norwegian krone	(8,281)	—	(8,327)	(8,327)
Philippine peso	(30)	—	(30)	(30)
Russian ruble	108	3,636	(3,636)	—
Singapore dollar	(3,720)	20	(3,751)	(3,731)
South African rand	360	6,699	(6,677)	22
South Korean won	(30,261)	15,711	(43,818)	(28,107)
Swedish krona	4,928	14,808	(9,563)	5,245
Swiss franc	(2,777)	—	(2,805)	(2,805)
Turkish lira	3,837	12,489	(10,024)	2,465
United States dollar	987,676	1,162,640	(174,962)	987,678
Total forwards subject to foreign currency risk	\$ —	1,334,717	(1,327,615)	7,102

Currency	Defined Contribution Plans			
	Notional Cost	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Fair Value 2016
Australian dollar	\$ (10,321)	—	(10,384)	(10,384)
Brazilian real	255	265	—	265
British pound sterling	(13,245)	420	(13,591)	(13,171)
Canadian dollar	(8,561)	509	(9,164)	(8,655)
Colombian peso	32	489	(489)	—
Danish krone	(255)	—	(252)	(252)
Euro	(46,704)	750	(47,664)	(46,914)
Hungarian forint	(1,242)	—	(1,203)	(1,203)
Indian rupee	21	1,471	(1,471)	—
Indonesian rupiah	988	969	—	969
Japanese yen	(20,632)	130	(20,790)	(20,660)
Mexican peso	(116)	3,059	(3,248)	(189)
New Taiwan dollar	(1,490)	—	(1,483)	(1,483)
New Zealand dollar	(4,499)	—	(4,501)	(4,501)
Norwegian krone	(662)	—	(666)	(666)
Russian ruble	15	512	(512)	—
Singapore dollar	(531)	—	(533)	(533)
South African rand	51	1,009	(1,009)	—
South Korean won	(3,087)	2,199	(5,006)	(2,807)
Swedish krona	(163)	601	(753)	(152)
Turkish lira	576	1,891	(1,522)	369
United States dollar	109,570	124,402	(14,832)	109,570
Total forwards subject to foreign currency risk	\$ —	138,676	(139,073)	(397)

### 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, 2016, the Systems' and Plans' investments included the currency forwards balances above.

### 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

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

## Options

(in thousands)		Market Value	
	Defined Benefit Plans 2016	Defined Contribution Plans 2016	
Cash & Cash Equivalents			
Put	\$ (176)	—	
Equity			
Put	603	—	
Debt Securities			
Call	—	(29)	
Put	386	4	
Swaptions			
Call	(73)	45	
Put	(356)	19	
<b>Total Options</b>	<b>\$ 384</b>	<b>39</b>	

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, 2016, the Systems' and Plans' investments had the option balances shown above.

## 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

## Fixed Income Portfolio Swaps

(in thousands)

Counterparty	Notional Amount	Utah Rate	Counterparty Rate	Maturity Date	Defined Benefit	
					Credit Rating	Fair Value 2016
JP Morgan Chase	\$ 20,200	BRL****	11.98%	2/1/17	A-	\$ (235)
Barclays	20,879	US CPI***	1.63%	9/13/17	AA	(139)
Barclays	19,240	2.066%	US CPI***	3/10/18	AA	(588)
Barclays	20,879	1.585%	US CPI***	9/13/18	AA	256
Goldman Sachs Bank	69,370	LIBOR**	1.230%	9/30/18	A+	(211)
Goldman Sachs Bank	24,000	LIBOR**	1.630%	11/21/19	A+	(123)
Goldman Sachs Bank	30,170	1.75%	LIBOR**	12/4/19	A+	95
Goldman Sachs Bank	24,580	2.03%	LIBOR**	12/19/19	A+	(52)
Goldman Sachs Bank	4,440	LIBOR**	1.08%	7/13/20	A+	(88)
Goldman Sachs Bank	3,780	LIBOR**	1.11%	7/17/20	A+	(73)
Goldman Sachs Bank	24,490	LIBOR**	1.26%	8/21/20	A+	(412)
Goldman Sachs Bank	39,540	1.95%	LIBOR**	11/16/20	A+	199
Bank of America	11,770	1.42%	1 day fed funds	5/31/21	BBB+	91
Bank of America	35,590	1.75%	LIBOR**	5/31/21	BBB+	301
Goldman Sachs Bank	14,600	1.42%	1 day fed funds	5/31/21	A+	113
Goldman Sachs Bank	131,620	1.75%	LIBOR**	5/31/21	A+	1,115
Deutsche Bank	8,980	1.125%	EUR CPI	8/12/21	BBB+	40
Barclays	15,715	3.38%	UK RPI	10/15/21	AA	62
Goldman Sachs Bank	7,370	0.37%	EURLIBOR	11/16/22	A+	(43)
Deutsche Bank	8,980	EUR CPI	1.4072%	8/12/26	BBB+	(65)
Bank of America	12,190	2.51%	LIBOR**	8/15/26	BBB+	(147)
Barclays	15,715	UK RPI	3.4525%	10/15/26	AA	(117)
Goldman Sachs Bank	11,060	LIBOR**	2.72%	12/6/26	A+	(22)
Bank of America	5,635	2.78%	LIBOR**	11/15/43	BBB+	(170)
Bank of America	3,611	1.80%	LIBOR**	8/19/46	BBB+	617
Goldman Sachs Bank	1,990	1.80%	LIBOR**	8/19/46	A+	342
Bank of America	1,560	1.73%	LIBOR**	8/31/46	BBB+	292
<b>Total Swaps</b>	<b>\$ 587,954</b>					<b>\$ 1,038</b>

Counterparty	Notional Amount	Utah Rate	Counterparty Rate	Maturity Date	Defined Contribution	
					Credit Rating	Fair Value 2016
Goldman Sachs Bank	\$ 3,100	BRL****	LIBOR**	1/2/17	A+	\$ (36)
Barclays	1,531	US CPI***	1.63%	9/13/17	AA	(10)
Barclays	1,020	2.066%	US CPI***	3/10/18	AA	(31)
Barclays	1,531	1.585%	US CPI***	9/13/18	AA	19
Credit Suisse First Boston	2,270	1.75%	LIBOR**	5/31/21	BBB+	19
Credit Suisse First Boston	840	1.42%	1 day fed funds	5/31/21	BBB+	6
Deutsche Bank	675	1.125%	EUR CPI	12/8/21	BBB+	3
Credit Suisse First Boston	960	2.51%	LIBOR**	8/15/26	BBB+	(12)
Deutsche Bank	675	EUR CPI	1.4072%	12/8/26	BBB+	(5)
Credit Suisse First Boston	435	2.78%	LIBOR**	11/15/43	BBB+	(13)
Credit Suisse First Boston	278	1.80%	LIBOR**	8/19/46	BBB+	49
Credit Suisse First Boston	120	1.73%	LIBOR**	8/31/46	BBB+	23
<b>Total Interest Rate and Credit Default Swaps</b>	<b>\$ 13,435</b>					<b>\$ 12</b>

\*\*Three Month London Interbank Offered Rate (LIBOR)  
 \*\*\*United States Consumer Price Index  
 \*\*\*\*Brazilian Interbank Offered Rate (Daily)

EUR CPI European Consumer Price Index  
 UR RPI United Kingdom Retail Price Index  
 EUROLIBOR European LIBOR

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

## Real Estate Portfolio Interest Swaps

(in thousands)

Counterparty	Notional Amount	Utah Rate	Counterparty Rate	Maturity Date	Defined Benefit	
					Credit Rating	Fair Value 2016
National Australia Bank	\$ 5,080	4.970%	LIBOR*	1/1/17	AA-	(20)
Morgan Stanley	4,486	4.690%	LIBOR*	3/1/18	BBB+	\$ (209)
Morgan Stanley	71,700	4.722%	LIBOR*	10/1/20	BBB+	(8,517)
Morgan Stanley	43,660	5.294%	LIBOR*	11/1/21	BBB+	(7,458)
Total Real Estate Swaps	\$ 124,926					\$ (16,204)

\*One Month London Interbank Offered Rate (LIBOR)

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 market values and are recorded in the Statements of Changes in Fiduciary Net Position. Swap market values are determined by an independent third party. As of December 31, 2016, the Systems' and Plans' investments had the swap market value balances as shown in the tables on page 77 and above.

## 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, 2016, if all counterparties fail to perform as contracted was \$1,475,423,000. Derivative credit risk at fair value is shown in the table below. This maximum exposure is reduced by \$1,468,711,000 of liabilities, resulting in \$6,712,000 exposure to credit risk. Credit ratings for the wrap contracts associated with the SGICs are noted in the bottom table on page 79. As of December 31, 2016, 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-	\$ (1,705)	—	—	(1,705)
A+	2,257	17	(1,501)	773
A	478	—	—	478
A-	(1,766)	—	(235)	(2,001)
BBB+	3,055	(221)	(15,065)	(12,231)
BBB	1,492	—	(615)	877
BBB-	2,894	—	—	2,894
NA	—	2,330	—	2,330
Total subject to credit risk	\$ 6,705	2,126	(17,416)	(8,585)

## 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

## 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. 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, 2016, was \$933,515,000 and the market value was \$943,930,000.



## Notes to the Basic Financial Statements (Continued)

December 31, 2016

(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	Durations	Credit Rating	Fair Value	Market Value	Durations	Credit Rating	Fair Value	Market Value
\$ 60,862	60,932	0.75	AAA	\$ 26,327	26,835	0.81	AAA	\$ 41,174	42,036	0.60	AAA	\$ 128,363	129,803
48,023	48,078	2.47	AA+	27,802	28,335	3.08	AA+	19,491	19,899	2.39	AA+	95,316	96,312
146,085	146,265	3.06	A-	97,349	99,280	4.36	A-	83,998	85,813	1.50	A-	327,432	331,358
62,702	62,774	3.40	AAA	27,552	28,083	3.35	AAA	9,702	9,905	2.98	AAA	99,956	100,762
48,374	48,429	3.37	AAA	55,883	56,960	6.79	AA+	24,005	24,508	3.62	AA+	128,262	129,897
62,483	62,555	1.70	AA+	40,771	41,557	1.40	AA+	35,986	36,740	1.14	AA+	139,240	140,852
9,639	9,639	—	—	2,616	2,616	—	—	2,691	2,691	—	—	14,946	14,946
\$ 438,168	438,672			\$ 278,300	283,666			\$ 217,047	221,592			\$ 933,515	943,930

### Wrap Contracts

(in thousands)

Contract Issuer	Fair Value	Market Value	Rate	Duration	Quality Rating
American General	\$ 60,629	60,783	1.95%	2.41	A+
Lincoln National Life	113,891	113,954	1.86	2.41	AA-
MetLife	217,047	221,592	1.60	1.64	AA-
Transamerica	65,724	65,921	2.04	2.41	AA-
Transamerica	123,408	126,108	2.86	3.79	AA-
Pacific Life	197,924	198,014	1.90	2.41	AA-
Royal Bank of Canada	154,892	157,558	2.10	3.79	AA-
Subtotal wrap contracts	933,515	943,930			
Merrill Lynch repurchase	37,104	37,104			
Total	\$ 970,619	981,034			

### K) Investment Payables

The investment accounts payable are comprised of investment advisor fees payable of \$8,944,000, administrative expenses payable of \$8,186,000, and investment purchases payable of \$703,427,000.

### 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, 2016. There were no significant leases as of December 31, 2016.

### Property and Equipment

(in thousands)

	2016
Land	\$ 1,780
Buildings and building improvements	17,978
Furniture and equipment	4,416
Computer software	2,388
Total property and equipment	26,562
Less accumulated depreciation:	
Buildings and building improvements	9,185
Furniture and equipment	1,589
Computer software	1,671
Total accumulated depreciation	12,445
Less operating reserves	9,227
Net property and equipment	\$ 4,890

Notes to the Basic Financial Statements (Continued)

December 31, 2016

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, 2016, 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 last experience study was performed in 2014 and the next experience study is scheduled to be conducted in 2017. 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, 2016, is based on the results of an actuarial valuation date of January 1, 2016, and rolled-forward using generally accepted actuarial procedures.

A summary of the actuarial assumptions as of the latest actuarial valuation is shown on page 81 and are based on the results of the most recent experience study except for the decrease in the assumed investment return from 7.50% to 7.20%, and the decrease in the assumed inflation rate from 2.75% to 2.60%. With the decrease in the assumed rate of inflation, both the payroll growth and wage inflation assumptions were decreased by 0.15% from the prior year’s assumption.



### 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	\$26,501,781	\$22,618,743	\$3,883,038	85.3%	\$3,406,567	114.0%
Contributory Retirement System	1,292,512	1,204,904	87,608	93.2	53,615	163.4
Public Safety Retirement System	3,794,880	3,176,545	618,335	83.7	352,407	175.5
Firefighters Retirement System	1,129,729	1,115,726	14,003	98.8	112,322	12.5
Judges Retirement System	210,623	175,618	35,005	83.4	16,755	208.9
Utah Governors and Legislators Retirement Plan	12,654	10,352	2,302	81.8	799	288.1
Tier 2 Public Employees System	228,450	217,293	11,157	95.1	822,196	1.4
Tier 2 Public Safety and Firefighter System	24,266	25,135	(869)	103.6	74,834	(1.2)
<b>Total</b>	<b>\$33,194,895</b>	<b>\$28,544,316</b>	<b>\$4,650,579</b>	<b>86.0%</b>	<b>\$4,839,495</b>	<b>96.1%</b>

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### 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	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16
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	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%
Projected salary increases	3.35-10.35%	3.35-10.35%	3.35-7.65%	3.35-8.90%	3.35%	None	3.35-10.35%	3.35-8.90%
Inflation rate	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%
Post-retirement cost-of-living adjustment	2.60%	2.60%	2.50% or 2.60% Depending on employer	2.60%	2.60%	2.60%	2.50%	2.50%
Mortality: (Non-educators)	Male: RP-2000 with white collar adjustments, projected with Scale AA from the year 2000. Female: 120% of constructed mortality table based on actual experience of female educators, projected with Scale AA from the year 2000.							
Mortality: (Educators)	Male: 90% of constructed mortality table based on actual experience of male educators, projected with Scale AA from the year 2000. Female: 100% of constructed mortality table based on actual experience of female educators, projected with Scale AA from the year 2000.							

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%	7.06%	2.82%
Debt securities	20	0.80	0.16
Real assets	13	5.10	0.66
Private equity	9	11.30	1.02
Absolute return	18	3.15	0.57
Cash and cash equivalents	0	0.00	0.00
Totals	100%		5.23%
Inflation			2.60
Expected arithmetic nominal return			7.83%

\*The total URS Defined Benefit long-term expected rate of return is 7.20%, which is comprised of a 2.60% inflation assumption and a 4.60% net real rate of return.

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, 2016, are summarized in table to the left.

The discount rate used to measure the total pension liability was 7.20%. 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, 2016

**Changes in Discount Rate**

(dollars in thousands)

System	Net Pension Liability/(Asset) 1% Decrease (6.20%)	Net Pension Liability/(Asset) Current Discount Rate (7.20%)	Net Pension Liability/(Asset) 1% Increase (8.20%)
Noncontributory Retirement System	\$ 7,272,333	3,883,038	1,044,993
Contributory Retirement System	213,702	87,608	(19,165)
Public Safety Retirement System	1,150,467	618,335	182,948
Firefighters Retirement System	169,686	14,003	(114,022)
Judges Retirement System	56,845	35,005	16,253
Utah Governors and Legislators Retirement Plan	3,526	2,302	1,265
Tier 2 Public Employees System	75,928	11,157	(38,121)
Tier 2 Public Safety and Firefighter System	6,073	(869)	(6,202)
<b>Total</b>	<b>\$ 8,948,560</b>	<b>4,650,579</b>	<b>1,067,949</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 7.20%, 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 (6.20%) or 1.00% higher (8.20%) 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 a closed 20-year amortization period. The rates are determined using the entry age actuarial cost method.

The top schedule on page 83 summarizes contribution rates in effect as of December 31, 2016. 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 below 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



## Notes to the Basic Financial Statements (Continued)

December 31, 2016

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.

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, 2016, is indicated in the schedules shown below.

Member contributions in the 401(k), 457, Roth and traditional IRAs, total \$350,725,000, that in combination with the member contributions made in the Retirement Systems total \$390,012,000.

### Contribution Rates

December 31, 2016

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 - 48.68	—
Contributory	10.50 - 12.29	22.19 - 29.70	—
Firefighters: Division A	15.05	3.89	11.64%
Division B	16.71	6.66	11.64
Judges: Noncontributory	—	42.12	9.79
Governors and Legislators	—	\$ 404,409	—
Tier 2 Public Employees	—	14.91 - 18.24%	—
Tier 2 Public Safety and Firefighter	—	10.75 - 37.02	—

### Required Contributions

(dollars in thousands)

	Contribution Requirements			Total Actual Contributions	Member Contributions Made	Employer Contributions Made
	Normal Cost	Unfunded Cost	Total Required Contributions			
Noncontributory Retirement System	\$531,086	\$316,853	\$ 847,939	\$ 847,939	\$16,308	\$ 831,631
Contributory Retirement System	6,348	5,260	11,608	11,608	3,420	8,188
Public Safety Retirement System	92,699	55,230	147,929	147,929	830	147,099
Firefighters Retirement System	36,252	—	36,252	36,252	18,729	17,523
Judges Retirement System	7,007	1,845	8,852	8,852	—	8,852
Utah Governors and Legislators Retirement Plan	421	—	421	421	—	421
Tier 2 Public Employees System	63,062	—	63,062	63,062	—	63,062
Tier 2 Public Safety and Firefighter System	8,488	—	8,488	8,488	—	8,488
<b>Total</b>	<b>\$745,363</b>	<b>\$379,188</b>	<b>\$1,124,551</b>	<b>\$1,124,551</b>	<b>\$39,287</b>	<b>\$1,085,264</b>

Note 7

## Transfers To or 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.

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

## 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.

## 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, 2016, the Systems had committed to fund certain private equity partnerships, absolute return, and real asset funds projects for an amount of \$9,675,946,000. Funding of \$7,124,786,000 had been provided by December 31, 2016, leaving an unfunded commitment of \$2,551,160,000 as of December 31, 2016.

## 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 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, 2016, 2015, and 2014, were \$2,941,508, \$2,681,089, and \$2,510,743, 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, 2016, 2015, and 2014, were \$487,794, \$399,721, and \$251,304, 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

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

## Note 12

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, 2016, 2015, and 2014, were \$946,818, \$764,166, and \$631,803, respectively; the employee contributions for the years ended December 31, 2016, 2015, and 2014, were \$755,806, \$638,355, and \$557,139, 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, 2016, 2015, and 2014, were \$460,828, \$422,398, and \$386,146, 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, 2016, 2015, and 2014, the Roth IRA employee contributions were \$186,088, \$152,088, and \$122,138, respectively. For the years ended December 31, 2016, 2015, and 2014, the traditional IRA employee contributions were \$8,985, \$2,235, and \$690, respectively.

**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 110% and the plan is closed to new entrants, there are no actuarial required contributions.

**Annual Costs**

For the year ended December 31, 2016, the annual cost (expense) of \$0 for UREPEHP was equal to the ARC. The net Other Post-Employment Benefits (OPEB) obligation for 2016 was as follows:

Year Ended	Annual Required Contributions	Percentage Contributed	Net OPEB Obligation
12/31/07	\$ 387,000	100%	\$ —
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	—

## Notes to the Basic Financial Statements (Continued)

December 31, 2016

### Schedule of Funding Progress

(dollars in thousands)

Division	Date	Based on fair value of assets		(3)	(4)	(5)	(6)
		(1) Actuarial Value of Assets	(2) Accrued Liability (AAL) Entry Age	(Overfunded) AAL (UAAL) (2) - (1)	Funding Ratios (1) / (2)	Annual Covered Payroll	UAAL as a % of Covered Payroll (3)/(5)
URS Employees	12/31/07	\$ 4,559	5,990	1,431	76.1%	\$ 9,131	15.7%
	12/31/08	4,206	7,008	2,802	60.0	8,673	32.3
	12/31/09	4,654	7,539	2,885	61.7	8,678	33.2
	12/31/10	4,811	7,382	2,571	65.2	8,366	30.7
	12/31/11	4,838	7,615	2,777	63.5	7,835	35.4
	12/31/12	4,886	7,838	2,952	62.3	7,538	39.2
	12/31/13	5,325	5,660	335	94.1	7,189	4.7
	12/31/14	5,794	5,750	(44)	100.8	6,955	(0.6)
	12/31/15	5,942	5,308	(634)	111.9	7,841	(8.1)
	12/31/16	6,094	5,739	(355)	106.2	7,647	(4.6)

### Schedule of Required Contributions

January 1, 2016

(dollars in thousands)

Year Ended*	Annual Required Contributions	Percentage Contributed	Net OPEB Obligation
12/31/07	\$ 387	100%	\$—
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	—

### Funded Status and Funding Progress

The funded status of the plan as of January 1, 2015, the date of the most recent actuarial valuation, was as follows:

Actuarial accrued liability (AAL)	\$ 5,226,973
Actuarial value of plan assets	5,794,000
Unfunded (overfunded) actuarial accrued liability (UAAL)	(567,027)
Funded ratio (actuarial value of plan assets/AAL)	111%
Covered salaries and wages (active) (plan members)	\$ 7,841,350
UAAL as a percentage of covered salaries and wages	(7)%

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, 2015, actuarial valuation, the entry age actuarial cost method was used. The actuarial assumptions included a 7.5% 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 2.75% 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.



Notes to the Basic Financial Statements *(Continued)*

December 31, 2016

## Note 13

## Compensated Absences, Post-Employment Benefits, and Insurance Reserve

The compensated absences liability for Utah Retirement Office employees as of December 31, 2016, was \$5,672,353. This represents the amount of unused leave to be paid to employees upon termination. As of December 31, 2016, 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 88 through 95. 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.

### Real Estate Liabilities

<i>(in thousands)</i>			
	Initial Affected Balance	Maturity Date	Annual Payment
BNP Paribas Credit Facility	\$ 85,000	Monthly	\$ 85,000
The Northern Trust	120,000	8/1/2017	120,000
<b>Total</b>	<b>\$ 205,000</b>		
Year Ending December 31,	Total Principal Payments	Total Interest Payments	Total Swap Payments
2017	\$ 205,000	825	4,983
2018	—	—	4,835
2019	—	—	4,807
2020	—	—	4,101
2021	—	—	1,650

*BNP Paribas Credit Facility is a term loan with one remaining annual principal payment. Loan and swap interest payments are calculated using the One Month LIBOR rate at December 31, 2016.*

## Note 16

## Real Estate Liabilities

The real estate liabilities consist of two private placement notes. These notes bear various interest rates and are 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, 2016, there are \$205 million in credit facility debt. Using interest rates as of December 31, 2016, principal and interest requirements of the debt and net swap payments for the terms of the debt and swaps are shown below.

# Required Supplementary Information

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

Year Ended December 31

*(in thousands)*

	Noncontributory System			
	2016	2015	2014	2013
<b>Total pension liability</b>				
Service cost	\$ 407,690	394,798	407,992	441,320
Interest	1,764,653	1,775,819	1,699,693	1,646,213
Benefit changes	48,400	—	—	23,123
Difference between actual and expected experience	6,408	(188,166)	(204,823)	(208,501)
Assumption changes	563,741	—	(157,921)	—
Benefit payments	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
Refunds	(4,366)	(2,496)	(2,204)	(2,454)
<b>Net change in total pension liability</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>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>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	16,308	17,020	13,587	14,208
Contributions — employer	831,631	813,449	772,420	710,933
Court fees and fire insurance tax	—	—	—	—
Net investment income	1,783,911	366,748	1,419,053	2,588,981
Benefit payments	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
Refunds	(4,366)	(2,496)	(2,204)	(2,454)
Administrative expense	(8,856)	(8,797)	(8,828)	(8,329)
Net transfers with affiliated systems	(8,005)	33,648	30,467	(42,277)
<b>Net change in plan fiduciary net position</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>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>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>\$ 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>85.3%</b>	<b>85.1%</b>	<b>87.7%</b>	<b>85.3%</b>
<b>Projected covered employee payroll</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>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				Firefighters System			
2016	2015	2014	2013	2016	2015	2014	2013	2016	2015	2014	2013
5,673	8,672	9,580	10,997	78,843	75,352	76,681	81,736	28,652	27,182	27,266	29,577
91,894	95,463	93,819	93,750	249,722	248,980	236,803	229,965	75,334	75,212	71,490	70,259
(45,057)	—	—	721	—	—	—	—	—	—	—	—
(13,801)	(15,289)	(22,839)	(20,520)	9,358	(17,164)	(25,225)	(29,228)	(5,525)	(8,259)	(15,077)	(13,083)
22,909	—	(4,233)	—	110,373	—	(52,410)	—	25,572	—	(20,372)	—
(83,447)	(81,390)	(77,015)	(74,158)	(164,508)	(155,387)	(144,763)	(137,486)	(52,102)	(49,671)	(47,710)	(44,747)
(1,700)	(1,215)	(2,433)	(1,922)	(183)	(533)	(199)	(467)	(466)	(528)	(293)	(106)
(23,529)	6,241	(3,121)	8,868	283,605	151,248	90,887	144,520	71,465	43,936	15,304	41,900
1,316,041	1,309,800	1,312,921	1,304,053	3,511,275	3,360,027	3,269,140	3,124,620	1,058,264	1,014,328	999,024	957,124
1,292,512	1,316,041	1,309,800	1,312,921	3,794,880	3,511,275	3,360,027	3,269,140	1,129,729	1,058,264	1,014,328	999,024
3,420	4,771	5,461	6,376	830	905	835	1,258	18,729	18,175	18,300	18,325
8,188	11,719	12,954	12,874	147,099	141,024	135,588	128,744	6,954	6,690	5,514	3,494
—	—	—	—	—	—	—	—	10,569	17,218	14,154	11,285
97,693	21,251	87,577	169,510	249,027	50,654	194,222	350,563	87,746	17,934	69,070	125,685
(83,447)	(81,390)	(77,015)	(74,158)	(164,508)	(155,387)	(144,763)	(137,486)	(52,102)	(49,671)	(47,710)	(44,747)
(1,700)	(1,215)	(2,433)	(1,922)	(183)	(533)	(199)	(467)	(466)	(528)	(293)	(106)
(446)	(478)	(494)	(480)	(1,260)	(1,233)	(1,227)	(1,161)	(374)	(371)	(370)	(355)
(1,895)	(41,558)	(38,004)	33,094	6,701	4,023	2,746	4,676	1,611	2,573	3,713	1,302
21,813	(86,900)	(11,954)	145,294	237,706	39,453	187,202	346,127	72,667	12,020	62,378	114,883
1,183,091	1,269,991	1,281,945	1,136,651	2,938,839	2,899,386	2,712,184	2,366,057	1,043,059	1,031,039	968,661	853,778
1,204,904	1,183,091	1,269,991	1,281,945	3,176,545	2,938,839	2,899,386	2,712,184	1,115,726	1,043,059	1,031,039	968,661
87,608	132,950	39,809	30,976	618,335	572,436	460,641	556,956	14,003	15,205	(16,711)	30,363
93.2%	89.9%	97.0%	97.6%	83.7%	83.7%	86.3%	83.0%	98.8%	98.6%	101.6%	97.0%
53,615	82,426	90,623	98,023	352,407	355,171	360,750	365,998	112,322	111,133	111,305	110,741
163.4%	161.3%	43.9%	31.6%	175.5%	161.2%	127.7%	152.2%	12.5%	13.7%	(15.0)%	27.4%

Continued on page 90.

## Utah Retirement Systems

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

Year Ended December 31

(in thousands)

	Judges System				Utah Governors and Legislators Plan			
	2016	2015	2014	2013	2016	2015	2014	2013
<b>Total pension liability</b>								
Service cost	\$ 5,023	4,794	4,895	4,537	89	99	106	100
Interest	14,064	14,136	13,641	12,924	851	890	884	860
Benefit changes	—	—	—	—	—	—	—	—
Difference between actual and expected experience	1,995	171	2,602	(569)	167	(105)	307	(233)
Assumption changes	2,885	—	(130)	—	241	—	—	—
Benefit payments	(12,330)	(12,400)	(11,361)	(10,189)	(941)	(904)	(909)	(892)
Refunds	—	—	—	—	—	—	—	—
<b>Net change in total pension liability</b>	<b>11,637</b>	<b>6,701</b>	<b>9,647</b>	<b>6,703</b>	<b>407</b>	<b>(20)</b>	<b>388</b>	<b>(165)</b>
<b>Total pension liability — beginning</b>	<b>198,986</b>	<b>192,285</b>	<b>182,638</b>	<b>175,935</b>	<b>12,247</b>	<b>12,267</b>	<b>11,879</b>	<b>12,044</b>
<b>Total pension liability — ending (a)</b>	<b>210,623</b>	<b>198,986</b>	<b>192,285</b>	<b>182,638</b>	<b>12,654</b>	<b>12,247</b>	<b>12,267</b>	<b>11,879</b>
<b>Plan fiduciary net position</b>								
Contributions — member	—	—	317	—	—	—	—	—
Contributions — employer	7,382	6,555	5,627	4,990	421	421	411	252
Court fees and fire insurance tax	1,470	1,653	1,486	1,498	—	—	—	—
Net investment income	13,820	2,842	11,068	20,130	849	181	717	1,346
Benefit payments	(12,330)	(12,400)	(11,361)	(10,189)	(941)	(904)	(909)	(892)
Refunds	—	—	—	—	—	—	—	—
Administrative expense	(71)	(71)	(71)	(66)	(4)	(5)	(5)	(4)
Net transfers with affiliated systems	1,600	1,334	1,092	3,186	(12)	(20)	(14)	19
<b>Net change in plan fiduciary net position</b>	<b>11,871</b>	<b>(87)</b>	<b>8,158</b>	<b>19,549</b>	<b>313</b>	<b>(327)</b>	<b>200</b>	<b>721</b>
<b>Plan fiduciary net position — beginning</b>	<b>163,747</b>	<b>163,834</b>	<b>155,676</b>	<b>136,127</b>	<b>10,039</b>	<b>10,366</b>	<b>10,166</b>	<b>9,445</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>175,618</b>	<b>163,747</b>	<b>163,834</b>	<b>155,676</b>	<b>10,352</b>	<b>10,039</b>	<b>10,366</b>	<b>10,166</b>
<b>Net pension liability/(asset) — ending (a-b)</b>	<b>\$ 35,005</b>	<b>35,239</b>	<b>28,451</b>	<b>26,962</b>	<b>2,302</b>	<b>2,208</b>	<b>1,901</b>	<b>1,713</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>83.4%</b>	<b>82.3%</b>	<b>85.2%</b>	<b>85.2%</b>	<b>81.8%</b>	<b>82.0%</b>	<b>84.5%</b>	<b>85.6%</b>
<b>Projected covered employee payroll</b>	<b>\$ 16,755</b>	<b>15,832</b>	<b>16,072</b>	<b>15,195</b>	<b>799</b>	<b>943</b>	<b>928</b>	<b>390</b>
<b>Net pension liability/(asset) as a percentage of covered employee payroll</b>	<b>208.9%</b>	<b>222.6%</b>	<b>177.0%</b>	<b>177.4%</b>	<b>288.1%</b>	<b>234.1%</b>	<b>204.8%</b>	<b>439.2%</b>

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

Tier 2 Public Employees System				Tier 2 Public Safety and Firefighter System				Total			
2016	2015	2014	2013	2016	2015	2014	2013	2016	2015	2014	2013
69,887	51,005	39,283	29,318	8,164	5,466	3,579	2,151	604,021	567,368	569,382	599,736
12,608	8,370	4,648	2,351	1,274	746	379	159	2,210,400	2,219,616	2,121,357	2,056,481
—	—	—	(119)	—	—	—	(7)	3,343	—	—	23,718
(1,917)	(4,982)	(4,577)	(4,459)	425	220	50	106	(2,890)	(233,574)	(269,582)	(276,487)
7,867	—	(1,385)	—	803	—	(127)	—	734,391	—	(236,578)	—
(316)	(333)	—	—	(28)	(30)	—	—	(1,497,989)	(1,423,762)	(1,325,556)	(1,242,156)
—	—	—	—	—	—	—	—	(6,715)	(4,772)	(5,129)	(4,949)
88,129	54,060	37,969	27,091	10,638	6,402	3,881	2,409	2,044,561	1,124,876	853,894	1,156,343
140,321	86,261	48,292	21,201	13,628	7,226	3,345	936	31,150,334	30,025,458	29,171,564	28,015,221
228,450	140,321	86,261	48,292	24,266	13,628	7,226	3,345	33,194,895	31,150,334	30,025,458	29,171,564
—	—	—	—	—	—	—	—	39,287	40,871	38,500	40,167
63,062	49,645	37,299	25,743	8,488	6,221	4,365	2,451	1,073,225	1,035,724	974,178	889,481
—	—	—	—	—	—	—	—	12,039	18,871	15,640	12,783
14,059	1,963	4,320	4,017	1,591	199	404	316	2,248,696	461,772	1,786,431	3,260,548
(316)	(333)	—	—	(28)	(30)	—	—	(1,497,989)	(1,423,762)	(1,325,556)	(1,242,156)
—	—	—	—	—	—	—	—	(6,715)	(4,772)	(5,129)	(4,949)
(51)	(30)	(16)	(6)	(5)	(3)	(1)	—	(11,067)	(10,988)	(11,012)	(10,401)
—	3	(2)	3	—	(3)	2	(3)	—	—	—	—
76,754	51,248	41,601	29,757	10,046	6,384	4,770	2,764	1,857,476	117,716	1,473,052	2,945,473
140,539	89,291	47,690	17,933	15,089	8,705	3,935	1,171	26,686,840	26,569,124	25,096,072	22,150,599
217,293	140,539	89,291	47,690	25,135	15,089	8,705	3,935	28,544,316	26,686,840	26,569,124	25,096,072
11,157	(218)	(3,030)	602	(869)	(1,461)	(1,479)	(590)	4,650,579	4,463,494	3,456,334	4,075,492
95.1%	100.2%	103.5%	98.8%	103.6%	110.7%	120.5%	117.6%	86.0%	85.7%	88.5%	86.0%
822,196	637,560	492,882	353,227	74,834	53,276	35,019	20,215	4,839,495	4,714,627	4,678,491	4,669,560
1.4%	(0.0)%	(0.6)%	0.2%	(1.2)%	(2.7)%	(4.2)%	(2.9)%	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
<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
<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
<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
<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
<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
<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
<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)
<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

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>	2007	\$ 487,803	487,803	—	3,582,495	13.62%
	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	
<b>Contributory Retirement System</b>	2007	\$ 11,208	11,208	—	132,899	8.43%
	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	
<b>Public Safety Retirement System</b>	2007	\$ 81,166	81,166	—	339,187	23.93%
	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	
<b>Firefighters Retirement System</b>	2007	\$ 13,797	13,797	—	95,767	14.41%
	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	

\*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.

Continued on page 94.

## 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>Judges Retirement System</b>	2007	\$ 3,210	3,210	—	13,322	24.10%
	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	
<b>Utah Governors and Legislative Retirement Plan</b>	2007	\$ —	—	—	947	0.00%
	2008	—	—	—	910	0.00
	2009	—	—	—	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	
<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
<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
<b>All Retirement Systems</b>	2007	\$ 597,184	597,184	—	4,164,617	14.34%
	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

<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.



**Utah Retirement Systems**

Required Supplementary Information

## Schedule of Investment Returns

Year Ended December 31

	2016	2015	2014
Annual money weighted rate of return, net of investment expense	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, 2016 valuation is effective for the fiscal year beginning July 1, 2018.

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

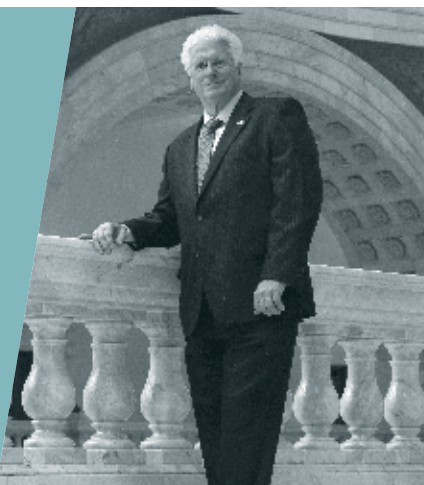
policy. The projected covered payroll is an estimated payroll figure based upon the January 1, 2016, census data.

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, 2016

### 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	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16
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 18-Year Closed Period	Open Group 20-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	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%
Projected salary increases*	3.35-10.35%	3.35-10.35%	3.35-7.65%	3.35-8.90%	3.35%	None	3.35-10.35%	3.35-8.90%
Inflation rate	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%
Post-retirement cost-of-living adjustment	2.60%	2.60%	2.50% or 2.60% Depending on employer	2.60%	2.60%	2.60%	2.50%	2.50%
Mortality: (Non-educators)	Male: RP-2000 with white collar adjustments, projected with Scale AA from the year 2000. Female: 120% of constructed mortality table based on actual experience of female educators, projected with Scale AA from the year 2000.							
Mortality: (Educators)	Male: 90% of constructed mortality table based on actual experience of male educators, projected with Scale AA from the year 2000. Female: 100% of constructed mortality table based on actual experience of female educators, projected with Scale AA from the year 2000.							

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 2.60% 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, 2016

With Comparative Totals for December 31, 2015

(in thousands)

	Local Government	State and School	Total All Divisions	
			2016	2015
<b>Assets:</b>				
Cash	\$ 1	826	827	2,158
Receivables:				
Employer contributions	6,501	34,520	41,021	33,259
Investments	68,838	283,918	352,756	229,238
Total receivables	75,339	318,438	393,777	262,497
Investments at fair value:				
Short-term securities	369,937	1,525,786	1,895,723	1,770,475
Debt securities	673,693	2,778,616	3,452,309	3,399,620
Equity investments	1,577,347	6,505,694	8,083,041	7,299,702
Absolute return	697,256	2,875,799	3,573,055	3,288,234
Private equity	508,902	2,098,942	2,607,844	2,552,474
Real assets	660,182	2,722,889	3,383,071	3,196,190
Total investments	4,487,317	18,507,726	22,995,043	21,506,695
Invested securities lending collateral	108,171	446,148	554,319	1,602,253
Property and equipment at cost, net of accumulated depreciation	756	3,119	3,875	2,488
Total assets	4,671,584	19,276,257	23,947,841	23,376,091
<b>Liabilities:</b>				
Securities lending liability	108,171	446,148	554,319	1,602,253
Disbursements in excess of cash balance	6,076	25,060	31,136	29,275
Compensated absences, post-employment benefits and insurance reserve	3,196	13,181	16,377	15,944
Investment accounts payable	110,032	454,779	564,811	304,196
Real estate liabilities	31,702	130,753	162,455	231,986
Total liabilities	259,177	1,069,921	1,329,098	2,183,654
Net position restricted for pensions	\$ 4,412,407	18,206,336	22,618,743	21,192,437

**Noncontributory Retirement System**

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

Year Ended December 31, 2016

With Comparative Totals for Year Ended December 31, 2015

*(in thousands)*

	Local Government	State and School	Total All Divisions	
			2016	2015
<b>Additions:</b>				
Contributions:				
Member	\$ 5,023	11,285	16,308	17,020
Employer	171,967	659,664	831,631	813,449
Total contributions	176,990	670,949	847,939	830,469
Investment income:				
Net appreciation in fair value of investments	277,025	1,151,262	1,428,287	38,208
Interest, dividends, and other investment income	75,309	312,968	388,277	364,237
Total income from investment activity	352,334	1,464,230	1,816,564	402,445
Less investment expenses	7,562	31,425	38,987	42,927
Net income from investment activity	344,772	1,432,805	1,777,577	359,518
Income from security lending activity	1,412	5,867	7,279	8,310
Less security lending expense	183	762	945	1,080
Net income from security lending activity	1,229	5,105	6,334	7,230
Net investment income	346,001	1,437,910	1,783,911	366,748
Transfers from affiliated systems	—	—	—	33,648
Total additions	522,991	2,108,859	2,631,850	1,230,865
<b>Deductions:</b>				
Retirement benefits	164,923	836,528	1,001,451	943,591
Cost-of-living benefits	26,088	156,778	182,866	180,056
Refunds	392	3,974	4,366	2,496
Administrative expenses	1,671	7,185	8,856	8,797
Transfers to affiliated systems	(8,323)	16,328	8,005	—
Total deductions	184,751	1,020,793	1,205,544	1,134,940
Increase from operations	338,240	1,088,066	1,426,306	95,925
Net position restricted for pensions beginning of year	4,074,167	17,118,270	21,192,437	21,096,512
Net position restricted for pensions end of year	\$ 4,412,407	18,206,336	22,618,743	21,192,437

## Noncontributory Retirement System

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

Year Ended December 31

*(in thousands)*

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

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

State and School				Total All Divisions			
2016	2015	2014	2013	2016	2015	2014	2013
311,641	303,494	314,556	340,531	407,690	394,798	407,992	441,320
1,434,005	1,447,699	1,389,106	1,348,596	1,764,653	1,775,819	1,699,693	1,646,213
—	—	—	17,060	48,400	—	—	23,123
(11,715)	(168,556)	(188,714)	(169,131)	6,408	(188,166)	(204,823)	(208,501)
451,045	—	(105,032)	—	563,741	—	(157,921)	—
(993,306)	(945,732)	(883,831)	(824,793)	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
(3,974)	(2,248)	(1,969)	(1,834)	(4,366)	(2,496)	(2,204)	(2,454)
1,187,696	634,657	524,116	710,429	1,602,209	856,308	698,939	925,017
20,259,556	19,624,899	19,100,783	18,390,354	24,899,572	24,043,264	23,344,325	22,419,308
21,447,252	20,259,556	19,624,899	19,100,783	26,501,781	24,899,572	24,043,264	23,344,325
11,285	11,539	9,728	11,571	16,308	17,020	13,587	14,208
659,664	646,434	614,490	563,828	831,631	813,449	772,420	710,933
1,437,910	296,853	1,152,843	2,110,520	1,783,911	366,748	1,419,053	2,588,981
(993,306)	(945,732)	(883,831)	(824,793)	(1,184,317)	(1,123,647)	(1,043,798)	(974,684)
(3,974)	(2,248)	(1,969)	(1,834)	(4,366)	(2,496)	(2,204)	(2,454)
(7,185)	(7,175)	(7,224)	(6,832)	(8,856)	(8,797)	(8,828)	(8,329)
(16,328)	6,228	16,409	(36,975)	(8,005)	33,648	30,467	(42,277)
1,088,066	5,899	900,446	1,815,485	1,426,306	95,925	1,180,697	2,286,378
17,118,270	17,112,371	16,211,925	14,396,440	21,192,437	21,096,512	19,915,815	17,629,437
18,206,336	17,118,270	17,112,371	16,211,925	22,618,743	21,192,437	21,096,512	19,915,815
3,240,916	3,141,286	2,512,528	2,888,858	3,883,038	3,707,135	2,946,752	3,428,510
84.9%	84.5%	87.2%	84.9%	85.3%	85.1%	87.7%	85.3%
2,576,161	2,631,288	2,725,548	2,840,933	3,406,567	3,458,286	3,570,912	3,705,771
125.8%	119.4%	92.2%	101.7%	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
<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
<b>Total</b>	12/31/13	\$ 23,344,325	19,915,815	3,428,510	85.3%	\$ 3,705,771	92.5%
<b>Noncontributory Retirement System</b>	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

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
<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	646,434	646,434	—	2,631,288	24.57
	2016	659,664	659,664	—	2,576,161	25.61
<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

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, 2016

With Comparative Totals for December 31, 2015

*(in thousands)*

	Local Government	State and School	Total All Divisions	
			2016	2015
<b>Assets:</b>				
Cash	\$ 1	1	2	2
Receivables:				
Member contributions	60	66	126	94
Employer contributions	160	195	355	266
Investments	6,656	12,162	18,818	12,813
Total receivables	6,876	12,423	19,299	13,173
Investments at fair value:				
Short-term securities	35,770	65,358	101,128	98,963
Debt securities	65,141	119,023	184,164	190,027
Equity investments	152,517	278,675	431,192	408,028
Absolute return	67,419	123,186	190,605	183,800
Private equity	49,207	89,909	139,116	142,675
Real assets	63,834	116,636	180,470	178,656
Total investments	433,888	792,787	1,226,675	1,202,149
Invested securities lending collateral	10,459	19,111	29,570	89,560
Property and equipment at cost, net of accumulated depreciation	73	134	207	139
Total assets	451,297	824,456	1,275,753	1,305,023
<b>Liabilities:</b>				
Securities lending collateral liability	10,459	19,111	29,570	89,560
Disbursements in excess of cash balance	587	1,073	1,660	1,637
Compensated absences, post-employment benefits and insurance reserve	309	565	874	891
Investment accounts payable	10,639	19,440	30,079	16,876
Real estate liabilities	3,065	5,601	8,666	12,968
Total liabilities	25,059	45,790	70,849	121,932
Net position restricted for pensions	\$ 426,238	778,666	1,204,904	1,183,091

## Contributory Retirement System

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

Year Ended December 31, 2016

With Comparative Totals for Year Ended December 31, 2015

(in thousands)

	Local Government	State and School	Total All Divisions	
			2016	2015
<b>Additions:</b>				
Contributions:				
Member	\$ 1,759	1,661	3,420	4,771
Employer	3,730	4,458	8,188	11,719
Total contributions	5,489	6,119	11,608	16,490
Investment income:				
Net appreciation in fair value of investments	27,503	50,715	78,218	2,213
Interest, dividends, and other investment income	7,477	13,787	21,264	21,106
Total income from investment activity	34,980	64,502	99,482	23,319
Less investment expenses	751	1,384	2,135	2,487
Net income from investment activity	34,229	63,118	97,347	20,832
Income from securities lending activity	140	258	398	481
Less security lending expense	18	34	52	62
Net income from security lending activity	122	224	346	419
Net investment income	34,351	63,342	97,693	21,251
Total additions	39,840	69,461	109,301	37,741
<b>Deductions:</b>				
Retirement benefits	22,540	47,597	70,137	67,510
Cost-of-living benefits	3,573	9,659	13,232	13,785
Supplemental retirement benefits	13	65	78	95
Refunds	655	1,045	1,700	1,215
Administrative expenses	157	289	446	478
Transfers to affiliated systems	6,519	(4,624)	1,895	41,558
Total deductions	33,457	54,031	87,488	124,641
Decrease from operations	6,383	15,430	21,813	(86,900)
Net position restricted for pensions beginning of year	419,855	763,236	1,183,091	1,269,991
Net position restricted for pensions end of year	\$ 426,238	778,666	1,204,904	1,183,091

## Contributory Retirement System

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

Year Ended December 31

*(in thousands)*

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

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

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

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
<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
<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

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, 2016

With Comparative Totals for December 31, 2015

(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	—	13	—
Employer contributions	1,924	1,955	574
Investments	16,829	20,253	4,064
Total receivables	18,753	22,221	4,638
Investments at fair value:			
Short-term securities	90,438	108,841	21,839
Debt securities	164,697	198,212	39,771
Equity investments	385,613	464,082	93,118
Absolute return	170,458	205,144	41,162
Private equity	124,411	149,727	30,043
Real assets	161,394	194,236	38,973
Total investments	1,097,011	1,320,242	264,906
Invested securities lending collateral	26,445	31,826	6,386
Property and equipment at cost, net of accumulated depreciation	185	223	45
Total assets	1,142,396	1,374,516	275,977
<b>Liabilities:</b>			
Securities lending liability	26,445	31,826	6,386
Disbursements in excess of cash balance	1,485	1,788	359
Compensated absences, post-employment benefits and insurance reserve	781	940	189
Investment accounts payable	26,900	32,373	6,496
Real estate liabilities	7,750	9,327	1,872
Total liabilities	63,361	76,254	15,302
Net position restricted for pensions	\$ 1,079,035	1,298,262	260,675



Utah Retirement Systems

	Ogden	Provo	Logan	Bountiful	Other Division B (without Social Security)	Total All Divisions	
						2016	2015
	2	2	2	2	4	20	20
	—	—	—	—	1	14	10
	117	89	39	71	751	5,520	1,486
	927	726	408	293	6,043	49,543	31,823
	1,044	815	447	364	6,795	55,077	33,319
	4,981	3,903	2,194	1,577	32,475	266,248	245,776
	9,070	7,109	3,996	2,872	59,140	484,867	471,934
	21,237	16,644	9,355	6,724	138,468	1,135,241	1,013,339
	9,388	7,357	4,135	2,972	61,209	501,825	456,471
	6,852	5,370	3,018	2,169	44,674	366,264	354,333
	8,888	6,966	3,916	2,814	57,954	475,141	443,692
	60,416	47,349	26,614	19,128	393,920	3,229,586	2,985,545
	1,456	1,141	642	461	9,496	77,853	222,424
	10	8	4	3	66	544	345
	62,928	49,315	27,709	19,958	410,281	3,363,080	3,241,653
	1,456	1,141	642	461	9,496	77,853	222,424
	82	64	36	26	533	4,373	4,064
	43	34	19	14	281	2,301	2,213
	1,481	1,161	653	469	9,659	79,192	41,910
	427	335	188	135	2,782	22,816	32,203
	3,489	2,735	1,538	1,105	22,751	186,535	302,814
	59,439	46,580	26,171	18,853	387,530	3,176,545	2,938,839

## Public Safety Retirement System

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

Year Ended December 31, 2016

With Comparative Totals for Year Ended December 31, 2015

*(in thousands)*

	State of Utah Public Safety	Other Division A (with Social Security)	Salt Lake City
<b>Additions:</b>			
Contributions:			
Member	\$ 112	515	8
Employer	50,554	52,359	15,260
Total contributions	50,666	52,874	15,268
Investment income:			
Net appreciation in fair value of investments	67,850	81,791	16,367
Interest, dividends, and other investment income	18,445	22,235	4,449
Total income from investment activity	86,295	104,026	20,816
Less investment expenses	1,852	2,233	447
Net income from investment activity	84,443	101,793	20,369
Income from security lending activity	346	417	83
Less security lending expense	45	54	11
Net income from security lending activity	301	363	72
Net investment income	84,744	102,156	20,441
Transfers from (to) affiliated systems	3,363	(6,727)	1,369
Total additions	138,773	148,303	37,078
<b>Deductions:</b>			
Retirement benefits	51,479	47,619	13,751
Cost-of-living benefits	11,014	9,948	3,892
Supplemental retirement benefits	129	85	38
Refunds	8	175	—
Administrative expenses	432	496	118
Total deductions	63,062	58,323	17,799
Increase (decrease) from operations	75,711	89,980	19,279
Net position restricted for pensions beginning of year	1,003,324	1,208,282	241,396
Net position restricted for pensions end of year	\$ 1,079,035	1,298,262	260,675

Utah Retirement Systems

Ogden	Provo	Logan	Bountiful	Other Division B (without Social Security)	Total All Divisions	
					2016	2015
—	—	—	—	195	830	905
3,147	2,403	1,052	943	21,381	147,099	141,024
3,147	2,403	1,052	943	21,576	147,929	141,929
3,760	2,930	1,656	1,196	23,835	199,385	5,276
1,022	797	450	325	6,480	54,203	50,307
4,782	3,727	2,106	1,521	30,315	253,588	55,583
103	80	45	33	651	5,444	5,929
4,679	3,647	2,061	1,488	29,664	248,144	49,654
19	15	8	6	121	1,015	1,149
2	2	1	1	16	132	149
17	13	7	5	105	883	1,000
4,696	3,660	2,068	1,493	29,769	249,027	50,654
(74)	(39)	(52)	35	8,826	6,701	4,023
7,769	6,024	3,068	2,471	60,171	403,657	196,606
3,286	2,140	1,242	1,193	14,987	135,697	127,285
917	555	274	241	1,706	28,547	27,807
5	6	—	1	—	264	295
—	—	—	—	—	183	533
27	20	11	9	147	1,260	1,233
4,235	2,721	1,527	1,444	16,840	165,951	157,153
3,534	3,303	1,541	1,027	43,331	237,706	39,453
55,905	43,277	24,630	17,826	344,199	2,938,839	2,899,386
59,439	46,580	26,171	18,853	387,530	3,176,545	2,938,839

## Public Safety Retirement System

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

Year Ended December 31

*(in thousands)*

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

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				Ogden			
2016	2015	2014	2013	2016	2015	2014	2013	2016	2015	2014	2013
31,202	29,942	30,473	32,564	6,316	5,963	5,878	6,209	1,139	1,164	1,170	1,304
98,935	98,538	93,276	90,791	23,099	23,023	22,171	21,719	5,232	5,359	5,185	5,028
—	—	—	—	—	—	—	—	—	—	—	—
(6,830)	(12,388)	(16,141)	(25,616)	2,815	2,063	(1,430)	(3,743)	(288)	(1,153)	559	(713)
48,303	—	(21,812)	—	11,313	—	(4,551)	—	2,544	—	(822)	—
(57,652)	(54,909)	(51,394)	(48,824)	(17,681)	(17,076)	(16,398)	(15,737)	(4,208)	(4,090)	(3,956)	(3,864)
(175)	(208)	(115)	(97)	—	—	—	(15)	—	—	—	—
113,783	60,975	34,287	48,818	25,862	13,973	5,670	8,433	4,419	1,280	2,136	1,755
1,387,407	1,326,432	1,292,145	1,243,327	326,502	312,529	306,859	298,426	74,200	72,920	70,784	69,029
1,501,190	1,387,407	1,326,432	1,292,145	352,364	326,502	312,529	306,859	78,619	74,200	72,920	70,784
515	701	597	714	8	—	4	13	—	56	—	—
52,359	51,677	49,156	46,421	15,260	14,100	13,519	12,426	3,147	2,729	2,791	2,525
102,156	20,899	80,565	146,201	20,441	4,178	16,113	29,378	4,696	976	3,803	6,973
(57,652)	(54,909)	(51,394)	(48,824)	(17,681)	(17,076)	(16,398)	(15,737)	(4,208)	(4,090)	(3,956)	(3,864)
(175)	(208)	(115)	(97)	—	—	—	(15)	—	—	—	—
(496)	(485)	(482)	(458)	(118)	(116)	(116)	(110)	(27)	(26)	(27)	(26)
(6,727)	(10,067)	(6,061)	(3,111)	1,369	657	620	447	(74)	(66)	107	535
89,980	7,608	72,266	140,846	19,279	1,743	13,742	26,402	3,534	(421)	2,718	6,143
1,208,282	1,200,674	1,128,408	987,562	241,396	239,653	225,911	199,509	55,905	56,326	53,608	47,465
1,298,262	1,208,282	1,200,674	1,128,408	260,675	241,396	239,653	225,911	59,439	55,905	56,326	53,608
202,928	179,125	125,758	163,737	91,689	85,106	72,876	80,948	19,180	18,295	16,594	17,176
86.5%	87.1%	90.5%	87.3%	74.0%	73.9%	76.7%	73.6%	75.6%	75.3%	77.2%	75.7%
139,677	141,681	143,924	146,190	28,331	28,275	27,821	28,016	5,082	5,517	5,518	5,831
145.3%	126.4%	87.4%	112.0%	323.6%	301.0%	261.9%	288.9%	377.4%	331.6%	300.7%	294.6%

Continued on page 116.

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

Year Ended December 31

*(in thousands)*

	Provo				Logan			
	2016	2015	2014	2013	2016	2015	2014	2013
<b>Total pension liability</b>								
Service cost	\$ 1,134	1,099	1,141	1,181	488	485	524	580
Interest	3,972	3,916	3,748	3,680	2,220	2,201	2,110	2,029
Benefit changes	—	—	—	—	—	—	—	—
Difference between actual and expected experience	147	636	(638)	561	(264)	278	232	(701)
Assumption changes	1,960	—	(859)	—	1,103	—	(420)	—
Benefit payments	(2,701)	(2,739)	(2,503)	(2,281)	(1,516)	(1,442)	(1,366)	(1,320)
Refunds	—	—	(11)	(204)	—	—	—	—
<b>Net change in total pension liability</b>	<b>4,512</b>	<b>2,912</b>	<b>878</b>	<b>2,937</b>	<b>2,031</b>	<b>1,522</b>	<b>1,080</b>	<b>588</b>
<b>Total pension liability — beginning</b>	<b>55,943</b>	<b>53,031</b>	<b>52,153</b>	<b>49,216</b>	<b>31,344</b>	<b>29,822</b>	<b>28,742</b>	<b>28,154</b>
<b>Total pension liability — ending (a)</b>	<b>60,455</b>	<b>55,943</b>	<b>53,031</b>	<b>52,153</b>	<b>33,375</b>	<b>31,344</b>	<b>29,822</b>	<b>28,742</b>
<b>Plan fiduciary net position</b>								
Contributions — member	—	—	—	—	—	—	35	49
Contributions — employer	2,403	2,314	2,255	2,158	1,052	1,044	989	944
Net investment income	3,660	749	2,877	5,204	2,068	432	1,671	3,047
Benefit payments	(2,701)	(2,739)	(2,503)	(2,281)	(1,516)	(1,442)	(1,366)	(1,320)
Refunds	—	—	(11)	(204)	—	—	—	—
Administrative expense	(20)	(20)	(19)	(19)	(11)	(11)	(11)	(10)
Net transfers with affiliated systems	(39)	66	145	16	(52)	(247)	100	88
<b>Net change in plan fiduciary net position</b>	<b>3,303</b>	<b>370</b>	<b>2,744</b>	<b>4,874</b>	<b>1,541</b>	<b>(224)</b>	<b>1,418</b>	<b>2,798</b>
<b>Plan fiduciary net position — beginning</b>	<b>43,277</b>	<b>42,907</b>	<b>40,163</b>	<b>35,289</b>	<b>24,630</b>	<b>24,854</b>	<b>23,436</b>	<b>20,638</b>
<b>Plan fiduciary net position — ending (b)</b>	<b>46,580</b>	<b>43,277</b>	<b>42,907</b>	<b>40,163</b>	<b>26,171</b>	<b>24,630</b>	<b>24,854</b>	<b>23,436</b>
<b>Net pension liability — ending (a-b)</b>	<b>\$ 13,875</b>	<b>12,666</b>	<b>10,124</b>	<b>11,990</b>	<b>7,204</b>	<b>6,714</b>	<b>4,968</b>	<b>5,306</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>77.0%</b>	<b>77.4%</b>	<b>80.9%</b>	<b>77.0%</b>	<b>78.4%</b>	<b>78.6%</b>	<b>83.3%</b>	<b>81.5%</b>
<b>Projected covered employee payroll</b>	<b>\$ 5,065</b>	<b>5,213</b>	<b>5,424</b>	<b>5,295</b>	<b>2,183</b>	<b>2,306</b>	<b>2,459</b>	<b>2,584</b>
<b>Net pension liability as a percentage of covered employee payroll</b>	<b>273.9%</b>	<b>243.0%</b>	<b>186.7%</b>	<b>226.4%</b>	<b>330.0%</b>	<b>291.2%</b>	<b>202.0%</b>	<b>205.3%</b>

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

Utah Retirement Systems

				Bountiful				Other Division B (with Social Security)				Total All Divisions			
2016	2015	2014	2013	2016	2015	2014	2013	2016	2015	2014	2013	2016	2015	2014	2013
409	380	383	390	13,828	13,049	12,922	13,495	78,843	75,352	76,681	81,736				
1,711	1,682	1,635	1,580	28,192	26,988	25,159	23,425	249,722	248,980	236,803	229,965				
—	—	—	—	—	—	—	—	—	—	—	—				
383	652	297	(147)	16,534	7,046	3,963	3,230	9,358	(17,164)	(25,225)	(29,228)				
830	—	(229)	—	15,005	—	(6,121)	—	110,373	—	(52,410)	—				
(1,435)	(1,358)	(1,419)	(1,369)	(16,693)	(14,502)	(12,652)	(11,659)	(164,508)	(155,387)	(144,763)	(137,486)				
—	—	—	—	—	(307)	(61)	(149)	(183)	(533)	(199)	(467)				
1,898	1,356	667	454	56,866	32,274	23,210	28,342	283,605	151,248	90,887	144,520				
24,275	22,919	22,252	21,798	392,994	360,720	337,510	309,168	3,511,275	3,360,027	3,269,140	3,124,620				
26,173	24,275	22,919	22,252	449,860	392,994	360,720	337,510	3,794,880	3,511,275	3,360,027	3,269,140				
—	—	—	—	195	33	47	379	830	905	835	1,258				
943	883	822	716	21,381	20,828	20,246	20,161	147,099	141,024	135,588	128,744				
1,493	310	1,220	2,271	29,769	5,761	21,024	35,969	249,027	50,654	194,222	350,563				
(1,435)	(1,358)	(1,419)	(1,369)	(16,693)	(14,502)	(12,652)	(11,659)	(164,508)	(155,387)	(144,763)	(137,486)				
—	—	—	—	—	(307)	(61)	(149)	(183)	(533)	(199)	(467)				
(9)	(9)	(9)	(8)	(147)	(135)	(129)	(117)	(1,260)	(1,233)	(1,227)	(1,161)				
35	35	14	99	8,826	11,344	6,697	5,845	6,701	4,023	2,746	4,676				
1,027	(139)	628	1,709	43,331	23,022	35,172	50,429	237,706	39,453	187,202	346,127				
17,826	17,965	17,337	15,628	344,199	321,177	286,005	235,576	2,938,839	2,899,386	2,712,184	2,366,057				
18,853	17,826	17,965	17,337	387,530	344,199	321,177	286,005	3,176,545	2,938,839	2,899,386	2,712,184				
7,320	6,449	4,954	4,915	62,330	48,795	39,543	51,505	618,335	572,436	460,641	556,956				
72.0%	73.4%	78.4%	77.9%	86.1%	87.6%	89.0%	84.7%	83.7%	83.7%	86.3%	83.0%				
1,810	1,776	1,795	1,749	61,501	61,436	60,698	60,373	352,408	355,171	360,750	365,998				
404.4%	363.1%	276.0%	281.0%	101.3%	79.4%	65.1%	85.3%	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
<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
<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
<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
<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
<b>Public Safety</b>	12/31/13	\$ 28,742	23,436	5,306	81.5%	\$ 2,584	205.3%
<b>Logan</b>	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
<b>Public Safety</b>	12/31/13	\$ 22,252	17,337	4,915	77.9%	\$ 1,749	281.0%
<b>Bountiful</b>	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
<b>Public Safety</b>	12/31/13	\$ 337,510	286,005	51,505	84.7%	\$ 60,373	85.3%
<b>Other Division B</b>	12/31/14	360,720	321,177	39,543	89.0	60,698	65.1
(without Social Security)	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
<b>Total</b>	12/31/13	\$ 3,269,140	2,712,184	556,956	83.0%	\$ 365,998	152.2%
<b>Public Safety</b>	12/31/14	3,360,027	2,899,386	460,641	86.3	360,750	127.7
<b>Retirement System</b>	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

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
<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
<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	—	28,275	49.87
	2016	15,260	15,260	—	28,331	53.86
<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
<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
<b>Public Safety Logan</b>	2013	\$ 944	944	—	2,584	36.53%
	2014	989	989	—	2,459	40.22
	2015	1,044	1,044	—	2,306	45.27
	2016	1,052	1,052	—	2,183	48.19
<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
<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
<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	—	355,171	39.71
	2016	147,099	147,099	—	352,408	41.74

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, 2016

With Comparative Totals for December 31, 2016

*(in thousands)*

	Division A (with Social Security)	Division B (without Social Security)	Total All Divisions	
			2016	2015
<b>Assets:</b>				
Cash	\$ 1	1	2	2
Receivables:				
Member contributions	133	519	652	280
Fire insurance tax	367	1,236	1,603	340
Investments	3,020	14,377	17,397	11,294
Total receivables	3,520	16,132	19,652	11,914
Investments at fair value:				
Short-term securities	16,227	77,264	93,491	87,224
Debt securities	29,552	140,706	170,258	167,486
Equity investments	69,190	329,440	398,630	359,627
Absolute return	30,584	145,627	176,211	161,998
Private equity	22,323	106,288	128,611	125,751
Real assets	28,959	137,884	166,843	157,464
Total investments	196,835	937,209	1,134,044	1,059,550
Invested securities lending collateral	4,745	22,592	27,337	78,936
Property and equipment at cost, net of accumulated depreciation	33	158	191	123
Total assets	205,134	976,092	1,181,226	1,150,525
<b>Liabilities:</b>				
Securities lending collateral liability	4,745	22,592	27,337	78,936
Disbursements in excess of cash balance	267	1,269	1,536	1,442
Compensated absences, post-employment benefits and insurance reserve	140	667	807	785
Investment accounts payable	4,827	22,981	27,808	14,874
Real estate liabilities	1,391	6,621	8,012	11,429
Total liabilities	11,370	54,130	65,500	107,466
Net position restricted for pensions benefits	\$ 193,764	921,962	1,115,726	1,043,059

**Firefighters Retirement System**

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

Year Ended December 31, 2016

With Comparative Totals for Year Ended December 31, 2015

*(in thousands)*

	Division A (with Social Security)	Division B (without Social Security)	Total All Divisions	
			2016	2015
<b>Additions:</b>				
Contributions:				
Member	\$ 4,214	14,515	18,729	18,175
Employer	1,124	5,830	6,954	6,690
Fire insurance tax	2,581	7,988	10,569	17,218
Total contributions	7,919	28,333	36,252	42,083
Investment income:				
Net appreciation in fair value of investments	12,021	58,233	70,254	1,869
Interest, dividends, and other investment income	3,268	15,831	19,099	17,810
Total income from investment activity	15,289	74,064	89,353	19,679
Less investment expenses	328	1,590	1,918	2,099
Net income from investment activity	14,961	72,474	87,435	17,580
Income from securities lending activity	61	297	358	407
Less security lending expense	8	39	47	53
Net income from security lending activity	53	258	311	354
Net investment income	15,014	72,732	87,746	17,934
Transfers from affiliated systems	135	1,476	1,611	2,573
Total additions	23,068	102,541	125,609	62,590
<b>Deductions:</b>				
Retirement benefits	5,217	36,470	41,687	39,340
Cost-of-living benefits	890	9,305	10,195	10,095
Supplemental retirement benefits	14	206	220	236
Refunds	174	292	466	528
Administrative expenses	62	312	374	371
Total deductions	6,357	46,585	52,942	50,570
Increase from operations	16,711	55,956	72,667	12,020
Net position restricted for pensions beginning of year	177,053	866,006	1,043,059	1,031,039
Net position restricted for pensions end of year	\$ 193,764	921,962	1,115,726	1,043,059

## 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)			
	2016	2015	2014	2013
Total pension liability				
Service cost	\$ 7,020	6,584	6,636	7,158
Interest	12,644	12,290	11,387	10,840
Benefit changes	—	—	—	—
Difference between actual and expected experience	(271)	(985)	(1,199)	(1,812)
Assumption changes	4,636	—	(4,028)	—
Benefit payments	(6,121)	(6,243)	(5,432)	(4,889)
Refunds	(174)	(190)	(72)	—
Net change in total pension liability	17,734	11,456	7,292	11,297
Total pension liability — beginning	175,242	163,786	156,494	145,197
Total pension liability — ending (a)	192,976	175,242	163,786	156,494
Plan fiduciary net position				
Contributions — member	4,214	4,063	3,983	3,977
Contributions — employer	1,124	1,055	888	745
Fire insurance tax	2,581	4,170	3,398	2,748
Net investment income	15,014	2,982	11,118	19,648
Benefit payments	(6,121)	(6,243)	(5,432)	(4,889)
Refunds	(174)	(190)	(72)	—
Administrative expense	(62)	(60)	(58)	(54)
Net transfers with affiliated systems	135	1,784	664	796
Net change in plan fiduciary net position	16,711	7,561	14,489	22,971
Plan fiduciary net position — beginning	177,053	169,492	155,003	132,032
Plan fiduciary net position — ending (b)	193,764	177,053	169,492	155,003
Net pension liability/(asset) — ending (a-b)	\$ (788)	(1,811)	(5,706)	1,491
Plan fiduciary net position as a percentage of the total pension liability	100.4%	101.0%	103.5%	99.0%
Projected covered employee payroll	27,266	26,672	26,873	26,521
Net pension liability as a percentage of covered employee payroll	(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			
2016	2015	2014	2013	2016	2015	2014	2013
21,632	20,598	20,630	22,419	28,652	27,182	27,266	29,577
62,690	62,922	60,103	59,419	75,334	75,212	71,490	70,259
—	—	—	—	—	—	—	—
(5,254)	(7,274)	(13,878)	(11,271)	(5,525)	(8,259)	(15,077)	(13,083)
20,936	—	(16,344)	—	25,572	—	(20,372)	—
(45,981)	(43,428)	(42,278)	(39,858)	(52,102)	(49,671)	(47,710)	(44,747)
(292)	(338)	(221)	(106)	(466)	(528)	(293)	(106)
53,731	32,480	8,012	30,603	71,465	43,936	15,304	41,900
883,022	850,542	842,530	811,927	1,058,264	1,014,328	999,024	957,124
936,753	883,022	850,542	842,530	1,129,729	1,058,264	1,014,328	999,024
14,515	14,112	14,317	14,348	18,729	18,175	18,300	18,325
5,830	5,635	4,626	2,749	6,954	6,690	5,514	3,494
7,988	13,048	10,756	8,537	10,569	17,218	14,154	11,285
72,732	14,952	57,952	106,037	87,746	17,934	69,070	125,685
(45,981)	(43,428)	(42,278)	(39,858)	(52,102)	(49,671)	(47,710)	(44,747)
(292)	(338)	(221)	(106)	(466)	(528)	(293)	(106)
(312)	(311)	(312)	(301)	(374)	(371)	(370)	(355)
1,476	789	3,049	506	1,611	2,573	3,713	1,302
55,956	4,459	47,889	91,912	72,667	12,020	62,378	114,883
866,006	861,547	813,658	721,746	1,043,059	1,031,039	968,661	853,778
921,962	866,006	861,547	813,658	1,115,726	1,043,059	1,031,039	968,661
14,791	17,016	(11,005)	28,872	14,003	15,205	(16,711)	30,363
98.4%	98.1%	101.3%	96.6%	98.8%	98.6%	101.6%	97.0%
85,056	84,461	84,432	84,220	112,322	111,133	111,305	110,741
17.4%	20.1%	(13.0)%	34.3%	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)
<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
<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

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>	2013	\$ 3,493	3,493	—	26,521	13.17%
(with Social Security)	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
<b>Firefighters Division B</b>	2013	\$ 11,286	11,286	—	84,220	13.40%
(without Social Security)	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
<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

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, 2016

	Total
Personal services:	
Salaries and wages	\$ 13,003
Employee benefits	6,186
Total personal services	19,189
Professional services:	
Audit	647
Actuarial services	322
General counsel	1,166
Banking services	63
Security handling expense	1,000
Investment advisor fees	42,006
Other consulting services	2,831
Total professional services	48,035
Communications:	
Telephone	181
Postage	353
Total communications	534
Rentals:	
Office space	945
Office equipment rental	596
Total rentals	1,541
Miscellaneous:	
Data processing	364
Professional development	307
Contractual services	178
Supplies and maintenance	159
Insurance and bonding premiums	562
Office supplies	71
Other	298
Depreciation expense	697
Total miscellaneous	2,636
Total administrative and investment expenses	\$ 71,935
Allocation of administrative expenses:	
Noncontributory Retirement System	\$ 8,856
Contributory Retirement System	446
Public Safety Retirement System	1,260
Firefighters Retirement System	374
Judges Retirement System	71
Utah Governors and Legislators Retirement Plan	4
Tier 2 Public Employees Retirement System	51
Tier 2 Public Safety and Firefighter Retirement System	5
401(k) Plan	7,085
457 Plan	810
Roth IRA Plan	142
Traditional IRA Plan	128
Health Reimbursement Arrangement (HRA)	31
Total administrative expenses	19,263
Investment administrative expense	10,662
Investment advisor fees:	
Investment Fund	38,489
401(k) Plan	3,071
457 Plan	332
Roth IRA Plan	59
Traditional IRA Plan	59
Health Reimbursement Arrangement (HRA)	—
Total investment expenses	52,672
Total administrative and investment expense allocations	\$ 71,935





Utah Retirement Systems

2016

Comprehensive Annual Financial Report

# Investment Section

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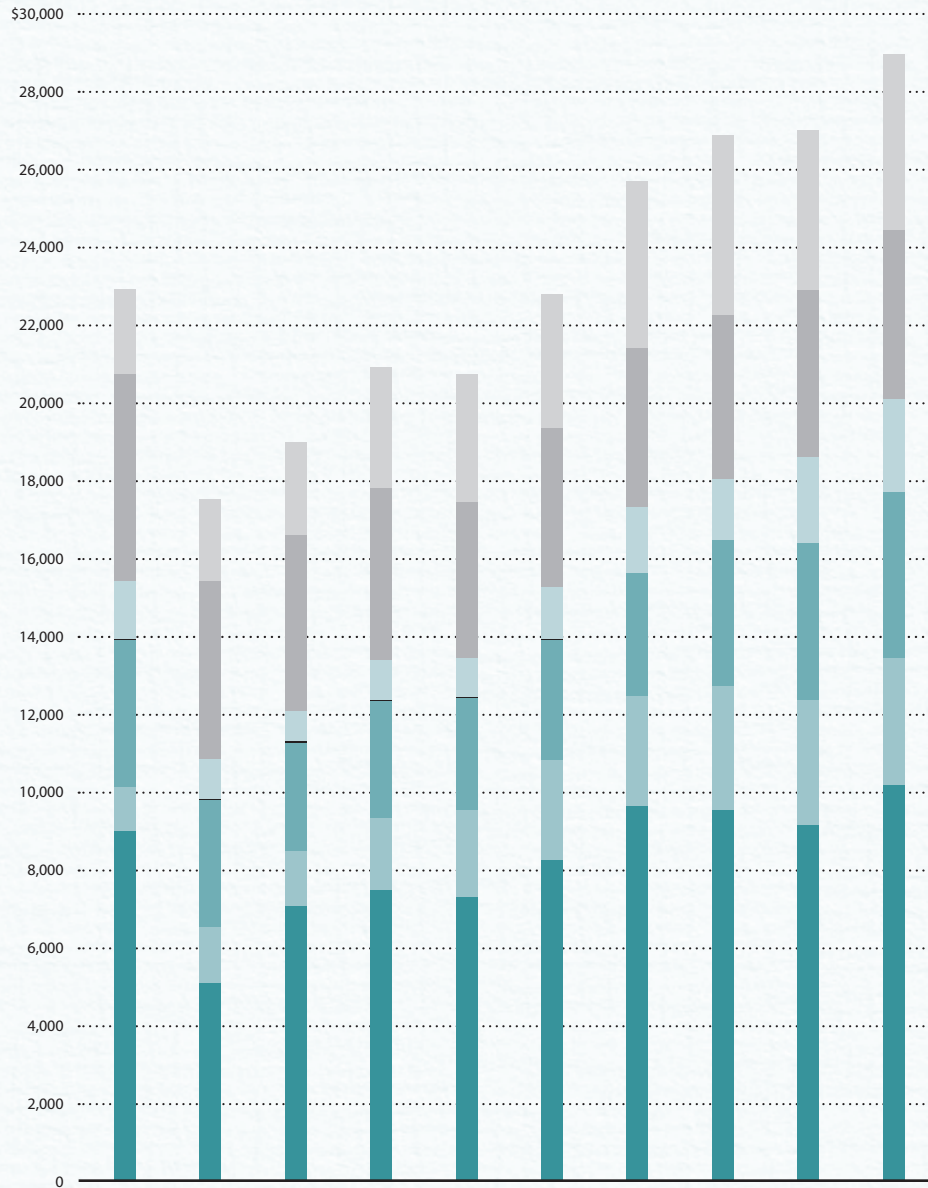
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Utah Retirement Systems

# 10-Year Investment Comparison

(in millions)



	<i>(in millions)</i>									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Absolute return	\$ 2,196	2,097	2,411	3,138	3,287	3,474	4,298	4,643	4,141	4,509
Debt securities	5,315	4,578	4,521	4,406	4,022	4,093	4,094	4,213	4,282	4,356
Short-term securities	1,515	1,041	804	1,056	1,017	1,337	1,711	1,572	2,230	2,392
Mortgages	7	7	7	7	7	7	—	—	—	—
Real assets	3,772	3,280	2,799	3,024	2,886	3,094	3,147	3,780	4,025	4,269
Private equity	1,150	1,442	1,411	1,840	2,255	2,594	2,840	3,170	3,215	3,291
Equities	9,029	5,120	7,104	7,521	7,323	8,272	9,675	9,577	9,193	10,200
<b>Totals</b>	<b>\$ 22,984</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>

# 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, 2017

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

Dear Members of Utah Retirement Systems:

The economic year 2016 got off to a difficult start. Oil prices remained near historic lows, markets were still concerned about high yield bond defaults, and the Federal Reserve Bank (Fed) was expected to raise interest rates. Thus, by the end of February, the Standard & Poors (S&P) 500 was down more than 5%, while developed and emerging international market indexes declined by 8.9% and 6.6%, respectively. In early 2016, we appeared headed toward the event everyone had been anticipating: a correction. However, this would all dramatically change by the end of the year.

Two major political events marked the year 2016. Both impacted investor sentiment and, therefore, performance of global markets. In June, the United Kingdom (U.K.) voted to leave the European Union, stunning the world and the markets. The United States stock market lost 5% on fears that other European countries could possibly follow the U.K.'s lead. However, within days of the vote, the market recovered, as investors realized the immediate effects on American businesses would be limited.

The other major event was the U.S. presidential election. In the aftermath of Donald Trump's surprise victory, investors and politicians alike scrambled to determine how the new president's campaign promises would impact markets and geopolitics. After a brief post-election decline, the U.S. stock market rallied, focusing on President Trump's business policies over his personal management style.

Despite substantial volatility, the year also marked new highs for the U.S. stock market; the S&P 500 ended the year up nearly 12%, compared to only 1.4% in 2015. The bond market was also volatile during 2016. Interest rates slid and bonds

rallied early in the year, only to reverse direction in November and December as markets anticipated the Fed's sole interest rate increase of 2016.

The dollar continued to rally from 2015 (+10%) through 2016 (+7%), raising the cost of U.S. exports and cheapening imported products, resulting in a negative impact to U.S. gross domestic product (GDP). Commodities, on the other hand, rose 11.4% during 2016, as measured by a standard commodity index. This was on the back of a difficult 2015 in which the same index lost 33%. Brent crude oil rose nearly 24% in price during 2016.

The dollar's strength hurt investors' returns in international markets, but local investors fared better. For the year, most world stock markets were positive, driven by economic improvements, accommodative central bank policies, and commodity price increases.

A number of negative corporate stories impacted individual stock prices and related sector sentiment, such as when the Chief Executive Officer of Mylan Pharmaceuticals Inc. tried to defend the company's price increases on its lifesaving EpiPen product. In its largest penalty ever imposed, the Consumer Protection Bureau fined Wells Fargo \$185 million for opening two million unauthorized consumer accounts.

On the geopolitical front, a variety of conflicts and shifting alignments made the investment environment feel particularly uncertain. A coup in Turkey failed, the Philippines renounced its alignment with the U.S., and Brazil and South Korea impeached their presidents. When added to the ongoing Syrian civil war and refugee crisis, regional conflict over territorial rights in the South China Sea, the demise of the Trans-Pacific Partnership, among other headlines, it seems counterintuitive that equity markets made such substantial gains.

At the time of this letter, U.S. GDP, adjusted for inflation, increased 1.6% in 2016, down from 2.6% in 2015 (the number was reported as 2.4% in my previous letter but was subsequently revised later in 2015). This was mainly attributed to a sustained inventory correction, lingering low oil prices, and a strengthening dollar. On a relative basis, the Eurozone outpaced the U.S. for the first time since 2008, posting a GDP increase of 1.7% for 2016. Japan lagged the U.S. with an approximate growth of 1% for the same period. The Asia Pacific region posted a growth rate of 4.9% for 2016, about the same as 2015.

In the U.S., the Institute for Supply Management (ISM) index rose to 54.5, compared to 48.2 in 2015. An index number above 50 indicates that manufacturing continues to expand. Industrial production was weak at negative 1%, seasonally adjusted for 2016. The core consumer price index (CPI), excluding food and energy, posted 2.2% for 2016, an

## Defined Benefit Investments *(Continued)*

increase over the previous year's 2.1%. Unemployment continued to improve, decreasing to 4.8%, compared to 5.3% in 2015.

Global bonds, as measured by the Bloomberg Global Aggregate, returned 4% on a dollar-hedged basis but only 2.1% unhedged (compared to 1% and (3.2%) in 2015). Again, the strength of the U.S. dollar significantly impacted returns. The domestic bond market, as measured by the Bloomberg Aggregate, returned just under 2.7%, compared to 0.6% the previous year. The Fed continued to be somewhat accommodative, waiting for stronger economic numbers to raise interest rates. The 10-year Treasury note began the year at 2.3% and ended at 2.5% after a single rate increase in December 2016.

In private real estate, fundamentals strengthened slightly in 2016, but returns began to moderate, with the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index (NPI) reporting an 8% total return versus 13.3% in 2015. Capitalization rates continued to compress to new historic lows, causing the Fed to voice concern over high real estate valuations. Public real estate, as measured by the Financial Times Stock Exchange (FTSE) National Association of Real Estate Investment Trusts (NAREIT) Equity Index, fared better, returning 8.5% for the year, compared to 2.8% the previous year.

Farmland returns in the U.S. slowed to 7.1% in 2016, according to the NCREIF Total Farmland Index (NFI), the lowest return in a decade. The United States Department of Agriculture (USDA) reported that farm cropland values and rents declined 1.0% as low commodity prices put downward pressure on farm incomes and rents.

Clearly, considerable uncertainty remains around both domestic and geopolitical outcomes, making it difficult to predict performance of individual companies, sectors, or broad markets. In addition, global economic growth projections remain tepid. In light of these factors, we do not feel now is the time to add more risk to the portfolio.

Despite economic and political challenges, Utah Retirement Systems' total portfolio return in 2016 was 8.8%, putting it in the 19th percentile of its peer group (1st percentile being the best and 100th percentile being the worst). Our global equity portfolio returned 11.2% for the year, representing nearly an additional 3% of value over the passive benchmark. Our fixed income portfolio returned 4.6%, underperforming its benchmark by 0.09%. Our alternative investments posted an 8.6% return and outperformed global equity by 0.2%. Our alternative investments are not designed to outperform public equity, yet over the last two years they have added additional value over the equity markets. These impressive numbers follow our outperformance in 2015. That year the URS total portfolio return was 1.9%, putting it in the 18th percentile of its peer group. In 2015, the URS diversified portfolio outperformed the global equity market by 4.1%, compared well against its peers, and outperformed a more traditional portfolio that contains more equity exposure. Our alternative

investments in private markets achieved a 5.8% return, outperforming global equity by 8% and adding positive diversification for the 2015 year.

We allocate approximately 50% of our public equity portfolio to international markets, significantly more than many of our peers. Over the last three years, the lower-risk, globally-oriented equity portfolio we manage has stood up quite well despite international markets' underperformance. For example, our public equity portfolio's three-year return is 6%, compared to losses in both developed and emerging equity indexes. The URS three-year return number is at the 9th percentile versus its peers. We have achieved this return with far less risk than our peers. Our standard deviation (measure of risk) has been one of the lowest for the last 10 years as measured against our peers. It was in the 93rd percentile versus our peers (100th percentile being the least risk). We have experienced smaller losses in down markets by managing a lower risk portfolio that compounds returns and produces greater wealth for the fund across market cycles.

The reason for our top quartile performance (one-year ranking) and top decile performance (three-year ranking) lies in our defensive approach to asset allocation. URS ranks 23rd against its peers when looking at a combined one-year return number of global public equity, domestic fixed income, and real estate. URS ranks 34th in the three-year return number for the same assets classes. In addition, our alternative asset allocations contributed significantly to our performance: +8.6% return in 2016 and +8.5% return over the last three years.

Our funded status, on a market basis, increased slightly to 86% versus 85.7% the previous year. Our actuarial funded status, at 87%, was the same as 2015. In 2016, we also paid nearly \$385 million in benefits, net of contributions, from our investment portfolio alone; over the past 10 years that number has been \$2.8 billion. We appreciate that the money paid to our participants helps them in their retirement years and benefits all Utahns as it is spent in our local economy.

Finally, the Retirement Board received a letter written by Billie M. Hunt, a retired employee from the Utah Highway Patrol living in Washington, Utah. It read in part: "Just a short note expressing my appreciation to a special group of State Employees who oversee investments and returns of the retirement funds ... May you who oversee the 'Retirement Fund,' know of the great peace of mind you bring to such a large group of retirees." To Billie, on behalf of the Investment Department employees, I thank you very much for your letter. We place the highest importance on our responsibilities to you and every other participant, and intend to do everything in our power to ensure a secure future for each one of you. It is people like you that motivate us to do our very best.



Bruce H. Cundick  
Chief Investment Officer

Defined Benefit Investments *(Continued)*

## 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.

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.

## 2016 Investment Summary

*(dollars in thousands)*

	2016 Beginning Fair Value	Purchases	Sales and Redemptions	Increase (Decrease) in Fair Value	2016 Ending Fair Value Balance	Percent of Total Fair Value
Short-term securities	\$ 2,229,799	104,050,312	103,899,479	11,552	2,392,184	8.24%
Debt securities	4,281,606	34,262,034	34,205,755	18,534	4,356,419	15.01
Equities	9,193,510	2,550,580	2,324,977	780,756	10,199,869	35.16
Absolute return	4,141,321	1,846,879	1,700,782	221,366	4,508,784	15.54
Private equity	3,214,680	533,415	432,824	(24,471)	3,290,800	11.34
Real assets	4,025,398	1,184,740	1,085,251	144,157	4,269,044	14.71
Totals	\$ 27,086,314	144,427,960	143,649,068	1,151,894	29,017,100	100.00%

## Defined Benefit Investments *(Continued)*

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.

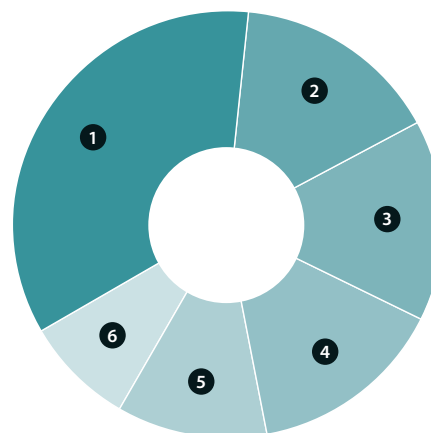
All managers must acknowledge a co-fiduciary status to the Fund. All managers are expected to communicate with the staff at least quarterly.

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.

The allocation of assets as reported to the board are as follows: Equity securities 39.5%, Debt securities 19.0%, Absolute return 16.0%, Private equity 11.5% and Real assets 14.0%. 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.

**Year-end Asset Allocation at Fair Value**  
December 31, 2016

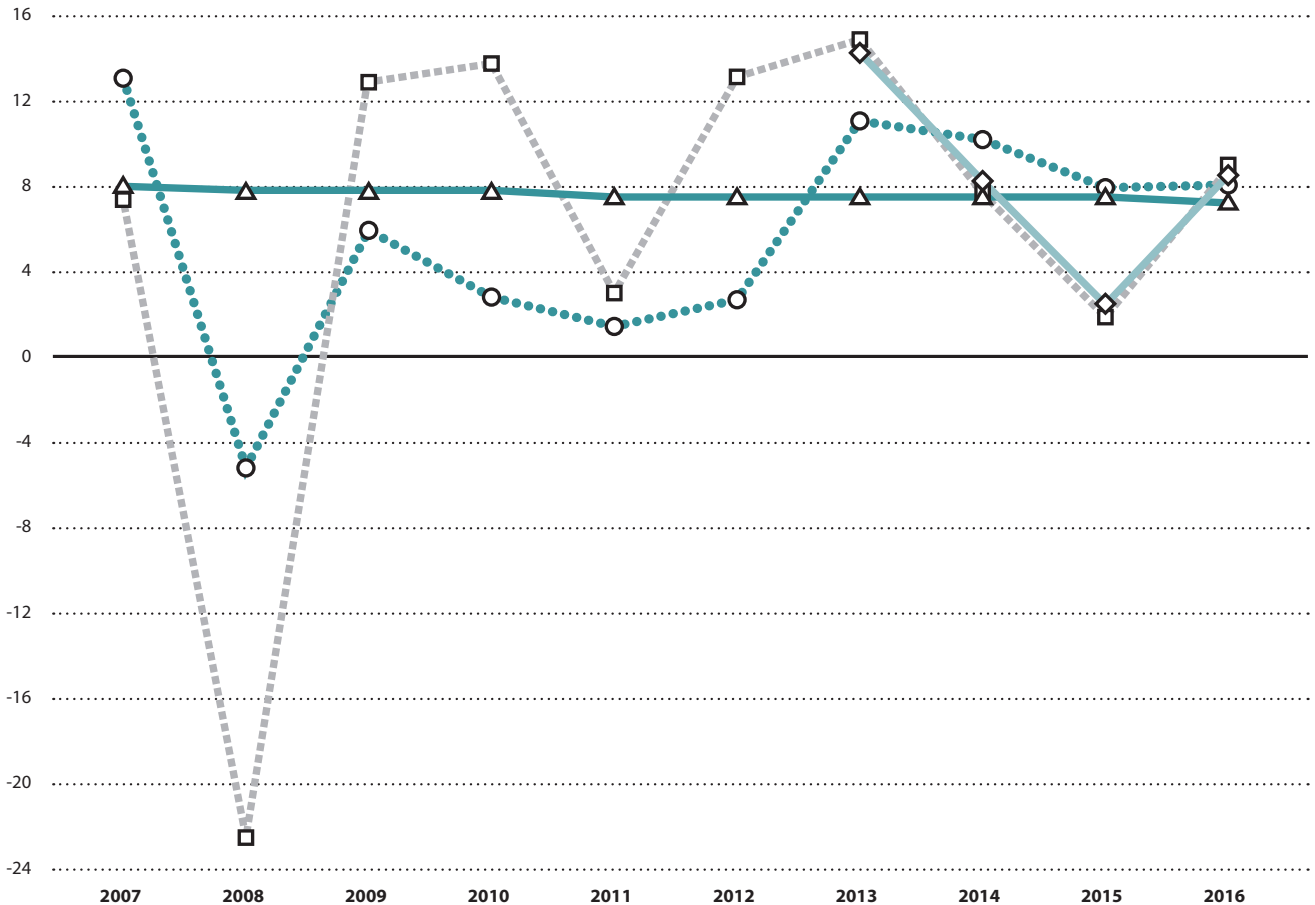


- 1 Equity Securities (35.2%)
- 2 Absolute Return (15.6%)
- 3 Debt Securities (15.0%)
- 4 Real Assets (14.7%)
- 5 Private Equity (11.3%)
- 6 Short Term (8.2%)

December 31,	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Equities securities	39.1%	29.2	37.3	35.8	35.2	36.2	37.5	35.5	33.9	35.2
Debt securities	23.3	26.1	23.7	21.0	19.4	17.9	16.0	15.7	15.8	15.0
Private equity	5.0	8.2	7.4	8.8	10.8	11.3	11.0	11.8	11.9	11.3
Real assets	16.4	18.7	14.7	14.4	13.9	13.5	12.2	14.0	14.9	14.7
Short-term securities	6.6	5.9	4.2	5.0	4.9	5.9	6.6	5.8	8.2	8.2
Absolute return	9.6	11.9	12.7	15.0	15.8	15.2	16.7	17.2	15.3	15.6
<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>

Defined Benefit Investments *(Continued)*

## 10-Year Total Pension Investment Rates of Return

*(in percents)**(dollars in millions)*

		(1) Smooth Expected Rate of Return	(2) Fair Value Rate of Return	(3) Actuarial Assumed Interest Rate	(4) Money Weighted Rate of Return
2007	\$22,979	13.04	7.15	8.00%	—
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

(1) **Smoothed Expected Rate of Return** consists of investment income in excess or shortfall of the expected 7.20% 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 2016, 8.60% 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, 2016

Investment Option Comparative Index	1 Year	3 Year	5 Year	10 Year
<b>Global Equity</b> .....	<b>11.17%</b>	<b>4.35%</b>	<b>11.28%</b>	<b>5.06%</b>
Russell Global Equity Index .....	8.39	3.29	9.70	3.79
<b>Global Debt Securities</b> .....	<b>4.62</b>	<b>4.04</b>	<b>3.36</b>	<b>5.15</b>
Fund Benchmark .....	4.71	3.99	2.82	4.73
<i>Benchmark consisting of:</i>				
60% Barclays Capital Aggregate Bond Index				
15% Barclays Capital Global Aggregate Bond Index Hedged				
25% Barclays Capital World Government Inflation-Linked Hedged Custom				
<b>Real Assets*</b> .....	<b>11.32</b>	<b>11.06</b>	<b>10.48</b>	<b>3.74</b>
U.S. Consumer Price Index + 5.0% .....	6.99	5.90	6.17	6.79
<b>Private Equity**</b> .....	<b>9.12</b>	<b>13.33</b>	<b>14.78</b>	<b>12.05</b>
Private Equity Benchmark .....	16.07	11.80	18.05	10.61
<i>Benchmark consisting of:</i>				
89% Russell 3000 Index + 3.5%				
11% Russell 3000 Index + 2.0%				
<b>Absolute Return</b> .....	<b>6.21</b>	<b>3.49</b>	<b>5.47</b>	<b>3.93</b>
3-Month Treasury Bills + 5.0% .....	5.33	5.14	5.12	5.80
<b>Short Term</b> .....	<b>0.54</b>	<b>0.24</b>	<b>0.19</b>	<b>1.51</b>
3-Month Treasury Bills .....	0.33	0.14	0.12	0.80
<b>Total Fund</b> .....	<b>8.79</b>	<b>5.98</b>	<b>9.12</b>	<b>5.47</b>
Fund Benchmark .....	7.62	4.94	7.95	5.39
<i>Benchmark consisting of:</i>				
40% Russell Global Equity Index				
18% 3-Month Treasury Bill + 5.0%				
13% CPI-W+5%				
12% Bloomberg Aggregate				
8% Russell 3000 Index + 3.5%				
5% Barclays Capital World Government Inflation-Linked Hedged Custom				
3% Bloomberg Global Aggregate Hedged				
1% Russell 3000 Index + 2.0%				
CAI Public Fund —				
Very Large Database Median .....	7.94	5.31	8.90	5.35
<b>Inflation</b> .....	<b>1.99</b>	<b>0.90</b>	<b>1.16</b>	<b>1.79</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, whether realized or unrealized.

(3) Investment return calculations were prepared using a time-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.

\*\*The 10-year benchmark consists of 85% Russell 3000 Index + 3.5% and 15% Russell 3000 Index + 2.0% prior to 9/30/2008.



Defined Benefit Investments *(Continued)*

## List of Largest Assets Held\*

December 31, 2016

## Largest Equity Holdings

*(By Fair Value)*

Description	Shares	Fair Value
Apple Inc.	785,395	\$ 90,964,449
Citigroup	1,315,056	78,153,778
Microsoft Corp.	1,085,392	67,446,259
Alphabet Inc.	74,525	59,057,336
Nestle SA	806,630	57,976,407
Amazon Inc.	71,998	53,989,140
Exxon Mobil Corp.	597,621	53,941,271
Wells Fargo & Co.	949,263	52,313,884
Berkshire Hathaway	292,896	47,736,190
Facebook Inc.	395,355	45,485,593

## Largest Debt Securities Holdings

*(By Fair Value)*

Description	Par Value	Fair Value
US Treasury Notes .875% Due 9-15-2019	\$ 121,570,000	119,979,135
US Treasury Notes .125% Inflation Index Due 4-15-2020	58,495,000	61,002,917
US Treasury Notes 6-30-2016 1.125% Due 6-30-2021	52,365,000	50,681,570
US Treasury Notes 8-26-2015 1.5% Due 8-15-2026	54,906,000	50,498,531
GNMA II Jumbos 3.5% 30 year	36,454,000	37,894,370
US Treasury Notes 1.375% Due 9-30-2023	39,342,500	37,257,033
Republic of Italy 2.35% Index Linked Due 9-15-2024	30,525,000	37,184,036
US Treasury Notes .125% Inflation Index Due 7-15-2026	37,145,000	36,220,255
Government of Japan .1% Due 6-20-2021	4,180,000,000	36,175,699
US Treasury Notes 7-31-2016 1.125% Due 7-31-2021	35,780,000	34,586,415

\*A complete list of public traded securities is available upon request.

## Schedules of Fees and Commissions

Year Ended December 31, 2016

## Broker Commission Fees

Broker	Total Commission Fees
Merrill Lynch	\$ 515,508
Instinet	314,360
Jefferies	293,777
Frank Russell SEC/Broadcourt	211,336
Convergex	134,077
Bank of New York	125,053
JP Morgan Securities	110,994
Barclays	98,558
PCS Securities	81,938
Morgan Stanley	77,350
UBS	71,045
All others	1,028,913
<b>Total</b>	<b>\$ 3,062,909</b>

## Schedule of Investment Fees and Commissions

Investment advisor fees:	
Equity securities	\$ 25,323,810
Debt securities	6,103,820
Private equity	3,736,038
Absolute return	1,562,191
Short-term	1,076,498
Real assets	686,643
<b>Total investment advisor fees</b>	<b>38,489,000</b>
Investment brokerage fees	3,062,909
<b>Total fees and commissions</b>	<b>\$ 41,551,909</b>

Utah Retirement Systems uses a commission recapture program as part of its trading strategies. During the year ending December 31, 2016, Utah Retirement Systems recaptured approximately \$215,561 from the gross commission charges. This recaptured sum was used to cover or offset the \$139,913 in investment expenses that otherwise would have been paid for with investment funds.

Defined Benefit Investments *(Concluded)*



## 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

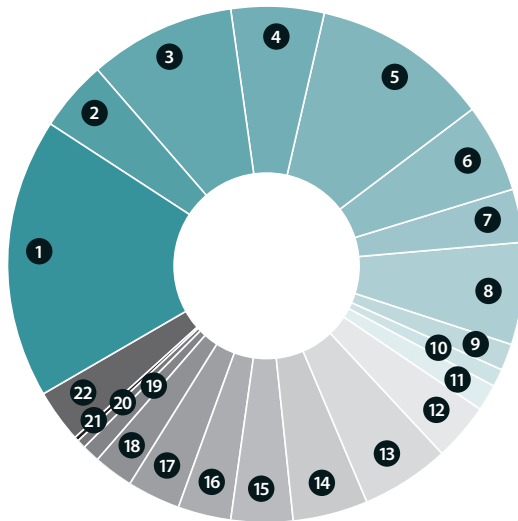
Russell Implementation  
Services, Inc.  
1301 Second Avenue  
18th Floor  
Seattle, WA 98101

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

# Defined Contribution Savings Plans Investments

## Defined Contribution Savings Plans Investments

December 31, 2016



- 1 Income Fund 17.68%
- 2 Bond Fund 4.52%
- 3 Balanced Fund 9.10%
- 4 Large Cap Stock Value Fund 5.96%
- 5 Large Cap Stock Index Fund 11.21%
- 6 Large Cap Stock Growth Fund 5.39%
- 7 International Fund 3.47%
- 8 Small Cap Stock Fund 6.33%
- 9 Tier 2 DC Nonvested 1.67%
- 10 Target Retired Fund 1.13%
- 11 Target Date 2010 Fund 1.76%
- 12 Target Date 2015 Fund 3.53%
- 13 Target Date 2020 Fund 5.53%
- 14 Target Date 2025 Fund 4.98%
- 15 Target Date 2030 Fund 3.66%
- 16 Target Date 2035 Fund 3.49%
- 17 Target Date 2040 Fund 3.22%
- 18 Target Date 2045 Fund 2.48%
- 19 Target Date 2050 Fund 1.29%
- 20 Target Date 2055 Fund 0.37%
- 21 Target Date 2060 Fund 0.11%
- 22 Brokerage Window 3.10%

### Investment Options

Investment Options	Total
Income Fund	\$ 867,887
Bond Fund	222,041
Balanced Fund	446,809
Large Cap Stock Value Fund	292,499
Large Cap Stock Index Fund	550,396
Large Cap Stock Growth Fund	264,632
International Fund	170,413
Small Cap Stock Fund	310,949
Tier 2 Nonvested	82,050
Target Retired Fund	55,241
Target Date 2010 Fund	86,394
Target Date 2015 Fund	173,367
Target Date 2020 Fund	271,503
Target Date 2025 Fund	244,677
Target Date 2030 Fund	179,468
Target Date 2035 Fund	171,099
Target Date 2040 Fund	158,196
Target Date 2045 Fund	121,811
Target Date 2050 Fund	63,373
Target Date 2055 Fund	17,992
Target Date 2060 Fund	5,379
Brokerage Window	152,320
<b>Totals</b>	<b>\$4,908,496</b>

(in thousands)

## 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 left shows the total assets in the various investment options. The graph above the table shows the asset distribution as of December 31, 2016.

## 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 138 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)*

**2016 Investment Summary and Investment and Administrative Fees**
*(dollars in thousands)*

Fund	2016 Beginning Fair Value	Purchases	Sales and Redemptions	Increase (Decrease) in Fair Value	2016 Ending Fair Value	Percent of Total Fair Value	Investment Fees	Admin- istrative Fees	Total Fees
Income Fund	\$ 847,472	78,070	61,890	4,235	867,887	17.69%	0.29%	0.16%	0.45%
Bond Fund	203,230	36,596	24,810	7,025	222,041	4.53	0.12	0.16	0.28
Balanced Fund	438,559	15,755	30,333	22,828	446,809	9.10	0.27	0.16	0.43
Large Cap Stock Value Fund	240,363	26,347	15,746	41,535	292,499	5.96	0.42	0.16	0.58
Large Cap Stock Index Fund	516,368	15,312	38,589	57,305	550,396	11.21	0.03	0.16	0.19
Large Cap Stock Growth Fund	305,317	12,220	34,713	(18,192)	264,632	5.39	0.31	0.16	0.47
International Fund	171,493	6,628	12,651	4,943	170,413	3.47	0.06	0.16	0.22
Small Cap Stock Fund	257,410	20,197	14,646	47,988	310,949	6.33	0.37	0.16	0.53
Brokerage Window	139,380	24,874	20,177	8,243	152,320	3.10	NA	NA	NA
Tier 2 Non Vested	67,369	27,673	18,246	5,254	82,050	1.67	0.18	0.16	0.34
Retired Fund	43,011	20,374	10,191	2,047	55,241	1.13	0.19	0.16	0.35
2010 Fund	80,693	11,296	9,838	4,243	86,394	1.76	0.19	0.16	0.35
2015 Fund	160,233	22,722	19,444	9,856	173,367	3.53	0.21	0.16	0.37
2020 Fund	239,095	35,683	20,798	17,523	271,503	5.53	0.21	0.16	0.37
2025 Fund	201,798	35,061	9,712	17,529	244,676	4.98	0.22	0.16	0.38
2030 Fund	146,828	24,844	6,889	14,685	179,468	3.66	0.22	0.16	0.38
2035 Fund	139,213	22,083	4,852	14,655	171,099	3.49	0.21	0.16	0.37
2040 Fund	129,413	19,536	4,253	13,503	158,199	3.22	0.22	0.16	0.38
2045 Fund	95,383	17,934	2,146	10,637	121,808	2.48	0.21	0.16	0.37
2050 Fund	44,518	14,538	1,036	5,354	63,374	1.29	0.21	0.16	0.37
2055 Fund	9,009	7,893	283	1,374	17,993	0.37	0.21	0.16	0.37
2060 Fund	3,310	3,732	2,045	381	5,378	0.11	0.21	0.16	0.37
HRA Fund*	23,156	7,009	30,165	—	0	0.00	0.37	0.16	0.53
<b>Total</b>	<b>\$ 4,502,621</b>	<b>506,377</b>	<b>393,453</b>	<b>292,951</b>	<b>4,908,496</b>	<b>100.00%</b>			

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

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, 2016

Investment Option Comparative Index	Annualized			
	1-Year	3-Year	5-Year	10-Year
<b>Income Fund</b> .....	<b>1.62%</b>	<b>1.60%</b>	<b>1.71%</b>	<b>2.46%</b>
Treasury Bills Index.....	0.33	0.14	0.12	0.80
<b>Bond Fund</b> .....	<b>5.86</b>	<b>3.79</b>	<b>3.89</b>	<b>5.26</b>
Bloomberg Barclays Capital Aggregate Bond Index .....	2.65	3.03	2.23	4.34
<b>Balanced Fund</b> .....	<b>9.32</b>	<b>6.48</b>	<b>11.27</b>	<b>6.94</b>
Balanced Index <sup>(1)</sup> .....	8.37	6.50	9.71	6.30
<b>Large Cap Stock Value Fund</b> .....	<b>21.24</b>	<b>8.49</b>	<b>16.92</b>	<b>5.82</b>
*Russell 1000 Value Index .....	17.34	8.59%	14.80	5.72
<b>Large Cap Stock Index Fund</b> .....	<b>11.84</b>	<b>8.39</b>	<b>14.44</b>	<b>6.65</b>
Large Cap Stock Blended Index <sup>(2)</sup> .....	12.05	8.59	14.69	6.86
<b>Large Cap Stock Growth Fund</b> .....	<b>1.15</b>	<b>7.20</b>	<b>14.17</b>	<b>8.35</b>
*Russell 1000 Growth Index .....	7.08	8.55	14.50	8.33
<b>International Fund</b> .....	<b>4.44</b>	<b>(1.43)</b>	<b>5.35</b>	<b>0.13</b>
International Blended Index <sup>(3)</sup> .....	4.41	(1.44)	5.35	(0.05)
<b>Small Cap Stock Fund</b> .....	<b>23.34</b>	<b>7.49</b>	<b>15.80</b>	<b>8.21</b>
*Russell 2000 Index .....	21.31	6.74	14.46	7.07
<b>Target Retired Fund</b> .....	<b>6.06</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Retired Index <sup>(4)</sup> .....	4.72	—	—	—
<b>Target Date 2010 Fund</b> .....	<b>6.14</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2010 Index <sup>(5)</sup> .....	5.20	—	—	—
<b>Target Date 2015 Fund</b> .....	<b>6.78</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2015 Index <sup>(6)</sup> .....	5.92	—	—	—
<b>Target Date 2020 Fund</b> .....	<b>7.69</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2020 Index <sup>(7)</sup> .....	6.78	—	—	—

Continued on page 140.

**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 Capital US Aggregate Bond through 12/31/2014, 60% Russell 1000 Index\*, 40% Barclays Capital 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 Retired Index:** 25% 90 Day T-Bills, 20% Bloomberg Barclays Capital 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 Capital Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 3% NFI-ODCE (Value Weighted)
- (5) **Target Date 2010 Index:** 21% 90 Day T-Bills, 21% Bloomberg Barclays Capital US Aggregate Bond, 18% 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, 18% Bloomberg Barclays Capital Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 4% NFI-ODCE (Value Weighted)
- (6) **Target Date 2015 Index:** 16% 90 Day T-Bills, 20% Bloomberg Barclays Capital US Aggregate Bond, 20% Russell 1000 Index\*, 7% MSCI ACWI ex. US IMI, 2% Russell 2000 Index\*, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 3% Bloomberg Commodity Index, 13% Bloomberg Barclays Capital Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 9% NFI-ODCE (Value Weighted))
- (7) **Target Date 2020 Index:** 11% 90 Day T-Bills, 18% Bloomberg Barclays Capital US Aggregate Bond, 1% Russell 1000 Value Index\*, 23% Russell 1000 Index\*, 1% Russell 1000 Growth Index\*, 12% MSCI ACWI ex. US IMI, 3% Russell 2000 Index\*, 10% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 3% Bloomberg Commodity Index, 8% Bloomberg Barclays Capital Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 10% NFI-ODCE (Value Weighted)

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Defined Contribution Investment Plans (Continued)

Defined Contribution Plans  
Comparative Annualized Rates of Return (Concluded)

Year Ended December 31, 2016

Investment Option Comparative Index	Annualized			
	1-Year	3-Year	5-Year	10-Year
<b>Target Date 2025 Fund</b> .....	<b>8.65%</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2025 Index <sup>(8)</sup> .....	8.07	—	—	—
<b>Target Date 2030 Fund</b> .....	<b>9.29</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2030 Index <sup>(9)</sup> .....	8.81	—	—	—
<b>Target Date 2035 Fund</b> .....	<b>9.73</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2035 Index <sup>(10)</sup> .....	9.52	—	—	—
<b>Target Date 2040 Fund</b> .....	<b>9.91</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2040 Index <sup>(11)</sup> .....	9.85	—	—	—
<b>Target Date 2045 Fund</b> .....	<b>10.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2045 Index <sup>(12)</sup> .....	9.90	—	—	—
<b>Target Date 2050 Fund</b> .....	<b>10.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2050 Index <sup>(13)</sup> .....	9.90	—	—	—
<b>Target Date 2055 Fund</b> .....	<b>10.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2055 Index <sup>(14)</sup> .....	9.90	—	—	—
<b>Target Date 2060 Fund</b> .....	<b>10.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Target Date 2060 Index <sup>(15)</sup> .....	9.90	—	—	—
<b>Tier 2 Nonvested Fund</b> .....	<b>8.33</b>	<b>3.73</b>	<b>7.16</b>	<b>N/A</b>
Tier 2 Nonvested Index <sup>(16)</sup> .....	7.57	3.89	6.58	—

Past performance does not guarantee future results.

(8) **Target Date 2025 Index:** 6% 90 Day T-Bills, 14% Bloomberg Barclays Capital US Aggregate Bond, 2.5% Russell 1000 Value Index\*, 25% Russell 1000 Index\*, 2.5% Russell 1000 Growth Index\*, 18% MSCI ACWI ex. US IMI, 5% Russell 2000 Index\*, 8% Bloomberg Barclays Global Aggregate ex. US Bond Index (hedged), 2% Russell Fundamental US Select Real Estate Index\*\*, 4% Bloomberg Commodity Index, 3% Bloomberg Barclays Capital Global Inflation-Linked Bond Index 1-10 Year (USD Hedged), 10% NFI-ODCE (Value Weighted)

(9) **Target Date 2030 Index:** 1% 90 Day T-Bills, 10% Bloomberg Barclays Capital US Aggregate Bond, 4.5% Russell 1000 Value Index\*, 23% Russell 1000 Index\*, 4.5% Russell 1000 Growth Index\*, 26% MSCI ACWI ex. US IMI, 7% Russell 2000 Index\*, 6% 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:** 5% Bloomberg Barclays Capital US Aggregate Bond, 7% Russell 1000 Value Index\*, 23% Russell 1000 Index\*, 7% Russell 1000 Growth Index\*, 31% 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, 7% NFI-ODCE (Value Weighted)

(11) **Target Date 2040 Index:** 3% Bloomberg Barclays Capital US Aggregate Bond, 9.5% Russell 1000 Value Index\*, 20% Russell 1000 Index\*, 9.5% 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, 5% NFI-ODCE (Value Weighted)

(12) **Target Date 2045 Index:** 3% Bloomberg Barclays Capital 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 Capital 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 Capital 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 Capital 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 Capital 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 Capital 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, 2016

## Largest Equity Holdings

(By Fair Value)

Description	Shares	Fair Value
Alphabet Inc.	55,658	\$ 43,530,770
Apple Inc.	354,114	41,013,483
Microsoft Corp.	589,374	36,623,700
Amazon Inc.	42,952	32,208,416
Facebook Inc.	235,251	27,065,628
Mastercard Inc.	204,192	21,082,824
Visa Inc.	253,809	19,802,178
Goldman Sachs	77,501	18,557,614
Home Depot	131,671	17,654,448
Celgene Corp.	151,047	17,483,690

## Largest Debt Securities Holdings

(By Fair Value)

Description	Par Value	Fair Value
Federal Home Loan Bank debenture 2.375% Due 01-13-2022	\$ 25,895,000	26,605,154
US Treasury Note 5-31-2013 1% Due 5-31-2018	25,000,000	25,011,634
US Treasury Note .635% Due 5-31-2017	24,000,000	24,014,717
US Treasury Note 2% Due 2-15-2025	24,360,000	23,890,501
US Treasury Note 2% Due 2-15-2023	23,650,000	23,631,166
US Treasury Note 1% Due 12-31-2017	23,000,000	23,132,963
US Treasury Note 1.5% Due 8-15-2026	20,165,000	18,658,901
US Treasury Note 1.5% Due 10-31-2019	17,375,000	17,460,280
US TIPS 0.125% Due 4-15-2019	15,112,061	15,304,649
US Treasury Note .75% Due 1-31-2018	15,000,000	5,015,138

\*A complete list of public traded securities is available upon request.

## Schedules of Fees and Commissions

Year Ended December 31, 2016

## Broker Commission Fees

Broker	Total Commission Fees
Frank Russell SEC/Broadcourt	\$ 89,463
Jefferies	13,102
Bear Sterns	12,057
Credit Suisse	7,509
Morgan Stanley	6,986
Barclays	4,597
Instinet	3,770
All Others	41,526
<b>Total</b>	<b>\$179,010</b>

## Schedule of Investment Fees and Commissions

Investment advisor fees:	
Equity securities	\$ 1,845,428
Debt securities	1,675,722
<b>Total investment advisor fees</b>	<b>3,521,150</b>
Investment brokerage fees	179,010
<b>Total fees and commissions</b>	<b>\$ 3,700,160</b>

Utah Retirement Systems uses a commission recapture program as part of its trading strategies. During the year ending December 31, 2016, Utah Retirement Systems recaptured \$64,317 from the gross commission charges. This recaptured sum was used to cover or offset the \$46,001 in investment expenses that otherwise would have been paid for with investment funds.

## Defined Contribution Investment Plans *(Concluded)*



## 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





Utah Retirement Systems

2016

Comprehensive Annual Financial Report

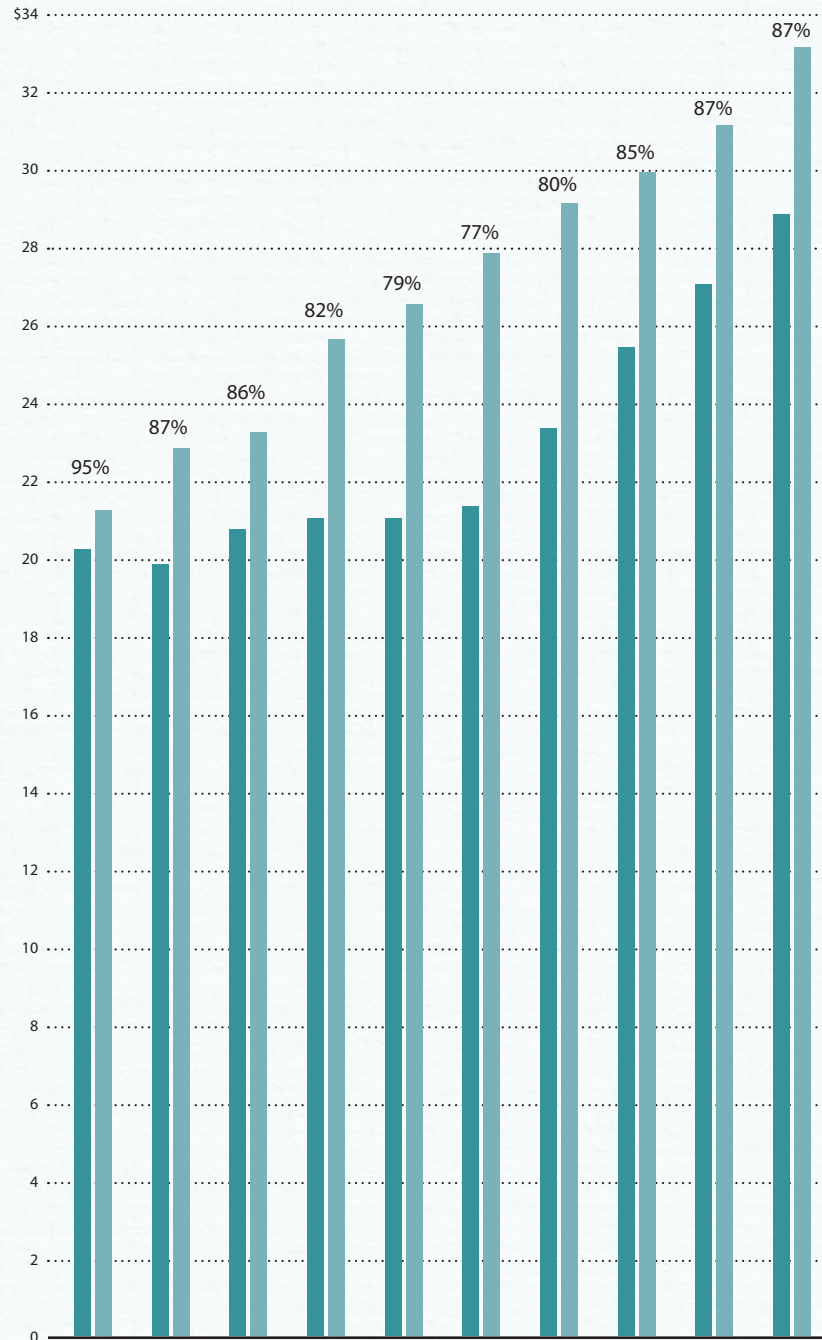
# Actuarial Section

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Utah Retirement Systems

# Funding Progress with Funding Ratios

(dollars in billions)



(dollars in billions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actuarial value of assets	\$ 20.3	19.9	20.8	21.1	21.1	21.4	23.4	25.5	27.1	28.9
Accrued actuarial liability	21.3	22.9	24.3	25.7	26.6	27.9	29.2	30.0	31.2	31.2
Funding Ratios	95%	87%	86%	82%	79%	77%	80%	85%	87%	87%

# Actuary's Certification Letter



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August 26, 2016

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, 2016

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, 2016 actuarial valuation will be used by the Board when certifying the employer contribution rates for the year beginning July 1, 2017 and ending June 30, 2018. 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

## Actuary's Certification Letter *(Continued)*

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%.

For all systems on a combined basis, the funded ratio decreased from 85.5% to 85.2%. The most significant cause of the change in funded ratio was due to a decrease in the assumed rate of return and inflation assumptions. Absent unfavorable actuarial experience, we expect the funded ratio to continue 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 83.8% compared to 89.1% in the prior year. The decrease in the funded ratio on a market value basis is largely

attributable to the change in economic assumptions and the 1.7% return on a market value of assets during the prior year being significantly less than the assumed rate of return.

### Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2016, or which were adopted by the end of the 2016 legislative session and are effective on or before July 1, 2016. The only legislative change that had a measurable impact on the liability and contribution rates is the prior actuarial valuation was HB 437 that was passed during the 2015 legislative session which provided a window allowing certain employees of local government entities to elect to transfer from the Contributory Public Employees Retirement System to the Noncontributory Public Employees Retirement System.

There were no other legislative changes enacted since the previous valuation that had a measurable effect on the 2016 actuarial valuation.

### Assumptions and methods

The demographic assumptions and actuarial methods used to perform this valuation remain unchanged from the prior valuation. The actuary reviews the investment return assumption each year and provides consultation to the Board regarding its appropriateness. The Board has the authority to change this assumption each year and elected to decrease the assumed nominal investment return from 7.50% to 7.20% and also decrease the assumed inflation rate from 2.75% to 2.60%. It is our opinion that a 7.20% investment return assumption is appropriate for performing the January 1, 2016 actuarial valuation. In conjunction with the decrease in the assumed rate of inflation, both the payroll growth and the wage inflation assumptions were decreased by 0.15% from the prior year's assumption.

Gabriel Roeder Smith & Company

## Actuary's Certification Letter *(Continued)*

The demographic assumptions are reviewed in detail every three years. The next experience analysis to review the demographic assumptions is scheduled for 2017.

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.

### Data

Member data for retired, active and inactive members was supplied as of December 31, 2015 by the URS staff. The staff also supplied asset information as of December 31, 2015. 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, 2015.

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, 2016



- 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, 2015).

In calculating this minimum, amortization payments are designed to remain level as a percent of payroll, and payroll is assumed to increase 3.10% 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 7.20%, compounded annually. This rate is made up of a 2.60% assumed inflation rate and a 4.60% assumed real rate of return. This assumption was adopted January 1, 2016.

- c)** The total rates of assumed annual salary increase are shown on the actuarial schedule on page 153. The rates include increases due to promotion and longevity and a 3.35% per annum rate of increase in the general wage level of the membership. Salaries of judges are assumed to increase at 3.35%. All of these assumptions were adopted January 1, 2016.

- d)** Post-retirement benefit increases are based on the consumer price index (CPI), limited by the provisions of each System. For members of the Public Safety Retirement System, annual increases are assumed to be 2.5% or 2.60%. All other Systems' annual increases are assumed to be 2.60%. 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, 2016

**Retired Member Mortality**

Class of Member

**Educators**

Men	EDUM (90%)
Women	EDUF (100%)

**Public Safety and Firefighters**

Men	RP 2000mWC (100%)
Women	EDUF (120%)

**Local Government, Public Employees**

Men	RP 2000mWC (100%)
Women	EDUF (120%)

*EDUM = Constructed mortality table based on actual experience of male educators multiplied by given percentage*

*EDUF = Constructed mortality table based on actual experience of female educators multiplied by given percentage*

*RP 2000mWC = RP 2000 Combined mortality table for males with white collar adjustments multiplied by given percentage*

**e)** Tables of mortality rates for male members retired for service and beneficiaries (except educators) were developed from a standard mortality table. Mortality rates for male retired educators were developed from actual experience of that group. Mortality rates for female members retired for service and beneficiaries were developed from actual experience of the female educators. The mortality basis is dependent 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 2000. With the exception of the female educators, these rates were adopted January 1, 2011, the female educators assumptions was adopted January 1, 2014. Mortality rates for active members use the RP 2000 employees mortality tables as the underlying assumption with scaling factors applied based on employee group and gender. The assumptions were adopted effective January 1, 2014.

**f)** Mortality among disabled members is based on a special 1981 Disability Table developed from the Systems' experience. The rates for males and females are also adjusted for future improvement in mortality using published Scale AA projected from the year 2000.

**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 2014, 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, 2016

		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 1 Noncontributory and Contributory Retirement Systems</b>	50	20.00%	15.00%	15.00%	30.00%	17.00%	20.00%	0.00%	
<i>Adopted January 1, 2014</i>	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	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	

		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 1 Public Safety Retirement System</b>	45	20.00%	50	20.00%	55	20.00%	59	20.00%	63	35.00%	67	50.00%
<i>Adopted January 1, 2014</i>	46	20.00	51	20.00	56	20.00	60	20.00	64	35.00	68	50.00
	47	20.00	52	20.00	57	20.00	61	20.00	65	50.00	69	50.00
	48	20.00	53	20.00	58	20.00	62	35.00	66	50.00	70	100.00
	49	20.00	54	20.00								

		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>Tier 1 Firefighters Retirement System</b>	45	15.00%	50	15.00%	55	20.00%	59	20.00%	63	25.00%	67	50.00%
<i>Adopted January 1, 2014</i>	46	15.00	51	15.00	56	20.00	60	22.50	64	25.00	68	50.00
	47	15.00	52	15.00	57	20.00	61	22.50	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	
<b>Judges Retirement System</b>	45	10.00%	50	10.00%	55	10.00%	59	10.00%	63	20.00%	67	20.00%
<i>Adopted January 1, 2014</i>	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, 2016

		Percent Retiring Within Next Year Among Active Members Eligible for Retirement						
		Male			Female			Governors and Legislators Retirement Plan
Retirement Age	State and School Division	Public Employees		Local Government Division	Public Employees		Local Government Division	
		Educators			Educators			
<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, 2016

	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> <i>Adopted January 1, 2014</i>	0	15.00%	28.00%	19.00%	18.00%	30.00%	24.00%	10.00%
	1	13.00	24.50	15.00	17.00	22.50	18.00	10.00
	2	9.00	15.00	11.00	13.50	17.00	14.00	10.00
	3	7.50	12.00	9.00	12.50	14.00	12.00	10.00
	4	6.50	10.00	8.00	10.00	11.00	11.00	10.00
	5	5.00	9.00	7.00	8.00	9.50	9.75	10.00
	6	4.00	7.50	6.00	7.50	8.50	8.00	10.00
	7	3.50	6.50	5.50	5.50	7.50	7.50	10.00
	8	3.25	5.50	4.75	4.50	6.50	6.50	10.00
	9	3.00	5.00	4.00	4.50	6.00	6.00	10.00
	10	2.75	4.25	3.50	4.00	5.50	5.50	10.00
	11	2.50	4.00	3.25	3.00	4.75	5.00	10.00
	12	2.25	3.75	3.00	2.50	4.50	4.50	10.00
	13	2.25	3.50	3.00	2.00	4.25	4.00	10.00
	14	2.00	3.00	3.00	2.00	3.75	3.75	10.00
	15	1.75	2.50	2.75	2.00	3.50	3.50	10.00
	16	1.75	2.25	2.75	2.00	3.00	3.25	10.00
	17	1.75	2.25	2.75	1.75	2.75	3.25	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	2.75	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+	0.00	0.00	0.00	0.00	0.00	0.00	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> <i>Adopted January 1, 2014</i>	0	12.00%	5	4.50%	9	3.25%	13	2.25%	17	1.50%
	1	6.50	6	4.25	10	3.00	14	1.50	18	1.50
	2	5.50	7	4.00	11	2.75	15	1.50	19	1.50
	3	5.25	8	3.50	12	2.50	16	1.50	20+	0.00
	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> <i>Adopted January 1, 2014</i>	0	6.00%	5	2.00%	9	1.50%	13	0.50%	17	0.50%
	1	3.50	6	1.50	10	1.50	14	0.50	18	0.50
	2	3.00	7	1.50	11	1.50	15	0.50	19	0.50
	3	2.50	8	1.50	12	0.50	16	0.50	20+	0.00
	4	2.50								

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

Summary of Actuarial Assumptions and Methods (Concluded)

as of January 1, 2016

	Total Annual Increase in Salary (Male and Female)													
	Years of Service	State and School Division			Local Government Division	Public Safety Retirement System	Firefighters Retirement System	Years of Service	State and School Division			Local Government Division	Public Safety Retirement System	Firefighters Retirement System
		Educators	Public Employees	Public Employees					Educators	Public Employees	Public Employees			
<b>All Retirement Systems</b> <i>Adopted January 1, 2016</i>	0	10.35%	8.60%	9.10%	7.85%	9.10%	13	4.85%	4.35%	4.35%	4.60%	4.85%		
	1	9.35	7.85	7.60	6.85	8.60	14	4.60	4.10	4.35	4.35	4.85		
	2	8.35	6.85	6.85	6.60	8.35	15	4.35	3.85	4.35	4.35	4.60		
	3	7.85	6.10	6.35	6.35	8.10	16	4.10	3.85	4.10	4.35	4.60		
	4	7.60	4.85	5.85	6.10	7.85	17	3.85	3.85	4.10	4.10	4.35		
	5	7.35	5.35	5.60	5.85	7.60	18	3.85	3.85	4.10	4.10	4.10		
	6	7.35	5.10	5.35	5.85	7.60	19	3.85	3.85	4.10	4.10	4.10		
	7	7.10	4.85	5.10	5.60	7.10	20	3.85	3.60	3.85	4.10	4.10		
	8	6.85	4.85	4.85	5.35	6.85	21	3.85	3.60	3.60	3.85	3.85		
	9	6.60	4.60	4.85	5.35	6.60	22	3.85	3.60	3.60	3.85	3.60		
	10	6.10	4.60	4.60	5.10	6.10	23	3.85	3.60	3.35	3.60	3.60		
	11	5.60	4.35	4.35	4.85	5.35	24	3.60	3.35	3.35	3.60	3.60		
	12	5.35	4.35	4.35	4.60	5.10	25+	3.35	3.35	3.35	3.35	3.35		

	Probability of Mortality Within the Next Year for Active Members													
	Age	Male			Female			Age	Male			Female		
		Educators	Local Government and Public Employees	Local Government and Public Employees	Educators	Local Government and Public Employees	Local Government and Public Employees		Educators	Local Government and Public Employees	Local Government and Public Employees	Educators	Local Government and Public Employees	Local Government and Public Employees
<b>Noncontributory and Contributory Retirement Systems</b> <i>Adopted January 1, 2014</i>	20	0.0173%	0.0276%	0.0067%	0.0096%		50	0.1069%	0.1710%	0.0587%	0.0838%			
	25	0.0188	0.0301	0.0072	0.0104		55	0.1515	0.2423	0.0884	0.1263			
	30	0.0222	0.0355	0.0092	0.0132		60	0.2439	0.3902	0.1376	0.1966			
	35	0.0387	0.0618	0.0166	0.0238		65	0.3787	0.6058	0.2037	0.2911			
	40	0.0540	0.0863	0.0247	0.0353		70	0.4961	0.7938	0.2665	0.3807			
	45	0.0754	0.1206	0.0393	0.0562									

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

	Probability of Mortality Within the Next Year for Active Members Public Safety and Firefighters Employees							
	Age		Age		Age		Age	
	Age	Rate	Age	Rate	Age	Rate	Age	Rate
<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		

	Percent Electing a Refund of Contributions Upon Termination While Vested Public Safety and Firefighters Retirement Employees			
	Years of Service		Years of Service	
	Years of Service	Rate	Years of Service	Rate
<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, 2016 (dollars in thousands)				December 31, 2016 (dollars in thousands)			
1. Fair value of assets				1. Fair value of assets			
\$ 26,686,840				\$ 28,544,317			
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. 2015	\$ (1,529,412)	80%	\$ (1,223,531)	a. 2016	\$ 329,863	80%	\$ 263,891
b. 2014	(95,447)	60%	(57,270)	b. 2015	(1,529,412)	60%	(917,647)
c. 2013	1,600,276	40%	640,108	c. 2014	(95,447)	40%	(38,180)
d. 2012	1,017,197	20%	203,437	d. 2013	1,600,276	20%	320,053
e. 2011	(977,081)	0%	—	e. 2012	1,017,197	0%	—
f. Total deferred gains (losses)			(437,256)	f. Total deferred gains (losses)			(371,883)
g. Total deferred losses			437,256	g. Total deferred losses			371,883
3. Actuarial value of assets available for benefits*				3. Actuarial value of assets available for benefits*			
\$ 27,124,096				\$ 28,916,200			

\*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

	(in thousands)								Total All Systems
	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	
1. Net assets available for benefits at fair value	\$ 21,192,437	1,183,091	2,938,839	1,043,059	163,747	10,039	140,539	15,089	26,686,840
2. Adjustments to smooth asset values based on (excess)/shortfall of expected investment income on fair value for:	336,300	25,978	49,532	17,253	2,551	134	4,979	529	437,256
3. Actuarial value of assets available for benefits (1-2)	\$ 21,528,737	1,209,069	2,988,371	1,060,312	166,298	10,173	145,518	15,618	27,124,096

## Analysis of Financial Experience

System	(in thousands)								January 1, 2016 Unfunded Actuarial Accrued Liability
	January 1, 2015 Unfunded Actuarial Accrued Liability	Amortization Payments	Liability (Gain) Loss	Asset (Gain) Loss	Changes in Actuarial Assumptions	Change in Benefit Provisions	Asset Transfers		
<b>Noncontributory</b>	\$ 3,627,580	(180,003)	(66,138)	(69,765)	577,502	48,400	10,266	3,947,842	
<b>Contributory</b>	96,719	(861)	27,590	(3,832)	9,148	(45,057)	(10,266)	73,441	
<b>Public Safety</b>	562,745	(26,871)	(4,602)	(7,050)	110,372	—	—	634,594	
<b>Firefighters</b>	17,840	(14,122)	(9,446)	(3,193)	25,572	—	—	16,651	
<b>Judges</b>	35,489	(881)	334	(585)	2,885	—	—	37,242	
<b>Utah Governors and Legislators</b>	2,315	(169)	166	(42)	241	—	—	2,511	
<b>Tier 2 Public Employees</b>	(7,119)	(534)	(909)	1,048	7,867	—	—	353	
<b>Tier 2 Public Safety and Firefighter</b>	(1,234)	(93)	(437)	117	803	—	—	(844)	



## 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>	2007	—	26.75%	—	22.61%	—	—	—	22.47%
	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

<b>Public Safety Retirement System Contributory Division A</b>	2007	12.29%	15.46%	12.29%	11.22%	—	—	—	—
	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	—	—

System	Year	Salt Lake City		Ogden		Logan		Provo		2.5% COLA Other Division B (without Soc Sec)		4.0% COLA Other Division B (without Soc Sec)	
		Member	Employer	Member	Employer	Member	Employer	Member	Employer	Member	Employer	Member	Employer
<b>Public Safety Retirement System Noncontributory Division B</b>	2007	—	35.71%	—	30.44%	—	25.48%	—	—	—	25.49%	—	—
	2008	—	35.71	—	31.47	—	25.48	—	29.84%	—	25.49	—	—
	2009	—	35.71	—	33.11	—	27.74	—	30.91	—	26.21	—	28.73%
	2010	—	36.31	—	34.93	—	31.49	—	32.98	—	28.24	—	32.70
	2011	—	36.71	—	36.13	—	31.91	—	33.05	—	28.64	—	32.70
	2012	—	41.95	—	42.21	—	38.18	—	38.54	—	32.20	—	36.97
	2013	—	44.83	—	44.98	—	39.84	—	39.97	—	32.20	—	37.45
	2014	—	46.67	—	48.68	—	41.92	—	42.16	—	32.20	—	38.94
	2015	—	46.67	—	48.68	—	41.92	—	42.16	—	32.20	—	38.94
	2016	—	46.67	—	48.68	—	41.92	—	42.16	—	32.20	—	38.94

<b>Public Safety Retirement System Contributory Division B</b>	2007	13.74%	22.99%	—	—	11.13%	14.61%	13.54%	16.30%	10.50%	15.69%	10.50%	—
	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

## Member and Employer Contribution Rates (Concluded)

As of December 31

System	Year	Contributory		Noncontributory				
		Employer	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					
<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)			
	Year	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		
	<b>Public Safety Contributory Division A</b>	2011	—	—	16.27	17.47		
		2012	—	—	19.25	21.94		
		2013	—	—	20.85	22.37		
		2014	—	—	22.55	23.71		
		2015	—	—	22.50	23.66		
	2016	—	—	20.61	23.66			
<b>Public Safety Noncontributory Division B</b>		Salt Lake City	Ogden	Logan	Provo	2.5% COLA Other Division B (without Soc Sec)	4% COLA Other Division B (without Soc Sec)	
	Year	Employer	Employer	Employer	Employer	Employer	Employer	
		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	32.37	33.47	28.19	28.19	20.51	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
	<b>Public Safety Contributory Division B</b>	2011	—	—	—	—	17.72	21.06
		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	
<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					

\*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>	1/01/08	\$ 16,199,077	17,025,185	826,108	95.1%	\$ 3,582,495	23.1%
	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
12/31/16	22,913,647	26,501,781	3,588,134	86.5	3,406,567	105.3	
<b>Contributory Retirement System</b>	1/01/08	\$ 1,102,107	1,170,251	68,144	94.2%	\$ 132,899	51.3%
	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
12/31/16	1,221,609	1,292,512	70,903	94.5	53,615	132.2	
<b>Public Safety Retirement System</b>	1/01/08	\$ 2,038,613	2,247,826	209,213	90.7%	\$ 339,187	61.7%
	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
12/31/16	3,217,221	3,794,880	577,659	84.8	352,408	163.9	
<b>Firefighters Retirement System</b>	1/01/08	\$ 787,663	732,829	(54,834)	107.5%	\$ 95,767	(57.3)%
	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
12/31/16	1,130,198	1,129,729	(469)	100.0	112,322	(0.4)	
<b>Judges Retirement System</b>	1/01/08	\$ 129,847	135,379	5,532	95.9%	\$ 13,322	41.5%
	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	230.8
	1/01/16	166,298	203,540	37,242	81.7	15,832	235.2
12/31/16	177,782	210,624	32,842	84.4	16,755	196.0	

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) 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>Governors and Legislators Retirement Plan</b>	1/01/08	\$ 11,736	9,862	(1,874)	119.0%	\$ 947	(197.9)%
	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
12/31/16	10,470	12,654	2,184	82.7	799	273.4	
<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
	12/31/16	219,885	228,450	8,565	96.3	822,196	1.0
<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)
	12/31/16	25,388	24,266	(1,122)	104.6	74,834	(1.5)
<b>All Retirement Systems</b>	1/01/08	\$ 20,269,043	21,321,332	1,052,289	95.1%	\$ 4,164,617	25.3%
	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
	12/31/16	28,916,200	33,194,896	4,278,696	87.1	4,839,496	88.2

\*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>	1/01/08	\$ 728,986	7,020,899	9,275,300	17,025,185	16,199,077	100%	100%	91%	95%
	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
	12/31/16	331,775	13,569,930	12,600,076	26,501,781	22,913,647	100	100	72	86
<b>Contributory Retirement System</b>	1/01/08	\$ 324,856	468,966	376,429	1,170,251	1,102,107	100%	100%	82%	94%
	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
	12/31/16	206,344	897,862	188,306	1,292,512	1,221,609	100	100	62	95
<b>Public Safety Retirement System</b>	1/01/08	\$ 90,962	1,076,782	1,080,082	2,247,826	2,038,613	100%	100%	81%	91%
	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
	12/31/16	61,419	2,070,512	1,662,949	3,794,880	3,217,221	100	100	65	85
<b>Firefighters Retirement System</b>	1/01/08	\$ 86,624	389,586	256,619	732,829	787,663	100%	100%	121%	107%
	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
	12/31/16	172,231	633,548	323,950	1,129,729	1,130,198	100	100	100	100

## Solvency Tests (Concluded)

System	Date	Actuarial Accrued Liabilities				Actuarial Value of Assets	Portion of Actuarial Accrued Liabilities Covered by Assets			
		(1) Active Members Contributions	(2) Retired and Beneficiaries	(3) Active Member (Employer Financed Portion)	(4) Total Actuarial Accrued Liabilities		(1)	(2)	(3)	(4)
<b>Judges Retirement System</b>	1/01/08	\$ 7,342	62,724	65,313	135,379	129,847	100%	100%	92%	96%
	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
12/31/16	2,540	131,763	76,321	210,624	177,782	100	100	57	84	
<b>Utah Governors and Legislators Retirement Plan</b>	1/01/08	\$ 145	5,123	4,594	9,862	11,736	100%	100%	141%	119%
	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
12/31/16	45	8,112	4,497	12,654	10,470	100	100	51	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
	12/31/16	—	160	228,290	228,450	219,885	100	100	96	96
<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
	12/31/16	—	—	24,266	24,266	25,388	100	100	105	105

\*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>	2007	411	89,605	\$ 3,582,495,000	39,584	4.76%	4.20%
	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
<b>Contributory Retirement System</b>	2007	160	2,852	\$ 132,899,000	44,865	4.33%	4.20%
	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
<b>Public Safety Retirement System</b>	2007	126	7,587	\$ 339,187,000	43,899	3.64%	4.20%
	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
<b>Firefighters Retirement System</b>	2007	51	1,771	\$ 95,767,000	52,247	1.36%	4.20%
	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

## 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>	2007	1	108	\$ 13,322,000	120,184	6.97%	4.20%
	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
<b>Utah Governors and Legislators Retirement Plan</b>	2007	1	97	\$ 947,000	9,109	19.08%	4.20%
	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
<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
<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

## 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>	2007	2,131	\$ 84,779,000	320	\$ 8,501,000	29,965	\$ 609,526,000	14.30%	\$ 19,138
	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
<b>Contributory Retirement System</b>	2007	197	\$ 7,748,000	497	\$ 4,616,000	5,552	\$ 61,678,000	5.35%	\$ 10,287
	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
<b>Public Safety Retirement System</b>	2007	190	\$ 10,541,000	25	\$ 1,176,000	3,614	\$ 91,864,000	11.35%	\$ 23,575
	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
<b>Firefighters Retirement System</b>	2007	53	\$ 5,023,000	3	\$ 584,000	1,063	\$ 33,936,000	15.05%	\$ 27,513
	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

## 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>	2007	7	\$ 1,254,000	—	\$ 170,000	96	\$ 6,335,000	20.64%	\$ 60,717
	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
<b>Utah Governors and Legislators Retirement Plan</b>	2007	6	\$ 57,000	8	\$ 57,000	220	\$ 758,000	—%	\$ 2,966
	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	
<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
<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)	—

\*There are currently no retirees in the system.

# Defined Benefit Systems Summary of Plan Provisions

as of January 1, 2016

## 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.

### 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.





**Defined Benefit Systems**

**Summary of Plan Provisions** *(Continued)*

*Noncontributory Retirement System (Concluded)*

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 12-31-2016)*

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.

**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



**Defined Benefit Systems**

**Summary of Plan Provisions** *(Continued)*

*Contributory Retirement System (Concluded)*

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 12-31-2016)*

Member contribution rate is 6.00%\* of covered salary. Employer rate for State and School (Level A) is 17.70% 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

**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

**Defined Benefit Systems****Summary of Plan Provisions** *(Continued)**Public Safety Retirement System (Concluded)*

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 12-31-2016)*

**Noncontributory Option**

Employer rates for Division A are: State units 41.35%; Bountiful 47.33%; 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.

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.

### 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.

### 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)  $2.5\% \times \text{FAS}^* \times \text{years of service}$  up to 20 years.
- 2)  $2.0\% \times \text{FAS}^* \times \text{years of service}$  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

**Defined Benefit Systems**

**Summary of Plan Provisions** *(Continued)*

*Firefighters Retirement System (Concluded)*

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 12-31-2016)*

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 3.89% and in Division B is 6.66% 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)  $5.00\% \times \text{FAS}^* \times \text{years of service}$  up to 10 yrs.
- 2)  $2.25\% \times \text{FAS}^* \times \text{years of service}$  between 10 and 20 yrs.
- 3)  $1.00\% \times \text{FAS}^* \times \text{years of service}$  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.*

**Cost-of-Living Allowance**

Up to 4% compounded annually, beginning one year after retirement.

**Defined Benefit Systems**

**Summary of Plan Provisions** *(Continued)*

*Judges Retirement System (Concluded)*

**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 12-31-2016)*

Employer rate includes 42.12% of covered salary and 9.79% 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 12-31-16 is \$1,360.

**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 12-31-16 is \$29.60.

**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.

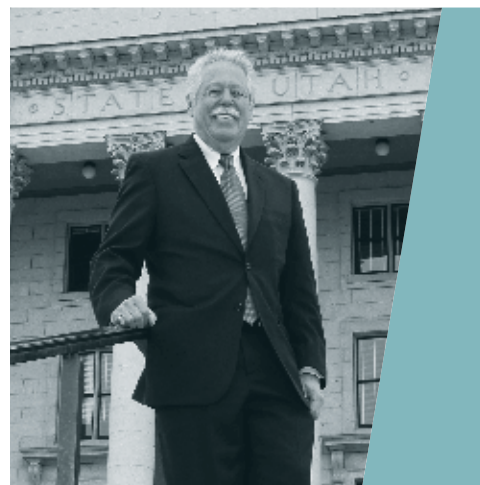
**Death Benefits**

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 12-31-2016)*

There was a 2016-17 appropriation payable by June 30, 2017, to the Utah Governors and Legislators Retirement Plan of \$404,409.



**Defined Benefit Systems**

**Summary of Plan Provisions** *(Continued)*



## 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 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

\*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.

eligibility requirements; the employee performs services through an employee leasing or similar arrangement and meets eligibility requirements.

### 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.

## Defined Benefit Systems

### Summary of Plan Provisions *(Continued)*

#### *Tier 2 Public Employees Contributory Retirement System (Concluded)*

#### 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 12-31-2016)*

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.

## Defined Benefit Systems

### Summary of Plan Provisions *(Concluded)*

#### *Tier 2 Public Safety and Firefighter Contributory Retirement System (Concluded)*

#### 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.

#### 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 12-31-2016)*

Public Safety rates range from a low of 21.72% to a high of 38.35% of salary. The Firefighter rate is 12.08% of salary.

*\*Includes 401(k) portion of the contribution rate.*

# Changes in Plan Provisions



The following retirement-related bills were passed by the 2016 Utah Legislature:

## Public Safety and Firefighters Retirement Systems

### **S.B. 29: Retirement System Amendments**

Provides that an employee of the Department of Corrections shall continue to earn public safety service credit in the Public Safety Retirement System if the employee's position is no longer covered for new employees of the department and the employee continues to meet the eligibility requirements of the system.

## General

### **H.B. 15: Domestic Relations Retirement Shares**

Provides that a former spouse of a member who dies before retiring may receive an apportioned share of a death benefit in certain circumstances.

### **H.B. 35: Retirement and Insurance Benefit Claims Limits**

Establishes a four-year statute of limitations for actions regarding a benefit, right, obligation, or employment right under Title 49; clarifies when a cause of action accrues and the limitation period runs; and provides when the limitation period is tolled and other exceptions.

### **H.B. 439: Retirement Amendments for Felony Conviction**

Provides that URS members are subject to forfeiture of accrual of service credit, employer retirement related contributions, including employer contributions to the employer sponsored defined contribution plans, from the day on which the employment related offense occurred after being convicted of an employment-related felony.

### **S.B. 19: Phased Retirement**

Establishes an optional "Phased Retirement" program that would allow 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 may be offered beginning on January 1, 2017.

### **S.B. 29: Retirement System Amendments**

The annual administrative and technical amendments to Title 49 recommended to the Legislature by URS includes: (1) Reducing the waiting period from three months to 30 days for URS' payment of death benefits that are part of a "small estate"; (2) Clarifying that the definition of final average salary is based on a contract year for educational institutions, state fiscal year for judges, and calendar year for all other participating employers; and (3) Clarifying that the four-year vesting for Tier II defined contribution benefits uses the same method as other retirement systems (within 1/10 of one year of the total years required for vesting).

### **S.B. 208: Retirement Amendments**

This bill: (1) Requires the Utah State Retirement Board to increase certified employer contribution rates to reflect any increased costs from retirement benefit enhancements enacted during a general session or special session under specified conditions; and (2) Amends the definition of "regular full-time employee" to exclude from retirement participation certain classified school employees who work on a contract for the purposes of vocational rehabilitation and the employment and training of people with significant disabilities.

# Defined Contribution Savings Plans

## Summary of Plan Provisions

### 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.

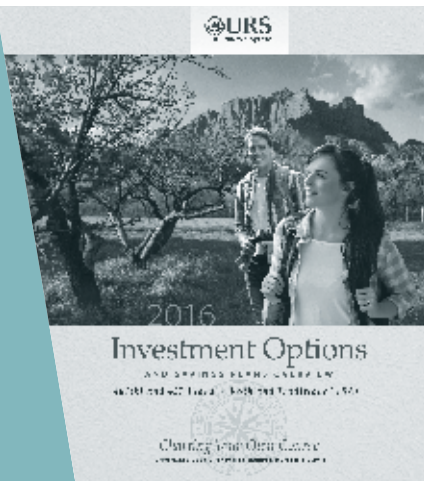
### Summary of Plan Provisions

#### Deferral Limits

**401(k)** — Limited in 2016 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.

#### 2016 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.

## Defined Contribution Savings Plans

### Summary of Plan Provisions *(Continued)*

#### 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.

##### 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.*

**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%	21%	16%	11%	6%	1%	—	—	—	—	—	—
URS Bond Fund	20	21	20	18	14	10	5%	3%	3%	3%	3%	3%
URS Large Cap Stock Value Fund	—	—	—	1	2.5	4.5	7	9.5	10	10	10	10
URS Large Cap Stock Index Fund	14	18	20	23	25	23	23	20	20	20	20	20
URS Large Cap Stock Growth Fund	—	—	—	1	2.5	4.5	7	9.5	10	10	10	10
URS International Stock Fund	4	4	7	12	18	26	31	33	33	33	33	33
URS Small Cap Stock Fund	1	1	2	3	5	7	9	10	10	10	10	10
International Bonds	10	10	10	10	8	6	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	4	4	4	4	4	4	4	4
Global Inflation-Linked Bonds	20	18	13	8	3	—	—	—	—	—	—	—
Private Real Estate	3	4	9	10	10	10	7	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>

**URS Target Date Funds**

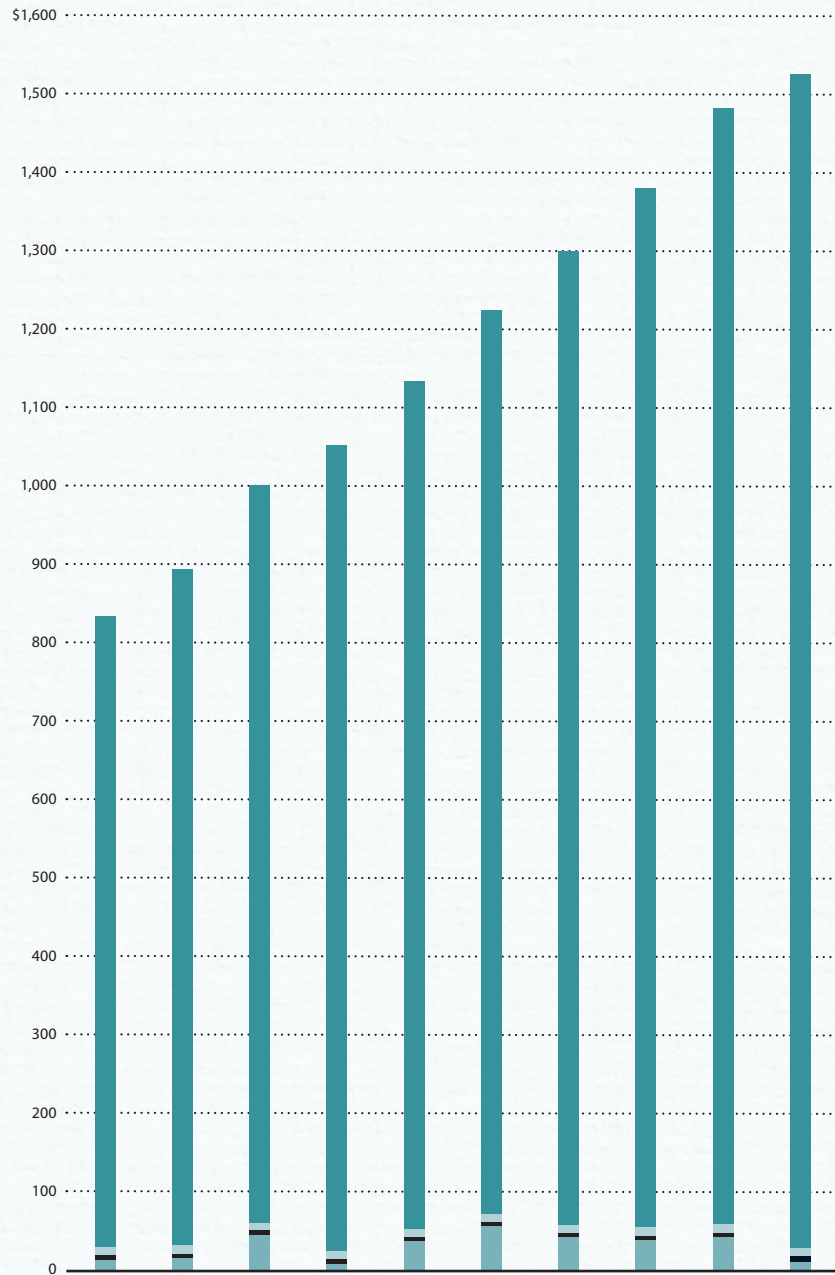
The URS Target Date Funds offer a one-fund approach to investing in the URS Savings Plans. A Target Date Fund will give participants a diversified portfolio through a single investment option. The funds will gradually adjust throughout the participant's career and into retirement. The investment mix – 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 139 and 140.*

Utah Retirement Systems

# Deductions by Type

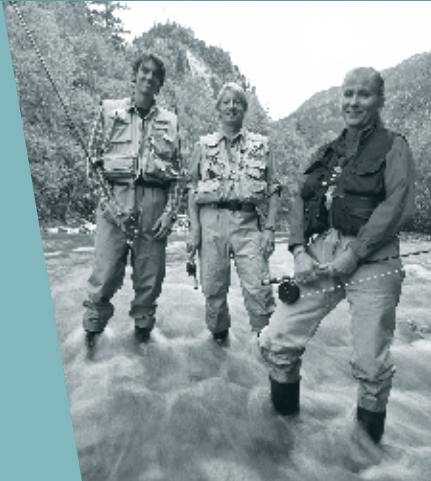
(in millions)



(in millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Benefits	\$ 804	863	941	1,028	1,083	1,153	1,242	1,326	1,424	1,498
Administrative expense	10	11	10	11	9	10	10	11	11	11
Refunds	7	5	6	6	5	5	5	5	5	7
Transfers to systems	12	15	44	7	37	56	42	38	42	10
<b>Totals</b>	<b>\$ 833</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>





Utah Retirement Systems

2016

Comprehensive Annual Financial Report

# Statistical Section

- 184 Schedules of Changes in Net Position — Defined Benefit Systems**  
These schedules allow readers to view changes in net assets and benefits over a 10-year period.
- 188 Schedules of Changes in Net Position — Defined Contribution Plans**  
These schedules allow readers to view changes in net assets and refunds over a 10-year period.
- 190 Schedules of Benefit Deductions by Type**  
These schedules provide readers with information regarding the type of benefit deductions for the last 10 years.
- 192 Schedules of Retired Members by Type of Benefit Option**  
These schedules provide readers with information regarding benefit payments by years of service.
- 194 Schedules of Average Benefit Payments**  
These schedules provide readers with information regarding benefit payments by years of service.
- 198 Schedules of Active Members by Age and Gender**  
These schedules provide readers with information regarding members by age and gender.
- 199 Schedules of Retirees by Age and Gender**  
These schedules provide readers with information regarding retirees by age and gender.
- 200 Schedules of Principal Participating Employers**  
These schedules provide readers with information regarding the largest participating employers.
- 204 Schedule of Utah Retirement Office Employees**  
This schedule provides readers with information regarding the number of Utah Retirement Systems' employees.
- 206 Schedules of Participating Employers**  
This schedule provides readers with information regarding the participating employers and the systems in which they participate.
- 212 Utah Retirement Systems — a Highlight History**  
This summary provides readers with historical highlights of the Utah Retirement Systems.

## 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>	2007	\$ 15,818,483	18,245	487,803	—	14.20%	\$ 1,041,414
	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
<b>Contributory Retirement System</b>	2007	\$ 1,115,416	9,700	11,208	—	8.56%	\$ 71,640
	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
<b>Public Safety Retirement System</b>	2007	\$ 1,981,492	4,343	81,166	—	24.46%	\$ 130,655
	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
<b>Firefighters Retirement System</b>	2007	\$ 773,776	9,194	—	13,797	14.41%	\$ 50,738
	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

Transfers from Systems	Total Additions	Benefit Payments	Refunds	Administrative & Actuarial Expense	Transfers to Systems	Total Deductions	Changes in Net Position	Ending Net Position
7,173	1,554,635	609,526	3,443	8,345	—	621,314	933,321	16,751,804
—	(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
—	92,548	61,678	2,318	588	12,064	76,648	15,900	1,131,316
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
2,323	218,487	91,864	723	1,090	—	93,677	124,810	2,106,302
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
1,709	75,438	33,936	248	356	—	34,540	40,898	814,674
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

Continued on page 186.

## 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>Judges Retirement System</b>	2007	\$ 128,299	13	1,360	1,850		24.10%	\$ 8,401
	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
<b>Utah Governors and Legislators Retirement Plan</b>	2007	\$ 12,163	—	—	—		—	\$ 780
	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
<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
<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
<b>All Retirement Systems</b>	2007	\$ 19,829,629	41,495	581,537	15,647		14.89%	\$ 1,303,628
	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	

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

Transfers from Systems	Total Additions	Benefit Payments	Refunds	Administrative & Actuarial Expense	Transfers to Systems	Total Deductions	Changes in Net Position	Ending Net Position
841	12,465	6,335	—	65	—	6,400	6,065	134,364
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
18	798	758	2	5	—	765	33	12,196
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
—	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	0	367	76,754	217,293
—	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
12,064	1,954,371	804,097	6,734	10,449	12,064	833,344	1,121,027	20,950,656
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

## 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>	2007	\$ 2,388,556	225,975	137,399	363,374
	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	
<b>457 Plan</b>	2007	\$ 258,815	26,303	14,025	40,328
	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	
<b>Roth IRA Plan</b>	2007	\$ 3,588	2,745	208	2,953
	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	
<b>Traditional IRA Plan</b>	2007	\$ 12,428	7,390	650	8,040
	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	
<b>HRA Plan</b>	2007	\$ 129	664	19	683
	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	
<b>All Defined Contribution Plans</b>	2007	\$ 2,663,516	263,077	152,301	415,378
	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	10,855	346,517
2016	4,596,736	357,521	383,985	741,506	

Utah Retirement Systems

Refunds	Administrative Expenses	Total Deductions	Changes in Net Position	Ending Net Position
142,180	5,602	147,782	215,592	2,604,148
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
21,489	591	22,080	18,248	277,063
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
192	13	205	2,748	6,336
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
2,592	36	2,628	5,412	17,840
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
126	1	127	556	685
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)	0
166,579	6,243	172,822	242,556	2,906,072
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
288,371	7,679	296,050	50,467	4,596,736
325,956	8,196	334,152	407,354	5,004,090

## 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>	2007	\$ 513,917	95,609	—	609,526
	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	
<b>Contributory Retirement System</b>	2007	\$ 43,248	17,694	736	61,678
	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	
<b>Public Safety Retirement System</b>	2007	\$ 77,605	13,743	516	91,864
	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	
<b>Firefighters Retirement System</b>	2007	\$ 26,952	6,461	523	33,936
	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	



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>	2007	\$ 5,105	1,230	—	6,335
	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
<b>Utah Governors and Legislators Retirement Plan</b>	2007	\$ 596	162	—	758
	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
<b>Tier 2 Public Employees Contributory Retirement System*</b>	2011	\$ —	—	—	—
	2012	—	—	—	—
	2013	—	—	—	—
	2014	—	—	—	—
	2015	333	—	—	333
	2016	316	—	—	316
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2011	\$ —	—	—	—
	2012	—	—	—	—
	2013	—	—	—	—
	2014	—	—	—	—
	2015	30	—	—	30
	2016	28	—	—	28

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

## Schedules of Retired Members by Type of Benefit Option

Year Ended December 31, 2016

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	9,422	679	3,330	385	3,472	898	—	—	—
	1,001-2,000	4,604	719	2,399	433	2,865	1,029	—	—	—
	2,001-3,000	2,946	751	2,243	293	2,801	831	—	—	—
	3,001-4,000	2,108	656	1,793	225	1,861	577	—	—	—
	4,001-5,000	738	197	808	126	614	206	—	—	—
	over-5,000	316	94	525	59	252	100	—	—	—
<b>Contributory Retirement System</b>	\$ 1-1,000	612	247	279	62	293	118	—	—	—
	1,001-2,000	370	199	267	34	258	64	—	—	—
	2,001-3,000	203	157	198	33	198	45	—	—	—
	3,001-4,000	95	66	65	13	85	28	—	—	—
	4,001-5,000	26	21	29	8	14	13	—	—	—
	over-5,000	14	12	25	2	9	3	—	—	—
<b>Public Safety Retirement System</b>	\$ 1-1,000	—	—	3	—	—	—	—	525	136
	1,001-2,000	—	—	3	—	—	—	—	919	294
	2,001-3,000	—	—	1	—	—	—	—	1,416	660
	3,001-4,000	—	—	—	—	—	—	—	622	247
	4,001-5,000	—	—	—	—	—	—	—	251	142
	over-5,000	—	—	—	—	—	—	—	136	57
<b>Firefighters Retirement System</b>	\$ 1-1,000	—	—	1	—	—	—	—	—	58
	1,001-2,000	—	—	1	—	—	—	—	—	220
	2,001-3,000	—	—	—	—	—	—	—	—	417
	3,001-4,000	—	—	—	—	—	—	—	—	366
	4,001-5,000	—	—	—	—	—	—	—	—	192
	over-5,000	—	—	—	—	—	—	—	—	117

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, 2016

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	—	—	—	—	—	—	—	8	4
	3,001-4,000	—	—	—	—	—	—	—	4	1
	4,001-5,000	—	—	—	—	—	—	—	4	4
	over-5,000	—	—	—	—	—	—	—	56	55
<b>Utah Governors and Legislators Retirement Plan*</b>	\$ 1-1,000	—	—	3	234	1	—	—	—	—
	1,001-2,000	—	—	—	5	—	—	—	—	—
	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	5	—	1	—	2	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>	2011	Average Monthly Benefit	\$ 366	730	1,190	1,599	2,547	3,444
		Monthly Final Average Salary	2,682	3,093	3,650	4,112	4,866	5,589
		Number of Active Retired	528	391	425	412	486	387
	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
<b>Contributory Retirement System</b>	2011	Average Monthly Benefit	\$ 290	415	1,135	1,326	2,054	2,609
		Monthly Final Average Salary	1,992	1,862	2,877	3,389	4,035	4,337
		Number of Active Retired	12	6	14	16	90	39
	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

## 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>	2011	Average Monthly Benefit	\$ 661	1,494	2,132	2,612	3,371	4,766
		Monthly Final Average Salary	2,874	3,715	4,582	5,015	5,431	6,190
		Number of Active Retired	9	9	62	47	15	15
	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
<b>Firefighters Retirement System</b>	2011	Average Monthly Benefit	\$ —	2,554	2,686	3,112	3,852	4,228
		Monthly Final Average Salary	—	5,980	5,527	5,574	6,408	5,757
		Number of Active Retired	—	2	6	9	10	5
	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

Continued on page 196.

## 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>Judges Retirement System</b>	2011	Average Monthly Benefit	\$ —	5,647	—	—	8,743	—
		Monthly Final Average Salary	—	10,666	—	—	11,013	—
		Number of Active Retired	—	3	—	—	1	—
	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
<b>Utah Governors and Legislators Retirement Plan</b>	2011	Average Monthly Benefit	\$ 172	380	435	627	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	3	1	2	1	—	—
	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	—	—	—	—	—

## 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>Tier 2 Public Employees Contributory Retirement System</b>	2011	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	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	—	—	—	—	—
<b>Tier 2 Public Safety and Firefighter Contributory Retirement System*</b>	2011	Average Monthly Benefit	\$ —	—	—	—	—	—
		Monthly Final Average Salary	—	—	—	—	—	—
		Number of Active Retired	—	—	—	—	—	—
	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	—	—	—	—	—	—

\*There are currently no retirees in the system.

# Schedules of Active Members by Age and Gender

Year Ended December 31, 2016

System	Ages	Male	Female	Total
<b>Noncontributory Retirement System</b>	Under 20	—	—	—
	20 to 29	421	703	1,124
	30 to 39	5,089	7,152	12,241
	40 to 49	6,908	11,010	17,918
	50 to 54	3,491	6,261	9,752
	55 to 59	3,531	7,180	10,711
	60 to 69	3,548	7,175	10,723
70 and Older	348	397	745	
Total		23,336	39,878	63,214

<b>Contributory Retirement System</b>	Under 20	—	—	—
	20 to 29	2	3	5
	30 to 39	6	17	23
	40 to 49	18	28	46
	50 to 54	54	64	118
	55 to 59	125	128	253
	60 to 69	147	131	278
70 and Older	10	5	15	
Total		362	376	738

<b>Public Safety Retirement System</b>	Under 20	—	—	—
	20 to 29	142	14	156
	30 to 39	1,981	232	2,213
	40 to 49	2,177	292	2,469
	50 to 54	529	102	631
	55 to 59	283	63	346
	60 to 69	177	35	212
70 and Older	4	1	5	
Total		5,293	739	6,032

<b>Firefighters Retirement System</b>	Under 20	—	—	—
	20 to 29	29	1	30
	30 to 39	588	23	611
	40 to 49	673	20	693
	50 to 54	162	5	167
	55 to 59	104	—	104
	60 to 69	57	1	58
70 and Older	—	—	—	
Total		1,613	50	1,663

<b>Judges Retirement System</b>	Under 20	—	—	—
	20 to 29	—	—	—
	30 to 39	1	—	1
	40 to 49	16	10	26
	50 to 54	14	6	20
	55 to 59	18	7	25
	60 to 69	34	5	39
70 and Older	3	1	4	
Total		86	29	115

System	Ages	Male	Female	Total
<b>Utah Governors and Legislators Retirement Plan</b>	Under 20	—	—	—
	20 to 29	—	—	—
	30 to 39	1	2	3
	40 to 49	11	3	14
	50 to 54	9	—	9
	55 to 59	5	3	8
	60 to 69	23	3	26
70 and Older	1	—	1	
Total		50	11	61

<b>Tier 2 Public Employees Contributory Retirement System</b>	Under 20	84	71	155
	20 to 29	3,019	6,071	9,090
	30 to 39	3,182	3,924	7,106
	40 to 49	1,397	3,182	4,579
	50 to 54	486	927	1,413
	55 to 59	454	673	1,127
	60 to 69	445	386	831
70 and Older	49	22	71	
Total		9,116	15,256	24,372

<b>Tier 2 Public Safety and Firefighter Contributory Retirement System</b>	Under 20	1	—	1
	20 to 29	1,066	143	1,209
	30 to 39	765	81	846
	40 to 49	131	26	157
	50 to 54	13	4	17
	55 to 59	4	—	4
	60 to 69	5	1	6
70 and Older	—	—	—	
Total		1,985	255	2,240

<b>Tier 2 DC Only Public Employees Contributory Retirement System</b>	Under 20	—	3	3
	20 to 29	466	1,178	1,644
	30 to 39	747	787	1,534
	40 to 49	273	606	879
	50 to 54	85	178	263
	55 to 59	86	138	224
	60 to 69	114	78	192
70 and Older	17	3	20	
Total		1,788	2,971	4,759

<b>Tier 2 DC Only Public Safety and Firefighter Contributory Retirement System</b>	Under 20	—	—	—
	20 to 29	99	14	113
	30 to 39	101	10	111
	40 to 49	25	6	31
	50 to 54	1	1	2
	55 to 59	5	—	5
	60 to 69	1	—	1
70 and Older	—	—	—	
Total		232	31	263



## Schedules of Retirees by Age and Gender

Year Ended December 31, 2016

System	Ages	Male	Female	Total
<b>Noncontributory Retirement System</b>	Under 55	173	263	436
	55 to 59	604	926	1,530
	60 to 64	2,064	3,878	5,942
	65 to 69	4,681	9,111	13,792
	70 to 74	4,237	7,544	11,781
	75 to 79	3,065	5,113	8,178
	80 to 84	2,120	3,418	5,538
	85 to 89	1,202	1,927	3,129
	90 to 94	358	601	959
	95 to 100	27	42	69
Over 100	—	1	1	
Total		18,531	32,824	51,355
<b>Contributory Retirement System</b>	Under 55	34	37	71
	55 to 59	125	123	248
	60 to 64	224	296	520
	65 to 69	288	423	711
	70 to 74	241	432	673
	75 to 79	162	332	494
	80 to 84	90	244	334
	85 to 89	111	280	391
	90 to 94	111	336	447
	95 to 100	51	203	254
Over 100	5	17	22	
Total		1,442	2,723	4,165
<b>Public Safety Retirement System</b>	Under 55	771	233	1,004
	55 to 59	476	151	627
	60 to 64	743	216	959
	65 to 69	848	222	1,070
	70 to 74	580	175	755
	75 to 79	313	131	444
	80 to 84	207	120	327
	85 to 89	79	89	168
	90 to 94	22	27	49
	95 to 100	2	7	9
Over 100	—	—	—	
Total		4,041	1,371	5,412
<b>Firefighters Retirement System</b>	Under 55	126	42	168
	55 to 59	123	26	149
	60 to 64	216	41	257
	65 to 69	236	39	275
	70 to 74	178	41	219
	75 to 79	109	33	142
	80 to 84	45	27	72
	85 to 89	21	42	63
	90 to 94	13	9	22
	95 to 100	2	3	5
Over 100	—	—	—	
Total		1,069	303	1,372

System	Ages	Male	Female	Total
<b>Judges Retirement System</b>	Under 55	—	1	1
	55 to 59	—	—	—
	60 to 64	8	6	14
	65 to 69	25	7	32
	70 to 74	21	7	28
	75 to 79	15	5	20
	80 to 84	9	5	14
	85 to 89	8	12	20
	90 to 94	5	3	8
	95 to 100	—	4	4
Over 100	—	—	—	
Total		91	50	141
<b>Utah Governors and Legislators Retirement Plan</b>	Under 55	1	1	2
	55 to 59	—	1	1
	60 to 64	3	3	6
	65 to 69	38	11	49
	70 to 74	22	15	37
	75 to 79	23	11	34
	80 to 84	31	17	48
	85 to 89	13	31	44
	90 to 94	13	3	16
	95 to 100	3	4	7
Over 100	—	—	—	
Total		147	97	244
<b>Tier 2 Public Employees Contributory Retirement System</b>	Under 55	—	—	—
	55 to 59	—	—	—
	60 to 64	—	—	—
	65 to 69	4	3	7
	70 to 74	2	—	2
	75 to 79	—	—	—
	80 to 84	—	—	—
	85 to 89	—	—	—
	90 to 94	—	—	—
	95 to 100	—	—	—
Over 100	—	—	—	
Total		6	3	9
<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	—	—	—	
Total		—	—	—

\*There are no retirees in this system.

# Schedules of Principal Participating Employers

Year Ended December 31

System/ Employer	2016			2015			2014			2013		
	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	10,898	1	17.24%	11,788	1	17.27%	12,550	1	17.47%	13,510	1	17.58%
Davis School District	3,904	2	6.18	4,090	2	5.99	4,338	2	6.04	4,624	3	6.02
Granite School District	3,740	3	5.92	4,044	3	5.92	4,337	3	6.04	4,702	2	6.12
Alpine School District	3,458	4	5.47	3,711	4	5.44	3,938	4	5.48	4,280	4	5.57
Jordan School District	2,424	5	3.83	2,635	5	3.86	2,747	5	3.82	2,943	5	3.83
Weber School District	2,130	6	3.37	2,286	6	3.35	2,360	6	3.29	2,503	6	3.26
Salt Lake County	2,079	7	3.29	2,194	7	3.21	2,352	7	3.27	2,476	7	3.22
University of Utah	1,774	8	2.81	1,864	10	2.73	2,039	8	2.84	2,290	8	2.98
Nebo School District	1,753	9	2.77	1,868	9	2.74	1,941	10	2.70	—	—	—
Salt Lake School District	1,684	10	2.66	—	—	—	1,977	9	2.75	2,144	9	2.79
Canyons School District	—	—	—	1,880	8	2.75	—	—	—	2,076	10	2.70
Other	29,370		46.46	31,913		46.74	33,248		46.29	35,297		45.93
Total Noncontributory System active members	63,214		100.00%	68,273		100.00%	71,827		100.00%	76,845		100.00%
<b>Contributory Retirement System</b>												
State of Utah	117	1	15.85%	152	1	16.13%	186	1	12.38%	237	1	13.68%
DDI Vantage	68	2	9.21	70	2	7.42	70	5	4.66	76	6	4.39
Salt Lake City Corp.	44	3	5.96	53	4	5.62	73	4	4.86	84	4	4.85
University of Utah	44	3	5.96	60	3	6.36	68	6	4.52	75	7	4.33
Granite School District	39	5	5.28	53	4	5.62	67	8	4.46	81	5	4.67
University of Utah Hospital	38	6	5.15	42	6	4.45	47	9	3.13	50	9	2.89
Salt Lake County	26	7	3.52	37	7	3.92	45	10	2.99	47	10	2.71
Davis School District	23	8	3.12	30	8	3.18	—	—	—	—	—	—
Salt Lake School District	20	9	2.71	25	9	2.65	—	—	—	—	—	—
Duchesne County	17	10	2.30	24	10	2.55	68	6	4.52	73	8	4.21
South Jordan City	—	—	—	—	—	—	153	2	10.18	167	2	9.64
Uintah County	—	—	—	—	—	—	136	3	9.05	146	3	8.42
Other	302		40.92	397		42.10	590		39.25	697		40.22%
Total Contributory System active members	738		100.00%	943		100.00%	1,503		100.00%	1,733		100.00%
<b>Public Safety Retirement System</b>												
State of Utah	1,881	1	31.18%	2,006	1	31.35%	2,076	1	31.12%	2,211	1	31.50%
Salt Lake City Corp.	424	2	7.03	412	2	6.44	423	3	6.34	432	3	6.15
Salt Lake County	381	3	6.32	397	3	6.20	424	2	6.35	459	2	6.54
Unified Police Department	355	4	5.89	359	4	5.61	365	4	5.47	378	4	5.39
Utah County	232	5	3.85	236	5	3.69	239	5	3.58	237	5	3.38
Weber County Corp.	194	6	3.22	211	6	3.30	221	6	3.31	228	6	3.25
Davis County	145	7	2.40	163	7	2.55	179	7	2.68	193	7	2.75
West Valley City	127	8	2.11	145	8	2.27	169	8	2.53	162	8	2.31
Washington County	96	9	1.59	109	9	1.70	113	9	1.69	120	9	1.71
City Of West Jordan	89	10	1.48	—	—	—	—	—	—	—	—	—
Ogden City Corp.	—	—	—	97	10	1.52	110	10	1.65	116	10	1.65
Sandy City	—	—	—	—	—	—	—	—	—	—	—	—
Other	2,108		34.95	2,264		35.38	2,353		35.27	2,483		35.38%
Total Public Safety System active members	6,032		100.00%	6,399		100.00%	6,672		100.00%	7,019		100.00%

Utah Retirement Systems

2012			2011			2010			2009			2008			2007		
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
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%	16,948	1	18.91%
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	5,391	4	6.02
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	5,922	2	6.61
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	4,910	5	5.48
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	5,705	3	6.37
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	2,793	9	3.12
2,605	8	3.17	2,813	7	3.20	2,869	7	3.11	2,968	7	3.20	3,084	7	3.30	2,981	7	3.33
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	4,453	6	4.97
—	—	—	—	—	—	—	—	—	—	—	—	2,465	10	2.63	2,330	10	2.60
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	2,805	8	3.13
2,281	10	2.77	2,460	10	2.80	2,637	10	2.85	2,572	10	2.77	—	—	—	—	—	—
37,633		45.75	39,309		44.72	41,026		44.40	40,172		43.30	38,029		40.64	35,367		39.47
82,259		100.00%	87,901		100.00%	92,392		100.00%	92,766		100.00%	93,576		100.00%	89,605		100.00%
269	1	13.89%	293	1	13.71%	325	1	13.95%	387	1	15.39%	435	1	15.86%	473	1	16.58%
85	6	4.39	94	7	4.40	91	8	3.91	82	8	3.26	76	10	2.77	—	—	—
93	4	4.80	104	5	4.87	112	6	4.81	128	6	5.09	137	6	4.99	144	6	5.05
84	7	4.34	153	4	7.16	162	4	6.95	178	4	7.08	195	3	7.11	207	3	7.26
91	5	4.70	102	6	4.77	114	5	4.89	131	5	5.21	141	5	5.14	150	5	5.26
56	9	2.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
52	10	2.68	59	9	2.76	61	9	2.62	80	9	3.18	90	8	3.28	97	7	3.40
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	55	10	2.57	58	10	2.49	67	10	2.66	—	—	—	78	10	2.73
77	8	3.98	82	8	3.84	104	7	4.46	90	7	3.58	87	7	3.17	85	8	2.98
177	2	9.14	196	2	9.17	203	2	8.71	208	2	8.27	212	2	7.73	207	2	7.26
158	3	8.16	168	3	7.86	187	3	8.03	193	3	7.67	191	4	6.96	188	4	6.59
795		41.04	831		38.89	913		39.18	971		38.61	1,179		42.98	1,223		42.88
1,937		100.00%	2,137		100.00%	2,330		100.00%	2,515		100.00%	2,743		100.00%	2,852		100.00%
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%	2,444	1	32.21%
452	3	6.18	463	3	6.08	480	3	6.30	480	3	6.24	479	3	6.07	472	3	6.22
494	2	6.76	540	2	7.09	547	2	7.17	828	2	10.76	860	2	10.89	783	2	10.32
377	4	5.16	329	4	4.32	293	4	3.84	—	—	—	—	—	—	—	—	—
239	5	3.27	236	6	3.10	233	6	3.06	238	5	3.09	244	5	3.09	233	5	3.07
237	6	3.24	249	5	3.27	246	5	3.23	252	4	3.27	266	4	3.37	275	4	3.62
201	7	2.75	208	7	2.73	209	7	2.74	209	6	2.72	208	6	2.63	206	6	2.72
172	8	2.35	177	8	2.32	177	8	2.32	175	7	2.27	176	7	2.23	169	7	2.23
129	9	1.76	129	9	1.69	126	9	1.65	123	8	1.60	120	9	1.52	113	9	1.49
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
122	10	1.67	127	10	1.67	119	10	1.56	117	9	1.52	122	8	1.55	122	8	1.61
—	—	—	—	—	—	—	—	—	109	10	1.42	115	10	1.46	108	10	1.42
2,573		35.18	2,771		36.37	2,814		36.91	2,716		35.30	2,712		34.36	2,662		35.09
7,313		100.00%	7,619		100.00%	7,624		100.00%	7,695		100.00%	7,894		100.00%	7,587		100.00%

Continued on page 202.

## Schedules of Principal Participating Employers (Continued)

Year Ended December 31

System/ Employer	2016			2015			2014			2013		
	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	380	1	22.85%	386	1	22.25%	395	1	22.10%	398	1	21.57%
Salt Lake City Corp.	274	2	16.48	295	2	17.00	302	2	16.90	309	2	16.75
Ogden City Corp.	82	3	4.93	85	3	4.90	90	3	5.04	102	3	5.53
West Valley City	80	4	4.81	80	4	4.61	87	4	4.87	89	4	4.82
City of West Jordan	64	5	3.85	66	6	3.80	66	7	3.69	68	8	3.69
Park City Fire Service	63	6	3.79	65	7	3.75	68	6	3.81	71	6	3.85
Provo City	63	6	3.79	67	5	3.86	70	5	3.92	72	5	3.90
Sandy City	57	8	3.43	59	8	3.40	64	8	3.58	69	7	3.74
Weber Fire District	51	9	3.07	53	9	3.05	—	—	—	—	—	—
Orem City	49	10	2.95	52	10	3.00	56	9	3.13	62	9	3.36
Murray City	—	—	—	—	—	—	51	10	2.85	55	10	2.98
South Davis Metro Fire Agency	—	—	—	—	—	—	—	—	—	—	—	—
Other	500		30.07	527		30.37	538		30.11	550		29.81
Total Firefighters System active members	1,663		100.00%	1,735		100.00%	1,787		100.00%	1,845		100.00%
<b>Judges Retirement System</b>												
State of Utah	115	1	100.00%	112	1	100.00%	114	1	100.00%	112	1	100.00%
<b>Utah Governors and Legislators Retirement Plan</b>												
State of Utah	61	1	100.00%	93	1	100.00%	105	1	100.00%	99	1	100.00%
<b>Tier 2 Public Employees Contributory Retirement System</b>												
State of Utah	4,345	1	17.83%	3,642	1	16.72%	2,772	1	16.09%	2,173	1	15.84%
Alpine School District	1,361	2	5.58	1,232	3	5.66	1,090	3	6.33	1,080	2	7.87
Granite School District	1,302	3	5.34	1,028	4	4.72	829	4	4.81	664	4	4.84
Davis School District	1,263	4	5.18	980	5	4.50	778	5	4.52	591	7	4.31
University of Utah	1,181	5	4.85	1,458	2	6.69	1,223	2	7.10	944	3	6.88
Jordan School District	1,095	6	4.49	962	6	4.42	755	6	4.38	661	5	4.82
Canyons School District	858	7	3.52	781	7	3.59	614	7	3.56	593	6	4.32
Salt Lake County	786	8	3.23	655	8	3.01	484	9	2.81	378	9	2.76
Nebo School District	692	9	2.84	624	9	2.87	549	8	3.19	403	8	2.94
Weber County School District	494	10	2.03	—	—	—	—	—	—	—	—	—
Salt Lake City District	—	—	—	479	10	2.20	—	—	—	363	10	2.65
Washington School District	—	—	—	—	—	—	360	10	2.09	—	—	—
Provo School District	—	—	—	—	—	—	—	—	—	—	—	—
Other	10,995		45.11	9,937		45.63	7,771		45.11	5,868		42.78
Total Tier 2 Public Employees System active members	24,372		100.00%	21,778		100.00%	17,225		100.00%	13,718		100.00%

Additional information will be added when it becomes available.

Utah Retirement Systems

2012			2011			2010			2009			2008			2007		
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
404	1	21.44%	404	1	20.91%	356	1	18.87%	365	1	19.14%	352	1	19.04%	344	1	19.42%
309	2	16.40	314	2	16.25	312	2	16.53	309	2	16.20	324	2	17.52	322	2	18.18
109	3	5.79	110	3	5.69	111	3	5.88	113	3	5.93	111	3	6.00	110	3	6.21
92	4	4.88	96	4	4.97	100	4	5.30	97	4	5.09	97	4	5.25	92	4	5.19
72	6	3.82	73	7	3.78	73	6	3.87	70	8	3.67	72	8	3.89	70	8	3.95
72	6	3.82	74	6	3.83	77	5	4.08	80	5	4.20	80	5	4.33	81	5	4.57
74	5	3.93	78	5	4.04	64	9	3.39	76	6	3.99	75	6	4.06	74	6	4.18
69	8	3.66	70	8	3.62	70	7	3.71	72	7	3.78	75	7	4.06	73	7	4.12
56	10	2.97	—	—	—	—	—	—	—	—	—	55	10	2.97	—	—	—
67	9	3.56	68	9	3.52	68	10	3.60	69	9	3.62	66	9	3.57	58	9	3.27
—	—	—	56	10	2.90	60	10	3.18	59	10	3.09	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	52	10	2.94
560		29.75	589		30.49	596		31.58	597		31.31	542		29.31	495		27.95
1,884		100.00%	1,932		100.00%	1,887		100.00%	1,907		100.00%	1,849		100.00%	1,771		100.00%
111	1	100.00%	111	1	100.00%	109	1	100.00%	104	1	100.00%	106	1	100.00%	108	1	100.00%
113	1	100.00%	115	1	100.00%	125	1	100.00%	119	1	100.00%	97	1	100.00%	97	1	100.00%
1,523	1	14.71%	600	1	12.56%												
1,072	2	10.35	574	2	12.02												
638	4	6.16	336	3	7.03												
463	5	4.47	235	6	4.92												
738	3	7.13	323	4	6.76												
417	6	4.03	238	5	4.98												
387	7	3.74	177	8	3.71												
—	—	—	—	—	—												
327	8	3.16	165	9	3.45												
—	—	—	—	—	—												
302	10	2.92	165	10	3.45												
—	—	—	—	—	—												
310	9	2.99	186	7	3.89												
4,179		40.34	1,778		37.22												
10,356		100.00%	4,777		100.00%												

Continued on page 204.

## Schedules of Principal Participating Employers *(Concluded)*

Year Ended December 31

System/ Employer	2016			2015			2014			2013		
	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	626	1	27.95%	523	1	28.67%	371	1	27.87%	274	1	30.96%
Salt Lake County	176	2	7.86	132	2	7.24	122	2	9.17	93	2	10.51
Salt Lake City Corp.	95	3	4.24	58	3	3.18	51	3	3.83	38	3	4.29
West Valley City	68	4	3.04	32	7	1.75	22	7	1.65	—	—	—
Ogden City Corp.	54	5	2.41	29	9	1.59	21	9	1.58	11	9	1.24
Unified Fire Authority	53	6	2.37	44	4	2.41	40	4	3.01	13	7	1.47
Davis County	48	7	2.14	43	5	2.36	31	5	2.33	22	4	2.49
Sandy City	46	8	2.05	—	—	—	—	—	—	—	—	—
Weber County Corp.	41	9	1.83	39	6	2.14	22	7	1.65	15	6	1.69
City of South Jordan	35	10	1.56	—	—	—	—	—	—	—	—	—
Cache County	—	—	—	31	8	1.70	26	6	1.95	22	4	2.49
Unified Police Department	—	—	—	29	9	1.59	20	10	1.50	—	—	—
Park City Fire Service	—	—	—	—	—	—	—	—	—	12	8	1.36
Iron County	—	—	—	—	—	—	—	—	—	11	9	1.24
Murray City	—	—	—	—	—	—	—	—	—	—	—	—
Duchesne County	—	—	—	—	—	—	—	—	—	—	—	—
Utah County	—	—	—	—	—	—	—	—	—	—	—	—
Layton City	—	—	—	—	—	—	—	—	—	—	—	—
St. George City	—	—	—	—	—	—	—	—	—	—	—	—
Grand County	—	—	—	—	—	—	—	—	—	—	—	—
Other	998		44.55	864		47.37	605		45.45	374		42.26
<b>Total Tier 2 Public Safety and Firefighter System active members</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>	<b>885</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	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Number of employees	176	169	162	168	163	161	161	165	164	156

Utah Retirement Systems

2012			2011		
Active Members	Rank	Percent of Total Active Members	Active Members	Rank	Percent of Total Active Members
144	1	30.19	3	9	3.03%
46	2	9.64	17	1	17.17
34	3	7.13	6	3	6.06
—	—	—	4	8	4.04
—	—	—	4	7	4.04
—	—	—	—	—	—
12	4	2.52	4	5	4.04
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
8	6	1.68	—	—	—
—	—	—	—	—	—
—	—	—	8	2	8.08
—	—	—	—	—	—
9	5	1.89	—	—	—
8	6	1.68	—	—	—
7	8	1.47	5	4	5.05
6	9	1.26	—	—	—
—	—	—	4	6	4.04
—	—	—	3	10	3.03
197		41.28	41		41.41
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								



Schedule 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	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

Schedule 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
Lone Peak Safety District.....	N		PS	F	T	D	K	Salem City.....	N		PS		T	D	K
Manila Town.....	N	C			T		K	Salina City.....	N		PS		T	D	K
Manti City.....	N				T		K	Salt Lake City.....	N	C	PS	F	T	D	K
Mantua City.....	N		PS		T		K	Sandy City.....	N	C	PS	F	T	D	K
Mapleton City.....	N		PS		T	D	K	Santa Clara City.....	N		PS	F	T	D	K
Marriott/Slaterville City.....	N				T		K	Santaquin City.....	N		PS		T	D	K
Mayfield Town.....	N				T		K	Saratoga Springs Town.....	N		PS	F	T	D	K
Meadow Town.....	N				T		K	Smithfield City.....	N		PS	F	T		K
Mendon City.....	N				T		K	South Jordan City.....	N	C	PS	F	T	D	K
Midvale City.....	N	C	PS	F	T	D	K	South Ogden City.....	N		PS	F	T	D	K
Midway City.....	N	C			T	D	K	South Salt Lake City.....	N		PS	F	T	D	K
Milford City.....	N		PS		T		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	Torrey Town.....	N				T		K
Nephi City.....	N		PS		T	D	K	Tremonton City.....	N	C	PS		T	D	K
Nibley City.....	N				T	D	K	Uintah City.....	N				T		K
North Logan City.....	N	C	PS	F	T	D	K	Vernal City.....	N	C	PS		T	D	K
North Ogden City.....	N	C	PS	F	T		K	Vineyard Town.....	N				T		K
North Salt Lake City.....	N		PS		T	D	K	Washington City.....	N			F	T	D	K
Oakley City.....		C			T	D	K	Washington Terrace City.....	N		PS	F	T	D	K
Ogden City.....	N	C	PS	F	T	D	K	Wellington City.....	N		PS		T		K
Orangeville City.....	N				T		K	Wellsville City.....	N				T		K
Orderville Town.....	N				T		K	Wendover City.....	N		PS		T	D	K

Schedule of Participating Employers (Continued)

Employer	N	C	PS	F	T	D	K	Employer	N	C	PS	F	T	D	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 Hospital .....	N	C			T	D	K
Ash Creek Special Service District .....	N				T	D	K	Heber Light & Power .....	N				T	D	K
Ashley Valley Sewer Management Board .....	N				T	D	K	Heber Valley Special District .....	N				T		
Ashley Valley Improvement District .....	N				T		K	Hooper Water Improvement District .....	N				T	D	K
Bear Lake Special Service District .....	N				T		K	Housing Authority of Carbon County .....	N				T		K
Bear River Association of Governments .....	N				T	D	K	Housing Authority of Ogden City .....	N				T		K
Bear River Health Department .....	N	C			T	D	K	Housing Authority of Salt Lake City .....	N	C			T	D	K
Bear River Mental Health .....	N				T	D	K	Housing Authority of Salt Lake County .....	N				T		K
Bear River Water District .....	N				T		K	Hurricane Valley Fire Spec. Service District .....				F	T		K
Beaver Housing Authority .....	N				T		K	Impact Mitigation Special Service District .....	N				T		K
Beaver Valley Hospital .....	N				T	D	K	Jordan River Commission .....	N				T	D	K
Benchland Water Company .....	N				T		K	Jordan Valley Water Conservancy District .....	N	C			T	D	K
Bona Vista Water Improvement .....	N				T	D	K	Jordanelle Special Service District .....	N				T	D	K
Bountiful Irrigation District .....	N				T	D	K	Kane Water Conservancy District .....	N				T		K
Box Elder County Mosquito District .....	N				T		K	Kearns Improvement District .....	N	C			T	D	K
Cache Metro Planning Organization .....	N				T		K	Leeds Area Special Service District .....				F	T		
Carbon County Recreation and Transportation Special Service District .....	N				T		K	Maesar Water Improvement District .....	N				T		K
Castle Valley Special Service District .....	N	C			T	D	K	Magna Mosquito Abatement .....	N				T		K
Cedar City Housing Authority .....	N				T	D	K	Metro Water District—SLC/Sandy .....	N				T	D	K
Cedar Mountain Fire Protection District .....	N			F	T		K	Midvalley Improvement District .....	N				T		K
Central Iron County Water Conservancy Dist .....	N				T		K	Military Installation Development Authority .....	N				T		K
Central Davis Sewer District .....	N				T	D	K	Millard County Care and Rehabilitation, Inc. ....	N				T		K
Central Utah Counseling Center .....	N				T	D	K	Moab Valley Fire Protection .....	N				F	T	K
Central Utah Public Health .....	N				T	D	K	Mountain Regional Water Special Service Dist ..	N				T		K
Central Utah Water District .....	N				T	D	K	Mountainland Association of Governments .....	N	C			T	D	K
Central Weber Sewer District .....	N	C			T	D	K	Mt. Olympus Improvement District .....	N				T		K
Children's Aid Society—Utah .....	N				T		K	Nebo Credit Union .....	N				T		K
Cottonwood Heights P&R Services .....	N				T	D	K	North Davis County Sewer District .....	N	C			T		K
Cottonwood Improvement District .....	N				T	D	K	North Davis Fire District .....	N			F	T		K
Council on Aging — Golden Age Center Special Service District .....	N				T	D	K	North East Counseling Center .....	N				T	D	K
Davis & Weber Counties Canal Company .....	N	C			T	D	K	North Emery Water Users Special Service Dist ...	N				T		K
Davis Behavioral Health .....	N				T	D	K	North Fork Special Service District .....	N				T		K
Davis County Housing Authority .....	N	C			T		K	North Park Police Agency .....	N		PS		T	D	K
Davis County Mosquito Abatement .....	N				T		K	North Pointe Solid Waste Special Service Dist ...	N				T	D	K
Davis County Solid Waste Management .....	N				T	D	K	North Tooele County Fire Protection Service District .....	N			F	T	D	K
DDI Advantage .....	N	C			T		K	North View Fire District .....	N			F	T		K
Duchesne County Mosquito District .....	N	C			T		K	Oquirrh Recreation and Parks District .....	N				T	D	K
Duchesne County Water Conservancy District ...	N				T	D	K	Park City Fire Service District .....	N			F	T	D	K
East Duchesne Culinary Water Imp District .....	N				T		K	Price River Water Improvement .....	N				T	D	K
Emery County Care and Rehabilitation Center ...	N	C			T	D	K	Provo Housing Authority .....	N				T		K
Emery County Recreation Special Service Dist ...	N				T		K	Provo River Water Users .....	N				T	D	K
Emery Water Conservancy District .....	N				T		K	Roosevelt City Housing Authority .....	N				T		
								Roy Water Conservancy District .....	N				T	D	K
								Salt Lake County Service Area 3 .....	N				T		K
								Salt Lake City Library .....	N				T	D	K

Schedule of Participating Employers (Continued)

Employer	N	C	PS	F	T	D	K
Salt Lake City Mosquito Abatement.....	N				T		K
Salt Lake City Sub. Sanitation #1 .....	N				T		K
San Juan Mental Health/Substance Abuse Dist...	N				T		K
Sandy Suburban Improvement District .....	N				T	D	K
Six-County Association of Governments.....	N	C			T	D	K
Six-County Infrastructure Coalition .....	N				T		K
Snyderville Basin Water Reclamation District.....	N	C			T	D	K
Solid Waste Management Special Serv Dist #1 ...	N				T		K
Solitude Improvement District .....	N				T		K
South Davis County Sewer Improvement Dist....	N	C			T	D	K
South Davis County Water Improvement Dist....	N				T	D	K
South Davis Metro Fire Agency.....	N			F	T	D	K
South Davis Recreation Center.....	N				T	D	K
South Ogden Conservancy District.....	N				T	D	K
South Utah Valley Animal Services Special Service District.....	N				T		K
South Utah Valley Electric Service District .....	N				T		K
South Utah Valley Solid Waste.....	N				T		K
South Valley Sewer District .....	N	C			T	D	K
South Valley Water Reclamation Facility .....	N				T		K
Southeastern Utah Assoc. of Governments .....	N	C			T	D	K
Southeastern Utah Health .....	N	C			T		K
Southern Salt Lake Valley Mosquito Abatement..	N				T	D	K
Southern Utah Valley Power System.....	N				T	D	K
Southwest Behavioral Health Center.....	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						K
Taylorsville – 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
Unified Police Department.....	N		PS		T	D	K
Upper Country Water District .....	N					D	
Utah Association of Counties.....	N				T		K
Utah Counties Indemnity Pool.....	N				T		K

Employer	N	C	PS	F	T	D	K
Utah County Housing Authority.....	N	C			T	D	K
Utah Local Governments Trust.....	N				T	D	K
Utah Lake Commission .....	N				T		K
Utah League of Cities & Towns.....	N	C			T		K
Utah Municipal Power Agency.....	N				T		K
Utah Public Employees Association .....	N	C			T	D	K
Utah Telecommunication Open Infrastructure Agency (UTOPIA).....	N				T	D	K
Utah Valley Dispatch Special Services Dist .....	N				T		K
Utah Zoological Society .....	N	C			T		K
Valley Emergency Communication Center.....	N				T	D	K
Wasatch Front Regional Council.....	N	C			T	D	K
Wasatch Front Waste and Recycling District.....	N				T	D	K
Wasatch Integrated Waste Management.....	N				T	D	K
Wasatch Mental Health Special Services Dist ...	N	C			T	D	K
Washington County Solid Waste #1 .....	N				T	D	K
Washington County Water District.....	N	C			T		K
Waste Management Service District #5 .....	N				T		K
Weber Area Dispatch 911 & Emergency Services District .....	N				T	D	K
Weber Basin Water Conservancy.....	N				T	D	K
Weber County Mosquito Abatement.....	N				T	D	K
Weber Human Services .....	N				T	D	K
Weber River Water Users .....	N	C			T		K
Western Kane County Special Service District #1 .....	N				T		K
White City Water Improvement District.....	N				T	D	K

**Total Participating Employers**

Noncontributory.....	453
Contributory.....	158
Public Safety.....	132
Firefighters.....	62
Judges .....	1
Governor and Legislators .....	1
Tier 2 Public Employees .....	466
Tier 2 Public Safety and Firefighter.....	150
457 Plan .....	255
401(k) Plan .....	445

Schedule of Participating Employers *(Concluded)*

## Employer

**Inactive Units**

American Fork Hospital	Marysville 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	

# A Highlight History 1907-2016



**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.

**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.

## A Highlight History 1907-2016 *(Continued)*

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.

**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 1907-2016 *(Concluded)*

**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.

**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.





Utah Retirement Systems

2016

Comprehensive Annual Financial Report

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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, 2016, 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 fiduciary changes in 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

## Independent Auditors' Report for Agent Plans *(Concluded)*

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 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, 2016, 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, 2016, and our report thereon, dated April 26, 2017, 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 used by anyone other than these specified parties.



April 26, 2017

**Public Safety Retirement System**

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

Year Ended December 31, 2016

With Comparative Totals for Year Ended December 31, 2015

*(in thousands)*

	Salt Lake City	Ogden	Provo
<b>Additions:</b>			
Contributions:			
Member	\$ 8	—	—
Employer	15,260	3,147	2,403
Total contributions	15,268	3,147	2,403
Investment income:			
Net appreciation in fair value of investments	16,367	3,760	2,930
Interest, dividends, and other investment income	4,449	1,022	797
Total income from investment activity	20,816	4,782	3,727
Less investment expenses	447	103	80
Net income from investment activity	20,369	4,679	3,647
Income from security lending activity	83	19	15
Less security lending expense	11	2	2
Net income from security lending activity	72	17	13
Net investment income	20,441	4,696	3,660
Transfers from (to) affiliated systems	1,369	(74)	(39)
Total additions	37,078	7,769	6,024
<b>Deductions:</b>			
Retirement benefits	13,751	3,286	2,140
Cost-of-living benefits	3,892	917	555
Supplemental retirement benefits	38	5	6
Refunds	—	—	—
Administrative expenses	118	27	20
Total deductions	17,799	4,235	2,721
Increase from operations	19,279	3,534	3,303
Net position restricted for pensions beginning of year	241,396	55,905	43,277
Net position restricted for pensions end of year	\$ 260,675	59,439	46,580

Utah Retirement Systems

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)		
Logan	Bountiful					
—	—	112	515	195	830	905
1,052	943	50,554	52,359	21,381	147,099	141,024
1,052	943	50,666	52,874	21,576	147,929	141,929
1,656	1,196	67,850	81,791	23,835	199,385	5,276
450	325	18,445	22,235	6,480	54,203	50,307
2,106	1,521	86,295	104,026	30,315	253,588	55,583
45	33	1,852	2,233	651	5,444	5,929
2,061	1,488	84,443	101,793	29,664	248,144	49,654
8	6	346	417	121	1,015	1,149
1	1	45	54	16	132	149
7	5	301	363	105	883	1,000
2,068	1,493	84,744	102,156	29,769	249,027	50,654
(52)	35	3,363	(6,727)	8,826	6,701	4,023
3,068	2,471	138,773	148,303	60,171	403,657	196,606
1,242	1,193	51,479	47,619	14,987	135,697	127,285
274	241	11,014	9,948	1,706	28,547	27,807
—	1	129	85	—	264	295
—	—	8	175	—	183	533
11	9	432	496	147	1,260	1,233
1,527	1,444	63,062	58,323	16,840	165,951	157,153
1,541	1,027	75,711	89,980	43,331	237,706	39,453
24,630	17,826	1,003,324	1,208,282	344,199	2,938,839	2,899,386
26,171	18,853	1,079,035	1,298,262	387,530	3,176,545	2,938,839

# 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 (specific 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, 2016, 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 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, 2016, 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, 2016, and our report thereon, dated April 26, 2017, 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 used by anyone other than these specified parties.



April 26, 2017

**Noncontributory Retirement System  
Local Government Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
4 Corners Community Behavior Health	\$ 390,714	0.2288724%	\$ 1,469,641	3,044,124	155,821	31,923	326,616
Alpine City	144,893	0.0848756	545,005	1,128,891	57,785	11,838	121,123
American Fork City	766,383	0.4489326	2,882,697	5,971,042	305,642	62,616	640,656
Annabella Town	13,851	0.0081138	52,101	107,918	5,524	1,132	11,579
Ash Creek Special Service District	135,709	0.0794955	510,458	1,057,332	54,122	11,088	113,445
Ashley Valley Improvement District	151,177	0.0885563	568,640	1,177,846	60,291	12,352	126,376
Ashley Valley Sewer Management Board	69,207	0.0405400	260,316	539,204	27,600	5,654	57,853
Ballard Town	31,924	0.0187005	120,080	248,727	12,732	2,608	26,687
Bear Lake Special Service District	19,733	0.0115592	74,224	153,743	7,870	1,612	16,496
Bear River Association of Governments	234,191	0.1371845	880,892	1,824,627	93,398	19,134	195,771
Bear River Health Department	752,953	0.4410652	2,832,178	5,866,401	300,285	61,519	629,429
Bear River Mental Health	591,043	0.3462218	2,223,168	4,604,934	235,714	48,290	494,081
Bear River Water District	31,373	0.0183776	118,007	244,432	12,512	2,563	26,226
Beaver City	162,254	0.0950453	610,307	1,264,153	64,709	13,257	135,636
Beaver County	315,299	0.1846963	1,185,976	2,456,559	125,745	25,761	263,574
Beaver Housing Authority	16,598	0.0097226	62,431	129,316	6,619	1,356	13,875
Beaver Valley Hospital	681,932	0.3994626	2,565,039	5,313,065	271,962	55,716	570,059
Benchland Water Company	64,184	0.0375979	241,425	500,072	25,597	5,244	53,655
Bicknell Town	6,109	0.0035785	22,978	47,596	2,436	499	5,107
Blanding City	139,788	0.0818853	525,804	1,089,118	55,749	11,421	116,856
Bluffdale City	236,107	0.1383070	888,100	1,839,557	94,162	19,291	197,373
Bona Vista Water Improvement	90,508	0.0530180	340,440	705,168	36,096	7,395	75,660
Bountiful Irrigation District	85,394	0.0500221	321,203	665,320	34,056	6,977	71,385
Box Elder Co Mosquito District	40,096	0.0234875	150,818	312,396	15,991	3,276	33,518
Box Elder County	726,588	0.4256214	2,733,010	5,660,991	289,771	59,365	607,390
Brigham City	698,152	0.4089641	2,626,050	5,439,440	278,430	57,041	583,618
Cache County	982,940	0.5757872	3,697,259	7,658,275	392,007	80,310	821,686
Cache Metro Planning Organization	14,800	0.0086695	55,669	115,309	5,902	1,209	12,372
Carbon County	783,695	0.4590733	2,947,812	6,105,919	312,546	64,031	655,128
Carbon County Rec/Trans Special Service District	7,719	0.0045218	29,035	60,142	3,079	631	6,453
Castle Dale City	17,685	0.0103598	66,523	137,791	7,053	1,445	14,784
Castle Valley Special Service District	86,827	0.0508616	326,594	676,486	34,628	7,094	72,583
Cedar City	695,493	0.4074062	2,616,046	5,418,719	277,370	56,824	581,395
Cedar City Housing Authority	27,732	0.0162452	104,314	216,070	11,060	2,266	23,183
Centerfield City	17,156	0.0100498	64,532	133,668	6,842	1,402	14,342
Centerville City	348,103	0.2039119	1,309,364	2,712,137	138,827	28,441	290,996
Central Davis Sewer District	170,336	0.0997795	640,707	1,327,120	67,932	13,917	142,392
Central Iron Co Water Conservancy	23,851	0.0139713	89,713	185,826	9,512	1,949	19,938
Central UT Public Health	267,261	0.1565562	1,005,282	2,082,281	106,586	21,836	223,416
Central Utah Counseling Center	467,145	0.2736446	1,757,133	3,639,618	186,302	38,167	390,509
Central Utah Water District	1,186,283	0.6949017	4,462,119	9,242,561	473,102	96,923	991,670
Central Weber Sewer District	268,559	0.1573167	1,010,166	2,092,396	107,104	21,942	224,501
City of Aurora	12,636	0.0074021	47,531	98,452	5,039	1,032	10,563
City of Bountiful	1,470,667	0.8614885	5,531,811	11,458,254	586,518	120,159	1,229,400
City of Cedar Hills	188,262	0.1102801	708,133	1,466,784	75,081	15,382	157,377
City of Draper	1,043,762	0.6114156	3,926,036	8,132,152	416,263	85,279	872,530
City of Duchesne	47,157	0.0276236	177,377	367,409	18,807	3,853	39,421
City of Enterprise	59,760	0.0350065	224,785	465,605	23,833	4,883	49,957
City of Green River	49,146	0.0287888	184,859	382,906	19,600	4,015	41,083
City of Harrisville	101,003	0.0591657	379,916	786,935	40,281	8,252	84,433
City of Helper	45,519	0.0266642	171,217	354,648	18,153	3,719	38,052
City of Holladay	195,038	0.1142497	733,623	1,519,582	77,783	15,935	163,042
City of Kanab	86,506	0.0506736	325,387	673,986	34,500	7,068	72,315
City of Milford	41,616	0.0243778	156,535	324,238	16,597	3,400	34,789
City of Moab	350,298	0.2051978	1,317,621	2,729,240	139,703	28,621	292,831
City of Monticello	75,166	0.0440309	282,732	585,634	29,977	6,141	62,835
City of Naples	46,629	0.0273141	175,390	363,292	18,596	3,810	38,979
City of North Salt Lake	432,041	0.2530812	1,625,091	3,366,114	172,302	35,299	361,163
City of Orem	1,992,077	1.1669202	7,493,056	15,520,658	794,461	162,760	1,665,271
City of Riverton	914,439	0.5356606	3,439,597	7,124,570	364,688	74,713	764,423



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	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	
198,512	13,693	570,744	39,997	96,821	47,834	47,028	231,680	503,704	(13,893)	—	489,811
73,617	36,020	242,598	14,833	35,905	17,739	—	68,477	186,795	12,784	—	199,579
389,381	40,259	1,132,912	78,454	189,914	93,825	64,859	427,052	988,015	(4,012)	—	984,003
7,037	124	19,872	1,418	3,432	1,696	557	7,103	17,857	(119)	—	17,738
68,950	2,598	196,081	13,892	33,629	16,614	—	64,135	174,954	881	—	175,835
76,809	9,861	225,398	15,476	37,462	18,508	—	71,446	194,895	3,428	—	198,323
35,162	537	99,206	7,085	17,150	8,473	2,555	35,263	89,221	(559)	—	88,662
16,220	2,111	47,626	3,268	7,911	3,908	1,502	16,589	41,156	358	—	41,514
10,026	1,591	29,725	2,020	4,890	2,416	1,497	10,823	25,440	161	—	25,601
118,987	8,720	342,612	23,974	58,034	28,671	—	110,679	301,917	2,980	—	304,897
382,558	44,604	1,118,110	77,079	186,586	92,181	—	355,846	970,700	16,397	—	987,097
300,295	—	842,666	60,505	146,464	72,359	122,493	401,821	761,968	(42,996)	—	718,972
15,940	4,661	49,390	3,212	7,774	3,841	—	14,827	40,446	1,616	—	42,062
82,437	—	231,330	16,610	40,207	19,864	88,969	165,650	209,176	(27,628)	—	181,548
160,196	26,408	475,939	32,277	78,133	38,601	73,497	222,508	406,481	(11,896)	—	394,585
8,433	1,930	25,594	1,699	4,113	2,032	—	7,844	21,398	631	—	22,029
346,474	6,068	978,317	69,809	168,987	83,486	32,554	354,836	879,141	(7,422)	—	871,719
32,611	18,243	109,753	6,571	15,905	7,858	—	30,334	82,746	5,694	—	88,440
3,104	1,520	10,230	625	1,514	748	—	2,887	7,876	498	—	8,374
71,023	—	199,300	14,310	34,640	17,114	31,207	97,271	180,214	(11,826)	—	168,388
119,960	419,156	755,780	24,170	58,509	28,906	—	111,585	304,387	139,546	—	443,933
45,985	10,993	140,033	9,265	22,428	11,081	10,077	52,851	116,682	1,189	—	117,871
43,387	1,305	123,054	8,742	21,161	10,454	9,105	49,462	110,089	(3,093)	—	106,996
20,372	2,150	59,316	4,105	9,936	4,909	—	18,950	51,691	663	—	52,354
369,162	28,048	1,063,965	74,381	180,053	88,954	43,636	387,024	936,711	(2,331)	—	934,380
354,715	548	995,922	71,470	173,006	85,472	45,950	375,898	900,052	(17,414)	—	882,638
499,409	70,290	1,471,695	100,623	243,578	120,338	—	464,539	1,267,197	23,202	—	1,290,399
7,519	1,603	22,703	1,515	3,667	1,812	—	6,994	19,080	522	—	19,602
398,177	—	1,117,336	80,226	194,204	95,945	140,585	510,960	1,010,332	(45,782)	—	964,550
3,922	—	11,006	790	1,913	945	1,154	4,802	9,952	(371)	—	9,581
8,986	174	25,389	1,810	4,383	2,165	755	9,113	22,800	(160)	—	22,640
44,115	693	124,485	8,888	21,516	10,630	2,251	43,285	111,937	(409)	—	111,528
353,363	—	991,582	71,197	172,347	85,147	96,133	424,824	896,623	(33,909)	—	862,714
14,090	2,004	41,543	2,839	6,872	3,395	1,920	15,026	35,753	192	—	35,945
8,717	—	24,461	1,756	4,251	2,100	3,192	11,299	22,118	(1,004)	—	21,114
176,863	18,802	515,102	35,635	86,262	42,617	—	164,514	448,771	5,871	—	454,642
86,544	—	242,853	17,437	42,210	20,854	33,148	113,649	219,596	(10,815)	—	208,781
12,118	5,994	39,999	2,442	5,910	2,920	—	11,272	30,748	1,935	—	32,683
135,789	27,144	408,185	27,359	66,229	32,720	—	126,308	344,550	9,351	—	353,901
237,345	35,880	701,901	47,821	115,761	57,191	—	220,773	602,239	12,701	—	614,940
602,722	—	1,691,315	121,439	293,968	145,232	120,388	681,027	1,529,345	(41,649)	—	1,487,696
136,448	34,626	417,517	27,492	66,550	32,879	36,114	163,035	346,224	(3,452)	—	342,772
6,420	361	18,376	1,294	3,131	1,547	333	6,305	16,291	38	—	16,329
747,211	64,285	2,161,055	150,552	364,440	180,048	93,541	788,581	1,895,971	(16,543)	—	1,879,428
95,651	8,780	277,190	19,272	46,652	23,048	4,421	93,393	242,705	2,036	—	244,741
530,311	121,109	1,609,229	106,849	258,650	127,784	90,486	583,769	1,345,609	1,633	—	1,347,242
23,959	7,803	75,036	4,827	11,686	5,773	7,894	30,180	60,794	622	—	61,416
30,363	—	85,203	6,118	14,809	7,316	5,756	33,999	77,043	(1,869)	—	75,174
24,970	4,093	74,161	5,031	12,179	6,017	9,347	32,574	63,359	(2,351)	—	61,008
51,317	25,943	169,945	10,340	25,029	12,365	—	47,734	130,212	8,159	—	138,371
23,127	1,307	66,205	4,660	11,280	5,573	3,636	25,149	58,683	(1,000)	—	57,683
99,094	27,791	305,862	19,966	48,332	23,878	—	92,176	251,442	8,751	—	260,193
43,952	428	123,763	8,856	21,437	10,591	14,845	55,729	111,523	(4,279)	—	107,244
21,144	6,872	66,205	4,260	10,313	5,095	—	19,668	53,651	2,198	—	55,849
177,978	—	499,430	35,860	86,806	42,886	115,341	280,893	451,601	(40,445)	—	411,156
38,190	12,837	120,003	7,695	18,627	9,202	—	35,524	96,904	4,491	—	101,395
23,691	85,890	152,370	4,773	11,555	5,709	—	22,037	60,113	27,355	—	87,468
219,510	35,784	651,756	44,228	107,062	52,893	—	204,183	556,983	13,158	—	570,141
1,012,127	42,269	2,882,427	203,928	493,648	243,883	52,242	993,701	2,568,168	(7,334)	—	2,560,834
464,605	56,380	1,360,121	93,611	226,603	111,951	46,156	478,321	1,178,886	7,753	—	1,186,639

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Santa Clara	\$ 226,160	0.1324804%	\$ 850,686	1,762,060	90,195	18,478	189,058
City of Saratoga Springs	498,135	0.2917979	1,873,700	3,881,067	198,661	40,699	416,415
City of South Jordan	1,628,822	0.9541323	6,126,697	12,690,466	649,591	133,080	1,361,609
City of South Salt Lake	814,739	0.4772586	3,064,584	6,347,793	324,927	66,567	681,079
City of St George	3,697,912	2.1661654	13,909,433	28,811,150	1,474,766	302,132	3,091,260
City of Taylorsville	329,959	0.1932836	1,241,117	2,570,774	131,591	26,959	275,828
City of Uintah	12,800	0.0074980	48,146	99,727	5,105	1,046	10,700
City of Washington Terrace	151,373	0.0886715	569,380	1,179,378	60,369	12,368	126,540
City of Wendover	30,424	0.0178216	114,436	237,037	12,133	2,486	25,433
City of West Haven	98,830	0.0578928	371,743	770,005	39,415	8,075	82,617
City of West Jordan	2,068,987	1.2119729	7,782,349	16,119,883	825,134	169,044	1,729,565
City of Woodland Hills	13,685	0.0080166	51,476	106,625	5,458	1,118	11,440
Clearfield City	518,463	0.3037055	1,950,161	4,039,444	206,768	42,360	433,408
Cleveland Town	1,931	0.0011312	7,264	15,046	770	158	1,614
Clinton City	276,888	0.1621956	1,041,494	2,157,288	110,426	22,623	231,464
Coalville City	43,210	0.0253118	162,533	336,660	17,233	3,530	36,122
Cottonwood Heights City	312,372	0.1829814	1,174,965	2,433,750	124,577	25,522	261,126
Cottonwood Heights P&R Srv	157,996	0.0925509	594,290	1,230,976	63,010	12,909	132,076
Cottonwood Improvement District	365,583	0.2141514	1,375,114	2,848,327	145,798	29,869	305,608
Council On Aging Golden Age SS	52,512	0.0307605	197,520	409,131	20,942	4,290	43,897
Daggett County	126,990	0.0743880	477,662	989,400	50,645	10,375	106,157
Davis Behavioral Health Inc	1,322,459	0.7746712	4,974,337	10,303,538	527,411	108,050	1,105,506
Davis Co Housing Authority	71,190	0.0417017	267,776	554,655	28,391	5,816	59,511
Davis Co Mosquito Abatement	38,051	0.0222895	143,126	296,462	15,175	3,109	31,809
Davis County	4,387,081	2.5698675	16,501,694	34,180,602	1,749,614	358,440	3,667,369
Delta City	95,588	0.0559934	359,546	744,742	38,121	7,810	79,906
Duchesne Co Water Conservancy District	29,240	0.0171281	109,983	227,813	11,661	2,389	24,443
Duchesne County	560,574	0.3283734	2,108,559	4,367,541	223,563	45,801	468,610
E Duchesne Culinary Water Improvement District	10,982	0.0064332	41,309	85,565	4,380	897	9,181
Eagle Mountain City	427,032	0.2501472	1,606,251	3,327,091	170,305	34,890	356,976
East Carbon City	56,824	0.0332862	213,738	442,724	22,662	4,643	47,502
Elk Ridge City	17,522	0.0102643	65,909	136,521	6,988	1,432	14,648
Emery County	475,221	0.2783754	1,787,511	3,702,541	189,523	38,827	397,260
Emery County Recreation Special Service District	3,251	0.0019046	12,230	25,332	1,297	266	2,718
Emery Water Conservancy District	40,884	0.0239489	153,781	318,533	16,305	3,340	34,177
Enoch City	74,863	0.0438532	281,591	583,271	29,856	6,117	62,581
Ephraim City	171,337	0.1003659	644,472	1,334,920	68,331	13,999	143,229
Escalante City	31,707	0.0185733	119,263	247,035	12,645	2,591	26,505
Eureka City Corporation	17,004	0.0099604	63,958	132,479	6,781	1,389	14,214
Fairview City	58,082	0.0340235	218,473	452,531	23,164	4,746	48,554
Farmington City	421,431	0.2468659	1,585,181	3,283,448	168,071	34,432	352,294
Farr West City	58,661	0.0343622	220,647	457,035	23,394	4,793	49,037
Ferron City	27,804	0.0162871	104,583	216,627	11,089	2,272	23,243
Fillmore City	65,865	0.0385824	247,746	513,166	26,268	5,381	55,060
Five-County Association of Governments	261,428	0.1531392	983,341	2,036,833	104,260	21,360	218,540
Fountain Green City	19,132	0.0112070	71,963	149,059	7,630	1,563	15,993
Fox Hollow Golf Course	24,531	0.0143695	92,270	191,122	9,783	2,004	20,506
Francis City	21,281	0.0124660	80,047	165,804	8,487	1,739	17,790
Fruit Heights City	66,528	0.0389707	250,240	518,331	26,532	5,436	55,614
Garfield County	347,155	0.2033566	1,305,798	2,704,751	138,449	28,364	290,203
Genola Town	16,614	0.0097320	62,491	129,441	6,626	1,357	13,888
Grand Co Cemetery Maintenance District	13,511	0.0079146	50,821	105,268	5,388	1,104	11,295
Grand County	672,356	0.3938530	2,529,018	5,238,454	268,143	54,934	562,054
Grand Water/Sewer Service	32,739	0.0191777	123,144	255,074	13,057	2,675	27,368
Granger-Hunter Improvement District	687,552	0.4027547	2,586,178	5,356,851	274,203	56,175	574,757
Grantsville City	182,680	0.1070105	687,138	1,423,296	72,855	14,926	152,711
Gunnison City	46,056	0.0269789	173,238	358,834	18,368	3,763	38,501
Gunnison Valley Hospital	925,455	0.5421137	3,481,033	7,210,400	369,081	75,613	773,632
Heber City	340,382	0.1993893	1,280,323	2,651,984	135,748	27,810	284,542
Heber Light & Power	496,240	0.2906881	1,866,573	3,866,306	197,906	40,545	414,831

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 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	
114,907	—	322,443	23,152	56,044	27,688	36,264	143,148	291,564	(11,764)	—	279,800
253,091	85,187	795,392	50,994	123,441	60,985	—	235,420	642,191	25,935	—	668,126
827,566	2,892,465	5,214,720	166,742	403,631	199,411	—	769,784	2,099,862	962,628	—	3,062,490
413,950	39,756	1,201,352	83,405	201,897	99,746	62,280	447,328	1,050,355	(11,926)	—	1,038,429
1,878,822	268,079	5,540,293	378,554	916,363	452,722	—	1,747,639	4,767,315	86,499	—	4,853,814
167,644	—	470,431	33,778	81,766	40,396	25,911	181,851	425,380	(9,790)	—	415,590
6,503	766	19,015	1,310	3,172	1,567	3,227	9,276	16,502	(673)	—	15,829
76,909	3,855	219,672	15,496	37,511	18,532	2,939	74,478	195,149	595	—	195,744
15,458	348	43,725	3,114	7,539	3,725	6,342	20,720	39,222	(1,765)	—	37,457
50,213	—	140,905	10,117	24,491	12,099	9,630	56,337	127,411	(3,352)	—	124,059
1,051,204	138,047	3,087,860	211,801	512,707	253,299	62,596	1,040,403	2,667,320	34,075	—	2,701,395
6,953	802	20,313	1,401	3,391	1,675	218	6,685	17,643	241	—	17,884
263,419	—	739,187	53,075	128,478	63,473	88,071	333,097	668,398	(31,926)	—	636,472
981	—	2,753	198	479	236	4,716	5,629	2,490	(1,611)	—	879
140,680	—	394,767	28,345	68,614	33,898	20,010	150,867	356,961	(6,338)	—	350,623
21,954	198	61,804	4,423	10,708	5,290	726	21,147	55,706	(142)	—	55,564
158,709	122,357	567,714	31,977	77,407	38,243	—	147,627	402,707	39,403	—	442,110
80,274	43,699	268,958	16,174	39,152	19,343	—	74,669	203,687	15,285	—	218,972
185,744	18,403	539,624	37,425	90,593	44,757	40,014	212,789	471,306	(4,936)	—	466,370
26,680	—	74,867	5,376	13,013	6,429	16,296	41,114	67,698	(4,992)	—	62,706
64,520	—	181,052	13,000	31,469	15,547	38,603	98,619	163,714	(13,461)	—	150,253
671,910	52,162	1,937,628	135,380	327,713	161,904	178,292	803,289	1,704,903	(33,410)	—	1,671,493
36,170	126,142	227,639	7,288	17,641	8,716	—	33,645	91,777	42,091	—	133,868
19,333	1,571	55,822	3,895	9,429	4,658	8,171	26,153	49,055	(2,656)	—	46,399
2,228,972	53,879	6,308,660	449,104	1,087,143	537,094	464,548	2,537,889	5,655,786	(118,433)	—	5,537,353
48,566	—	136,282	9,785	23,687	11,702	31,533	76,707	123,231	(10,767)	—	112,464
14,856	10,520	52,208	2,993	7,246	3,580	4,109	17,928	37,696	1,577	—	39,273
284,814	1,044,670	1,843,895	57,386	138,913	68,629	—	264,928	722,687	328,071	—	1,050,758
5,580	540	16,198	1,124	2,721	1,345	866	6,056	14,158	(53)	—	14,105
216,965	—	608,831	43,715	105,821	52,280	278,491	480,307	550,526	(95,821)	—	454,705
28,871	7,658	88,674	5,817	14,081	6,957	7,506	34,361	73,257	683	—	73,940
8,903	—	24,983	1,794	4,342	2,145	33,762	42,043	22,590	(11,693)	—	10,897
241,449	—	677,536	48,648	117,762	58,180	149,260	373,850	612,651	(49,760)	—	562,891
1,652	792	5,428	333	806	398	2,705	4,242	4,192	(507)	—	3,685
20,772	1,679	59,968	4,185	10,131	5,005	2,018	21,339	52,707	38	—	52,745
38,036	—	106,734	7,664	18,551	9,165	2,078	37,458	96,512	(634)	—	95,878
87,052	30,279	274,559	17,540	42,458	20,976	3,890	84,864	220,886	7,575	—	228,461
16,110	—	45,206	3,246	7,857	3,882	6,889	21,874	40,876	(2,392)	—	38,484
8,639	—	24,242	1,741	4,214	2,082	494	8,531	21,921	(185)	—	21,736
29,510	8,607	91,417	5,946	14,393	7,111	10,064	37,514	74,879	280	—	75,159
214,119	40,689	641,534	43,142	104,433	51,594	—	199,169	543,305	12,426	—	555,731
29,804	6,433	90,067	6,005	14,536	7,182	2,652	30,375	75,625	1,667	—	77,292
14,127	—	39,642	2,846	6,890	3,404	4,636	17,776	35,845	(1,744)	—	34,101
33,464	13,893	107,798	6,743	16,322	8,064	1,786	32,915	84,912	3,475	—	88,387
132,825	—	372,725	26,762	64,783	32,006	47,891	171,442	337,030	(17,363)	—	319,667
9,720	316	27,592	1,959	4,741	2,342	1,848	10,890	24,664	(432)	—	24,232
12,463	250	35,223	2,511	6,079	3,003	289	11,882	31,625	9	—	31,634
10,812	2,560	32,901	2,179	5,274	2,605	—	10,058	27,435	823	—	28,258
33,801	5,673	100,524	6,810	16,486	8,145	—	31,441	85,767	2,079	—	87,846
176,381	—	494,948	35,538	86,027	42,501	24,428	188,494	447,549	(7,664)	—	439,885
8,441	4,070	27,756	1,701	4,117	2,034	—	7,852	21,418	1,406	—	22,824
6,865	8,157	27,421	1,383	3,348	1,654	—	6,385	17,419	2,674	—	20,093
341,608	—	958,596	68,829	166,614	82,314	67,491	385,248	866,795	(24,793)	—	842,002
16,634	—	46,677	3,351	8,113	4,008	—	31,452	42,206	(5,203)	—	37,003
349,329	—	980,261	70,384	170,379	84,174	118,061	442,998	886,386	(36,354)	—	850,032
92,815	—	260,452	18,701	45,269	22,365	18,387	104,722	235,510	(6,918)	—	228,592
23,400	—	65,664	4,715	11,413	5,639	5,154	26,921	59,375	(1,612)	—	57,763
470,202	212,514	1,531,961	94,738	229,333	113,300	—	437,371	1,193,088	70,664	—	1,263,752
172,940	21,422	506,714	34,845	84,349	41,672	—	160,866	438,818	7,010	—	445,828
252,128	—	707,504	50,800	122,971	60,753	86,079	320,603	639,749	(31,853)	—	607,896

**Noncontributory Retirement System  
Local Government Division**  
**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Heber Valley Special Service District	\$ 37,966	0.0222398%	\$ 142,807	295,801	15,141	3,102	31,738
Herriman City	790,769	0.4632172	2,974,421	6,161,035	315,367	64,609	661,041
Highland City	229,519	0.1344475	863,317	1,788,223	91,534	18,752	191,865
Hinckley Town	11,077	0.0064889	41,667	86,306	4,418	905	9,260
Hooper City	55,063	0.0322549	207,116	429,007	21,960	4,499	46,030
Hooper Water Improv District	77,428	0.0453560	291,241	603,259	30,879	6,326	64,726
Housing Authority of Carbon Co	52,210	0.0305836	196,384	406,778	20,822	4,266	43,645
Housing Authority of SL County	509,681	0.2985615	1,917,130	3,971,026	203,266	41,643	426,067
Housing Authority of SLC	512,990	0.3004997	1,929,576	3,996,806	204,586	41,913	428,833
Housing Authority Ogden City	133,796	0.0783748	503,262	1,042,426	53,359	10,932	111,846
Huntington City	34,274	0.0200771	128,920	267,036	13,669	2,800	28,651
Hurricane City	594,996	0.3485371	2,238,035	4,635,728	237,291	48,613	497,385
Hurricane Valley Fire Special Service District	12,966	0.0075955	48,772	101,024	5,171	1,059	10,839
Hyde Park City	76,058	0.0445533	286,087	592,583	30,333	6,214	63,580
Hyrum City	232,068	0.1359410	872,908	1,808,087	92,551	18,961	193,997
Impact Mitigation Special Service District	30,437	0.0178295	114,487	237,142	12,139	2,487	25,444
Iron County	795,718	0.4661161	2,993,036	6,199,592	317,341	65,013	665,178
Ivins City	258,132	0.1512086	970,944	2,011,155	102,946	21,090	215,785
Jordan River Commission	16,280	0.0095364	61,235	126,839	6,493	1,330	13,609
Jordan Valley Water Conservancy	1,476,839	0.8651037	5,555,025	11,506,338	588,979	120,663	1,234,560
Jordanelle Special Service District	252,143	0.1477003	948,417	1,964,492	100,557	20,601	210,778
Juab County	276,887	0.1621948	1,041,489	2,157,277	110,425	22,623	231,463
Kamas City	42,991	0.0251833	161,708	334,951	17,145	3,513	35,938
Kane County	423,431	0.2480379	1,592,707	3,299,036	168,869	34,596	353,966
Kane County Water Conservancy District	77,117	0.0451734	290,069	600,830	30,755	6,301	64,465
Kaysville City	645,673	0.3782228	2,428,653	5,030,564	257,501	52,754	539,749
Kearns Improvement District	315,827	0.1850052	1,187,960	2,460,667	125,955	25,804	264,015
Laverkin City	976	0.0005717	3,671	7,604	389	80	816
Layton City	1,250,375	0.7324458	4,703,198	9,741,918	498,663	102,160	1,045,248
Lehi City	1,469,688	0.8609147	5,528,126	11,450,622	586,127	120,079	1,228,582
Lewiston City	37,421	0.0219207	140,758	291,557	14,924	3,057	31,282
Lindon City	318,081	0.1863255	1,196,438	2,478,228	126,854	25,988	265,899
Logan City	2,298,187	1.3462335	8,644,467	17,905,620	916,541	187,770	1,921,163
Lone Peak PS District	28,810	0.0168761	108,365	224,461	11,490	2,354	24,083
Maeser Water Improvement District	57,500	0.0336824	216,282	447,994	22,932	4,698	48,067
Magna Mosquito Abatement	12,589	0.0073744	47,353	98,083	5,021	1,029	10,524
Manti City	93,009	0.0544828	349,846	724,650	37,093	7,599	77,751
Mapleton City	249,050	0.1458886	936,783	1,940,396	99,324	20,348	208,193
Marriott-Slaterville City	29,897	0.0175129	112,454	232,931	11,923	2,443	24,992
Mayfield Town	6,358	0.0037242	23,914	49,534	2,536	519	5,315
Mendon City	9,400	0.0055066	35,359	73,241	3,749	768	7,858
Metro Water District SLC/Sandy	709,536	0.4156324	2,668,869	5,528,132	282,970	57,972	593,135
Midvale City	610,065	0.3573643	2,294,716	4,753,135	243,300	49,844	509,982
Midvalley Improvement District	98,517	0.0577092	370,564	767,563	39,290	8,049	82,355
Midway City	119,884	0.0702255	450,934	934,036	47,811	9,795	100,216
Military Installation Devel	44,936	0.0263226	169,023	350,105	17,921	3,671	37,564
Millard Co Care & Rehab Inc	199,779	0.1170265	751,453	1,556,515	79,674	16,323	167,004
Millard County	692,529	0.4056702	2,604,899	5,395,629	276,188	56,582	578,918
Millville City	31,538	0.0184741	118,626	245,715	12,578	2,577	26,364
Minersville Town	24,323	0.0142478	91,488	189,503	9,700	1,987	20,333
Monroe City	80,931	0.0474078	304,416	630,549	32,276	6,612	67,654
Morgan City Corporation	143,345	0.0839687	539,182	1,116,828	57,167	11,712	119,829
Morgan County	258,542	0.1514487	972,486	2,014,348	103,109	21,124	216,127
Moroni City	15,171	0.0088868	57,064	118,199	6,050	1,240	12,682
Mount Pleasant City	106,407	0.0623310	400,241	829,035	42,436	8,694	88,950
Mountain Regional Water Special Service District	296,648	0.1737704	1,115,819	2,311,239	118,306	24,237	247,982
Mountainland Association of Governments	374,098	0.2191396	1,407,144	2,914,673	149,194	30,565	312,727
Mt Olympus Improvement District	282,214	0.1653156	1,061,528	2,198,785	112,550	23,058	235,916
Murray City	2,436,441	1.4272199	9,164,498	18,982,782	971,678	199,066	2,036,736
Myton City	17,195	0.0100727	64,679	133,972	6,858	1,405	14,374

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	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
19,290	—	54,130	3,887	9,408	4,648	1,287	19,230	48,946	(408)	—	48,538
401,771	186,519	1,313,940	80,951	195,957	96,811	—	373,719	1,019,452	63,293	—	1,082,745
116,613	5,063	332,293	23,496	56,876	28,099	12,368	120,839	295,893	(3,216)	—	292,677
5,628	1,876	17,669	1,134	2,745	1,356	4,734	9,969	14,281	(699)	—	13,582
27,976	—	78,505	5,637	13,645	6,741	10,994	37,017	70,987	(4,161)	—	66,826
39,339	7,338	117,729	7,926	19,187	9,479	221	36,813	99,820	2,112	—	101,932
26,527	—	74,438	5,345	12,938	6,392	11,449	36,124	67,309	(3,824)	—	63,485
258,957	4,442	731,109	52,176	126,302	62,398	55,424	296,300	657,077	(14,890)	—	642,187
260,638	—	731,384	52,515	127,122	62,803	184,575	43,242	661,342	(62,052)	—	599,290
67,978	6,720	197,476	13,697	33,155	16,380	56	63,288	172,488	1,990	—	174,478
17,414	—	48,865	3,509	8,493	4,196	6,251	22,449	44,186	(2,170)	—	42,016
302,303	64,747	913,048	60,909	147,443	72,843	—	281,195	767,063	20,687	—	787,750
6,588	22,088	40,574	1,327	3,213	1,587	—	6,127	16,716	7,725	—	24,441
38,643	—	108,437	7,786	18,848	9,311	7,297	43,242	98,053	(2,466)	—	95,587
117,908	—	330,866	23,757	57,508	28,411	29,861	139,537	299,180	(9,128)	—	290,052
15,464	—	43,395	3,116	7,542	3,726	3,198	17,582	39,239	(1,034)	—	38,205
404,285	24,305	1,158,781	81,457	197,183	97,417	105,723	481,780	1,025,832	(33,170)	—	992,662
131,151	31,952	399,978	26,425	63,966	31,602	44,074	166,067	332,781	(968)	—	331,813
8,271	1,041	24,251	1,667	4,034	1,993	—	7,694	20,988	387	—	21,375
750,347	—	2,105,570	151,183	365,969	180,804	55,496	753,452	1,903,927	(18,537)	—	1,885,390
128,108	22,786	382,273	25,812	62,482	30,869	5,230	124,393	325,060	4,819	—	329,879
140,680	8,445	403,211	28,345	68,614	33,898	24,945	155,802	356,960	(7,015)	—	349,945
21,843	2,201	63,495	4,401	10,653	5,263	—	20,317	55,424	836	—	56,260
215,135	14,261	617,958	43,346	104,929	51,839	63,345	263,459	545,884	(13,504)	—	532,380
39,181	9,180	119,127	7,894	19,110	9,441	—	36,445	99,418	2,910	—	102,328
328,051	72,480	993,034	66,097	160,001	79,047	—	305,145	832,396	26,110	—	858,506
160,464	8,781	459,064	32,331	78,264	38,666	12,485	161,746	407,161	(2,148)	—	405,013
496	1,892	3,284	100	242	119	—	461	1,258	566	—	1,824
635,286	—	1,782,694	128,000	309,850	153,079	89,268	680,197	1,611,973	(30,819)	—	1,581,154
746,714	91,292	2,186,667	150,451	364,197	179,928	—	694,576	1,894,708	28,962	—	1,923,670
19,013	3,367	56,719	3,831	9,273	4,581	8,258	25,943	48,243	(1,184)	—	47,059
161,609	14,224	467,720	32,562	78,822	38,941	3,480	153,805	410,067	4,400	—	414,467
1,167,654	66,708	3,343,295	235,264	569,504	281,359	25,378	1,111,505	2,962,802	10,258	—	2,973,060
14,637	1,171	42,245	2,949	7,139	3,527	6,708	20,323	37,141	(2,216)	—	34,925
29,214	—	81,979	5,886	14,249	7,040	11,750	38,925	74,129	(4,127)	—	70,002
6,396	209	18,158	1,289	3,120	1,541	4,889	10,839	16,230	(1,808)	—	14,422
47,256	8,414	141,020	9,521	23,048	11,387	4,737	48,693	119,906	1,801	—	121,707
126,536	4,291	359,368	25,495	61,716	30,490	4,297	121,998	321,073	355	—	321,428
15,190	2,892	45,517	3,061	7,409	3,660	187	14,317	38,543	794	—	39,337
3,230	—	9,064	651	1,575	778	528	3,532	8,196	(165)	—	8,031
4,776	1,656	15,058	962	2,329	1,151	—	4,442	12,119	503	—	12,622
360,498	11,749	1,023,354	72,635	175,827	86,866	33,991	369,319	914,727	(5,679)	—	909,048
309,960	4,081	873,867	62,452	151,178	74,688	47,870	336,188	786,490	(12,767)	—	773,723
50,054	19,123	159,581	10,085	24,413	12,061	—	46,559	127,007	6,341	—	133,348
60,910	20,928	191,849	12,272	29,708	14,677	—	56,657	154,553	7,936	—	162,489
22,831	4,848	68,914	4,600	11,135	5,501	—	21,236	57,931	1,666	—	59,597
101,503	13,138	297,968	20,451	49,506	24,458	18,229	112,644	257,553	(430)	—	257,123
351,858	—	987,358	70,894	171,613	84,784	124,198	451,489	892,802	(39,105)	—	853,697
16,023	4,960	49,924	3,228	7,815	3,861	—	14,904	40,658	1,548	—	42,206
12,358	2,755	37,433	2,490	6,027	2,978	2,054	13,549	31,357	439	—	31,796
41,119	9,588	124,973	8,285	20,055	9,908	—	38,248	104,335	3,131	—	107,466
72,830	4,742	209,113	14,674	35,522	17,549	—	67,745	184,799	1,629	—	186,428
131,359	—	368,610	26,467	64,068	31,652	22,727	144,914	333,310	(7,437)	—	325,873
7,708	1,288	22,918	1,553	3,759	1,857	7,053	14,222	19,558	(1,618)	—	17,940
54,063	32,985	184,692	10,893	26,368	13,027	—	50,288	137,179	10,303	—	147,482
150,720	25,699	448,638	30,368	73,511	36,317	—	140,196	382,435	9,264	—	391,699
190,071	16,930	550,293	38,296	92,704	45,799	—	176,799	482,284	5,229	—	487,513
143,386	9,196	411,556	28,890	69,934	34,550	58,073	191,447	363,828	(13,864)	—	349,964
1,237,898	37,760	3,511,460	249,417	603,764	298,284	1,990	1,153,455	3,141,037	10,541	—	3,151,578
8,737	8,400	32,916	1,760	4,261	2,105	3,758	11,884	22,168	1,077	—	23,245

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Ne Counseling Center	\$ 360,236	0.2110195%	\$ 1,355,003	2,806,671	143,666	29,433	301,139
Nebo Credit Union	127,482	0.0746766	479,515	993,238	50,841	10,416	106,568
Nephi City	265,287	0.1553998	997,857	2,066,900	105,799	21,675	221,766
Nibley City Corporation	99,644	0.0583695	374,804	776,345	39,739	8,141	83,297
North Davis Co Sewer District	465,095	0.2724434	1,749,420	3,623,642	185,485	38,000	388,795
North Davis Fire District	10,125	0.0059309	38,084	78,884	4,038	827	8,464
North Emery Water Users Special Service District	8,932	0.0052324	33,598	69,594	3,562	730	7,467
North Fork Special Service District	17,039	0.0099813	64,092	132,757	6,795	1,392	14,244
North Logan City	174,444	0.1021861	656,160	1,359,129	69,570	14,253	145,826
North Ogden City	273,560	0.1602462	1,028,977	2,131,360	109,099	22,351	228,682
North Park Police Agency	8,829	0.0051718	33,209	68,788	3,521	721	7,380
North Pointe Solid Waste	171,718	0.1005891	645,905	1,337,888	68,483	14,030	143,547
North View Fire District	8,196	0.0048011	30,829	63,857	3,269	670	6,851
Ogden City Corp	2,379,940	1.3941231	8,951,976	18,542,577	949,145	194,449	1,989,505
Oquirrh Recreation and Parks District	149,055	0.0873137	560,661	1,161,319	59,445	12,178	124,602
Orangeville City	18,751	0.0109839	70,530	146,092	7,478	1,532	15,675
Orderville Town	13,738	0.0080477	51,676	107,039	5,479	1,122	11,485
Panguitch City Corporation	36,361	0.0212994	136,768	283,293	14,501	2,971	30,396
Park City	1,882,746	1.1028763	7,081,816	14,668,840	750,859	153,827	1,573,877
Park City Fire Service	72,600	0.0425276	273,079	565,640	28,954	5,932	60,690
Parowan City	179,638	0.1052285	675,696	1,399,595	71,642	14,677	150,168
Payson City	740,732	0.4339067	2,786,212	5,771,189	295,412	60,520	619,213
Perry City	69,292	0.0405899	260,637	539,867	27,634	5,661	57,924
Piute County	83,416	0.0488634	313,763	649,909	33,267	6,815	69,731
Plain City	46,404	0.0271826	174,546	361,543	18,506	3,791	38,791
Pleasant Grove City	559,021	0.3274636	2,102,717	4,355,440	222,943	45,674	467,312
Pleasant View City	132,505	0.0776186	498,460	1,032,369	52,844	10,826	110,767
Price City	467,554	0.2738840	1,758,670	3,642,803	186,465	38,201	390,850
Price River Water Improvement	261,215	0.1530148	982,542	2,035,178	104,175	21,342	218,362
Providence City	85,327	0.0499826	320,949	664,795	34,029	6,971	71,328
Provo City Corp	3,725,418	2.1822782	14,012,897	29,025,458	1,485,736	304,380	3,114,254
Provo Housing Authority	117,958	0.0690974	443,690	919,032	47,043	9,638	98,607
Provo River Water Users	156,728	0.0918083	589,522	1,221,099	62,505	12,805	131,016
Recreation & Habilitation Services	9,665	0.0056618	36,356	75,305	3,855	790	8,080
Redmond Town	16,251	0.0095196	61,127	126,616	6,481	1,328	13,585
Rich County	66,229	0.0387956	249,115	516,002	26,413	5,411	55,364
Richfield City	194,788	0.1141028	732,680	1,517,628	77,683	15,915	162,832
Richmond City	46,626	0.0273125	175,380	363,271	18,595	3,809	38,977
Riverdale City	319,766	0.1873130	1,202,779	2,491,362	127,526	26,126	267,308
Roosevelt City	247,427	0.1449380	930,679	1,927,752	98,677	20,216	206,836
Roosevelt City Housing	7,026	0.0041158	26,428	54,742	2,802	574	5,874
Roy City	573,286	0.3358198	2,156,374	4,466,582	228,632	46,839	479,237
Roy Water Conservancy District	74,610	0.0437049	280,639	581,298	29,755	6,096	62,370
S Utah Valley Electric Service District	140,413	0.0822511	528,153	1,093,983	55,998	11,472	117,378
S Utah Valley Solid Waste	205,718	0.1205054	773,792	1,602,786	82,042	16,808	171,969
Salem City	273,548	0.1602394	1,028,933	2,131,269	109,094	22,350	228,672
Salina City	63,496	0.0371948	238,836	494,711	25,323	5,188	53,079
Salt Lake City Corp	17,873,541	10.4699755	67,230,056	139,256,232	7,128,156	1,460,331	14,941,339
Salt Lake City Public Library	827,723	0.4848643	3,113,422	6,448,953	330,105	67,628	691,933
Salt Lake Co Serv Area 3	31,217	0.0182865	117,422	243,220	12,450	2,551	26,096
Salt Lake County	22,936,236	13.4356046	86,273,035	178,700,669	9,147,210	1,873,966	19,173,473
San Juan County	724,223	0.4242361	2,724,115	5,642,565	288,828	59,172	605,413
San Juan Mental Health	143,094	0.0838216	538,237	1,114,872	57,067	11,691	119,619
Sandy City	2,524,084	1.4785597	9,494,163	19,665,629	1,006,631	206,226	2,110,001
Sandy Suburban Improvement District	198,776	0.1164389	747,680	1,548,699	79,274	16,241	166,166
Sanpete County	350,542	0.2053409	1,318,540	2,731,143	139,800	28,641	293,035
Santaquin City	208,110	0.1219067	782,790	1,621,424	82,996	17,003	173,969
Seven County Infrastructure	32,322	0.0189339	121,579	251,831	12,891	2,641	27,020
Sevier County	426,623	0.2499074	1,604,711	3,323,901	170,142	34,857	356,634
Six-County Association of Governments	164,352	0.0962742	618,198	1,280,498	65,545	13,428	137,390

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	
183,028	—	513,600	36,877	89,269	44,102	64,389	234,637	464,413	(21,269)	—	443,144
64,771	14,675	196,430	13,050	31,591	15,607	17,147	77,395	164,349	(2,167)	—	162,182
134,786	—	378,227	27,157	65,740	32,478	41,266	166,641	342,005	(15,039)	—	326,966
50,627	24,667	166,732	10,201	24,692	12,199	—	47,092	128,460	8,698	—	137,158
236,304	10,678	673,777	47,612	115,253	56,940	43,930	263,735	599,596	(9,064)	—	590,532
5,144	723	15,158	1,036	2,509	1,240	937	5,722	13,053	(142)	—	12,911
4,538	32	12,767	914	2,213	1,094	44	4,265	11,516	(1)	—	11,515
8,657	—	24,293	1,744	4,222	2,086	21,917	29,969	21,967	(6,762)	—	15,205
88,631	16,434	265,144	17,858	43,228	21,357	55,734	138,177	224,892	(10,395)	—	214,497
138,989	—	390,022	28,004	67,790	33,491	22,075	151,360	352,671	(7,514)	—	345,157
4,486	17,118	29,705	904	2,188	1,081	—	4,173	11,382	5,124	—	16,506
87,246	12,226	257,049	17,579	42,553	21,023	11,086	92,241	221,377	(582)	—	220,795
4,164	151	11,836	839	2,031	1,003	139	4,012	10,566	16	—	10,582
1,209,191	205,626	3,598,771	243,633	589,763	291,367	—	1,124,763	3,068,198	66,398	—	3,134,596
75,731	193	212,704	15,259	36,937	18,248	2,536	72,980	192,161	(912)	—	191,249
9,527	1,185	27,919	1,920	4,647	2,296	—	8,863	24,173	389	—	24,562
6,980	399	19,986	1,406	3,404	1,682	—	6,492	17,711	126	—	17,837
18,474	7,286	59,127	3,722	9,010	4,452	15,597	32,781	46,876	(3,786)	—	43,090
956,579	139,014	2,823,297	192,736	466,555	230,498	210,198	1,099,987	2,427,219	(9,734)	—	2,417,485
36,886	18,949	122,457	7,432	17,991	8,888	—	34,311	93,595	5,805	—	99,400
91,270	9,918	266,033	18,389	44,515	21,992	26,903	111,799	231,588	(4,258)	—	227,330
376,349	43,303	1,099,385	75,828	183,558	90,685	42,612	392,683	954,945	3,811	—	958,756
35,206	9,972	108,763	7,093	17,171	8,483	798	33,545	89,331	3,576	—	92,907
42,382	—	118,928	8,539	20,671	10,212	36,356	75,778	107,539	(13,179)	—	94,360
23,577	15,844	82,003	4,750	11,499	5,681	10,884	32,814	59,824	2,804	—	62,628
284,025	74,270	871,281	57,227	138,528	68,439	—	264,194	720,685	23,142	—	743,827
67,322	25,851	214,766	13,564	32,835	16,222	—	62,621	170,824	9,674	—	180,498
237,553	—	666,604	47,863	115,862	57,241	64,078	285,044	602,766	(20,951)	—	581,815
132,717	—	372,421	26,740	64,731	31,980	21,542	144,993	336,756	(7,504)	—	329,252
43,352	—	121,651	8,735	21,144	10,446	16,416	56,741	110,002	(5,291)	—	104,711
1,892,797	—	5,311,431	381,369	923,179	456,089	119,782	1,880,419	4,802,776	(44,078)	—	4,758,698
59,932	—	168,177	12,075	29,231	14,441	15,985	71,732	152,070	(5,388)	—	146,682
79,630	726	224,177	16,044	38,838	19,188	14,365	88,435	202,052	(4,022)	—	198,030
4,911	1,456	15,237	989	2,395	1,183	2,331	6,898	12,461	(141)	—	12,320
8,257	782	23,952	1,664	4,027	1,990	407	8,088	20,951	177	—	21,128
33,649	128,405	222,829	6,780	16,412	8,108	—	31,300	85,382	38,433	—	123,815
98,967	—	277,714	19,940	48,269	23,847	14,801	106,857	251,118	(5,612)	—	245,506
23,689	6,895	73,370	4,773	11,554	5,708	3,888	25,923	60,110	1,474	—	61,584
162,466	4,336	460,236	32,734	79,240	39,148	6,967	158,089	412,240	(427)	—	411,813
125,712	32,407	385,171	25,329	61,314	30,292	—	116,935	318,981	10,245	—	329,226
3,570	—	10,018	719	1,741	860	767	4,087	9,058	(248)	—	8,810
291,273	22,668	840,017	58,687	142,063	70,185	86,373	357,308	739,075	(17,181)	—	721,894
37,907	5,156	111,529	7,638	18,489	9,134	5,678	40,939	96,186	273	—	96,459
71,340	18,367	218,557	14,374	34,795	17,190	3,001	69,360	181,019	6,128	—	187,147
104,520	—	293,297	21,059	50,978	25,185	16,523	113,745	265,209	(5,525)	—	259,684
138,984	34,779	424,785	28,003	67,787	33,490	—	129,280	352,656	11,106	—	363,762
32,261	1,589	92,117	6,500	15,735	7,774	7,636	37,645	81,859	(2,446)	—	79,413
9,081,124	235,630	25,718,424	1,829,707	4,429,163	2,188,192	—	8,447,062	23,042,409	82,269	—	23,124,678
420,547	46,393	1,226,501	84,734	205,114	101,335	9,463	400,646	1,067,093	10,266	—	1,077,359
15,861	1,171	45,679	3,196	7,736	3,822	—	14,754	40,245	356	—	40,601
11,653,362	—	32,700,801	2,347,980	5,683,731	2,808,001	2,557,654	13,397,366	29,569,180	(842,710)	—	28,726,470
367,961	49,280	1,081,826	74,138	179,467	88,664	33,785	376,054	933,662	8,740	—	942,402
72,703	44,826	248,839	14,648	35,459	17,518	—	67,625	184,475	14,914	—	199,389
1,282,427	150,676	3,749,330	258,389	625,482	309,014	324,081	1,516,966	3,254,026	(39,360)	—	3,214,666
100,993	2,673	286,073	20,349	49,258	24,335	29,954	123,896	256,260	(7,943)	—	248,317
178,102	6,752	506,530	35,885	86,866	42,916	17,925	183,592	451,916	(4,836)	—	447,080
105,736	23,125	319,833	21,304	51,571	25,478	—	98,353	268,293	8,329	—	276,622
16,422	53,077	99,160	3,309	8,010	3,957	—	15,276	41,670	19,386	—	61,056
216,757	10,521	618,769	43,673	105,720	52,230	201,039	402,662	549,998	(56,148)	—	493,850
83,503	—	234,321	16,825	40,727	20,121	56,877	134,550	211,881	(19,539)	—	192,342

**Noncontributory Retirement System  
Local Government Division**  
**Schedule of Employer Allocations and Pension Amounts** (Continued)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Slc Mosquito Abatement	\$ 80,395	0.0470937%	\$ 302,399	626,371	32,062	6,569	67,206
Smithfield City Corp	215,917	0.1264798	812,155	1,682,248	86,110	17,641	180,495
Snyder Basin Special Recreation District	130,096	0.0762075	489,345	1,013,600	51,883	10,629	108,753
Snyderville Basin Water Reclamation District	483,513	0.2832327	1,818,701	3,767,145	192,830	39,505	404,192
So Davis Metro Fire Agency	17,272	0.0101175	64,967	134,568	6,888	1,411	14,438
So Davis Recreation Center	84,062	0.0492417	316,192	654,941	33,525	6,868	70,271
So Si Valley Mosquito Abatement	35,454	0.0207685	133,359	276,232	14,140	2,897	29,638
So Utah Valley Animal SSD	15,482	0.0090689	58,233	120,621	6,174	1,265	12,942
So Utah Valley Power Systems	16,644	0.0097495	62,604	129,674	6,638	1,360	13,913
Solid Waste Special Service District #1	35,345	0.0207043	132,947	275,378	14,096	2,888	29,546
Solitude Improvement District	10,713	0.0062753	40,295	83,465	4,272	875	8,955
South Davis Sewer District	317,505	0.1859885	1,194,274	2,473,746	126,624	25,941	265,418
South Davis Water District	63,975	0.0374755	240,639	498,444	25,514	5,227	53,480
South Ogden City	323,811	0.1896824	1,217,993	2,522,877	129,139	26,457	270,689
South Ogden Conservancy District	208,688	0.1222452	784,964	1,625,926	83,227	17,051	174,452
South Valley Sewer District	495,350	0.2901666	1,863,225	3,859,370	197,551	40,472	414,087
South Valley Water Reclamation	480,067	0.2812139	1,805,737	3,740,294	191,456	39,223	401,311
South Weber City	86,192	0.0504895	324,204	671,537	34,374	7,042	72,052
Southeastern Utah AOG	119,163	0.0698034	448,223	928,422	47,523	9,736	99,614
Southeastern Utah Health	168,457	0.0986790	633,640	1,312,483	67,183	13,764	140,821
Spanish Fork City	1,373,047	0.8043046	5,164,620	10,697,678	547,586	112,183	1,147,795
Spring City	28,141	0.0164843	105,849	219,250	11,223	2,299	23,524
Springville City	1,362,988	0.7984120	5,126,782	10,619,303	543,574	111,361	1,139,386
St George Housing Authority	25,051	0.0146741	94,226	195,173	9,990	2,047	20,941
Summit County	1,953,325	1.1442199	7,347,292	15,218,732	779,006	159,593	1,632,877
Sunset City	86,690	0.0507814	326,079	675,420	34,573	7,083	72,468
SW Behavioral Health Center	1,049,442	0.6147431	3,947,403	8,176,410	418,529	85,743	877,279
Sw Mosquito Abatement/Control	21,206	0.0124223	79,766	165,223	8,457	1,733	17,727
SW UT Public Health Department	365,053	0.2138410	1,373,121	2,844,199	145,587	29,826	305,165
Syracuse City Corp	328,759	0.1925808	1,236,604	2,561,427	131,113	26,861	274,825
Taylor West Weber Water Improvement District	23,848	0.0139696	89,702	185,803	9,511	1,948	19,936
Taylorville-Bennion Improvement	357,079	0.2091700	1,343,127	2,782,072	142,407	29,175	298,499
Timber Lakes Water Special Service District	35,736	0.0209337	134,420	278,429	14,252	2,920	29,874
Timpanogos Special Service District	363,359	0.2128489	1,366,750	2,831,003	144,912	29,688	303,749
Tooele City	656,314	0.3844558	2,468,677	5,113,466	261,745	53,623	548,644
Tooele County	1,385,694	0.8117131	5,212,192	10,796,215	552,630	113,216	1,158,368
Tooele County Housing	44,009	0.0257794	165,535	342,880	17,551	3,596	36,789
Tooele Valley Mosquito Abatement	3,442	0.0020165	12,948	26,821	1,373	281	2,878
Torrey Town	2,636	0.0015441	9,915	20,537	1,051	215	2,204
Town of Alta	82,713	0.0484515	311,118	644,431	32,987	6,758	69,143
Town of Apple Valley	11,191	0.0065554	42,094	87,190	4,463	914	9,355
Town of Brian Head	85,574	0.0501275	321,880	666,722	34,128	6,992	71,535
Town of Daniel	2,881	0.0016878	10,838	22,449	1,149	235	2,409
Town of Garden City	33,198	0.0194467	124,872	258,651	13,240	2,712	27,752
Town of Goshen	3,698	0.0021664	13,911	28,814	1,475	302	3,092
Town of Levan	23,940	0.0140235	90,048	186,520	9,547	1,956	20,012
Town of Manila	1,854	0.0010858	6,972	14,442	739	151	1,550
Town of Mantua	13,283	0.0077811	49,964	103,493	5,298	1,085	11,104
Town of Randolph	9,518	0.0055757	35,803	74,160	3,796	778	7,957
Town of Springdale	111,385	0.0652471	418,966	867,821	44,421	9,101	93,112
Trans-Jordan Cities	291,808	0.1709353	1,097,614	2,273,530	116,376	23,842	243,936
Tremonton City	217,078	0.1271599	816,522	1,691,294	86,573	17,736	181,465
Tridell-Lapoint Water	7,511	0.0043995	28,250	58,516	2,995	614	6,278
Uintah Animal Control/Shelter	49,352	0.0289095	185,634	384,512	19,682	4,032	41,256
Uintah Basin Association of Governments	173,048	0.1013683	650,909	1,348,252	69,013	14,139	144,659
Uintah Basin Asst Council	11,360	0.0066544	42,729	88,507	4,530	928	9,496
Uintah Co Care Center Special Service District	430,056	0.2519183	1,617,624	3,350,647	171,511	35,137	359,504
Uintah County	1,506,836	0.8826751	5,667,854	11,740,047	600,942	123,114	1,259,635
Uintah Fire Suppression Special Service District	5,893	0.0034519	22,165	45,912	2,350	481	4,926
Uintah Highlands Improv District	10,388	0.0060850	39,073	80,934	4,143	849	8,684



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 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	
40,847	8,175	122,797	8,230	19,922	9,842	9,092	47,086	103,644	406	—	104,050
109,702	6,748	314,586	22,103	53,505	26,434	31,017	133,059	278,358	(6,702)	—	271,656
66,099	252,230	437,711	13,318	32,238	15,927	—	61,483	167,718	75,495	—	243,213
245,662	23,129	712,488	49,497	119,817	59,195	16,854	245,363	623,341	3,803	—	627,144
8,775	696	25,320	1,768	4,280	2,115	—	8,163	22,267	221	—	22,488
42,710	—	119,849	8,605	20,831	10,291	8,703	48,430	108,372	(2,707)	—	105,665
18,014	857	51,406	3,629	8,786	4,341	411	17,167	45,707	205	—	45,912
7,866	9,430	31,503	1,585	3,836	1,895	—	7,316	19,959	2,847	—	22,806
8,456	61	23,790	1,704	4,124	2,038	137	8,003	21,457	(17)	—	21,440
17,958	2,205	52,597	3,618	8,759	4,327	3,088	19,792	45,566	(81)	—	45,485
5,443	—	15,273	1,097	2,655	1,312	1,172	6,236	13,811	(378)	—	13,433
161,317	40,291	492,967	32,503	78,680	38,871	—	150,054	409,325	13,185	—	422,510
32,504	2,472	93,683	6,549	15,853	7,832	393	30,627	82,476	828	—	83,304
164,521	20,114	481,781	33,148	80,242	39,643	—	153,033	417,455	6,759	—	424,214
106,029	—	297,532	21,363	51,714	25,549	104,113	202,739	269,038	(32,936)	—	236,102
251,676	20,954	727,189	50,709	122,751	60,644	—	234,104	638,601	7,735	—	646,336
243,911	28,953	713,398	49,144	118,963	58,773	—	226,880	618,898	10,614	—	629,512
43,792	22,324	145,210	8,823	21,359	10,552	22,781	63,515	111,118	1,721	—	112,839
60,544	—	169,894	12,199	29,529	14,589	69,325	125,642	153,624	(24,500)	—	129,124
85,589	—	240,174	17,245	41,745	20,624	112,619	192,233	217,174	(37,172)	—	180,002
697,613	122,704	2,080,295	140,558	340,249	168,097	—	648,904	1,770,120	40,286	—	1,810,406
14,298	54,560	94,681	2,881	6,973	3,445	—	13,299	36,279	16,330	—	52,609
692,502	—	1,943,249	139,528	337,756	166,866	81,186	725,336	1,757,152	(25,637)	—	1,731,515
12,728	422	36,138	2,564	6,208	3,067	1,586	13,425	32,295	(313)	—	31,982
992,438	116,811	2,901,719	199,961	484,045	239,138	7,506	930,650	2,518,209	42,440	—	2,560,649
44,045	7,330	130,926	8,874	21,482	10,613	—	40,969	111,760	2,749	—	114,509
533,197	45,207	1,541,426	107,431	260,058	128,479	17,882	513,850	1,352,932	6,690	—	1,359,622
10,774	6,096	36,330	2,171	5,255	2,596	—	10,022	27,339	1,974	—	29,313
185,475	—	520,466	37,370	90,462	44,692	88,496	261,020	470,623	(29,792)	—	440,831
167,035	—	468,721	33,655	81,468	40,249	29,571	184,943	423,833	(10,384)	—	413,449
12,117	4,537	38,538	2,441	5,910	2,920	—	11,271	30,744	1,450	—	32,194
181,423	5,610	514,707	36,554	88,486	43,716	—	168,756	460,343	2,076	—	462,419
18,157	3,994	54,945	3,658	8,856	4,375	—	16,889	46,071	1,231	—	47,302
184,614	40,449	558,500	37,197	90,042	44,485	6,186	177,910	468,440	13,622	—	482,062
333,457	—	935,724	67,187	162,638	80,350	51,183	361,358	846,114	(15,651)	—	830,463
704,039	107,984	2,083,607	141,853	343,383	169,645	81,211	736,092	1,786,425	17,003	—	1,803,428
22,360	1,050	63,795	4,505	10,906	5,388	252	21,051	56,736	218	—	56,954
1,749	—	4,908	352	853	421	7,503	9,129	4,438	(2,826)	—	1,612
1,339	1,170	4,928	270	653	323	1,511	2,757	3,398	(228)	—	3,170
42,024	11,475	129,400	8,467	20,497	10,126	—	39,090	106,632	3,537	—	110,169
5,686	19,613	35,568	1,146	2,773	1,370	—	5,289	14,427	6,631	—	21,058
43,478	149,455	271,460	8,760	21,206	10,476	—	40,442	110,321	50,738	—	161,059
1,464	5,024	9,132	295	714	353	—	1,362	3,715	1,709	—	5,424
16,867	680	48,011	3,398	8,227	4,064	15,036	30,725	42,798	(5,549)	—	37,249
1,879	—	5,273	379	916	453	5,883	7,631	4,768	(1,879)	—	2,889
12,163	3,802	37,933	2,451	5,932	2,931	—	11,314	30,863	1,418	—	32,281
942	3,594	6,237	190	459	227	—	876	2,390	1,076	—	3,466
6,749	—	18,938	1,360	3,292	1,626	4,000	10,278	17,125	(1,508)	—	15,617
4,836	526	14,097	974	2,359	1,165	141	4,639	12,271	104	—	12,375
56,592	7,566	166,371	11,402	27,602	13,636	4,431	57,071	143,596	1,568	—	145,164
148,261	105,726	521,765	29,872	72,312	35,725	—	137,909	376,196	32,600	—	408,796
110,292	2,843	312,336	22,222	53,793	26,576	13,770	116,361	279,855	(3,034)	—	276,821
3,816	719	11,427	769	1,861	919	380	3,929	9,682	161	—	9,843
25,075	—	70,363	5,052	12,230	6,042	19,609	42,933	63,624	(6,070)	—	57,554
87,922	—	246,720	17,715	42,882	21,186	36,706	118,489	223,092	(11,373)	—	211,719
5,772	1,118	17,314	1,163	2,815	1,391	513	5,882	14,645	138	—	14,783
218,501	24,344	637,486	44,025	106,570	52,650	59,960	263,205	554,424	(8,634)	—	545,790
765,587	2,766,920	4,915,256	154,254	373,402	184,476	—	712,132	1,942,599	884,562	—	2,827,161
2,994	—	8,401	603	1,460	721	3,456	6,240	7,597	(1,108)	—	6,489
5,278	830	15,641	1,063	2,574	1,272	—	4,909	13,392	274	—	13,666

**Noncontributory Retirement System  
Local Government Division**

**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Uintah Mosquito Abatement District	\$ 31,730	0.0185866%	\$ 119,349	247,212	12,654	2,592	26,524
Uintah Recreation District	197,267	0.1155552	742,006	1,536,945	78,672	16,117	164,905
Uintah Transportation Special Service District	34,383	0.0201410	129,330	267,886	13,712	2,809	28,743
Uintah Water Conservancy District	93,128	0.0545527	350,295	725,580	37,141	7,609	77,850
Unified Fire Authority	449,333	0.2632109	1,690,136	3,500,845	179,199	36,712	375,619
Unified Police Department	1,021,412	0.5983236	3,841,970	7,958,021	407,350	83,453	853,847
Upper Country Water District	19,457	0.0113974	73,185	151,591	7,760	1,590	16,265
UT Municipal Power Agency	261,682	0.1532885	984,300	2,038,818	104,362	21,380	218,753
UT Public Employees Association	37,141	0.0217563	139,702	289,370	14,812	3,035	31,048
Utah Association of Counties	121,311	0.0710619	456,304	945,161	48,380	9,912	101,410
Utah Co Housing Authority	158,905	0.0930834	597,709	1,238,059	63,373	12,983	132,836
Utah Counties Indemnity Pool	67,257	0.0393979	252,983	524,013	26,823	5,495	56,223
Utah County	5,591,807	3.2755727	21,033,186	43,566,856	2,230,071	456,870	4,674,456
Utah Lake Commission	1,486	0.0008705	5,590	11,578	593	121	1,242
Utah Local Governments Trust	241,646	0.1415515	908,934	1,882,710	96,371	19,743	202,003
Utah Valley Dispatch Special Service District	273,001	0.1599189	1,026,875	2,127,006	108,876	22,305	228,215
Utah Zoological Society	784,737	0.4596836	2,951,731	6,114,036	312,961	64,116	655,999
UTOPIA	384,681	0.2253385	1,446,949	2,997,122	153,415	31,430	321,573
Valley Emergency Communications Center	717,930	0.4205496	2,700,443	5,593,533	286,318	58,657	600,152
Vernal City	400,118	0.2343813	1,505,015	3,117,396	159,571	32,691	334,477
Vineyard Town	73,142	0.0428454	275,120	569,867	29,170	5,976	61,143
Wasatch County	1,304,827	0.7643427	4,908,016	10,166,164	520,379	106,609	1,090,767
Wasatch County Fire District	13,033	0.0076343	49,022	101,540	5,198	1,065	10,895
Wasatch Front Regional Council	313,773	0.1838020	1,180,234	2,444,664	125,136	25,636	262,297
Wasatch Front Waste/Recycling	510,010	0.2987538	1,918,365	3,973,584	203,397	41,670	426,341
Wasatch Integrated Waste Management	580,998	0.3403374	2,185,383	4,526,668	231,708	47,470	485,684
Wasatch Mental Health Special Service District	2,281,615	1.3365262	8,582,134	17,776,508	909,932	186,416	1,907,310
Washington City	755,174	0.4423665	2,840,534	5,883,709	301,171	61,700	631,286
Washington Co Solid Waste	102,140	0.0598318	384,193	795,795	40,735	8,345	85,384
Washington Co Water Conservancy District	322,984	0.1891976	1,214,880	2,516,429	128,809	26,389	269,997
Washington County	1,856,461	1.0874791	6,982,947	14,464,049	740,376	151,679	1,551,904
Waste Management Serv District #5	25,046	0.0146716	94,210	195,140	9,989	2,046	20,937
Wayne County	105,282	0.0616724	396,012	820,276	41,988	8,602	88,011
Weber Area Dispatch 911	503,451	0.2949118	1,893,695	3,922,483	200,781	41,134	420,858
Weber Basin Water Conservancy	915,158	0.5360816	3,442,300	7,130,170	364,974	74,772	765,023
Weber Co Mosquito Abatement	100,658	0.0589636	378,618	784,247	40,144	8,224	84,145
Weber County Corp	3,447,992	2.0197672	12,969,377	26,863,976	1,375,095	281,713	2,882,340
Weber Fire District	9,507	0.0055689	35,759	74,069	3,791	777	7,947
Weber Human Services	1,778,144	1.0416027	6,688,364	13,853,869	709,143	145,281	1,486,435
Wellington City	15,762	0.0092328	59,286	122,801	6,286	1,288	13,176
Wellsville City Corp	56,549	0.0331254	212,706	440,585	22,552	4,620	47,272
West Bountiful City	106,504	0.0623882	400,609	829,796	42,475	8,702	89,032
West Kane County Special Service District #1	30,737	0.0180053	115,616	239,480	12,258	2,511	25,695
West Point City	131,849	0.0772348	495,942	1,027,264	52,583	10,773	110,219
West Valley City	2,904,634	1.7014786	10,925,575	22,630,569	1,158,399	237,319	2,428,121
White City Water Improvement District	75,078	0.0439791	282,400	584,945	29,942	6,134	62,761
Willard City Corp	40,210	0.0235543	151,247	313,285	16,036	3,285	33,614
Woods Cross City	144,754	0.0847940	544,481	1,127,805	57,729	11,827	121,007
<b>Grand Total</b>	<b>\$ 170,712,353</b>	<b>100.0000000%</b>	<b>\$ 642,122,385</b>	<b>1,330,053,081</b>	<b>68,081,879</b>	<b>13,947,796</b>	<b>142,706,534</b>
<b>No Proportionate Share for 2016</b>							
Canyonlands Health Care	\$ —	0.0000000%	\$ —	—	—	—	—
Summit Mosquito Abatement District	—	0.0000000	—	—	—	—	—
Sunnyside City	—	0.0000000	—	—	—	—	—
Valley Mental Health	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 170,712,353</b>	<b>100.0000000%</b>	<b>\$ 642,122,385</b>	<b>1,330,053,081</b>	<b>68,081,879</b>	<b>13,947,796</b>	<b>142,706,534</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 Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportionate Share of Contributions and Nonemployer Contributions		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
									Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions		
16,121	2,198	47,435	3,248	7,863	3,885	2,829	17,825	40,906	(424)	—	40,482	
100,227	—	281,249	20,194	48,884	24,151	20,045	113,274	254,315	(6,884)	—	247,431	
17,469	52,805	101,826	3,520	8,520	4,209	25,184	41,433	44,326	6,171	—	50,497	
47,316	11,900	144,675	9,533	23,078	11,401	—	44,012	120,060	4,409	—	124,469	
228,296	51,466	692,093	45,998	111,347	55,010	12,718	225,073	579,277	15,882	—	595,159	
518,955	—	1,456,255	104,562	253,112	125,048	77,702	560,424	1,316,796	(25,736)	—	1,291,060	
9,886	378	28,119	1,992	4,821	2,382	1,124	10,319	25,083	(192)	—	24,891	
132,955	—	373,088	26,788	64,846	32,037	19,198	142,869	337,359	(5,881)	—	331,478	
18,870	—	52,953	3,802	9,204	4,547	16,207	33,760	47,881	(5,710)	—	42,171	
61,635	56,374	229,331	12,419	30,062	14,852	48,752	106,085	156,394	6,974	—	163,368	
80,736	—	226,555	16,267	39,378	19,454	28,408	103,507	204,859	(9,218)	—	195,641	
34,172	2,464	98,354	6,885	16,667	8,234	10,372	42,158	86,707	(2,162)	—	84,545	
2,841,065	229,875	8,202,266	572,431	1,385,681	684,584	—	2,642,696	7,208,907	70,333	—	7,279,240	
755	—	2,118	152	368	182	22,668	23,370	1,916	(8,273)	—	(6,357)	
122,775	14,404	358,925	24,737	59,881	29,584	42,072	156,274	311,528	(11,784)	—	299,744	
138,706	—	389,226	27,947	67,651	33,423	54,485	183,506	351,951	(18,743)	—	333,208	
398,706	44,162	1,162,983	80,333	194,462	96,072	—	370,867	1,011,675	13,537	—	1,025,212	
195,447	44,174	592,624	39,380	95,326	47,095	63,158	244,959	495,927	(10,940)	—	484,987	
364,763	—	1,023,572	73,494	177,907	87,894	181,743	521,038	925,549	(55,307)	—	870,242	
203,290	9,161	579,619	40,960	99,151	48,985	29,899	218,995	515,828	(5,444)	—	510,384	
37,162	80,502	184,783	7,488	18,125	8,955	—	34,568	94,295	26,395	—	120,690	
662,952	83,256	1,943,584	133,575	323,344	159,745	—	616,664	1,682,172	31,136	—	1,713,308	
6,622	3,545	22,127	1,334	3,230	1,596	498	6,658	16,802	871	—	17,673	
159,421	35,134	482,488	32,121	77,755	38,414	—	148,290	404,513	11,836	—	416,349	
259,124	—	727,135	52,209	126,383	62,439	42,542	283,573	657,500	(14,659)	—	642,841	
295,191	—	828,345	59,477	143,975	71,129	84,520	359,101	749,017	(27,756)	—	721,261	
1,159,235	57,343	3,310,304	233,568	565,397	279,330	88,646	1,166,941	2,941,438	(4,596)	—	2,936,842	
383,686	—	1,076,672	77,307	187,136	92,453	70,835	427,731	973,564	(24,502)	—	949,062	
51,895	2,023	147,647	10,456	25,311	12,505	7,862	56,134	131,678	(1,579)	—	130,099	
164,100	614,562	1,075,048	33,064	80,037	39,542	—	152,643	416,388	188,193	—	604,581	
943,224	—	2,646,807	190,045	460,041	227,280	33,859	911,225	2,393,333	(10,909)	—	2,382,424	
12,725	381	36,089	2,564	6,207	3,066	55	11,892	32,289	129	—	32,418	
53,492	—	150,105	10,778	26,090	12,889	40,211	89,968	135,729	(12,603)	—	123,126	
255,791	41,221	759,004	51,538	124,758	61,636	37,606	275,538	649,044	4,513	—	653,557	
464,970	131,595	1,436,360	93,684	226,781	112,039	—	432,504	1,179,813	43,395	—	1,223,208	
51,142	3,187	146,698	10,304	24,944	12,323	10,292	57,863	129,768	(2,983)	—	126,785	
1,751,843	63,963	4,979,859	352,969	854,432	422,125	522,255	2,151,781	4,445,120	(131,848)	—	4,313,272	
4,830	18,395	31,949	973	2,356	1,164	—	4,493	12,256	5,519	—	17,775	
903,433	150,542	2,685,691	182,028	440,634	217,692	15,265	855,619	2,292,368	39,219	—	2,331,587	
8,008	—	22,472	1,614	3,906	1,930	5,564	13,014	20,320	(2,062)	—	18,258	
28,731	1,256	81,879	5,789	14,013	6,923	485	27,210	72,903	335	—	73,238	
54,112	191,507	343,353	10,903	26,392	13,039	—	50,334	137,304	62,788	—	200,092	
15,617	78	43,901	3,147	7,617	3,763	1,205	15,732	39,626	(331)	—	39,295	
66,990	—	187,982	13,497	32,673	16,142	3,656	65,968	169,979	(1,151)	—	168,828	
1,475,776	72,946	4,214,162	297,346	719,785	355,604	114,592	1,487,327	3,744,628	(22,004)	—	3,722,624	
38,145	851	107,891	7,686	18,605	9,191	1,946	37,428	96,790	(257)	—	96,533	
20,430	6,085	63,414	4,116	9,964	4,923	9,464	28,467	51,838	(1,799)	—	50,039	
73,546	5,567	211,947	14,818	35,871	17,722	3,160	71,571	186,615	1,184	—	187,799	
86,734,911	15,241,538	258,630,779	17,475,749	42,303,474	20,899,685	11,495,374	92,174,282	220,080,826	1,264,041	—	221,344,867	
—	—	—	—	—	—	49,956	49,956	—	(19,111)	—	(19,111)	
—	—	—	—	—	—	20,207	20,207	—	(6,438)	—	(6,438)	
—	—	—	—	—	—	2,425	2,425	—	(928)	—	(928)	
—	—	—	—	—	—	6,052,814	6,052,814	—	(2,067,355)	—	(2,067,355)	
86,734,911	15,241,538	258,630,779	17,475,749	42,303,474	20,899,685	17,620,777	98,299,685	220,080,826	(829,792)	—	219,251,034	

**Noncontributory Retirement System  
State and School Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Active Re Entry Inc	\$ 67,677	0.0103253%	\$ 334,634	613,558	100,869	—	62,685
Alpine School District	47,060,547	7.1798782	232,693,886	426,648,459	70,141,018	—	43,589,291
Alpine Uniserv	19,785	0.0030186	97,830	179,374	29,489	—	18,326
American Leadership Academy	852,839	0.1301149	4,216,916	7,731,792	1,271,107	—	789,932
Ames Charter School	344,475	0.0525555	1,703,280	3,122,995	513,420	—	319,066
Beaver School District	1,272,442	0.1941325	6,291,673	11,535,897	1,896,502	—	1,178,585
Box Elder School District	8,208,773	1.2523865	40,588,806	74,420,311	12,234,701	—	7,603,282
Bridgerland Applied Technology Center	1,088,674	0.1660955	5,383,017	9,869,860	1,622,605	—	1,008,372
Cache School District	11,549,327	1.7620442	57,106,388	104,705,598	17,213,603	—	10,697,432
Canyons School District	24,890,296	3.7974335	123,071,664	225,654,128	37,097,544	—	23,054,351
Carbon School District	2,721,873	0.4152675	13,458,475	24,676,357	4,056,794	—	2,521,103
Color Country Uniserv	9,437	0.0014398	46,663	85,557	14,066	—	8,741
Daggett School District	311,662	0.0475493	1,541,033	2,825,512	464,514	—	288,673
Davis Applied Technology College	801,552	0.1222902	3,963,324	7,266,826	1,194,666	—	742,428
Davis School District	48,912,472	7.4624207	241,850,854	443,437,925	72,901,206	—	45,304,616
Davis Uniserv	12,432	0.0018967	61,470	112,707	18,529	—	11,515
Dixie Applied Technology College	72,600	0.0110763	358,974	658,185	108,206	—	67,245
Dixie State University	1,115,186	0.1701404	5,514,109	10,110,219	1,662,120	—	1,032,928
Duchesne School District	3,534,146	0.5391934	17,474,810	32,040,381	5,267,439	—	3,273,462
East Hollywood High School	169,291	0.0258282	837,070	1,534,784	252,319	—	156,804
Educators Mutual Insurance	1,445,270	0.2205003	7,146,231	13,102,745	2,154,092	—	1,338,665
Emery School District	2,410,420	0.3677502	11,918,478	21,852,746	3,592,592	—	2,232,624
Fast Forward Charter High School	170,737	0.0260488	844,220	1,547,893	254,474	—	158,143
Garfield School District	995,094	0.1518183	4,920,305	9,021,468	1,483,130	—	921,694
Grand School District	1,479,536	0.2257282	7,315,663	13,413,401	2,205,164	—	1,370,404
Granite School District	50,376,916	7.6858461	249,091,885	456,714,488	75,083,874	—	46,661,040
Granite Uniserv	54,757	0.0083541	270,749	496,424	81,612	—	50,718
Heber Valley Historic Railroad	51,131	0.0078009	252,821	463,551	76,208	—	47,360
High Desert Uniserv	4,244	0.0006475	20,985	38,476	6,325	—	3,931
High School Activities Association	121,578	0.0185487	601,148	1,102,216	181,204	—	112,610
Intech Collegiate High School	99,285	0.0151477	490,924	900,119	147,980	—	91,962
Iron School District	6,352,164	0.9691294	31,408,679	57,588,382	9,467,531	—	5,883,618
Itineris High School	236,018	0.0360085	1,167,006	2,139,726	351,771	—	218,609
Jordan School District	33,444,985	5.1025951	165,370,867	303,210,483	49,847,811	—	30,978,033
Jordan Uniserv	46,355	0.0070722	229,204	420,250	69,089	—	42,936
Juab School District	1,651,239	0.2519242	8,164,654	14,970,041	2,461,075	—	1,529,441
Kane School District	1,201,147	0.1832551	5,939,146	10,889,531	1,790,239	—	1,112,548
Liberty Academy Charter	70,029	0.0106841	346,263	634,879	104,374	—	64,864
Logan School District	4,147,317	0.6327430	20,506,675	37,599,360	6,181,336	—	3,841,405
Millard School District	3,077,753	0.4695629	15,218,143	27,902,742	4,587,211	—	2,850,733
Monticello Academy	323,970	0.0494271	1,601,891	2,937,097	482,859	—	300,074
Morgan School District	1,548,083	0.2361861	7,654,595	14,034,839	2,307,328	—	1,433,894
Mountainland Applied Technology College	345,147	0.0526579	1,706,599	3,129,080	514,421	—	319,688
Murray School District	4,650,215	0.7094686	22,993,288	42,158,610	6,930,877	—	4,307,209
Nebo School District	22,016,702	3.3590183	108,862,992	199,602,269	32,814,618	—	20,392,717
Noah Webster Academy Inc	184,827	0.0281984	913,887	1,675,628	275,473	—	171,193
North Sanpete School District	1,945,335	0.2967931	9,618,818	17,636,277	2,899,404	—	1,801,841
North Summit School District	1,014,365	0.1547585	5,015,594	9,196,183	1,511,853	—	939,544
NUAMES Charter School	399,535	0.0609558	1,975,527	3,622,164	595,484	—	370,065
Ogden School District	9,649,352	1.4721710	47,711,839	87,480,521	14,381,800	—	8,937,601
Ogden Weber/NEA/UEA Uniserv	20,316	0.0030996	100,455	184,187	30,280	—	18,818
Ogden-Weber Technology College	776,080	0.1184041	3,837,378	7,035,903	1,156,703	—	718,835
Park City School District	5,872,915	0.8960120	29,039,004	53,243,541	8,753,240	—	5,439,720
Piute School District	403,163	0.0615092	1,993,462	3,655,049	600,890	—	373,424
Provo School District	10,318,684	1.5742888	51,021,392	93,548,647	15,379,400	—	9,557,562

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	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
35,481	7,557	105,723	18,053	17,985	4,151	8,062	48,251	72,985	499	—	73,484
24,672,066	3,142,185	71,403,542	12,553,374	12,506,199	2,886,127	—	27,945,700	50,751,715	1,034,823	—	51,786,538
10,373	—	28,699	5,278	5,258	1,213	43,682	55,431	21,337	(17,160)	—	4,177
447,111	28,002	1,265,045	227,494	226,639	52,303	104,328	610,764	919,731	(21,425)	—	898,306
180,595	34,241	533,902	91,889	91,543	21,126	8,815	213,373	371,494	7,182	—	378,676
667,093	27,191	1,872,869	339,423	338,148	78,036	27,998	783,605	1,372,246	2,111	—	1,374,357
4,303,550	326,527	12,233,359	2,189,686	2,181,457	503,427	417,829	5,292,399	8,852,624	(64,860)	—	8,787,764
570,751	176,978	1,756,101	290,403	289,312	66,766	8,596	655,077	1,174,063	68,019	—	1,242,082
6,054,876	906,880	17,659,188	3,080,776	3,069,199	708,297	—	6,858,272	12,455,192	331,490	—	12,786,682
13,049,042	298,527	36,401,920	6,639,472	6,614,522	1,526,471	1,050,454	15,830,919	26,842,553	(209,102)	—	26,633,451
1,426,975	—	3,948,078	726,058	723,330	166,927	258,823	1,875,138	2,935,361	(100,499)	—	2,834,862
4,948	23,908	37,597	2,517	2,508	579	5,968	11,572	10,177	5,089	—	15,266
163,393	31,801	483,867	83,136	82,823	19,114	35,612	220,685	336,107	(4,287)	—	331,820
420,223	179,293	1,341,944	213,813	213,010	49,158	—	475,981	864,421	60,575	—	924,996
25,642,961	2,187,118	73,134,695	13,047,374	12,998,343	2,999,701	1,331,617	30,377,035	52,748,896	151,679	—	52,900,575
6,518	—	18,033	3,316	3,304	762	44,963	52,345	13,407	(15,963)	—	(2,556)
38,061	67,781	173,087	19,366	19,293	4,452	—	43,111	78,294	21,528	—	99,822
584,650	—	1,617,578	297,475	296,357	68,392	220,502	882,726	1,202,655	(69,893)	—	1,132,762
1,852,819	112,098	5,238,379	942,731	939,189	216,742	46,077	2,144,739	3,811,345	30,382	—	3,841,727
88,753	13,752	259,309	45,158	44,989	10,382	13,370	113,899	182,569	(1,043)	—	181,526
757,701	71,455	2,167,821	385,525	384,076	88,635	131,676	989,912	1,558,629	(30,270)	—	1,528,359
1,263,692	—	3,496,316	642,978	640,562	147,826	577,294	2,008,660	2,599,480	(199,128)	—	2,400,352
89,511	36,827	284,481	45,544	45,373	10,471	—	101,388	184,129	11,621	—	195,750
521,690	151,662	1,595,046	265,441	264,443	61,027	—	590,911	1,073,143	58,092	—	1,131,235
775,665	11,434	2,157,503	394,666	393,182	90,737	69,975	948,560	1,595,583	(17,306)	—	1,578,277
26,410,713	—	73,071,753	13,438,013	13,387,515	3,089,513	6,843,776	36,758,817	54,328,202	(2,363,816)	—	51,964,386
28,707	50,819	130,244	14,606	14,552	3,358	—	32,516	59,052	17,486	—	76,538
26,806	26,253	100,419	13,639	13,588	26,253	—	30,363	55,141	10,009	—	65,150
2,225	8,045	14,201	1,132	1,128	260	5,968	8,488	4,577	130	—	4,707
63,739	8,511	184,860	32,431	32,309	7,456	8,503	80,699	131,113	742	—	131,855
52,052	37,102	181,116	26,484	26,385	6,089	—	58,958	107,073	14,404	—	121,477
3,330,199	33,451	9,247,268	1,694,436	1,688,068	389,565	192,098	3,964,167	6,850,392	(46,685)	—	6,803,707
123,735	37,256	379,600	62,958	62,721	14,474	—	140,153	254,530	13,172	—	267,702
17,533,942	43,295	48,555,270	8,921,430	8,887,905	2,051,112	1,153,020	21,013,467	36,068,224	(343,134)	—	35,725,090
24,302	780	68,018	12,365	12,319	2,843	263	27,790	49,991	229	—	50,220
865,682	110,464	2,505,587	440,467	438,812	101,267	—	980,546	1,780,752	43,810	—	1,824,562
629,716	24,211	1,766,475	320,405	319,201	73,664	31,457	744,727	1,295,358	(160)	—	1,295,198
36,714	—	101,578	18,680	18,610	4,295	135,139	176,724	75,522	(43,034)	—	32,488
2,174,282	315,062	6,330,749	1,106,294	1,102,137	254,346	234,769	2,697,546	4,472,610	52,485	—	4,525,095
1,613,549	187,184	4,651,466	820,989	817,903	188,752	80,367	1,908,011	3,319,154	49,661	—	3,368,815
169,845	53,755	523,674	86,419	86,094	19,868	27,641	220,022	349,381	5,760	—	355,141
811,601	—	2,245,495	412,950	411,398	94,941	129,290	1,048,579	1,669,506	(50,011)	—	1,619,495
180,947	144,614	645,249	92,068	91,722	21,167	—	204,957	372,218	48,496	—	420,714
2,437,932	—	6,745,141	1,240,442	1,235,781	285,188	562,221	3,323,632	5,014,953	(183,546)	—	4,831,407
11,542,525	1,398,938	33,334,180	5,872,943	5,850,873	1,350,239	—	13,074,055	23,743,570	521,459	—	24,265,029
96,898	9,911	278,002	49,302	49,117	11,335	10,793	120,547	199,323	586	—	199,909
1,019,864	39,624	2,861,329	518,916	516,966	119,303	2,232	1,157,417	2,097,913	11,495	—	2,109,408
531,793	—	1,471,337	270,581	269,565	62,209	53,159	655,514	1,093,927	(19,900)	—	1,074,027
209,461	264,752	844,278	106,576	106,175	24,503	—	237,254	430,872	90,816	—	521,688
5,058,791	208,177	14,204,569	2,573,959	2,564,286	591,775	770,979	6,500,999	10,406,194	(157,835)	—	10,248,359
10,651	10,043	39,512	5,419	5,399	1,246	—	12,064	21,910	3,156	—	25,066
406,870	—	1,125,705	207,019	206,241	47,595	251,866	712,721	836,952	(80,104)	—	756,848
3,078,947	202,172	8,720,839	1,566,597	1,560,710	360,174	435,270	3,922,751	6,333,554	(55,293)	—	6,278,261
211,363	3,319	588,106	107,543	107,139	24,725	52,120	291,527	434,784	(14,967)	—	419,817
5,409,696	—	14,967,258	2,752,503	2,742,159	632,824	734,207	6,861,693	11,128,024	(261,483)	—	10,866,541

**Noncontributory Retirement System  
State and School Division**
**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Rich School District	\$ 634,959	0.0968737%	\$ 3,139,596	5,756,506	946,370	—	588,124
Salt Lake Arts Academy	235,487	0.0359276	1,164,384	2,134,919	350,981	—	218,118
Salt Lake Community College	4,052,730	0.6183121	20,038,981	36,741,836	6,040,359	—	3,753,794
Salt Lake School District	24,260,150	3.7012941	119,955,866	219,941,255	36,158,348	—	22,470,686
San Juan School District	3,514,110	0.5361367	17,375,745	31,858,743	5,237,578	—	3,254,905
Sevier School District	3,748,948	0.5719651	18,536,914	33,987,767	5,587,590	—	3,472,420
Snow College	918,114	0.1400738	4,539,675	8,323,577	1,368,396	—	850,393
Soldier Hollow Charter School	138,741	0.0211673	686,015	1,257,820	206,786	—	128,507
South Sanpete School District	2,743,878	0.4186248	13,567,282	24,875,857	4,089,592	—	2,541,486
South Summit School District	1,338,857	0.2042651	6,620,062	12,138,004	1,995,488	—	1,240,101
Southern Utah University	2,385,398	0.3639326	11,794,753	21,625,894	3,555,297	—	2,209,448
Southwest Applied Technology	325,814	0.0497084	1,611,008	2,953,812	485,607	—	301,781
Southwest Educational Development Center	83,457	0.0127327	412,656	756,613	124,387	—	77,301
Space Dynamics Lab / USU	565,078	0.0862121	2,794,063	5,122,964	842,215	—	523,397
State of Utah	160,304,245	24.4571103	792,634,624	1,453,309,950	238,924,192	—	148,479,966
Success Academy	168,683	0.0257354	834,063	1,529,270	251,412	—	156,241
Summit Academy High School	197,817	0.0301803	978,118	1,793,398	294,835	—	183,226
Summit Academy Inc	738,494	0.1126696	3,651,528	6,695,143	1,100,682	—	684,021
Tintic School District	351,830	0.0536775	1,739,643	3,189,667	524,381	—	325,878
Tooele Applied Technology College	209,748	0.0320005	1,037,110	1,901,559	312,616	—	194,276
Tooele School District	9,413,101	1.4361270	46,543,683	85,338,686	14,029,682	—	8,718,777
Tuacahn High School	248,906	0.0379749	1,230,735	2,256,575	370,981	—	230,547
Uintah Basin Applied Technology Center	597,083	0.0910951	2,952,316	5,413,126	889,918	—	553,042
Uintah School District	5,083,278	0.7755395	25,134,591	46,084,728	7,576,330	—	4,708,327
University of Utah	22,514,682	3.4349936	111,325,288	204,116,934	33,556,829	—	20,853,966
University of Utah Hospital	8,439,296	1.2875567	41,728,643	76,510,223	12,578,283	—	7,816,802
UT School Board Risk Management	172,974	0.0263901	855,281	1,568,174	257,808	—	160,215
Utah Co Academy of Sciences	217,864	0.0332388	1,077,242	1,975,143	324,713	—	201,794
Utah Communications Authority	360,371	0.0549806	1,781,876	3,267,101	537,112	—	333,789
Utah Dairy Council	106,120	0.0161904	524,717	962,079	158,166	—	98,292
Utah Education Association	302,285	0.0461187	1,494,669	2,740,502	450,539	—	279,988
Utah Housing Corporation	1,034,482	0.1578277	5,115,065	9,378,564	1,541,836	—	958,177
Utah Retirement Systems	5,352,353	0.8165915	26,465,052	48,524,153	7,977,372	—	4,957,555
Utah Safety Council	86,957	0.0132667	429,963	788,344	129,604	—	80,543
Utah School Boards Association	123,450	0.0188343	610,404	1,119,187	183,994	—	114,344
Utah School Employees Association	74,258	0.0113293	367,173	673,219	110,677	—	68,781
Utah State Fair Corp	105,467	0.0160908	521,489	956,160	157,193	—	97,688
Utah State University	9,036,213	1.3786264	44,680,136	81,921,839	13,467,953	—	8,369,689
Utah Valley University	5,027,876	0.7670871	24,860,655	45,582,463	7,493,758	—	4,657,013
Wasatch School District	5,274,590	0.8047275	26,080,550	47,819,160	7,861,471	—	4,885,529
Wasatch Uniserv	11,545	0.0017613	57,082	104,661	17,206	—	10,693
Washington School District	20,549,563	3.1351816	101,608,630	186,301,266	30,627,933	—	19,033,797
Wayne School District	486,129	0.0741672	2,403,697	4,407,223	724,548	—	450,272
Weber County School District	24,295,325	3.7066607	120,129,793	220,260,154	36,210,775	—	22,503,266
Weber State University	3,556,734	0.5426397	17,586,502	32,245,170	5,301,107	—	3,294,385
Woodland Peaks Uniserv	29,043	0.0044310	143,605	263,302	43,287	—	26,901
Workers Compensation Fund	6,113,853	0.9327711	30,230,336	55,427,870	9,112,343	—	5,662,886
<b>Grand Total</b>	<b>\$ 655,450,485</b>	<b>100.0000000%</b>	<b>\$ 3,240,916,902</b>	<b>5,942,279,901</b>	<b>976,910,969</b>	<b>—</b>	<b>607,103,487</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 Contributions	Proportionate Share of Nonemployer Contributions	
332,885	41,340	962,349	169,375	168,738	38,941	—	377,054	684,762	14,315	—	699,077
123,457	31,531	373,106	62,816	62,580	14,442	—	139,838	253,958	9,914	—	263,872
2,124,693	1,344,475	7,222,962	1,081,063	1,077,001	248,546	—	2,406,610	4,370,603	478,081	—	4,848,684
12,718,680	—	35,189,366	6,471,381	6,447,062	1,487,825	2,195,639	16,601,907	26,162,982	(697,664)	—	25,465,318
1,842,315	46,795	5,144,015	937,387	933,864	215,513	164,745	2,251,509	3,789,738	(32,803)	—	3,756,935
1,965,432	26,697	5,464,549	1,000,030	996,272	229,915	188,343	2,414,560	4,042,995	(48,210)	—	3,994,785
481,333	102,786	1,434,512	244,906	243,986	56,306	—	545,198	990,126	35,649	—	1,025,775
72,737	—	201,244	37,009	36,870	8,509	111,705	194,093	149,623	(39,290)	—	110,333
1,438,512	—	3,979,998	731,928	729,177	168,276	166,935	1,796,316	2,959,093	(62,886)	—	2,896,207
701,912	29,966	1,971,979	357,139	355,797	82,109	63,445	858,490	1,443,869	(15,980)	—	1,427,889
1,250,574	73,397	3,533,419	636,304	633,912	146,292	5,377	1,421,885	2,572,495	27,643	—	2,600,138
170,812	192,217	664,810	86,911	86,584	19,981	—	193,476	351,369	66,463	—	417,832
43,753	46,025	167,079	22,262	22,178	5,118	—	49,558	90,002	16,683	—	106,685
296,249	200,102	1,019,748	150,734	150,168	34,655	—	335,557	609,399	70,483	—	679,882
84,041,463	11,602,247	244,123,676	42,761,071	42,600,375	9,831,133	4,273,637	99,466,216	172,877,626	1,919,430	—	174,797,056
88,434	44,463	289,138	44,996	44,827	10,345	—	100,168	181,913	14,482	—	196,395
103,708	28,672	315,606	52,768	52,569	12,132	—	117,469	213,333	10,242	—	223,575
387,164	536,891	1,608,076	196,993	196,252	45,290	—	438,535	796,417	190,356	—	986,773
184,451	65,796	576,125	93,850	93,498	21,577	—	208,925	379,425	24,056	—	403,481
109,963	66,018	370,257	55,950	55,740	12,863	—	124,553	226,199	25,281	—	251,480
4,934,933	—	13,653,710	2,510,939	2,501,504	577,286	1,435,142	7,024,871	10,151,413	(476,304)	—	9,675,109
130,492	47,540	408,579	66,396	66,146	15,265	—	147,807	268,430	18,750	—	287,180
313,028	—	866,070	159,272	158,673	36,618	193,428	547,991	643,915	(75,706)	—	568,209
2,664,970	—	7,373,297	1,355,961	1,350,866	311,747	773,673	3,792,247	5,481,982	(254,132)	—	5,227,850
11,803,597	—	32,657,563	6,005,779	5,983,209	1,380,779	6,063,287	19,433,054	24,280,609	(1,933,287)	—	22,347,322
4,424,404	—	12,241,206	2,251,178	2,242,718	517,565	1,786,548	6,798,009	9,101,228	(595,186)	—	8,506,042
90,684	122,831	373,730	46,141	45,967	10,608	40,814	143,530	186,541	22,091	—	208,632
114,218	41,399	357,411	58,115	57,897	13,361	—	129,373	234,952	14,916	—	249,868
188,929	316,058	838,776	96,129	95,767	22,101	—	213,997	388,636	121,802	—	510,438
55,635	12,980	166,907	28,307	28,201	6,508	10,260	73,276	114,444	(42)	—	114,402
158,477	—	438,465	80,634	80,331	18,539	45,610	225,114	325,995	(15,019)	—	310,976
542,340	206,088	1,706,605	275,948	274,911	63,443	—	614,302	1,115,621	77,029	—	1,192,650
2,806,036	841,293	8,604,884	1,427,737	1,422,372	328,249	128,306	3,306,664	5,772,162	211,725	—	5,983,887
45,588	64,028	190,159	23,196	23,108	5,333	—	51,637	93,777	22,626	—	116,403
64,720	78,193	257,257	32,930	32,806	7,571	20,229	93,536	133,132	16,361	—	149,493
38,931	—	107,712	19,808	19,734	4,554	76,711	120,807	80,082	(28,264)	—	51,818
55,292	27,314	180,294	28,133	28,028	6,468	4,638	67,267	113,739	6,685	—	120,424
4,737,345	370,551	13,477,585	2,410,405	2,401,347	554,172	594,377	5,960,301	9,744,964	(37,758)	—	9,707,206
2,635,925	747,043	8,039,981	1,341,183	1,336,143	308,349	922,591	3,908,266	5,422,235	10,059	—	5,432,294
2,765,268	385,390	8,036,187	1,406,994	1,401,707	323,480	85,205	3,217,386	5,688,300	127,337	—	5,815,637
6,052	151	16,896	3,079	3,068	708	654	7,509	12,450	(144)	—	12,306
10,773,359	897,935	30,705,091	5,481,584	5,460,985	1,260,262	—	12,202,831	22,161,357	335,618	—	22,496,975
254,859	6,411	711,542	129,675	129,187	29,813	151,673	440,348	524,259	(44,851)	—	479,408
12,737,121	—	35,240,387	6,480,764	6,456,410	1,489,982	913,418	15,340,574	26,200,916	(287,964)	—	25,912,952
1,864,662	215,793	5,374,840	948,757	945,192	218,127	464,689	2,576,765	3,835,705	(59,047)	—	3,776,658
15,226	2,450	44,577	7,747	7,718	1,781	—	17,246	31,321	951	—	32,272
3,205,262	480,010	9,348,158	1,630,867	1,624,738	374,950	—	3,630,555	6,593,389	159,207	—	6,752,596
343,627,925	30,395,833	981,127,245	174,841,043	174,184,005	40,197,431	37,001,860	426,224,339	706,860,389	(2,360,218)	—	704,500,171

**Contributory Retirement System  
Local Government Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Bluffdale City	\$ —	0.000000%	\$ —	—	—	—	—
Box Elder County	24,349	0.7017954	230,267	554,332	(42,725)	—	109,359
Brigham City	7,579	0.2184385	71,672	172,539	(13,298)	—	34,039
Carbon County	19,723	0.5684649	186,520	449,017	(34,608)	—	88,583
Castle Valley Special Service District	10,842	0.3124961	102,533	246,833	(19,025)	—	48,696
Centerville City	27,368	0.7888045	258,815	623,058	(48,022)	—	122,918
City of Bountiful	7,756	0.2235533	73,350	176,579	(13,610)	—	34,836
City of Naples	14,418	0.4155565	136,349	328,238	(25,299)	—	64,755
City of Orem	146,215	4.2142704	1,382,749	3,328,753	(256,562)	—	656,700
City of South Jordan	7,821	0.2254320	73,967	178,063	(13,724)	—	35,129
City of St George	23,022	0.6635399	217,715	524,115	(40,396)	—	103,398
City of West Jordan	9,803	0.2825332	92,702	223,166	(17,200)	—	44,027
Clinton City	25,023	0.7212194	236,640	569,674	(43,907)	—	112,386
Corinne City	17,706	0.5103378	167,447	403,104	(31,069)	—	79,525
Davis & Weber County Canal Co	110,995	3.1991387	1,049,673	2,526,924	(194,761)	—	498,514
Davis Co Housing Authority	30,085	0.8671101	284,508	684,910	(52,789)	—	135,120
Ddi Vantage	576,551	16.6175854	5,452,412	13,125,843	(1,011,665)	—	2,589,478
Duchesne Co Mosquito District	9,197	0.2650671	86,971	209,370	(16,137)	—	41,305
Duchesne County	133,741	3.8547274	1,264,779	3,044,758	(234,673)	—	600,673
Emery Co Care & Rehab Center	81,057	2.3362485	766,549	1,845,348	(142,229)	—	364,052
Emery County	16,704	0.4814428	157,967	380,280	(29,310)	—	75,022
Emery Town	5,687	0.1639246	53,785	129,480	(9,980)	—	25,544
Five-County Association of Governments	10,916	0.3146284	103,233	248,518	(19,154)	—	49,028
Garfield County	8,942	0.2577353	84,566	203,579	(15,691)	—	40,162
Garland City	25,250	0.7277612	238,786	574,841	(44,306)	—	113,405
Grand County	23,408	0.6746694	221,366	532,905	(41,073)	—	105,132
Gunnison Valley Hospital	4,575	0.1318545	43,263	104,149	(8,027)	—	20,547
Honeyville City	13,375	0.3854860	126,482	304,486	(23,468)	—	60,069
Housing Authority of SLC	9,887	0.2849814	93,506	225,100	(17,349)	—	44,408
Iron County	6,992	0.2015241	66,122	159,179	(12,269)	—	31,403
Jordan Valley Water Conservancy	36,807	1.0608685	348,083	837,955	(64,585)	—	165,313
Juab County	7,346	0.2117232	69,469	167,235	(12,890)	—	32,992
Kaysville City	12,728	0.3668630	120,372	289,776	(22,334)	—	57,167
Kearns Improvement District	43,334	1.2489916	409,808	986,549	(76,038)	—	194,628
Laverkin City	80,104	2.3087949	757,541	1,823,663	(140,558)	—	359,774
Layton City	46,197	1.3315160	436,885	1,051,733	(81,062)	—	207,487
Logan City	12,830	0.3697879	121,331	292,087	(22,512)	—	57,623
Mountainland Association of Governments	16,486	0.4751601	155,905	375,318	(28,927)	—	74,043
Murray City	83,022	2.3929059	785,139	1,890,100	(145,678)	—	372,881
North Davis Co Sewer District	12,077	0.3480829	114,210	274,942	(21,191)	—	54,241
North Logan City	12,427	0.3581704	117,520	282,910	(21,805)	—	55,813
Oakley City	20,875	0.6016723	197,415	475,247	(36,629)	—	93,757
Ogden City Corp	102,251	2.9471334	966,987	2,327,871	(179,419)	—	459,245
Park City	123,267	3.5528544	1,165,731	2,806,316	(216,295)	—	553,633
Provo City Corp	62,991	1.8155608	595,706	1,434,069	(110,530)	—	282,915
Provo Housing Authority	20,247	0.5835554	191,471	460,937	(35,526)	—	90,934
Rich County	32,811	0.9456789	310,288	746,969	(57,572)	—	147,363
Riverdale City	3,380	0.0974195	31,964	76,949	(5,931)	—	15,181
Roy City	11,665	0.3362274	110,320	265,578	(20,469)	—	52,394
Salt Lake City Corp	491,785	14.1744340	4,650,788	11,196,051	(862,929)	—	2,208,770
Salt Lake County	284,033	8.1865077	2,686,083	6,466,329	(498,388)	—	1,275,685
San Juan County	7,603	0.2191371	71,901	173,091	(13,341)	—	34,148
Sandy City	103,224	2.9751790	976,189	2,350,024	(181,127)	—	463,615
South Davis Sewer District	44,999	1.2969910	425,557	1,024,463	(78,960)	—	202,107
Spring City	2,779	0.0801076	26,284	63,275	(4,877)	—	12,483



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 Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Gross Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportionate Share of Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
—	—	—	—	—	—	9,234	9,234	—	(991,769)	—	(991,769)
—	1,417	110,776	1,722	28,762	—	—	30,484	(197,020)	181,705	—	(15,315)
—	439	34,478	536	8,952	—	—	9,488	(61,324)	58,114	—	(3,210)
—	—	88,583	1,395	23,298	—	2,540	27,233	(159,589)	(6,028)	—	(165,617)
—	809	49,505	767	12,807	—	—	13,574	(87,729)	81,819	—	(5,910)
—	1,365	124,283	1,936	32,328	—	—	34,264	(221,447)	208,615	—	(12,832)
—	597	35,433	549	9,162	—	—	9,711	(62,760)	46,710	—	(16,050)
—	—	64,755	1,020	17,031	—	2,855	20,906	(116,662)	(175,967)	—	(292,629)
—	6,869	663,569	10,341	172,715	—	—	183,056	(1,183,101)	1,029,783	—	(153,318)
—	—	35,129	553	9,239	—	83,716	93,508	(63,287)	(6,598,744)	—	(6,662,031)
—	1,605	105,003	1,628	27,194	—	—	28,822	(186,280)	173,504	—	(12,776)
—	1,501	45,528	693	11,579	—	—	12,272	(79,317)	(56,819)	—	(136,136)
—	1,707	114,093	1,770	29,558	—	—	31,328	(202,473)	134,165	—	(68,308)
—	1,064	80,589	1,252	20,915	—	—	22,167	(143,271)	138,102	—	(5,169)
—	5,690	504,204	7,850	131,111	—	—	138,961	(898,116)	861,159	—	(36,957)
—	—	135,120	2,128	35,537	—	1,313	38,978	(243,430)	(111,698)	—	(355,128)
—	31,200	2,620,678	40,773	681,043	—	—	721,816	(4,665,167)	4,660,965	—	(4,202)
—	909	42,214	650	10,863	—	—	11,513	(74,414)	69,614	—	(4,800)
—	8,669	609,342	9,459	157,979	—	—	167,438	(1,082,164)	(2,075,002)	—	(3,157,166)
—	1,946	365,998	5,733	95,747	—	—	101,480	(655,871)	532,704	—	(123,167)
—	44	75,066	1,181	19,731	—	—	20,912	(135,159)	63,364	—	(71,795)
—	—	25,544	402	6,718	—	221	7,341	(46,020)	37,837	—	(8,183)
—	618	49,646	772	12,895	—	—	13,667	(88,328)	79,247	—	(9,081)
—	280	40,442	632	10,563	—	—	11,195	(72,356)	64,052	—	(8,304)
—	1,909	115,314	1,786	29,826	—	—	31,612	(204,309)	185,396	—	(18,913)
—	1,407	106,539	1,656	27,650	—	—	29,306	(189,405)	174,811	—	(14,594)
—	596	21,143	324	5,404	—	—	5,728	(37,016)	2,141	—	(34,875)
—	558	60,627	946	15,798	—	—	16,744	(108,220)	105,036	—	(3,184)
—	122	44,530	699	11,679	—	—	12,378	(80,005)	66,048	—	(13,957)
—	419	31,822	495	8,259	—	—	8,754	(56,575)	53,233	—	(3,342)
—	2,241	167,554	2,603	43,478	—	—	46,081	(297,825)	271,810	—	(26,015)
—	—	32,992	520	8,677	—	177	9,374	(59,439)	28,083	—	(31,356)
—	729	57,896	900	15,035	—	—	15,935	(102,992)	98,567	—	(4,425)
—	2,594	197,222	3,065	51,188	—	—	54,253	(350,638)	325,246	—	(25,392)
—	4,487	364,261	5,665	94,622	—	—	100,287	(648,164)	592,864	—	(55,300)
—	—	207,487	3,267	54,570	—	1,477	59,314	(373,806)	288,950	—	(84,856)
—	287	57,910	907	15,155	—	—	16,062	(103,813)	95,707	—	(8,106)
—	1,239	75,282	1,166	19,474	—	—	20,640	(133,395)	125,169	—	(8,226)
—	1,589	374,470	5,872	98,069	—	—	103,941	(671,777)	544,166	—	(127,611)
—	—	54,241	854	14,266	—	1,483	16,603	(97,720)	50,969	—	(46,751)
—	771	56,584	879	14,679	—	—	15,558	(100,552)	94,349	—	(6,203)
—	1,220	94,977	1,476	24,658	—	—	26,134	(168,912)	157,986	—	(10,926)
—	3,389	462,634	7,232	120,783	—	—	128,015	(827,369)	626,659	—	(200,710)
—	6,931	560,564	8,718	145,608	—	—	154,326	(997,417)	811,364	—	(186,053)
—	—	282,915	4,455	74,408	—	4,537	83,400	(509,695)	355,245	—	(154,450)
—	1,012	91,946	1,432	23,916	—	—	25,348	(163,826)	161,007	—	(2,819)
—	4,492	151,855	2,321	38,757	—	—	41,078	(265,487)	(164,403)	—	(429,890)
—	—	15,181	239	3,993	—	28	4,260	(27,349)	(7,198)	—	(34,547)
—	706	53,100	825	13,780	—	—	14,605	(94,391)	89,657	—	(4,734)
—	3,390	2,212,160	34,781	580,915	—	—	615,696	(3,979,287)	2,501,129	—	(1,478,158)
—	8,411	1,284,096	20,088	335,510	—	—	355,598	(2,298,255)	1,314,391	—	(983,864)
—	417	34,565	538	8,981	—	—	9,519	(61,520)	60,110	—	(1,410)
—	3,334	466,949	7,301	121,933	—	—	129,234	(835,242)	657,330	—	(177,912)
—	2,836	204,943	3,183	53,155	—	—	56,338	(364,113)	349,561	—	(14,552)
—	302	12,785	197	3,283	—	—	3,480	(22,489)	(133,863)	—	(156,352)

**Contributory Retirement System  
Local Government Division**
**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Springville City	\$ 7,602	0.2191155%	\$ 71,894	173,074	(13,340)	—	34,144
Timpanogos Special Service District	16,969	0.4890778	160,472	386,311	(29,775)	—	76,212
Tooele City	7,134	0.2056053	67,461	162,403	(12,517)	—	32,039
Tooele County	7,591	0.2187864	71,786	172,814	(13,320)	—	34,093
Town of Manila	8,752	0.2522463	82,765	199,243	(15,357)	—	39,307
Town of Paragonah	4,512	0.1300329	42,665	102,710	(7,916)	—	20,263
Uintah County	2,415	0.0695969	22,836	54,973	(4,237)	—	10,845
Utah Co Housing Authority	10,968	0.3161344	103,727	249,707	(19,246)	—	49,263
Utah County	99,061	2.8551754	936,815	2,255,236	(173,821)	—	444,915
Utah League Cities/Towns	71,604	2.0638026	677,156	1,630,149	(125,643)	—	321,598
UTOPIA	—	0.0000000	—	—	—	—	—
Vernal City	23,084	0.6653298	218,302	525,528	(40,505)	—	103,677
Washington Co Water Conservancy District	2,761	0.0795726	26,109	62,853	(4,844)	—	12,400
Weber County Corp	25,518	0.7354761	241,318	580,935	(44,775)	—	114,608
Weber Fire District	2,800	0.0806884	26,475	63,734	(4,912)	—	12,573
Weber River Water Users	8,580	0.2473093	81,145	195,344	(15,056)	—	38,538
West Valley City	74,123	2.1364134	700,981	1,687,503	(130,063)	—	332,912
Woods Cross City	11,796	0.3399872	111,554	268,548	(20,698)	—	52,979
<b>Grand Total</b>	<b>\$ 3,469,521</b>	<b>100.0000000%</b>	<b>\$ 32,811,102</b>	<b>78,987,643</b>	<b>(6,087,924)</b>	<b>—</b>	<b>15,582,771</b>
<b>No Proportionate Share for 2016</b>							
Brian Head Town	\$ —	0.0000000%	\$ —	—	—	—	—
Cache County	—	0.0000000	—	—	—	—	—
Midway City	—	0.0000000	—	—	—	—	—
Millard County	—	0.0000000	—	—	—	—	—
Mount Pleasant City	—	0.0000000	—	—	—	—	—
Pleasant View City	—	0.0000000	—	—	—	—	—
Sevier County	—	0.0000000	—	—	—	—	—
South Valley Sewer District	—	0.0000000	—	—	—	—	—
Southeastern Utah Association of Governments	—	0.0000000	—	—	—	—	—
Southeastern Utah Health	—	0.0000000	—	—	—	—	—
Sunset City	—	0.0000000	—	—	—	—	—
Valley Mental Health	—	0.0000000	—	—	—	—	—
West Bountiful City	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 3,469,521</b>	<b>100.0000000%</b>	<b>\$ 32,811,102</b>	<b>78,987,643</b>	<b>(6,087,924)</b>	<b>—</b>	<b>15,582,771</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	
—	—	34,144	538	8,980	—	944	10,462	(61,514)	20,845	—	(40,669)
—	786	76,998	1,200	20,044	—	—	21,244	(137,302)	155,352	—	18,050
—	—	32,039	505	8,426	—	1,375	10,306	(57,721)	30,841	—	(26,880)
—	468	34,561	537	8,967	—	—	9,504	(61,421)	57,066	—	(4,355)
—	717	40,024	619	10,338	—	—	10,957	(70,815)	26,410	—	(44,405)
—	250	20,513	319	5,329	—	—	5,648	(36,505)	32,320	—	(4,185)
—	—	10,845	171	2,852	—	17,830	20,853	(19,538)	(8,064,287)	—	(8,083,825)
—	469	49,732	776	12,956	—	—	13,732	(88,751)	83,786	—	(4,965)
—	3,921	448,836	7,006	117,014	—	—	124,020	(801,553)	698,213	—	(103,340)
—	4,616	326,214	5,064	84,581	—	—	89,645	(579,386)	561,280	—	(18,106)
—	—	—	—	—	—	—	—	—	—	—	—
—	120	103,797	1,633	27,267	—	—	28,900	(186,783)	79,740	—	(107,043)
—	6,691	19,091	195	3,261	—	—	3,456	(22,339)	(1,769,434)	—	(1,791,773)
—	—	114,608	1,805	30,142	—	1,316	33,263	(206,475)	88,440	—	(18,035)
—	519	13,092	198	3,307	—	—	3,505	(22,652)	(21,789)	—	(44,441)
—	376	38,914	607	10,136	—	—	10,743	(69,429)	58,414	—	(11,015)
—	740	333,652	5,242	87,557	—	—	92,799	(599,770)	313,838	—	(285,932)
—	617	53,596	834	13,934	—	—	14,768	(95,447)	88,674	—	(6,773)
—	142,404	15,725,175	245,381	4,098,327	—	129,046	4,472,754	(28,073,689)	726,657	—	(27,347,032)
—	—	—	—	—	—	7,320	7,320	—	(382,486)	—	(382,486)
—	—	—	—	—	—	3,204	3,204	—	(29,946)	—	(29,946)
—	—	—	—	—	—	1,140	1,140	—	(10,653)	—	(10,653)
—	141	141	—	—	—	—	—	—	(57,768)	—	(57,768)
—	—	—	—	—	—	1,001	1,001	—	(9,352)	—	(9,352)
—	—	—	—	—	—	3,101	3,101	—	(28,985)	—	(28,985)
—	—	—	—	—	—	775	775	—	(7,241)	—	(7,241)
—	—	—	—	—	—	585	585	—	(5,464)	—	(5,464)
—	—	—	—	—	—	318	318	—	(19,417)	—	(19,417)
—	—	—	—	—	—	157	157	—	(1,469)	—	(1,469)
—	—	—	—	—	—	2,262	2,262	—	(30,757)	—	(30,757)
—	—	—	—	—	—	622	622	—	(5,813)	—	(5,813)
—	—	—	—	—	—	4,320	4,320	—	(503,000)	—	(503,000)
—	142,545	15,725,316	245,381	4,098,327	—	153,851	4,497,559	(28,073,689)	(365,695)	—	(28,439,384)

**Contributory Retirement System  
State and School Division**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Alpine School District	\$ 177,633	3.7437475%	\$ 2,051,415	5,043,362	(489,582)	—	1,060,791
Box Elder School District	15,710	0.3310938	181,425	446,031	(43,298)	—	93,815
Cache School District	78,904	1.6629618	911,233	2,240,247	(217,471)	—	471,200
Carbon School District	5,338	0.1125099	61,651	151,567	(14,713)	—	31,880
Davis School District	246,959	5.2048370	2,852,030	7,011,659	(680,654)	—	1,474,791
Dixie State University	7,992	0.1684310	92,293	226,901	(22,026)	—	47,725
Duchesne School District	39,037	0.8227239	450,818	1,108,327	(107,590)	—	233,119
Educators Mutual Insurance	36,832	0.7762627	425,359	1,045,737	(101,514)	—	219,954
Emery School District	12,569	0.2648923	145,150	356,848	(34,641)	—	75,057
Granite School District	449,306	9.4694535	5,188,859	12,756,706	(1,238,352)	—	2,683,170
Iron School District	10,897	0.2296535	125,840	309,376	(30,033)	—	65,072
Jordan School District	99,254	2.0918477	1,146,244	2,818,018	(273,558)	—	592,725
Kane School District	4,114	0.0867147	47,516	116,817	(11,340)	—	24,571
Logan School District	23,352	0.4921531	269,679	663,000	(64,360)	—	139,452
Millard School District	30,987	0.6530674	357,853	879,775	(85,404)	—	185,047
Murray School District	8,738	0.1841626	100,913	248,093	(24,084)	—	52,182
Nebo School District	10,549	0.2223368	121,831	299,519	(29,076)	—	62,999
North Sanpete School District	4,318	0.0910154	49,873	122,611	(11,902)	—	25,789
Ogden-Weber Technology College	30,277	0.6381009	349,652	859,613	(83,447)	—	180,806
Park City School District	21,327	0.4494815	246,297	605,516	(58,780)	—	127,361
Provo School District	67,179	1.4158416	775,821	1,907,341	(185,154)	—	401,179
Salt Lake Community College	68,627	1.4463568	792,542	1,948,449	(189,145)	—	409,825
Salt Lake School District	255,008	5.3744721	2,944,983	7,240,181	(702,837)	—	1,522,857
San Juan School District	11,687	0.2463122	134,969	331,818	(32,211)	—	69,793
Sevier School District	7,796	0.1643031	90,031	221,340	(21,486)	—	46,555
Snow College	7,431	0.1566075	85,814	210,973	(20,480)	—	44,375
Southern Utah University	5,589	0.1177917	64,545	158,682	(15,404)	—	33,376
State of Utah	1,466,109	30.8993409	16,931,530	41,625,821	(4,040,810)	—	8,755,328
Tooele School District	10,236	0.2157321	118,212	290,622	(28,212)	—	61,128
Uintah School District	39,890	0.8407068	460,672	1,132,552	(109,942)	—	238,214
University of Utah	523,787	11.0392034	6,049,016	14,871,383	(1,443,633)	—	3,127,958
University of Utah Hospital	452,322	9.5330257	5,223,694	12,842,347	(1,246,665)	—	2,701,183
Utah Housing Corporation	90,155	1.9000816	1,041,164	2,559,681	(248,480)	—	538,388
Utah State University	78,900	1.6628695	911,182	2,240,123	(217,459)	—	471,174
Utah Valley University	123,665	2.6063328	1,428,160	3,511,102	(340,839)	—	738,504
Washington School District	38,049	0.8019154	439,416	1,080,295	(104,869)	—	227,223
Weber County School District	2,242	0.0472535	25,893	63,657	(6,179)	—	13,389
Weber State University	85,476	1.8014682	987,128	2,426,835	(235,584)	—	510,446
Workers Compensation Fund	96,554	2.0349381	1,115,060	2,741,352	(266,116)	—	576,600
<b>Grand Total</b>	<b>\$ 4,744,792</b>	<b>100.0000000%</b>	<b>\$ 54,795,763</b>	<b>134,714,277</b>	<b>(13,077,330)</b>	<b>—</b>	<b>28,335,001</b>
<b>No Proportionate Share for 2016</b>							
Juab School District	\$ —	0.0000000%	\$ —	—	—	—	—
<b>Grand Total</b>	<b>\$ 4,744,792</b>	<b>100.0000000%</b>	<b>\$ 54,795,763</b>	<b>134,714,277</b>	<b>(13,077,330)</b>	<b>—</b>	<b>28,335,001</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	Proportionate Share of	
—	—	1,060,791	—	302,593	—	—	302,593	536,364	(2,849)	—	533,515
—	—	93,815	—	26,761	—	—	26,761	47,436	(86,271)	—	(38,835)
—	—	471,200	—	134,411	—	—	134,411	238,251	82,291	—	320,542
—	—	31,880	—	9,094	—	—	9,094	16,119	(32,423)	—	(16,304)
—	—	1,474,791	—	420,688	—	—	420,688	745,693	(40,873)	—	704,820
—	—	47,725	—	13,614	—	—	13,614	24,131	(27,278)	—	(3,147)
—	—	233,119	—	66,498	—	—	66,498	117,871	9,612	—	127,483
—	—	219,954	—	62,742	—	—	62,742	111,215	40,964	—	152,179
—	—	75,057	—	21,410	—	—	21,410	37,951	(8,074)	—	29,877
—	—	2,683,170	—	765,381	—	—	765,381	1,356,681	(92,308)	—	1,264,373
—	—	65,072	—	18,562	—	—	18,562	32,902	7,140	—	40,042
—	—	592,725	—	169,076	—	—	169,076	299,697	9,128	—	308,825
—	—	24,571	—	7,009	—	—	7,009	12,424	3,918	—	16,342
—	—	139,452	—	39,779	—	—	39,779	70,510	23,644	—	94,154
—	—	185,047	—	52,785	—	—	52,785	93,564	(4,046)	—	89,518
—	—	52,182	—	14,885	—	—	14,885	26,385	8,004	—	34,389
—	—	62,999	—	17,971	—	—	17,971	31,854	10,718	—	42,572
—	—	25,789	—	7,356	—	—	7,356	13,040	3,823	—	16,863
—	—	180,806	—	51,575	—	—	51,575	91,420	31,421	—	122,841
—	—	127,361	—	36,330	—	—	36,330	64,397	(16,554)	—	47,843
—	—	401,179	—	114,437	—	—	114,437	202,846	(12,885)	—	189,961
—	—	409,825	—	116,904	—	—	116,904	207,218	32,828	—	240,046
—	—	1,522,857	—	434,399	—	—	434,399	769,996	77,964	—	847,960
—	—	69,793	—	19,908	—	—	19,908	35,289	(2,761)	—	32,528
—	—	46,555	—	13,280	—	—	13,280	23,540	5,454	—	28,994
—	—	44,375	—	12,658	—	—	12,658	22,437	7,188	—	29,625
—	—	33,376	—	9,521	—	—	9,521	16,876	4,169	—	21,045
—	—	8,755,328	—	2,497,478	—	—	2,497,478	4,426,921	(310,728)	—	4,116,193
—	—	61,128	—	17,437	—	—	17,437	30,908	12,336	—	43,244
—	—	238,214	—	67,951	—	—	67,951	120,447	24,617	—	145,064
—	—	3,127,958	—	892,258	—	—	892,258	1,581,578	55,352	—	1,636,930
—	—	2,701,183	—	770,519	—	—	770,519	1,365,789	162,105	—	1,527,894
—	—	538,388	—	153,577	—	—	153,577	272,223	98,345	—	370,568
—	—	471,174	—	134,404	—	—	134,404	238,238	75,136	—	313,374
—	—	738,504	—	210,660	—	—	210,660	373,407	(20,831)	—	352,576
—	—	227,223	—	64,816	—	—	64,816	114,890	39,124	—	154,014
—	—	13,389	—	3,819	—	—	3,819	6,770	(17,118)	—	(10,348)
—	—	510,446	—	145,606	—	—	145,606	258,095	97,847	—	355,942
—	—	576,600	—	164,476	—	—	164,476	291,544	71,143	—	362,687
—	—	28,335,001	—	8,082,628	—	—	8,082,628	14,326,917	319,272	—	14,646,189
—	—	—	—	—	—	—	—	—	(32,041)	—	(32,041)
—	—	28,335,001	0	8,082,628	—	—	8,082,628	14,326,917	287,231	—	14,614,148

**Public Safety Retirement System  
Other Division A with Social Security**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
American Fork City	\$ 506,598	0.9700784%	\$ 1,968,557	4,094,152	240,738	—	414,337
Beaver County	786,257	1.5055932	3,055,264	6,354,257	373,633	—	643,064
Big Water Municipal Corp	3,910	0.0074880	15,195	31,603	1,858	—	3,198
Blanding City	63,036	0.1207075	244,949	509,438	29,955	—	51,556
Box Elder County	1,071,263	2.0513474	4,162,750	8,657,577	509,069	—	876,165
Brigham City	440,109	0.8427587	1,710,190	3,556,808	209,142	—	359,956
Cache County	1,636,294	3.1333176	6,358,367	13,223,961	777,575	—	1,338,293
Carbon County	675,044	1.2926335	2,623,110	5,455,475	320,784	—	552,105
Cedar City	510,783	0.9780919	1,984,819	4,127,973	242,727	—	417,759
Centerfield City	18,005	0.0344782	69,966	145,513	8,556	—	14,726
Centerville City	332,920	0.6375033	1,293,670	2,690,541	158,205	—	272,288
City of Draper	601,919	1.1526067	2,338,957	4,864,501	286,035	—	492,298
City of Harrisville	92,981	0.1780486	361,310	751,442	44,185	—	76,048
City of Helper	64,713	0.1239179	251,464	522,987	30,752	—	52,927
City of Kanab	83,637	0.1601547	324,998	675,922	39,745	—	68,405
City of Moab	167,414	0.3205798	650,545	1,352,986	79,556	—	136,925
City of Monticello	25,651	0.0491193	99,677	207,305	12,190	—	20,980
City of Naples	78,813	0.1509173	306,253	636,937	37,452	—	64,459
City of North Salt Lake	346,747	0.6639816	1,347,402	2,802,291	164,776	—	283,598
City of South Jordan	839,669	1.6078706	3,262,813	6,785,912	399,015	—	686,749
City of South Salt Lake	971,462	1.8602397	3,774,940	7,851,020	461,643	—	794,540
City of St George	1,873,639	3.5878081	7,280,653	15,142,109	890,363	—	1,532,413
Clearfield City	394,102	0.7546618	1,531,417	3,185,001	187,279	—	322,329
Clinton City	202,249	0.3872833	785,905	1,634,504	96,110	—	165,415
Daggett County	130,375	0.2496528	506,614	1,053,643	61,955	—	106,631
Davis County	3,297,169	6.3137072	12,812,255	26,646,587	1,566,831	—	2,696,690
Duchesne County	503,105	0.9633898	1,954,984	4,065,923	239,078	—	411,480
East Carbon City	26,825	0.0513671	104,238	216,791	12,747	—	21,940
Emery County	508,292	0.9733222	1,975,140	4,107,842	241,543	—	415,722
Enoch City	53,569	0.1025795	208,162	432,930	25,456	—	43,813
Ephraim City	80,204	0.1535813	311,659	648,180	38,113	—	65,597
Fairview City	—	0.0000000	—	—	—	—	—
Farmington City	263,021	0.5036553	1,022,056	2,125,644	124,989	—	215,120
Fountain Green City	12,595	0.0241179	48,942	101,788	5,985	—	10,301
Garfield County	408,300	0.7818479	1,586,585	3,299,738	194,026	—	333,940
Garland City	36,882	0.0706253	143,318	298,069	17,527	—	30,165
Grand County	273,704	0.5241121	1,063,568	2,211,981	130,065	—	223,857
Grantsville City	146,639	0.2807970	569,815	1,185,085	69,684	—	119,933
Gunnison City	50,450	0.0966052	196,039	407,716	23,974	—	41,262
Heber City	290,585	0.5564376	1,129,166	2,348,408	138,087	—	237,664
Hurricane City	319,591	0.6119810	1,241,878	2,582,826	151,871	—	261,387
Iron County	911,561	1.7455369	3,542,176	7,366,924	433,178	—	745,548
Ivins City	206,144	0.3947426	801,042	1,665,985	97,961	—	168,601
Juab County	237,352	0.4545025	922,311	1,918,198	112,791	—	194,126
Kamas City	35,587	0.0681446	138,284	287,600	16,911	—	29,106
Kane County	465,506	0.8913908	1,808,878	3,762,056	221,211	—	380,728
Kaysville City	499,779	0.9570199	1,942,058	4,039,040	237,497	—	408,759
Laverkin City	51,881	0.0993460	201,600	419,283	24,654	—	42,432
Layton City	1,295,455	2.4806511	5,033,926	10,469,425	615,607	—	1,059,528
Lehi City	726,405	1.3909834	2,822,689	5,870,554	345,191	—	594,112
Lindon City	286,391	0.5484060	1,112,867	2,314,512	136,094	—	234,233
Mapleton City	111,245	0.2130220	432,280	899,045	52,864	—	90,985
Millard County	742,766	1.4223134	2,886,267	6,002,780	352,966	—	607,494
Morgan County	128,169	0.2454299	498,045	1,035,821	60,907	—	104,827
Mount Pleasant City	72,586	0.1389948	282,059	586,618	34,493	—	59,367
Murray City	1,343,357	2.5723775	5,220,064	10,856,550	638,370	—	1,098,706
Nephi City	135,958	0.2603433	528,308	1,098,762	64,608	—	111,197
North Logan City	31,291	0.0599182	121,591	252,881	14,870	—	25,592
North Ogden City	243,847	0.4669401	947,550	1,970,690	115,877	—	199,438
North Park Police Agency	55,731	0.1067184	216,561	450,398	26,484	—	45,581

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 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		
341,485	15,031	770,853	159,767	120,910	68,625	57,309	406,611	594,431	(13,963)	—	580,468	
529,996	116,222	1,289,282	247,964	187,656	106,508	—	542,128	922,577	48,955	—	971,532	
2,636	3,005	8,839	1,233	933	530	455	3,151	4,588	1,303	—	5,891	
42,491	9,476	103,523	19,880	15,045	8,539	—	43,464	73,965	3,957	—	77,922	
722,111	35,791	1,634,067	337,847	255,679	145,116	13,375	752,017	1,256,997	12,559	—	1,269,556	
296,666	39,943	696,565	138,798	105,041	59,618	21,270	324,727	516,414	4,444	—	520,858	
1,102,984	161,036	2,602,313	516,043	390,535	221,656	—	1,128,234	1,919,992	66,584	—	1,986,576	
455,030	124,944	1,132,079	212,891	161,113	91,443	41,312	506,759	792,082	45,842	—	837,924	
344,306	7,015	769,080	161,087	121,909	69,192	17,992	370,180	599,342	(6,204)	—	593,138	
12,137	2,341	29,204	5,678	4,297	2,439	1,284	13,698	21,127	242	—	21,369	
224,413	90,835	587,536	104,994	79,458	45,098	—	229,550	390,641	36,826	—	427,467	
405,738	54,126	952,162	189,829	143,660	81,537	16,334	431,360	706,279	12,141	—	718,420	
62,676	30,364	169,088	29,324	22,192	12,595	7,174	71,285	109,102	7,785	—	116,887	
43,621	—	96,548	20,409	15,445	8,766	32,166	76,786	75,933	(13,153)	—	62,780	
56,377	8,495	133,277	26,377	19,962	11,330	—	57,669	98,137	3,742	—	101,879	
112,850	6,177	255,952	52,798	39,957	22,678	22,666	138,099	196,441	(8,806)	—	187,635	
17,291	15,657	53,928	8,090	6,122	3,475	852	18,539	30,099	5,409	—	35,508	
53,126	—	117,585	24,855	18,810	10,676	47,232	101,573	92,477	(20,416)	—	72,061	
233,734	20,656	537,988	109,355	82,758	46,971	—	239,084	406,866	8,264	—	415,130	
566,000	64,954	1,317,703	264,809	200,404	113,743	—	578,956	985,249	28,724	—	1,013,973	
654,838	—	1,449,378	306,373	231,859	131,596	112,181	782,009	1,139,892	(52,335)	—	1,087,557	
1,262,973	326,034	3,121,420	590,895	447,183	253,807	—	1,291,885	2,198,488	123,580	—	2,322,068	
265,655	—	587,984	124,289	94,061	53,386	105,144	376,880	462,431	(47,708)	—	414,723	
136,331	22,888	324,634	63,784	48,271	27,397	—	139,452	237,314	10,031	—	247,345	
87,882	—	194,513	41,117	31,117	17,661	90,381	180,276	152,979	(38,512)	—	114,467	
2,222,539	22,279	4,941,508	1,039,838	786,937	446,642	685,461	2,958,878	3,868,828	(244,187)	—	3,624,641	
339,131	68,933	819,544	158,666	120,076	68,152	3,593	350,487	590,333	23,894	—	614,227	
18,082	—	40,022	8,460	6,402	3,634	31,429	49,925	31,476	(13,919)	—	17,557	
342,627	29,516	787,865	160,302	121,314	68,854	99,843	450,313	596,419	(22,696)	—	573,723	
36,110	14,853	94,776	16,894	12,785	7,257	32,135	69,071	62,857	(4,682)	—	58,175	
54,063	52,615	172,275	25,294	19,142	10,865	—	55,301	94,109	20,394	—	114,503	
177,296	25,230	417,646	82,950	62,775	35,629	2,863	184,217	308,623	7,987	—	316,610	
8,490	—	18,791	3,972	3,006	1,706	773	9,457	14,779	(317)	—	14,462	
275,225	25,134	634,299	128,767	97,449	55,309	—	281,525	479,090	10,444	—	489,534	
24,861	—	55,026	11,632	8,803	4,996	44,589	70,020	43,277	(19,429)	—	23,848	
184,497	—	408,354	86,319	65,325	37,077	19,243	207,964	321,158	(8,311)	—	312,847	
98,846	—	218,779	46,246	34,998	19,864	35,149	136,257	172,063	(15,592)	—	156,471	
34,007	—	75,269	15,910	12,041	6,834	1,935	36,720	59,196	(849)	—	58,347	
195,876	62,058	495,598	91,643	69,354	39,363	—	200,360	340,966	26,198	—	367,164	
215,428	52,951	529,766	100,790	76,277	43,293	—	220,360	375,001	22,905	—	397,906	
614,461	—	1,360,009	287,482	217,563	123,482	120,144	748,671	1,069,606	(56,031)	—	1,013,575	
138,957	48,981	356,539	65,012	49,201	27,925	—	142,138	241,885	18,448	—	260,333	
159,993	—	354,119	74,854	56,649	32,152	13,558	177,213	278,504	(5,992)	—	272,512	
23,988	21,082	74,176	11,223	8,494	4,821	—	24,538	41,757	9,763	—	51,520	
313,786	18,564	713,078	146,808	111,103	63,058	4,285	325,254	546,214	7,501	—	553,715	
336,888	83,827	829,474	157,617	119,283	67,701	—	344,601	586,430	34,117	—	620,547	
34,972	4,168	81,572	16,362	12,382	7,028	24,512	60,284	60,876	(7,080)	—	53,796	
873,234	27,334	1,960,096	408,552	309,187	175,485	17,885	911,109	1,520,060	1,410	—	1,521,470	
489,651	130,758	1,214,521	229,088	173,372	98,400	—	500,860	852,348	53,588	—	905,936	
193,049	22,518	449,800	90,320	68,353	38,795	—	197,468	336,045	8,507	—	344,552	
74,988	—	165,973	35,084	26,551	15,070	24,520	101,225	130,533	(11,310)	—	119,223	
500,680	14,347	1,122,521	234,248	177,276	100,617	29,103	541,244	871,546	(3,802)	—	867,744	
86,396	—	191,223	40,421	30,590	17,362	54,519	142,892	150,391	(21,436)	—	128,955	
48,929	6,202	114,498	22,892	17,324	9,833	1,544	51,593	85,171	1,552	—	86,723	
905,523	193,289	2,197,518	423,658	320,620	181,974	—	926,252	1,576,266	74,689	—	1,650,955	
91,646	31,661	234,504	42,877	32,449	18,417	—	93,743	159,530	11,914	—	171,444	
21,092	6,031	52,715	9,868	7,468	4,239	128,822	150,397	36,716	(44,988)	—	(8,272)	
164,371	36,494	400,303	76,903	58,199	33,032	—	168,134	286,125	15,379	—	301,504	
37,567	118,191	201,339	17,576	13,301	7,549	—	38,426	65,393	43,986	—	109,379	

**Public Safety Retirement System**  
**Other Division A with Social Security**

**Schedule of Employer Allocations and Pension Amounts** (Concluded)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Park City	\$ 697,089	1.3348476%	\$ 2,708,774	5,633,637	331,260	—	570,136
Parowan City	58,691	0.1123865	228,063	474,320	27,890	—	48,002
Payson City	310,804	0.5951550	1,207,734	2,511,813	147,696	—	254,201
Perry City	66,199	0.1267633	257,238	534,996	31,458	—	54,143
Piute County	44,276	0.0847844	172,051	357,827	21,040	—	36,213
Pleasant Grove City	382,564	0.7325669	1,486,581	3,091,751	181,796	—	312,892
Pleasant View City	120,435	0.2306201	467,992	973,317	57,231	—	98,502
Price City	252,470	0.4834520	981,058	2,040,377	119,975	—	206,490
Rich County	96,746	0.1852586	375,941	781,872	45,974	—	79,127
Richfield City	181,416	0.3473909	704,952	1,466,140	86,210	—	148,376
Riverdale City	368,398	0.7054406	1,431,534	2,977,266	175,065	—	301,306
Roosevelt City	165,654	0.3172078	643,702	1,338,755	78,719	—	135,485
Roy City	618,278	1.1839327	2,402,526	4,996,710	293,809	—	505,678
Salem City	160,243	0.3068477	622,679	1,295,031	76,148	—	131,060
Salina City	36,591	0.0700684	142,188	295,719	17,388	—	29,927
Salt Lake County	7,722,483	14.7876850	30,008,297	62,410,458	3,669,767	—	6,316,071
San Juan County	325,336	0.6229811	1,264,201	2,629,251	154,601	—	266,086
Sanpete County	430,606	0.8245623	1,673,265	3,480,011	204,626	—	352,184
Santaquin City	192,704	0.3690062	748,815	1,557,366	91,574	—	157,609
Sevier County	651,835	1.2481911	2,532,924	5,267,909	309,755	—	533,123
Smithfield City Corp	81,550	0.1561583	316,888	659,056	38,753	—	66,698
South Ogden City	430,013	0.8234270	1,670,961	3,475,220	204,344	—	351,699
Spanish Fork City	616,622	1.1807616	2,396,091	4,983,327	293,022	—	504,323
Springville City	384,264	0.7358229	1,493,188	3,105,492	182,604	—	314,282
Stockton Town	10,500	0.0201056	40,800	84,854	4,989	—	8,587
Summit County	1,647,995	3.1557250	6,403,837	13,318,530	783,135	—	1,347,863
Sunset City	83,706	0.1602869	325,266	676,480	39,777	—	68,461
Syracuse City Corp	288,548	0.5525375	1,121,251	2,331,948	137,120	—	235,998
Tooele City	462,412	0.8854666	1,796,856	3,737,054	219,740	—	378,198
Tooele County	817,563	1.5655414	3,176,916	6,607,265	388,510	—	668,669
Town of Brian Head	91,668	0.1755339	356,207	740,829	43,561	—	74,973
Town of Springdale	88,639	0.1697345	344,438	716,353	42,122	—	72,496
Tremonton City	108,974	0.2086722	423,454	880,687	51,785	—	89,127
Uintah County	860,015	1.6468326	3,341,878	6,950,349	408,684	—	703,390
Unified Fire Authority	50,686	0.0970583	196,958	409,628	24,086	—	41,455
Utah County	—	0.0000000	—	—	—	—	—
Vernal City	377,394	0.7226660	1,466,489	3,049,964	179,339	—	308,663
Wasatch County	773,850	1.4818348	3,007,052	6,253,987	367,737	—	632,917
Washington City	195,770	0.3748773	760,730	1,582,145	93,031	—	160,116
Washington County	2,092,653	4.0071949	8,131,705	16,912,103	994,439	—	1,711,540
Wayne County	51,485	0.0985873	200,061	416,081	24,466	—	42,108
Weber County Corp	3,889,276	7.4475250	15,113,085	31,431,791	1,848,203	—	3,180,963
Wellington City	19,360	0.0370730	75,231	156,464	9,200	—	15,835
West Bountiful City	113,130	0.2166308	439,604	914,276	53,760	—	92,527
Willard City Corp	33,971	0.0650507	132,006	274,542	16,143	—	27,784
<b>Grand Total</b>	<b>\$ 52,222,396</b>	<b>100.0000000%</b>	<b>202,927,613</b>	<b>422,043,439</b>	<b>24,816,340</b>	<b>—</b>	<b>42,711,678</b>
<b>No Proportionate Share for 2016</b>							
Escalante Town	\$ 0	0.0000000%	—	—	—	—	—
Taylorville City	0	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 52,222,396</b>	<b>100.0000000%</b>	<b>\$ 202,927,613</b>	<b>422,043,439</b>	<b>24,816,340</b>	<b>—</b>	<b>42,711,678</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 Contributions	Proportionate Share of Nonemployer Contributions	
469,891	298,805	1,338,832	219,843	166,375	94,429	—	480,647	817,950	120,024	—	937,974
39,562	6,007	93,571	18,510	14,008	7,950	—	40,468	68,867	2,521	—	71,388
209,505	62,301	526,007	98,019	74,180	42,102	—	214,301	364,691	29,393	—	394,084
44,623	32,722	131,488	20,877	15,800	8,967	—	45,644	77,676	14,267	—	91,943
29,846	—	66,059	13,964	10,567	5,998	3,044	33,573	51,953	(1,317)	—	50,636
257,877	—	570,769	120,650	91,307	51,823	31,630	295,410	448,892	(13,692)	—	435,200
81,182	35,975	215,659	37,982	28,744	16,314	—	83,040	141,316	15,221	—	156,537
170,184	—	376,674	79,622	60,257	34,200	76,182	250,261	296,243	(30,519)	—	265,724
65,214	33,896	178,237	30,511	23,091	13,105	—	66,707	113,520	15,524	—	129,044
122,288	5,025	275,689	57,214	43,299	24,575	685	125,773	212,869	1,534	—	214,403
248,328	—	549,634	116,183	87,926	49,904	42,718	296,731	432,270	(17,631)	—	414,639
111,663	16,598	263,746	52,243	39,537	22,440	10,611	124,831	194,374	978	—	195,352
416,766	34,251	956,695	194,988	147,565	83,753	65,228	491,534	725,474	(19,212)	—	706,262
108,016	53,443	292,519	50,536	38,245	21,707	—	110,488	188,026	20,791	—	208,817
24,665	—	54,592	11,540	8,733	4,957	10,047	35,277	42,936	(4,092)	—	38,844
5,205,530	—	11,521,601	2,435,459	1,843,133	1,046,107	655,235	5,979,934	9,061,396	(291,580)	—	8,769,816
219,301	—	485,387	102,602	77,648	44,071	67,336	291,657	381,746	(27,597)	—	354,149
290,261	35,949	678,394	135,802	102,773	58,331	15,457	312,363	505,264	5,806	—	511,070
129,897	56,471	343,977	60,774	45,993	26,104	—	132,871	226,115	25,507	—	251,622
439,386	—	972,509	205,571	155,574	88,299	130,617	580,061	764,850	(51,850)	—	713,000
54,971	—	121,669	25,719	19,463	11,047	43,475	99,704	95,689	(20,781)	—	74,908
289,861	48,048	689,608	135,615	102,632	58,251	29,754	326,252	504,568	3,303	—	507,871
415,649	83,139	1,003,111	194,466	147,170	83,529	—	425,165	723,531	37,359	—	760,890
259,023	—	573,305	121,187	91,713	52,053	100,535	365,488	450,888	(43,003)	—	407,885
7,078	13,249	28,914	3,311	2,506	1,422	4,583	11,822	12,320	2,685	—	15,005
1,110,872	549,490	3,008,225	519,733	393,328	223,241	—	1,136,302	1,933,722	212,938	—	2,146,660
56,424	—	124,885	26,398	19,978	11,339	21,050	78,765	98,218	(10,297)	—	87,921
194,503	50,830	481,331	91,000	68,868	39,087	—	198,955	338,576	20,239	—	358,815
311,700	—	689,898	145,832	110,364	62,639	77,196	396,031	542,584	(35,759)	—	506,825
551,099	—	1,219,768	257,837	195,128	110,749	73,389	637,103	959,311	(30,625)	—	928,686
61,791	18,413	155,177	28,910	21,878	12,418	—	63,206	107,561	7,130	—	114,691
59,750	97,193	229,439	27,954	21,156	12,007	—	61,117	104,008	39,332	—	143,340
73,456	5,649	168,232	34,367	26,009	14,762	—	75,138	127,867	2,122	—	129,989
579,715	95,940	1,379,045	271,226	205,260	116,500	54,719	647,705	1,009,124	26,642	—	1,035,766
34,166	3,428	79,049	15,985	12,097	6,866	—	34,948	59,474	1,286	—	60,760
—	—	—	—	—	—	—	—	—	—	—	—
254,392	—	563,055	119,020	90,073	51,123	82,467	342,683	442,825	(36,225)	—	406,600
521,633	80,470	1,235,020	244,051	184,695	104,827	—	533,573	908,019	30,802	—	938,821
131,964	6,046	298,126	61,741	46,725	26,519	13,279	148,264	229,712	(1,980)	—	227,732
1,410,605	46,975	3,169,120	659,966	499,455	283,475	—	1,442,896	2,455,474	22,783	—	2,478,257
34,705	6,716	83,529	16,237	12,288	6,974	764	36,263	60,411	2,125	—	62,536
2,621,664	70,958	5,873,585	1,226,572	928,256	526,850	726,301	3,407,979	4,563,593	(235,535)	—	4,328,058
13,050	—	28,885	6,106	4,621	2,623	20,101	33,451	22,717	(7,525)	—	15,192
76,258	27,995	196,780	35,678	27,001	15,325	11,263	89,267	132,744	9,524	—	142,268
22,899	6,761	57,444	10,714	8,108	4,602	—	23,424	39,861	2,885	—	42,746
35,201,809	4,154,747	82,068,234	16,469,529	12,463,953	7,074,161	4,330,697	40,338,340	61,276,639	(75,151)	—	61,201,488
—	—	—	—	—	—	16,857	16,857	—	(7,548)	—	(7,548)
—	—	—	—	—	—	17,873	17,873	—	(8,757)	—	(8,757)
35,201,809	4,154,747	82,068,234	16,469,529	12,463,953	7,074,161	4,365,427	40,373,070	61,276,639	(91,455)	—	61,185,184

**Public Safety Retirement System  
State of Utah**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Dixie State University	\$ 98,655	0.1942121%	\$ 415,242	751,357	138,434	—	68,770
Snow College	28,026	0.0551717	117,962	213,445	39,326	—	19,536
Southern Utah University	94,347	0.1857309	397,109	718,545	132,389	—	65,767
State of Utah	49,646,609	97.7342324	208,964,231	378,108,544	69,664,710	—	34,607,606
University of Utah	754,208	1.4847326	3,174,487	5,744,048	1,058,314	—	525,743
Utah State University	175,719	0.3459203	739,607	1,338,276	246,571	—	122,490
<b>Grand Total</b>	<b>\$ 50,797,563</b>	<b>100.0000000%</b>	<b>\$ 213,808,638</b>	<b>386,874,215</b>	<b>71,279,744</b>	<b>—</b>	<b>35,409,912</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, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Salt Lake City Corporation	\$ 15,260,367	100.0000000%	\$ 91,688,895	138,403,464	53,229,415	3,006,765	8,524,373

**Public Safety Retirement System  
Ogden City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Ogden City Corp	\$ 3,146,953	100.0000000%	\$ 19,179,423	29,509,212	10,689,997	103,210	1,989,652

**Public Safety Retirement System  
Provo City**

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Provo City Corp	\$ 2,402,524	100.0000000%	\$ 13,875,843	22,061,828	7,157,275	472,334	1,525,915

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
40,694	6,134	115,598	23,591	19,909	9,107	—	52,607	80,730	3,315	—	84,045
11,560	46,584	77,680	6,702	5,656	2,587	—	14,945	22,934	21,474	—	44,408
38,917	6,640	111,324	22,560	19,039	8,710	25,181	75,490	77,204	(6,271)	—	70,933
20,478,664	147,576	55,233,846	11,871,602	10,018,686	4,583,149	—	26,473,437	40,626,005	72,684	—	40,698,689
311,102	362,173	1,199,018	180,348	152,199	69,625	—	402,172	617,171	189,357	—	806,528
72,482	6,158	201,130	42,018	35,460	16,222	—	93,700	143,792	2,844	—	146,636
20,953,419	575,265	56,938,596	12,146,821	10,250,949	4,689,400	25,181	27,112,351	41,567,836	283,404	—	41,851,240

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
8,159,709	—	19,690,847	357,267	2,478,861	1,137,750	—	3,973,878	16,070,941	—	—	16,070,941

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
1,654,009	—	3,746,871	666,957	569,290	151,890	—	1,388,137	3,400,351	—	—	3,400,351

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
1,496,966	—	3,495,215	253,735	444,673	341,530	—	1,039,938	2,803,351	—	—	2,803,351

**Public Safety Retirement System  
Logan City**

**Schedule of Employer Allocations  
and Pension Amounts**

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Logan City	\$ 1,051,517	100.00000000%	\$ 7,205,719	11,740,559	3,518,071	83,751	875,536

**Public Safety Retirement System  
Bountiful City**

**Schedule of Employer Allocations  
and Pension Amounts**

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Bountiful	\$ 943,052	100.00000000%	\$ 7,319,792	10,671,389	4,545,260	750,631	635,429

**Public Safety Retirement System  
Other Division B without Social Security**

**Schedule of Employer Allocations  
and Pension Amounts**

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Orem	\$ 1,677,649	7.8307470%	\$ 4,880,882	10,114,449	603,896	1,577,122	921,880
City of Saratoga Springs	319,539	1.4915100	929,654	1,926,483	115,023	300,392	175,589
City of West Jordan	2,016,190	9.4109506	5,865,818	12,155,492	725,759	1,895,377	1,107,910
Cottonwood Heights City	538,363	2.5129097	1,566,289	3,245,757	193,792	506,103	295,834
Lone Peak PS District	348,605	1.6271805	1,014,217	2,101,720	125,486	327,716	191,561
Sandy City	1,663,830	7.7662414	4,840,676	10,031,132	598,921	1,564,130	914,286
Town of Mantua	3,684	0.0171944	10,717	22,209	1,326	3,463	2,024
Unified Police Department	7,290,958	34.0319334	21,212,005	43,956,762	2,624,491	6,854,071	4,006,431
Utah County	4,391,079	20.4961943	12,775,219	26,473,556	1,580,636	4,127,958	2,412,928
West Valley City	2,998,008	13.9937734	8,722,279	18,074,816	1,079,179	2,818,363	1,647,426
Woods Cross City	175,968	0.8213653	511,955	1,060,902	63,342	165,424	96,696
Grand Total	\$ 21,423,873	100.00000000%	\$ 62,329,711	129,163,278	7,711,851	20,140,119	11,772,565

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 Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
784,047	—	1,743,334	187,470	250,615	150,192	—	588,277	1,589,033	—	—	1,589,033

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
624,469	—	2,010,529	—	180,894	82,204	—	263,098	1,460,663	—	—	1,460,663

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
956,836	36,101	3,491,939	—	281,556	248,508	45,513	575,577	1,384,549	(3,702)	—	1,380,847
182,247	22,563	680,791	—	53,627	47,333	15,294	116,254	263,713	1,135	—	264,848
1,149,920	287,877	4,441,084	—	338,372	298,655	—	637,027	1,663,944	72,674	—	1,736,618
307,051	86,431	1,195,419	—	90,352	79,747	—	170,099	444,306	21,546	—	465,852
198,825	5,814	723,916	—	58,506	51,638	15,573	125,717	287,701	(2,758)	—	284,943
948,954	—	3,427,370	—	279,236	246,461	122,159	647,856	1,373,144	(29,217)	—	1,343,927
2,101	4,020	11,608	—	618	546	—	1,164	3,040	917	—	3,957
4,158,350	150,838	15,169,690	—	1,223,624	1,079,999	196,206	2,499,829	6,017,161	(17,053)	—	6,000,108
2,504,422	227,846	9,273,154	—	736,944	650,444	—	1,387,388	3,623,918	54,835	—	3,678,753
1,709,894	—	6,175,683	—	503,148	444,091	387,381	1,334,620	2,474,229	(89,948)	—	2,384,281
100,362	4,215	366,697	—	29,532	26,066	20,300	75,898	145,225	(3,523)	—	141,702
12,218,962	825,704	44,957,350	—	3,595,515	3,173,488	802,427	7,571,430	17,680,930	4,905	—	17,685,835

**Firefighters Retirement System  
Other Division A with Social Security**

# Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
American Fork City	\$ 15,955	1.4418841%	(11,367)	411,060	(354,124)	—	89,361
Brigham City	8,977	0.8112751	(6,396)	231,282	(199,248)	—	50,279
Cache County	7,493	0.6771347	(5,338)	193,041	(166,303)	—	41,966
Cedar City	18,698	1.6897646	(13,321)	481,727	(415,003)	—	104,724
City of Draper	1,216	0.1098577	(866)	31,319	(26,981)	—	6,808
City of Kanab	2,252	0.2034758	(1,604)	58,008	(49,973)	—	12,610
City of Santa Clara	4,349	0.3930163	(3,098)	112,043	(96,524)	—	24,357
City of South Jordan	94,831	8.5699580	(67,561)	2,443,167	(2,104,766)	—	531,126
City of South Salt Lake	106,246	9.6015631	(75,694)	2,737,262	(2,358,126)	—	595,060
City of St George	58,949	5.3272443	(41,997)	1,518,718	(1,308,361)	—	330,158
City of Washington Terrace	1,938	0.1751689	(1,381)	49,938	(43,021)	—	10,856
Clinton City	16,300	1.4730711	(11,613)	419,951	(361,784)	—	91,294
Farmington City	10,951	0.9896594	(7,802)	282,137	(243,059)	—	61,334
Hurricane Valley Fire Special Service District	13,677	1.2359810	(9,744)	352,360	(303,555)	—	76,600
Ivins City	1,269	0.1147079	(904)	32,702	(28,172)	—	7,109
Kaysville City	5,233	0.4728736	(3,728)	134,809	(116,137)	—	29,307
Layton City	116,921	10.5662448	(83,299)	3,012,278	(2,595,050)	—	654,847
Lehi City	62,084	5.6106342	(44,231)	1,599,508	(1,377,961)	—	347,721
Moab Valley Fire Protection	5,166	0.4668459	(3,680)	133,091	(114,656)	—	28,933
Morgan County	233	0.0211007	(166)	6,015	(5,182)	—	1,308
Murray City	133,750	12.0871251	(95,289)	3,445,856	(2,968,576)	—	749,106
N Tooele Co Fire Protection SD	2,062	0.1863098	(1,469)	53,114	(45,757)	—	11,547
North Davis Fire District	30,446	2.7514108	(21,691)	784,386	(675,741)	—	170,520
North Fork Special Service District	928	0.0838282	(661)	23,898	(20,588)	—	5,195
North Logan City	4,371	0.3950045	(3,114)	112,610	(97,012)	—	24,481
North View Fire District	17,246	1.5585305	(12,287)	444,314	(382,772)	—	96,590
Payson City	3,452	0.3119508	(2,459)	88,933	(76,615)	—	19,333
Pleasant Grove City	22,096	1.9967965	(15,742)	569,257	(490,410)	—	123,752
Price City	2,867	0.2590720	(2,042)	73,858	(63,628)	—	16,056
Riverdale City	21,900	1.9791597	(15,603)	564,229	(486,078)	—	122,659
Roy City	45,315	4.0952062	(32,284)	1,167,482	(1,005,775)	—	253,802
Smithfield City Corp	4,730	0.4274197	(3,370)	121,851	(104,973)	—	26,489
So Davis Metro Fire Agency	127,926	11.5608385	(91,140)	3,295,822	(2,839,320)	—	716,487
South Ogden City	23,789	2.1497992	(16,948)	612,876	(527,987)	—	133,235
Springville City	5,476	0.4948301	(3,901)	141,069	(121,529)	—	30,667
State of Utah	47,584	4.3002318	(33,901)	1,225,932	(1,056,129)	—	266,508
Syracuse City Corp	20,496	1.8522833	(14,602)	528,058	(454,917)	—	114,796
Uintah Fire Suppression Special Service District	4,440	0.4012482	(3,163)	114,390	(98,546)	—	24,867
Wasatch County Fire District	27,653	2.4990163	(19,701)	712,432	(613,754)	—	154,877
Washington City	7,286	0.6584776	(5,191)	187,722	(161,721)	—	40,809
<b>Grand Total</b>	<b>\$ 1,106,549</b>	<b>100.0000000%</b>	<b>\$ (788,348)</b>	<b>28,508,505</b>	<b>(24,559,814)</b>	<b>—</b>	<b>6,197,534</b>
<b>No Proportionate Share for 2016</b>							
Hurricane City	\$ —	0.0000000%	\$ —	—	—	—	—
Leeds Area Special Service District	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 1,106,549</b>	<b>100.0000000%</b>	<b>\$ (788,348)</b>	<b>28,508,505</b>	<b>(24,559,814)</b>	<b>—</b>	<b>6,197,534</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 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 in 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	
57,279	3,173	149,813	24,602	25,410	36,272	1,186	87,470	58,710	314	(37,213)	21,811
32,228	—	82,507	13,842	14,297	20,409	25,502	74,050	33,033	(4,317)	(20,938)	7,778
26,899	1,129	69,994	11,554	11,933	17,034	44	40,565	27,571	181	(17,476)	10,276
67,126	2,130	173,980	28,831	29,778	42,508	2,596	103,713	68,803	(46)	(43,610)	25,147
4,364	—	11,172	1,874	1,936	2,764	5,044	11,618	4,473	(843)	(2,835)	795
8,083	710	21,403	3,472	3,586	5,119	—	12,177	8,285	123	(5,251)	3,157
15,613	—	39,970	6,706	6,926	9,887	10,847	34,366	16,003	(1,851)	(10,143)	4,009
340,440	10,456	882,022	146,224	151,027	215,587	—	512,838	348,949	1,797	(221,178)	129,568
381,421	5,654	982,135	163,826	169,207	241,538	1,362	575,933	390,954	802	(247,803)	143,953
211,624	369	542,151	90,896	93,881	134,013	10,839	329,629	216,913	(1,743)	(137,489)	77,681
6,959	73	17,888	2,989	3,087	4,407	112	10,595	7,132	(8)	(4,521)	2,603
58,518	—	149,812	25,134	25,960	37,057	2,444	90,595	59,980	(442)	(38,018)	21,520
39,314	—	100,648	16,886	17,441	24,896	3,124	62,347	40,297	(555)	(25,542)	14,200
49,099	—	125,699	21,089	21,782	31,092	16,964	90,927	50,326	(3,048)	(31,899)	15,379
4,557	7,464	19,130	1,957	2,021	2,886	—	6,864	4,671	1,265	(2,960)	2,976
18,785	—	48,092	8,068	8,333	11,896	21,712	50,009	19,254	(3,627)	(12,204)	3,423
419,743	17,390	1,091,980	180,286	186,207	265,806	—	632,299	430,234	2,957	(272,700)	160,491
222,882	—	570,603	95,731	98,875	141,142	11,338	347,086	228,452	(1,919)	(144,802)	81,731
18,545	867	48,345	7,966	8,227	11,744	2,356	30,293	19,009	(236)	(12,049)	6,724
838	—	2,146	360	372	531	969	2,232	859	(162)	(545)	152
480,159	2,813	1,232,078	206,236	213,013	304,059	26,412	749,720	492,163	(3,899)	(311,953)	176,311
7,401	3,069	22,017	3,179	3,283	4,687	—	11,149	7,586	533	(4,808)	3,311
109,299	18,054	297,873	46,946	48,488	69,215	—	164,649	112,031	3,022	(71,010)	44,043
3,330	865	9,390	1,430	1,477	2,109	3,849	8,865	3,413	(485)	(2,163)	765
15,691	975	41,147	6,740	6,961	9,937	289	23,927	16,084	110	(10,194)	6,000
61,912	760	159,262	26,592	27,466	39,207	695	93,960	63,460	22	(40,223)	23,259
12,392	491	32,216	5,323	5,497	7,847	135	18,802	12,702	57	(8,051)	4,708
79,322	12,811	215,885	34,070	35,189	50,232	—	119,491	81,305	2,180	(51,534)	31,951
10,292	222	26,570	4,420	4,566	6,517	7	15,510	10,549	36	(6,686)	3,899
78,622	4,211	205,492	33,769	34,878	49,788	—	118,435	80,587	720	(51,079)	30,228
162,681	16,873	433,356	69,874	72,169	103,019	—	245,062	166,748	2,820	(105,691)	63,877
16,979	12,921	56,389	7,293	7,532	10,752	—	25,577	17,404	2,176	(11,031)	8,549
459,253	9,819	1,185,559	197,256	203,735	290,826	—	691,817	470,731	1,665	(298,369)	174,027
85,400	1,648	220,283	36,681	37,886	54,081	187	128,835	87,535	241	(55,483)	32,293
19,657	1,256	51,580	8,443	8,720	12,448	491	30,102	20,148	120	(12,771)	7,497
170,826	—	437,334	73,372	75,782	108,177	34,684	292,015	175,096	(6,033)	(110,983)	58,080
73,582	25	188,403	31,604	32,643	46,596	1,016	111,859	75,421	(165)	(47,805)	27,451
15,940	1,861	42,668	6,846	7,071	10,094	—	24,011	16,338	311	(10,356)	6,293
99,273	656	254,806	42,639	44,040	62,866	1,491	151,036	101,754	(162)	(64,496)	37,096
26,158	9,745	76,712	11,235	11,604	16,565	101	39,505	26,812	1,609	(16,994)	11,427
3,972,486	148,495	10,318,515	1,706,241	1,762,286	2,515,610	185,796	6,169,933	4,071,775	(6,476)	(2,580,856)	1,484,443
—	11,534	11,534	—	—	—	—	—	—	2,101	—	2,101
—	7,614	7,614	—	—	—	—	—	—	1,291	—	1,291
3,972,486	167,643	10,337,663	1,706,241	1,762,286	2,515,610	185,796	6,169,933	4,071,775	(3,085)	(2,580,856)	1,487,834

## Firefighters Retirement System Other Division B without Social Security

### Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Orem	\$ 221,381	3.8179852%	\$ 564,747	5,390,133	(3,415,647)	—	1,170,295
City of Saratoga Springs	27,502	0.4743030	70,158	669,609	(424,321)	—	145,384
City of West Jordan	321,602	5.5464135	820,411	7,830,284	(4,961,934)	—	1,700,095
Logan City	175,682	3.0298502	448,168	4,277,465	(2,710,565)	—	928,714
Lone Peak PS District	35,663	0.6150544	90,977	868,318	(550,240)	—	188,527
Ogden City Corp	339,915	5.8622338	867,127	8,276,151	(5,244,473)	—	1,796,901
Park City Fire Service	311,575	5.3734852	794,832	7,586,148	(4,807,229)	—	1,647,089
Provo City Corp	295,685	5.0994441	754,297	7,199,264	(4,562,066)	—	1,563,089
Salt Lake City Corp	1,506,923	25.9886908	3,844,181	36,690,166	(23,250,010)	—	7,966,092
Sandy City	272,168	4.6938587	694,304	6,626,669	(4,199,221)	—	1,438,769
Unified Fire Authority	1,743,278	30.0649010	4,447,122	42,444,856	(26,896,670)	—	9,215,539
Weber Fire District	179,209	3.0906676	457,164	4,363,325	(2,764,974)	—	947,356
West Valley City	367,798	6.3431125	938,257	8,955,043	(5,674,677)	—	1,944,300
<b>Grand Total</b>	<b>\$ 5,798,382</b>	<b>100.0000000%</b>	<b>\$ 14,791,745</b>	<b>141,177,431</b>	<b>(89,462,027)</b>	<b>—</b>	<b>30,652,150</b>

Columns may not add to total due to rounding.

## Judges Retirement System

### Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
State of Utah	\$ 7,382,309	100.0000000%	\$ 35,005,177	56,844,504	16,252,658	2,024,056	5,803,666

## Utah Governors and Legislators Retirement Plan

### Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
State of Utah	\$ 421,009	100.0000000%	\$ 2,302,925	3,526,108	1,265,422	—	357,027



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	
665,245	—	1,835,540	651,476	335,154	347,083	21,759	1,355,472	461,887	(4,918)	(304,971)	151,998
82,643	8,841	236,868	80,932	41,636	43,118	—	165,686	57,380	1,967	(37,886)	21,461
966,407	48,768	2,715,270	946,404	486,880	504,210	—	1,937,494	670,987	11,256	(443,034)	239,209
527,921	1,752	1,458,387	516,994	265,969	275,436	9,972	1,068,371	366,541	(1,954)	(242,017)	122,570
107,167	4,308	300,002	104,949	53,991	55,913	—	214,853	74,407	978	(49,129)	26,256
1,021,435	9,465	2,827,801	1,000,293	514,604	532,921	27,351	2,075,169	709,194	(4,419)	(468,261)	236,514
936,276	—	2,583,365	916,896	471,700	488,490	15,423	1,892,509	650,067	(3,352)	(429,221)	217,494
888,527	—	2,451,616	870,136	447,644	463,578	4,436	1,785,794	616,914	(1,010)	(407,331)	208,573
4,528,267	1,440	12,495,799	4,434,541	2,281,363	2,362,566	246	9,078,716	3,144,027	283	(2,075,914)	1,068,396
817,858	8,758	2,265,385	800,929	412,041	426,707	7,841	1,647,518	567,848	445	(374,934)	193,359
5,238,505	21,168	14,475,212	5,130,080	2,639,186	2,733,124	17,597	10,519,987	3,637,153	1,350	(2,401,513)	1,236,990
538,518	6,230	1,492,104	527,371	271,308	280,965	—	1,079,644	373,899	1,424	(246,875)	128,448
1,105,223	—	3,049,523	1,082,347	556,817	576,636	36,157	2,251,957	767,369	(8,223)	(506,673)	252,473
17,423,992	110,730	48,186,872	17,063,348	8,778,293	9,090,747	140,782	35,073,170	12,097,673	(6,171)	(7,987,759)	4,103,743

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	
2,130,857	—	9,958,579	—	1,678,231	23,443	—	1,701,674	9,381,572	—	(1,469,774)	7,911,798

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	
—	—	357,027	—	116,484	—	—	116,484	753,367	—	—	753,367

## Tier 2 Public Employees Contributory Retirement System

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
4 Corners Community Behavior Health	\$ 63,033	0.0926049%	\$ 10,330	70,313	(35,302)	—	3,901
Active Re Entry Inc	1,262	0.0018535	207	1,407	(707)	—	78
Alpine City	11,480	0.0168651	1,881	12,805	(6,429)	—	710
Alpine School District	3,768,441	5.5364018	617,582	4,203,669	(2,110,535)	—	233,216
American Fork City	67,068	0.0985332	10,991	74,814	(37,562)	—	4,151
American Leadership Academy	110,512	0.1623589	18,111	123,276	(61,893)	—	6,839
Ames Charter School	6,265	0.0092037	1,027	6,988	(3,509)	—	388
Ash Creek Special Service District	1,264	0.0018566	207	1,410	(708)	—	78
Ashley Valley Improvement District	8,709	0.0127943	1,427	9,714	(4,877)	—	539
Ballard Town	1,714	0.0025181	281	1,912	(960)	—	106
Bear River Association of Governments	20,528	0.0301585	3,364	22,899	(11,497)	—	1,270
Bear River Health Department	96,666	0.1420163	15,842	107,830	(54,138)	—	5,982
Bear River Mental Health	86,448	0.1270057	14,167	96,433	(48,416)	—	5,350
Bear River Water District	6,453	0.0094808	1,058	7,199	(3,614)	—	399
Beaver City	19,832	0.0291356	3,250	22,122	(11,107)	—	1,227
Beaver County	45,221	0.0664371	7,411	50,444	(25,327)	—	2,799
Beaver School District	63,747	0.0936545	10,447	71,110	(35,702)	—	3,945
Beaver Valley Hospital	50,623	0.0743723	8,296	56,469	(28,352)	—	3,133
Benchland Water Company	3,213	0.0047206	527	3,584	(1,800)	—	199
Blanding City	8,424	0.0123761	1,381	9,397	(4,718)	—	521
Bluffdale City	49,797	0.0731596	8,161	55,548	(27,889)	—	3,082
Bona Vista Water Improvement	3,138	0.0046096	514	3,500	(1,757)	—	194
Bountiful Irrigation District	3,149	0.0046269	516	3,513	(1,764)	—	195
Box Elder Co Mosquito District	3,300	0.0048478	541	3,681	(1,848)	—	204
Box Elder County	54,304	0.0797810	8,900	60,576	(30,413)	—	3,361
Box Elder School District	445,275	0.6541755	72,973	496,701	(249,379)	—	27,557
Bridgerland Applied Technology Center	36,867	0.0541636	6,042	41,125	(20,648)	—	2,282
Brigham City	69,743	0.1024636	11,430	77,798	(39,060)	—	4,316
Cache County	94,462	0.1387795	15,481	105,372	(52,904)	—	5,846
Cache School District	642,937	0.9445697	105,366	717,191	(360,080)	—	39,789
Canyons School District	2,369,619	3.4813235	388,339	2,643,293	(1,327,117)	—	146,647
Carbon County	98,274	0.1443787	16,105	109,624	(55,039)	—	6,082
Carbon School District	203,993	0.2996958	33,431	227,552	(114,247)	—	12,624
Castle Dale City	2,501	0.0036748	410	2,790	(1,401)	—	155
Castle Valley Special Service District	3,211	0.0047168	526	3,581	(1,798)	—	199
Cedar City	64,284	0.0944426	10,535	71,708	(36,003)	—	3,978
Cedar City Housing Authority	4,826	0.0070904	791	5,384	(2,703)	—	299
Centerfield City	1,854	0.0027245	304	2,069	(1,039)	—	115
Centerville City	12,131	0.0178215	1,988	13,531	(6,794)	—	751
Central Davis Sewer District	11,611	0.0170589	1,903	12,952	(6,503)	—	719
Central Iron Co Water Conservancy	9,122	0.0134021	1,495	10,176	(5,109)	—	565
Central UT Public Health	22,922	0.0336756	3,756	25,569	(12,837)	—	1,419
Central Utah Counseling Center	31,169	0.0457916	5,108	34,769	(17,456)	—	1,929
Central Utah Water District	88,035	0.1293359	14,427	98,202	(49,304)	—	5,448
Central Weber Sewer District	47,283	0.0694657	7,749	52,744	(26,481)	—	2,926
City of Bountiful	151,577	0.2226893	24,841	169,083	(84,892)	—	9,381
City of Cedar Hills	13,069	0.0191998	2,142	14,578	(7,319)	—	809
City of Draper	101,428	0.1490124	16,622	113,142	(56,805)	—	6,277
City of Duchesne	4,414	0.0064848	723	4,924	(2,472)	—	273
City of Green River	3,796	0.0055773	622	4,235	(2,126)	—	235
City of Harrisville	3,654	0.0053676	599	4,076	(2,046)	—	226
City of Helper	6,541	0.0096093	1,072	7,296	(3,663)	—	405
City of Holladay	15,130	0.0222287	2,480	16,878	(8,474)	—	936
City of Kanab	16,205	0.0238077	2,656	18,077	(9,076)	—	1,003
City of Milford	6,678	0.0098113	1,094	7,450	(3,740)	—	413
City of Moab	50,026	0.0734958	8,198	55,804	(28,017)	—	3,096
City of Monticello	14,086	0.0206940	2,308	15,713	(7,889)	—	872
City of Naples	7,454	0.0109503	1,221	8,314	(4,174)	—	461
City of North Salt Lake	33,495	0.0492092	5,489	37,363	(18,759)	—	2,073
City of Orem	205,504	0.3019157	33,678	229,238	(115,093)	—	12,718

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	
6,677	7,544	18,122	8,565	1,246	941	—	10,752	65,583	722	—	66,305
134	146	358	171	25	19	32	247	1,313	10	—	1,323
1,216	1,374	3,300	1,560	227	171	—	1,958	11,944	132	—	12,076
399,212	435,539	1,067,967	512,038	74,519	56,231	—	642,788	3,920,907	41,797	—	3,962,704
7,105	8,042	19,298	9,113	1,326	1,001	—	11,440	69,782	770	—	70,552
11,707	13,199	31,745	15,016	2,185	1,649	—	18,850	114,983	1,270	—	116,253
664	747	1,799	851	124	93	—	1,068	6,518	72	—	6,590
134	147	359	172	25	19	—	216	1,315	13	—	1,328
923	914	2,376	1,183	172	130	—	1,485	9,061	88	—	9,149
182	189	477	233	34	26	—	293	1,783	18	—	1,801
2,175	2,501	5,946	2,789	406	306	—	3,501	21,358	239	—	21,597
10,240	11,772	27,994	13,134	1,912	1,442	—	16,488	100,577	1,134	—	101,711
9,158	10,194	24,702	11,746	1,709	1,290	—	14,745	89,946	980	—	90,926
684	827	1,910	877	128	96	—	1,101	6,714	80	—	6,794
2,101	2,421	5,749	2,695	392	296	—	3,383	20,634	232	—	20,866
4,791	5,365	12,955	6,144	894	675	—	7,713	47,051	514	—	47,565
6,753	7,575	18,273	8,662	1,261	951	—	10,874	66,327	719	—	67,046
5,363	5,993	14,489	6,878	1,001	755	—	8,634	52,671	569	—	53,240
340	374	913	437	64	48	—	549	3,343	36	—	3,379
892	1,022	2,435	1,145	167	126	—	1,438	8,765	98	—	8,863
5,275	5,929	14,286	6,766	985	743	—	8,494	51,812	570	—	52,382
332	442	968	426	62	47	—	535	3,265	43	—	3,308
334	380	909	428	62	47	—	537	3,277	37	—	3,314
350	378	932	448	65	49	—	562	3,433	36	—	3,469
5,753	6,549	15,663	7,379	1,074	810	—	9,263	56,501	633	—	57,134
47,171	52,190	126,918	60,502	8,805	6,644	—	75,951	463,290	4,995	—	468,285
3,906	4,853	11,041	5,009	729	550	—	6,288	38,359	467	—	38,826
7,388	8,031	19,735	9,476	1,379	1,041	—	11,896	72,565	762	—	73,327
10,007	11,117	26,970	12,835	1,868	1,410	—	16,113	98,284	1,055	—	99,339
68,110	75,578	183,477	87,359	12,714	9,594	—	109,667	668,949	7,242	—	676,191
251,027	270,369	668,043	321,973	46,858	35,359	—	404,190	2,465,490	25,933	—	2,491,423
10,411	11,891	28,384	13,353	1,943	1,466	—	16,762	102,250	1,142	—	103,392
21,610	23,652	57,886	27,718	4,034	3,044	—	34,796	212,246	2,260	—	214,506
265	274	694	340	49	37	—	426	2,603	27	—	2,630
340	353	892	436	63	48	—	547	3,340	34	—	3,374
6,810	7,704	18,492	8,735	1,271	959	—	10,965	66,885	743	—	67,628
511	547	1,357	656	95	72	—	823	5,021	53	—	5,074
196	215	526	252	37	28	—	317	1,930	20	—	1,950
1,285	1,346	3,382	1,648	240	181	—	2,069	12,621	128	—	12,749
1,230	1,292	3,241	1,578	230	173	—	1,981	12,081	122	—	12,203
966	1,011	2,542	1,240	180	136	—	1,556	9,491	97	—	9,588
2,428	2,535	6,382	3,115	453	342	—	3,910	23,849	244	—	24,093
3,302	3,356	8,587	4,235	616	465	—	5,316	32,430	316	—	32,746
9,326	10,986	25,760	11,962	1,741	1,314	—	15,017	91,596	1,060	—	92,656
5,009	5,479	13,414	6,425	935	706	—	8,066	49,196	527	—	49,723
16,057	18,104	43,542	20,596	2,997	2,262	—	25,855	157,710	1,741	—	159,451
1,384	1,557	3,750	1,776	258	195	—	2,229	13,597	153	—	13,750
10,745	12,076	29,098	13,782	2,006	1,513	—	17,301	105,531	1,147	—	106,678
468	552	1,293	600	87	66	—	753	4,593	52	—	4,645
402	449	1,086	516	75	57	—	648	3,950	43	—	3,993
387	441	1,054	496	72	55	—	623	3,801	43	—	3,844
693	765	1,863	889	129	98	—	1,116	6,805	74	—	6,879
1,603	1,796	4,335	2,056	299	226	—	2,581	15,742	168	—	15,910
1,717	1,958	4,678	2,202	320	242	—	2,764	16,861	184	—	17,045
707	758	1,878	907	132	100	—	1,139	6,948	73	—	7,021
5,300	6,033	14,429	6,797	989	746	—	8,532	52,050	567	—	52,617
1,492	1,711	4,075	1,914	279	210	—	2,403	14,656	164	—	14,820
790	1,041	2,292	1,013	147	111	—	1,271	7,755	102	—	7,857
3,548	3,724	9,345	4,551	662	500	—	5,713	34,850	357	—	35,207
21,770	24,949	59,437	27,923	4,064	3,066	—	35,053	213,818	2,384	—	216,202

## Tier 2 Public Employees Contributory Retirement System

### Schedule of Employer Allocations and Pension Amounts *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
City of Riverton	\$ 94,607	0.1389913%	\$ 15,504	105,533	(52,985)	—	5,855
City of Santa Clara	16,769	0.0246362	2,748	18,706	(9,392)	—	1,038
City of Saratoga Springs	76,913	0.1129970	12,605	85,796	(43,076)	—	4,760
City of South Jordan	158,894	0.2334395	26,040	177,246	(88,990)	—	9,833
City of South Salt Lake	124,828	0.1833915	20,457	139,245	(69,911)	—	7,725
City of St George	474,093	0.6965131	77,696	528,847	(265,518)	—	29,340
City of Taylorsville	35,272	0.0518192	5,780	39,345	(19,754)	—	2,183
City of Uintah	3,301	0.0048491	541	3,682	(1,849)	—	204
City of Washington Terrace	9,444	0.0138746	1,548	10,535	(5,289)	—	584
City of Wendover	6,523	0.0095832	1,069	7,276	(3,653)	—	404
City of West Haven	10,497	0.0154215	1,720	11,709	(5,879)	—	650
City of West Jordan	200,679	0.2948270	32,888	223,856	(112,391)	—	12,419
Clearfield City	67,615	0.0993367	11,081	75,424	(37,868)	—	4,184
Cleveland Town	1,892	0.0027802	310	2,111	(1,060)	—	117
Clinton City	19,084	0.0280371	3,128	21,288	(10,688)	—	1,181
Coalville City	8,422	0.0123725	1,380	9,394	(4,717)	—	521
Color Country Uniserv	1,463	0.0021489	240	1,632	(819)	—	91
Cottonwood Heights City	37,117	0.0545308	6,083	41,404	(20,788)	—	2,297
Cottonwood Heights P&R Srv	12,194	0.0179143	1,998	13,602	(6,829)	—	755
Cottonwood Improvement District	14,419	0.0211836	2,363	16,084	(8,075)	—	892
Council On Aging Golden Age SS	4,372	0.0064224	716	4,876	(2,448)	—	271
Daggett County	8,000	0.0117530	1,311	8,924	(4,480)	—	495
Daggett School District	23,145	0.0340034	3,793	25,818	(12,962)	—	1,432
Davis & Weber County Canal Co	13,202	0.0193951	2,164	14,726	(7,394)	—	817
Davis Applied Technology College	43,965	0.0645909	7,205	49,042	(24,623)	—	2,721
Davis Behavioral Health Inc	196,323	0.2884281	32,174	218,997	(109,952)	—	12,150
Davis Co Housing Authority	8,063	0.0118460	1,321	8,994	(4,516)	—	499
Davis County	319,737	0.4697410	52,399	356,664	(179,070)	—	19,787
Davis School District	2,988,330	4.3903033	489,735	3,333,461	(1,673,630)	—	184,937
Ddi Vantage	123,687	0.1817153	20,270	137,972	(69,272)	—	7,655
Delta City	13,006	0.0191071	2,131	14,508	(7,284)	—	805
Dixie State University	57,218	0.0840620	9,377	63,826	(32,045)	—	3,541
Duchesne County	86,668	0.1273287	14,203	96,678	(48,539)	—	5,364
Duchesne School District	362,491	0.5325539	59,406	404,357	(203,015)	—	22,433
Eagle Mountain City	67,342	0.0989357	11,036	75,120	(37,715)	—	4,168
East Carbon City	5,220	0.0076683	855	5,822	(2,923)	—	323
East Hollywood High School	34,171	0.0502029	5,600	38,118	(19,138)	—	2,115
Educators Mutual Insurance	29,352	0.0431219	4,810	32,742	(16,439)	—	1,816
Elk Ridge City	17,194	0.0252608	2,818	19,180	(9,630)	—	1,064
Emery Co Care & Rehab Center	17,161	0.0252122	2,812	19,143	(9,611)	—	1,062
Emery County	29,962	0.0440189	4,910	33,423	(16,780)	—	1,854
Emery County Recreation Special Service District	4,083	0.0059979	669	4,554	(2,286)	—	253
Emery School District	106,481	0.1564368	17,450	118,779	(59,635)	—	6,590
Emery Water Conservancy District	8,488	0.0124708	1,391	9,469	(4,754)	—	525
Enoch City	8,374	0.0123024	1,372	9,341	(4,690)	—	518
Ephraim City	16,714	0.0245557	2,739	18,645	(9,361)	—	1,034
Fairview City	2,243	0.0032954	368	2,502	(1,256)	—	139
Farmington City	60,188	0.0884248	9,864	67,139	(33,708)	—	3,725
Farr West City	355	0.0005210	58	396	(199)	—	22
Fast Forward Charter High School	21,618	0.0317597	3,543	24,114	(12,107)	—	1,338
Ferron City	1,827	0.0026836	299	2,038	(1,023)	—	113
Fillmore City	9,576	0.0140693	1,569	10,683	(5,363)	—	593
Five-County Association of Governments	42,167	0.0619502	6,911	47,037	(23,616)	—	2,610
Fruit Heights City	6,157	0.0090449	1,009	6,868	(3,448)	—	381
Garfield County	14,627	0.0214896	2,397	16,317	(8,192)	—	905
Garfield School District	31,944	0.0469310	5,235	35,634	(17,891)	—	1,977
Garland City	2,469	0.0036280	405	2,755	(1,383)	—	153
Grand Co Cemetery Maintenance District	5,370	0.0078897	880	5,990	(3,008)	—	332
Grand County	77,539	0.1139165	12,707	86,494	(43,426)	—	4,799
Grand School District	180,205	0.2647474	29,532	201,017	(100,925)	—	11,152

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	
												Proportionate Share of Contributions
10,022	10,973	26,850	12,855	1,871	1,412	—	16,138	98,434	1,053	—	99,487	
1,776	1,941	4,755	2,278	332	250	—	2,860	17,447	189	—	17,636	
8,148	9,482	22,390	10,451	1,521	1,148	—	13,120	80,025	904	—	80,929	
16,833	19,129	45,795	21,590	3,142	2,371	—	27,103	165,323	1,842	—	167,165	
13,224	14,510	35,459	16,961	2,468	1,863	—	21,292	129,879	1,379	—	131,258	
50,223	55,652	135,215	64,418	9,375	7,074	—	80,867	493,274	5,326	—	498,600	
3,737	4,022	9,942	4,793	697	526	—	6,016	36,699	387	—	37,086	
350	363	917	448	65	49	—	562	3,434	35	—	3,469	
1,000	1,097	2,681	1,283	187	141	—	1,611	9,826	105	—	9,931	
691	731	1,826	886	129	97	—	1,112	6,787	70	—	6,857	
1,112	1,234	2,996	1,426	208	157	—	1,791	10,922	119	—	11,041	
21,259	24,515	58,193	27,267	3,968	2,994	—	34,229	208,798	2,350	—	211,148	
7,163	8,027	19,374	9,187	1,337	1,009	—	11,533	70,351	769	—	71,120	
200	242	559	257	37	28	—	322	1,969	24	—	1,993	
2,022	2,231	5,434	2,593	377	285	—	3,255	19,856	211	—	20,067	
892	1,046	2,459	1,144	167	126	—	1,437	8,762	101	—	8,863	
155	189	435	199	29	22	—	250	1,522	18	—	1,540	
3,932	4,438	10,667	5,043	734	554	—	6,331	38,619	421	—	39,040	
1,292	1,389	3,436	1,657	241	182	—	2,080	12,687	133	—	12,820	
1,527	1,679	4,098	1,959	285	215	—	2,459	15,002	159	—	15,161	
463	483	1,217	594	86	65	—	745	4,548	47	—	4,595	
847	909	2,251	1,087	158	119	—	1,364	8,324	91	—	8,415	
2,452	2,734	6,618	3,145	458	345	—	3,948	24,081	259	—	24,340	
1,399	1,526	3,742	1,794	261	197	—	2,252	13,736	141	—	13,877	
4,657	5,282	12,660	5,974	869	656	—	7,499	45,744	496	—	46,240	
20,798	23,112	56,060	26,675	3,882	2,929	—	33,486	204,266	2,203	—	206,469	
854	935	2,288	1,096	159	120	—	1,375	8,389	91	—	8,480	
33,872	37,593	91,252	43,444	6,323	4,771	—	54,538	332,673	3,606	—	336,279	
316,571	349,992	851,500	406,041	59,093	44,591	—	509,725	3,109,234	33,470	—	3,142,704	
13,103	14,346	35,104	16,806	2,446	1,846	—	21,098	128,692	1,372	—	130,064	
1,378	1,588	3,771	1,767	257	194	—	2,218	13,532	152	—	13,684	
6,061	6,615	16,217	7,775	1,131	854	—	9,760	59,533	640	—	60,173	
9,181	9,992	24,537	11,776	1,714	1,293	—	14,783	90,175	963	—	91,138	
38,401	42,495	103,329	49,254	7,168	5,409	—	61,831	377,157	4,094	—	381,251	
7,134	7,953	19,255	9,150	1,332	1,005	—	11,487	70,067	762	—	70,829	
553	566	1,442	709	103	78	—	890	5,431	55	—	5,486	
3,620	3,992	9,727	4,643	676	510	—	5,829	35,554	385	—	35,939	
3,109	3,027	7,952	3,988	580	438	—	5,006	30,539	291	—	30,830	
1,821	2,174	5,059	2,336	340	257	—	2,933	17,890	209	—	18,099	
1,818	1,929	4,809	2,332	339	256	—	2,927	17,855	186	—	18,041	
3,174	3,631	8,659	4,071	592	447	—	5,110	31,174	354	—	31,528	
432	446	1,131	555	81	61	—	697	4,248	44	—	4,292	
11,280	12,507	30,377	14,468	2,106	1,589	—	18,163	110,789	1,200	—	111,989	
899	942	2,366	1,153	168	127	—	1,448	8,832	91	—	8,923	
887	974	2,379	1,138	166	125	—	1,429	8,713	94	—	8,807	
1,771	1,976	4,781	2,271	331	249	—	2,851	17,390	189	—	17,579	
238	318	695	305	44	33	—	382	2,334	31	—	2,365	
6,376	7,198	17,299	8,178	1,190	898	—	10,266	62,623	687	—	63,310	
38	41	101	48	7	5	—	60	369	4	—	373	
2,290	2,499	6,127	2,937	427	323	—	3,687	22,492	237	—	22,729	
194	272	579	248	36	27	—	311	1,901	28	—	1,929	
1,014	1,157	2,764	1,301	189	143	—	1,633	9,964	109	—	10,073	
4,467	4,790	11,867	5,730	834	629	—	7,193	43,873	457	—	44,330	
652	678	1,711	837	122	92	—	1,051	6,406	64	—	6,470	
1,550	1,696	4,151	1,987	289	218	—	2,494	15,219	163	—	15,382	
3,384	3,528	8,889	4,340	632	477	—	5,449	33,237	337	—	33,574	
262	316	731	336	49	37	—	422	2,569	30	—	2,599	
569	756	1,657	730	106	80	—	916	5,588	74	—	5,662	
8,214	9,362	22,375	10,536	1,533	1,157	—	13,226	80,676	898	—	81,574	
19,090	21,520	51,762	24,485	3,563	2,689	—	30,737	187,495	2,061	—	189,556	

## Tier 2 Public Employees Contributory Retirement System

### Schedule of Employer Allocations and Pension Amounts *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Grand Water/Sewer Service	\$ 10,282	0.0151053%	\$ 1,685	11,469	(5,758)	—	636
Granger-Hunter Improvement District	53,654	0.0788265	8,793	59,851	(30,049)	—	3,320
Granite School District	3,418,023	5.0215853	560,155	3,812,780	(1,914,281)	—	211,529
Grantsville City	12,798	0.0188019	2,097	14,276	(7,167)	—	792
Gunnison City	2,691	0.0039539	441	3,002	(1,507)	—	167
Gunnison Valley Hospital	62,649	0.0920409	10,267	69,885	(35,087)	—	3,877
Heber City	67,724	0.0994969	11,099	75,546	(37,929)	—	4,191
Heber Light & Power	36,591	0.0537583	5,997	40,818	(20,493)	—	2,265
Heber Valley Historic Railroad	15,505	0.0227791	2,541	17,296	(8,684)	—	960
Herriman City	85,556	0.1256948	14,021	95,437	(47,916)	—	5,295
High Desert Uniserv	1,463	0.0021489	240	1,632	(819)	—	91
Highland City	3,804	0.0055885	623	4,243	(2,130)	—	235
Hinckley Town	192	0.0002824	32	214	(108)	—	12
Hooper City	10,588	0.0155559	1,735	11,811	(5,930)	—	655
Hooper Water Improv District	3,297	0.0048445	540	3,678	(1,847)	—	204
Housing Authority of SL County	102,551	0.1506625	16,806	114,395	(57,434)	—	6,347
Housing Authority of SLC	74,605	0.1096056	12,226	83,221	(41,783)	—	4,617
Housing Authority Ogden City	8,262	0.0121386	1,354	9,217	(4,627)	—	511
Hurricane City	48,123	0.0706999	7,887	53,681	(26,952)	—	2,978
Hyde Park City	4,220	0.0062004	692	4,708	(2,364)	—	261
Hyrum City	10,050	0.0147654	1,647	11,211	(5,629)	—	622
Intech Collegiate High School	17,085	0.0251005	2,800	19,058	(9,569)	—	1,057
Iron County	90,932	0.1335924	14,902	101,434	(50,927)	—	5,627
Iron School District	344,292	0.5058162	56,423	384,055	(192,822)	—	21,307
Itineris High School	9,488	0.0139388	1,555	10,583	(5,314)	—	587
Ivins City	32,864	0.0482819	5,386	36,659	(18,406)	—	2,034
Jordan River Commission	1,363	0.0020018	223	1,520	(763)	—	84
Jordan School District	2,868,620	4.2144309	470,117	3,199,925	(1,606,586)	—	177,529
Jordan Valley Water Conservancy	85,617	0.1257840	14,031	95,505	(47,950)	—	5,299
Jordanelle Special Service District	24,979	0.0366982	4,094	27,864	(13,990)	—	1,546
Juab County	15,190	0.0223163	2,489	16,944	(8,507)	—	940
Juab School District	100,842	0.1481520	16,526	112,489	(56,477)	—	6,241
Kane County	100,403	0.1475070	16,454	111,999	(56,231)	—	6,214
Kane County Water Conservancy District	9,541	0.0140172	1,564	10,643	(5,344)	—	590
Kane School District	98,901	0.1452997	16,208	110,323	(55,390)	—	6,121
Kaysville City	47,373	0.0695979	7,764	52,844	(26,531)	—	2,932
Kearns Improvement District	16,943	0.0248923	2,777	18,900	(9,489)	—	1,049
Laverkin City	4,811	0.0070681	788	5,367	(2,694)	—	298
Layton City	125,801	0.1848198	20,617	140,330	(70,455)	—	7,785
Lehi City	141,781	0.2082968	23,235	158,155	(79,405)	—	8,774
Lewiston City	6,498	0.0095463	1,065	7,248	(3,639)	—	402
Liberty Academy Charter	45,246	0.0664731	7,415	50,472	(25,340)	—	2,800
Lindon City	15,463	0.0227181	2,534	17,249	(8,660)	—	957
Logan City	187,995	0.2761920	30,809	209,707	(105,287)	—	11,634
Logan School District	346,509	0.5090727	56,787	386,528	(194,064)	—	21,444
Manti City	5,957	0.0087519	976	6,645	(3,336)	—	369
Mapleton City	7,878	0.0115733	1,291	8,787	(4,412)	—	488
Mendon City	1,181	0.0017357	194	1,318	(662)	—	73
Metro Water District SLC/Sandy	23,869	0.0350673	3,912	26,626	(13,368)	—	1,477
Midvale City	76,721	0.1127146	12,573	85,582	(42,968)	—	4,748
Midvalley Improvement District	4,093	0.0060134	671	4,566	(2,292)	—	253
Midway City	19,367	0.0284528	3,174	21,604	(10,847)	—	1,199
Millard Co Care & Rehab Inc	47,843	0.0702878	7,841	53,368	(26,794)	—	2,961
Millard County	39,058	0.0573817	6,401	43,569	(21,875)	—	2,417
Millard School District	156,281	0.2295997	25,612	174,330	(87,526)	—	9,672
Minersville Town	1,085	0.0015937	178	1,210	(608)	—	67
Monroe City	1,461	0.0021467	239	1,630	(818)	—	90
Monticello Academy	53,573	0.0787064	8,780	59,760	(30,004)	—	3,315
Morgan City Corporation	3,607	0.0052993	591	4,024	(2,020)	—	223
Morgan County	25,830	0.0379475	4,233	28,813	(14,466)	—	1,599

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	
1,089	1,263	2,988	1,397	203	153	—	1,753	10,698	118	—	10,816
5,684	6,444	15,448	7,290	1,061	801	—	9,152	55,825	614	—	56,439
362,091	401,908	975,528	464,425	67,590	51,003	—	583,018	3,556,311	38,523	—	3,594,834
1,356	1,577	3,725	1,739	253	191	—	2,183	13,316	153	—	13,469
285	293	745	366	53	40	—	459	2,800	28	—	2,828
6,637	7,074	17,588	8,512	1,239	935	—	10,686	65,184	672	—	65,856
7,174	7,983	19,348	9,202	1,339	1,011	—	11,552	70,464	760	—	71,224
3,876	4,350	10,491	4,972	724	546	—	6,242	38,072	417	—	38,489
1,643	1,879	4,482	2,107	307	231	—	2,645	16,132	182	—	16,314
9,063	10,263	24,621	11,625	1,692	1,277	—	14,594	89,018	983	—	90,001
155	189	435	199	29	22	—	250	1,522	18	—	1,540
403	446	1,084	517	75	57	406	1,055	3,958	9	—	3,967
20	22	54	26	4	3	—	33	200	2	—	202
1,122	1,270	3,047	1,439	209	158	—	1,806	11,017	121	—	11,138
349	403	956	448	65	49	—	562	3,431	39	—	3,470
10,864	12,381	29,592	13,934	2,028	1,530	—	17,492	106,700	1,194	—	107,894
7,903	8,561	21,081	10,137	1,475	1,113	—	12,725	77,623	815	—	78,438
875	1,159	2,545	1,123	163	123	—	1,409	8,597	113	—	8,710
5,098	5,819	13,895	6,539	952	718	—	8,209	50,070	552	—	50,622
447	586	1,294	573	83	63	—	719	4,391	57	—	4,448
1,065	1,112	2,799	1,366	199	150	—	1,715	10,457	104	—	10,561
1,810	2,131	4,998	2,321	338	255	—	2,914	17,776	208	—	17,984
9,633	10,147	25,407	12,355	1,798	1,357	—	15,510	94,611	967	—	95,578
36,473	39,522	97,302	46,781	6,808	5,137	—	58,726	358,221	3,781	—	362,002
1,005	1,157	2,749	1,289	188	142	—	1,619	9,872	115	—	9,987
3,481	4,022	9,537	4,465	650	490	—	5,605	34,193	384	—	34,577
144	189	417	185	27	20	—	232	1,418	18	—	1,436
303,889	330,480	811,898	389,775	56,726	42,805	—	489,306	2,984,680	31,679	—	3,016,359
9,070	10,277	24,646	11,633	1,693	1,278	—	14,604	89,081	984	—	90,065
2,646	3,214	7,406	3,394	494	373	—	4,261	25,990	306	—	26,296
1,609	1,557	4,106	2,064	300	227	—	2,591	15,805	144	—	15,949
10,683	12,126	29,050	13,702	1,994	1,505	—	17,201	104,922	1,157	—	106,079
10,636	11,786	28,636	13,642	1,985	1,498	—	17,125	104,465	1,131	—	105,596
1,011	1,108	2,709	1,296	189	142	—	1,627	9,927	107	—	10,034
10,477	11,773	28,371	13,438	1,956	1,476	—	16,870	102,902	1,133	—	104,035
5,018	5,637	13,587	6,437	937	707	—	8,081	49,290	539	—	49,829
1,795	1,891	4,735	2,302	335	253	—	2,890	17,629	182	—	17,811
510	553	1,361	654	95	72	—	821	5,006	52	—	5,058
13,327	14,954	36,066	17,093	2,488	1,877	—	21,458	130,890	1,438	—	132,328
15,020	16,530	40,324	19,264	2,804	2,116	—	24,184	147,517	1,562	—	149,079
688	793	1,883	883	128	97	—	1,108	6,761	74	—	6,835
4,793	5,599	13,192	6,148	895	675	—	7,718	47,077	558	—	47,635
1,638	1,823	4,418	2,101	306	231	—	2,638	16,089	177	—	16,266
19,915	22,516	54,065	25,544	3,718	2,805	—	32,067	195,601	2,160	—	197,761
36,708	40,748	98,900	47,082	6,852	5,170	—	59,104	360,528	3,921	—	364,449
631	508	1,508	809	118	89	—	1,016	6,198	48	—	6,246
835	1,025	2,348	1,070	156	118	—	1,344	8,196	99	—	8,295
125	136	334	161	23	18	—	202	1,229	12	—	1,241
2,529	2,765	6,771	3,243	472	356	—	4,071	24,835	267	—	25,102
8,127	8,844	21,719	10,424	1,517	1,145	—	13,086	79,825	846	—	80,671
434	406	1,093	556	81	61	—	698	4,259	41	—	4,300
2,052	2,418	5,669	2,631	383	289	—	3,303	20,150	235	—	20,385
5,068	5,400	13,429	6,501	946	714	—	8,161	49,778	511	—	50,289
4,138	4,645	11,200	5,307	772	583	—	6,662	40,638	442	—	41,080
16,556	18,588	44,816	21,235	3,090	2,332	—	26,657	162,604	1,779	—	164,383
115	136	318	147	21	16	—	184	1,129	13	—	1,142
155	161	406	199	29	22	—	250	1,520	16	—	1,536
5,675	6,116	15,106	7,279	1,059	799	—	9,137	55,740	589	—	56,329
382	483	1,088	490	71	54	—	615	3,753	47	—	3,800
2,736	2,945	7,280	3,510	511	385	—	4,406	26,875	281	—	27,156

## Tier 2 Public Employees Contributory Retirement System

### Schedule of Employer Allocations and Pension Amounts *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments
Morgan School District	\$ 120,805	0.1774810%	\$ 19,798	134,757	(67,658)	—	7,476
Moroni City	3,507	0.0051519	575	3,912	(1,964)	—	217
Mount Pleasant City	13,446	0.0197538	2,204	14,999	(7,530)	—	832
Mountain Regional Water Special Service District	20,573	0.0302245	3,372	22,949	(11,522)	—	1,273
Mountainland Association of Governments	24,273	0.0356606	3,978	27,076	(13,594)	—	1,502
Mt Olympus Improvement District	19,106	0.0280698	3,131	21,313	(10,701)	—	1,182
Murray City	180,154	0.2646738	29,524	200,961	(100,896)	—	11,149
Murray School District	296,370	0.4354118	48,570	330,599	(165,984)	—	18,341
Myton City	1,209	0.0017755	198	1,348	(677)	—	75
Ne Counseling Center	44,618	0.0655498	7,312	49,771	(24,988)	—	2,761
Nebo Credit Union	12,050	0.0177026	1,975	13,441	(6,748)	—	746
Nebo School District	1,670,719	2.4545353	273,802	1,863,675	(935,695)	—	103,395
Nephi City	28,408	0.0417352	4,656	31,689	(15,910)	—	1,758
Nibley City Corporation	15,061	0.0221268	2,468	16,800	(8,435)	—	932
Noah Webster Academy Inc	41,287	0.0606575	6,766	46,056	(23,123)	—	2,555
North Davis Co Sewer District	14,642	0.0215107	2,400	16,333	(8,200)	—	906
North Emery Water Users Special Service District	4,482	0.0065847	735	5,000	(2,510)	—	277
North Fork Special Service District	5,539	0.0081381	908	6,179	(3,102)	—	343
North Logan City	16,129	0.0236957	2,643	17,992	(9,033)	—	998
North Ogden City	43,047	0.0632419	7,055	48,018	(24,108)	—	2,664
North Pointe Solid Waste	21,521	0.0316178	3,527	24,007	(12,053)	—	1,332
North Sanpete School District	103,222	0.1516483	16,916	115,143	(57,810)	—	6,388
North Summit School District	36,714	0.0539379	6,017	40,954	(20,562)	—	2,272
NUAMES Charter School	37,295	0.0547915	6,112	41,602	(20,887)	—	2,308
Ogden City Corp	290,398	0.4266376	47,591	323,937	(162,639)	—	17,972
Ogden School District	997,501	1.4654773	163,473	1,112,705	(558,655)	—	61,732
Ogden Weber/NEA/UEA Uniserv	2,632	0.0038672	431	2,936	(1,474)	—	163
Ogden-Weber Technology College	9,479	0.0139258	1,553	10,574	(5,309)	—	587
Oquirrh Recreation and Parks District	3,862	0.0056744	633	4,308	(2,163)	—	239
Orderville Town	285	0.0004185	47	318	(160)	—	18
Panguitch City Corporation	8,939	0.0131328	1,465	9,971	(5,006)	—	553
Park City	393,414	0.5779839	64,474	438,851	(220,334)	—	24,347
Park City Fire Service	15,890	0.0233449	2,604	17,725	(8,899)	—	983
Park City School District	411,218	0.6041406	67,391	458,711	(230,305)	—	25,449
Parowan City	7,806	0.0114677	1,279	8,707	(4,372)	—	483
Payson City	67,646	0.0993825	11,086	75,459	(37,886)	—	4,186
Perry City	7,968	0.0117065	1,306	8,888	(4,463)	—	493
Piute County	5,179	0.0076090	849	5,777	(2,901)	—	321
Piute School District	26,089	0.0383281	4,275	29,102	(14,611)	—	1,615
Plain City	4,440	0.0065232	728	4,953	(2,487)	—	275
Pleasant Grove City	47,840	0.0702846	7,840	53,366	(26,793)	—	2,961
Pleasant View City	5,626	0.0082659	922	6,276	(3,151)	—	348
Price City	26,263	0.0385848	4,304	29,297	(14,709)	—	1,625
Price River Water Improvement	13,054	0.0191786	2,139	14,562	(7,311)	—	808
Providence City	9,673	0.0142109	1,585	10,790	(5,417)	—	599
Provo City Corp	455,318	0.6689307	74,619	507,904	(255,003)	—	28,178
Provo Housing Authority	16,204	0.0238067	2,656	18,076	(9,075)	—	1,003
Provo River Water Users	9,544	0.0140220	1,564	10,647	(5,345)	—	591
Provo School District	1,032,168	1.5164092	169,154	1,151,376	(578,071)	—	63,877
Recreation & Habilitation Services	645	0.0009480	106	720	(361)	—	40
Rich County	18,607	0.0273363	3,049	20,756	(10,421)	—	1,152
Rich School District	27,996	0.0411308	4,588	31,230	(15,679)	—	1,733
Richfield City	4,832	0.0070983	792	5,390	(2,706)	—	299
Richmond City	6,068	0.0089154	995	6,769	(3,399)	—	376
Riverdale City	14,115	0.0207374	2,313	15,745	(7,905)	—	874
Roosevelt City	22,449	0.0329814	3,679	25,042	(12,573)	—	1,389
Roy City	54,047	0.0794033	8,857	60,289	(30,269)	—	3,345
S Utah Valley Electric Service District	14,490	0.0212885	2,375	16,164	(8,115)	—	897
S Utah Valley Solid Waste	4,809	0.0070655	788	5,365	(2,693)	—	298
Salem City	12,169	0.0178777	1,994	13,574	(6,815)	—	753



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 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	
12,798	14,640	34,914	16,414	2,389	1,803	—	20,606	125,693	1,398	—	127,091
371	383	971	476	69	52	—	597	3,649	37	—	3,686
1,424	1,662	3,918	1,827	266	201	—	2,294	13,990	161	—	14,151
2,179	2,341	5,793	2,795	407	307	—	3,509	21,405	228	—	21,633
2,571	2,975	7,048	3,298	480	362	—	4,140	25,255	291	—	25,546
2,024	2,271	5,477	2,596	378	285	—	3,259	19,879	217	—	20,096
19,085	21,204	51,438	24,479	3,562	2,688	—	30,729	187,443	2,027	—	189,470
31,396	34,806	84,543	40,269	5,861	4,422	—	50,552	308,361	3,320	—	311,681
128	140	343	164	24	18	—	206	1,257	13	—	1,270
4,727	5,298	12,786	6,062	882	666	—	7,610	46,423	510	—	46,933
1,276	1,504	3,526	1,637	238	180	—	2,055	12,537	142	—	12,679
176,989	194,697	475,081	227,010	33,038	24,930	—	284,978	1,738,314	18,697	—	1,757,011
3,009	3,560	8,327	3,860	562	424	—	4,846	29,557	336	—	29,893
1,595	1,701	4,228	2,046	298	225	—	2,569	15,670	166	—	15,836
4,374	4,460	11,389	5,610	816	616	—	7,042	42,958	423	—	43,381
1,551	1,899	4,356	1,989	290	218	—	2,497	15,234	186	—	15,420
475	486	1,238	609	89	67	—	765	4,663	47	—	4,710
587	654	1,584	753	110	83	—	946	5,763	60	—	5,823
1,709	1,902	4,609	2,192	319	241	—	2,752	16,781	183	—	16,964
4,560	5,186	12,410	5,849	851	642	—	7,342	44,788	493	—	45,281
2,280	2,486	6,098	2,924	426	321	—	3,671	22,392	239	—	22,631
10,935	12,529	29,852	14,025	2,041	1,540	—	17,606	107,398	1,200	—	108,598
3,889	4,252	10,413	4,988	726	548	—	6,262	38,199	404	—	38,603
3,951	4,562	10,821	5,067	737	556	—	6,360	38,804	440	—	39,244
30,763	34,617	83,352	39,458	5,743	4,333	—	49,534	302,147	3,310	—	305,457
105,671	115,831	283,234	135,536	19,725	14,884	—	170,145	1,037,858	11,151	—	1,049,009
279	315	757	358	52	39	54	503	2,739	27	—	2,766
1,004	1,051	2,642	1,288	187	141	—	1,616	9,862	102	—	9,964
409	446	1,094	525	76	58	—	659	4,019	41	—	4,060
30	33	81	39	6	4	—	49	296	3	—	299
947	1,129	2,629	1,215	177	133	—	1,525	9,301	109	—	9,410
41,677	48,036	114,060	53,455	7,780	5,870	—	67,105	409,331	4,635	—	413,966
1,683	1,888	4,554	2,159	314	237	—	2,710	16,533	180	—	16,713
43,563	48,032	117,044	55,874	8,132	6,136	—	70,142	427,855	4,599	—	432,454
827	1,008	2,318	1,061	154	116	—	1,331	8,121	98	—	8,219
7,166	8,210	19,562	9,191	1,338	1,009	—	11,538	70,383	797	—	71,180
844	1,052	2,389	1,083	158	119	—	1,360	8,291	101	—	8,392
549	619	1,489	704	102	77	—	883	5,389	60	—	5,449
2,764	3,238	7,617	3,545	516	389	—	4,450	27,144	312	—	27,456
470	479	1,224	603	88	66	—	757	4,620	44	—	4,664
5,068	6,067	14,096	6,500	946	714	—	8,160	49,776	583	—	50,359
596	719	1,663	764	111	84	—	959	5,854	69	—	5,923
2,782	3,170	7,577	3,569	519	392	—	4,480	27,326	308	—	27,634
1,383	1,428	3,619	1,774	258	195	—	2,227	13,582	133	—	13,715
1,025	1,138	2,762	1,314	191	144	—	1,649	10,064	106	—	10,170
48,234	53,053	129,465	61,867	9,004	6,794	—	77,665	473,740	5,086	—	478,826
1,717	1,679	4,399	2,202	320	242	—	2,764	16,860	159	—	17,019
1,011	957	2,559	1,297	189	142	—	1,628	9,930	89	—	10,019
109,343	118,820	292,040	140,246	20,411	15,402	—	176,059	1,073,928	11,449	—	1,085,377
68	139	247	88	13	10	24	135	671	12	—	683
1,971	2,052	5,175	2,528	368	278	—	3,174	19,360	198	—	19,558
2,966	3,043	7,742	3,804	554	418	—	4,776	29,129	289	—	29,418
512	503	1,314	656	96	72	33	857	5,027	42	—	5,069
643	780	1,799	825	120	91	—	1,036	6,314	74	—	6,388
1,495	1,583	3,952	1,918	279	211	—	2,408	14,686	145	—	14,831
2,378	2,260	6,027	3,050	444	335	—	3,829	23,358	210	—	23,568
5,726	6,388	15,459	7,344	1,069	806	—	9,219	56,234	613	—	56,847
1,535	1,677	4,109	1,969	287	216	—	2,472	15,077	162	—	15,239
509	548	1,355	653	95	72	—	820	5,004	51	—	5,055
1,289	1,446	3,488	1,653	241	182	—	2,076	12,661	138	—	12,799

## Tier 2 Public Employees Contributory Retirement System

### Schedule of Employer Allocations and Pension Amounts *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Salina City	\$ 2,954	0.0043399%	\$ 484	3,295	(1,654)	—	183
Salt Lake Arts Academy	34,515	0.0507078	5,656	38,501	(19,330)	—	2,136
Salt Lake City Corp	1,864,960	2.7399053	305,635	2,080,350	(1,044,481)	—	115,416
Salt Lake City Public Library	80,217	0.1178511	13,146	89,482	(44,926)	—	4,964
Salt Lake Community College	428,881	0.6300908	70,286	478,414	(240,197)	—	26,542
Salt Lake County	2,293,617	3.3696656	375,884	2,558,514	(1,284,552)	—	141,944
Salt Lake School District	1,508,150	2.2156978	247,160	1,682,331	(844,647)	—	93,334
San Juan County	47,446	0.0697048	7,776	52,925	(26,572)	—	2,936
San Juan Mental Health	11,256	0.0165370	1,845	12,556	(6,304)	—	697
San Juan School District	261,631	0.3843754	42,877	291,848	(146,528)	—	16,191
Sandy City	232,336	0.3413357	38,076	259,169	(130,121)	—	14,378
Sandy Suburban Improvement District	3,719	0.0054636	609	4,148	(2,083)	—	230
Sanpete County	42,583	0.0625604	6,979	47,501	(23,849)	—	2,635
Santaquin City	16,194	0.0237908	2,654	18,064	(9,069)	—	1,002
Sevier County	42,650	0.0626585	6,990	47,575	(23,886)	—	2,639
Sevier School District	165,257	0.2427879	27,083	184,344	(92,553)	—	10,227
Six-County Association of Governments	3,571	0.0052469	585	3,984	(2,000)	—	221
Slc Mosquito Abatement	13,259	0.0194801	2,173	14,791	(7,426)	—	821
Smithfield City Corp	27,208	0.0399722	4,459	30,350	(15,238)	—	1,684
Snow College	39,969	0.0587211	6,550	44,586	(22,385)	—	2,474
Snyder Basin Special Recreation District	74,286	0.1091374	12,174	82,866	(41,604)	—	4,597
Snyderville Basin Water Reclamation District	22,076	0.0324330	3,618	24,626	(12,364)	—	1,366
So Davis Recreation Center	7,980	0.0117242	1,308	8,902	(4,469)	—	494
So SI Valley Mosquito Abatement	7,342	0.0107858	1,203	8,189	(4,112)	—	454
So Utah Valley Animal Svcs SSD	975	0.0014325	160	1,088	(546)	—	60
Soldier Hollow Charter School	22,744	0.0334146	3,727	25,371	(12,738)	—	1,408
Solid Waste Special Service District #1	10,305	0.0151389	1,689	11,495	(5,771)	—	638
South Davis Sewer District	7,185	0.0105558	1,177	8,015	(4,024)	—	445
South Ogden City	22,318	0.0327885	3,658	24,896	(12,499)	—	1,381
South Ogden Conservancy District	20,192	0.0296650	3,309	22,524	(11,309)	—	1,250
South Sanpete School District	152,110	0.2234720	24,928	169,677	(85,190)	—	9,414
South Summit School District	72,751	0.1068816	11,923	81,153	(40,744)	—	4,502
South Valley Sewer District	57,486	0.0844553	9,421	64,125	(32,195)	—	3,558
South Valley Water Reclamation	40,373	0.0593136	6,616	45,036	(22,611)	—	2,499
South Weber City	12,262	0.0180146	2,010	13,678	(6,867)	—	759
Southeastern Utah AOG	3,736	0.0054889	612	4,168	(2,092)	—	231
Southeastern Utah Health	12,743	0.0187221	2,088	14,215	(7,137)	—	789
Southern Utah University	168,049	0.2468898	27,540	187,458	(94,117)	—	10,400
Southwest Applied Technology	38,898	0.0571463	6,375	43,390	(21,785)	—	2,407
Southwest Educ Development Center	16,573	0.0243487	2,716	18,487	(9,282)	—	1,026
Space Dynamics Lab / USU	27,548	0.0404722	4,515	30,730	(15,428)	—	1,705
Spanish Fork City	127,983	0.1880264	20,974	142,764	(71,678)	—	7,920
Spring City	2,417	0.0035513	396	2,696	(1,354)	—	150
Springville City	106,533	0.1565131	17,459	118,837	(59,664)	—	6,593
St George Housing Authority	1,361	0.0019996	223	1,518	(762)	—	84
State of Utah	12,956,712	19.0353440	2,123,388	14,453,115	(7,256,478)	—	801,835
Success Academy	20,413	0.0299903	3,345	22,771	(11,433)	—	1,263
Summit Academy High School	56,364	0.0828065	9,237	62,873	(31,567)	—	3,488
Summit Academy Inc	205,292	0.3016044	33,644	229,002	(114,975)	—	12,705
Summit County	192,491	0.2827979	31,546	214,722	(107,806)	—	11,913
Sunset City	4,288	0.0062992	703	4,783	(2,401)	—	265
SW Behavioral Health Center	160,597	0.2359403	26,319	179,144	(89,943)	—	9,939
SW Mosquito Abatement/Control	6,983	0.0102596	1,144	7,790	(3,911)	—	432
SW UT Public Health Department	42,750	0.0628062	7,006	47,687	(23,942)	—	2,646
Syracuse City Corp	45,517	0.0668706	7,459	50,773	(25,492)	—	2,817
Taylor West Weber Water Improvement District	4,696	0.0068994	770	5,239	(2,630)	—	291
Taylorville-Bennion Improvement	15,732	0.0231123	2,578	17,549	(8,811)	—	974
Timber Lakes Water Special Service District	7,497	0.0110141	1,229	8,363	(4,199)	—	464
Timpanogos Special Service District	42,111	0.0618676	6,901	46,975	(23,585)	—	2,606
Tintic School District	3,863	0.0056748	633	4,309	(2,163)	—	239

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
313	387	883	401	58	44	—	503	3,074	37	—	3,111
3,656	3,889	9,681	4,690	683	515	—	5,888	35,912	373	—	36,285
197,566	219,288	532,270	253,402	36,879	27,828	—	318,109	1,940,414	20,991	—	1,961,405
8,498	9,216	22,678	10,900	1,586	1,197	—	13,683	83,463	877	—	84,340
45,434	50,911	122,887	58,274	8,481	6,400	—	73,155	446,233	4,881	—	451,114
242,976	269,852	654,772	311,646	45,355	34,225	—	391,226	2,386,413	25,833	—	2,412,246
159,767	177,631	430,732	204,921	29,823	22,504	—	257,248	1,569,168	17,006	—	1,586,174
5,026	6,015	13,977	6,447	938	708	—	8,093	49,365	579	—	49,944
1,192	1,194	3,083	1,529	223	168	—	1,920	11,712	114	—	11,826
27,716	30,858	74,765	35,549	5,174	3,904	—	44,627	272,217	2,966	—	275,183
24,613	28,665	67,656	31,569	4,594	3,467	—	39,630	241,736	2,741	—	244,477
394	429	1,053	505	74	55	—	634	3,869	42	—	3,911
4,511	4,868	12,014	5,786	842	635	—	7,263	44,306	462	—	44,768
1,715	1,843	4,560	2,200	320	242	—	2,762	16,849	178	—	17,027
4,518	5,075	12,232	5,795	843	636	—	7,274	44,375	482	—	44,857
17,507	19,427	47,161	22,454	3,268	2,466	—	28,188	171,944	1,872	—	173,816
378	443	1,042	485	71	53	—	609	3,716	45	—	3,761
1,405	1,710	3,936	1,802	262	198	—	2,262	13,796	164	—	13,960
2,882	3,265	7,831	3,697	538	406	—	4,641	28,309	314	—	28,623
4,234	5,322	12,030	5,431	790	596	—	6,817	41,587	523	—	42,110
7,870	8,591	21,058	10,094	1,469	1,108	—	12,671	77,292	782	—	78,074
2,339	2,586	6,291	3,000	437	329	—	3,766	22,969	249	—	23,218
845	929	2,268	1,084	158	119	—	1,361	8,303	90	—	8,393
778	953	2,185	998	145	110	—	1,253	7,639	91	—	7,730
103	112	275	132	19	15	—	166	1,015	10	—	1,025
2,409	2,831	6,648	3,090	450	339	—	3,879	23,664	269	—	23,933
1,092	1,271	3,001	1,400	204	154	—	1,758	10,721	123	—	10,844
761	818	2,024	976	142	107	—	1,225	7,476	77	—	7,553
2,364	2,612	6,357	3,032	441	333	—	3,806	23,221	252	—	23,473
2,139	2,389	5,778	2,744	399	301	—	3,444	21,009	227	—	21,236
16,114	18,403	43,931	20,668	3,008	2,270	—	25,946	158,264	1,772	—	160,036
7,707	8,569	20,778	9,885	1,439	1,086	—	12,410	75,694	830	—	76,524
6,090	6,810	16,458	7,811	1,137	858	—	9,806	59,812	659	—	60,471
4,277	4,660	11,436	5,486	798	602	—	6,886	42,006	447	—	42,453
1,299	1,356	3,414	1,666	242	183	—	2,091	12,758	131	—	12,889
396	453	1,080	508	74	56	14	652	3,887	45	—	3,932
1,350	1,460	3,599	1,732	252	190	—	2,174	13,259	139	—	13,398
17,802	19,496	47,698	22,834	3,323	2,508	—	28,665	174,849	1,844	—	176,693
4,121	4,273	10,801	5,285	769	580	—	6,634	40,471	408	—	40,879
1,756	2,040	4,822	2,252	328	247	—	2,827	17,244	196	—	17,440
2,918	3,503	8,126	3,743	545	411	—	4,699	28,663	342	—	29,005
13,558	15,107	36,585	17,390	2,531	1,910	—	21,831	133,161	1,444	—	134,605
256	279	685	328	48	36	—	412	2,515	25	—	2,540
11,286	12,534	30,413	14,475	2,107	1,590	—	18,172	110,843	1,190	—	112,033
144	152	380	185	27	20	—	232	1,416	15	—	1,431
1,372,583	1,510,051	3,684,469	1,760,498	256,221	193,336	—	2,210,055	13,480,917	144,356	—	13,625,273
2,163	2,433	5,859	2,774	404	305	—	3,483	21,239	236	—	21,475
5,971	6,400	15,859	7,658	1,115	841	—	9,614	58,644	629	—	59,273
21,748	24,825	59,278	27,894	4,060	3,063	—	35,017	213,598	2,372	—	215,970
20,392	22,274	54,579	26,155	3,806	2,872	—	32,833	200,279	2,116	—	202,395
454	550	1,269	583	85	64	—	732	4,461	52	—	4,513
17,013	19,703	46,655	21,821	3,176	2,396	—	27,393	167,094	1,904	—	168,998
740	805	1,977	949	138	104	—	1,191	7,266	77	—	7,343
4,529	4,951	12,126	5,809	845	638	—	7,292	44,480	479	—	44,959
4,822	5,117	12,756	6,185	900	679	—	7,764	47,358	489	—	47,847
497	528	1,316	638	93	70	—	801	4,886	51	—	4,937
1,667	1,848	4,489	2,138	311	235	—	2,684	16,368	176	—	16,544
794	939	2,197	1,019	148	112	—	1,279	7,800	91	—	7,891
4,461	4,987	12,054	5,722	833	628	—	7,183	43,815	483	—	44,298
409	345	993	525	76	58	—	659	4,019	32	—	4,051

## Tier 2 Public Employees Contributory Retirement System

### Schedule of Employer Allocations and Pension Amounts *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Tooele Applied Technology College	\$ 14,660	0.0215377%	\$ 2,403	16,353	(8,210)	—	907
Tooele City	74,416	0.1093276	12,195	83,010	(41,677)	—	4,605
Tooele County	172,810	0.2538839	28,321	192,769	(96,783)	—	10,695
Tooele County Housing	13,895	0.0204145	2,277	15,500	(7,782)	—	860
Tooele School District	663,765	0.9751693	108,779	740,425	(371,745)	—	41,078
Torrey Town	2,467	0.0036240	404	2,752	(1,382)	—	153
Town of Alta	3,483	0.0051166	571	3,885	(1,951)	—	216
Town of Apple Valley	4,381	0.0064359	718	4,887	(2,453)	—	271
Town of Brian Head	3,618	0.0053147	593	4,035	(2,026)	—	224
Town of Garden City	10,386	0.0152585	1,702	11,585	(5,817)	—	643
Town of Goshen	2,370	0.0034825	388	2,644	(1,328)	—	147
Town of Manila	2,328	0.0034196	381	2,596	(1,304)	—	144
Town of Springdale	7,874	0.0115683	1,290	8,784	(4,410)	—	487
Trans-Jordan Cities	27,937	0.0410435	4,578	31,163	(15,646)	—	1,729
Tremonton City	16,636	0.0244407	2,726	18,557	(9,317)	—	1,030
Tridell-Lapoint Water	9,431	0.0138554	1,546	10,520	(5,282)	—	584
Tuacahn High School	27,206	0.0399704	4,459	30,349	(15,237)	—	1,684
Uintah Animal Control/Shelter	2,623	0.0038533	430	2,926	(1,469)	—	162
Uintah Basin Applied Technology Center	96,476	0.1417378	15,811	107,618	(54,032)	—	5,971
Uintah Basin Association of Governments	40,455	0.0594345	6,630	45,127	(22,657)	—	2,504
Uintah Basin Asst Council	4,730	0.0069489	775	5,276	(2,649)	—	293
Uintah Co Care Center Special Service District	68,462	0.1005804	11,220	76,369	(38,342)	—	4,237
Uintah County	246,398	0.3619962	40,380	274,856	(137,997)	—	15,249
Uintah Highlands Improv District	548	0.0008057	90	612	(307)	—	34
Uintah Recreation District	23,404	0.0343835	3,835	26,107	(13,107)	—	1,448
Uintah School District	601,039	0.8830167	98,500	670,455	(336,615)	—	37,196
Uintah Transportation Special Service District	12,761	0.0187473	2,091	14,234	(7,147)	—	790
Uintah Water Conservancy District	3,034	0.0044579	497	3,385	(1,699)	—	188
Unified Fire Authority	34,644	0.0508973	5,678	38,645	(19,403)	—	2,144
Unified Police Department	129,888	0.1908250	21,286	144,889	(72,745)	—	8,038
University of Utah	3,133,534	4.6036290	513,532	3,495,435	(1,754,952)	—	193,923
UT Municipal Power Agency	11,465	0.0168434	1,879	12,789	(6,421)	—	710
UT Public Employees Association	5,159	0.0075792	845	5,755	(2,889)	—	319
UT School Board Risk Management	9,510	0.0139716	1,559	10,608	(5,326)	—	589
Utah Co Academy of Sciences	23,970	0.0352153	3,928	26,738	(13,424)	—	1,483
Utah Co Housing Authority	35,132	0.0516138	5,757	39,189	(19,676)	—	2,174
Utah Communications Authority	9,620	0.0141327	1,576	10,731	(5,388)	—	595
Utah Counties Indemnity Pool	3,007	0.0044177	493	3,354	(1,684)	—	186
Utah County	484,547	0.7118714	79,409	540,508	(271,373)	—	29,987
Utah Dairy Council	5,270	0.0077431	864	5,879	(2,952)	—	326
Utah Education Association	18,475	0.0271429	3,028	20,609	(10,347)	—	1,143
Utah Housing Corporation	117,522	0.1726572	19,260	131,095	(65,819)	—	7,273
Utah Lake Commission	1,515	0.0022256	248	1,690	(848)	—	94
Utah League Cities/Towns	4,987	0.0073265	817	5,563	(2,793)	—	309
Utah Local Governments Trust	24,525	0.0360306	4,019	27,357	(13,735)	—	1,518
Utah Retirement Systems	389,155	0.5717271	63,776	434,100	(217,948)	—	24,083
Utah Safety Council	18,216	0.0267627	2,985	20,320	(10,202)	—	1,127
Utah School Boards Association	10,272	0.0150908	1,683	11,458	(5,753)	—	636
Utah School Employees Association	2,038	0.0029937	334	2,273	(1,141)	—	126
Utah State Fair Corp	19,594	0.0287866	3,211	21,857	(10,974)	—	1,213
Utah State University	728,540	1.0703341	119,395	812,681	(408,023)	—	45,087
Utah Valley Dispatch Special Service District	39,735	0.0583765	6,512	44,324	(22,254)	—	2,459
Utah Valley University	521,798	0.7665995	85,514	582,062	(292,236)	—	32,292
Utah Zoological Society	147,918	0.2173132	24,241	165,001	(82,842)	—	9,154
UTOPIA	104,929	0.1541564	17,196	117,048	(58,766)	—	6,494
Valley Emergency Communications Center	149,963	0.2203179	24,576	167,283	(83,988)	—	9,281
Vernal City	27,736	0.0407486	4,545	30,940	(15,534)	—	1,716
Vineyard Town	19,865	0.0291848	3,256	22,159	(11,126)	—	1,229
Wasatch County	160,732	0.2361397	26,341	179,296	(90,019)	—	9,947
Wasatch Front Regional Council	36,898	0.0542080	6,047	41,159	(20,665)	—	2,283

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 Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
1,553	1,496	3,956	1,992	290	219	—	2,501	15,253	144	—	15,397
7,883	8,492	20,980	10,111	1,472	1,110	—	12,693	77,426	807	—	78,233
18,307	20,788	49,790	23,481	3,417	2,579	—	29,477	179,802	1,989	—	181,791
1,472	1,791	4,123	1,888	275	207	—	2,370	14,458	174	—	14,632
70,316	76,422	187,816	90,189	13,126	9,904	—	113,219	690,620	7,337	—	697,957
261	226	640	335	49	37	—	421	2,567	21	—	2,588
369	362	947	473	69	52	—	594	3,624	35	—	3,659
464	574	1,309	595	87	65	—	747	4,558	55	—	4,613
383	401	1,008	492	72	54	—	618	3,764	38	—	3,802
1,100	1,235	2,978	1,411	205	155	—	1,771	10,806	116	—	10,922
251	274	672	322	47	35	41	445	2,466	21	—	2,487
247	270	661	316	46	35	—	397	2,422	25	—	2,447
834	1,052	2,373	1,070	156	117	—	1,343	8,193	101	—	8,294
2,960	3,250	7,939	3,796	552	417	—	4,765	29,067	311	—	29,378
1,762	2,016	4,808	2,260	329	248	—	2,837	17,309	194	—	17,503
999	1,029	2,612	1,281	186	141	—	1,608	9,812	100	—	9,912
2,882	3,169	7,735	3,697	538	406	—	4,641	28,307	301	—	28,608
278	270	710	356	52	39	—	447	2,729	27	—	2,756
10,220	11,253	27,444	13,109	1,908	1,440	—	16,457	100,379	1,094	—	101,473
4,286	4,570	11,360	5,497	800	604	—	6,901	42,092	437	—	42,529
501	579	1,373	643	94	71	—	808	4,921	56	—	4,977
7,253	7,881	19,371	9,302	1,354	1,022	—	11,678	71,232	762	—	71,994
26,102	28,863	70,214	33,479	4,872	3,677	—	42,028	256,367	2,784	—	259,151
58	64	156	75	11	8	—	94	571	6	—	577
2,479	3,053	6,980	3,180	463	349	—	3,992	24,351	299	—	24,650
63,672	70,394	171,262	81,666	11,885	8,969	—	102,520	625,357	6,804	—	632,161
1,352	1,654	3,796	1,734	252	190	—	2,176	13,277	157	—	13,434
321	458	967	412	60	45	—	517	3,157	45	—	3,202
3,670	3,986	9,800	4,707	685	517	—	5,909	36,046	387	—	36,433
13,760	15,470	37,268	17,649	2,568	1,938	—	22,155	135,143	1,484	—	136,627
331,953	366,216	892,092	425,770	61,964	46,758	—	534,492	3,260,312	35,924	—	3,296,236
1,215	1,280	3,205	1,558	227	171	—	1,956	11,929	122	—	12,051
547	589	1,455	701	102	77	—	880	5,368	54	—	5,422
1,007	1,171	2,767	1,292	188	142	—	1,622	9,895	113	—	10,008
2,539	2,812	6,834	3,257	474	358	—	4,089	24,940	272	—	25,212
3,722	4,317	10,213	4,774	695	524	—	5,993	36,553	415	—	36,968
1,019	1,234	2,848	1,307	190	144	—	1,641	10,009	119	—	10,128
319	348	853	409	59	45	—	513	3,129	33	—	3,162
51,331	58,353	139,671	65,838	9,582	7,230	—	82,650	504,151	5,578	—	509,729
558	644	1,528	716	104	79	—	899	5,484	62	—	5,546
1,957	2,541	5,641	2,510	365	276	—	3,151	19,223	252	—	19,475
12,450	13,412	33,135	15,968	2,324	1,754	—	20,046	122,277	1,284	—	123,561
160	213	467	206	30	23	—	259	1,576	21	—	1,597
528	619	1,456	678	99	74	—	851	5,189	58	—	5,247
2,598	3,306	7,422	3,332	485	366	—	4,183	25,517	318	—	25,835
41,225	46,018	111,326	52,877	7,695	5,807	—	66,379	404,900	4,414	—	409,314
1,930	1,797	4,854	2,475	360	272	—	3,107	18,953	169	—	19,122
1,088	1,065	2,789	1,396	203	153	—	1,752	10,687	99	—	10,786
216	249	591	277	40	30	—	347	2,120	24	—	2,144
2,076	1,954	5,243	2,662	387	292	—	3,341	20,387	191	—	20,578
77,178	84,350	206,615	98,991	14,407	10,871	—	124,269	758,016	8,222	—	766,238
4,209	4,623	11,291	5,399	786	593	—	6,778	41,343	441	—	41,784
55,277	63,878	151,447	70,900	10,318	7,786	—	89,004	542,909	6,246	—	549,155
15,670	17,442	42,266	20,098	2,925	2,207	—	25,230	153,902	1,678	—	155,580
11,116	12,781	30,391	14,257	2,075	1,566	—	17,898	109,174	1,227	—	110,401
15,886	18,373	43,540	20,376	2,965	2,238	—	25,579	156,030	1,762	—	157,792
2,938	2,832	7,486	3,769	548	414	—	4,731	28,858	274	—	29,132
2,104	2,364	5,697	2,699	393	296	—	3,388	20,669	222	—	20,891
17,027	19,815	46,789	21,840	3,178	2,398	—	27,416	167,235	1,905	—	169,140
3,909	4,343	10,535	5,013	730	551	—	6,294	38,390	413	—	38,803

**Tier 2 Public Employees Contributory Retirement System**  
**Schedule of Allocations and Pension Amount** (Concluded)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Wasatch Front Waste/Recycling	\$ 107,662	0.1581720%	\$ 17,644	120,097	(60,297)	—	6,663
Wasatch Integrated Waste Management	60,334	0.0886394	9,888	67,302	(33,790)	—	3,734
Wasatch Mental Health Special Service District	206,746	0.3037412	33,882	230,624	(115,789)	—	12,795
Wasatch School District	407,683	0.5989478	66,812	454,768	(228,325)	—	25,230
Washington City	61,868	0.0908929	10,139	69,013	(34,649)	—	3,829
Washington Co Solid Waste	7,899	0.0116051	1,295	8,811	(4,424)	—	489
Washington Co Water Conservancy District	26,396	0.0387790	4,326	29,444	(14,783)	—	1,634
Washington County	157,830	0.2318753	25,866	176,058	(88,393)	—	9,768
Washington School District	1,328,877	1.9523182	217,780	1,482,353	(744,244)	—	82,240
Wayne County	13,229	0.0194357	2,168	14,757	(7,409)	—	819
Wayne School District	32,619	0.0479226	5,346	36,387	(18,269)	—	2,019
Weber Area Dispatch 911	64,265	0.0944150	10,532	71,687	(35,992)	—	3,977
Weber Basin Water Conservancy	51,991	0.0763822	8,520	57,995	(29,118)	—	3,218
Weber County Corp	526,550	0.7735800	86,292	587,362	(294,897)	—	32,586
Weber County School District	1,199,044	1.7615740	196,502	1,337,525	(671,531)	—	74,205
Weber Fire District	1,046	0.0015364	171	1,167	(586)	—	65
Weber Human Services	266,390	0.3913670	43,657	297,156	(149,193)	—	16,486
Weber State University	257,107	0.3777285	42,135	286,801	(143,994)	—	15,911
Wellington City	6,202	0.0091111	1,016	6,918	(3,473)	—	384
Wellsville City Corp	1,634	0.0024008	268	1,823	(915)	—	101
West Bountiful City	20,156	0.0296125	3,303	22,484	(11,289)	—	1,247
West Kane County Special Service District #1	2,833	0.0041623	464	3,160	(1,587)	—	175
West Point City	20,840	0.0306174	3,415	23,247	(11,672)	—	1,290
West Valley City	299,908	0.4406098	49,150	334,545	(167,965)	—	18,560
White City Water Improvement District	4,181	0.0061419	685	4,663	(2,341)	—	259
Willard City Corp	1,622	0.0023823	266	1,809	(908)	—	100
Woods Cross City	8,563	0.0125804	1,403	9,552	(4,796)	—	530
Workers Compensation Fund	480,842	0.7064282	78,802	536,376	(269,298)	—	29,758
<b>Grand Total</b>	<b>\$ 68,066,603</b>	<b>100.0000000%</b>	<b>\$ 11,154,934</b>	<b>75,927,816</b>	<b>(38,121,057)</b>	<b>—</b>	<b>4,212,403</b>
<b>No Proportionate Share for 2016</b>							
Alpine Uniserv	\$ —	0.0000000%	\$ —	—	—	—	—
Aurora City	—	0.0000000	—	—	—	—	—
Canyonlands Health Care	—	0.0000000	—	—	—	—	—
Davis County Mosquito Abatement	—	0.0000000	—	—	—	—	—
Enterprise City	—	0.0000000	—	—	—	—	—
Huntington City	—	0.0000000	—	—	—	—	—
Hurricane Valley Fire Special Service District	—	0.0000000	—	—	—	—	—
Maeser Water District	—	0.0000000	—	—	—	—	—
Mantua City	—	0.0000000	—	—	—	—	—
Utah Association of Counties	—	0.0000000	—	—	—	—	—
Valley Mental Health	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 68,066,603</b>	<b>100.0000000%</b>	<b>\$ 11,154,934</b>	<b>75,927,816</b>	<b>(38,121,057)</b>	<b>—</b>	<b>4,212,403</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	
11,405	12,442	30,510	14,629	2,129	1,607	—	18,365	112,018	1,202	—	113,220
6,392	7,169	17,295	8,198	1,193	900	—	10,291	62,775	680	—	63,455
21,902	23,875	58,572	28,092	4,088	3,085	—	35,265	215,111	2,330	—	217,441
43,188	48,046	116,464	55,394	8,062	6,083	—	69,539	424,178	4,614	—	428,792
6,554	7,100	17,483	8,406	1,223	923	—	10,552	64,371	683	—	65,054
837	944	2,270	1,073	156	118	—	1,347	8,219	90	—	8,309
2,796	2,988	7,418	3,587	522	394	—	4,503	27,463	282	—	27,745
16,720	18,370	44,858	21,445	3,121	2,355	—	26,921	164,215	1,747	—	165,962
140,775	156,653	379,668	180,562	26,278	19,829	—	226,669	1,382,641	15,019	—	1,397,660
1,401	1,585	3,805	1,798	262	197	—	2,257	13,764	153	—	13,917
3,456	3,849	9,324	4,432	645	487	—	5,564	33,939	372	—	34,311
6,808	7,584	18,369	8,732	1,271	959	—	10,962	66,865	732	—	67,597
5,508	6,508	15,234	7,064	1,028	776	—	8,868	54,094	623	—	54,717
55,780	64,330	152,696	71,545	10,412	7,857	—	89,814	547,853	6,196	—	554,049
127,022	141,192	342,419	162,921	23,711	17,892	—	204,524	1,247,555	13,558	—	1,261,113
111	227	403	142	21	16	114	293	1,088	13	—	1,101
28,220	32,123	76,829	36,196	5,268	3,975	—	45,439	277,168	3,072	—	280,240
27,237	29,508	72,656	34,935	5,084	3,836	—	43,855	267,509	2,859	—	270,368
657	761	1,802	843	123	93	—	1,059	6,453	74	—	6,527
173	189	463	222	32	24	—	278	1,700	17	—	1,717
2,135	2,430	5,812	2,739	399	301	—	3,439	20,972	236	—	21,208
300	310	785	385	56	42	—	483	2,948	30	—	2,978
2,208	2,403	5,901	2,832	412	311	—	3,555	21,683	229	—	21,912
31,771	35,023	85,354	40,750	5,931	4,475	—	51,156	312,042	3,348	—	315,390
443	466	1,168	568	83	62	—	713	4,350	46	—	4,396
172	187	459	220	32	24	—	276	1,687	17	—	1,704
907	1,032	2,469	1,164	169	128	—	1,461	8,910	99	—	9,009
50,938	55,211	135,907	65,335	9,508	7,175	—	82,018	500,296	5,237	—	505,533
7,210,684	7,973,122	19,396,209	9,248,577	1,345,991	1,015,667	719	11,610,954	70,820,484	764,987	—	71,585,471
—	195	195	—	—	—	170	170	—	4	—	4
—	—	—	—	—	—	106	106	—	(11)	—	(11)
—	—	—	—	—	—	592	592	—	(61)	—	(61)
—	51	51	—	—	—	117	117	—	(5)	—	(5)
—	—	—	—	—	—	94	94	—	(9)	—	(9)
—	7	7	—	—	—	49	49	—	(4)	—	(4)
—	87	87	—	—	—	58	58	—	4	—	4
—	—	—	—	—	—	91	91	—	(9)	—	(9)
—	—	—	—	—	—	98	98	—	(10)	—	(10)
—	—	—	—	—	—	89	89	—	(9)	—	(9)
—	7,738	7,738	—	—	—	16,017	16,017	—	(663)	—	(663)
7,210,684	7,981,200	19,404,287	9,248,577	1,345,991	1,015,667	18,201	11,628,436	70,820,484	764,213	0	71,584,697

## Tier 2 Public Safety and Firefighter Contributory Retirement System

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments
American Fork City	\$ 121,563	1.3686609%	\$ (11,881)	83,122	(84,888)	8,778	5,936
Beaver County	62,561	0.7043602	(6,114)	42,777	(43,686)	4,517	3,055
Big Water Municipal Corp	3,578	0.0402796	(350)	2,446	(2,498)	258	175
Blanding City	4,839	0.0544802	(473)	3,309	(3,379)	349	236
Box Elder County	46,683	0.5255960	(4,562)	31,921	(32,599)	3,371	2,280
Brigham City	24,324	0.2738549	(2,377)	16,632	(16,985)	1,756	1,188
Cache County	122,992	1.3847484	(12,020)	84,099	(85,886)	8,881	6,006
Carbon County	34,483	0.3882328	(3,370)	23,578	(24,079)	2,490	1,684
Cedar City	35,926	0.4044896	(3,511)	24,566	(25,087)	2,594	1,754
Cedar Mountain Fire Protection District	2,354	0.0265057	(230)	1,610	(1,644)	170	115
Centerville City	4,507	0.0507471	(441)	3,082	(3,147)	325	220
City of Bountiful	17,302	0.1948012	(1,691)	11,831	(12,082)	1,249	845
City of Draper	29,961	0.3373268	(2,928)	20,487	(20,922)	2,163	1,463
City of Harrisville	4,256	0.0479146	(416)	2,910	(2,972)	307	208
City of Helper	8,138	0.0916280	(795)	5,565	(5,683)	588	397
City of Moab	24,883	0.2801501	(2,432)	17,014	(17,376)	1,797	1,215
City of Monticello	6,436	0.0724612	(629)	4,401	(4,494)	465	314
City of Naples	6,320	0.0711524	(618)	4,321	(4,413)	456	309
City of North Salt Lake	12,437	0.1400266	(1,216)	8,504	(8,685)	898	607
City of Orem	121,513	1.3680971	(11,876)	83,087	(84,853)	8,774	5,934
City of Santa Clara	2,866	0.0322655	(280)	1,960	(2,001)	207	140
City of Saratoga Springs	47,559	0.5354597	(4,648)	32,520	(33,211)	3,434	2,322
City of South Jordan	126,909	1.4288409	(12,403)	86,776	(88,620)	9,164	6,197
City of South Salt Lake	87,559	0.9858136	(8,557)	59,871	(61,143)	6,323	4,276
City of St George	133,696	1.5052599	(13,067)	91,418	(93,360)	9,654	6,529
City of West Jordan	139,295	1.5682947	(13,614)	95,246	(97,270)	10,058	6,802
Clearfield City	27,380	0.3082666	(2,676)	18,722	(19,119)	1,977	1,337
Clinton City	30,300	0.3411459	(2,961)	20,719	(21,159)	2,188	1,480
Cottonwood Heights City	27,947	0.3146488	(2,731)	19,109	(19,515)	2,018	1,365
Daggett County	20,159	0.2269697	(1,970)	13,784	(14,077)	1,456	984
Davis County	208,907	2.3520412	(20,417)	142,844	(145,880)	15,085	10,201
Dixie State University	3,526	0.0396935	(345)	2,411	(2,462)	255	172
Duchesne County	71,496	0.8049578	(6,988)	48,887	(49,926)	5,163	3,491
East Carbon City	2,874	0.0323592	(281)	1,965	(2,007)	208	140
Emery County	14,349	0.1615545	(1,402)	9,812	(10,020)	1,036	701
Enoch City	1,812	0.0204017	(177)	1,239	(1,265)	131	88
Farmington City	28,522	0.3211270	(2,788)	19,503	(19,917)	2,060	1,393
Garfield County	25,281	0.2846389	(2,471)	17,287	(17,654)	1,826	1,235
Garland City	2,421	0.0272542	(237)	1,655	(1,690)	175	118
Grand County	45,786	0.5154929	(4,475)	31,307	(31,972)	3,306	2,236
Grantsville City	21,286	0.2396518	(2,080)	14,555	(14,864)	1,537	1,039
Heber City	33,870	0.3813388	(3,310)	23,160	(23,652)	2,446	1,654
Hurricane City	11,824	0.1331246	(1,156)	8,085	(8,257)	854	577
Hurricane Valley Fire Special Service District	8,625	0.0971078	(843)	5,898	(6,023)	623	421
Iron County	77,861	0.8766194	(7,610)	53,239	(54,370)	5,622	3,802
Ivins City	10,689	0.1203410	(1,045)	7,309	(7,464)	772	522
Juab County	41,945	0.4722557	(4,099)	28,681	(29,291)	3,029	2,048
Kane County	21,746	0.2448387	(2,125)	14,870	(15,186)	1,570	1,062
Kaysville City	29,683	0.3341964	(2,901)	20,296	(20,728)	2,143	1,449
Laverkin City	3,333	0.0375273	(326)	2,279	(2,328)	241	163
Layton City	81,900	0.9220961	(8,004)	56,001	(57,191)	5,914	3,999
Lehi City	102,338	1.1522095	(10,002)	69,976	(71,463)	7,390	4,997
Logan City	85,841	0.9664638	(8,389)	58,695	(59,943)	6,199	4,192
Lone Peak PS District	54,164	0.6098233	(5,294)	37,036	(37,823)	3,911	2,645
Mapleton City	12,958	0.1458921	(1,266)	8,860	(9,049)	936	633



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	
10,391	10,472	35,577	—	2,185	1,450	—	3,635	112,712	608	—	113,320
5,348	3,265	16,185	—	1,124	746	—	1,870	58,005	187	—	58,192
306	518	1,257	—	64	43	137	244	3,317	21	—	3,338
414	362	1,361	—	87	58	458	603	4,487	(7)	—	4,480
3,990	3,413	13,054	—	839	557	—	1,396	43,284	200	—	43,484
2,079	—	5,023	—	437	290	1,489	2,216	22,552	(88)	—	22,464
10,513	19,513	44,913	—	2,210	1,467	—	3,677	114,037	1,144	—	115,181
2,948	594	7,716	—	620	411	604	1,635	31,972	(3)	—	31,969
3,071	—	7,419	—	646	429	2,588	3,663	33,310	(150)	—	33,160
201	967	1,453	—	42	28	449	519	2,183	33	—	2,216
385	—	930	—	81	54	648	783	4,179	(38)	—	4,141
1,479	1,019	4,592	—	311	206	1,024	1,541	16,042	(4)	—	16,038
2,561	3,265	9,452	—	538	357	—	895	27,779	191	—	27,970
364	1,898	2,777	—	76	51	—	127	3,946	110	—	4,056
696	—	1,681	—	146	97	1,212	1,455	7,546	(70)	—	7,476
2,127	—	5,139	—	447	297	884	1,628	23,071	(53)	—	23,018
550	376	1,705	—	116	77	65	258	5,967	19	—	5,986
540	1,317	2,622	—	114	75	51	240	5,860	72	—	5,932
1,063	1,585	4,153	—	223	148	—	371	11,531	92	—	11,623
10,387	3,209	28,304	—	2,184	1,449	—	3,633	112,665	185	—	112,850
245	457	1,049	—	51	34	546	631	2,657	(7)	—	2,650
4,065	2,276	12,097	—	855	567	—	1,422	44,096	136	—	44,232
10,848	1,706	27,915	—	2,281	1,514	3,428	7,223	117,668	(92)	—	117,576
7,484	—	18,083	—	1,573	1,044	5,388	8,005	81,184	(322)	—	80,862
11,428	7,698	35,309	—	2,403	1,595	—	3,998	123,961	449	—	124,410
11,907	19,167	47,934	—	2,503	1,662	—	4,165	129,152	1,110	—	130,262
2,340	2,771	8,425	—	492	327	1,529	2,348	25,386	65	—	25,451
2,590	5,262	11,520	—	544	361	—	905	28,094	309	—	28,403
2,389	4,170	9,942	—	502	333	—	835	25,912	244	—	26,156
1,723	1,371	5,534	—	362	240	2,121	2,723	18,691	(51)	—	18,640
17,857	18,554	61,697	—	3,754	2,492	—	6,246	193,695	1,083	—	194,778
301	742	1,470	—	63	42	—	105	3,269	44	—	3,313
6,111	9,207	23,972	—	1,285	853	—	2,138	66,290	537	—	66,827
246	145	739	—	52	34	377	463	2,665	(15)	—	2,650
1,227	1,243	4,207	—	258	171	781	1,210	13,304	31	—	13,335
155	859	1,233	—	33	22	419	474	1,680	24	—	1,704
2,438	2,220	8,111	—	513	340	—	853	26,445	129	—	26,574
2,161	2,365	7,587	—	454	302	—	756	23,441	139	—	23,580
207	—	500	—	44	29	461	534	2,244	(26)	—	2,218
3,914	3,544	13,000	—	823	546	1,848	3,217	42,452	90	—	42,542
1,819	1,108	5,503	—	383	254	—	637	19,736	66	—	19,802
2,895	2,858	9,853	—	609	404	—	1,013	31,404	166	—	31,570
1,011	1,102	3,544	—	212	141	—	353	10,963	67	—	11,030
737	43	1,824	—	155	103	919	1,177	7,997	(53)	—	7,944
6,655	4,694	20,773	—	1,399	929	—	2,328	72,191	279	—	72,470
914	1,015	3,223	—	192	128	—	320	9,910	61	—	9,971
3,585	4,753	13,415	—	754	500	—	1,254	38,891	276	—	39,167
1,859	1,291	5,782	—	391	259	—	650	20,163	75	—	20,238
2,537	1,090	7,219	—	533	354	1,247	2,134	27,522	(13)	—	27,509
285	—	689	—	60	40	530	630	3,090	(31)	—	3,059
7,001	6,022	22,936	—	1,472	977	—	2,449	75,936	354	—	76,290
8,748	147	21,282	—	1,839	1,221	471	3,531	94,887	(18)	—	94,869
7,338	9,931	27,660	—	1,543	1,024	—	2,567	79,590	568	—	80,158
4,630	4,651	15,837	—	973	646	971	2,590	50,220	207	—	50,427
1,108	1,481	4,158	—	233	155	—	388	12,014	86	—	12,100

## Tier 2 Public Safety and Firefighter Contributory Retirement System

### Schedule of Employer Allocations and Pension Amounts *(Continued)*

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments
Millard County	\$ 57,179	0.6437688%	\$ (5,588)	39,097	(39,928)	4,129	2,792
Moab Valley Fire Protection	3,948	0.0444498	(386)	2,700	(2,757)	285	193
Morgan County	13,402	0.1508930	(1,310)	9,164	(9,359)	968	654
Murray City	153,537	1.7286488	(15,006)	104,984	(107,215)	11,087	7,497
N Tooele Co Fire Protection SD	5,383	0.0606067	(526)	3,681	(3,759)	389	263
Nephi City	10,299	0.1159593	(1,007)	7,042	(7,192)	744	503
North Davis Fire District	26,976	0.3037219	(2,636)	18,446	(18,838)	1,948	1,317
North Logan City	1,495	0.0168290	(146)	1,022	(1,044)	108	73
North Ogden City	22,042	0.2481679	(2,154)	15,072	(15,392)	1,592	1,076
North Park Police Agency	3,244	0.0365189	(317)	2,218	(2,265)	234	158
North View Fire District	33,927	0.3819737	(3,316)	23,198	(23,691)	2,450	1,657
Ogden City Corp	234,965	2.6454273	(22,964)	160,662	(164,076)	16,967	11,474
Park City	37,987	0.4276917	(3,713)	25,975	(26,527)	2,743	1,855
Park City Fire Service	80,696	0.9085473	(7,887)	55,178	(56,350)	5,827	3,941
Parowan City	4,114	0.0463147	(402)	2,813	(2,873)	297	201
Payson City	26,322	0.2963545	(2,573)	17,998	(18,381)	1,901	1,285
Perry City	1,666	0.0187578	(163)	1,139	(1,163)	120	81
Pleasant Grove City	38,796	0.4367920	(3,792)	26,527	(27,091)	2,801	1,894
Pleasant View City	4,740	0.0533640	(463)	3,241	(3,310)	342	231
Price City	15,395	0.1733255	(1,505)	10,526	(10,750)	1,112	752
Provo City Corp	135,563	1.5262833	(13,249)	92,694	(94,664)	9,789	6,620
Rich County	6,585	0.0741445	(644)	4,503	(4,599)	476	322
Richfield City	9,672	0.1088961	(945)	6,613	(6,754)	698	472
Riverdale City	13,037	0.1467836	(1,274)	8,914	(9,104)	941	637
Roosevelt City	9,273	0.1044009	(906)	6,340	(6,475)	670	453
Roy City	91,206	1.0268670	(8,914)	62,364	(63,689)	6,586	4,454
Salem City	1,167	0.0131367	(114)	798	(815)	84	57
Salina City	3,106	0.0349753	(304)	2,124	(2,169)	224	152
Salt Lake City Corp	453,659	5.1076635	(44,337)	310,199	(316,790)	32,758	22,153
Salt Lake County	589,958	6.6422289	(57,658)	403,396	(411,968)	42,601	28,809
San Juan County	31,647	0.3563046	(3,093)	21,639	(22,099)	2,285	1,545
Sandy City	187,059	2.1060616	(18,282)	127,906	(130,623)	13,507	9,134
Sanpete County	20,662	0.2326309	(2,019)	14,128	(14,428)	1,492	1,009
Santaquin City	1,126	0.0126808	(110)	770	(786)	81	55
Sevier County	29,463	0.3317163	(2,879)	20,146	(20,574)	2,127	1,439
Smithfield City Corp	15,746	0.1772772	(1,539)	10,766	(10,995)	1,137	769
So Davis Metro Fire Agency	74,065	0.8338829	(7,239)	50,643	(51,720)	5,348	3,617
South Ogden City	32,335	0.3640513	(3,160)	22,110	(22,579)	2,335	1,579
Southern Utah University	1,388	0.0156266	(136)	949	(969)	100	68
Spanish Fork City	21,122	0.2378124	(2,064)	14,443	(14,750)	1,525	1,031
Springville City	46,856	0.5275480	(4,579)	32,039	(32,720)	3,383	2,288
State of Utah	2,393,235	26.9450088	(233,899)	1,636,422	(1,671,194)	172,819	116,867
Stockton Town	690	0.0077729	(67)	472	(482)	50	34
Summit County	60,149	0.6772100	(5,879)	41,128	(42,002)	4,343	2,937
Sunset City	8,308	0.0935393	(812)	5,681	(5,802)	600	406
Syracuse City Corp	33,574	0.3780014	(3,281)	22,957	(23,445)	2,424	1,639
Tooele City	62,270	0.7010886	(6,086)	42,579	(43,483)	4,496	3,041
Tooele County	50,811	0.5720758	(4,966)	34,743	(35,482)	3,669	2,481
Town of Brian Head	1,798	0.0202390	(176)	1,229	(1,255)	130	88
Tremonton City	3,837	0.0432021	(375)	2,624	(2,680)	277	187
Uintah County	96,974	1.0918107	(9,478)	66,308	(67,717)	7,002	4,735
Unified Fire Authority	208,157	2.3436040	(20,344)	142,332	(145,356)	15,031	10,165
Unified Police Department	138,350	1.5576614	(13,521)	94,600	(96,610)	9,990	6,756
University of Utah	38,838	0.4372690	(3,796)	26,556	(27,121)	2,804	1,897
Utah County	113,295	1.2755688	(11,073)	77,468	(79,114)	8,181	5,532

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	
4,888	1,904	13,713	—	1,028	682	—	1,710	53,016	110	—	53,126
337	389	1,204	—	71	47	45	163	3,661	20	—	3,681
1,146	386	3,154	—	241	160	1,161	1,562	12,426	(43)	—	12,383
13,124	11,407	43,115	—	2,759	1,831	—	4,590	142,357	659	—	143,016
460	2,090	3,202	—	97	64	—	161	4,991	125	—	5,116
880	1,049	3,176	—	185	123	182	490	9,549	49	—	9,598
2,306	52	5,623	—	485	322	777	1,584	25,012	(41)	—	24,971
128	1,255	1,564	—	27	18	—	45	1,386	73	—	1,459
1,884	3,175	7,727	—	396	263	—	659	20,437	185	—	20,622
277	—	669	—	58	39	618	715	3,007	(35)	—	2,972
2,900	1,709	8,716	—	610	405	—	1,015	31,456	102	—	31,558
20,084	16,718	65,243	—	4,222	2,803	—	7,025	217,856	984	—	218,840
3,247	4,058	11,903	—	683	453	—	1,136	35,221	240	—	35,461
6,898	9,311	25,977	—	1,450	963	—	2,413	74,821	548	—	75,369
352	911	1,761	—	74	49	—	123	3,814	54	—	3,868
2,250	59	5,495	—	473	314	676	1,463	24,405	(38)	—	24,367
142	1,273	1,616	—	30	20	245	295	1,545	58	—	1,603
3,316	—	8,011	—	697	463	3,696	4,856	35,971	(218)	—	35,753
405	497	1,475	—	85	57	449	591	4,395	1	—	4,396
1,316	—	3,180	—	277	184	1,200	1,661	14,274	(69)	—	14,205
11,588	4,633	32,630	—	2,436	1,617	—	4,053	125,692	269	—	125,961
563	481	1,842	—	118	79	—	197	6,106	29	—	6,135
827	505	2,502	—	174	115	714	1,003	8,968	(15)	—	8,953
1,114	432	3,124	—	234	156	1,105	1,495	12,088	(37)	—	12,051
793	1,928	3,844	—	167	111	177	455	8,598	99	—	8,697
7,796	6,206	25,042	—	1,639	1,088	—	2,727	84,564	365	—	84,929
100	1,610	1,851	—	21	14	—	35	1,082	94	—	1,176
266	—	642	—	56	37	592	685	2,880	(34)	—	2,846
38,778	20,114	113,803	—	8,152	5,412	—	13,564	420,625	1,173	—	421,798
50,429	92,245	214,084	—	10,602	7,037	—	17,639	547,000	5,416	—	552,416
2,705	1,013	7,548	—	569	378	—	947	29,342	59	—	29,401
15,990	8,056	46,687	—	3,361	2,231	2,814	8,406	173,438	289	—	173,727
1,766	1,096	5,363	—	371	246	40	657	19,158	60	—	19,218
96	—	232	—	20	13	215	248	1,044	(12)	—	1,032
2,518	4,210	10,294	—	529	351	—	880	27,317	244	—	27,561
1,346	—	3,252	—	283	188	2,562	3,033	14,599	(148)	—	14,451
6,331	8,335	23,631	—	1,331	883	—	2,214	68,672	489	—	69,161
2,764	424	7,102	—	581	386	—	967	29,980	25	—	30,005
119	—	287	—	25	17	264	306	1,287	(15)	—	1,272
1,806	1,157	5,519	—	380	252	205	837	19,584	54	—	19,638
4,005	7,026	16,702	—	842	559	—	1,401	43,445	411	—	43,856
204,570	131,570	625,826	—	43,006	28,548	—	71,554	2,218,971	7,716	—	2,226,687
59	1,106	1,249	—	12	8	674	694	640	22	—	662
5,141	—	12,421	—	1,081	717	3,625	5,423	55,769	(213)	—	55,556
710	983	2,699	—	149	99	—	248	7,703	58	—	7,761
2,870	4,658	11,591	—	603	400	—	1,003	31,129	270	—	31,399
5,323	2,382	15,242	—	1,119	743	691	2,553	57,736	105	—	57,841
4,343	1,371	11,864	—	913	606	3,351	4,870	47,111	(125)	—	46,986
154	—	372	—	32	21	343	396	1,667	(20)	—	1,647
328	833	1,625	—	69	46	—	115	3,558	50	—	3,608
8,289	13,765	33,791	—	1,743	1,157	—	2,900	89,913	796	—	90,709
17,793	17,194	60,183	—	3,741	2,483	—	6,224	193,000	999	—	193,999
11,826	9,227	37,799	—	2,486	1,650	—	4,136	128,276	530	—	128,806
3,320	1,006	9,027	—	698	463	—	1,161	36,010	58	—	36,068
9,684	3,845	27,242	—	2,036	1,351	—	3,387	105,045	222	—	105,267

## Tier 2 Public Safety and Firefighter Contributory Retirement System Schedule of Employer Allocations and Pension Amounts (Concluded)

at December 31, 2016

Participating Employer	Employer Contributions	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan
Utah State University	\$ 616	0.0069305%	\$ (60)	421	(430)	44	30
Vernal City	8,329	0.0937729	(814)	5,695	(5,816)	601	407
Wasatch County	27,323	0.3076233	(2,670)	18,683	(19,080)	1,973	1,334
Wasatch County Fire District	20,168	0.2270713	(1,971)	13,791	(14,084)	1,456	985
Washington City	43,192	0.4862928	(4,221)	29,534	(30,161)	3,119	2,109
Washington County	114,253	1.2863569	(11,166)	78,123	(79,783)	8,250	5,579
Wayne County	2,274	0.0255992	(222)	1,555	(1,588)	164	111
Weber County Corp	144,416	1.6259586	(14,114)	98,748	(100,846)	10,428	7,052
Weber Fire District	84,152	0.9474543	(8,224)	57,541	(58,764)	6,077	4,109
Wellington City	3,324	0.0374267	(325)	2,273	(2,321)	240	162
West Bountiful City	19,305	0.2173542	(1,887)	13,200	(13,481)	1,394	943
West Valley City	296,496	3.3381985	(28,977)	202,736	(207,044)	21,410	14,478
Woods Cross City	15,218	0.1713381	(1,487)	10,406	(10,627)	1,099	743
<b>Grand Total</b>	<b>\$ 8,881,925</b>	<b>100.0000000%</b>	<b>\$ (868,058)</b>	<b>6,073,209</b>	<b>(6,202,257)</b>	<b>641,359</b>	<b>433,718</b>
<b>No Proportionate Share for 2016</b>							
Ephraim City	\$ —	0.0000000%	\$ —	—	—	—	—
Garden City Fire District	—	0.0000000	—	—	—	—	—
Springdale Town	—	0.0000000	—	—	—	—	—
<b>Grand Total</b>	<b>\$ 8,881,925</b>	<b>100.0000000%</b>	<b>\$ (868,058)</b>	<b>6,073,209</b>	<b>(6,202,257)</b>	<b>641,359</b>	<b>433,718</b>

Columns may not add to total due to rounding.

## Utah Retirement Systems

## Schedule of Employer Allocations and Pension Amounts

at December 31, 2016

Retirement System	Employer Contributions	Net Pension Liability/(Asset) (7.5% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Net Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan	Changes of Assumptions
Noncontributory Retirement System	\$ 826,162,837	3,883,039,287	7,272,332,982	1,044,992,848	13,947,796	749,810,021	430,362,836
Contributory Retirement System	8,214,313	87,606,865	213,701,920	(19,165,254)	—	43,917,772	—
Public Safety Retirement System	147,248,245	618,335,634	1,150,467,384	182,947,953	24,556,810	103,445,060	81,093,390
Firefighters Retirement System	6,904,931	14,003,397	169,685,936	(114,021,841)	—	36,849,684	21,396,478
Judges Retirement System	7,382,309	35,005,177	56,844,504	16,252,658	2,024,056	5,803,666	2,130,857
Utah Governors and Legislators Retirement Plan	421,009	2,302,925	3,526,108	1,265,422	—	357,027	—
Tier 2 Public Employees Contributory Retirement System	68,066,603	11,154,934	75,927,816	(38,121,057)	—	4,212,403	7,210,684
Tier 2 Public Safety and Firefighters Contributory Retirement System	8,881,925	(868,058)	6,073,209	(6,202,257)	641,359	433,718	759,215
<b>Grand Total</b>	<b>\$ 1,073,282,173</b>	<b>4,650,580,161</b>	<b>8,948,559,859</b>	<b>1,067,948,472</b>	<b>41,170,021</b>	<b>944,829,351</b>	<b>542,953,460</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	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
712	—	1,720	—	150	99	893	1,142	7,722	(54)	—	7,668
2,336	2,056	7,699	—	491	326	—	817	25,333	119	—	25,452
1,724	699	4,864	—	362	241	2,475	3,078	18,700	(110)	—	18,590
3,692	5,631	14,551	—	776	515	—	1,291	40,047	332	—	40,379
9,766	4,931	28,526	—	2,053	1,363	2,836	6,252	105,934	110	—	106,044
194	589	1,058	—	41	27	526	594	2,108	2	—	2,110
12,345	7,592	37,417	—	2,595	1,723	8	4,326	133,901	433	—	134,334
7,193	4,155	21,534	—	1,512	1,004	1,505	4,021	78,025	146	—	78,171
284	—	686	—	60	40	624	724	3,082	(36)	—	3,046
1,650	919	4,906	—	347	230	1,146	1,723	17,900	(17)	—	17,883
25,344	4,377	65,609	—	5,328	3,537	3,469	12,334	274,907	68	—	274,975
1,301	—	3,143	—	273	182	1,645	2,100	14,110	(95)	—	14,015
759,215	610,316	2,444,608	—	159,609	105,949	72,314	337,872	8,235,182	31,356	—	8,266,538
—	1,520	1,520	—	—	—	—	—	—	90	—	90
—	1,221	1,221	—	—	—	—	—	—	74	—	74
—	728	728	—	—	—	—	—	—	42	—	42
759,215	613,784	2,448,076	—	159,609	105,949	72,314	337,872	8,235,182	31,561	—	8,266,743

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 Nonemployer Contributions	Proportionate Share of Nonemployer Contributions	Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions
142,545	44,060,317	245,381	12,180,955	—	153,851	12,580,187	(13,746,772)	(78,464)	—	(13,825,236)
5,555,716	214,650,976	30,081,779	30,234,750	16,800,615	5,193,035	82,310,179	145,849,744	196,853	—	146,046,597
278,372	58,524,534	18,769,589	10,540,579	11,606,357	326,578	41,243,103	16,169,448	(9,256)	(10,568,615)	5,591,577
—	9,958,579	—	1,678,231	23,443	—	1,701,674	9,381,572	—	(1,469,774)	7,911,798
—	357,027	—	116,484	—	—	116,484	753,367	—	—	753,367
7,981,200	19,404,287	9,248,577	1,345,991	1,015,667	18,201	11,628,436	70,820,484	764,213	—	71,584,697
613,784	2,448,076	—	159,609	105,949	72,314	337,872	8,235,182	31,561	—	8,266,743
60,208,989	1,589,161,821	250,662,118	272,744,078	90,649,147	60,386,617	674,441,960	1,164,404,240	(2,285,102)	(12,038,389)	1,150,080,749

# 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

December 31, 2016

## 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 166 through 181.

#### 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

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



## Notes to the Schedules of Employer Allocations and Pension Amounts *(Continued)*

December 31, 2016

### 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.

**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.

## 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 \$1,360 per month per term. Legislators receive a benefit at age 65 with four or more years of service at the rate of \$29.60 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.

## Notes to the Schedules of Employer Allocations and Pension Amounts *(Continued)*

December 31, 2016

### Contribution Rates

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 - 48.68	—
Contributory	10.50 - 12.29	22.19 - 29.70	—
Firefighters: Division A	15.05	3.89	11.64%
Division B	16.71	6.66	11.64
Judges: Noncontributory	—	42.12	9.79
Governors and Legislators	—	\$ 404,409	—
Tier 2 Public Employees	—	14.91 - 18.24%	—
Tier 2 Public Safety and Firefighter	—	10.75 - 37.02	—

### 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. 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.



## Notes to the Schedules of Employer Allocations and Pension Amounts (Continued)

December 31, 2016

### 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	453	158	132	62	1	1	466	150
Members:								
Active	63,214	738	6,032	1,663	115	61	24,372	2,240
Terminated vested	47,933	1,274	4,615	390	3	96	464	28
Retirees and beneficiaries:								
Service benefits	47,047	3,460	4,693	1,145	107	173	9	0
Beneficiary benefits	4,308	705	719	227	34	71	0	0

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, 2016, participating members by System are included in the table above.

Note 2

## Basis of Presentation

The Schedules of Employer Allocations and Pension Amounts by Employer 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, 2016

### Net Pension Liability by Division

Year Ended December 31, 2016

System	<i>(in thousands)</i>					
	(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	\$ 5,054,527,756	4,412,405,371	642,122,385	87.3%	\$ 830,405,852	77.3%
State and School	21,447,254,094	18,206,337,192	3,240,916,902	84.9	2,576,161,243	125.8
<b>Total</b>	<b>26,501,781,850</b>	<b>22,618,742,563</b>	<b>3,883,039,287</b>	<b>85.3</b>	<b>3,406,567,095</b>	<b>114.0</b>
<b>Contributory Retirement System</b>						
Local Government	459,047,687	426,236,585	32,811,102	92.9	23,958,601	136.9
State and School	833,463,040	778,667,277	54,795,763	93.4	29,656,132	184.8
<b>Total</b>	<b>1,292,510,727</b>	<b>1,204,903,862</b>	<b>87,606,865</b>	<b>93.2</b>	<b>53,614,733</b>	<b>163.4</b>
<b>Public Safety Retirement System</b>						
State of Utah	1,292,844,026	1,079,035,388	213,808,638	83.5	108,759,249	196.6
Other Division A (with Social Security)	1,501,189,365	1,298,261,752	202,927,613	86.5	139,676,959	145.3
Salt Lake City	352,364,572	260,675,677	91,688,895	74.0	28,331,159	323.6
Ogden	78,616,889	59,437,466	19,179,423	75.6	5,082,117	377.4
Provo	60,456,673	46,580,830	13,875,843	77.0	5,064,803	274.0
Logan	33,377,711	26,171,992	7,205,719	78.4	2,183,115	330.1
Bountiful	26,175,283	18,855,491	7,319,792	72.0	1,810,042	404.4
Other Division B (without Social Security)	449,858,345	387,528,634	62,329,711	86.1	61,500,780	101.3
<b>Total</b>	<b>3,794,882,864</b>	<b>3,176,547,230</b>	<b>618,335,634</b>	<b>83.7</b>	<b>352,408,224</b>	<b>175.5</b>
<b>Firefighters Retirement System</b>						
Division A (with Social Security)	192,977,520	193,765,868	(788,348)	100.4	27,266,310	(2.9)
Division B (without Social Security)	936,751,749	921,960,004	14,791,745	98.4	85,055,968	17.4
<b>Total</b>	<b>1,129,729,269</b>	<b>1,115,725,872</b>	<b>14,003,397</b>	<b>98.8</b>	<b>112,322,278</b>	<b>12.5</b>
Judges Retirement System	210,625,702	175,620,525	35,005,177	83.4	16,755,132	208.9
Governors and Legislators Retirement Plan	12,653,868	10,350,943	2,302,925	81.8	798,798	288.3
Tier 2 Public Employees Retirement System	228,448,413	217,293,479	11,154,934	95.1	822,195,617	1.4
Tier 2 Public Safety and Firefighter Retirement System	24,266,975	25,135,033	(868,058)	103.6	74,834,419	(1.2)
<b>Grand Total</b>	<b>\$ 33,194,899,668</b>	<b>28,544,319,507</b>	<b>4,650,580,161</b>	<b>86.0%</b>	<b>\$ 4,839,496,296</b>	<b>96.1%</b>

### 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, 2016, to December 31, 2016. The components of the current-year pension liability/ (asset) of the employers as of December 31, 2016, were as shown in the schedule above.

### 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

## Notes to the Schedules of Employer Allocations and Pension Amounts *(Continued)*

December 31, 2016

### 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	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16	1/1/16
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 18-Year Closed Period	Open Group 20-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	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%
Projected salary increases*	3.35-10.35%	3.50-10.35%	3.35-7.65%	3.35-8.90%	3.35%	None	3.35-10.35%	3.35-8.90%
Inflation rate	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%
Post-retirement cost-of-living adjustment	2.60%	2.60%	2.50% or 2.60% Depending on employer	2.60%	2.60%	2.60%	2.50%	2.50%
Mortality: (Non-educators)	Male: RP-2000 with white collar adjustments, projected with Scale AA from the year 2000. Female: 120% of constructed mortality table based on actual experience of female educators, projected with Scale AA from the year 2000.							
Mortality: (Educators)	Male: 90% of constructed mortality table based on actual experience of male educators, projected with Scale AA from the year 2000. Female: 100% of constructed mortality table based on actual experience of female educators, projected with Scale AA from the year 2000.							

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 2.60% 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, 2016

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 2014 and the next experience study is scheduled to be conducted in 2017. 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, 2016, is based on the results of an actuarial valuation date of January 1, 2016, 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 281.

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, 2016, are summarized in the top table above.

### 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%	7.06%	2.82%
Debt securities	20	0.80	0.16
Real assets	13	5.10	0.66
Private equity	9	11.30	1.02
Absolute return	18	3.15	0.57
Cash and cash equivalents	0	0.00	0.00
<b>Totals</b>	<b>100%</b>		<b>5.23%</b>
Inflation			2.75%
Expected arithmetic nominal return			7.98%

\*The total URS Defined Benefit long-term expected rate of return is 7.20%, which is comprised of a 2.60% inflation assumption and a 4.60% net real rate of return assumption.

### D) Discount Rate

The discount rate used to measure the total pension liability was 7.20%. 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 7.20%, as well as what the net pension liability/(asset) would be if it were calculated using a 1.00% point lower (6.20%) or a 1.00% point higher (8.20%) than the current assumption.

## Notes to the Schedules of Employer Allocations and Pension Amounts *(Continued)*

December 31, 2016

### Changes in Discount Rate

Year ended December 31, 2016

System	Net Pension Liability/(Asset) 1% Decrease (6.2%)	Net Pension Liability/(Asset) Current Discount Rate (7.2%)	Net Pension Liability/(Asset) 1% Increase (8.2%)
<b>Noncontributory Retirement System</b>			
Local Government	\$ 1,330,053,081	642,122,385	68,081,879
State and School	5,942,279,901	3,240,916,902	976,910,969
<b>Total</b>	<b>7,272,332,982</b>	<b>3,883,039,287</b>	<b>1,044,992,848</b>
<b>Contributory Retirement System</b>			
Local Government	78,987,643	32,811,102	(6,087,924)
State and School	134,714,277	54,795,763	(13,077,330)
<b>Total</b>	<b>213,701,920</b>	<b>87,606,865</b>	<b>(19,165,254)</b>
<b>Public Safety Retirement System</b>			
State of Utah	386,874,215	213,808,638	71,279,744
Other Division A (with Social Security)	422,043,439	202,927,613	24,816,340
Salt Lake City	138,403,464	91,688,895	53,229,415
Ogden	29,509,212	19,179,423	10,689,997
Provo	22,061,828	13,875,843	7,157,275
Logan	11,740,559	7,205,719	3,518,071
Bountiful	10,671,389	7,319,792	4,545,260
Other Division B (without Social Security)	129,163,278	62,329,711	7,711,851
<b>Total</b>	<b>1,150,467,384</b>	<b>618,335,634</b>	<b>182,947,953</b>
<b>Firefighters Retirement System</b>			
Division A (with Social Security)	28,508,505	(788,348)	(24,559,814)
Division B (without Social Security)	141,177,431	14,791,745	(89,462,027)
<b>Total</b>	<b>169,685,936</b>	<b>14,003,397</b>	<b>(114,021,841)</b>
<b>Judges Retirement System</b>			
Governors and Legislators Retirement Plan	56,844,504	35,005,177	16,252,658
Tier 2 Public Employees Retirement System	3,526,108	2,302,925	1,265,422
Tier 2 Public Safety and Firefighter Retirement System	75,927,816	11,154,934	(38,121,057)
<b>Total</b>	<b>136,298,428</b>	<b>48,463,036</b>	<b>(20,603,077)</b>
<b>Grand Total</b>	<b>\$ 8,948,559,859</b>	<b>4,650,580,161</b>	<b>1,067,948,472</b>

Notes to the Schedules of Employer Allocations and Pension Amounts *(Continued)*

December 31, 2016

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, 2016, are shown in the table to the right.

### Assumptions and Methods

The demographic assumptions and actuarial methods used to perform this valuation remain unchanged from the prior valuation. The actuary reviews the investment return assumption each year and provides consultation to the Board regarding its appropriateness. The Board has the authority to change this assumption each year and elected to decrease the assumed nominal investment return from 7.50% to 7.20% and also decrease the assumed inflation rate from 2.75% to 2.60%. In conjunction with the decrease in the assumed rate of inflation, both the payroll growth and the wage inflation assumptions were decreased by 0.15% from the prior year's assumption.

### 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.



## Notes to the Schedules of Employer Allocations and Pension Amounts (Continued)

December 31, 2016

### //// Differences Between Expected and Actual Experience

December 31, 2016

System	Deferred Outflows	Deferred Inflows
<b>Noncontributory Retirement System</b>		
Local Government	\$ 13,947,796	17,475,749
State and School	—	174,841,043
<b>Total</b>	<b>13,947,796</b>	<b>192,316,792</b>
<b>Contributory Retirement System</b>		
Local Government	—	245,381
State and School	—	—
<b>Total</b>	<b>—</b>	<b>245,381</b>
<b>Public Safety Retirement System</b>		
State of Utah	—	12,146,821
Other Division A (with Social Security)	—	16,469,529
Salt Lake City	3,006,765	357,267
Ogden	103,210	666,957
Provo	472,334	253,735
Logan	83,751	187,470
Bountiful	750,631	—
Other Division B (without Social Security)	20,140,119	—
<b>Total</b>	<b>24,556,810</b>	<b>30,081,779</b>
<b>Firefighters Retirement System</b>		
Other Division A (with Social Security)	—	1,706,241
Other Division B (without Social Security)	—	17,063,348
<b>Total</b>	<b>—</b>	<b>18,769,589</b>
Judges Retirement System	2,024,056	—
Governors and Legislators Retirement Plan	—	—
Tier 2 Public Employees Retirement System	—	9,248,577
Tier 2 Public Safety and Firefighter Retirement System	641,359	—
<b>Grand Total</b>	<b>\$ 41,170,021</b>	<b>250,662,118</b>

### //// Changes in Assumptions

December 31, 2016

System	Deferred Outflows	Deferred Inflows
<b>Noncontributory Retirement System</b>		
Local Government	\$ 86,734,911	20,899,685
State and School	343,627,925	40,197,431
<b>Total</b>	<b>430,362,836</b>	<b>61,097,116</b>
<b>Contributory Retirement System</b>		
Local Government	—	—
State and School	—	—
<b>Total</b>	<b>—</b>	<b>—</b>
<b>Public Safety Retirement System</b>		
State of Utah	20,953,419	4,689,400
Other Division A (with Social Security)	35,201,809	7,074,161
Salt Lake City	8,159,709	1,137,750
Ogden	1,654,009	151,890
Provo	1,496,966	341,530
Logan	784,047	150,192
Bountiful	624,469	82,204
Other Division B (without Social Security)	12,218,962	3,173,488
<b>Total</b>	<b>81,093,390</b>	<b>16,800,615</b>
<b>Firefighters Retirement System</b>		
Other Division A (with Social Security)	3,972,486	2,515,610
Other Division B (without Social Security)	17,423,992	9,090,747
<b>Total</b>	<b>21,396,478</b>	<b>11,606,357</b>
Judges Retirement System	2,130,857	23,443
Governors and Legislators Retirement Plan	—	—
Tier 2 Public Employees Retirement System	7,210,684	1,015,667
Tier 2 Public Safety and Firefighter Retirement System	759,215	105,949
<b>Grand Total</b>	<b>\$ 542,953,460</b>	<b>90,649,147</b>

### C) Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments

The difference between the System's expected rate of return of 7.2% and actual investment earnings on pension plan investments is amortized over a five-year closed 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 amounts of the difference between expected and actual experience for the year ended December 31, 2016, is \$944,829,351 and deferred inflows of \$272,744,078 as illustrated in the table at the top left of page 286.

## Notes to the Schedules of Employer Allocations and Pension Amounts (Continued)

December 31, 2016

### Net Difference Between Projected and Actual Investment Earnings on Plan Investments

December 31, 2016

System	Deferred Outflows	Deferred Inflows
<b>Noncontributory Retirement System</b>		
Local Government	\$ 142,706,534	42,303,474
State and School	607,103,487	174,184,005
<b>Total</b>	<b>749,810,021</b>	<b>216,487,479</b>
<b>Contributory Retirement System</b>		
Local Government	15,582,771	4,098,327
State and School	28,335,001	8,082,628
<b>Total</b>	<b>43,917,772</b>	<b>12,180,955</b>
<b>Public Safety Retirement System</b>		
State of Utah	35,409,912	10,250,949
Other Division A (with Social Security)	42,711,678	12,463,953
Salt Lake City	8,524,373	2,478,861
Ogden	1,989,652	569,290
Provo	1,525,915	444,673
Logan	875,536	250,615
Bountiful	635,429	180,894
Other Division B (without Social Security)	11,772,565	3,595,515
<b>Total</b>	<b>103,445,060</b>	<b>30,234,750</b>
<b>Firefighters Retirement System</b>		
Other Division A (with Social Security)	6,197,534	1,762,286
Other Division B (without Social Security)	30,652,150	8,778,293
<b>Total</b>	<b>36,849,684</b>	<b>10,540,579</b>
Judges Retirement System	5,803,666	1,678,231
Governors and Legislators Retirement Plan	357,027	116,484
Tier 2 Public Employees Retirement System	4,212,403	1,345,991
Tier 2 Public Safety and Firefighter Retirement System	433,718	159,609
<b>Grand Total</b>	<b>\$ 944,829,351</b>	<b>272,744,078</b>

### Proportionate Share of Gross Pension Expense

December 31, 2016

System	
<b>Noncontributory Retirement System</b>	
Local Government	\$ 220,080,826
State and School	706,860,389
<b>Total</b>	<b>926,941,215</b>
<b>Contributory Retirement System</b>	
Local Government	(28,073,689)
State and School	14,326,917
<b>Total</b>	<b>(13,746,772)</b>
<b>Public Safety Retirement System</b>	
State of Utah	41,567,836
Other Division A (with Social Security)	61,276,639
Salt Lake City	16,070,941
Ogden	3,400,351
Provo	2,803,351
Logan	1,589,033
Bountiful	1,460,663
Other Division B (without Social Security)	17,680,930
<b>Total</b>	<b>145,849,744</b>
<b>Firefighters Retirement System</b>	
Other Division A (with Social Security)	4,071,775
Other Division B (without Social Security)	12,097,673
<b>Total</b>	<b>16,169,448</b>
Judges Retirement System	9,381,572
Governors and Legislators Retirement Plan	753,367
Tier 2 Public Employees Retirement System	70,820,484
Tier 2 Public Safety and Firefighter Retirement System	8,235,182
<b>Grand Total</b>	<b>\$ 1,164,404,240</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 *(Concluded)*

December 31, 2016

### 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 period ending December 31, 2016, is as shown in the top-right table on page 286.

### 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, 2015), 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.

### Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions

Year ended December 31, 2016

Cost Sharing Retirement System	Average Remaining Service Lives
<b>Noncontributory Retirement System</b>	
Local Government	4.34
State and School	4.20
<b>Contributory Retirement System</b>	
Local Government	0.88
State and School	0.45
<b>Public Safety Retirement System</b>	
State of Utah	3.51
Other Division A (with Social Security)	3.69
Other Division B (without Social Security)	5.39
<b>Firefighters Retirement System</b>	
Other Division A (with Social Security)	6.99
Other Division B (without Social Security)	5.96
Tier 2 Public Employees Retirement System	11.99
Tier 2 Public Safety and Firefighter Retirement System	18.50

### 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 \$10,568,615 in calendar year 2016 and 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 \$1,469,774 in court fees in calendar year 2016 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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
4 Corners Community 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	(23,248)	494,182	(439,012)	8,778	95,297	67,670
American Leadership Academy	N/A	—	—	—	—	—	—
Ames Charter School	N/A	—	—	—	—	—	—
Annabella Town	N/A	—	—	—	—	—	—
Ash Creek Special Service District	N/A	—	—	—	—	—	—
Ashley Valley Improv District	N/A	—	—	—	—	—	—
Ashley Valley Sewer Management Board	N/A	—	—	—	—	—	—
Ballard Town	N/A	—	—	—	—	—	—
Bear Lake Special Service District	N/A	—	—	—	—	—	—
Bear River Association of Governments	N/A	—	—	—	—	—	—
Bear River Health Department	N/A	—	—	—	—	—	—
Bear River Mental Health	N/A	—	—	—	—	—	—
Bear River Water District	N/A	—	—	—	—	—	—
Beaver City	N/A	—	—	—	—	—	—
Beaver County	N/A	(6,114)	42,777	(43,686)	4,517	3,055	5,348
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 Water Municipal Corp	N/A	(350)	2,446	(2,498)	258	175	306
Blanding City	N/A	(473)	3,309	(3,379)	349	236	414
Bluffdale City	N/A	—	—	—	—	—	—
Bona Vista Water Improvement	N/A	—	—	—	—	—	—
Bountiful Irrigation District	N/A	—	—	—	—	—	—
Box Elder Co Mosquito District	N/A	—	—	—	—	—	—
Box Elder County	N/A	(4,562)	31,921	(32,599)	3,371	2,280	3,990
Box Elder School District	N/A	—	—	—	—	—	—
Bridgerland Applied Technology Center	N/A	—	—	—	—	—	—
Brigham City	N/A	(8,773)	247,914	(216,233)	1,756	51,467	34,307
Cache County	N/A	(17,358)	277,140	(252,189)	8,881	47,972	37,412
Cache Metro Planning Organization	N/A	—	—	—	—	—	—
Cache School District	N/A	—	—	—	—	—	—
Canyons School District	N/A	—	—	—	—	—	—
Carbon County	N/A	(3,370)	23,578	(24,079)	2,490	1,684	2,948
Carbon County Rec/Trans Special Service District	N/A	—	—	—	—	—	—
Carbon School District	N/A	—	—	—	—	—	—
Castle Dale City	N/A	—	—	—	—	—	—
Castle Valley Special Service District	N/A	—	—	—	—	—	—
Cedar City	N/A	(16,832)	506,293	(440,090)	2,594	106,478	70,197
Cedar City Housing Authority	N/A	—	—	—	—	—	—
Cedar Mountain Fire Protection District	N/A	(230)	1,610	(1,644)	170	115	201
Centerfield City	N/A	—	—	—	—	—	—
Centerville City	N/A	(441)	3,082	(3,147)	325	220	385
Central Davis Sewer District	N/A	—	—	—	—	—	—
Central Iron Co Water Conservancy	N/A	—	—	—	—	—	—
Central UT Public Health	N/A	—	—	—	—	—	—
Central Utah Counseling Center	N/A	—	—	—	—	—	—
Central Utah Water District	N/A	—	—	—	—	—	—
Central Weber Sewer District	N/A	—	—	—	—	—	—
City of Aurora	N/A	—	—	—	—	—	—
City of Bountiful	N/A	(1,691)	11,831	(12,082)	1,249	845	1,479
City of Cedar Hills	N/A	—	—	—	—	—	—
City of Draper	N/A	(3,794)	51,806	(47,903)	2,163	8,271	6,925
City of Duchesne	N/A	—	—	—	—	—	—



**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
City of Enterprise	N/A	\$ —	—	—	—	—	—
City of Green River	N/A	—	—	—	—	—	—
City of Harrisville	N/A	(416)	2,910	(2,972)	307	208	364
City of Helper	N/A	(795)	5,565	(5,683)	588	397	696
City of Holladay	N/A	—	—	—	—	—	—
City of Kanab	N/A	(1,604)	58,008	(49,973)	—	12,610	8,083
City of Milford	N/A	—	—	—	—	—	—
City of Moab	N/A	(2,432)	17,014	(17,376)	1,797	1,215	2,127
City of Monticello	N/A	(629)	4,401	(4,494)	465	314	550
City of Naples	N/A	(618)	4,321	(4,413)	456	309	540
City of North Salt Lake	N/A	(1,216)	8,504	(8,685)	898	607	1,063
City of Orem	N/A	(11,876)	83,087	(84,853)	8,774	5,934	10,387
City of Riverton	N/A	—	—	—	—	—	—
City of Santa Clara	N/A	(3,378)	114,003	(98,525)	207	24,497	15,858
City of Saratoga Springs	N/A	(4,648)	32,520	(33,211)	3,434	2,322	4,065
City of South Jordan	N/A	(79,964)	2,529,943	(2,193,386)	9,164	537,323	351,288
City of South Salt Lake	N/A	(84,251)	2,797,133	(2,419,269)	6,323	599,336	388,905
City of St George	N/A	(55,064)	1,610,136	(1,401,721)	9,654	336,687	223,052
City of Taylorsville	N/A	—	—	—	—	—	—
City of Uintah	N/A	—	—	—	—	—	—
City of Washington Terrace	N/A	(1,381)	49,938	(43,021)	—	10,856	6,959
City of Wendover	N/A	—	—	—	—	—	—
City of West Haven	N/A	—	—	—	—	—	—
City of West Jordan	N/A	(13,614)	95,246	(97,270)	10,058	6,802	11,907
City of Woodland Hills	N/A	—	—	—	—	—	—
Clearfield City	N/A	(2,676)	18,722	(19,119)	1,977	1,337	2,340
Cleveland Town	N/A	—	—	—	—	—	—
Clinton City	N/A	(14,574)	440,670	(382,943)	2,188	92,774	61,108
Coalville City	N/A	—	—	—	—	—	—
Color Country Uniserv	N/A	—	—	—	—	—	—
Corinne City	N/A	—	—	—	—	—	—
Cottonwood Heights City	N/A	(2,731)	19,109	(19,515)	2,018	1,365	2,389
Cottonwood Heights P&R Srv	N/A	—	—	—	—	—	—
Cottonwood Improvement District	N/A	—	—	—	—	—	—
Council On Aging Golden Age SS	N/A	—	—	—	—	—	—
Daggett County	N/A	(1,970)	13,784	(14,077)	1,456	984	1,723
Daggett School District	N/A	—	—	—	—	—	—
Davis & Weber County Canal Co	N/A	—	—	—	—	—	—
Davis Applied Technology College	N/A	—	—	—	—	—	—
Davis Behavioral Health Inc	N/A	—	—	—	—	—	—
Davis Co Housing Authority	N/A	—	—	—	—	—	—
Davis Co Mosquito Abatement	N/A	—	—	—	—	—	—
Davis County	N/A	(20,417)	142,844	(145,880)	15,085	10,201	17,857
Davis School District	N/A	—	—	—	—	—	—
Davis Uniserv	N/A	—	—	—	—	—	—
Ddi Vantage	N/A	—	—	—	—	—	—
Delta City	N/A	—	—	—	—	—	—
Dixie Applied Technology College	N/A	—	—	—	—	—	—
Dixie State University	N/A	(345)	2,411	(2,462)	255	172	301
Duchesne Co Mosquito District	N/A	—	—	—	—	—	—
Duchesne Co Water Conservancy District	N/A	—	—	—	—	—	—
Duchesne County	N/A	(6,988)	48,887	(49,926)	5,163	3,491	6,111
Duchesne School District	N/A	—	—	—	—	—	—
E Duchesne Culinary Water Improvement District	N/A	—	—	—	—	—	—
Eagle Mountain City	N/A	—	—	—	—	—	—
East Carbon City	N/A	(281)	1,965	(2,007)	208	140	246
East Hollywood High School	N/A	—	—	—	—	—	—
Educators Mutual Insurance	N/A	—	—	—	—	—	—
Elk Ridge City	N/A	—	—	—	—	—	—
Emery Co Care & Rehab 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 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		
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,898	2,777	—	76	51	—	127	3,946	110	—	4,056	
—	1,681	—	146	97	1,212	1,455	7,546	(70)	—	7,476	
—	—	—	—	—	—	—	—	—	—	—	
710	21,403	3,472	3,586	5,119	—	12,177	8,285	123	(5,251)	3,157	
—	—	—	—	—	—	—	—	—	—	—	
—	5,139	—	447	297	884	1,628	23,071	(53)	—	23,018	
376	1,705	—	116	77	65	258	5,967	19	—	5,986	
1,317	2,622	—	114	75	51	240	5,860	72	—	5,932	
—	—	—	—	—	—	—	—	—	—	—	
1,585	4,153	—	223	148	—	371	11,531	92	—	11,623	
3,209	28,304	—	2,184	1,449	—	3,633	112,665	185	—	112,850	
—	—	—	—	—	—	—	—	—	—	—	
457	41,019	6,706	6,977	9,921	11,393	34,997	18,660	(1,858)	(10,143)	6,659	
2,276	12,097	—	855	567	—	1,422	44,096	136	—	44,232	
—	—	—	—	—	—	—	—	—	—	—	
12,162	909,937	146,224	153,308	217,101	3,428	520,061	466,617	1,705	(221,178)	247,144	
5,654	1,000,218	163,826	170,780	242,582	6,751	583,939	472,138	480	(247,803)	224,815	
8,067	577,460	90,896	96,284	135,608	10,839	333,627	340,874	(1,294)	(137,489)	202,091	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
73	17,888	2,989	3,087	4,407	112	10,595	7,132	(8)	(4,521)	2,603	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
19,167	47,934	—	2,503	1,662	—	4,165	129,152	1,110	—	130,262	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
2,771	8,425	—	492	327	1,529	2,348	25,386	65	—	25,451	
—	—	—	—	—	—	—	—	—	—	—	
5,262	161,332	25,134	26,504	37,418	2,444	91,500	88,074	(133)	(38,018)	49,923	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
4,170	9,942	—	502	333	—	835	25,912	244	—	26,156	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,371	5,534	—	362	240	2,121	2,723	18,691	(51)	—	18,640	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
18,554	61,697	—	3,754	2,492	—	6,246	193,695	1,083	—	194,778	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
742	1,470	—	63	42	—	105	3,269	44	—	3,313	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
9,207	23,972	—	1,285	853	—	2,138	66,290	537	—	66,827	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
145	739	—	52	34	377	463	2,665	(15)	—	2,650	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Emery County	N/A	\$ (1,402)	9,812	(10,020)	1,036	701	1,227
Emery County Recreation Special Service District	N/A	—	—	—	—	—	—
Emery School District	N/A	—	—	—	—	—	—
Emery Town	N/A	—	—	—	—	—	—
Emery Water Conservancy District	N/A	—	—	—	—	—	—
Enoch City	N/A	(177)	1,239	(1,265)	131	88	155
Ephraim City	N/A	—	—	—	—	—	—
Escalante City	N/A	—	—	—	—	—	—
Eureka City Corporation	N/A	—	—	—	—	—	—
Fairview City	N/A	—	—	—	—	—	—
Farmington City	N/A	(10,590)	301,640	(262,976)	2,060	62,727	41,752
Farr West City	N/A	—	—	—	—	—	—
Fast Forward Charter High School	N/A	—	—	—	—	—	—
Ferron City	N/A	—	—	—	—	—	—
Fillmore City	N/A	—	—	—	—	—	—
Five-County Association of Governments	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	(2,471)	17,287	(17,654)	1,826	1,235	2,161
Garfield School District	N/A	—	—	—	—	—	—
Garland City	N/A	(237)	1,655	(1,690)	175	118	207
Genola Town	N/A	—	—	—	—	—	—
Grand Co Cemetery Maintenance District	N/A	—	—	—	—	—	—
Grand County	N/A	(4,475)	31,307	(31,972)	3,306	2,236	3,914
Grand School District	N/A	—	—	—	—	—	—
Grand Water/Sewer Service	N/A	—	—	—	—	—	—
Granger-Hunter Improvement District	N/A	—	—	—	—	—	—
Granite School District	N/A	—	—	—	—	—	—
Granite Uniserv	N/A	—	—	—	—	—	—
Grantsville City	N/A	(2,080)	14,555	(14,864)	1,537	1,039	1,819
Gunnison City	N/A	—	—	—	—	—	—
Gunnison Valley Hospital	N/A	—	—	—	—	—	—
Heber City	N/A	(3,310)	23,160	(23,652)	2,446	1,654	2,895
Heber Light & Power	N/A	—	—	—	—	—	—
Heber Valley Historic Railroad	N/A	—	—	—	—	—	—
Heber Valley Special Service District	N/A	—	—	—	—	—	—
Herriman City	N/A	—	—	—	—	—	—
High Desert Uniserv	N/A	—	—	—	—	—	—
High School Activities Association	N/A	—	—	—	—	—	—
Highland City	N/A	—	—	—	—	—	—
Hinckley Town	N/A	—	—	—	—	—	—
Honeyville City	N/A	—	—	—	—	—	—
Hooper City	N/A	—	—	—	—	—	—
Hooper Water Improv District	N/A	—	—	—	—	—	—
Housing Authority of Carbon Co	N/A	—	—	—	—	—	—
Housing Authority 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	(1,156)	8,085	(8,257)	854	577	1,011
Hurricane Valley Fire Special Service District	N/A	(10,587)	358,258	(309,578)	623	77,021	49,836
Hyde Park City	N/A	—	—	—	—	—	—
Hyrum City	N/A	—	—	—	—	—	—
Impact Mitigation Special Service District	N/A	—	—	—	—	—	—
Intech Collegiate High School	N/A	—	—	—	—	—	—
Iron County	N/A	(7,610)	53,239	(54,370)	5,622	3,802	6,655
Iron School District	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		Total Employer Net Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
								Proportionate Share of Nonemployer Contributions	Proportionate Share of Employer Contributions		
1,243	4,207	—	258	171	781	1,210	13,304	31	—	13,335	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
859	1,233	—	33	22	419	474	1,680	24	—	1,704	
1,520	1,520	—	—	—	—	—	—	90	—	90	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
2,220	108,759	16,886	17,954	25,236	3,124	63,200	66,742	(425)	(25,542)	40,775	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,221	1,221	—	—	—	—	—	—	74	—	74	
2,365	7,587	—	454	302	—	756	23,441	139	—	23,580	
—	—	—	—	—	—	—	—	—	—	—	
—	500	—	44	29	461	534	2,244	(26)	—	2,218	
—	—	—	—	—	—	—	—	—	—	—	
3,544	13,000	—	823	546	1,848	3,217	42,452	90	—	42,542	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,108	5,503	—	383	254	—	637	19,736	66	—	19,802	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
2,858	9,853	—	609	404	—	1,013	31,404	166	—	31,570	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
12,636	15,078	—	212	141	—	353	10,963	2,167	—	13,130	
43	127,523	21,089	21,937	31,195	17,883	92,104	58,323	(3,101)	(31,899)	23,323	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
4,694	20,773	—	1,399	929	—	2,328	72,191	279	—	72,470	
—	—	—	—	—	—	—	—	—	—	—	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Itineris High School	N/A	\$ —	—	—	—	—	—
Ivins City	N/A	(1,949)	40,011	(35,636)	772	7,631	5,471
Jordan River Commission	N/A	—	—	—	—	—	—
Jordan School District	N/A	—	—	—	—	—	—
Jordan Uniserv	N/A	—	—	—	—	—	—
Jordan Valley Water Conservancy	N/A	—	—	—	—	—	—
Jordanelle Special Service District	N/A	—	—	—	—	—	—
Juab County	N/A	(4,099)	28,681	(29,291)	3,029	2,048	3,585
Juab School District	N/A	—	—	—	—	—	—
Kamas City	N/A	—	—	—	—	—	—
Kane County	N/A	(2,125)	14,870	(15,186)	1,570	1,062	1,859
Kane County Water Conservancy District	N/A	—	—	—	—	—	—
Kane School District	N/A	—	—	—	—	—	—
Kaysville City	N/A	(6,629)	155,105	(136,865)	2,143	30,756	21,322
Kearns Improvement District	N/A	—	—	—	—	—	—
Laverkin City	N/A	(326)	2,279	(2,328)	241	163	285
Layton City	N/A	(91,303)	3,068,279	(2,652,241)	5,914	658,846	426,744
Lehi City	N/A	(54,233)	1,669,484	(1,449,424)	7,390	352,718	231,630
Lewiston City	N/A	—	—	—	—	—	—
Liberty Academy Charter	N/A	—	—	—	—	—	—
Lindon City	N/A	—	—	—	—	—	—
Logan City	N/A	(8,389)	58,695	(59,943)	6,199	4,192	7,338
Logan School District	N/A	—	—	—	—	—	—
Lone Peak PS District	N/A	(5,294)	37,036	(37,823)	3,911	2,645	4,630
Maeser Water Improvement District	N/A	—	—	—	—	—	—
Magna Mosquito Abatement	N/A	—	—	—	—	—	—
Manti City	N/A	—	—	—	—	—	—
Mapleton City	N/A	(1,266)	8,860	(9,049)	936	633	1,108
Marriott-Slaterville City	N/A	—	—	—	—	—	—
Mayfield Town	N/A	—	—	—	—	—	—
Mendon City	N/A	—	—	—	—	—	—
Metro Water District 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	(5,588)	39,097	(39,928)	4,129	2,792	4,888
Millard School District	N/A	—	—	—	—	—	—
Millville City	N/A	—	—	—	—	—	—
Minersville Town	N/A	—	—	—	—	—	—
Moab Valley Fire Protection	N/A	(4,066)	135,791	(117,413)	285	29,126	18,882
Monroe City	N/A	—	—	—	—	—	—
Monticello Academy	N/A	—	—	—	—	—	—
Morgan City Corporation	N/A	—	—	—	—	—	—
Morgan County	N/A	(1,476)	15,179	(14,541)	968	1,962	1,984
Morgan School District	N/A	—	—	—	—	—	—
Moroni City	N/A	—	—	—	—	—	—
Mount Pleasant City	N/A	—	—	—	—	—	—
Mountain Regional Water Special Service District	N/A	—	—	—	—	—	—
Mountainland Association of Governments	N/A	—	—	—	—	—	—
Mountainland Applied Technology College	N/A	—	—	—	—	—	—
Mt Olympus Improvement District	N/A	—	—	—	—	—	—
Murray City	N/A	(110,295)	3,550,840	(3,075,791)	11,087	756,603	493,283
Murray School District	N/A	—	—	—	—	—	—
Myton City	N/A	—	—	—	—	—	—
N Tooele Co Fire Protection SD	N/A	(1,995)	56,795	(49,516)	389	11,810	7,861
Ne Counseling Center	N/A	—	—	—	—	—	—
Nebo Credit Union	N/A	—	—	—	—	—	—
Nebo School District	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 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	
—	—	—	—	—	—	—	—	—	—	—	
8,479	22,353	1,957	2,213	3,014	—	7,184	14,581	1,326	(2,960)	12,947	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
4,753	13,415	—	754	500	—	1,254	38,891	276	—	39,167	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,291	5,782	—	391	259	—	650	20,163	75	—	20,238	
—	—	—	—	—	—	—	—	—	—	—	
1,090	55,311	8,068	8,866	12,250	22,959	52,143	46,776	(3,640)	(12,204)	30,932	
—	—	—	—	—	—	—	—	—	—	—	
—	689	—	60	40	530	630	3,090	(31)	—	3,059	
23,413	1,114,917	180,286	187,679	266,783	—	634,748	506,170	3,311	(272,700)	236,781	
147	591,885	95,731	100,714	142,363	11,809	350,617	323,339	(1,937)	(144,802)	176,600	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
9,931	27,660	—	1,543	1,024	—	2,567	79,590	568	—	80,158	
—	—	—	—	—	—	—	—	—	—	—	
4,651	15,837	—	973	646	971	2,590	50,220	207	—	50,427	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,481	4,158	—	233	155	—	388	12,014	86	—	12,100	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,904	13,713	—	1,028	682	—	1,710	53,016	110	—	53,126	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,255	49,548	7,966	8,298	11,791	2,400	30,455	22,670	(216)	(12,049)	10,405	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
386	5,300	360	613	691	2,129	3,793	13,285	(205)	(545)	12,535	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
14,220	1,275,193	206,236	215,772	305,890	26,412	754,310	634,520	(3,241)	(311,953)	319,326	
—	—	—	—	—	—	—	—	—	—	—	
5,158	25,218	3,179	3,380	4,751	—	11,310	12,577	658	(4,808)	8,427	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Nephi City	N/A	\$ (1,007)	7,042	(7,192)	744	503	880
Nibbley City Corporation	N/A	—	—	—	—	—	—
Noah Webster Academy Inc	N/A	—	—	—	—	—	—
North Davis Co Sewer District	N/A	—	—	—	—	—	—
North Davis Fire District	N/A	(24,327)	802,832	(694,579)	1,948	171,837	111,605
North Emery Water Users Special Service District	N/A	—	—	—	—	—	—
North Fork Special Service District	N/A	(661)	23,898	(20,588)	—	5,195	3,330
North Logan City	N/A	(3,260)	113,632	(98,056)	108	24,554	15,819
North Ogden City	N/A	(2,154)	15,072	(15,392)	1,592	1,076	1,884
North Park Police Agency	N/A	(317)	2,218	(2,265)	234	158	277
North Pointe Solid Waste	N/A	—	—	—	—	—	—
North Sanpete School District	N/A	—	—	—	—	—	—
North Summit School District	N/A	—	—	—	—	—	—
North View Fire District	N/A	(15,603)	467,512	(406,463)	2,450	98,247	64,812
NUAMES Charter School	N/A	—	—	—	—	—	—
Oakley City	N/A	—	—	—	—	—	—
Ogden City Corp	N/A	(22,964)	160,662	(164,076)	16,967	11,474	20,084
Ogden School District	N/A	—	—	—	—	—	—
Ogden Weber/NEA/UEA Uniserv	N/A	—	—	—	—	—	—
Ogden-Weber Technology College	N/A	—	—	—	—	—	—
Oquirrh Recreation and Parks District	N/A	—	—	—	—	—	—
Orangeville City	N/A	—	—	—	—	—	—
Orderville Town	N/A	—	—	—	—	—	—
Panguitch City Corporation	N/A	—	—	—	—	—	—
Park City	N/A	(3,713)	25,975	(26,527)	2,743	1,855	3,247
Park City Fire Service	N/A	(7,887)	55,178	(56,350)	5,827	3,941	6,898
Park City School District	N/A	—	—	—	—	—	—
Parowan City	N/A	(402)	2,813	(2,873)	297	201	352
Payson City	N/A	(5,032)	106,931	(94,996)	1,901	20,618	14,642
Perry City	N/A	(163)	1,139	(1,163)	120	81	142
Piute County	N/A	—	—	—	—	—	—
Piute School District	N/A	—	—	—	—	—	—
Plain City	N/A	—	—	—	—	—	—
Pleasant Grove City	N/A	(19,534)	595,784	(517,501)	2,801	125,646	82,638
Pleasant View City	N/A	(463)	3,241	(3,310)	342	231	405
Price City	N/A	(3,547)	84,384	(74,378)	1,112	16,808	11,608
Price River Water Improvement	N/A	—	—	—	—	—	—
Providence City	N/A	—	—	—	—	—	—
Provo City Corp	N/A	(13,249)	92,694	(94,664)	9,789	6,620	11,588
Provo Housing Authority	N/A	—	—	—	—	—	—
Provo River Water Users	N/A	—	—	—	—	—	—
Provo School District	N/A	—	—	—	—	—	—
Recreation & Habilitation Services	N/A	—	—	—	—	—	—
Redmond Town	N/A	—	—	—	—	—	—
Rich County	N/A	(644)	4,503	(4,599)	476	322	563
Rich School District	N/A	—	—	—	—	—	—
Richfield City	N/A	(945)	6,613	(6,754)	698	472	827
Richmond City	N/A	—	—	—	—	—	—
Riverdale City	N/A	(16,877)	573,143	(495,182)	941	123,296	79,736
Roosevelt City	N/A	(906)	6,340	(6,475)	670	453	793
Roosevelt City Housing	N/A	—	—	—	—	—	—
Roy City	N/A	(41,198)	1,229,846	(1,069,464)	6,586	258,256	170,477
Roy Water Conservancy District	N/A	—	—	—	—	—	—
S Utah Valley Electric Service District	N/A	—	—	—	—	—	—
S Utah Valley Solid Waste	N/A	—	—	—	—	—	—
Salem City	N/A	(114)	798	(815)	84	57	100
Salina City	N/A	(304)	2,124	(2,169)	224	152	266
Salt Lake Arts Academy	N/A	—	—	—	—	—	—
Salt Lake City Corp	N/A	(44,337)	310,199	(316,790)	32,758	22,153	38,778
Salt Lake City Public Library	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 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		
1,049	3,176	—	185	123	182	490	9,549	49	—	9,598	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
18,106	303,496	46,946	48,973	69,537	777	166,233	137,043	2,980	(71,010)	69,013	
—	—	—	—	—	—	—	—	—	—	—	
865	9,390	1,430	1,477	2,109	3,849	8,865	3,413	(485)	(2,163)	765	
2,231	42,712	6,740	6,988	9,955	289	23,972	17,470	183	(10,194)	7,459	
3,175	7,727	—	396	263	—	659	20,437	185	—	20,622	
—	669	—	58	39	618	715	3,007	(35)	—	2,972	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
2,469	167,978	26,592	28,076	39,612	695	94,975	94,916	124	(40,223)	54,817	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
16,718	65,243	—	4,222	2,803	—	7,025	217,856	984	—	218,840	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
4,058	11,903	—	683	453	—	1,136	35,221	240	—	35,461	
9,311	25,977	—	1,450	963	—	2,413	74,821	548	—	75,369	
—	—	—	—	—	—	—	—	—	—	—	
911	1,761	—	74	49	—	123	3,814	54	—	3,868	
551	37,712	5,323	5,970	8,161	811	20,265	37,107	20	(8,051)	29,076	
1,273	1,616	—	30	20	245	295	1,545	58	—	1,603	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
12,811	223,896	34,070	35,886	50,695	3,696	124,347	117,276	1,962	(51,534)	67,704	
497	1,475	—	85	57	449	591	4,395	1	—	4,396	
222	29,750	4,420	4,843	6,701	1,207	17,171	24,823	(33)	(6,686)	18,104	
—	—	—	—	—	—	—	—	—	—	—	
4,633	32,630	—	2,436	1,617	—	4,053	125,692	269	—	125,961	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
481	1,842	—	118	79	—	197	6,106	29	—	6,135	
—	—	—	—	—	—	—	—	—	—	—	
505	2,502	—	174	115	714	1,003	8,968	(15)	—	8,953	
4,643	208,616	33,769	35,112	49,944	1,105	119,930	92,675	683	(51,079)	42,279	
1,928	3,844	—	167	111	177	455	8,598	99	—	8,697	
—	—	—	—	—	—	—	—	—	—	—	
23,080	458,399	69,874	73,808	104,107	—	247,789	251,312	3,185	(105,691)	148,806	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	
1,610	1,851	—	21	14	—	35	1,082	94	—	1,176	
—	642	—	56	37	592	685	2,880	(34)	—	2,846	
20,114	113,803	—	8,152	5,412	—	13,564	420,625	1,173	—	421,798	
—	—	—	—	—	—	—	—	—	—	—	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Salt Lake Co Serv Area 3	N/A	\$ —	—	—	—	—	—
Salt Lake Community College	N/A	—	—	—	—	—	—
Salt Lake County	N/A	(57,658)	403,396	(411,968)	42,601	28,809	50,429
Salt Lake School District	N/A	—	—	—	—	—	—
San Juan County	N/A	(3,093)	21,639	(22,099)	2,285	1,545	2,705
San Juan Mental Health	N/A	—	—	—	—	—	—
San Juan School District	N/A	—	—	—	—	—	—
Sandy City	N/A	(18,282)	127,906	(130,623)	13,507	9,134	15,990
Sandy Suburban Improvement District	N/A	—	—	—	—	—	—
Sanpete County	N/A	(2,019)	14,128	(14,428)	1,492	1,009	1,766
Santaquin City	N/A	(110)	770	(786)	81	55	96
Seven County Infrastructure	N/A	—	—	—	—	—	—
Sevier County	N/A	(2,879)	20,146	(20,574)	2,127	1,439	2,518
Sevier School District	N/A	—	—	—	—	—	—
Six-County Association of Governments	N/A	—	—	—	—	—	—
Slc Mosquito Abatement	N/A	—	—	—	—	—	—
Smithfield City Corp	N/A	(4,909)	132,617	(115,968)	1,137	27,258	18,325
Snow College	N/A	—	—	—	—	—	—
Snyder Basin Special Recreation District	N/A	—	—	—	—	—	—
Snyderville Basin Water Reclamation District	N/A	—	—	—	—	—	—
So Davis Metro Fire Agency	N/A	(98,379)	3,346,465	(2,891,040)	5,348	720,104	465,584
So Davis Recreation Center	N/A	—	—	—	—	—	—
So SI Valley Mosquito Abatement	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 Special Service District #1	N/A	—	—	—	—	—	—
Solitude Improvement District	N/A	—	—	—	—	—	—
South Davis Sewer District	N/A	—	—	—	—	—	—
South Davis Water District	N/A	—	—	—	—	—	—
South Ogden City	N/A	(20,108)	634,986	(550,566)	2,335	134,814	88,164
South Ogden Conservancy District	N/A	—	—	—	—	—	—
South Sanpete School District	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	(136)	949	(969)	100	68	119
Southwest Applied Technology	N/A	—	—	—	—	—	—
Southwest Educ Development Center	N/A	—	—	—	—	—	—
Space Dynamics Lab / USU	N/A	—	—	—	—	—	—
Spanish Fork City	N/A	(2,064)	14,443	(14,750)	1,525	1,031	1,806
Spring City	N/A	—	—	—	—	—	—
Springville City	N/A	(8,480)	173,108	(154,249)	3,383	32,955	23,662
St George Housing Authority	N/A	—	—	—	—	—	—
State of Utah	N/A	(267,800)	2,862,354	(2,727,323)	172,819	383,375	375,396
Stockton Town	N/A	(67)	472	(482)	50	34	59
Success Academy	N/A	—	—	—	—	—	—
Summit Academy High School	N/A	—	—	—	—	—	—
Summit Academy Inc	N/A	—	—	—	—	—	—
Summit County	N/A	(5,879)	41,128	(42,002)	4,343	2,937	5,141
Sunset City	N/A	(812)	5,681	(5,802)	600	406	710
SW Behavioral Health Center	N/A	—	—	—	—	—	—
Sw Mosquito Abatement/Control	N/A	—	—	—	—	—	—
SW UT Public Health Department	N/A	—	—	—	—	—	—
Syracuse City Corp	N/A	(17,883)	551,015	(478,362)	2,424	116,435	76,452
Taylor West Weber Water Improvement District	N/A	—	—	—	—	—	—
Taylorville-Bennion Improvement	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 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
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
92,245	214,084	—	10,602	7,037	—	17,639	547,000	5,416	—	552,416
—	—	—	—	—	—	—	—	—	—	—
1,013	7,548	—	569	378	—	947	29,342	59	—	29,401
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
8,056	46,687	—	3,361	2,231	2,814	8,406	173,438	289	—	173,727
—	—	—	—	—	—	—	—	—	—	—
1,096	5,363	—	371	246	40	657	19,158	60	—	19,218
—	232	—	20	13	215	248	1,044	(12)	—	1,032
—	—	—	—	—	—	—	—	—	—	—
4,210	10,294	—	529	351	—	880	27,317	244	—	27,561
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
12,921	59,641	7,293	7,815	10,940	2,562	28,610	32,003	2,028	(11,031)	23,000
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
18,154	1,209,190	197,256	205,066	291,709	—	694,031	539,403	2,155	(298,369)	243,189
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
2,072	227,385	36,681	38,467	54,467	187	129,802	117,515	267	(55,483)	62,299
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	287	—	25	17	264	306	1,287	(15)	—	1,272
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
1,157	5,519	—	380	252	205	837	19,584	54	—	19,638
—	—	—	—	—	—	—	—	—	—	—
8,282	68,282	8,443	9,562	13,007	491	31,503	63,593	531	(12,771)	51,353
—	—	—	—	—	—	—	—	—	—	—
131,570	1,063,160	73,372	118,788	136,725	34,684	363,569	2,394,067	1,683	(110,983)	2,284,767
1,106	1,249	—	12	8	674	694	640	22	—	662
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	12,421	—	1,081	717	3,625	5,423	55,769	(213)	—	55,556
983	2,699	—	149	99	—	248	7,703	58	—	7,761
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
4,683	199,994	31,604	33,246	46,996	1,016	112,862	106,550	105	(47,805)	58,850
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Timber Lakes Water Special Service District	N/A	\$ —	—	—	—	—	—
Timpanogos Special Service District	N/A	—	—	—	—	—	—
Tintic School District	N/A	—	—	—	—	—	—
Tooele Applied Technology College	N/A	—	—	—	—	—	—
Tooele City	N/A	(6,086)	42,579	(43,483)	4,496	3,041	5,323
Tooele County	N/A	(4,966)	34,743	(35,482)	3,669	2,481	4,343
Tooele County Housing	N/A	—	—	—	—	—	—
Tooele School District	N/A	—	—	—	—	—	—
Tooele Valley Mosquito Abatement	N/A	—	—	—	—	—	—
Torrey Town	N/A	—	—	—	—	—	—
Town of Alta	N/A	—	—	—	—	—	—
Town of Apple Valley	N/A	—	—	—	—	—	—
Town of Brian Head	N/A	(176)	1,229	(1,255)	130	88	154
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	(375)	2,624	(2,680)	277	187	328
Tridell-Lapoint Water	N/A	—	—	—	—	—	—
Tuacahn High School	N/A	—	—	—	—	—	—
Uintah Animal Control/Shelter	N/A	—	—	—	—	—	—
Uintah Basin Applied Technology Center	N/A	—	—	—	—	—	—
Uintah Basin Association of Governments	N/A	—	—	—	—	—	—
Uintah Basin Asst Council	N/A	—	—	—	—	—	—
Uintah Co Care Center Special Service District	N/A	—	—	—	—	—	—
Uintah County	N/A	(9,478)	66,308	(67,717)	7,002	4,735	8,289
Uintah Fire Suppression Special Service District	N/A	(3,163)	114,390	(98,546)	—	24,867	15,940
Uintah Highlands Improv District	N/A	—	—	—	—	—	—
Uintah Mosquito Abatement District	N/A	—	—	—	—	—	—
Uintah Recreation District	N/A	—	—	—	—	—	—
Uintah School District	N/A	—	—	—	—	—	—
Uintah Transportation Special Service District	N/A	—	—	—	—	—	—
Uintah Water Conservancy District	N/A	—	—	—	—	—	—
Unified Fire Authority	N/A	(20,344)	142,332	(145,356)	15,031	10,165	17,793
Unified Police Department	N/A	(13,521)	94,600	(96,610)	9,990	6,756	11,826
University of Utah	N/A	(3,796)	26,556	(27,121)	2,804	1,897	3,320
University of Utah Hospital	N/A	—	—	—	—	—	—
Upper Country Water District	N/A	—	—	—	—	—	—
UT Municipal Power Agency	N/A	—	—	—	—	—	—
UT Public Employees Association	N/A	—	—	—	—	—	—
UT School Board Risk Management	N/A	—	—	—	—	—	—
Utah Association 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	(11,073)	77,468	(79,114)	8,181	5,532	9,684
Utah Dairy Council	N/A	—	—	—	—	—	—
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 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
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
2,382	15,242	—	1,119	743	691	2,553	57,736	105	—	57,841
1,371	11,864	—	913	606	3,351	4,870	47,111	(125)	—	46,986
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	372	—	32	21	343	396	1,667	(20)	—	1,647
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
728	728	—	—	—	—	—	—	42	—	42
833	1,625	—	69	46	—	115	3,558	50	—	3,608
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
13,765	33,791	—	1,743	1,157	—	2,900	89,913	796	—	90,709
1,861	42,668	6,846	7,071	10,094	—	24,011	16,338	311	(10,356)	6,293
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
17,194	60,183	—	3,741	2,483	—	6,224	193,000	999	—	193,999
9,227	37,799	—	2,486	1,650	—	4,136	128,276	530	—	128,806
1,006	9,027	—	698	463	—	1,161	36,010	58	—	36,068
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3,845	27,242	—	2,036	1,351	—	3,387	105,045	222	—	105,267
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions
Utah Safety Council	N/A	\$ —	—	—	—	—	—
Utah School Boards Association	N/A	—	—	—	—	—	—
Utah School Employees Association	N/A	—	—	—	—	—	—
Utah State Fair Corp	N/A	—	—	—	—	—	—
Utah State University	N/A	(60)	421	(430)	44	30	53
Utah Valley Dispatch Special Service District	N/A	—	—	—	—	—	—
Utah Valley University	N/A	—	—	—	—	—	—
Utah Zoological Society	N/A	—	—	—	—	—	—
UTOPIA	N/A	—	—	—	—	—	—
Valley Emergency Communications Center	N/A	—	—	—	—	—	—
Vernal City	N/A	(814)	5,695	(5,816)	601	407	712
Vineyard Town	N/A	—	—	—	—	—	—
Wasatch County	N/A	(2,670)	18,683	(19,080)	1,973	1,334	2,336
Wasatch County Fire District	N/A	(21,672)	726,223	(627,838)	1,456	155,862	100,997
Wasatch Front Regional Council	N/A	—	—	—	—	—	—
Wasatch Front Waste/Recycling	N/A	—	—	—	—	—	—
Wasatch Integrated Waste Management	N/A	—	—	—	—	—	—
Wasatch Mental Health Special Service District	N/A	—	—	—	—	—	—
Wasatch School District	N/A	—	—	—	—	—	—
Wasatch Uniserv	N/A	—	—	—	—	—	—
Washington City	N/A	(9,412)	217,256	(191,882)	3,119	42,918	29,850
Washington Co Solid Waste	N/A	—	—	—	—	—	—
Washington Co Water Conservancy District	N/A	—	—	—	—	—	—
Washington County	N/A	(11,166)	78,123	(79,783)	8,250	5,579	9,766
Washington School District	N/A	—	—	—	—	—	—
Waste Management Service District #5	N/A	—	—	—	—	—	—
Wayne County	N/A	(222)	1,555	(1,588)	164	111	194
Wayne School District	N/A	—	—	—	—	—	—
Weber Area Dispatch 911	N/A	—	—	—	—	—	—
Weber Basin Water Conservancy	N/A	—	—	—	—	—	—
Weber Co Mosquito Abatement	N/A	—	—	—	—	—	—
Weber County Corp	N/A	(14,114)	98,748	(100,846)	10,428	7,052	12,345
Weber County School District	N/A	—	—	—	—	—	—
Weber Fire District	N/A	(8,224)	57,541	(58,764)	6,077	4,109	7,193
Weber Human Services	N/A	—	—	—	—	—	—
Weber River Water Users	N/A	—	—	—	—	—	—
Weber State University	N/A	—	—	—	—	—	—
Wellington City	N/A	(325)	2,273	(2,321)	240	162	284
Wellsville City Corp	N/A	—	—	—	—	—	—
West Bountiful City	N/A	(1,887)	13,200	(13,481)	1,394	943	1,650
West Kane County Special Service District #1	N/A	—	—	—	—	—	—
West Point City	N/A	—	—	—	—	—	—
West Valley City	N/A	(28,977)	202,736	(207,044)	21,410	14,478	25,344
White City Water Improvement District	N/A	—	—	—	—	—	—
Willard City Corp	N/A	—	—	—	—	—	—
Woodland Peaks Uniserv	N/A	—	—	—	—	—	—
Woods Cross City	N/A	(1,487)	10,406	(10,627)	1,099	743	1,301
Workers Compensation Fund	N/A	—	—	—	—	—	—
<b>Grand Total</b>		<b>\$ (1,656,406)</b>	<b>34,581,714</b>	<b>(30,762,071)</b>	<b>641,359</b>	<b>6,631,252</b>	<b>4,731,701</b>
<b>No Proportionate Share for 2016</b>							
Canyonlands Health Care	N/A	—	—	—	—	—	—
Leeds Area Special Service District	N/A	—	—	—	—	—	—
Summit Mosquito Abatement District	N/A	—	—	—	—	—	—
Sunnyside City	N/A	—	—	—	—	—	—
Valley Mental Health	N/A	—	—	—	—	—	—
<b>Grand Total</b>		<b>\$ (1,656,406)</b>	<b>34,581,714</b>	<b>(30,762,071)</b>	<b>641,359</b>	<b>6,631,252</b>	<b>4,731,701</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 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
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	127	—	11	7	117	135	571	(7)	—	564
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	1,720	—	150	99	893	1,142	7,722	(54)	—	7,668
2,056	7,699	—	491	326	—	817	25,333	119	—	25,452
1,355	259,670	42,639	44,402	63,107	3,966	154,114	120,454	(272)	(64,496)	55,686
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
15,376	91,263	11,235	12,380	17,080	101	40,796	66,859	1,941	(16,994)	51,806
—	—	—	—	—	—	—	—	—	—	—
4,931	28,526	—	2,053	1,363	2,836	6,252	105,934	110	—	106,044
—	—	—	—	—	—	—	—	—	—	—
589	1,058	—	41	27	526	594	2,108	2	—	2,110
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
7,592	37,417	—	2,595	1,723	8	4,326	133,901	433	—	134,334
4,155	21,534	—	1,512	1,004	1,505	4,021	78,025	146	—	78,171
—	—	—	—	—	—	—	—	—	—	—
—	686	—	60	40	624	724	3,082	(36)	—	3,046
919	4,906	—	347	230	1,146	1,723	17,900	(17)	—	17,883
—	—	—	—	—	—	—	—	—	—	—
4,377	65,609	—	5,328	3,537	3,469	12,334	274,907	68	—	274,975
—	—	—	—	—	—	—	—	—	—	—
—	3,143	—	273	182	1,645	2,100	14,110	(95)	—	14,015
—	—	—	—	—	—	—	—	—	—	—
773,813	12,778,125	1,706,241	1,921,895	2,621,559	258,109	6,507,804	12,306,957	27,186	(2,580,856)	9,753,287
—	—	—	—	—	—	—	—	—	—	—
7,614	7,614	—	—	—	—	—	—	1,291	—	1,291
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
781,427	12,785,739	1,706,241	1,921,895	2,621,559	258,109	6,507,804	12,306,957	28,477	(2,580,856)	9,754,578

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
4 Corners Community Behavior Health	N/A	\$ 1,479,971	3,114,437	120,519	31,923	330,517	205,189
Active Re Entry Inc	N/A	334,841	614,965	100,162	—	62,763	35,615
Alpine City	N/A	546,886	1,141,696	51,356	11,838	121,833	74,833
Alpine School District	N/A	235,362,883	435,895,490	67,540,901	—	44,883,298	25,071,278
Alpine Uniserv	N/A	97,830	179,374	29,489	—	18,326	10,373
American Fork City	N/A	4,862,245	10,140,008	508,818	62,616	1,059,144	737,971
American Leadership Academy	N/A	4,235,027	7,855,068	1,209,214	—	796,771	458,818
Ames Charter School	N/A	1,704,307	3,129,983	509,911	—	319,454	181,259
Annabella Town	N/A	52,101	107,918	5,524	1,132	11,579	7,037
Ash Creek Special Service District	N/A	510,665	1,058,742	53,414	11,088	113,523	69,084
Ashley Valley Improv District	N/A	570,067	1,187,560	55,414	12,352	126,915	77,732
Ashley Valley Sewer Management Board	N/A	260,316	539,204	27,600	5,654	57,853	35,162
Ballard Town	N/A	120,361	250,639	11,772	2,608	26,793	16,402
Bear Lake Special Service District	N/A	74,224	153,743	7,870	1,612	16,496	10,026
Bear River Association of Governments	N/A	884,256	1,847,526	81,901	19,134	197,041	121,162
Bear River Health Department	N/A	2,848,020	5,974,231	246,147	61,519	635,411	392,798
Bear River Mental Health	N/A	2,237,335	4,701,367	187,298	48,290	499,431	309,453
Bear River Water District	N/A	119,065	251,631	8,898	2,563	26,625	16,624
Beaver City	N/A	613,557	1,286,275	53,602	13,257	136,863	84,538
Beaver County	N/A	4,248,651	8,861,260	474,051	25,761	909,437	694,983
Beaver Housing Authority	N/A	62,431	129,316	6,619	1,356	13,875	8,433
Beaver School District	N/A	6,302,120	11,607,007	1,860,800	—	1,182,530	673,846
Beaver Valley Hospital	N/A	2,573,335	5,369,534	243,610	55,716	573,192	351,837
Benchland Water Company	N/A	241,952	503,656	23,797	5,244	53,854	32,951
Bicknell Town	N/A	22,978	47,596	2,436	499	5,107	3,104
Big Water Municipal Corp	N/A	15,195	31,603	1,858	—	3,198	2,636
Blanding City	N/A	772,134	1,607,953	80,986	11,421	168,933	114,406
Bluffdale City	N/A	896,261	1,895,105	66,273	19,291	200,455	125,235
Bona Vista Water Improvement	N/A	340,954	708,668	34,339	7,395	75,854	46,317
Bountiful Irrigation District	N/A	321,719	668,833	32,292	6,977	71,580	43,721
Box Elder Co Mosquito District	N/A	151,359	316,077	14,143	3,276	33,722	20,722
Box Elder County	N/A	7,134,927	14,933,476	725,702	59,365	1,596,275	1,097,026
Box Elder School District	N/A	40,843,204	75,363,043	11,942,024	—	7,724,654	4,350,721
Bridgerland Applied Technology Center	N/A	5,389,059	9,910,985	1,601,957	—	1,010,654	574,657
Brigham City	N/A	4,419,342	9,246,585	435,214	57,041	981,929	658,769
Cache County	N/A	10,071,107	20,987,608	1,116,678	80,310	2,165,825	1,612,400
Cache Metro Planning Organization	N/A	55,669	115,309	5,902	1,209	12,372	7,519
Cache School District	N/A	58,122,987	107,663,036	16,636,052	—	11,208,421	6,122,986
Canyons School District	N/A	123,460,003	228,297,421	35,770,427	—	23,200,998	13,300,069
Carbon County	N/A	5,773,547	12,120,035	543,683	64,031	1,301,898	863,618
Carbon County Rec/Trans Special Service District	N/A	29,035	60,142	3,079	631	6,453	3,922
Carbon School District	N/A	13,553,557	25,055,476	3,927,834	—	2,565,607	1,448,585
Castle Dale City	N/A	66,933	140,581	5,652	1,445	14,939	9,251
Castle Valley Special Service District	N/A	429,653	926,900	13,805	7,094	121,478	44,455
Cedar City	N/A	4,611,400	9,618,400	484,094	56,824	1,003,132	704,479
Cedar City Housing Authority	N/A	105,105	221,454	8,357	2,266	23,482	14,601
Cedar Mountain Fire Protection District	N/A	—	—	—	—	—	—
Centerfield City	N/A	134,802	281,250	14,359	1,402	29,183	21,050
Centerville City	N/A	2,863,837	6,039,267	242,216	28,441	686,953	402,561
Central Davis Sewer District	N/A	642,610	1,340,072	61,429	13,917	143,111	87,774
Central Iron Co Water Conservancy	N/A	91,208	196,002	4,403	1,949	20,503	13,084
Central UT Public Health	N/A	1,009,038	2,107,850	93,749	21,836	224,835	138,217
Central Utah Counseling Center	N/A	1,762,241	3,674,387	168,846	38,167	392,438	240,647
Central Utah Water District	N/A	4,476,546	9,340,763	423,798	96,923	997,118	612,048
Central Weber Sewer District	N/A	1,017,915	2,145,140	80,623	21,942	227,427	141,457
City of Aurora	N/A	47,531	98,452	5,039	1,032	10,563	6,420
City of Bountiful	N/A	12,949,794	22,475,305	5,033,276	870,790	1,909,046	1,387,737
City of Cedar Hills	N/A	710,275	1,481,362	67,762	15,382	158,186	97,035
City of Draper	N/A	6,281,615	13,109,795	645,493	85,279	1,371,105	946,794
City of Duchesne	N/A	178,100	372,333	16,335	3,853	39,694	24,427

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			
21,236	588,865	48,562	98,067	48,775	47,028	242,432	569,287	(13,170)	—	556,117		
7,702	106,080	18,224	18,010	4,170	8,094	48,498	74,298	509	—	74,807		
37,394	245,898	16,393	36,132	17,910	—	70,435	198,739	12,917	—	211,656		
3,577,724	73,532,300	13,065,412	12,883,311	2,942,358	—	28,891,081	55,208,986	1,073,772	—	56,282,758		
195	28,894	5,278	5,258	1,213	43,853	55,602	21,337	(17,155)	—	4,182		
63,332	1,923,063	247,334	312,150	163,451	122,168	845,103	1,652,228	(17,205)	—	1,635,023		
41,201	1,296,790	242,510	228,824	53,952	104,328	629,614	1,034,714	(20,155)	—	1,014,559		
34,988	535,701	92,740	91,667	21,219	8,815	214,441	378,012	7,254	—	385,266		
124	19,872	1,418	3,432	1,696	557	7,103	17,857	(119)	—	17,738		
2,744	196,439	14,064	33,654	16,633	—	64,351	176,269	894	—	177,163		
10,775	227,774	16,659	37,634	18,638	—	72,931	203,956	3,516	—	207,472		
537	99,206	7,085	17,150	8,473	2,555	35,263	89,221	(559)	—	88,662		
2,299	48,102	3,501	7,945	3,934	1,502	16,882	42,939	376	—	43,315		
1,591	29,725	2,020	4,890	2,416	1,497	10,823	25,440	161	—	25,601		
11,221	348,558	26,763	58,440	28,977	—	114,180	323,275	3,219	—	326,494		
56,377	1,146,105	90,213	188,498	93,623	—	372,334	1,071,277	17,531	—	1,088,808		
10,194	867,368	72,251	148,173	73,649	122,493	416,566	851,914	(42,016)	—	809,898		
5,488	51,300	4,089	7,902	3,937	—	15,928	47,160	1,696	—	48,856		
2,421	237,079	19,305	40,599	20,160	88,969	169,033	229,810	(27,396)	—	202,414		
147,994	1,778,175	286,385	266,683	145,784	73,497	772,349	1,376,109	37,573	—	1,413,682		
1,930	25,594	1,699	4,113	2,032	—	7,844	21,398	631	—	22,029		
34,766	1,891,142	348,085	339,409	78,987	27,998	794,479	1,438,573	2,830	—	1,441,403		
12,061	992,806	76,687	169,988	84,241	32,554	363,470	931,812	(6,853)	—	924,959		
18,617	110,666	7,008	15,969	7,906	—	30,883	86,089	5,730	—	91,819		
1,520	10,230	625	1,514	748	—	2,887	7,876	498	—	8,374		
3,005	8,839	1,233	933	530	455	3,151	4,588	1,303	—	5,891		
10,498	305,258	35,335	49,852	25,779	31,207	142,173	262,944	(7,771)	—	255,173		
425,085	770,066	30,936	59,494	29,649	9,234	129,313	356,199	(851,652)	—	(495,453)		
11,435	141,001	9,691	22,490	11,128	10,077	53,386	119,947	1,233	—	121,180		
1,685	123,963	9,170	21,223	10,501	9,105	49,999	113,366	(3,056)	—	110,310		
2,528	60,248	4,553	10,001	4,958	—	19,512	55,124	699	—	55,823		
71,806	2,824,472	421,329	465,568	234,880	57,011	1,178,788	2,053,189	192,566	—	2,245,755		
378,717	12,454,092	2,250,188	2,217,023	510,071	417,829	5,395,111	9,363,350	(146,136)	—	9,217,214		
181,831	1,767,142	295,412	290,041	67,316	8,596	661,365	1,212,422	68,486	—	1,280,908		
48,961	1,746,700	220,280	288,378	146,131	67,220	722,009	1,427,707	45,905	—	1,473,612		
242,443	4,100,978	629,501	635,981	343,404	3,204	1,612,090	3,285,473	60,895	—	3,346,368		
1,603	22,703	1,515	3,667	1,812	—	6,994	19,080	522	—	19,602		
982,457	18,313,864	3,168,135	3,216,324	717,891	—	7,102,350	13,362,392	421,023	—	13,783,415		
568,896	37,069,963	6,961,445	6,661,380	1,561,830	1,050,454	16,235,109	29,308,043	(183,169)	—	29,124,874		
136,834	2,366,381	307,865	380,558	188,854	184,437	1,061,714	1,745,075	(4,827)	—	1,740,248		
—	11,006	790	1,913	945	1,154	4,802	9,952	(371)	—	9,581		
23,652	4,037,844	753,776	736,458	169,971	258,823	1,919,028	3,163,726	(130,662)	—	3,033,064		
448	26,083	2,150	4,432	2,202	755	9,539	25,403	(133)	—	25,270		
1,855	174,882	10,091	34,386	10,678	2,251	57,406	27,548	81,444	—	108,992		
14,719	1,779,154	241,019	295,527	155,298	114,124	805,968	1,562,850	(39,370)	—	1,523,480		
2,552	42,901	3,495	6,967	3,467	1,920	15,849	40,774	245	—	41,019		
—	—	—	—	—	—	—	—	—	—	—		
2,556	54,191	7,686	8,585	4,567	4,476	25,314	45,175	(743)	—	44,432		
112,349	1,230,304	144,213	198,288	87,896	—	430,397	630,586	251,440	—	882,026		
1,292	246,094	19,015	42,440	21,027	33,148	115,630	231,677	(10,693)	—	220,984		
7,005	42,541	3,682	6,090	3,056	—	12,828	40,239	2,032	—	42,271		
29,679	414,567	30,474	66,682	33,062	—	130,218	368,399	9,595	—	377,994		
39,236	710,488	52,056	116,377	57,656	—	226,089	634,669	13,017	—	647,686		
10,986	1,717,075	133,401	295,709	146,546	120,388	696,044	1,620,941	(40,589)	—	1,580,352		
40,105	430,931	33,917	67,485	33,585	36,114	171,101	395,420	(2,925)	—	392,495		
361	18,376	1,294	3,131	1,547	439	6,411	16,291	27	—	16,318		
82,986	4,250,559	171,697	557,493	264,514	93,541	1,087,245	3,451,584	31,907	—	3,483,491		
10,337	280,940	21,048	46,910	23,243	4,421	95,622	256,302	2,188	—	258,490		
187,311	2,590,489	310,460	404,316	210,834	106,820	1,032,430	2,157,419	14,921	—	2,172,340		
8,354	76,328	5,427	11,773	5,839	7,894	30,933	65,387	674	—	66,061		

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
City of Enterprise	N/A	\$ 224,785	465,605	23,833	4,883	49,957	30,363
City of Green River	N/A	185,481	387,141	17,474	4,015	41,318	25,372
City of Harrisville	N/A	741,825	1,542,453	82,420	8,252	160,707	114,380
City of Helper	N/A	423,753	884,931	45,242	3,719	91,384	67,441
City of Holladay	N/A	736,103	1,536,460	69,309	15,935	163,978	100,697
City of Kanab	N/A	653,041	1,367,985	65,169	7,068	141,723	102,046
City of Milford	N/A	157,629	331,688	12,857	3,400	35,202	21,851
City of Moab	N/A	1,976,364	4,138,030	191,242	28,621	432,852	296,128
City of Monticello	N/A	384,717	808,652	34,278	6,141	84,687	56,973
City of Naples	N/A	619,213	1,336,781	26,575	3,810	168,654	77,607
City of North Salt Lake	N/A	2,977,982	6,205,768	318,319	35,299	646,834	456,792
City of Orem	N/A	14,355,112	34,583,231	(2,388,945)	1,739,882	4,426,864	2,655,978
City of Riverton	N/A	3,455,101	7,230,103	311,703	74,713	770,278	474,627
City of Santa Clara	N/A	853,434	1,780,766	80,803	18,478	190,096	116,683
City of Saratoga Springs	N/A	2,886,117	6,562,955	(153,713)	341,091	742,148	526,129
City of South Jordan	N/A	9,489,517	19,831,687	945,892	133,080	2,093,320	1,410,399
City of South Salt Lake	N/A	6,859,981	14,338,058	716,659	66,567	1,483,344	1,082,012
City of St George	N/A	21,485,497	45,006,221	2,059,215	302,132	4,756,411	3,192,018
City of Taylorsville	N/A	1,246,897	2,610,119	111,837	26,959	278,011	171,381
City of Uintah	N/A	48,687	103,409	3,256	1,046	10,904	6,853
City of Washington Terrace	N/A	570,928	1,189,913	55,080	12,368	127,124	77,909
City of Wendover	N/A	115,505	244,313	8,480	2,486	25,837	16,149
City of West Haven	N/A	373,463	781,714	33,536	8,075	83,267	51,325
City of West Jordan	N/A	14,594,168	36,552,681	(3,540,632)	2,064,421	4,594,016	3,188,790
City of Woodland Hills	N/A	51,476	106,625	5,458	1,118	11,440	6,953
Clearfield City	N/A	3,492,659	7,299,869	356,179	42,360	759,921	536,237
Cleveland Town	N/A	7,574	17,157	(290)	158	1,731	1,181
Clinton City	N/A	2,067,167	4,382,754	151,941	22,623	510,446	279,033
Coalville City	N/A	163,913	346,054	12,516	3,530	36,643	22,846
Color Country Uniserv	N/A	46,903	87,189	13,247	—	8,832	5,103
Corinne City	N/A	167,447	403,104	(31,069)	—	79,525	—
Cottonwood Heights City	N/A	2,747,337	5,720,911	297,581	531,625	559,257	469,692
Cottonwood Heights P&R Srv	N/A	596,288	1,244,578	56,181	12,909	132,831	81,566
Cottonwood Improvement District	N/A	1,377,477	2,864,411	137,723	29,869	306,500	187,271
Council On Aging Golden Age SS	N/A	198,236	414,007	18,494	4,290	44,168	27,143
Daggett County	N/A	985,587	2,051,967	108,120	10,375	213,283	153,249
Daggett School District	N/A	1,544,826	2,851,330	451,552	—	290,105	165,845
Davis & Weber County Canal Co	N/A	1,051,837	2,541,650	(202,155)	—	499,331	1,399
Davis Applied Technology College	N/A	3,970,529	7,315,868	1,170,043	—	745,149	424,880
Davis Behavioral Health Inc	N/A	5,006,511	10,522,535	417,459	108,050	1,117,656	692,708
Davis Co Housing Authority	N/A	553,605	1,248,559	(28,914)	5,816	195,130	37,024
Davis Co Mosquito Abatement	N/A	143,126	296,462	15,175	3,109	31,809	19,333
Davis County	N/A	29,366,348	61,183,853	3,137,375	358,440	6,383,846	4,485,383
Davis School District	N/A	245,192,619	453,783,045	70,546,922	—	46,964,344	25,959,532
Davis Uniserv	N/A	61,470	112,707	18,529	—	11,515	6,518
Ddi Vantage	N/A	5,472,682	13,263,815	(1,080,937)	—	2,597,133	13,103
Delta City	N/A	361,677	759,250	30,837	7,810	80,711	49,944
Dixie Applied Technology College	N/A	358,974	658,185	108,206	—	67,245	38,061
Dixie State University	N/A	6,031,021	11,152,303	1,746,483	—	1,152,964	631,405
Duchesne Co Mosquito District	N/A	86,971	209,370	(16,137)	—	41,305	—
Duchesne Co Water Conservancy District	N/A	109,983	227,813	11,661	2,389	24,443	14,856
Duchesne County	N/A	5,342,525	11,574,900	179,429	45,801	1,486,127	633,126
Duchesne School District	N/A	17,985,034	33,553,065	4,956,834	—	3,529,014	1,891,220
E Duchesne Culinary Water Improvement District	N/A	41,309	85,565	4,380	897	9,181	5,580
Eagle Mountain City	N/A	1,617,287	3,402,211	132,590	34,890	361,144	224,099
East Carbon City	N/A	318,831	665,337	32,486	4,643	69,765	47,506
East Hollywood High School	N/A	842,670	1,572,902	233,181	—	158,919	92,373
Educators Mutual Insurance	N/A	7,576,400	14,181,224	2,036,139	—	1,560,435	760,810
Elk Ridge City	N/A	68,727	155,701	(2,642)	1,432	15,712	10,724
Emery Co Care & Rehab Center	N/A	769,361	1,864,491	(151,840)	—	365,114	1,818

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		
—	85,203	6,118	14,809	7,316	5,850	34,093	77,043	(1,878)	—	—	75,165
4,541	75,246	5,547	12,254	6,074	9,347	33,222	67,309	(2,308)	—	—	65,001
56,748	340,087	40,160	47,293	25,015	7,174	119,642	243,115	15,987	—	—	259,102
2,073	164,617	25,958	26,854	14,437	35,802	103,051	141,421	(14,079)	—	—	127,342
29,587	310,197	22,022	48,631	24,104	—	94,757	267,184	8,919	—	—	276,103
10,881	261,718	37,435	41,719	22,163	14,845	116,162	226,521	(353)	—	—	226,168
7,631	68,084	5,167	10,445	5,195	—	20,807	60,599	2,271	—	—	62,870
12,210	769,811	95,455	127,752	66,310	138,007	427,524	700,092	(48,684)	—	—	651,408
30,205	178,006	17,699	25,028	12,887	852	56,466	141,659	10,064	—	—	151,723
86,932	337,003	31,661	47,543	16,496	50,086	145,786	43,683	(168,927)	—	—	(125,244)
60,164	1,199,089	158,134	190,482	100,364	—	448,980	998,699	21,778	—	—	1,020,477
110,188	8,932,912	893,668	1,287,137	842,540	119,514	3,142,859	3,445,321	1,016,213	(304,971)	—	4,156,563
67,353	1,386,971	106,466	228,474	113,363	46,156	494,459	1,277,320	8,806	—	—	1,286,126
1,941	327,198	25,430	56,376	27,938	36,264	146,008	309,011	(11,575)	—	—	297,436
126,074	1,735,442	142,377	220,225	152,584	15,294	530,480	1,043,309	29,940	(37,886)	—	1,035,363
2,976,547	6,613,346	453,694	616,416	315,525	83,716	1,469,351	3,187,147	(5,605,550)	—	—	(2,418,403)
54,266	2,686,189	406,739	436,224	233,205	174,461	1,250,629	2,320,126	(62,882)	—	—	2,257,244
651,371	8,901,932	1,035,495	1,400,115	713,603	—	3,149,213	7,272,797	388,910	—	—	7,661,707
4,022	480,373	38,571	82,463	40,922	43,784	205,740	462,079	(18,160)	—	—	443,919
1,129	19,932	1,758	3,237	1,616	3,227	9,838	19,936	(638)	—	—	19,298
4,953	222,354	16,779	37,698	18,673	2,939	76,089	204,975	701	—	—	205,676
1,080	45,552	4,000	7,668	3,822	6,342	21,832	46,009	(1,695)	—	—	44,314
1,234	143,901	11,543	24,699	12,256	9,630	58,128	138,333	(3,233)	—	—	135,100
500,708	10,347,935	1,186,165	1,353,506	1,059,158	62,596	3,661,425	5,131,732	63,537	(443,034)	—	4,752,235
802	20,313	1,401	3,391	1,675	218	6,685	17,643	241	—	—	17,884
8,027	1,346,545	186,551	223,876	117,868	193,214	721,509	1,201,180	(78,864)	—	—	1,122,316
242	3,312	455	516	264	4,716	5,951	4,459	(1,587)	—	—	2,872
26,827	838,929	96,492	146,820	61,580	20,010	324,902	411,658	138,069	—	—	549,727
1,243	64,262	5,567	10,875	5,416	726	22,584	64,468	(41)	—	—	64,427
24,097	38,032	2,716	2,537	601	5,968	11,822	11,699	5,108	—	—	16,807
1,064	80,589	1,252	20,915	—	—	22,167	(143,271)	138,102	—	—	(5,169)
213,225	1,773,799	37,020	168,493	118,544	—	324,057	885,632	61,370	—	—	947,002
45,087	272,393	17,831	39,393	19,525	—	76,749	216,374	15,417	—	—	231,791
20,082	543,722	39,384	90,878	44,972	40,014	215,248	486,308	(4,778)	—	—	481,530
483	76,084	5,970	13,099	6,494	16,296	41,859	72,246	(4,946)	—	—	67,300
909	377,816	55,204	62,744	33,327	128,985	280,260	325,017	(51,881)	—	—	273,136
34,534	490,484	86,281	83,281	19,459	35,612	224,633	360,188	(4,027)	—	—	356,161
7,216	507,946	9,644	131,372	197	—	141,213	(884,380)	861,300	—	—	(23,080)
184,575	1,354,604	219,787	213,879	49,814	—	483,480	910,165	61,070	—	—	971,235
75,275	1,993,689	162,055	331,595	164,833	178,292	836,775	1,909,169	(31,207)	—	—	1,877,962
127,077	365,047	10,512	53,337	8,836	1,313	73,998	(143,264)	(69,516)	—	—	(212,780)
1,622	55,873	3,895	9,429	4,658	8,288	26,270	49,055	(2,661)	—	—	46,394
113,751	11,341,420	1,532,386	1,880,403	988,507	1,150,009	5,551,305	9,857,287	(359,014)	—	—	9,498,273
2,537,109	75,460,985	13,453,415	13,478,124	3,044,292	1,331,617	31,307,448	56,603,823	144,276	—	—	56,748,099
—	18,033	3,316	3,304	762	44,963	52,345	13,407	(15,963)	—	—	(2,556)
45,546	2,655,782	57,579	683,489	1,846	—	742,914	(4,536,475)	4,662,337	—	—	125,862
1,588	140,053	11,552	23,944	11,896	31,533	78,925	136,763	(10,614)	—	—	126,149
67,781	173,087	19,366	19,293	4,452	—	43,111	78,294	21,528	—	—	99,822
12,749	1,797,118	328,841	331,011	78,353	220,502	958,707	1,367,049	(93,215)	—	—	1,273,834
909	42,214	650	10,863	—	—	11,513	(74,414)	69,614	—	—	(4,800)
10,520	52,208	2,993	7,246	3,580	4,109	17,928	37,696	1,577	—	—	39,273
1,132,264	3,297,318	237,287	418,682	138,074	3,593	797,636	321,031	(1,722,075)	—	—	(1,401,044)
154,592	5,574,826	991,985	1,012,855	222,151	46,077	2,273,068	4,306,373	44,088	—	—	4,350,461
540	16,198	1,124	2,721	1,345	866	6,056	14,158	(53)	—	—	14,105
7,953	628,086	52,865	107,153	53,285	278,491	491,794	620,593	(95,058)	—	—	525,535
8,224	130,138	14,986	20,586	10,669	38,935	85,176	110,164	(13,181)	—	—	96,983
17,745	269,037	49,801	45,665	10,892	13,370	119,728	218,123	(658)	—	—	217,465
74,483	2,395,728	389,513	447,398	89,073	131,676	1,057,660	1,700,383	10,984	—	—	1,711,367
2,174	30,042	4,130	4,682	2,402	33,762	44,976	40,480	(11,485)	—	—	28,995
3,876	370,808	8,065	96,086	256	—	104,407	(638,016)	532,890	—	—	(105,126)

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Emery County	N/A	\$ 3,925,528	8,224,086	384,976	38,827	889,858	587,250
Emery County Recreation Special Service District	N/A	12,899	29,886	(989)	266	2,971	2,084
Emery School District	N/A	12,081,078	22,328,373	3,498,316	—	2,314,271	1,274,972
Emery Town	N/A	53,785	129,480	(9,980)	—	25,544	—
Emery Water Conservancy District	N/A	155,172	328,002	11,551	3,340	34,702	21,671
Enoch City	N/A	491,125	1,025,542	50,622	6,117	106,912	75,033
Ephraim City	N/A	958,870	2,001,745	97,083	13,999	209,860	142,886
Escalante City	N/A	119,263	247,035	12,645	2,591	26,505	16,110
Eureka City Corporation	N/A	63,958	132,479	6,781	1,389	14,214	8,639
Fairview City	N/A	218,841	455,033	21,908	4,746	48,693	29,748
Farmington City	N/A	2,617,101	5,476,231	259,352	34,432	571,139	397,791
Farr West City	N/A	220,705	457,431	23,195	4,793	49,059	29,842
Fast Forward Charter High School	N/A	847,763	1,572,007	242,367	—	159,481	91,801
Ferron City	N/A	104,882	218,665	10,066	2,272	23,356	14,321
Fillmore City	N/A	249,315	523,849	20,905	5,381	55,653	34,478
Five-County Association of Governments	N/A	1,093,485	2,332,388	61,490	21,360	270,178	137,292
Fountain Green City	N/A	120,905	250,847	13,615	1,563	26,294	18,210
Fox Hollow Golf Course	N/A	92,270	191,122	9,783	2,004	20,506	12,463
Francis City	N/A	80,047	165,804	8,487	1,739	17,790	10,812
Fruit Heights City	N/A	251,249	525,199	23,084	5,436	55,995	34,453
Garden City Fire District	N/A	—	—	—	—	—	—
Garfield County	N/A	2,979,346	6,224,385	308,592	28,364	665,210	453,156
Garfield School District	N/A	4,925,540	9,057,102	1,465,239	—	923,671	525,074
Garland City	N/A	382,509	875,665	(28,162)	—	143,723	25,123
Genola Town	N/A	62,491	129,441	6,626	1,357	13,888	8,441
Grand Co Cemetery Maintenance District	N/A	51,701	111,258	2,380	1,104	11,627	7,434
Grand County	N/A	3,826,659	8,069,834	313,709	54,934	895,842	534,319
Grand School District	N/A	7,345,195	13,614,418	2,104,239	—	1,381,556	794,755
Grand Water/Sewer Service	N/A	124,829	266,543	7,299	2,675	28,004	17,723
Granger-Hunter Improvement District	N/A	2,594,971	5,416,702	244,154	56,175	578,077	355,013
Granite School District	N/A	254,840,899	473,283,974	71,931,241	—	49,555,739	26,772,804
Granite Uniserv	N/A	270,749	496,424	81,612	—	50,718	28,707
Grantsville City	N/A	1,259,050	2,622,657	135,372	14,926	273,436	193,017
Gunnison City	N/A	369,718	769,552	40,835	3,763	79,930	57,692
Gunnison Valley Hospital	N/A	3,534,563	7,384,434	325,967	75,613	798,056	476,839
Heber City	N/A	2,420,588	5,075,938	235,906	27,810	526,397	375,990
Heber Light & Power	N/A	1,872,570	3,907,124	177,413	40,545	417,096	256,004
Heber Valley Historic Railroad	N/A	255,362	480,847	67,524	—	48,320	28,449
Heber Valley Special Service District	N/A	142,807	295,801	15,141	3,102	31,738	19,290
Herriman City	N/A	2,988,442	6,256,472	267,451	64,609	666,336	410,834
High Desert Uniserv	N/A	21,225	40,108	5,506	—	4,022	2,380
High School Activities Association	N/A	601,148	1,102,216	181,204	—	112,610	63,739
Highland City	N/A	863,940	1,792,466	89,404	18,752	192,100	117,016
Hinckley Town	N/A	41,699	86,520	4,310	905	9,272	5,648
Honeyville City	N/A	126,482	304,486	(23,468)	—	60,069	—
Hooper City	N/A	208,851	440,818	16,030	4,499	46,685	29,098
Hooper Water Improv District	N/A	291,781	606,937	29,032	6,326	64,930	39,688
Housing Authority of Carbon Co	N/A	196,384	406,778	20,822	4,266	43,645	26,527
Housing Authority of SL County	N/A	1,933,936	4,085,421	145,832	41,643	432,414	269,821
Housing Authority of SLC	N/A	2,035,308	4,305,127	145,454	41,913	477,858	268,541
Housing Authority Ogden City	N/A	504,616	1,051,643	48,732	10,932	112,357	68,853
Huntington City	N/A	128,920	267,036	13,669	2,800	28,651	17,414
Hurricane City	N/A	3,487,800	7,272,235	362,210	48,613	761,750	522,829
Hurricane Valley Fire Special Service District	N/A	48,772	101,024	5,171	1,059	10,839	6,588
Hyde Park City	N/A	286,779	597,291	27,969	6,214	63,841	39,090
Hyrum City	N/A	874,555	1,819,298	86,922	18,961	194,619	118,973
Impact Mitigation Special Service District	N/A	114,487	237,142	12,139	2,487	25,444	15,464
Intech Collegiate High School	N/A	493,724	919,177	138,411	—	93,019	53,862
Iron County	N/A	6,616,236	13,827,129	687,323	65,013	1,447,756	1,028,379
Iron School District	N/A	31,590,942	58,281,813	9,244,676	—	5,969,997	3,366,672

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		
33,191	1,549,126	214,202	259,399	127,481	249,103	850,185	1,105,085	(8,738)	—	1,096,347	
1,237	6,558	888	887	459	2,705	4,939	8,440	(463)	—	7,977	
12,507	3,601,750	657,446	664,078	149,415	577,294	2,048,233	2,748,220	(206,002)	—	2,542,218	
—	25,544	402	6,718	—	221	7,341	(46,020)	37,837	—	(8,183)	
2,621	62,334	5,338	10,299	5,132	2,018	22,787	61,539	129	—	61,668	
15,826	203,888	25,696	31,502	16,547	34,213	107,958	168,082	(5,223)	—	162,859	
84,871	451,616	45,105	61,931	32,090	3,890	143,016	332,385	28,158	—	360,543	
—	45,206	3,246	7,857	3,882	23,746	38,731	40,876	(9,940)	—	30,936	
—	24,242	1,741	4,214	2,082	494	8,531	21,921	(185)	—	21,736	
8,925	92,112	6,251	14,437	7,144	10,064	37,896	77,213	312	—	77,525	
73,117	1,076,479	134,270	168,398	88,121	2,863	393,652	914,551	21,101	—	935,652	
6,474	90,168	6,053	14,543	7,187	2,652	30,435	75,994	1,671	—	77,665	
39,327	290,609	48,481	45,800	10,794	—	105,075	206,621	11,858	—	218,479	
272	40,221	3,094	6,926	3,431	4,636	18,087	37,746	(1,717)	—	36,029	
15,050	110,562	8,044	16,511	8,207	1,786	34,548	94,876	3,584	—	98,460	
5,408	434,238	33,264	78,512	32,635	47,891	192,302	292,575	62,341	—	354,916	
316	46,383	5,931	7,747	4,048	2,621	20,347	39,443	(749)	—	38,694	
250	35,223	2,511	6,079	3,003	289	11,882	31,625	9	—	31,634	
2,560	32,901	2,179	5,274	2,605	—	10,058	27,435	823	—	28,258	
6,350	102,234	7,647	16,608	8,237	—	32,492	92,173	2,143	—	94,316	
—	—	—	—	—	—	—	—	—	—	—	
27,110	1,173,840	166,924	194,328	98,028	24,428	483,708	869,502	66,996	—	936,498	
155,190	1,603,935	269,781	265,075	61,504	—	596,360	1,106,380	58,428	—	1,164,808	
2,224	171,070	13,754	38,678	5,033	44,589	102,054	(158,463)	165,997	—	7,534	
4,070	27,756	1,701	4,117	2,034	—	7,852	21,418	1,406	—	22,824	
8,914	29,079	2,113	3,454	1,734	—	7,301	23,007	2,748	—	25,755	
10,769	1,495,864	167,340	261,122	120,548	86,734	635,744	1,079,224	142,605	—	1,221,829	
32,953	2,209,264	419,151	396,745	93,426	69,975	979,297	1,783,078	(15,245)	—	1,767,833	
1,263	49,665	4,748	8,316	4,161	15,980	33,205	52,904	(5,085)	—	47,819	
6,444	995,709	77,674	171,440	84,975	118,061	452,150	942,211	(35,740)	—	906,471	
401,908	76,730,451	13,902,438	14,220,486	3,140,516	6,843,776	38,107,216	59,241,194	(2,417,601)	—	56,823,593	
50,819	130,244	14,606	14,552	3,358	—	32,516	59,052	17,486	—	76,538	
1,577	482,956	66,686	80,520	42,420	53,536	243,162	420,889	(22,357)	—	398,532	
293	141,678	20,991	23,507	12,513	7,089	64,100	121,371	(2,433)	—	118,938	
220,184	1,570,692	103,574	235,976	114,235	—	453,785	1,221,256	73,476	—	1,294,732	
91,462	1,021,659	135,690	155,042	82,046	—	372,778	850,248	33,967	—	884,215	
4,350	717,995	55,772	123,695	61,299	86,079	326,845	677,821	(31,436)	—	646,385	
28,132	104,901	15,746	13,895	3,367	—	33,008	71,273	10,191	—	81,464	
—	54,130	3,887	9,408	4,648	1,287	19,230	48,946	(408)	—	48,538	
196,782	1,338,561	92,576	197,649	98,088	—	388,313	1,108,470	64,276	—	1,172,746	
8,234	14,636	1,331	1,157	282	5,968	8,738	6,099	149	—	6,248	
8,511	184,860	32,431	32,309	7,456	8,503	80,699	131,113	742	—	131,855	
5,509	333,377	24,013	56,951	28,156	12,775	121,895	299,851	(3,207)	—	296,644	
1,898	17,723	1,160	2,749	1,359	4,734	10,002	14,481	(697)	—	13,784	
558	60,627	946	15,798	—	—	16,744	(108,220)	105,036	—	(3,184)	
1,270	81,552	7,076	13,854	6,899	10,994	38,823	82,004	(4,041)	—	77,963	
7,741	118,685	8,374	19,252	9,528	221	37,375	103,251	2,151	—	105,402	
—	74,438	5,345	12,938	6,392	11,449	36,124	67,309	(3,824)	—	63,485	
16,823	760,701	66,110	128,330	63,928	55,424	313,792	763,777	(13,695)	—	750,082	
8,683	796,995	63,351	140,276	63,916	184,575	452,118	658,960	4,812	—	663,772	
7,879	200,021	14,820	33,318	16,503	56	64,697	181,085	2,103	—	183,188	
7	48,872	3,509	8,493	4,196	6,300	22,498	44,186	(2,174)	—	42,012	
123,518	1,456,710	168,238	224,672	116,854	—	509,764	1,192,134	44,144	—	1,236,278	
22,175	40,661	1,327	3,213	1,587	58	6,185	16,716	7,728	—	24,444	
586	109,731	8,359	18,931	9,374	7,297	43,961	102,444	(2,410)	—	100,034	
1,112	333,665	25,123	57,707	28,561	29,861	141,252	309,637	(9,024)	—	300,613	
—	43,395	3,116	7,542	3,726	3,198	17,582	39,239	(1,034)	—	38,205	
39,233	186,114	28,805	26,723	6,344	—	61,872	124,849	14,612	—	139,461	
34,871	2,576,019	381,789	424,803	222,256	225,867	1,254,715	2,133,474	(35,001)	—	2,098,473	
72,973	9,409,642	1,741,217	1,713,438	394,702	192,098	4,041,455	7,241,515	(35,764)	—	7,205,751	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Itineris High School	N/A	\$ 1,168,561	2,150,309	346,457	—	219,196	124,740
Ivins City	N/A	1,777,372	3,713,799	182,501	21,090	386,420	273,589
Jordan River Commission	N/A	61,458	128,359	5,730	1,330	13,693	8,415
Jordan School District	N/A	166,987,228	309,228,426	47,967,667	—	31,748,287	17,837,831
Jordan Uniserv	N/A	229,204	420,250	69,089	—	42,936	24,302
Jordan Valley Water Conservancy	N/A	5,917,139	12,439,798	476,444	120,663	1,405,172	759,417
Jordanville Special Service District	N/A	952,511	1,992,356	86,567	20,601	212,324	130,754
Juab County	N/A	2,035,758	4,259,654	201,819	22,623	459,521	302,282
Juab School District	N/A	8,181,180	15,082,530	2,404,598	—	1,535,682	876,365
Kamas City	N/A	299,992	622,551	34,056	3,513	65,044	45,831
Kane County	N/A	3,418,039	7,173,091	333,849	34,596	740,908	539,557
Kane County Water Conservancy District	N/A	291,633	611,473	25,411	6,301	65,055	40,192
Kane School District	N/A	6,002,870	11,116,671	1,723,509	—	1,143,240	640,193
Kaysville City	N/A	4,498,847	9,412,224	446,133	52,754	1,008,607	669,957
Kearns Improvement District	N/A	1,600,545	3,466,116	40,428	25,804	459,692	162,259
Laverkin City	N/A	963,600	2,255,917	(118,209)	80	403,320	35,978
Layton City	N/A	10,194,626	21,403,406	962,753	102,160	2,320,048	1,521,847
Lehi City	N/A	8,374,050	17,479,331	851,913	120,079	1,831,468	1,251,385
Lewiston City	N/A	141,823	298,805	11,285	3,057	31,684	19,701
Liberty Academy Charter	N/A	353,678	685,351	79,034	—	67,664	41,507
Lindon City	N/A	2,311,839	4,809,989	254,288	25,988	501,089	356,296
Logan City	N/A	16,450,494	34,425,438	1,596,248	271,521	3,794,670	2,499,537
Logan School District	N/A	20,833,141	38,648,888	5,922,912	—	4,002,301	2,210,990
Lone Peak PS District	N/A	1,213,559	3,194,499	(413,264)	330,070	404,171	320,629
Maeser Water Improvement District	N/A	216,282	447,994	22,932	4,698	48,067	29,214
Magna Mosquito Abatement	N/A	47,353	98,083	5,021	1,029	10,524	6,396
Manti City	N/A	350,822	731,295	33,757	7,599	78,120	47,887
Mapleton City	N/A	1,370,354	2,848,228	147,776	20,348	299,666	202,359
Marriott-Slaterville City	N/A	112,454	232,931	11,923	2,443	24,992	15,190
Mayfield Town	N/A	23,914	49,534	2,536	519	5,315	3,230
Mendon City	N/A	35,553	74,559	3,087	768	7,931	4,901
Metro Water District SLC/Sandy	N/A	2,672,781	5,554,758	269,602	57,972	594,612	363,027
Midvale City	N/A	2,307,289	4,838,717	200,332	49,844	514,730	318,087
Midvalley Improvement District	N/A	371,235	772,129	36,998	8,049	82,608	50,488
Midway City	N/A	454,108	955,640	36,964	9,795	101,415	62,962
Military Installation Devel	N/A	169,023	350,105	17,921	3,671	37,564	22,831
Millard Co Care & Rehab Inc	N/A	759,294	1,609,883	52,880	16,323	169,965	106,571
Millard County	N/A	5,497,567	11,441,978	607,279	56,582	1,188,829	856,676
Millard School District	N/A	15,601,608	28,956,847	4,414,281	—	3,045,452	1,630,105
Millville City	N/A	118,626	245,715	12,578	2,577	26,364	16,023
Minersville Town	N/A	91,666	190,713	9,092	1,987	20,400	12,473
Moab Valley Fire Protection	N/A	—	—	—	—	—	—
Monroe City	N/A	304,655	632,179	31,458	6,612	67,744	41,274
Monticello Academy	N/A	1,610,671	2,996,857	452,855	—	303,389	175,520
Morgan City Corporation	N/A	539,773	1,120,852	55,147	11,712	120,052	73,212
Morgan County	N/A	1,474,764	3,078,982	149,550	21,124	322,553	220,491
Morgan School District	N/A	7,674,393	14,169,596	2,239,670	—	1,441,370	824,399
Moroni City	N/A	57,639	122,111	4,086	1,240	12,899	8,079
Mount Pleasant City	N/A	684,504	1,430,652	69,399	8,694	149,149	104,416
Mountain Regional Water Special Service District	N/A	1,119,191	2,334,188	106,784	24,237	249,255	152,899
Mountainland Association of Governments	N/A	1,567,027	3,317,067	106,673	30,565	388,272	192,642
Mountainland Applied Technology College	N/A	1,706,599	3,129,080	514,421	—	319,688	180,947
Mt Olympus Improvement District	N/A	1,064,659	2,220,098	101,849	23,058	237,098	145,410
Murray City	N/A	15,199,225	31,930,393	1,363,474	199,066	3,519,472	2,162,506
Murray School District	N/A	23,142,771	42,737,302	6,740,809	—	4,377,732	2,469,328
Myton City	N/A	64,877	135,320	6,181	1,405	14,449	8,865
N Tooele Co Fire Protection SD	N/A	—	—	—	—	—	—
Ne Counseling Center	N/A	1,362,315	2,856,442	118,678	29,433	303,900	187,755
Nebo Credit Union	N/A	481,490	1,006,679	44,093	10,416	107,314	66,047
Nebo School District	N/A	109,258,625	201,765,463	31,849,847	—	20,559,111	11,719,514



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		
38,414	382,350	64,247	62,909	14,616	—	141,772	264,402	13,287	—	277,689	
84,954	766,053	95,902	113,817	60,017	44,074	313,810	608,859	17,864	—	626,723	
1,230	24,668	1,852	4,061	2,013	—	7,926	22,406	406	—	22,812	
373,775	49,959,893	9,311,205	9,113,707	2,093,917	1,153,020	21,671,849	39,352,601	(302,326)	—	39,050,275	
780	68,018	12,365	12,319	2,843	263	27,790	49,991	229	—	50,220	
12,518	2,297,770	165,419	411,140	182,082	55,496	814,137	1,695,183	254,257	—	1,949,440	
26,000	389,679	29,206	62,976	31,242	5,230	128,654	351,050	5,126	—	356,176	
10,002	794,428	105,783	134,240	66,277	38,680	344,980	591,830	15,220	—	607,050	
122,590	2,534,637	454,169	440,806	102,772	—	997,747	1,885,674	12,926	—	1,898,600	
23,283	137,671	15,624	19,147	10,084	—	44,855	97,181	10,598	—	107,779	
44,611	1,359,672	203,796	218,017	116,395	67,629	605,837	1,196,563	(4,872)	—	1,191,691	
10,288	121,836	9,190	19,299	9,583	—	38,072	109,345	3,017	—	112,362	
35,984	1,819,417	333,843	328,166	75,140	31,457	768,606	1,410,684	4,890	—	1,415,574	
162,673	1,893,991	231,051	295,256	147,455	—	673,762	1,365,124	159,333	—	1,524,457	
13,267	661,022	37,698	129,787	38,919	12,485	218,889	74,152	323,280	—	397,432	
11,101	450,479	22,781	107,341	7,219	24,512	161,853	(581,024)	586,402	—	5,378	
42,288	3,986,343	556,912	676,095	330,441	108,631	1,672,079	2,889,117	260,978	—	3,150,095	
238,579	3,441,511	398,803	540,373	280,444	—	1,219,620	2,894,573	84,113	—	2,978,686	
4,159	58,601	4,714	9,401	4,678	8,258	27,051	55,004	(1,110)	—	53,894	
5,599	114,770	24,828	19,505	4,970	135,139	184,442	122,599	(42,476)	—	80,123	
38,565	921,938	124,983	147,481	77,967	3,480	353,911	762,201	13,084	—	775,285	
91,262	6,656,990	966,179	1,104,961	709,792	35,350	2,816,282	5,010,164	106,172	(242,017)	4,874,319	
355,809	6,569,100	1,153,376	1,148,768	259,516	234,769	2,796,429	4,903,648	80,050	—	4,983,698	
11,293	1,066,163	107,898	119,636	111,078	22,282	360,894	399,249	(3,995)	(49,129)	346,125	
—	81,979	5,886	14,249	7,040	11,841	39,016	74,129	(4,136)	—	69,993	
209	18,158	1,289	3,120	1,541	4,889	10,839	16,230	(1,808)	—	14,422	
8,922	142,528	10,330	23,166	11,476	4,737	49,709	126,104	1,849	—	127,953	
5,316	527,689	61,649	88,423	45,678	28,818	224,568	459,802	(10,856)	—	448,946	
2,892	45,517	3,061	7,409	3,660	187	14,317	38,543	794	—	39,337	
—	9,064	651	1,575	778	528	3,532	8,196	(165)	—	8,031	
1,793	15,393	1,123	2,352	1,169	—	4,644	13,348	516	—	13,864	
14,513	1,030,124	75,878	176,299	87,222	33,991	373,390	939,562	(5,412)	—	934,150	
12,925	895,586	72,876	152,695	75,833	47,870	349,274	866,315	(11,921)	—	854,394	
19,528	160,673	10,641	24,494	12,122	—	47,257	131,266	6,382	—	137,648	
23,345	197,517	14,903	30,091	14,966	1,140	61,100	174,703	(2,482)	—	172,221	
4,848	68,914	4,600	11,135	5,501	—	21,236	57,931	1,666	—	59,597	
18,538	311,397	26,952	50,452	25,172	18,229	120,805	307,331	81	—	307,412	
19,132	2,121,219	310,449	349,661	185,984	153,300	999,394	1,804,986	(100,234)	—	1,704,752	
205,771	4,881,328	842,224	873,778	191,084	80,367	1,987,453	3,575,322	47,394	—	3,622,716	
4,960	49,924	3,228	7,815	3,861	—	14,904	40,658	1,548	—	42,206	
2,891	37,751	2,637	6,048	2,994	2,054	13,733	32,486	452	—	32,938	
—	—	—	—	—	—	—	—	—	—	—	
9,749	125,379	8,484	20,084	9,930	—	38,498	105,855	3,147	—	109,002	
59,870	538,779	93,698	87,153	20,667	27,641	229,159	405,121	6,350	—	411,471	
5,226	210,202	15,164	35,593	17,603	—	68,360	188,552	1,677	—	190,229	
2,945	567,113	70,398	95,169	49,399	77,246	292,212	510,576	(28,592)	—	481,984	
14,640	2,280,409	429,364	413,787	96,744	129,290	1,069,185	1,795,199	(48,614)	—	1,746,585	
1,671	23,889	2,029	3,828	1,909	7,053	14,819	23,207	(1,581)	—	21,626	
40,849	303,108	35,612	43,958	23,061	2,545	105,176	236,340	2,663	—	239,003	
28,040	454,431	33,163	73,918	36,624	—	143,705	403,840	9,492	—	413,332	
21,144	632,623	42,760	112,658	46,161	—	201,579	374,144	130,690	—	504,834	
144,614	645,249	92,068	91,722	21,167	—	204,957	372,218	48,496	—	420,714	
11,466	417,032	31,486	70,312	34,835	58,073	194,706	383,707	(13,647)	—	370,060	
253,842	6,134,886	703,426	1,026,015	482,946	1,990	2,214,377	4,232,969	631,422	—	4,864,391	
34,806	6,881,866	1,280,711	1,256,527	289,610	562,221	3,389,069	5,349,699	(172,222)	—	5,177,477	
8,540	33,259	1,924	4,285	2,123	3,758	12,090	23,425	1,089	—	24,514	
—	—	—	—	—	—	—	—	—	—	—	
5,298	526,386	42,939	90,151	44,768	64,389	242,247	510,836	(20,760)	—	490,076	
16,180	199,957	14,687	31,829	15,787	17,147	79,450	176,886	(2,025)	—	174,861	
1,593,635	33,872,260	6,099,953	5,901,882	1,375,169	—	13,377,004	25,513,738	550,874	—	26,064,612	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Nephi City	N/A	\$ 1,530,821	3,197,351	154,497	21,675	334,721	229,441
Nibley City Corporation	N/A	377,272	793,145	31,304	8,141	84,229	52,222
Noah Webster Academy Inc	N/A	920,653	1,721,684	252,350	—	173,748	101,272
North Davis Co Sewer District	N/A	1,866,030	3,914,917	156,094	38,000	443,942	237,855
North Davis Fire District	N/A	38,084	78,884	4,038	827	8,464	5,144
North Emery Water Users Special Service District	N/A	34,333	74,594	1,052	730	7,744	5,013
North Fork Special Service District	N/A	65,000	138,936	3,693	1,392	14,587	9,244
North Logan City	N/A	897,914	1,912,912	53,602	14,253	228,229	111,432
North Ogden City	N/A	1,983,582	4,150,068	200,868	22,351	430,784	307,920
North Park Police Agency	N/A	249,770	519,186	30,005	721	52,961	42,053
North Pointe Solid Waste	N/A	649,432	1,361,895	56,430	14,030	144,879	89,526
North Sanpete School District	N/A	9,685,607	17,874,031	2,829,692	—	1,834,018	1,030,799
North Summit School District	N/A	5,021,611	9,237,137	1,491,291	—	941,816	535,682
North View Fire District	N/A	30,829	63,857	3,269	670	6,851	4,164
NUAMES Charter School	N/A	1,981,639	3,663,766	574,597	—	372,373	213,412
Oakley City	N/A	197,415	475,247	(36,629)	—	93,757	—
Ogden City Corp	N/A	30,013,104	58,979,748	6,052,611	297,659	6,253,275	3,915,398
Ogden School District	N/A	47,875,312	88,593,226	13,823,145	—	8,999,333	5,164,462
Ogden Weber/NEA/UEA Uniserv	N/A	100,886	187,123	28,806	—	18,981	10,930
Ogden-Weber Technology College	N/A	4,188,583	7,906,090	1,067,947	—	900,228	407,874
Oquirrh Recreation and Parks District	N/A	561,294	1,165,627	57,282	12,178	124,841	76,140
Orangeville City	N/A	70,530	146,092	7,478	1,532	15,675	9,527
Orderville Town	N/A	51,723	107,357	5,319	1,122	11,503	7,010
Panguitch City Corporation	N/A	138,233	293,264	9,495	2,971	30,949	19,421
Park City	N/A	11,020,795	23,547,644	645,490	153,827	2,721,993	1,468,147
Park City Fire Service	N/A	1,070,515	8,169,513	(4,787,174)	5,932	1,708,762	974,845
Park City School District	N/A	29,352,692	54,307,768	8,464,155	—	5,592,530	3,122,510
Parowan City	N/A	905,038	1,882,622	95,160	14,677	198,653	131,659
Payson City	N/A	4,005,032	8,358,461	405,222	60,520	877,600	593,020
Perry City	N/A	519,181	1,083,751	54,629	5,661	112,560	80,673
Piute County	N/A	486,663	1,013,513	51,406	6,815	106,265	72,777
Piute School District	N/A	1,997,737	3,684,151	586,279	—	375,039	214,127
Plain City	N/A	175,274	366,496	16,019	3,791	39,066	24,047
Pleasant Grove City	N/A	3,597,138	7,500,557	377,946	45,674	783,165	546,970
Pleasant View City	N/A	967,320	2,011,962	106,924	10,826	209,617	149,100
Price City	N/A	2,744,032	5,712,477	291,731	38,201	598,965	410,519
Price River Water Improvement	N/A	984,681	2,049,740	96,864	21,342	219,170	134,100
Providence City	N/A	322,534	675,585	28,612	6,971	71,927	44,377
Provo City Corp	N/A	29,313,362	60,228,523	3,715,412	776,714	6,514,351	4,326,524
Provo Housing Authority	N/A	637,817	1,398,045	2,442	9,638	190,544	61,649
Provo River Water Users	N/A	591,086	1,231,746	57,160	12,805	131,607	80,641
Provo School District	N/A	51,966,367	96,607,364	14,616,175	—	10,022,618	5,519,039
Recreation & Habilitation Services	N/A	36,462	76,025	3,494	790	8,120	4,979
Redmond Town	N/A	61,127	126,616	6,481	1,328	13,585	8,257
Rich County	N/A	938,393	2,065,599	4,394	5,411	283,006	100,834
Rich School District	N/A	3,144,184	5,787,736	930,691	—	589,857	335,851
Richfield City	N/A	1,438,424	2,989,158	161,187	15,915	311,507	221,767
Richmond City	N/A	176,375	370,040	15,196	3,809	39,353	24,332
Riverdale City	N/A	2,668,590	5,561,322	288,755	26,126	584,669	412,289
Roosevelt City	N/A	1,578,060	3,291,549	164,823	20,216	343,710	239,753
Roosevelt City Housing	N/A	26,428	54,742	2,802	574	5,874	3,570
Roy City	N/A	4,678,077	9,789,159	471,703	46,839	1,040,654	713,765
Roy Water Conservancy District	N/A	280,639	581,298	29,755	6,096	62,370	37,907
S Utah Valley Electric Service District	N/A	530,528	1,110,147	47,883	11,472	118,275	72,875
S Utah Valley Solid Waste	N/A	774,580	1,608,151	79,349	16,808	172,267	105,029
Salem City	N/A	1,653,606	3,439,874	178,427	22,350	360,485	248,289
Salina City	N/A	381,508	793,725	41,057	5,188	83,189	57,239
Salt Lake Arts Academy	N/A	1,170,040	2,173,420	331,651	—	220,254	127,113
Salt Lake City Corp	N/A	167,719,555	327,626,263	35,200,151	4,467,096	33,755,990	21,966,666
Salt Lake City Public Library	N/A	3,126,568	6,538,435	285,179	67,628	696,897	429,045

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		
35,221	621,058	73,894	98,751	51,319	41,266	265,230	531,092	(2,789)	—	528,303	
26,368	170,960	12,247	24,990	12,424	—	49,661	144,130	8,865	—	152,995	
14,372	289,392	54,912	49,933	11,951	10,793	127,589	242,281	1,009	—	243,290	
12,576	732,373	50,455	129,809	57,158	45,413	282,835	517,110	42,091	—	559,201	
723	15,158	1,036	2,509	1,240	937	5,722	13,053	(142)	—	12,911	
518	14,005	1,523	2,302	1,161	44	5,030	16,179	46	—	16,225	
654	25,877	2,497	4,332	2,169	21,917	30,915	27,730	(6,702)	—	21,028	
25,138	379,052	30,797	65,694	25,837	184,556	306,884	177,837	39,149	—	216,986	
41,680	802,735	110,756	126,840	67,165	22,075	326,836	683,584	8,358	—	691,942	
135,309	231,044	18,480	15,489	8,630	—	42,599	76,775	49,110	—	125,885	
14,713	263,148	20,503	42,979	21,344	11,086	95,912	243,769	(342)	—	243,427	
52,153	2,916,970	532,941	526,363	120,843	2,232	1,182,379	2,218,351	16,518	—	2,234,869	
4,252	1,481,750	275,569	270,291	62,757	53,159	661,776	1,132,126	(19,496)	—	1,112,630	
151	11,836	839	2,031	1,003	139	4,012	10,566	16	—	10,582	
269,313	855,098	111,643	106,912	25,059	—	243,614	469,676	91,255	—	560,931	
1,220	94,977	1,476	24,658	—	—	26,134	(168,912)	157,986	—	(10,926)	
253,098	10,719,430	1,957,573	1,800,183	980,511	27,351	4,765,618	6,652,521	691,948	(468,261)	6,876,208	
324,009	14,487,804	2,709,495	2,584,011	606,659	770,979	6,671,144	11,444,052	(146,684)	—	11,297,368	
10,358	40,269	5,777	5,451	1,285	54	12,567	24,649	3,184	—	27,833	
1,051	1,309,153	208,307	258,003	47,736	251,866	765,912	938,234	(48,581)	—	889,653	
640	213,799	15,784	37,013	18,306	2,536	73,639	196,180	(872)	—	195,308	
1,185	27,919	1,920	4,647	2,296	—	8,863	24,173	389	—	24,562	
432	20,067	1,445	3,410	1,686	—	6,541	18,007	129	—	18,136	
8,415	61,756	4,937	9,187	4,585	15,597	34,306	56,177	(3,677)	—	52,500	
492,785	4,836,752	474,752	786,318	330,797	210,198	1,802,065	2,657,083	926,289	—	3,583,372	
20,836	2,710,375	926,487	490,005	497,615	15,423	1,929,530	760,195	2,634	(429,221)	333,608	
250,204	8,965,244	1,622,471	1,605,172	366,310	435,270	4,029,223	6,825,806	(67,248)	—	6,758,558	
16,933	361,922	37,960	58,677	30,058	26,903	153,598	308,576	(1,640)	—	306,936	
113,814	1,644,954	183,038	259,076	133,796	42,612	618,522	1,390,019	34,002	—	1,424,021	
43,746	242,640	29,053	33,129	17,569	798	80,549	175,298	17,945	—	193,243	
619	186,476	23,207	31,340	16,287	39,400	110,234	164,881	(14,436)	—	150,445	
6,556	595,722	111,088	107,655	25,114	52,120	295,977	461,928	(14,655)	—	447,273	
16,323	83,227	5,353	11,587	5,747	10,884	33,571	64,444	2,848	—	67,292	
80,337	1,456,146	184,377	230,781	120,976	31,630	567,764	1,219,353	10,033	—	1,229,386	
62,545	432,088	52,310	61,690	32,620	3,101	149,721	317,994	(4,021)	—	313,973	
3,170	1,050,855	131,054	176,638	91,833	140,260	539,785	926,335	(51,162)	—	875,173	
1,428	376,040	28,514	64,989	32,175	21,542	147,220	350,338	(7,371)	—	342,967	
1,138	124,413	10,049	21,335	10,590	16,416	58,390	120,066	(5,185)	—	114,881	
53,053	11,670,642	1,571,562	1,898,908	1,267,991	128,755	4,867,216	8,187,086	315,243	(407,331)	8,094,998	
2,691	264,522	15,709	53,467	14,683	15,985	99,844	5,104	155,778	—	160,882	
1,683	226,736	17,341	39,027	19,330	14,365	90,063	211,982	(3,932)	—	208,050	
118,820	15,660,477	2,892,749	2,877,007	648,226	734,207	7,152,189	12,404,798	(262,920)	—	12,141,878	
1,594	15,483	1,077	2,408	1,193	2,356	7,034	13,132	(129)	—	13,003	
782	23,952	1,664	4,027	1,990	407	8,088	20,951	177	—	21,128	
168,844	558,095	42,140	78,628	21,491	—	142,259	(47,225)	(110,247)	—	(157,472)	
44,383	970,091	173,179	169,292	39,359	—	381,830	713,891	14,604	—	728,495	
5,528	554,717	77,810	91,664	48,494	15,519	233,487	469,014	(4,035)	—	464,979	
7,676	75,170	5,598	11,674	5,799	3,888	26,959	66,424	1,548	—	67,972	
5,919	1,029,003	151,074	171,438	89,263	49,713	461,488	831,847	(25,111)	—	806,736	
51,264	654,943	80,622	101,295	53,067	10,611	245,595	536,713	11,434	—	548,147	
—	10,018	719	1,741	860	767	4,087	9,058	(248)	—	8,810	
64,013	1,865,271	261,844	304,477	154,744	151,601	872,666	1,426,392	53,877	—	1,480,269	
5,156	111,529	7,638	18,489	9,134	5,678	40,939	96,186	273	—	96,459	
20,044	222,666	16,343	35,082	17,406	3,001	71,832	196,096	6,290	—	202,386	
548	294,652	21,712	51,073	25,257	16,523	114,565	270,213	(5,475)	—	264,738	
89,668	720,792	80,192	106,273	55,379	—	241,844	553,343	32,035	—	585,378	
1,976	147,592	18,441	24,526	12,775	17,683	73,425	127,869	(6,500)	—	121,369	
35,420	382,787	67,506	63,263	14,957	—	145,726	289,870	10,287	—	300,157	
459,748	60,649,500	6,909,698	9,807,181	5,716,336	246	22,433,461	40,218,504	2,604,673	(2,075,914)	40,747,263	
55,608	1,249,178	95,634	206,700	102,532	9,463	414,329	1,150,556	11,142	—	1,161,698	

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Salt Lake Co Serv Area 3	N/A	\$ 117,422	243,220	12,450	2,551	26,096	15,861
Salt Lake Community College	N/A	20,901,809	39,168,699	5,611,017	—	4,190,161	2,170,127
Salt Lake County	N/A	119,343,299	250,135,970	11,034,037	1,873,966	26,907,173	17,101,868
Salt Lake School District	N/A	123,148,009	228,863,767	34,610,864	—	24,086,877	12,878,447
San Juan County	N/A	4,067,993	8,497,832	403,516	59,172	908,583	592,288
San Juan Mental Health	N/A	540,082	1,127,428	50,763	11,691	120,316	73,895
San Juan School District	N/A	17,553,591	32,482,409	5,058,839	—	3,340,889	1,870,031
Sandy City	N/A	16,043,408	38,932,623	(2,904,917)	1,770,356	4,941,049	3,073,852
Sandy Suburban Improvement District	N/A	748,289	1,552,847	77,191	16,241	166,396	101,387
Sanpete County	N/A	2,998,784	6,258,655	320,577	28,641	647,854	472,874
Santaquin City	N/A	1,534,259	3,196,854	165,501	17,003	332,580	237,348
Seven County Infrastructure	N/A	121,579	251,831	12,891	2,641	27,020	16,422
Sevier County	N/A	4,144,625	8,639,385	456,011	34,857	892,396	660,661
Sevier School District	N/A	18,654,028	34,393,451	5,473,551	—	3,529,202	1,982,939
Six-County Association of Governments	N/A	618,783	1,284,482	63,545	13,428	137,611	83,881
Slc Mosquito Abatement	N/A	304,572	641,162	24,636	6,569	68,027	42,252
Smithfield City Corp	N/A	1,133,502	2,371,654	109,625	17,641	248,877	167,555
Snow College	N/A	4,750,001	8,792,581	1,364,857	—	916,778	497,127
Snyder Basin Special Recreation District	N/A	501,519	1,096,466	10,279	10,629	113,350	73,969
Snyderville Basin Water Reclamation District	N/A	1,822,319	3,791,771	180,466	39,505	405,558	248,001
So Davis Metro Fire Agency	N/A	64,967	134,568	6,888	1,411	14,438	8,775
So Davis Recreation Center	N/A	317,500	663,843	29,056	6,868	70,765	43,555
So SI Valley Mosquito Abatement	N/A	134,562	284,421	10,028	2,897	30,092	18,792
So Utah Valley Animal SSD	N/A	58,393	121,709	5,628	1,265	13,002	7,969
So Utah Valley Power Systems	N/A	62,604	129,674	6,638	1,360	13,913	8,456
Soldier Hollow Charter School	N/A	689,742	1,283,191	194,048	—	129,915	75,146
Solid Waste Special Service District #1	N/A	134,636	286,873	8,325	2,888	30,184	19,050
Solitude Improvement District	N/A	40,295	83,465	4,272	875	8,955	5,443
South Davis Sewer District	N/A	1,621,008	3,506,224	43,640	25,941	467,970	162,078
South Davis Water District	N/A	240,639	498,444	25,514	5,227	53,480	32,504
South Ogden City	N/A	2,892,612	6,022,993	320,984	26,457	623,769	456,746
South Ogden Conservancy District	N/A	788,273	1,648,450	71,918	17,051	175,702	108,168
South Sanpete School District	N/A	13,592,210	25,045,534	4,004,402	—	2,550,900	1,454,626
South Summit School District	N/A	6,631,985	12,219,157	1,954,744	—	1,244,603	709,619
South Valley Sewer District	N/A	1,872,646	3,923,495	165,356	40,472	417,645	257,766
South Valley Water Reclamation	N/A	1,812,353	3,785,330	168,845	39,223	403,810	248,188
South Weber City	N/A	326,214	685,215	27,507	7,042	72,811	45,091
Southeastern Utah AOG	N/A	448,835	932,590	45,431	9,736	99,845	60,940
Southeastern Utah Health	N/A	635,728	1,326,698	60,046	13,764	141,610	86,939
Southern Utah University	N/A	12,283,947	22,690,579	3,578,165	—	2,318,991	1,307,293
Southwest Applied Technology	N/A	1,617,383	2,997,202	463,822	—	304,188	174,933
Southwest Educ Development Center	N/A	415,372	775,100	115,105	—	78,327	45,509
Space Dynamics Lab / USU	N/A	2,798,578	5,153,694	826,787	—	525,102	299,167
Spanish Fork City	N/A	7,581,685	15,823,769	768,930	112,183	1,660,038	1,126,820
Spring City	N/A	132,529	285,221	4,992	2,299	36,157	14,554
Springville City	N/A	6,709,323	14,016,706	653,174	111,361	1,494,405	962,811
St George Housing Authority	N/A	94,449	196,691	9,228	2,047	21,025	12,872
State of Utah	N/A	1,057,961,875	1,947,868,042	314,809,694	2,024,056	198,805,428	108,023,567
Stockton Town	N/A	40,800	84,854	4,989	—	8,587	7,078
Success Academy	N/A	837,408	1,552,041	239,979	—	157,504	90,597
Summit Academy High School	N/A	987,355	1,856,271	263,268	—	186,714	109,679
Summit Academy Inc	N/A	3,685,172	6,924,145	985,707	—	696,726	408,912
Summit County	N/A	13,782,675	28,751,984	1,454,335	159,593	2,992,653	2,123,702
Sunset City	N/A	652,048	1,356,683	71,949	7,083	141,194	100,923
SW Behavioral Health Center	N/A	3,973,722	8,355,554	328,586	85,743	887,218	550,210
Sw Mosquito Abatement/Control	N/A	80,910	173,013	4,546	1,733	18,159	11,514
SW UT Public Health Department	N/A	1,380,127	2,891,886	121,645	29,826	307,811	190,004
Syracuse City Corp	N/A	2,365,314	4,944,148	242,741	26,861	513,640	366,360
Taylor West Weber Water Improvement District	N/A	90,472	191,042	6,881	1,948	20,227	12,614
Taylorville-Bennion Improvement	N/A	1,345,705	2,799,621	133,596	29,175	299,473	183,090

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 Contributions	
1,171	45,679	3,196	7,736	3,822	—	14,754	40,245	356	—	40,601
1,395,387	7,755,675	1,139,337	1,202,386	254,946	—	2,596,669	5,024,054	515,791	—	5,539,845
278,263	46,161,270	5,115,173	7,907,729	3,888,333	3,212,889	20,124,124	38,718,734	205,933	—	38,924,667
177,631	37,142,955	6,676,302	6,911,284	1,510,329	2,195,639	17,293,554	28,502,146	(602,694)	—	27,899,452
55,711	1,615,754	183,725	267,034	133,443	101,121	685,323	1,303,253	41,832	—	1,345,085
46,020	251,922	16,177	35,682	17,686	—	69,545	196,187	15,028	—	211,215
77,653	5,288,573	972,936	958,946	219,417	164,745	2,316,044	4,097,244	(32,598)	—	4,064,646
191,432	9,976,689	1,098,188	1,443,286	985,649	454,082	3,981,205	4,601,512	591,939	(374,934)	4,818,517
3,102	287,126	20,854	49,332	24,390	29,954	124,530	260,129	(7,902)	—	252,227
47,569	1,196,938	177,473	190,481	101,882	33,382	503,218	1,001,486	1,432	—	1,002,918
81,438	668,369	84,278	97,884	51,824	—	233,986	511,257	34,015	—	545,272
53,077	99,160	3,309	8,010	3,957	—	15,276	41,670	19,386	—	61,056
15,595	1,603,509	255,039	262,137	141,165	332,430	990,771	1,359,223	(114,757)	—	1,244,466
46,124	5,558,265	1,022,484	1,012,820	232,381	188,343	2,456,028	4,238,479	(40,883)	—	4,197,596
443	235,363	17,310	40,798	20,174	56,877	135,159	215,597	(19,494)	—	196,103
9,885	126,733	10,032	20,184	10,040	9,092	49,348	117,440	570	—	118,010
10,013	444,086	51,519	73,506	37,887	74,492	237,404	402,356	(27,170)	—	375,186
154,692	1,568,597	257,039	263,090	59,489	—	579,618	1,077,084	64,834	—	1,141,918
260,821	458,769	23,412	33,707	17,035	—	74,154	245,010	76,278	—	321,288
25,715	718,779	52,497	120,254	59,524	16,854	249,129	646,310	4,053	—	650,363
696	25,320	1,768	4,280	2,115	—	8,163	22,267	221	—	22,488
929	122,117	9,689	20,989	10,410	8,703	49,791	116,675	(2,617)	—	114,058
1,810	53,591	4,627	8,931	4,451	411	18,420	53,346	296	—	53,642
9,542	31,778	1,717	3,855	1,910	—	7,482	20,974	2,858	—	23,832
61	23,790	1,704	4,124	2,038	137	8,003	21,457	(17)	—	21,440
2,831	207,892	40,099	37,320	8,848	111,705	197,972	173,287	(39,021)	—	134,266
3,476	55,598	5,018	8,963	4,481	3,088	21,550	56,287	42	—	56,329
—	15,273	1,097	2,655	1,312	1,172	6,236	13,811	(378)	—	13,433
43,945	699,934	36,662	131,977	38,978	—	207,617	52,688	362,822	—	415,510
2,472	93,683	6,549	15,853	7,832	393	30,627	82,476	828	—	83,304
70,775	1,177,747	171,795	183,315	98,227	29,754	483,091	945,244	10,314	—	955,558
2,389	303,310	24,107	52,113	25,850	104,113	206,183	290,047	(32,709)	—	257,338
18,403	4,023,929	752,596	732,185	170,546	166,935	1,822,262	3,117,357	(61,114)	—	3,056,243
38,535	1,992,757	367,024	357,236	83,195	63,445	870,900	1,519,563	(15,150)	—	1,504,413
27,764	743,647	58,520	123,888	61,502	585	244,495	698,413	2,930	—	701,343
33,613	724,834	54,630	119,761	59,375	—	233,766	660,904	11,062	—	671,966
23,680	148,624	10,489	21,601	10,735	22,781	65,606	123,876	1,852	—	125,728
453	170,974	12,707	29,603	14,645	69,657	126,612	157,511	(43,872)	—	113,639
1,460	243,773	18,977	41,997	20,814	112,776	194,564	230,433	(38,503)	—	191,930
99,533	3,725,817	681,698	665,795	157,510	30,558	1,535,561	2,841,424	27,385	—	2,868,809
196,490	675,611	92,196	87,353	20,561	—	200,110	391,840	66,871	—	458,711
48,065	171,901	24,514	22,506	5,365	—	52,385	107,246	16,879	—	124,125
203,605	1,027,874	154,477	150,713	35,066	—	340,256	638,062	70,825	—	708,887
220,950	3,119,991	352,414	489,950	253,536	—	1,095,900	2,626,812	79,089	—	2,705,901
55,141	108,151	3,406	10,304	3,481	—	17,191	16,305	(117,508)	—	(101,203)
12,534	2,581,111	275,728	440,556	220,509	182,665	1,119,458	2,257,369	(46,605)	—	2,210,764
574	36,518	2,749	6,235	3,087	1,586	13,657	33,711	(299)	—	33,412
13,259,874	322,112,925	56,393,171	57,167,475	14,631,061	4,273,637	132,465,344	241,546,408	1,825,741	(1,469,774)	241,902,375
13,249	28,914	3,311	2,506	1,422	4,583	11,822	12,320	2,685	—	15,005
46,896	294,997	47,770	45,231	10,650	—	103,651	203,152	14,718	—	217,870
35,072	331,465	60,426	53,684	12,973	—	127,083	271,977	10,870	—	282,847
561,716	1,667,354	224,887	200,312	48,353	—	473,552	1,010,015	192,729	—	1,202,744
688,575	5,964,523	745,849	881,179	465,251	7,506	2,099,785	4,652,210	257,494	—	4,909,704
7,880	257,080	35,855	41,545	22,016	23,312	122,728	214,439	(38,253)	—	176,186
64,910	1,588,081	129,252	263,234	130,875	17,882	541,243	1,520,026	8,594	—	1,528,620
6,901	38,307	3,120	5,393	2,700	—	11,213	34,605	2,051	—	36,656
4,951	532,592	43,179	91,307	45,330	88,496	268,312	515,103	(29,313)	—	485,790
55,946	962,807	130,840	151,236	80,015	29,571	391,662	809,767	10,343	—	820,110
5,065	39,854	3,079	6,003	2,990	—	12,072	35,630	1,502	—	37,132
7,458	519,196	38,692	88,797	43,951	—	171,440	476,711	2,253	—	478,964

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Timber Lakes Water Special Service District	N/A	\$ 135,649	286,792	10,053	2,920	30,338	18,951
Timpanogos Special Service District	N/A	1,534,123	3,264,289	91,552	29,688	382,567	189,075
Tintic School District	N/A	1,740,276	3,193,976	522,218	—	326,117	184,860
Tooele Applied Technology College	N/A	1,039,513	1,917,912	304,406	—	195,183	111,516
Tooele City	N/A	4,345,189	9,095,933	427,291	53,623	963,486	653,040
Tooele County	N/A	8,489,215	17,769,063	831,037	113,216	1,871,825	1,273,445
Tooele County Housing	N/A	167,812	358,380	9,769	3,596	37,649	23,832
Tooele School District	N/A	46,770,674	86,369,733	13,629,725	—	8,820,983	5,005,249
Tooele Valley Mosquito Abatement	N/A	12,948	26,821	1,373	281	2,878	1,749
Torrey Town	N/A	10,319	23,289	(331)	215	2,357	1,600
Town of Alta	N/A	311,689	648,316	31,036	6,758	69,359	42,393
Town of Apple Valley	N/A	42,812	92,077	2,010	914	9,626	6,150
Town of Brian Head	N/A	678,680	1,411,586	75,663	6,992	146,732	105,652
Town of Daniel	N/A	10,838	22,449	1,149	235	2,409	1,464
Town of Garden City	N/A	126,574	270,236	7,423	2,712	28,395	17,967
Town of Goshen	N/A	14,299	31,458	147	302	3,239	2,130
Town of Levan	N/A	90,048	186,520	9,547	1,956	20,012	12,163
Town of Manila	N/A	90,118	216,281	(15,922)	151	41,001	1,189
Town of Mantua	N/A	60,681	125,702	6,624	4,548	13,128	8,850
Town of Paragonah	N/A	42,665	102,710	(7,916)	—	20,263	—
Town of Randolph	N/A	35,803	74,160	3,796	778	7,957	4,836
Town of Springdale	N/A	764,694	1,592,958	82,133	9,101	166,095	117,176
Trans-Jordan Cities	N/A	1,102,192	2,304,693	100,730	23,842	245,665	151,221
Tremonton City	N/A	1,242,702	2,590,538	129,041	17,736	271,622	185,510
Tridell-Lapoint Water	N/A	29,796	69,036	(2,287)	614	6,862	4,815
Tuacahn High School	N/A	1,235,194	2,286,924	355,744	—	232,231	133,374
Uintah Animal Control/Shelter	N/A	186,064	387,438	18,213	4,032	41,418	25,353
Uintah Basin Applied Technology Center	N/A	2,968,127	5,520,744	835,886	—	559,013	323,248
Uintah Basin Association of Governments	N/A	657,539	1,393,379	46,356	14,139	147,163	92,208
Uintah Basin Asst Council	N/A	43,504	93,783	1,881	928	9,789	6,273
Uintah Co Care Center Special Service District	N/A	1,628,844	3,427,016	133,169	35,137	363,741	225,754
Uintah County	N/A	9,072,948	19,020,225	867,392	123,114	1,989,119	1,371,404
Uintah Fire Suppression Special Service District	N/A	22,165	45,912	2,350	481	4,926	2,994
Uintah Highlands Improv District	N/A	39,163	81,546	3,836	849	8,718	5,336
Uintah Mosquito Abatement District	N/A	119,349	247,212	12,654	2,592	26,524	16,121
Uintah Recreation District	N/A	745,841	1,563,052	65,565	16,117	166,353	102,706
Uintah School District	N/A	25,693,763	47,887,735	7,129,773	—	4,983,737	2,728,642
Uintah Transportation Special Service District	N/A	131,421	282,120	6,565	2,809	29,533	18,821
Uintah Water Conservancy District	N/A	350,792	728,965	35,442	7,609	78,038	47,637
Unified Fire Authority	N/A	6,339,894	46,393,974	(26,712,788)	36,712	9,634,757	5,504,637
Unified Police Department	N/A	25,075,261	52,059,672	2,959,096	6,937,524	4,868,316	4,691,065
University of Utah	N/A	121,062,323	228,227,800	31,416,558	—	24,701,590	12,446,652
University of Utah Hospital	N/A	46,952,337	89,352,570	11,331,618	—	10,517,985	4,424,404
Upper Country Water District	N/A	73,185	151,591	7,760	1,590	16,265	9,886
UT Municipal Power Agency	N/A	986,179	2,051,607	97,941	21,380	219,463	134,170
UT Public Employees Association	N/A	140,547	295,125	11,923	3,035	31,367	19,417
UT School Board Risk Management	N/A	856,840	1,578,782	252,482	—	160,804	91,691
Utah Association of Counties	N/A	456,304	945,161	48,380	9,912	101,410	61,635
Utah Co Academy of Sciences	N/A	1,081,170	2,001,881	311,289	—	203,277	116,757
Utah Co Housing Authority	N/A	707,193	1,526,955	24,451	12,983	184,273	84,458
Utah Communications Authority	N/A	1,783,452	3,277,832	531,724	—	334,384	189,948
Utah Counties Indemnity Pool	N/A	253,476	527,367	25,139	5,495	56,409	34,491
Utah County	N/A	34,824,629	72,836,156	3,365,513	4,584,828	7,562,286	5,396,818
Utah Dairy Council	N/A	525,581	967,958	155,214	—	98,618	56,193
Utah Education Association	N/A	1,497,697	2,761,111	440,192	—	281,131	160,434
Utah Housing Corporation	N/A	6,175,489	12,069,340	1,227,537	—	1,503,838	554,790
Utah Lake Commission	N/A	5,838	13,268	(255)	121	1,336	915
Utah League Cities/Towns	N/A	677,973	1,635,712	(128,436)	—	321,907	528
Utah Local Governments Trust	N/A	912,953	1,910,067	82,636	19,743	203,521	125,373
Utah Retirement Systems	N/A	26,528,828	48,958,253	7,759,424	—	4,981,638	2,847,261

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		
4,933	57,142	4,677	9,004	4,487	—	18,168	53,871	1,323	—	—	55,194
46,223	647,553	44,119	110,919	45,113	6,186	206,337	374,953	169,457	—	—	544,410
66,141	577,118	94,375	93,574	21,635	—	209,584	383,444	24,088	—	—	407,532
67,515	374,214	57,942	56,030	13,082	—	127,054	241,452	25,424	—	—	266,876
8,492	1,678,641	223,635	282,900	144,099	129,755	780,389	1,408,403	(19,762)	—	—	1,388,641
129,240	3,387,726	423,708	550,895	282,973	154,600	1,412,176	2,864,117	45,432	—	—	2,909,549
2,841	67,918	6,393	11,181	5,595	252	23,421	71,194	392	—	—	71,586
76,422	13,902,654	2,601,128	2,532,067	587,190	1,435,142	7,155,527	10,872,941	(456,631)	—	—	10,416,310
—	4,908	352	853	421	7,503	9,129	4,438	(2,826)	—	—	1,612
1,396	5,568	605	702	360	1,511	3,178	5,965	(206)	—	—	5,759
11,837	130,347	8,940	20,566	10,178	—	39,684	110,256	3,572	—	—	113,828
20,187	36,877	1,741	2,860	1,435	—	6,036	18,985	6,685	—	—	25,670
168,268	427,644	38,162	43,156	22,948	7,320	111,586	221,646	(324,579)	—	—	(102,933)
5,024	9,132	295	714	353	—	1,362	3,715	1,709	—	—	5,424
1,914	50,988	4,809	8,432	4,219	15,036	32,496	53,604	(5,432)	—	—	48,172
274	5,945	701	963	488	5,925	8,077	7,234	(1,858)	—	—	5,376
3,802	37,933	2,451	5,932	2,931	—	11,314	30,863	1,418	—	—	32,281
4,581	46,922	1,125	10,843	262	—	12,230	(66,003)	27,510	—	—	(38,493)
4,020	30,546	1,360	3,910	2,172	4,099	11,541	20,165	(602)	—	—	19,563
250	20,513	319	5,329	—	—	5,648	(36,505)	32,320	—	—	(4,185)
526	14,097	974	2,359	1,165	141	4,639	12,271	104	—	—	12,375
105,812	398,184	40,426	48,914	25,760	4,431	119,531	255,797	41,002	—	—	296,799
108,975	529,703	33,668	72,864	36,142	—	142,674	405,263	32,911	—	—	438,174
10,508	485,376	58,849	80,131	41,586	13,770	194,336	425,031	(718)	—	—	424,313
1,748	14,039	2,050	2,047	1,060	380	5,537	19,494	261	—	—	19,755
50,709	416,314	70,093	66,684	15,671	—	152,448	296,737	19,051	—	—	315,788
270	71,073	5,408	12,282	6,081	19,609	43,380	66,353	(6,043)	—	—	60,310
11,253	893,514	172,381	160,581	38,058	193,428	564,448	744,294	(74,613)	—	—	669,681
4,570	258,080	23,212	43,682	21,790	36,706	125,390	265,184	(10,936)	—	—	254,248
1,697	18,687	1,806	2,909	1,462	513	6,690	19,566	194	—	—	19,760
32,225	656,857	53,327	107,924	53,672	59,960	274,883	625,656	(7,872)	—	—	617,784
2,891,723	6,375,360	459,130	586,386	304,653	72,549	1,422,718	3,188,552	(7,150,300)	—	—	(3,961,748)
—	8,401	603	1,460	721	3,456	6,240	7,597	(1,108)	—	—	6,489
893	15,796	1,138	2,585	1,280	—	5,003	13,963	280	—	—	14,243
2,198	47,435	3,248	7,863	3,885	2,829	17,825	40,906	(424)	—	—	40,482
3,053	288,229	23,374	49,347	24,500	20,045	117,266	278,666	(6,585)	—	—	272,081
70,394	7,782,773	1,437,627	1,430,702	320,716	773,673	3,962,718	6,227,786	(222,711)	—	—	6,005,075
54,459	105,622	5,254	8,772	4,399	25,184	43,609	57,603	6,328	—	—	63,931
12,358	145,642	9,945	23,138	11,446	—	44,529	123,217	4,454	—	—	127,671
80,049	15,256,155	5,196,770	2,763,315	2,795,517	30,315	10,785,917	4,311,950	18,905	(2,401,513)	—	1,929,342
166,308	16,663,213	122,211	1,479,304	1,206,985	273,908	3,082,408	7,469,100	(41,305)	—	—	7,427,795
728,389	37,876,631	6,611,897	7,089,630	1,497,162	6,063,287	21,261,976	29,739,670	(1,652,654)	—	—	28,087,016
—	14,942,389	2,251,178	3,013,237	517,565	1,786,548	7,568,528	10,467,017	(433,081)	—	—	10,033,936
378	28,119	1,992	4,821	2,382	1,124	10,319	25,083	(192)	—	—	24,891
1,280	376,293	28,346	65,073	32,208	19,198	144,825	349,288	(5,759)	—	—	343,529
589	54,408	4,503	9,306	4,624	16,207	34,640	53,249	(5,657)	—	—	47,592
124,002	376,497	47,433	46,155	10,750	40,814	145,152	196,436	22,204	—	—	218,640
56,374	229,331	12,419	30,062	14,852	48,841	106,174	156,394	6,965	—	—	163,359
44,211	364,245	61,372	58,371	13,719	—	133,462	259,892	15,187	—	—	275,079
4,786	286,500	21,817	53,029	19,978	28,408	123,232	152,661	74,983	—	—	227,644
317,291	841,623	97,436	95,957	22,245	—	215,638	398,645	121,921	—	—	520,566
2,813	99,208	7,294	16,726	8,279	10,372	42,671	89,836	(2,129)	—	—	87,707
519,995	18,063,927	645,275	2,249,221	1,342,258	—	4,236,754	10,535,423	828,959	—	—	11,364,382
13,624	168,435	29,023	28,305	6,587	10,260	74,175	119,928	20	—	—	119,948
2,541	444,106	83,144	80,696	18,815	45,610	228,265	345,218	(14,766)	—	—	330,452
219,500	2,278,128	291,916	430,812	65,197	—	787,925	1,510,121	176,658	—	—	1,686,779
213	2,585	358	398	205	22,668	23,629	3,492	(8,253)	—	—	(4,761)
5,234	327,669	5,742	84,680	74	—	90,496	(574,197)	561,337	—	—	(12,860)
17,709	366,346	28,069	60,366	29,950	42,072	160,457	337,045	(11,465)	—	—	325,580
887,312	8,716,211	1,480,614	1,430,067	334,056	128,306	3,373,043	6,177,062	216,140	—	—	6,393,202

**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, 2016

Participating Employer	Employer Allocation Percentage	Net Pension Liability/(Asset) (7.20% Discount)	Net Pension Liability/(Asset) 1.00% Decrease (6.20%)	Net Pension Liability/(Asset) 1.00% Increase (8.20%)	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions
Utah Safety Council	N/A	\$ 432,948	808,664	119,402	—	81,670	47,518
Utah School Boards Association	N/A	612,087	1,130,645	178,241	—	114,980	65,808
Utah School Employees Association	N/A	367,507	675,492	109,536	—	68,907	39,147
Utah State Fair Corp	N/A	524,700	978,017	146,219	—	98,901	57,368
Utah State University	N/A	46,450,320	86,312,919	13,089,042	—	9,008,440	4,887,005
Utah Valley Dispatch Special Service District	N/A	1,033,387	2,171,330	86,622	22,305	230,674	142,915
Utah Valley University	N/A	26,374,329	49,675,627	6,860,683	—	5,427,809	2,691,202
Utah Zoological Society	N/A	2,975,972	6,279,037	230,119	64,116	665,153	414,376
UTOPIA	N/A	1,464,145	3,114,170	94,649	31,430	328,067	206,563
Valley Emergency Communications Center	N/A	2,725,019	5,760,816	202,330	58,657	609,433	380,649
Vernal City	N/A	3,194,351	6,723,828	282,871	32,691	748,533	460,620
Vineyard Town	N/A	278,376	592,026	18,044	5,976	62,372	39,266
Wasatch County	N/A	7,941,409	16,599,447	798,097	106,609	1,733,631	1,201,612
Wasatch County Fire District	N/A	49,022	101,540	5,198	1,065	10,895	6,622
Wasatch Front Regional Council	N/A	1,186,281	2,485,823	104,471	25,636	264,580	163,330
Wasatch Front Waste/Recycling	N/A	1,936,009	4,093,681	143,100	41,670	433,004	270,529
Wasatch Integrated Waste Management	N/A	2,195,271	4,593,970	197,918	47,470	489,418	301,583
Wasatch Mental Health Special Service District	N/A	8,616,016	18,007,132	794,143	186,416	1,920,105	1,181,137
Wasatch School District	N/A	26,147,362	48,273,928	7,633,146	—	4,910,759	2,808,456
Wasatch Uniserv	N/A	57,082	104,661	17,206	—	10,693	6,052
Washington City	N/A	3,611,403	7,534,867	359,553	61,700	795,231	522,204
Washington Co Solid Waste	N/A	385,488	804,606	36,311	8,345	85,873	52,732
Washington Co Watwe Conservancy District	N/A	1,245,315	2,608,726	109,182	26,389	284,031	166,896
Washington County	N/A	15,140,518	31,552,210	1,646,422	151,679	3,273,212	2,370,549
Washington School District	N/A	102,265,826	188,863,914	29,778,820	—	19,343,260	10,914,134
Waste Management Service District #5	N/A	94,210	195,140	9,989	2,046	20,937	12,725
Wayne County	N/A	598,241	1,251,114	59,045	8,602	130,938	89,598
Wayne School District	N/A	2,409,043	4,443,610	706,279	—	452,291	258,315
Weber Area Dispatch 911	N/A	1,904,227	3,994,170	164,789	41,134	424,835	262,599
Weber Basin Water Conservancy	N/A	3,450,820	7,188,165	335,856	74,772	768,241	470,478
Weber Co Mosquito Abatement	N/A	378,618	784,247	40,144	8,224	84,145	51,142
Weber County Corp	N/A	28,410,072	59,464,064	2,883,626	281,713	6,210,497	4,429,287
Weber County School District	N/A	120,352,188	221,661,336	35,533,065	—	22,590,860	12,864,143
Weber Fire District	N/A	519,569	4,502,295	(2,766,681)	777	967,941	543,459
Weber Human Services	N/A	6,732,021	14,151,025	559,950	145,281	1,502,921	931,653
Weber River Water Users	N/A	81,145	195,344	(15,056)	—	38,538	—
Weber State University	N/A	18,615,765	34,958,806	4,921,529	—	3,820,742	1,891,899
Wellington City	N/A	135,533	286,183	12,013	1,288	29,395	21,715
Wellsville City Corp	N/A	212,974	442,408	21,637	4,620	47,373	28,904
West Bountiful City	N/A	843,516	1,766,556	84,946	8,702	182,806	132,505
West Kane County Special Service District #1	N/A	116,080	242,640	10,671	2,511	25,870	15,917
West Point City	N/A	499,357	1,050,511	40,911	10,773	111,509	69,198
West Valley City	N/A	21,336,242	51,682,476	(3,735,127)	3,055,682	6,371,319	4,322,664
White City Water Improvement District	N/A	283,085	589,608	27,601	6,134	63,020	38,588
Willard City Corp	N/A	283,519	589,636	31,271	3,285	61,498	43,501
Woodland Peaks Uniserv	N/A	143,605	263,302	43,287	—	26,901	15,226
Woods Cross City	N/A	1,169,393	2,466,807	95,577	177,251	271,212	174,815
Workers Compensation Fund	N/A	31,424,198	58,705,598	8,576,929	—	6,269,244	3,256,200
<b>Grand Total</b>	<b>N/A</b>	<b>\$ 4,652,236,567</b>	<b>8,913,978,145</b>	<b>1,098,710,543</b>	<b>40,528,662</b>	<b>938,198,099</b>	<b>538,221,759</b>
<b>No Proportionate Share for 2016</b>							
Canyonlands Health Care	N/A	\$ —	—	—	—	—	—
Leeds Area Special Service District	N/A	—	—	—	—	—	—
Summit Mosquito Abatement District	N/A	—	—	—	—	—	—
Sunnyside City	N/A	—	—	—	—	—	—
Valley Mental Health	N/A	—	—	—	—	—	—
<b>Grand Total</b>	<b>N/A</b>	<b>\$ 4,652,236,567</b>	<b>8,913,978,145</b>	<b>1,098,710,543</b>	<b>40,528,662</b>	<b>938,198,099</b>	<b>538,221,759</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		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		
65,825	195,013	25,671	23,468	5,605	—	54,744	112,730	22,795	—	—	135,525
79,259	260,047	34,326	33,009	7,724	20,229	95,288	143,819	16,460	—	—	160,279
249	108,303	20,085	19,774	4,584	76,711	121,154	82,202	(28,240)	—	—	53,962
29,268	185,537	30,795	28,415	6,760	4,638	70,608	134,126	6,876	—	—	141,002
461,058	14,356,503	2,551,414	2,585,618	581,265	594,377	6,312,674	10,885,010	48,444	—	—	10,933,454
4,623	400,517	33,346	68,437	34,016	54,485	190,284	393,294	(18,302)	—	—	374,992
810,922	8,929,933	1,412,083	1,557,121	316,135	922,591	4,207,930	6,338,551	(4,525)	—	—	6,334,026
61,604	1,205,249	100,431	197,387	98,279	—	396,097	1,165,577	15,215	—	—	1,180,792
56,954	623,014	53,637	97,401	48,661	63,158	262,857	605,101	(9,713)	—	—	595,388
18,373	1,067,112	93,870	180,872	90,132	181,743	546,617	1,081,579	(53,546)	—	—	1,028,033
12,113	1,253,957	165,382	217,039	100,522	112,366	595,309	800,728	38,344	—	—	839,072
82,866	190,480	10,187	18,518	9,251	—	37,956	114,964	26,617	—	—	141,581
183,541	3,225,393	399,466	511,217	266,970	—	1,177,653	2,757,426	63,844	—	—	2,821,270
3,545	22,127	1,334	3,230	1,596	498	6,658	16,802	871	—	—	17,673
39,477	493,023	37,134	78,485	38,965	—	154,584	442,903	12,248	—	—	455,151
12,442	757,645	66,838	128,512	64,046	42,542	301,938	769,518	(13,457)	—	—	756,061
7,169	845,640	67,675	145,168	72,029	84,520	369,392	811,792	(27,076)	—	—	784,716
81,218	3,368,876	261,660	569,485	282,415	88,646	1,202,206	3,156,549	(2,266)	—	—	3,154,283
433,436	8,152,651	1,462,388	1,409,769	329,563	85,205	3,286,925	6,112,478	131,951	—	—	6,244,429
151	16,896	3,079	3,068	708	654	7,509	12,450	(144)	—	—	12,306
13,146	1,392,281	147,454	235,084	119,895	84,114	586,547	1,267,647	(25,799)	—	—	1,241,848
2,967	149,917	11,529	25,467	12,623	7,862	57,481	139,897	(1,490)	—	—	138,407
624,240	1,101,556	36,846	83,820	39,936	—	160,602	421,512	(1,580,959)	—	—	(1,159,447)
65,345	5,860,785	871,456	962,617	513,110	33,859	2,381,042	5,013,022	13,621	—	—	5,026,643
1,054,588	31,311,982	5,662,146	5,552,079	1,280,091	—	12,494,316	23,658,888	389,761	—	—	24,048,649
381	36,089	2,564	6,207	3,066	55	11,892	32,289	129	—	—	32,418
8,301	237,439	28,813	38,640	20,060	40,975	128,488	209,904	(10,325)	—	—	199,579
10,260	720,866	134,107	129,832	30,300	151,673	445,912	558,198	(44,479)	—	—	513,719
48,804	777,372	60,270	126,029	62,595	37,606	286,500	715,909	5,245	—	—	721,154
138,102	1,451,593	100,748	227,809	112,815	—	441,372	1,233,907	44,018	—	—	1,277,925
3,187	146,698	10,304	24,944	12,323	10,292	57,863	129,768	(2,983)	—	—	126,785
199,251	11,120,748	1,652,891	1,823,242	956,832	1,249,873	5,682,838	9,350,091	(272,747)	—	—	9,077,344
141,192	35,596,195	6,643,685	6,483,940	1,507,874	913,418	15,548,917	27,455,241	(291,525)	—	—	27,163,716
25,371	1,537,548	528,684	276,992	282,145	114	1,087,935	364,591	(14,833)	(246,875)	—	102,883
182,665	2,762,520	218,224	445,902	221,667	15,265	901,058	2,569,536	42,291	—	—	2,611,827
376	38,914	607	10,136	—	—	10,743	(69,429)	58,414	—	—	(11,015)
245,301	5,957,942	983,692	1,095,882	221,963	464,689	2,766,226	4,361,309	41,659	—	—	4,402,968
761	53,159	8,563	8,650	4,646	25,666	47,525	49,490	(9,513)	—	—	39,977
1,445	82,342	6,011	14,045	6,947	485	27,488	74,603	352	—	—	74,955
221,931	545,944	49,320	53,792	28,665	15,583	147,360	291,020	(430,452)	—	—	(139,432)
388	44,686	3,532	7,673	3,805	1,205	16,215	42,574	(301)	—	—	42,273
2,403	193,883	16,329	33,085	16,453	3,656	69,523	191,662	(922)	—	—	190,740
108,709	13,858,374	1,425,685	1,873,238	1,380,806	538,130	5,217,859	6,698,498	197,011	(506,673)	—	6,388,836
1,317	109,059	8,254	18,688	9,253	1,946	38,141	101,140	(211)	—	—	100,929
13,033	121,317	15,050	18,104	9,549	9,464	52,167	93,386	1,103	—	—	94,489
2,450	44,577	7,747	7,718	1,781	—	17,246	31,321	951	—	—	32,272
11,430	634,708	16,816	79,506	43,916	23,460	163,698	245,303	86,433	—	—	331,736
535,221	10,060,665	1,696,202	1,798,722	382,125	—	3,877,049	7,385,229	235,587	—	—	7,620,816
59,419,824	1,576,368,344	248,955,877	270,822,183	88,027,588	53,985,873	661,791,521	1,152,097,283	(213,209)	(9,457,533)	—	1,142,426,541
—	—	—	—	—	50,548	50,548	—	(19,172)	—	—	(19,172)
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	20,207	20,207	—	(6,438)	—	—	(6,438)
—	—	—	—	—	2,425	2,425	—	(928)	—	—	(928)
7,738	7,738	—	—	—	6,069,453	6,069,453	—	(2,073,832)	—	—	(2,073,832)
59,427,562	1,576,376,083	248,955,877	270,822,183	88,027,588	60,128,508	667,934,156	1,152,097,283	(2,313,579)	(9,457,533)	—	1,140,326,171

# Systems and Plans Statistical Highlights

Year Ended December 31, 2016

## 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>	161,542	6,329	14,587	3,325	257	336	27,051	2,305	5,673	221,405
Active	63,214	738	6,032	1,663	115	61	24,372	2,240	5,022	103,457
Terminated vested	47,933	1,274	4,615	390	3	96	464	28	165	54,968
Retired	51,355	4,165	5,412	1,372	141	244	9	—	—	62,698
<b>Total 2016 Active Members</b>	63,214	738	6,032	1,663	115	61	24,372	2,240	5,022	101,712
Average age	49.2	57.3	42.6	42.8	56.1	55.8	35.9	30.2	36.3	44.6
Average years of service	15.5	29.0	15.2	15.0	16.6	12.1	2.2	2.3	2.8	11.5
Average annual salary	\$ 51,984	60,936	57,381	67,114	155,852	12,285	30,809	35,363	41,246	46,829

### 2016 Retirees

Number	3,965	227	368	72	7	17	8	—	N/A	4,664
Average age	64.2	62.1	53.5	55.0	65.3	66.1	67.0	—	N/A	63.2
Average years of service	21.1	30.1	22.6	25.2	29.2	6.1	4.5	—	N/A	21.6
Final average annual salary	\$ 48,980	52,211	60,881	79,969	139,428	19,603	24,789	—	N/A	50,298
Average annual benefit	21,224	30,729	34,036	47,671	106,141	7,125	1,651	—	N/A	22,880
Average annual benefit —all retirees	\$ 22,475	19,284	29,241	36,574	84,793	3,863	1,565	—	N/A	23,221

### Financial Information

#### Changes in Fiduciary Net Position Restricted for Pensions

(in thousands)

Contributions	\$ 847,939	11,608	147,929	36,252	8,852	421	63,062	8,488	N/A	1,124,551
Investment income	1,783,911	97,693	249,027	87,746	13,820	849	14,059	1,591	N/A	2,248,696
Pension benefits	1,188,683	85,147	164,691	52,568	12,329	941	316	28	N/A	1,504,703
Plan fiduciary net position	\$ 22,618,743	1,204,904	3,176,545	1,115,726	175,619	10,352	217,293	25,135	N/A	28,544,317

### Actuarial Information (GASB 67)

#### Employers' Net Pension Liability/(Asset) (dollars in thousands)

Total pension liability	\$ 26,501,781	1,292,512	3,794,880	1,129,729	210,624	12,654	228,450	24,266	N/A	33,194,896
Plan fiduciary net position (market value)	22,618,743	1,204,904	3,176,545	1,115,726	175,619	10,352	217,293	25,135	N/A	28,544,317
Employers net pension liability/(asset)	3,883,038	87,608	618,335	14,003	35,005	2,302	11,157	(869)	N/A	4,650,579
Percentage of the total pension liability	85.3%	93.2%	83.7%	98.8%	83.4%	81.8%	95.1%	103.6%	N/A	86.0%

### Actuarial Information (Funding)

#### Funding Progress (dollars in thousands)

Actuarial value of assets	\$ 22,913,647	1,221,609	3,217,221	1,130,198	177,782	10,470	219,885	25,388	N/A	28,916,200
Actuarial accrued liability	\$ 26,501,781	1,292,512	3,794,880	1,129,729	210,624	12,654	228,450	24,266	N/A	33,194,896
Unfunded (overfunded) actuarial accrued liability	\$ 3,588,134	70,903	577,659	(469)	32,842	2,184	8,565	(1,122)	N/A	4,278,696
Funded ratios	86.5%	94.5%	84.8%	100.0%	84.4%	82.7%	96.3%	104.6%	N/A	87.1%

Systems and Plans Statistical Highlights *(Concluded)*

Year Ended December 31, 2016

## Defined Contribution Plans

	401(k)	457	Roth IRA	Traditional IRA			
<b>Membership Information</b>							
<b>Number of Active Employees Eligible to Participate</b>	105,864	101,497	221,405	221,405			
Employee contributions (excluding employer contributions):							
Number of employees contributing	39,462	8,232	6,376	452			
Percent of eligible employees contributing	37.3%	8.1%	2.9%	0.2%			
Average percent of salary deferred by employees	5.5%	6.0%	3.7%	2.5%			
Total participants	166,430	17,416	8,772	1,763			
Average participant account balance	\$ 26,071	28,389	10,165	46,247			
<b>Financial Information</b>							
<b>Changes in Fiduciary Net Assets</b>							
	<i>(in thousands)</i>					Health Reimbursement Arrangement (HRA)	Total
Contributions	\$ 290,632	27,326	16,585	16,182	6,796	357,521	
Net investment income	332,672	39,252	7,200	4,825	36	383,985	
Refunds	257,651	25,706	4,192	8,332	30,075	325,956	
Plan net position	\$ 4,338,973	494,419	89,165	81,533	—	5,004,090	



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